

Trimble Survey Controller™

Release Notes

Version 11.10
Revision A
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Table of Contents

Release Notes	1
Corporate Office.....	1
Product Information.....	1
New Features.....	5
Other Information.....	9
Documentation.....	10

Release Notes

Corporate Office

Trimble Navigation Limited
Geomatics and Engineering Division
5475 Kellenburger Road
Dayton, Ohio 45424-1099
U.S.A.
www.trimble.com

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Release Notice

This is the July 2005 release (Revision A) of the *Trimble Survey Controller Release Notes*. It applies to version 11.10 of the Trimble Survey Controller software.

Product Information

This section contains information about the Trimble Survey Controller software version 11.10 running on a Trimble® CU, TSC2, ACU or TSCe controller ("the controller"). For detailed information, refer to the *Trimble Survey Controller Getting Started Guide*.



New user

In a new controller, the Trimble Survey Controller software version 11.10 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

To use the Trimble Survey Controller software version 11.10, your controller must be running a Microsoft Windows operating system the same as or later than that shown below.

Controller	Microsoft Windows
Trimble CU	CE .NET 4.2.2.16
Trimble ACU	CE .NET 4.0.12
Trimble TSCe	CE .NET 4.0.12
Trimble TSC2	Microsoft Windows Mobile™ for Pocket PC 4.2.1

The *Trimble Survey Controller Software Installation CD* does not contain a menu option to upgrade the operating system. The *Install Survey Controller Software* option checks your operating system, and runs the operating system upgrade wizard if required.

- If the controller is running the Trimble Survey Controller software version 10.5, 10.6, 10.7, 10.8, or 11.0 the Microsoft Windows operating system is already installed. You need to upgrade to the latest version of the operating system, but you do not need a Microsoft authorization key.
- If the TSCe controller is running the Trimble Survey Controller software version 10.00 or 10.01, the Microsoft Windows CE operating system version 3 is installed on the controller. To upgrade the TSCe controller operating system you need to contact Trimble Support and request a Microsoft Windows CE .NET authorization key and sticker.

Note – The Trimble Survey Controller software version 11.1 or later does not fit on a 32Mb TSCe controller. A TSCe controller with a serial number below 25400 is a 32Mb controller.

- If you have a TSC2 controller, the latest operating system is already installed. You cannot reinstall the operating system on a TSC2 controller from the *Trimble Survey Controller Software Installation CD*.

Note – As you install the software, you are given the option to download the contents of the Trimble Data folder. To safeguard the data in this folder, make sure that you select this option. Unlike previous versions, the Trimble Survey Controller version 11.0 software installation does not back up the Trimble data folder to Trimble Data V10.

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

During the upgrade, complete all of the following steps. Follow the prompts that are provided by the installation wizard:

1. Select *Update Office Software*.
2. Install Microsoft ActiveSync® software version 3.8 from the *Trimble Survey Controller Software CD*.
3. Select *Trimble Survey Controller Installation*, and then select *Install Survey Controller Software*.

The *Install Survey Controller Software* option checks your operating system, and runs the operating system upgrade wizard if required.

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.

Converting job 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 11.1.

To determine compatibility, the software inspects the files before transferring them to the controller. Trimble Survey Controller software version 10.70 and 10.80 job files can be converted and transferred. A variety of other files (for example, .fal from version 10.7 and 10.8, .csv, .txt, .dtm, .tmm, .ggf, .cdg, .jpg, .sgf, .pgf, .dxf, and .shp) can also be transferred back onto the controller. 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 because they are not supported (for example, Style 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 when 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]\Download*.

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 version 11.10 with other Trimble products

Trimble Survey Controller software version 11.10 communicates best with the software and hardware products shown in the following table. The software can also communicate with any version later than that shown:

Product type	Trimble product	Version
Software	Trimble Geomatics Office	1.61
	Trimble Link	3.00
	Data Transfer	1.16
	Trimble Total Control	2.73

	Terramodel®	10.13
Receiver	Trimble R7	2.24
	Trimble R8	2.24
	5700	2.24
	5800	2.24
	4800	1.30
	4700	1.30
Conventional Instrument	Trimble S Series	R2.0.0
	Trimble 5600 Series	696–03.05
	Trimble ATS	696–03.05
	Trimble 3600 Elta CP (with interpreter)	1.15
	Trimble 3600	2.00
	Trimble 3300 Series	5.65

Note – If you use a Trimble R8 receiver with a TSC2 controller and GPRS, you must upgrade the receiver to firmware version 2.24.

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.

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 11.10 uses a version 10.7 DC file.

If you use Trimble Geomatics Office, Trimble recommends that you update the Trimble Geomatics Office software from version 1.60 to 1.61. This option will not update versions of Trimble Geomatics Office that are earlier than version 1.60.

Although Trimble Survey Controller software version 11.10 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.

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.

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 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.

New Features

This section summarizes new features in the Trimble Survey Controller software. 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.

About Trimble Survey Controller has moved

The Trimble Survey Controller software Help About screen has moved. To view the Trimble Survey Controller software version number, build number, serial number, authorization key, and software warranty expiry date, see *About Trimble Survey Controller* in the *Configuration* menu.

*** TSC2 Controller Features ***

The TSC2 controller has a [Left App] button and a [Right App] button that you can customize to perform your most-used functions in the Trimble Survey Controller software.

Accessing Help on the TSC2 controller

To access help on the TSC2 controller, tap [Start / Help] on the touch screen, or press [Fn + Space] on the keyboard.

*** General Enhancements ***

Quick code support

You can now use a graphical Measure codes function to code and measure points with a single tap on the screen, or a single press on the keyboard. The nine numeric keys on the keypad map to the nine codes displayed on the Measure codes form. You can configure multiple groups of codes.

String support is also available. To increment the code on the button, tap the + softkey. To decrement the code on the button, tap the – softkey.

For more information, refer to the Trimble Survey Controller Help.

Reflines

You can now perform a reline station setup in the Trimble Survey Controller software. Use reline to establish the position of an occupied point relative to a known or unknown baseline. This enables you to measure subsequent points in terms of a station and offset from the baseline.

Customized ASCII Import

You can now import data to the Trimble job file from customizable file formats.

Station setup enhancements

You can now configure Station setup to suit your own work preferences. Improvements include:

- Instrument and backsight point information are now separated onto two pages to simplify the workflow.
- Code fields are now available for instrument point and backsight point.
- When an instrument point is unknown, you can define default coordinates, or key in instrument coordinates.
- Known coordinates for the instrument point are displayed on the Instrument point form.
- You can configure default settings for an instrument point name, backsight point name, instrument height, and backsight height.
- You can configure an option to not measure the backsight observation.

For more information, refer to the Trimble Survey Controller Help.

Horizontal and Vertical Angle Offsets

You can now perform horizontal and vertical angle offset measurements.

Point Manager

You can now select and then edit multiple codes at once.

SC Basic displays coordinates

SC Basic now displays coordinates after you define a station setup.

Robotic stakeout now supports the GPS style navigation arrow

In a Robotic stakeout, you can now configure the display to show large GPS-style navigation arrows. When you are at some distance from a point, you see *Direction and distance* or the traditional *In/out and left/right* navigation information.

Once you are close to the point, you see the standard *In/out and left/right* navigation display.

Configuring the navigation direction for conventional stakeout

You can now configure the stakeout directions to be from the instrument perspective, the target perspective, or automatic. Automatic configuration sets the stakeout directions automatically, based on whether you have a servo connection or a robotic connection to the instrument.

Bluetooth Laser Rangefinder support

The Trimble TCU and TSC2 controllers can communicate to the Bosch DLE 150, LaserCraft Contour XL, and Leica Disto plus Bluetooth laser rangefinders. The operating system on the ACU, and TSCe controllers do not support these Bluetooth laser rangefinders.

Line and Arc editing

You can now change the Start station and Station interval for a line and arc in Review current job.

Neighbourhood Adjustment for GPS

You can now use the Neighbourhood Adjustment method to distribute the misclosure in a GPS survey.

GDM Data Output

You can now stream horizontal angle, vertical angle, and slope distance data from the com port with a robotic Trimble CU or TSC2 connection to a Trimble S6 total station.

Stakeout option to not automatically set TRK mode

You can now configure stakeout to not set TRK measurement mode when starting stakeout.

Leica TPS1100 support

- Trimble functions support has been added for the Leica TPS1100 instruments.
- You can now measure on the Leica TPS1100 instrument and automatically record the observation to the Trimble Survey Controller software.

Improvements to the Feature code selection when using feature code libraries

- The code list is automatically filtered to show only codes with the characters appropriate to the key that was pressed on the controller.
- You do not have to set the alpha–numeric state on the controller; the code list filtering works independently of the alpha–numeric state of the controller.
- Enable Auto–complete for the software to default to the first matching code in the library. Enter another character to further filter the list, or use the arrow keys to select another code, if the first does not match.
- To use the frequently–used codes list, disable Auto–complete.
- Codes are now highlighted when selected, to improve the ability to replace them.
- Partial code selections in the code field are now retained in the Code list dialog.
- Spaces are automatically entered when you select multiple codes from the Code list.

- Code list filtering is improved.

Miscellaneous General Enhancements:

- New Korean coordinate system definitions are added.
- You can now use DXF files with leading spaces in the coordinate records.
- You can now successfully connect an ACU controller to an external cellular modem.

***** Roading Enhancements *****

Trimble Roads

- You can now key in a vertical alignment by the end points for each curve. For a symmetric parabola, you also enter the K factor. For a circular arc, you enter the radius.
- You can now navigate along a selected offset. In addition, you no longer have to select an offset to stake. The Trimble Survey Controller software guides you to the nearest offset when you select the stake option Nearest offset.
- When you stake a catch point with construction offsets, you no longer have to select a specific option to apply construction offsets. This now occurs as part of the staking process.
- You can now store the catch position and the construction offset position when you stake a catch point with construction offsets.

GENIO Roads

- New Stakeout methods:
 - ◆ You can now determine your current position relative to a GENIO road.
 - ◆ You can now navigate along a selected string.
 - ◆ You can now stake any keyed-in station and offset value for a GENIO road.
- Graphical selection methods:
 - ◆ By default, the Trimble Survey Controller software is in the Position on road method until you select a string to stake or a position to stake.
 - ◆ To select a string to stake, tap the linework representing a string in the plan view.
 - ◆ To select a string and station to stake, tap the circle representing the position in the plan view. Once you activate the String and station method, the cross-section view is available and you can also graphically select positions from that view.
 - ◆ To return to the Position on road method, tap in a blank part of the screen to clear the current selection.
 - ◆ For all methods, the current method is indicated in the title banner.
- Stakeout details from a secondary road can now be referenced to a position being staked on a primary (current) road.
- You can now choose to not convert a 5D / Interface string to a side slope. The system guides you to the design catch position.
- You can now set the delta display to Station and offset relative to a GENIO road.
- When you stake a catch point (5D / Interface string) with construction offsets, you no longer have to select a specific option to apply construction offsets. This now occurs as part of the staking process.
- You can now store the catch position and the construction offset position when you stake a catch point with construction offsets.
- You can now stake a GENIO road relative to a DTM.

LandXML Roads

You can now stake a LandXML road relative to a DTM.

Trimble, GENIO, and LandXML Roads

Zooming tools in the cross section view now help you to select cross slope / subgrade for all road formats.

Roading cross slopes reporting change

Trimble Survey Controller software version 11.10 and later reports a V.Dist from the as-stake position. Version 11.0x reports a delta value between the position being staked and the position defined by the cross slope.

Other Information

Trimble Survey Controller is available in many Languages

The Trimble Survey Controller software version 11 is now available in Dutch as well as English, Chinese (Simplified), French, German, Italian, Japanese, Korean, Portuguese, Spanish, and Swedish.

Connecting the Trimble S Series Total Station to a TSCe controller

Connect the TSCe controller to the Trimble S Series total stations using the supplied 26-pin-to-Hirose cable. In order to communicate with Trimble S Series total stations, the controller requires the Trimble S Series communication plug-in. When you upgrade the controller, make sure that you install this plug-in from the *Trimble Survey Controller Software CD*.

If you try to connect the controller to the Trimble S Series total station soon after you have made a connection between the controller and an office computer using Microsoft ActiveSync technology, the connection from the controller to the total station may fail. To avoid this problem, either cancel the ActiveSync connection before you remove the cable, or perform a soft reset on the controller.

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 GPS systems) and use this to connect the docking station to the serial port on the office computer.

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, means that Trimble Survey Controller software version 11.1 needs more memory than previous versions.

The Trimble Survey Controller software version 11.1 or later does not fit on a 32Mb TSCe controller. A TSCe controller with a serial number below 25400 is a 32Mb controller.

Microsoft ActiveSync issues

To install the Trimble Survey Controller software and to transfer data files, you must connect the controller to the computer using Microsoft ActiveSync technology version 3.8.

ActiveSync is included on the *Trimble Survey Controller Software CD*.

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, ACU, or TSCe 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.