Trimble Survey Controller™

Release Notes

Version 11.40
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 11.40 of the Trimble Survey Controller software.

Product Information

This section contains information about the Trimble Survey Controller software version 11.40 running on a ACU or TSCe controller ("the controller"). For detailed information, refer to the *Trimble Survey Controller Getting Started Guide.*

The Trimble Survey Controller software version 11.40 does not run on a Trimble® CU or TSC2® controller.

New user

In a new controller, the Trimble Survey Controller software version 11.33 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 11.40 from www.trimble.com/tsc_ts.asp?Nav=Collection–44203 . Use the web install instructions available from there.

Is my warranty valid?

To run the Trimble Survey Controller software version 11.40 on a Trimble ACU or TSCe controller, 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 11.40 at no charge. Download and install version 11.40.
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 11.40.

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–46263.

Upgrading from a previous version of the software

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 11.40, 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 ACU	Microsoft Windows CE .NET Version 4.0	4.0.12	11.02
Trimble TSCe		4.0.12	11.02

	Microsoft Windows CE .NET Version 4.0		

The operating system is available from the Trimble website.

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

   Note − ActiveSync technology version 4.2 does not support **network** (Ethernet) connections. If you have an ACU or TSCe controller and you use a **network** (Ethernet) connection for file transfer, use ActiveSync technology version 3.8.

4. Select *Trimble Survey Controller Installation* and then select *Install Survey Controller Software.*

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

   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 11.40 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.

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.

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.

For details about upgrading the Trimble Survey Controller software version 10.0x, contact Trimble Support.

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 11.40.

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, .pjg, .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 11.40 with other Trimble products

Trimble Survey Controller software version 11.40 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	1.34
Trimble Total Control	2.73
Terramodel®	10.43

Trimble Receiver	Version
Trimble R8 GNSS	3.30
Trimble R8	2.32
Trimble R7 GNSS	3.40
Trimble R7	2.32
Trimble R6	3.30
5800	2.32
5700	2.32

4800	1.30
4700	1.30

Trimble Conventional Instrument	Version
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 S Series instrument with the Trimble Survey Controller software version 11.33 or later, you must upgrade the instrument to firmware version **R5.1.16** or later. The Trimble Survey Controller software version 11.33 is not compatible with earlier versions of the Trimble S Series Total Station firmware.
- If you use a Trimble 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 GNSS receiver with the Trimble Survey Controller software version 11.31 or later, you must upgrade the receiver to firmware version 3.20 or later.
- 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 11.40 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 11.40 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 GPS receiver or a new GPS 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.

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.

New Features

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

- Trimble MultiTrack Target
- 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.

Trimble MultiTrack Target

Trimble Survey Controller version 11.40 supports the new Trimble MultiTrack Target, which features the unique Trimble MultiTrack technology. Together with the Trimble S Series instrument, 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.

If you use a Trimble S Series instrument with the Trimble MultiTrack target, you must upgrade the instrument

to firmware version **R7.0.35** or later.

GNSS enhancements

Trimble R7 GNSS

The Trimble Survey Controller version 11.40 software now supports the Trimble R7 GNSS receiver.

General enhancements

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 11 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 ACU and TSCe 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.

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.

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.

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.

Trimble DC file with two zero length elements

Trimble DC files with two consecutive zero length elements now use the azimuth from the second element when they are converted to an RXL file.

GENIO roads – cross slope

The cross slope value is now correctly calculated at the slope of the next (or previous) element when you are staking a calculated subgrade position and the slope is applied towards the centerline.

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 *Trimble Survey Controller Software CD.*

Datum grid selections

When reviewing coordinate system settings, the datum grid selection is now retained.

Projection grid selections

When reviewing coordinate system settings, the projection grid selection is now retained.

Other changes

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

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 TSCe controller to a Trimble S Series total station

To connect a TSCe controller to a Trimble S Series total station, use the 26–pin–to–Hirose cable that is provided.

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 a 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.

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.

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 technology issues

Windows Mobile 5.0 software and ActiveSync technology version 4.2 now support Bluetooth wireless connections and file transfer.

File transfer using ActiveSync technology version 4.2 over WiFi (802.11b), network (Ethernet), and a serial connection is no longer supported.

If you do not have a TSC2 controller and you want to use one of these transfer mechanisms, continue to use ActiveSync technology version 3.8.

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

The Trimble Survey Controller Help is "context–sensitive."

To access the Help on an ACU, or TSCe controller, tap [?] at the top of the screen.

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.