



Trimble Access™ Software

RELEASE NOTES



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Legal Information

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Roads version 2016.12

Resolved issues

Additional strings

The following issues are now resolved for **additional strings**. Measuring additional strings was a new feature added in Trimble Access version 2016.10.

- An issue when measuring your position relative to an additional string where the target did not lie on the string, causing the Go left/right navigation value to be incorrectly computed, is now resolved.
- An issue when measuring your position relative to an additional string in a Trimble or LandXML road where the navigation arrow always pointed north instead of to the start of the string is now resolved. This was an issue when the additional string started at the same station as the start station of the road and your position was off the string.
- An issue when measuring your position relative to an additional string where tapping the string to select it sometimes selected a different additional string is now resolved.
- The additional string was not always displayed at the review, selection and navigation screens. At the review and selection screens this was more likely to occur for long strings and when you had zoomed in. For the navigation screen this was more likely to occur for long strings and if your position was not near the start or end of the string. Note that the target was still displayed correctly and the deltas reported were still relative to the string.
- When measuring your position relative to an additional string in a Trimble or LandXML road during a conventional survey, if you used the graphical option to select the survey method you could not access the cross section view at the selection screen. This was not an issue if you selected the string from the tap and hold menu.
- When measuring relative to an additional string with a calculated construction offset, in the cross section view the computed station value was displayed at the top of the screen instead of the string name.
- For a road with an additional string that you have selected to stake from the *Jobs* or *Map* screen, you can now measure your position relative to the additional string. Previously the string could not be selected. In addition, the elevation for a point selected on an additional string is now displayed.
- An issue when reviewing a secondary road where the elevation for a selected station on an additional string was incorrectly displayed as null is now resolved.

Application error

You should no longer see an occasional application error when you apply a calculated construction offset when measuring your position relative to a side slope string. This was only an issue for a Trimble road when you were off the string.

General Survey version 2016.11

This section includes features, enhancements and resolved issues that also apply to other Trimble Access applications.

Resolved issues

- **Incorrect station value for an alignment:** An issue when the display delta option was set to *Station and offset* where the station value displayed in the navigation screen was always in Meters when the units specified for the job were either International feet or US survey feet is now resolved. This issue occurred when staking a:
 - Station on alignment
 - Side slope from alignment
 - Station/skew offset from alignment

Note that the station value displayed at the *Confirm staked deltas* screen and stored in the job was correct.

- **Logging in:** An issue where two versions of the same user name were created if you changed the *Login mode* is now resolved. This issue occurred only when you created a new user name on the device that already existed in the Trimble Connected Community.
- **Feature codes:** An issue where searching the feature code list by *Description* using capital letters and then selecting the required code did not always auto complete the code field is now resolved.
- **Application errors:** You should no longer see occasional application errors when you do any of the following:
 - Connect the General Survey software to the Trimble V10 imaging rover when the *Trimble SX10* check box in the *Auto connect* screen was enabled.
 - Disconnect a conventional instrument from the device running the General Survey software.

Roads version 2016.11

Enhancements

Improved cross section view display when surveying a Trimble or LandXML road

When accessing the cross section view at the graphical selection screen, the displayed cross section is for the station at your current position. This applies when measuring your position relative to:

- a selected string
- the nearest string

Previously the displayed cross section was for the station where you tapped the screen to select the string.

Resolved issues

- **Incorrect station value for a Trimble road:** An issue where the station value displayed in the navigation screen was always in Meters when the units specified for the job were either International feet or US survey feet is now resolved. This issue occurred when:
 - Measuring your position relative to the road
 - Measuring your position relative to a string
 - Staking a station on a string, when the display delta option was set to *Station and offset*Note that the station value displayed at the *Confirm staked deltas* screen and stored in the job was correct.
- **Navigation arrow not pointing to the start of the string:** An issue when measuring your position relative to a string in a Trimble or LandXML road where the navigation arrow always pointed north or to your current position instead of to the start of the string is now resolved. This was an issue when measuring side slope strings or additional strings when your position was off the road.
- **Accessing the cross section when surveying a road:** An issue where you could not access the cross section view at the graphical selection screen is now resolved. This was an issue when measuring your position relative to:
 - a selected string
 - the nearest string (Trimble and LandXML roads only)This feature was inadvertently disabled in Trimble Access version 2016.10.
- **Application errors:** You should no longer see occasional application errors when you do any of the following:
 - Measure your position relative to a side slope string when you are off the road. This issue affected Trimble roads when the side slope string did not start at the start station of the horizontal alignment.

General Survey version 2016.10

This section includes features, enhancements and resolved issues that also apply to other Trimble Access applications.

New hardware supported

Trimble SX10 scanning total station support

The Trimble Access™ software supports the new Trimble SX10 scanning total station.

Key features of the SX10 include:

- Combines high accuracy total station measurements and high-speed 3D scanning in one instrument.
- Uses Trimble Lightning 3DM to scan up to 26,600 points per second.
- Fast and easy capture of high resolution site imagery using improved Trimble VISION™ technology.

- Has a 3D scan range of 600 m and a DR range of 800 m.
- Provides 360° horizontal x 300° vertical field of view with scanning and imaging.

Significant improvements to the Trimble Access software specifically to support the Trimble SX10 scanning total station include:

- New scanning workflows, including scan stations.
- Display of scan points in the *Video* screen.
- Ability to compute inverses between scan points.
- Improved controls in the *Video* screen to more easily zoom and turn the instrument.
- Ability to use gestures to zoom and pan around the video screen.
- Instrument tilt check after a scan.
- Stakeout screens now support AccessVision, which enables you to easily see the video or the map as you are staking out.

For more information, refer to the [General Survey Help](#) or the "General Survey" section of these *Release Notes*.

New features and enhancements

Staking out elevations

The new stakeout *Elevation* option enables a design elevation to be entered and then, when surveying, the distance from your current position above (cut) or below (fill) the design elevation is reported.

TIFF files in the map

You can now add TIFF and GeoTIFF files to the map as background layers. This enables you to view maps and topographic features such as identified roads, streams, contours and land boundaries.

TIFF files are generally much more efficient in their use of program memory than other background image formats such as BMP, JPEG or PNG. This makes it possible to load TIFF files with file sizes of 100 MB or more, while using only a few MB of program memory.

To use TIFF files in the map, they must be GeoTIFF files or have an associated world file (.wld or .tfw).

For more information, refer to the topic **Selecting data to display in the map** in the [General Survey Help](#).

Improved performance of TTM and DTM files in the map

Significant improvements have been made to the load times for triangulated terrain model (TTM) and digital terrain model (DTM) files in the map. For example:

- On a Trimble TSC3 controller, a 10,000 point TTM file now takes 7 seconds to load and 2 seconds to update the map. Previously it took 15 seconds to load and 2 seconds to update the map.
- On a tablet, a 100,000 point TTM file now takes less than 1 second to load and 5 seconds to update the map. Previously it took 45 seconds to load and 15 seconds to update the map.

More easily copy job files to a different location

The new *Copy job files to* option in the *Jobs* screen enables you to copy a job and associated job files collected during the survey (for example, image and scan files) to a new location, such as a folder on a network server or a USB stick. Files such as image, scan, and T02 files that are referenced in the job are copied automatically. With this option you can include all files starting with the same <jobname> in the Export folder. You can also choose to create a JobXML file at the same time.

For more information, refer to the topic **Managing jobs** in the [General Survey Help](#).

Import and export files direct to or from USB on tablets

You can now import or export files on a tablet directly to or from a USB stick or another drive. In previous versions of Trimble Access you could do this on Windows Mobile controllers with USB ports, but you were not able to do this on tablets.

Stakeout screens now support AccessVision

Stakeout screens now support AccessVision. AccessVision incorporates the map view and the video view within the current screen to provide immediate visual feedback and avoid having to switch back and forth between screens.

Note – *AccessVision is supported only on tablet controllers.*

For more information, refer to the topic **AccessVision** in the [General Survey Help](#).

Enhancements to selecting a code from the feature library

When measuring using codes, you can enter the initial characters of the code you want into the code field and the list of codes available in the FXL file are filtered based on the characters you have entered. You can now filter the available list of codes based on the *Description* field. Tap **C** to filter by *Code* or tap **D** to filter by *Description*.

You can now also filter the entire feature code list by either code *Type*, for example point or control code, or by the *Category* as defined in the feature library.

For more information, refer to the topic **Measure codes** in the [General Survey Help](#).

Feature library enhancements to support blocks

You can now use a feature definition library that references *block codes*. Block codes insert a predefined symbol which may be automatically scaled and rotated based on multiple insertion points.

Use *block control codes* to control the rotation and scaling of inserted blocks.

Note – *Blocks are not actually constructed or displayed in the General Survey software. Points with feature codes that reference blocks are displayed with the appropriate block symbols when the file is imported to the Trimble Business Center software version 3.80 or later.*

Blocks must be created or edited using the Feature Definition Manager in Trimble Business Center. Block control codes need FXL file version 8 or later. You can change the feature code and feature code description for the block using General Survey, if required.

For more information, refer to the topic **Feature libraries** in the [General Survey Help](#).

Use attributes of base code option now enabled by default

When creating a new job, the *Use attributes of base code* check box is now enabled by default.

Additional tap and hold menu options in the map

Additional navigation and Cogo options have been added to the tap and hold menu in the map in Roads, Tunnels, Mines and Pipelines. Previously these options were only available from the map in General Survey.

Warning if point name exists in linked file

When measuring a point, the software now warns before the point is stored if a point with the same name already exists in a linked file. In previous versions of Trimble Access, the software warned if a point with the same name existed only in the job.

Changing the search class for keyed in points

You can now change the search class for keyed in points from *Normal* to *Control* or from *Control* to *Normal*. To do this, in the *Point manager* select *Edit / Coordinates* and then select or deselect the *Control point* option. A note to record the change is automatically created.

Reminder that the controller clock is incorrect

When you run Trimble Access, the software now checks that the date on the controller is later than the software release date and if it is not, you are prompted to update the date and time on the controller. The message repeats every four hours until the controller has been updated.

When controllers are connected to GNSS receivers, the clock is automatically set based on the receiver date and time, but when controllers are used with total stations the clock must be manually set.

Enhancements for search window

Trimble Access version 2016.12 provides the following enhancements when using a search window during a conventional survey:

- The search window definition is now always stored in terms of face 1, but the search is always performed on the face that is in use. In previous versions of Trimble Access, before performing the search the software would automatically switch to the face that was used to define the search window.
- You can now define the search window using the *Set win* softkey in the *Target controls* screen. In previous versions of Trimble Access you had to prepare the total station for a robotic survey before you could define or change the location of the search window.
- You can now set the vertical range of the autocentered search window to 90 degrees. In previous versions of Trimble Access the maximum range was 50 degrees.

Using GDM data output to stream HD and VD labels

Trimble Access version 2016.12 supports streaming label 10 VD (vertical distance) and label 11 HD (horizontal distance) GDM data output.

For more information, refer to the topic **Data output** in the [General Survey Help](#).

Improved reporting of instrument values

When generating reports, the following values are now included:

- The value entered in the *Instrument / Adjust / EDM Constant* field is now included as the "Instrument Applied EDM Constant" in the *ISO rounds* report and as the "EDM Constant" in the *Survey* report.

Note that in previous versions of Trimble Access, the *Survey* report already contained a value for the "EDM Constant". This value is now reported as the "EDM Precision", which is consistent with other reports that contain this value.

- The *ISO rounds* report now includes the backsight centering error. Previously, it included only the instrument centering error.

GNSS survey style enhancements

The following changes have been made to the GNSS survey style wizard:

- You are no longer asked to confirm the selected broadcast format if you start a survey when connected to a different integrated antenna to the one chosen in the survey style.
- The *Tilt auto-measure* setting that appears in the *Topo point* and *Rapid point* screens of the survey style wizard is now set to Off by default.
- The *Antenna* group box has been moved onto the first page of the *Rover options* and *Base options* screens, because along with the *Survey type* and *Broadcast format* fields, the *Antenna type* affects the fields displayed on the following pages.
- In the *Rover options* screen the antenna type list is now sorted alphabetically. This change also affects custom antenna files loaded onto the controller, which are now sorted alphabetically after being loaded onto the controller.

Defining the project height from the current GNSS position

When you open a job that does not have a defined project height, the *Project height* screen prompts you to enter the project height. You can now tap *Here* in the *Project height* screen to use the height from the current GNSS position.

Software now available in Marathi

The Trimble Access software is now available in Marathi. Translated software applications include General Survey, Roads, Tunnels, and Mines.

Coordinate system database updates

- The obsolete Ordnance Survey National Grid coordinate system for the United Kingdom has been removed.
- The new OS National Grid (OSTN15) zone definition for the United Kingdom has been added, referencing the new OSTN15 shift grid file and OSGM geoid model.
- The Ireland coordinate system zones have been reorganized into Ireland/Northern Ireland and Ireland/Republic of Ireland zone groups and updated to reference the new Northern Ireland 2015 and Republic of Ireland 2015 geoid models.
- All New Zealand zone definitions have been updated to reference the new New Zealand 2016 geoid model.

- Several new datum definitions have been added.
 - Global: ITRF 2008
 - French dependencies: RGAF09, RGFG95, RGNC91-93, RGR92, RGTAAF07
 - Estonia: EST97
 - Argentina: POSGAR07

All Argentinian zone definitions have been updated to reference the POSGAR07 datum.

Note – *The POSGAR07 and EST97 datum definitions are 0-value datum transformations and so selecting these does not result in any numeric change to the coordinates.*

- Subgrids of the EGM 2008 global geoid model have been added for the following countries: EGM 2008 Ethiopia, EGM 2008 Lebanon, EGM 2008 Oman, EGM 2008 Pakistan.
- Some reorganization and renaming of zones and zone definitions for Norway and Germany. The Bessels Utvidede ellipsoid has been renamed to Bessel Modified and the Norway WGS-NGO48 III datum definitions have been updated to reflect this.
- The NAD 1983 (Hawaii) datum transformation has been modified, and the United States/State Plane 1983 Hawaiian zone definitions now use the NAD 1983 (Hawaii) datum transformation instead of the NAD 1983 (Conus) datum transformation (no actual numeric change).

TSC2 support for Trimble Access

Trimble Access version 2016.10 can be installed on Trimble TSC2 controllers that have a valid software warranty. As previously announced, the TSC2 controller is supported through to the end of 2016, but will not be supported in 2017.

Resolved issues

- **RTK base data link down:** An issue when the base data link was down and the reset counters message appeared due to poor precisions, where choosing to store the last good position resulted in **code** solutions that met the precision tolerances being stored is now resolved. The software now stores the last known good **RTK** position.
- **DXF files in the 3D map:** The following issues for drawing DXF files in the map are now resolved:
 - An issue where text was not positioned correctly.
 - An issue where some but not all text in the DXF was displayed. This affected text where there was other text nearby.
- **DXF files in the map:** The following issues for drawing DXF files in the map are now resolved:
 - An issue where DXF files were slow to redraw when zooming in on the map. This was an issue only when zoomed in very close, and when the DXF file contained circles, arcs, or polylines that included arcs.
 - An issue where DXF files that contained empty strings were not visible on the map and when zooming to extents the scale showed 1000 km.
- **Cut/fill values in the map:** An issue where ludicrous cut/fill values to a surface in an XML file were occasionally displayed is now resolved.
- **Displaying surface triangles in the map:** An issue where surface triangles were drawn over the top of any other background data drawn prior to the triangle model is now resolved.
- **Background images in the map:** An issue where background images were not displayed at the

correct coordinates for coordinate systems other than increasing NE is now resolved.

- **Map not updating after PPM changed:** An issue where updating the PPM in the atmospheric record of a position in the *Review job* screen did not update the position on the map is now resolved.
- **Media file not found in Review job:** An issue where selecting a media file when reviewing a point in the *Review job* screen produced a "File not found" message is now resolved. This issue was introduced in Trimble Access version 2015.20.
- **Project height missing in Select coordinate system screen:** An issue where, after opening a job that did not have a defined project height and entering the project height when prompted, the value you entered was not shown in the *Project height* field in the *Select coordinate system* screen is now resolved. The value you had entered was always shown in the *Project height* field in the *Projection* screen.
- **Vertical offset for duplicate point:** An issue where the vertical offset for a previous point was incorrectly applied to a duplicate point that had no vertical offset is now resolved.
- **Keying in offsets during stakeout:** An issue where offset values you keyed in during stake out were not remembered if you went back to the stakeout screen and then returned to the *Offset* screen is now resolved.
- **Trimble Business Center reports invalid design elevation:** An issue when staking a point with an offset defined by *Slope from point* where no slope value was specified, which resulted in a corrupt offset design point being computed, is now resolved. The job file containing the point could not be imported into the Trimble Business Center software because an invalid design elevation was reported.
- **Closing all windows from Export:** An issue where, if you attempted to close the General Survey software from an *Export* screen, you were prompted to close all windows but tapping the *Close All* softkey had no effect, is now resolved.
- **eBubble softkey:** An issue where the eBubble softkey sometimes appeared when connected to an instrument that does not have an eBubble is now resolved.
- **OmniSTAR:** An issue where the OmniSTAR to RTK offset from the previous RTK + OmniSTAR survey was being applied to OmniSTAR-only positions outside a survey in a new job when no OmniSTAR offset was selected to survey with is now resolved. OmniSTAR to RTK offsets are now only applied when an RTK + OmniSTAR survey is running.
- **Measure points on a plane:** An issue where some points on the plane could have the same coordinates if the *View before storage* option was set to Off is now resolved.
- **Loss of target during continuous topo:** An issue where duplicate points were sometimes stored after losing a target during a conventional continuous topo survey is now resolved.
- **Continuous topo measurement not ending with survey:** An issue where ending the survey does not end the current measurement during a conventional continuous topo survey is now resolved.
- **eLevel tilt error:** An issue where the audible warning message "Tilt error" sounded only the first time you tapped *Accept* in the *eLevel* screen when the instrument was not level is now resolved. The audible warning message now sounds whenever you tap *Accept* in the *eLevel* screen when the instrument is not level.
- **Face 2 measurement required if no backsight measured:** An issue where the Trimble Access software prompted you to measure a Face 2 measurement when completing a Station setup where the *Measure backsight* check box was not enabled is now resolved.

- **Keying in a point:** An issue when keying in a point on a tablet when the graphical display was hidden and then if you tapped the button to show the graphical display the values you had entered disappeared, is now resolved.
- **Control codes:** The *Join to named point* control code is no longer case sensitive. Previously when using this control code, the case for all characters of the point name had to match the point being joined to.
- **3D map gestures:** An issue where after using gestures to "pinch zoom" the map, activating a softkey or toolbar button required two taps instead of one, is now resolved.
- **3D map progress bar:** An issue where the progress bar did not update when the map was loading large background files is now resolved.
- **Tablet keyboard:** The following issues when using the virtual Trimble keyboard on a tablet are now resolved:
 - Tapping the *Windows* key now opens the *Windows Start* menu instead of File Explorer.
 - When you tap the *Shift* key, the symbols on the keyboard are now <, >, and _. Previously, they were , , and -.
- **Trimble M3 compensator status:** An issue where the Trimble Access software showed the compensator as disabled on the Trimble M3 total station although the compensator status cannot be changed on the instrument, is now resolved.
- **Trimble Geo7X data transfer:** An issue where the Trimble Data Transfer utility did not connect to the Trimble Geo7X handheld is now resolved.
- **Trimble Geo7X serial number:** An issue where the serial number for the Trimble Geo7X handheld shown in the *Receiver settings* screen was a generic serial number is now resolved.
- **Application errors:** You should no longer see occasional application errors when you do any of the following:
 - Export to DXF points that use feature codes when the map is open.
 - Cancel the loading of a large background image and then tap and hold on the map.
 - On opening a job, selecting a projection after being warned that the specified geoid model file is not available.
 - In a conventional survey, pan across the *Video* screen while the instrument is measuring. This also caused the instrument to stop responding for a couple of minutes.
 - Attempt to edit the prism target height when staking a point, line, arc, DTM, or elevation in a GNSS survey with a total station connected but with no current station setup.
 - Exiting the Trimble Access software soon after exiting a Trimble Access application such as General Survey or AccessSync.
 - When the software is low on memory, typically when trying to generate a report for a large job.

Roads version 2016.10

New features and enhancements

Additional strings

You can now define and survey an additional string. Additional strings define features that are related to the road but are separate from it, such as sound barriers or storm water drains. The additional string is defined by horizontal geometry comprising a series of lines that are defined relative to the horizontal alignment of the road and, if required, vertical geometry defined using all the options available when defining a vertical alignment for a road. When surveying an additional string you can measure your position relative to the string or stake the start and end stations of each line.

Gaps in templates

You can now create a gap in a template. This option is useful when the template does not start at the alignment.

To create a gap in the template, select the *Create gap* option when defining a string. A gap is shown as a dashed line from the current string to the previous string. If your position is in the gap when measuring your position relative to the road, the *V. Dist* to the road value is null.

Changing the grade display format for a vertical alignment

When defining a vertical alignment, you can now configure the display format of the slope values. From the *Options* softkey select *Angle*, *Percent*, or *Ratio*. The ratio can be displayed as *Rise:Run* or *Run:Rise*.

Road surface display options in 3D drive

When reviewing a road using the *3D drive* option you can now display the surface of the road with a color gradient and/or surface triangles.

Improved display of stakeout delta values

To improve the readability of the stakeout delta values displayed at the bottom of the screen when surveying a Trimble, GENIO or LandXML road, the stakeout delta values are now shown without units. The stakeout delta values are still shown with units when viewing them in the *Review job* screen.

Line work highlighted when reviewing a road

When reviewing a road, the line work preceding the selected string is now highlighted, to clarify which line the slope and delta elevation and offset values at the top of the screen apply to.

Reviewing a road in 3D

When reviewing the cross sections for a GENIO road where the master string has been excluded, selecting the first string left of the master string now displays the *Slope*, *Delta offset* and *Delta elevation* values at the top of the screen for the line from the selected string to the first string right of the center line. Similarly, selecting the first string right of the master string displays these values

for the line from the selected string to the first string left of the center line. Previously these values were available only when reviewing the road in 2D mode.

Resolved issues

- **Additional points:** An issue where additional points were sometimes displayed and available for stakeout despite the *Enable template and additional points* option not being selected is now resolved.
- **Staking a skew offset:** An issue when staking a skew offset where a keyed in elevation was not remembered if you went back to the stakeout screen and then returned to the *Skew offset* screen is now resolved.
- **Display of LandXML roads:** The following issues when viewing LandXML roads are now resolved:
 - Sometimes a LandXML road was not visible at the selection screen when using the graphical selection method.
 - On non-tablet controllers sometimes a LandXML road was not visible when defining or reviewing the road.
- **Incorrect string dimension for GENIO road:** An issue when surveying a GENIO road where selecting a string from the cross section view resulted in all strings in the plan view having the same string dimension as the selected string is now resolved. For example, if the selected string dimension was 3D, then all strings in the plan view including 12D, 6D, and 5D strings would also show as 3D when selected.
- **Incorrect conversion of units for a GENIO road:** An issue where if, after reviewing a GENIO road you select a job that uses different units and then reselect the same GENIO road, the values in the file were incorrectly converted to the new units is now resolved. Now, the software correctly shows the same values with different units. Because GENIO files do not include the units for the values in the file, you must configure the appropriate units for the GENIO file you are working with in the job.
- **Reviewing a GENIO road:** The following issues are now resolved when reviewing a GENIO road:
 - The plan view line work for the master string was not drawn between the last two stations.
 - The coordinates and elevation values were null for all points on the last station.
 - If you zoomed in to a GENIO road so that the 6D string was not visible on the screen, the point and lines associated with the road would also disappear.
 - Tapping to select a position to review did not snap to that position. This was an issue only when reviewing the road in 3D mode.
- **Reviewing a Trimble road:** An issue when reviewing a Trimble road on a tablet, where a side slope string could not be selected using the *Offset* softkey when you were in the plan view is now resolved.
- **Surveying a Trimble road with additional points:** An issue where reloading the original elevation for an edited additional point loaded the elevation for the previously selected point is now resolved.
- **Application errors:** You should no longer see occasional application errors when you do any of the following:
 - Review the last station of a GENIO road.
 - Attempt to review a LandXML road on a tablet controller when defining or reviewing the road, or in the map.

Pipelines

New features and enhancements

Easier job template setup

When defining a job template from a Pipelines job, all of the settings for the job configured in the *Pipelines options* screen are now imported to the template. This provides an easy way to start a new Pipelines job with all of the appropriate options already set up.

Resolved issues

- **Station equations during tally checking/joint mapping:** An issue where station equations were not applied to the *Station* field for a recorded position is now resolved. Note however, that station equations are not applied if *Slope stationing* is selected in the *Pipeline options* screen.
- **Joint mapping:** An issue where the recorded position for a record was used for subsequent records is now resolved. This was an issue only if a new position was not recorded for the subsequent record(s).
- **Linking weld attributes:** To remove confusion when measuring points and assigning attributes, an issue where more than one attribute per feature code could be linked as a weld attribute is now resolved.
- **Measuring a pipeline point for a joint ID that does not exist:** An issue when measuring a pipeline point that references a joint ID that does not exist, where tapping the *Details* softkey presented a warning message, is now resolved. If you tap *Details* you are now able to view the details for the joint ID that does exist.
- **Application errors:** You should no longer see occasional application errors when you do any of the following:
 - View the *Defaults* or *Select file* screen while creating or checking a tally file.

Pipelines Tally and Joint Map Updater Utility

The Trimble Access Pipelines Tally and Joint Map Updater utility is used to merge the updated tally and joint map data from multiple field crews into a master set of files in the office at the end of each day. The master tally files are then distributed to each field crew, ready for the next day's work. An XML file containing all the merged data is also available for generating custom reports from.

The utility is available for download from www.trimble.com/Survey/Trimble-Access-IS.aspx by clicking *Downloads* on the right and navigating to the *Trimble Access Pipelines* section.

This utility is updated from time to time. To view the latest update information and all updates to the utility since it was first released, view the *Pipelines Tally and Joint Map Updater Utility Release Notes* document available with the utility download file.

Tunnels

New features and enhancements

Changing the grade display format for a vertical alignment

When defining a vertical alignment, you can now configure the display format of the slope values. From the *Options* softkey select *Angle*, *Percent*, or *Ratio*. The ratio can be displayed as *Rise:Run* or *Run:Rise*.

Improved information about vertex points

When viewing information about vertex points when measuring a position in a tunnel, Trimble Access now shows the horizontal and vertical offsets and the northing, easting, and elevation values.

Resolved issues

- **Design points:** An issue when viewing information about design points when measuring a position in a tunnel, where the values reported were sometimes for the preceding design point, is now resolved.

Trimble Installation Manager

New features

Download and installing Trimble SX10 scanning total station firmware

The Trimble Installation Manager is used to download and install firmware updates for the Trimble SX10 scanning total station.

You can select the version of firmware to install and then click *Install* to download and run the firmware installer, or click the download button to download the firmware to install later. Trimble SX10 firmware is not available for download from the Trimble website.

For more information, refer to the *Trimble Installation Manager Help*.

AccessSync

Resolved issues

- **Minimize button:** An issue where AccessSync screens did not include a minimize button, which made it difficult to return to the Trimble Access launcher screen, is now resolved. This issue was introduced in Trimble Access version 2016.00.

Installation Information

This section provides information on installing version 2016.12 of the Trimble Access software.

Installing the software and licenses on the controller

Operating system installation

With a new Trimble Tablet, the operating system is not installed. Turn on the Tablet to install the Windows® operating system and then apply Windows updates.

With all other new controllers, the operating system is already installed.

From time to time new operating systems are made available and can be found at www.trimble.com/Survey/Controllers.aspx.

WARNING – *Operating system updates will erase all data from the device. Make sure you backup your data to your PC before installing. Otherwise you may lose your data.*

Note – *The process of upgrading Trimble Access from one version to another converts the jobs (and other files like survey styles). If you copy the original Trimble Access data files off the controller and then upgrade the operating system, before installing the new version of Trimble Access please ensure you copy the original Trimble Access data files back onto the controller. If you follow these steps then the original Trimble Access files will be converted and made compatible with the new version of Trimble Access.*

Software and license installation

Before you use your controller, you must install the applications and licenses using the Trimble Installation Manager. If you have:

- Never installed the Trimble Installation Manager, go to www.trimble.com/installationmanager for installation information.
- Previously installed the Trimble Installation Manager, you do not need to reinstall it because it updates itself automatically. Select *Start / All Programs / Trimble Installation Manager* to start the Trimble Installation Manager.

For more information, click *Help* in the Trimble Installation Manager.

Note – *For Trimble CU controllers, Trimble Access version 2013.00 and later can be installed only on the Trimble CU model 3 (S/N 950xxxxx). Trimble CU models 1 and 2 have insufficient memory to run later versions of Trimble Access.*

Am I entitled to this version?

To install and run Trimble Access software version 2016.12, you must have a warranty agreement valid up to 1 October 2016.

When you upgrade to version 2016.12 using the Trimble Installation Manager, a new license file is downloaded to your device.

Updating office software

When you upgrade to version 2016.12, you must also update your office software. These updates are required if you need to import your General Survey jobs into Trimble office software such as Trimble Business Center.

When you upgrade the controller using the Trimble Installation Manager, the office software on the computer that has the Trimble Installation Manager installed is also upgraded.

To upgrade other computers that were not used to update the controller, do one of the following:

- Install the Trimble Installation Manager onto each computer and then run Office updates.
- Run the Trimble Update Office Software packages for the Trimble Access software from www.trimble.com/support_trl.aspx?Nav=Collection-84862.
- Use the Trimble Data Transfer utility:
 - You must have version 1.51 or later installed. You can install the Data Transfer utility from www.trimble.com/datatransfer.shtml.
 - If you have version 1.51, you do not need to update to a later version of the Data Transfer utility; you can run one of the Trimble Update Office Software packages from www.trimble.com/support_trl.aspx?Nav=Collection-84862.
- If you only need to update the latest version of the Trimble Business Center software, you do not need to run the Trimble Installation Manager to update the office software. The required converters are now available on the controllers running the Trimble Access software and, if required, they are copied from the controller to the computer by the Trimble Business Center software.

Trimble Solution Improvement Program

The Trimble Solution Improvement Program collects information about how you use Trimble programs and about some of the problems you may encounter. Trimble uses this information to improve the products and features you use most often, to help you to solve problems, and to better meet your needs. Participation in the program is strictly voluntary.

If you participate, a software program is installed on your computer. Every time that you connect your controller to this computer using ActiveSync® technology or the Windows Mobile® Device Center, the Trimble Access software generates a log file that is automatically sent to the Trimble server. The file includes data on what the Trimble equipment is being used for, what software functions are popular in specific geographical regions, and how often problems occur in Trimble products that Trimble can correct.

At any time, you can uninstall the Trimble Solution Improvement Program. If you no longer wish to participate in the Trimble Solution Improvement Program go to *Add or Remove programs* on your computer and remove the software.

Documentation

Trimble Access Help is "context-sensitive." To access the Help, 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.

Go to <http://apps.trimbleaccess.com/help> to download a PDF file of the Help. A separate PDF file is provided for each application.

Software and Hardware Requirements

Trimble Access software version 2016.12 communicates best with the software and hardware products shown below. The software can also communicate with any version later than that shown.

Trimble software	Version
Trimble Business Center (32-bit)	2.99
Trimble Business Center (64-bit)	3.80

Trimble receiver	Version
Trimble R10	5.15
Trimble R8s	5.15
Trimble R2	5.15
Trimble R8-4, R8-3	5.15
Trimble R6-4, R6-3	5.15
Trimble R4-3, R4-2	5.15
Trimble R9s	5.15
Trimble NetR9 Geospatial	5.15
Trimble R7	5.00
Trimble R5	5.00
Trimble Geo7X	4.95
Trimble GeoXR	4.55
Trimble R8-2, R6-2, R4-1	4.64
5800, 5700 II	4.64

Trimble instrument	Version
Trimble V10 imaging rover	E1.1.70
Trimble SX10 scanning total station	S1.0.12
Trimble VX Spatial Station	R12.5.51
Trimble S5/S7/S9 total station	H1.1.20
Trimble S8 total station	R12.5.51
Trimble S6 total station	R12.5.51
Trimble S3 total station	M2.2.30
Trimble M3 total station	V2.0.4.4

For the latest software and firmware versions, see also

<http://trl.trimble.com/dscgi/ds.py/Get/File-93082/Survey%20Software%20and%20Firmware.pdf>.

Controller operating system support

Trimble TSC3 controllers with Microsoft Windows Mobile Version 6.5 Professional can run Trimble Access software version 1.8.0 to version 2011.10.

Trimble TSC3 controllers with Microsoft Windows Mobile Embedded Handheld 6.5 must have Trimble Access version 2012.00 or later.