Trimble® Access™ Software

Legal Information

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Contents

These Release Notes contain information about Trimble® Access™ software version 2016.02.

Trimble Access 2016.02

Resolved issues

- **Low memory**: An issue where multiple open screens on the Trimble TSC3 controller unnecessarily used 4 MB of memory and resulted in low program memory is now resolved. Symptoms of this issue included incomplete drawing of the map and stakeout navigation screen, and the appearance of an error message prompting you to close some windows when you attempted to open a new window.

- **Photo attributes:** An issue where the file name for photo attributes sometimes included the file path, which prevented the image being successfully imported into Trimble Business Center, is now resolved.

- **Geotagged images:** An issue where the *Geotagging* check box was enabled but images were not always successfully geotagged with the GNSS or conventional instrument position is now resolved.

- **Measure codes application error**: You should no longer see an occasional application error when using *Measure codes*.

- **Measure points in tracking mode**: An issue when starting *Measure points* from *Favorites* with tracking mode enabled, where the system required you to tap *Measure* before storing a tracking measurement, is now resolved.

- **Units in new job**: An issue where the grid coordinates and project height would appear in the wrong units when the distance and height units were changed during creation of a new *no projection/no datum* job before selecting or keying in a coordinate system is now resolved.

Trimble Access 2016.01

Trimble Access 2016.01 now supports the Trimble TSC2 controller

Support for the Trimble TSC2 controller is back due to popular demand. A significant number of customers requested access to the new features in the Trimble Access 2016.00 release, and while the TSC2 platform is aging and does not perform as well as the TSC3, if you are not pushing the device to maximum capacity, for example using very large files, then performance is still acceptable.

Trimble Access 2016.01 is the last version of Trimble Access that can be installed on the TSC2 controller.

Resolved issues

- **GNSS vertical offsets**: An issue where GNSS vertical offsets were being applied outside the *Measure points* routine is now resolved. Vertical offsets defined in *Measure points* are now only applied in an RTK survey when you measure Topo, Rapid and Compensated points from the *Measure points* screen.

- **GPS UTC offset**: An issue where the correct UTC offset was not always being applied to GPS times is now resolved. This was a display issue only.

- **Office use only attributes**: An issue where "Office use only" attributes were not displayed correctly is now resolved.
- **Configurable App keys**: An issue where pressing the configurable App keys on some controllers did not perform the configured action is now resolved.
- **Settings application error**: You should no longer see an occasional application error when you use the arrow keys on the controller keyboard to move around the buttons in the *Settings* screen.

Trimble Access 2016.00

Trimble Access GNSS replaces Trimble Access Lite

With Trimble Access version 2016.02, existing *Trimble TSC3 w/Trimble Access Lite* and *Trimble Slate Controller w/Trimble Access Lite* controllers can now be used with a full range of supported GNSS receivers and the Trimble V10 Imaging Rover. Previously, these controllers supported a subset of GNSS receivers.

The part number descriptions for the TSC3 "Lite" and Slate "Lite" controller parts have been updated to indicate the GNSS support change, but the actual part numbers have not changed.

Descriptions have been updated replacing Lite with GNSS:

Part number (no change)	New Trimble Access GNSS Controllers Description
TSC3-02-1012	Trimble TSC3, w/Trimble Access GNSS, no internal 2.4 GHz radio, ABCD keypad
TSC3-02-1022	Trimble TSC3, w/Trimble Access GNSS, no internal 2.4 GHz radio, QWERTY keypad
SLT-01-1000	Trimble Slate Controller, w/Trimble Access GNSS
SLT-01-1100	Trimble Slate Controller, w/Trimble Access GNSS, extended batteries

The GNSS support for the Trimble Access GNSS parts has been enhanced to support the full range of supported GNSS receivers and the Trimble V10 Imaging Rover.

To add support for total stations, purchase TA-UPGRADE-IS-P to upgrade a Trimble Access GNSS controller to a Trimble Access Integrated Survey controller.

A Trimble Access GNSS controller with the TA-UPGRADE-IS-P upgrade applied is identical in functionality to a full Trimble Access controller.

General Survey

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

New features and enhancements

Staking offsets

New offset staking functionality enables a position to be staked offset from a point, line, arc, or alignment. For a point the offset position is defined by an azimuth, horizontal distance and

elevation. For a line, arc, or alignment the offset position is defined by an azimuth or deflection angle, horizontal distance, and elevation.

For a point, when navigating to the point tap *Offset* from the second row of softkeys in the graphical display. The:

- offset direction is defined by an azimuth from the selected point
- offset distance is defined by a horizontal distance from the selected point
- elevation for the offset position is defined by a slope or delta from the elevation of the selected point, or you can key in a value

The second offset is on the same azimuth as the first, with the distance and elevation defined from the original position.

For a line, arc, or alignment, select the *Stake* option *Station/Skew offset from line/arc/alignment*. The:

- offset direction is defined from a station on the line/arc/alignment by either an azimuth or by a deflection angle forward or back of a line at right angles to the selected station
- offset distance is defined by a horizontal distance
- elevation for the offset position is defined by a slope or delta from the elevation of the position at the selected station, or you can key in a value

Target enhancements

In a conventional survey, you can now:

- Define a display name for conventional targets.
- Create up to 10 different targets.
- Use the keyboard shortcut Ctrl + P in any screen to display the prism list and then use the keyboard arrows to select the target to use.

DTM offsets

You can now apply DTM offset values perpendicular to the DTM surface. Previously they were always vertical. This option is available when staking a DTM and when staking a point, line, arc, alignment, or road relative to a DTM.

Simplified support for vertical offsets to a surface

Trimble Access now allows only one vertical offset to a surface to be in use at one time. Previously you could set different offsets in different places and these were applied in different ways.

You can change the vertical offset in any of the following:

- the *Surface Vertical offset* field in the Map *Options* screen
- the *Vertical offset* field in the *Stakeout DTM* screen
- the *Display cut/fill to DTM* and *V. offset to DTM* fields in any other Stakeout screen
- the *Display cut/fill to DTM* and *V. offset to DTM* fields in the survey style

When you change the vertical offset in any of these screens, the change is made in all screens of the Trimble Access software. For example, if you are displaying cut/fill to DTM1 in the Map and staking out DTM2 then only one vertical offset is applied to both DTMs at any one time. Changing the offset in the *Map* or *Stakeout* screen updates the offset in the other screen.

Modifying a TTM surface

In the map, you can now modify a TTM surface by deleting triangles, which can be important when computing volume calculations with irregular shaped areas. To do this, select one or more triangles in the map, and then from the tap and hold menu select *Delete selected triangles*.

For more information, refer to the topic **Surfaces and volumes** in the *General Survey Help*.

Gesture support on tablets

Tablet users can now use gestures to zoom and pan around the 3D map:

- **Zoom in or out**: Place two fingers on the screen and pinch in or stretch out.
- **Pan**: Place two fingers on the screen and slide in the desired direction to move the view.

Note – If you have disabled the 3D map and reverted to the 2D map, gestures are not supported.

Applications can now run in full screen mode on larger Tablet displays

Tablet users with screens larger than the Trimble Tablet (1024 x 600 pixels) can now run Trimble Access applications in full screen mode. You can disable full screen mode from the Trimble icon in the top left corner.

Note – The Trimble Access launcher screen does not run in full screen mode, this is always sized at 1024 x 600 pixels. If a Trimble Access application is not running in full screen mode, tapping the Trimble icon in the top left corner automatically moves the position of the launcher to coincide with the other Trimble Access window.

Measure codes screen now supports AccessVision

The *Measure codes* screen now supports 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. When using AccessVision with measuring codes, this means you can immediately view the new point feature on the map, and if you have enabled the display of codes, the code is shown next to it. If you have added linework to the selected feature code, you will see the linework added to the map.

Note – AccessVision is supported only on tablet controllers.

For more information, refer to the topic **Measure codes** in the *General Survey Help*. For more information on adding linework to feature codes, refer to the topic **Feature libraries** in the *General Survey Help*.

Improved layout of 3D map

The layout of the 3D map has been improved to provide a more streamlined interface. The following changes have been made:

- You can now access the display options by tapping the *Show* button on the map toolbar and then selecting the appropriate category from the pullout menu. Select from *Settings*, *Scans*, *Filter*, *Layers*, and *Pan to*.
- Because the display options can now be accessed from the map toolbar, you can now access the map display options when in an AccessVision screen.
- The icon on the *Predefined Views* button has been updated to .

- The 3D/2D toggle button has been removed from the map toolbar. To:
  - View a 2D representation of the map, tap the *Predefined Views* button ⬡ and then select *Plan*.
  - View the 3D map from the *Plan* view, tap the *Orbit* button ⊕.
  - Disable the 3D map and revert to the 2D map, you still tap *Options* and then clear the *3D map* check box.

Adding a prefix or suffix to staked point names

When storing a staked point you can now assign a prefix or suffix to the *As-staked name*. Configure the prefix or suffix when defining a survey style, or from the *Options* screen when staking a point.

Duplicate point storage options when importing points

When importing a comma delimited file, the new *Duplicate point action* field enables you to decide how points of the same name as existing points in the job are imported. Select:

- *Overwrite* to store the imported points and delete all existing points of the same name.
- *Ignore* to ignore the imported points of the same name so that they are not imported.
- *Store another* to store the imported points and keep all existing points of the same name.

Proximity check tolerance for points with similar coordinates but different names

You can now configure the software to warn you if you try to store a point with similar coordinates to another point already in your job, rather than just warning for duplicate points simply based on the point name. This proximity check enables you to avoid measuring points of a different name but in the same location.

You can configure both a horizontal and vertical tolerance. When you try to store a point that has coordinates that are within the horizontal tolerance of an observed point in the job, then a warning message appears showing the tolerance distance and the measured horizontal distance between the two points. You can select to proceed with storing the measurement or cancel it.

Use the vertical tolerance to avoid the proximity check warning when new points are measured above or below existing points but are legitimately at a different elevation, for example the top and bottom of a vertical kerb.

For more information, refer to the topic **Duplicate point tolerance** in the *General Survey Help*.

Vertical offsets when measuring points during GNSS surveys

You can now add a vertical offset when measuring a GNSS point. To apply a vertical offset, from the *Measure pointsOptions* screen select *Add vertical offset* and then in the *Measure points* screen enter a value in the *Vertical offset* field. When reviewing a job the vertical offset is recorded and the value can be edited if required.

Displaying alignments from a LandXML file in the map

Alignments in a LandXML file can now be displayed in the map. This allows you to select an alignment and then:

- Stake out the alignment as a road using the Roads application.
- Store or stake it as an alignment using General Survey.

Filtering points in the map and Video screen

You can now filter points by *Point name*, *Code*, *Descriptions* (if enabled) and *Note* in the map (3D or 2D map) and in the *Video* screen. From the *Map* or *Video* screen, go to the *Select filters* screen and then tap ⛢ to view the *Wildcard search* screen.

Improved naming of user defined coordinate systems

In previous versions of Trimble Access, when editing coordinate system details for a job that uses a coordinate system selected from the coordinate system library, then editing details such as the project height or geoid model resulted in the coordinate system name being changed to "Local site".

Now when the coordinate system is selected from the library, the *Coordinate system* field displays "Zonename (SystemName)". Where possible, Trimble Access only modifies the coordinate system name to indicate that some user preferences have been defined. Note the following:

- Changing the geoid model or project height does not change the name of the coordinate system.
- Editing any projection or datum parameters changes the coordinate system name to "Local site".
- Completing a GNSS site calibration changes the coordinate system name to "Zonename (Site)".
- Editing any horizontal adjustment or vertical adjustment parameters changes the coordinate system name to "Zonename (Site)".

Display distances in feet and inches

When distances are set to US survey feet or International feet you can now configure the distance display to be in feet and inches. Supported fractions of an inch include: 1/2", 1/4", 1/8", 1/16" and 1/32".

Improved point selection when defining transformations

When defining a rotate/scale/translate transformation you can now select the points to be transformed using the available point selection methods in the *Select* screen.

To access the selection methods tap the *Add* softkey. The *Select* screen appears, showing available point selection methods:

```
Enter single point name
Select from list
Select using wildcard search
Select from file
All grid points
All keyed in points
Points within radius
All points
Points with same code
Points by name range
Section of job
```
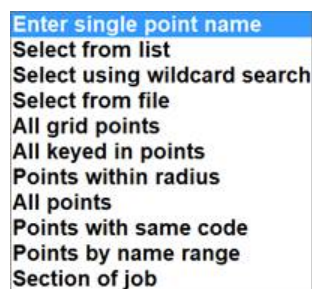
If you have previously selected points in the map, the list is populated with the selected points. If required, you can then add additional points using one or more of the available point selection methods.

Sorting points in a list

When viewing a list of points to select from, you can now sort points by name or code by tapping the column name.

Removing points from a list

When compiling a list of points to:

- stake out
- measure points on a plane
- calculate a traverse misclosure, and adjust a conventional traverse
- calibrate
- transform (Rotate, Scale, Translate)
- transform (Helmert and 7 parameter)

the *Delete* softkey has been renamed to *Remove* to more accurately describe the action as the points are not deleted but just removed from the list. For some options there is also a *Del all* softkey. This too has been renamed, to *Rem all*.

Additional colors for map and video features

The color range has been expanded and made more consistent in the following areas:

- *Cloud color* when scanning with an instrument that has Trimble VISION technology
- *Overlay color* when measuring at the *Video* screen
- *Label color* in the map

Adding files remembers last used folder

When adding files to a job, for example when linking files to the job, by default the software now opens the last used folder.

Copying data between jobs

When copying data from one job to another, when selecting the job to copy from, you can now browse to jobs that are stored in a different folder to the current job.

Exporting files

After exporting files, the *Export fixed format* or *Export custom format* screen now remains open. This makes it easier to generate more than one file or report at a time.

Support for "Office use only" feature code attributes

Feature code attributes created using the Feature Definition Manager where the *Entry mode* for the attributes has been set to *Office Use Only* will now appear in Trimble Access as read-only attributes. Previously these attributes were not visible.

Auto increment point names during station setup

When performing a Station setup you can now set the default point names for the instrument to automatically increment. For more information, refer to the topic **Station setup** in the *General Survey Help*.

Compensator disabled status

When the electronic level of an instrument is disabled, a compensator disabled icon ![icon] now appears on the instrument icon in the status bar and the *Level* icon in the *Instrument functions* screen.

Decimal places for geodimeter output angles

The *GDM data output* option now respects the *Angle display* settings in the *Jobs / Properties of job / Units* screen, enabling the horizontal angle and vertical angle records to be exported to up to five decimal places.

RTX with Galileo satellites

You can now select Galileo satellite tracking for RTX surveys. For more information, refer to the topic **RTX** in the *General Survey Help*.

RTX Internet corrections

In *GNSS Contacts*, the *Use RTX (TGIP)* check box has been replaced by the *Use RTX (Internet)* check box. When this check box is selected the *Mountpoint name* field appears. Select the mountpoint appropriate for your RTX subscription. The *RTXIP* mountpoint is for global RTX corrections, while others are particular to specific network coverage regions. For information regarding RTX subscriptions, please contact Trimble Positioning Services.

Ignoring RTCM transformation messages

If you are connected to an RTCM broadcast data stream which contains unsupported transformation projections, a warning message appears. There is now an *Ignore* button available in the message screen so that you can stop receiving these messages.

GNSS auto connect on tablet controllers

We now disable GNSS autoconnect on the tablet controller when it is connected to a conventional instrument or when Trimble Access is attempting to start a conventional survey.

Coordinate system database updates

- The datum for Germany UTM zones has been set to ETRF89.
- The coordinate systems for Germany have been reorganized into the groups Ascos, Bayern-Soldner, DB, GK and UTM.
- Datum transformations have been added for Barbados, Naparima, Tobago, and Trinidad.
- EGM 2008 Trinidad Tobago geoid model has been added.
- Zone updates to:
  - Brazil
  - Indiana County
  - Iowa County
  - Wisconsin
- Zones for Ireland have been renamed.

Resolved issues

- **Invalid unit in grade fields**: An issue where grade fields showed an error warning that gons was an invalid unit is now resolved. This issue affected non-English versions of Trimble Access only.

- **Units in new job**: An issue where the grid coordinates and project height would appear in the wrong units when the distance and height units were changed during creation of a new job before selecting or keying in a coordinate system is now resolved.

- **Point manager**: Clearing the option to *Display deleted points* in the Point manager now hides deleted duplicate points in the expanded tree view as well as hiding deleted points at the top level of Point manager.

- **Using map point selection in Cogo**: An issue where if you selected points in the map and then switched to the *Cogo* menu, the option to use the selected points was not available, is now resolved. This issue was introduced in Trimble Access version 2015.10.

- **Map**: The following issues are resolved:

  - **Keying in points from the map**: An issue where you could not key in a point from the map. This was an issue only when you had selected *Key in point* from the main menu and then, with *Key in point* still open, you switched to the map and attempted to key in a point from the tap and hold menu.

  - **Entities in DXF files**: An issue where entities defined with a custom coordinate system were not being displayed or were displayed incorrectly.

  - **Blocks in DXF files**: An issue where DXF files that contained scaled inserted blocks were not displayed correctly when the map was zoomed to extents is now resolved.

  - **Arcs in the map**: An issue where an arc in a road definition was occasionally drawn as a line. This was an issue only on a Tablet, when viewing a road in the 3D map or when reviewing a road in the Roads software.

- **3D map:** The following issues are resolved:

  - **Improved display of text:** The appearance and behavior of text displayed in the 3D map is now improved.

  - **Point elevation:** The elevation of a point now appears closer to the appropriate point. This was an issue when there were no codes displayed.

  - **3D map showing incorrect GNSS position**: When measuring positions in a GNSS survey when viewing the 3D map in oblique view, the measured position did not appear in the correct position on the map. This issue occurred only when the survey was started with a value of 0.00 entered in the *Antenna height* field and then the antenna height value was edited without leaving the 3D map.

  - **GNSS position outside map extents**: When opening the map, if the current GNSS position was outside the map extents the map did not auto-pan so that the current position was in the center of the screen.

  - **GNSS position not updating**: During an integrated survey, the position of the GNSS icon on the 3D map was not updating as the antenna was being moved in the field.

  - **Duplicate points appearing**: When measuring duplicate points, the 3D map sometimes showed the same point as an "average point" and a "mean turned angle point" when only the "average point" should have been shown.

  - **Unable to select points**: After selecting two or more points with codes displayed from the 3D map and reviewing them, you could no longer select points from the 3D map.

- **Empty map**: If the tablet was suspended and then resumed, the map was empty and only the *Esc* key was active.
- **Control codes for compound curves**: An issue when using control codes to create a compound curve where the linework was not drawn correctly is now resolved. This issue was introduced in Trimble Access version 2015.10.
- **Control codes for arcs**: An issue when a point was coded to define a back to back arc (where the end arc and start arc control codes were defined for the same point), where a dashed red line was drawn instead of the second arc is now resolved.
- **Control codes for offsetting lines and arcs**: The following issues are now resolved:
  - All linework including the offset lines are now drawn correctly when a *Start join sequence* control code is used in conjunction with an *End tangential arc* control code. Previously the linework following the end of the arc was not tangential to the arc. A similar issue occurred if the *Start join sequence* control code was used for the first point after the end of the arc.
  - Offset linework is now drawn correctly:
    - At the intersection end of an arc and a line where the line is not tangential to the arc. Previously, offset lines could overlap and not connect.
    - Between the end of one arc and the start of another arc. Previously, no offset lines were drawn.
    - When the offset values are not the same for sequential points. Previously the half angle was not computed correctly.
- **Staking out an alignment in cross section view**: An issue where an extra *Auto measure* check box appeared when staking out an alignment in the cross section view is now resolved.
- **Staking by station on alignment**: An issue when staking a station on an alignment, where the original elevation shown in the *As-staked deltas* screen was shown as null so the original elevation could not be reloaded, is now resolved. This issue occurred only when staking with an offset.
- **Surface to surface volumes**: An issue where the names of the surfaces selected in the *Initial surface* and *Final surface* fields in the *Compute volume* screen were swapped over in the *Review Job* screen and in the JobXML file ouput is now resolved. The calculated volume was correct for the original selection.
- **Pause CMRx corrections**: An issue where tapping *Pause* did not pause the flow of correction data after hanging up and then redialing the base station is now resolved.
- **Internet RTK Survey**: An issue with connections to NTRIP v2.0 servers where the survey would not start after selecting a mountpoint is now resolved.
- **Duplicate T02 files:** An issue where the file names of postprocessed logging files were duplicated in different job folders is now resolved. This issue occurred only when more than one job was used in a PPK survey on the same day.
- **Communication issues starting a scan**: There were new radios phased in to the Trimble S series instruments and the Trimble Tablet around March 2015 to conform with new European listen-before-talk regulations (ETSI 1.8.1). As a result of the change, controllers with new radios could encounter communication issues when attempting to start a scan.
- **Snapshot on measure**: An issue when capturing a snapshot when taking a measurement where the original image was not saved is now resolved. This was an issue when the image was annotated with the cross hair only.

- **High speed scanning**: An issue when performing high-speed scanning using a Trimble VX Spatial Station or Trimble S7 or S9 total station where not all points, as defined by the offset interval, were being computed and therefore these points were not measured, is now resolved

- **Incorrect low battery warning connecting a Trimble M3 total station**: An issue where the Trimble Access software briefly showed an incorrect low battery warning when connecting to a Trimble M3 total station is now resolved.

- **Foresight resection points displaying HA residuals**: An issue where Foresight points in a resection showed HA residuals despite not having known positions in the resection is now resolved.

- **Esc from eLevel screen**: An issue where you were not able to tap *Esc* to leave this screen without re-leveling the instrument is now resolved.

- **Joystick**: An issue when using controller keys to control the Joystick in an AccessVision screen where the instrument kept rotating or the arrow key in the software screen remained highlighted until another key was pressed is now resolved.

- **Circular objects using a Trimble S Series and Trimble CU**: An issue when calculating the center of a circular object using the bisect tangent method, where the observation could not be made and the instrument display locked up is now resolved. This issue affected Trimble S Series total stations with Trimble CU controllers only.

- **Trimble CU keys repeating**: An issue on a Trimble CU controller, where after pressing a key once on the keypad, the software occasionally behaved as if the key had been pressed multiple times is now resolved. This fix ensures the character repeat setting is disabled when General Survey starts.

- **AccessVision**: The following issues are now resolved when viewing an AccessVision screen:
  - **Faster display when reopening map or video screen**: When more than one AccessVision screen is open, if you close the map or video screen in one AccessVision screen and then reopen the map or video screen in another, the map or video screen content is displayed more quickly.
  - **Measure topo screen not closing correctly**: An issue where, when using the *Measure topo* screen with the video or map screen displayed, the *Measure topo* screen did not redraw correctly when the point was measured and stored.
  - **Snapshot on measure**: An issue when measuring a topo point with *Snapshot on measure* selected where the snapshot was not captured. This was an issue only when the AccessVision graphical display was hidden.

- **Storing attributes on a tablet**: An issue on a tablet, where the Trimble Access launcher screen appeared after attributes for a point were stored is now resolved. Now the software returns to the General Survey *Measure points* screen.

- **Panorama progress screen**: An issue when using an instrument that has Trimble VISION technology with a non-Tablet controller, where starting a panorama from page 2 of the *Scanning* screen meant that a panorama was captured but no progress screen was shown, is now resolved.

- **Application errors**: You should no longer see occasional application errors when you do any of the following:
  - Close General Survey when the *Key in note* screen is open.
  - Tap the *Orbit* button in the 3D map after adding a raster background in a scale-only job. This issue affected only some raster image files.

- Use large raster image files in the 3D Map. The performance of the software is now improved when using these files.

- Tap *ESC* when performing a resection.

- Export a DXF file from a job where point attribute fields contain null dates.

- If controller memory was running especially low the Map could stop responding and then the software would crash. The controller battery had to be removed and then reinserted in order to restart the software.

Pipelines version 1.31

New features and enhancements

Staking out alignments

Version 1.31 of the Pipelines software provides a *Stake out alignment* option in the *Stakeout* screen. This enables users to easily stake out an alignment within the Pipelines software, instead of switching to the General Survey software.

Special characters in weld or bend details fields

When defining additional weld or bend details fields for use during joint mapping, you can now use the following special characters: &, <, >, and ' in field names and &, <, >, ' and " in field values. Previously, if any of these characters were used the generated XML report files were invalid.

Resolved issues

- **Empty rows in joint mapping form**: An issue where adding more than six additional details fields for welds or bends created unnecessary empty rows in the joint mapping form is now resolved.

- **Blank screen during joint mapping**: An issue where a blank screen sometimes appeared when you used the *Prev* or *Next* softkey to move to another record is now resolved. This was an issue only when moving to a record with a smaller number of pages than the current record.

- **Application errors**: You should no longer see occasional application errors when you use the pullout menu next to the *ID* field to select the next weld, bend, or loose end ID during joint mapping.

Pipelines version 1.30

New features and enhancements

Selecting the order that joint maps are presented when using Next and Prev

When performing joint mapping you can now choose whether the joint maps are presented in the recorded *File order* or *Sequence order* when the next or previous joint is displayed. *File order* presents the joint maps in the order that they were recorded in the field. *Sequence order* presents

the joint maps by matching the joint ahead and joint behind IDs to create linked sequences. The default is *File order*, which provides faster presentation for larger files over *Sequence order* since no extra processing is needed.

When generating a report using either the *Joint map list* or *Joint mapping report* file format, the report can be presented in *File order* or *Sequence order*. In general, *File order* is most useful when you are collecting data and creating a joint map. If you are reviewing the data that has been collected, then you may find it more useful to run a Joint mapping report with *Sequence order* selected.

Improved performance during joint mapping and as-built survey

When working with large joint map files, the system is now significantly faster at checking to see if the joint IDs have previously been used during joint mapping, or when searching for the next weld ID during measurement of the as-built pipeline.

Computing an inverse between two points

You can now compute an inverse between two points from the *Cogo* menu. Previously, when in the Pipelines application, an inverse could only be computed from the map.

Resolved issues

- **Copied points with Pipeline attributes**: An issue when copying points from one job to another, where any Pipeline attribute records associated with those points were not copied to the job is now resolved. To copy points, from the *General Survey* menu select *Jobs / Copy between jobs*.

- **Next weld ID**: An issue where the joint behind ID and the joint ahead ID were not set when the next weld ID was entered when you first opened the *Joint mapping* screen is now resolved.

- **Changing to a new joint mapping method**: When mapping joints, you can now more easily use the arrow next to the ID field to change the mapping method and select the next weld, bend, or loose end ID, even if there is no existing weld, bend, or loose end ID.

- **Check status**: An issue where a tally record was flagged as checked and modified (showing a flag value of 3 in the master index IDX file) when it should have been flagged as checked only (flag value of 1) is now resolved.

Pipelines Tally and Joint Map Updater Utility

The Trimble AccessPipelines 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.

The following updates to the utility have been made since the previous Trimble Access release:

5 April 2016

- **Checking the master and new joint map files**: During joint map checking (carried out when previewing the update operation or when carrying out an update operation), the Tally and Joint Map Updater utility now checks through all weld joint maps in the master joint map file and new joint map file (if present) to ensure that a joint ID is not referenced as a joint ahead or a joint behind more than once.

5 March 2016

- **Checking and editing the master joint map file**: The preview and logging report details have been extended to report on any joint map records that have duplicate definitions (where the weld or loose end definitions have different joint map IDs but specify the same joint IDs). Any joint maps with duplicate definitions are reported in addition to any joint maps with duplicate IDs. The Edit option for editing the master tally files has been enhanced to provide an option to delete specified joint map records, so that problems with joint map records reported as having duplicate names or definitions can be rectified.

3 February 2016

- **Editing the master tally file**: The Tally and Joint Map Updater now provides an **Edit** button for updating the master tally file, if required. After updating the master file with updates from the field, click **Edit** to delete joint definitions from the master file or to rename joint IDs in the master file. Then copy the master set of files onto each controller as usual.

Roads

New features and enhancements

Staking skewed offsets

In the graphical selection screen, a new tap and hold menu option, *Stake skew offset*, is available for Trimble, LandXML, and GENIO roads. The *Stake skew offset* option enables a position to be staked at a skew relative to the horizontal alignment. This option is especially useful when staking culverts, bridge abutments, and similar features that are not aligned at right angles to the alignment, or where offset stakes that would typically be set perpendicular to an alignment have to be set at a skew angle due to obstructions. The skew is defined from a station on the alignment by a deflection forward or back of a line at right angles to the alignment or, alternatively, by an azimuth. The elevation for the offset position is defined by a slope or delta from the elevation of the position at the selected station or, alternatively, you can key in a value.

Displaying alignments from a LandXML file in the map

Alignments in a LandXML file can now be displayed in the map. This allows you to select an alignment and then:

- Stake out the alignment as a road using the Roads application.
- Store or stake it as an alignment using General Survey.

Prev and Next softkeys

When defining the components of a road, the *Prev* softkey is no longer displayed when on the first of a series of elements and the *Next* softkey is no longer displayed when on the last element of a series of elements.

Resolved issues

- **Point name incrementing**: An issue when surveying a road using an integrated survey style with the *Precise elevation* option selected where the point name did not increment if a specific point name, rather than the default, had been entered is now resolved.

- **Azimuth value during stakeout**: An issue when staking a road using a conventional instrument where the *Azimuth* navigation value did not display when the value was greater than 90° is now resolved.

- **Go in distance during stakeout**: An issue when staking a road using a conventional instrument where the *Go in* distance navigation delta was obscured by the details for the point being staked is now resolved. This was an issue only when staking the road using the menu-based survey selection method.

- **Additional points**: An issue where additional points (defined as part of the road definition) were not displayed when reviewing a road is now resolved. This was an issue when there was only one additional point or when the elevation of an additional point was lower than the road surface at the station and offset of the additional point.

- **Hinge string name**: An issue when surveying a GENIO road and editing the hinge string for a side slope where, in some situations, the *Hinge string* name did not update to the new string name is now resolved.

- **No projection warning**: An issue when the coordinate system for the job was set to No projection/no datum where a message warning "No projection. Some features will not be displayed." incorrectly appeared when you defined a template or reviewed a road is now resolved.

- **Slow to update position**: An issue where your position was slow to update when surveying a GENIO road is now resolved. This issue was apparent only for particularly long roads or roads with a large number of strings.

- **Application error**: An issue when reviewing a long GENIO road on a tablet where the software appeared to freeze when you tapped in empty space on the screen is now resolved.

Tunnels

Resolved issues

- **Application errors**: You should no longer see occasional application errors when you tap *Esc* after measuring and storing a position to define a template element.

Trimble Installation Manager

New features

Upgrades are now faster

Upgrading from Trimble Access version 2015.20 and later to a new version is now faster due to changes to the process of upgrading the old files. In previous versions, all files in the Trimble Data folder were copied from the data collector and the required files were converted to the new version, before all files were then copied back onto the controller. From version 2016.00, only files that require conversion are copied, converted, and transferred back onto the controller. Files such as DXF files and geoid models that do not need converting are no longer copied on and off the controller.

Custom data folders for installing Trimble Access data files

You can now use Trimble Installation Manager to install custom Trimble Access data files to a controller as part of a software installation, upgrade, or when required.

Users who are...	Might use custom data folders when...
Distributors	• Setting up a group of new controllers for a customer • Configuring demo controllers with sample files
Customers	• Setting up a group of new controllers with 'standard' files used by the organization • Configuring existing controllers with files for a specific project

Installed file types might include:

- Survey styles, job templates
- Feature code libraries
- Control files, DXFs, alignments
- Customized reports/stylesheets, or antenna.dat files

Files requiring conversion, for example a job from the previous version of Trimble Access, are automatically converted to the new version in the same way this occurs when a controller is upgraded.

For more information, refer to the topic **Managing Trimble Access data files** in the *Trimble Installation Manager Help*.

Other changes

- **Custom antenna files**: The format of the on-board antenna file antenna.dat has changed. Custom antenna.dat files from previous versions of Trimble Access are not compatible with version 2016.00, and will not be copied during the Trimble Installation Manager upgrade process. Custom antenna.dat files from the Trimble Access software version 2016.00 cannot be used with previous versions of the software. To use a custom antenna file in Trimble Access version 2016.00 you must re-upload the customized antenna.ini file using Trimble Business Center or Trimble Data Transfer after updating the office software components to work with Trimble Access version 2016.00

AccessSync

New features

AccessSync transfer rates

You can now select the rate at which data is transferred, and whether the needs of other network services need to be considered. The options are:

- **Minimum**: Transfers files at a slow rate at all times. Holds off all file transfers if real-time surveying is using the connection for base data. Use this if you have a slow or rate-restricted internet connection.
- **Adaptive**: Transfers files at an intermediate rate if the internet connection is not in use, or lowers the transfer rate if there is other activity so as to share the connection. The behavior of this mode depends on the type and capacity of the connection.
- **Maximum**: Transfers files at the fastest rate for the connection. May cause throughput issues for other functions using the internet connection if it is not capable of a high bandwidth.

Resolved issues

- **Downloading images**: An issue where AccessSync repeatedly downloaded a background image file even after successfully downloading it is now resolved.

GNSS Forecast

Resolved issues

- **Not enough satellites reported**: An issue where incorrect satellite conditions were reported when tracking of GPS satellites is disabled is now resolved.

Installation Information

This section provides information on installing version 2016.02 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 2016.02, you must have a warranty agreement valid up to 1 April 2016.

When you upgrade to version 2016.02 using the Trimble Installation Manager, a new license file is downloaded to your device.

Updating office software

When you upgrade to version 2016.02, 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 2016.02 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)	3.70

Trimble receiver	Version
Trimble R10	5.11
Trimble R8s	5.10
Trimble R2	5.11
Trimble R8-4, R8-3	5.10
Trimble R6-4, R6-3	5.10
Trimble R4-3, R4-2	5.10
Trimble R9s	5.11
Trimble NetR9 Geospatial	5.10
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 VX Spatial Station	R12.5.48
Trimble S5/S7/S9 total station	H1.1.14
Trimble S8 total station	R12.5.49
Trimble S6 total station	R12.5.49
Trimble S3 total station	M2.2.23
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.