

NEW FEATURES

Robotic Instrument Toolbar – Improved robotic instrument toolbar for robotic Total Stations. [F3274]

Total Station Assistant – New assistant feature to suggest workflows when opening a project for Total Station work. [F3246]

NEW AND UPDATED INSTRUMENT DRIVERS

Various instrument drivers have been added and improved.

GNSS

- **Benchmark BMG80** – New Driver. [F3248]
- **KQ GEO M8mini** – New Driver. [F3259]
- **KOLIDA K5/K5 Plus+/K9 Mini** – Improved driver. [D8852]
- **Leica GS14** – Fixed issue with setting antenna height if raw data logging was enabled. [D8668]
- **Leica GS14/GS15** – Fixed issue with configuring radio settings for Reference receiver profile.
- **Leica GS16** – New Driver. [F3263]
- **NavCom** – Fixed issue with picking StarFire QuickStart seed point from database, and updated StarFire over IP URL. [D8736, F3321]
- **Pentax G2100** – Added raw data logging support for Pentax G2100N and G2100T receivers. [F3168]
- **Pentax G6** – Improved driver. [D8705, D8747]
- **RUIDE NOVA R6** – Improved driver. [D8852]
- **SANDING T66** – Improved driver. [D8852]
- **SatLab SLC** – Added raw data logging support for SatLab SLC receivers. [F3132]
- **SOUTH GALAXY G1/G1 Plus/G6** – Improved driver. [D8852]
- **Stonex S10A** – New Driver. [F3108]
- **Stonex S800** – New Driver. [F3265]

Total Station

- **Leica / GeoMax Robotic (GeoCOM) Instruments** – Various improvements including:
 - Improved tilt correction handling
 - Improved automation handling with all ATR / LOCK / Manual modes
 - Improved Connect/Disconnect procedure
 - Improved EDM Tracking mode support for Prism and Reflectorless
 - Automatic EGL when using the joystick
 - Setting the plate reading following a resection was not possible [D8304]
 - ATR may not be successful on first attempt [D8094]
- **Leica TS12** – Improved connection with CS20 LRBT.

Disto/Laser

- **Leica Disto S910 / 3D Disto** – Various refinements related to WiFi connectivity.

COORDINATE SYSTEMS

- Added [Australian MGA94\(GDA2020\)](#) coordinate systems. [F3329]
- Improved **RTCM Transformation** support is now part of the Link Configure procedure. [D7402]
- Coordinate system files updated to new version, the new names are:
 - **Map3_Datums**
 - **Map3_Ellipsoids**
 - **Map3_Systems**
- Updated **MRT** (Multiple Regression Transformation) files.

NOTE: Installer Packages no longer include all regional transformation files for coordinate systems. Separate downloads can be obtained through the [Grid Shift Files](#) download page. The MRT transformation files are still included, however GDC and GSB files must be downloaded separately.

NOTE: New geoid models are posted on the [Geoid Models](#) download page when available. If you require a geoid model not currently available, please contact MicroSurvey.

LANGUAGES

The following program interface language translations have been updated:

- Czech
- French
- German
- Portuguese
- Spanish

DEFECTS FIXED

ASCII file extension – Fixed issue with ASCII Export on mobile platforms adding three extensions (*.txt.csv.cst) to the file name if no extension was entered with the file name. Defaults to *.txt now. [D8639]

GNSS Auto Record – Incorrect results were exported if project was not set to *Meters* distance unit. [D8753]

GNSS Tilt Offset – Post processing notes in the RAW file did not include Start/End times. [D8656]

Stake Point on Wall – The MEP Stake Point on Wall feature was not functional with Leica CS15 and CS20 data collectors. [D8333]

Point Averaging – Selecting multiple points from the Point Database was broken. [D8833]

KNOWN ISSUES

Photo Notes – Camera rotation is not supported.

LandXML – LandXML alignments containing a sequence of Spiral-Curve-Spiral-Curve-Spiral are not properly displayed.

NEW FEATURE DETAILS

Robotic Instrument Toolbar

A movie showing the updated toolbar can be viewed online at

<http://s3.microsurvey.com/fieldgenius/movies/RoboticToolbar/RoboticToolbar.html>



When you use Layout in robotic total station mode, you will see this toolbar on the side of the map area.



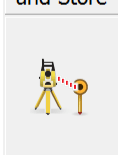
This toolbar allows you to control your instrument settings, target heights, and Measure Modes, as well as initiating a measurement.



HT:1.300m
IR Std

The current state of the instrument target aiming settings are displayed, and you are able to toggle the instrument target aiming settings between Manual / ATR / LOCK states. With LOCK enabled, **Search** and **Search Next** functionality is available.

Measure
and Store



Manual mode

This button indicates that the instrument is in manual aiming mode.

- **Single Tap** - Switch LOCK mode to ON.
- **Double Tap** - Switch ATR mode to ON.



LOCK mode, not following a prism

These buttons indicate that the instrument is in LOCK mode, however not currently following a prism.

- **Single Tap** - Begin PowerSearch to search for prism. The left button starts a clockwise search, the right button starts a counterclockwise search.
- **Double Tap** - Switch LOCK mode to OFF and set manual aiming. Same action on both buttons.



Searching

This button indicates that a target search is in progress.



LOCK mode, following a prism

These buttons indicate that the instrument is in LOCK mode, and following a prism.

- **Single Tap** - Begin PowerSearch Next to search for the next prism. The left button starts a clockwise search, the right button starts a counterclockwise search.
- **Double Tap** - Stop following the prism. Same action on both buttons.



ATR mode

This button indicates that the instrument is in ATR mode.

- **Single Tap** - Switch ATR mode to OFF and set manual aiming.



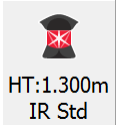
Cursor Tracking

Toggle Cursor Tracking. When enabled, the instrument makes continuous measurements and the current position of the target will be displayed on the screen in real time. When stationary, the cursor is a hollow triangle pointing towards the instrument. When moving, the cursor is a solid triangle pointing in the direction of travel.



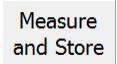
Instrument Settings

Opens the Total Station Settings screen, where you can control specific settings and features for your total station.



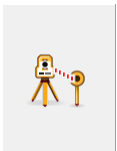
Target Manager

Opens the Target Manager, where you can set the target, target height and EDM mode.



Measure Mode

Opens the Measure Modes screen where you can select what type of measurement you want to take. The current Measure Mode is always displayed on this button - for example if you're using the distance offset mode it will display "Dist Off".



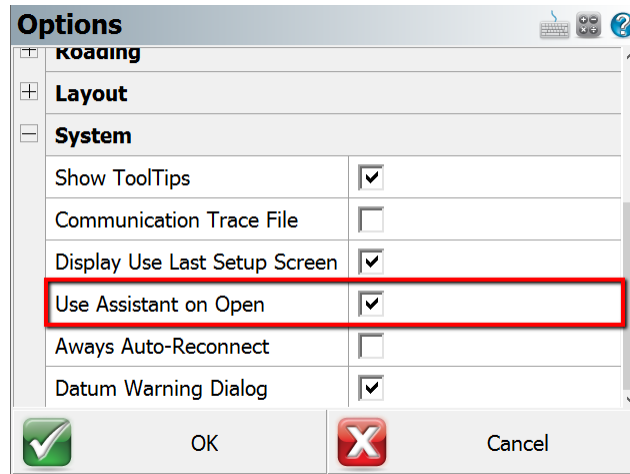
Measure Button

Measure and store distances and angles. The current state of Manual / ATR / LOCK mode determines the sequence of events:

- **Manual mode** - The instrument starts a measurement immediately.
- **LOCK mode, not following a prism** - The instrument first searches for a prism and takes a measurement only if a prism is found.
- **LOCK mode, following a prism** - The instrument starts a measurement immediately.
- **ATR mode** - The instrument first searches for a prism and takes a measurement only if a prism is found.

Total Station Assistant

The new Assistant will suggest workflow shortcuts when you open a new or existing project. The Assistant can be turned ON/OFF from the Settings – Options area:

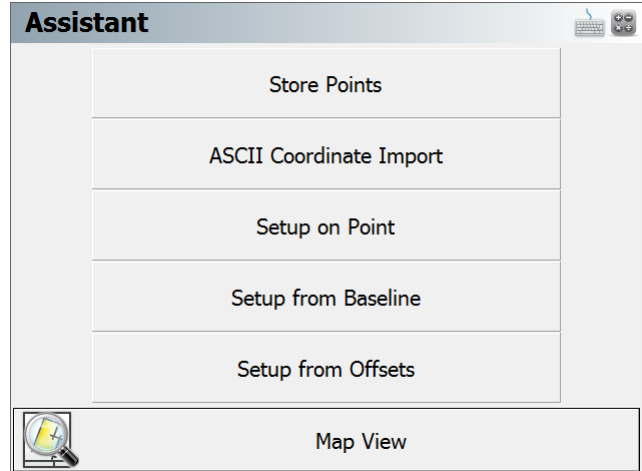


When opening a project, one of three scenarios can be encountered:

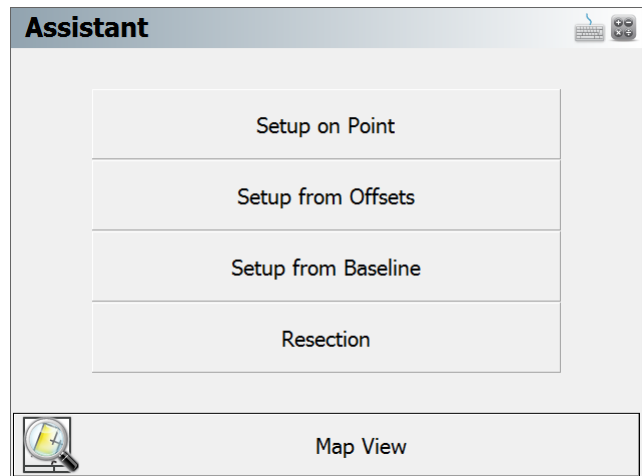
1. The project has no points stored, usually a new project
2. The project has some points stored, but no previous Total Station setup routine was completed
3. A previous Total Station setup routine was completed in the project

The Assistant will suggest different workflow shortcuts depending on which state the project is in.

No Points exist



Points exist, no previous Total Station Setup



Previous Total Station Setup completed

