MicroSurvey FieldGenius 3.4

Release Notes

MicroSurvey FieldGenius 3.4 (v 3.4.11189)

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FieldGenius 3.4 makes the tools you use every day faster, easier, and more reliable. We've added support for new devices, cut down the number of taps in common workflows, and made it easier to see which settings are enabled and change them when you need to. We've also put a big focus on stability, with 118 features and improvements added and 92 bugs fixed in this release.

New features

Improved DXF and DWG workflows
Improved DXF and DWG workflows make it clearer whether a drawing will be imported into the project database or attached as an external reference (XREF). When importing geometry into the database, you can specify the starting point ID and find the next available ID if a conflict exists. This release also improves the handling of block references, nested blocks, layers, colours, point and line creation, drawing placement, XREF organization, and zooming to attached drawings.

Easier access to tilt controls
Tilt corrections can now be enabled or disabled directly from the GNSS Observation panel without opening the instrument profile. Updated icons show whether tilt is disabled, enabled but not initialized, or enabled and ready for measurement. The GNSS profile now uses a toggle to show and change the current tilt state.

Change measurement tolerance from the Observation panel
Measurement tolerance settings can now be changed directly from the Observation panel. Open the measurement-mode menu to select an available tolerance profile or access the full tolerance settings, reducing the number of steps needed to adjust measurement requirements in the field.

Pan the map while map follow is enabled
You can now pan away from the current position while Map Follows Position is enabled. Panning temporarily releases map follow and displays a current-position indicator. Select the indicator to recenter the map on the current position and resume map following.

Start and select lines more efficiently
A new Connected Line option lets you start a line from the previously stored point, making it easier to create branches from existing linework without manually joining the segments afterward. Line selection on the map has also been improved: select a line once to make it active, or select the active line again to open its editing and stakeout options.

Search point-selection lists and code descriptions
Point-selection lists used throughout FieldGenius are now searchable, making it easier to locate points in large projects. Search controls have been added to common point-input locations, including COGO calculations, total station setup, staking, and transformations. Code searches can also match the code description or the code name, allowing numeric or abbreviated codes to be found using a familiar description. (For example, a code HC with description House Corner can be found by searching Corner).

One-finger map zoom
Added one-finger map zoom on Android and Windows to allow zooming with a stylus in the cold months. Double-tap the map, keep the second press held, and drag vertically to zoom in or out. Existing two-finger pinch-to-zoom controls remain available.

Stake Again when outside tolerance
When a staking measurement is outside the defined tolerance, the result message now includes a Stake Again option. This returns directly to the staking workflow so the measurement can be repeated without first saving the out-of-tolerance result or navigating back through multiple screens.

Expanded GNSS transformation
GNSS local transformations support additional point types and workflows, including using an existing GNSS-observed base point as a control point. Grid-to-Ground transformations can also calculate a project scale factor using a base point together with imported latitude and longitude control points.

Optional interface feedback sounds
Optional interface feedback sounds provide audible confirmation when a button or other interactive control has been activated. Sounds apply to actions such as selecting buttons, menu items, toggles, tabs, list items, dialog actions, and measurement controls, but not to continuous actions such as scrolling or map panning. Interface sounds can be enabled or disabled under Settings > Sound & Vibration.

Windows desktop shortcut
On first run, FieldGenius for Windows now offers to create a desktop shortcut. This makes the application easier to access without requiring the shortcut to be created manually from the Windows Start menu or application folder.

Instrument and driver support

More than 12 satellites in the generic NMEA driver
The generic NMEA driver can now report and track more than 12 satellites.

Support for the EOS Skadi family and Smart Handle
Added support for the EOS Skadi receiver family, including the Skadi 200, Skadi 300, and Skadi Gold. Supported capabilities include pole-based GNSS measurements, tilt compensation, automatic antenna-height handling, and EOS Smart Handle detection. When the Smart Handle is attached, FieldGenius provides Extensible Mode and Invisible Pole Mode for measuring points that cannot be occupied directly. The Observation panel, measurement controls, stored observation details, and instrument profile update to reflect the selected Smart Handle mode and its current readiness. Additional messages explain when tilt needs to be initialized or when an antenna height must be entered before tilt can be enabled.

Juniper Spire SP1 support
Added instrument and antenna-definition support for the Juniper Spire SP1 GNSS receiver. The receiver can now be selected when creating an instrument profile and used with the appropriate antenna reference information.

Emlid Reach RX2 tilt support
Added tilt-compensation support for the Emlid Reach RX2 when running receiver firmware 2.13 or newer. The driver is now listed as Reach RX2 (NMEA), without the previous "No Tilt" label. Tilt-corrected positions are updated at the position rate configured on the receiver, preventing uncompensated positions from interfering with tilt-corrected measurements.

Improved GeoMeasure GM52 total station support
Improved communication and measurement-mode handling with the GeoMeasure GM52 total station. Changes improve F1/F2 recognition, prism and reflectorless target changes, command handling, and overall connection stability.

Improvements

Many stability and performance improvements
Improved stability and performance across Android and Windows. This release includes reduced memory use, more efficient screen and list rendering, faster loading in data-heavy workflows, improved code-list performance, and quicker application shutdown on Windows. It also includes fixes for crashes and stability problems involving project data, maps, instrument connections, staking, surfaces, installation, and large or complex projects.

Clearer progress update during large imports
Large file imports now provide clearer progress information while data is being processed. This gives better feedback during longer operations and lets you know the import is underway.

Dark map background in Dark Mode
When Dark Mode is enabled and no online map or background imagery is displayed, the map canvas now uses a dark background instead of a white background. Online imagery and other map services continue to use the appearance provided by the external map source.

Displaying closely spaced points
Points that are very close together can now be displayed separately when the map is sufficiently zoomed in. This makes it easier to identify and select the intended point when multiple points are separated by only a few millimetres or centimetres, and the scale bar displays correctly.

Improved mobile COGO input layouts
Improved mobile portrait layouts for COGO and line-offset workflows. Input panels can be expanded to provide more room for entering values or collapsed after a result is calculated, allowing the result and map to remain visible with less scrolling. The updated layouts apply to workflows including Inverse, Inverse Point to Line, Traverse, Intersections, Station/Offset, and Line Offset.

Progress indicators for GNSS commands
When enabling or disabling GNSS corrections and tilt, we now display a progress wheel to indicate that the operation is in progress.

Immediate coordinate updates after RTS transformations
Rotate/Translate/Scale transformations now refresh affected measured-point coordinates immediately. Total station setup and staking workflows use the transformed coordinates without requiring the project or application to be closed and reopened.

Improved total station measurement workflows
Improved several total station workflows. Resection no longer incorrectly retains the F1/F2 setting from the Occupy Point setup method, existing points can be overwritten when using automatic side-shot modes, and point lists can be opened correctly during check measurements. Point-selection controls also display the correct Select All or Deselect state based on the active selection.

Inverse defaults to user-controlled input
The Inverse calculation now defaults to the User Controlled input method. Entered start and end points remain unchanged after calculating a result instead of automatically advancing the previous endpoint to become the next start point.

Fixes

Surface and volume calculation fixes
Fixed crashes and incorrect results in surface-volume calculations. Corrections include calculations using a reference-plane datum in projects configured for US survey feet, volume calculations between two surfaces, and calculations involving certain surface definitions or breakline configurations.

Stake screen crash
Fixed a crash that could occur after opening the Stake Mode list, leaving the Stake screen, and then returning to staking. The Stake screen can now be reopened without placing the application in an invalid staking state.

RAW file prism-height records
Corrected RAW file output when the prism or target height changes between backsight setup and subsequent side-shot measurements. The exported RAW file now retains the backsight target-height record and writes the updated target height before the side shot.

GNSS correction source management
Fixed an issue where GNSS correction data-source profiles could reappear after being deleted or could be duplicated in the correction-source list. Deleted correction sources now remain removed when leaving and reopening the correction settings.

Leica GS18 and GS16 measurement speed
Fixed slow point measurements when using Leica GS18 and Leica GS16 GNSS receivers with a Leica CSX8 data collector. The driver now handles receiver communication more efficiently during measurement.

Crash after project backup
Fixed a crash that could occur when connecting to an instrument immediately after backing up a project. Project information is now retained correctly after the backup operation so an instrument connection can be started without reopening the project first.

Map refresh corrections
Fixed map refresh issues that could leave deleted points or lines visible until the map was zoomed or moved. Manually entered points and active linework now update their displayed position and rubber-band line as the map cursor moves, without requiring an additional map action.

EOS Atlas and RTK corrections
Fixed an issue where EOS Atlas corrections could interfere with an active RTK correction stream and cause the receiver to alternate between RTK and Atlas solutions. Atlas settings are now handled more consistently when creating or reconnecting to an instrument profile so the selected correction mode is preserved.

Slovakia grid-shift file corrections
Fixed coordinate-transformation issues when using Slovakia grid-shift files. The updated transformation handling improves agreement between FieldGenius results and recognized Slovak JTSK reference coordinates.