



**Release Notes**  
**MAGNET Field for Android**  
**November 15, 2023**

**MAGNET Field (Android/iOS) V8.0 Release Notes - Introduction**

Please take time to read these Release Notes. They contain information about the following:

- New Features
- Improvements
- Bug fixes

**NOTE:**

It is always recommended, before upgrading your field software, user's backup their original job; and following any update to your field software, users perform in-the-field checks to ensure data integrity.

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# MAGNET Field for Android V8 Release Notes

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The following new additions/revisions have been made to Magnet Field V8.0.

Please take time to read the release notes. They contain information about the following:

- New Features
- Feature Enhancements
- Issue Resolutions

## Tested Devices

### List of Android devices that have been tested with MAGNET Field for Android/iOS V8.0

Android: Topcon FC-6000A, Juniper Systems CT8X2, Google Pixel

iOS: iPad Mini 6th gen, iPhone X and iPhone XR

## Key Features

### Shared Data File

MAGNET Field now supports the use of a Shared Data File. The shared data file is stored on the users Field Controller and can be used on any job. Data that can be included in the shared data file includes:

- Control Points
- Code Library

All the supported data types can be updated to include new shared data and users can choose what data they want to use in a job. The Shared data file can be used in all Setup and Calculate routines in MAGNET Field.

The shared data XML file is stored in a default location on the Field Controller, the user has the option to store the shared file in any location on the Field Controller.

### SureTopo

SureTopo™: outlier detection feature for RTK Topo surveys. SureTopo is Topcon's patent-pending automatic method to detect and filter out random RTK positions. SureTopo™ uses automatically recorded series of RTK coordinates for a point, automatically resets both GNSS tracking and the RTK engine between records and processes these coordinates with the proprietary filtering algorithm before MAGNET Field stores the point.

## GNSS and Optical Improvements

- **Optical Setup Improvements:** MAGNET Field (Android/iOS) now includes the following setup features and improvements.
  - Reference Line
  - Reference Direction
  - Setup by Gridlines
  - Set Collection
  - Support for the RC handle trigger
  - Added an ability to set a custom/user-defined Non-Prism (distance) offset for topo, stakeout and resection under the Prism configuration
  - Edit Prism dialog: The Center Offset is now in mm and not dependent on the distance units set in the job
  - Supported Sheet prism type in Edit Prism so it can use aperture setting.
  - Added the option in Resection to add a grid scale factor.
  - Added support in Backsight (BS) setup to add a user defined scale.
  - Added support for the SCET T-MP360 mini prism.
  
- **Optical Topo Offsets.** Support now includes the following offset routines when collecting Topo. Users can either enter the Offset feature by selecting Topo>Offsets, or you can configure the map buttons to include the Offsets feature.
  - Horizontal Angle Offset
  - Horizontal/Vertical Angle Offset
  - Distance Offset
  - Line and Offset
  - Line and Corner
  - Two Line Intersection
  - Plane and Corner
  - Column Offset

- Hidden Point

- **GNSS support improvements**

- Added support for the HiPer VR with Satel TR4+ modem.
- Improved GNSS Base support by added a Base Movement Alert
- Improved PPP support
  - Added support for getting PPP corrections from NTRIP mountpoint in RTK mode along with Radio for RTK corrections.
  - Added PPP seeding possibilities to improve base convergence times.
- Added the option to manually select the active base station on the Multi Base Page
- Improved NMEA setup support by adding a Setup Wizard
- Added the option to set the Ambiguity fixing level in the GNSS configuration settings.
- Added an option to display TILT values in Topo and Stake map screens

- **Topo Offsets for GNSS** include the following features and options:

- Offset Line
- Az and Offset
- 2 Distance Offset
- Compute Az function
- Show Direction preview for Az Offset and Az Calculator

## Stake

- **General Improvements to stakeout** include:

- Stake 'Nearest Point' has been added as an option.
- Added height options when staking a line or curve.
- Added the option in Stake Line to change the default Ht Comp method to Interpolate Ht
- Added stake report options to all stake routines.

- Added the option to Stake Reports to show cut/fill to a Reference CL.
- Added the Grade Offset option to Stake Screens.
- **Point Lists.** Added point lists as an option when managing points in MAGNET Field jobs. Users have multiple options available to use point lists throughout the product including:
  - Added Point list support to Stake.
  - Support import and export points to point list.
  - In Surface, users can now add the points in a point list as surface points.
  - Support inverse Point to Point List.
  - Support Point Lists in COGO tasks.
- **Offsets in Stake.** When staking Points, Linework, Curves, Areas, Spirals and Surfaces users can now offset the selected entity.
- **Stake Arcs routines**
  - Additional Stake Curve options have been added including support for Radius, Curve Angle, and Chord Angle curve definitions to existing Stake Curve routine.
  - Stake Spiral Curve option has been added to Stake options.
  - Curve Height options have been added for Stake Curve
- **Support Planes**
  - COGO now includes the option to calculate a Point to Plane as well as calculate the intersection of a Line to a Plane.
  - Planes can also be used as a Reference in Stake. A Plane can be set as a reference in Stake Point, Point List, Line, Grid, Linework, Curves, Areas and Spirals.
  - Add/Edit Planes in the Plane editor. Users can create and edit Planes in the Plane Editor. Define Location, Layer, Boundary and Style. Visibility settings have also been added to the Map Settings so users can turn on/off Planes in a job.
  - Added the option to Show Planes on the 3d map.

- **COGO.** The following routines have been added to COGO in MAGNET Field for Android/iOS.
  - Curve
  - COGO 3Pt Curve
  - COGO PI & Tangents Curve
  - COGO Radius & Points Curve
  - COGO Spiral Curve
  - COGO Traverse Curve
  - COGO Vertical Curve
  - Inverse Point to Point List
  - Point List: Offset Points
  - Area by Points
  - Volume Calculations
  - Point to Plane
  - Line to Plane
  
  - COGO results have the option to be added to Field Reports

## Import/Export

- **The following import/export formats are now supported.**
  - MML ETRS
  - Topcon Text Custom
  - Topcon Text Custom QC (export only)
  - Added the option to export localization as a \*.prj file
  
  - Updated MaXML support to V1.6, and allow the Import/Export of the following new data types
    - PPP-based solution types
    - WA data
    - Scale Factor in Resection
    - Multiple Quick Codes
    - 'Sheet' and 'Reflectorless' predefined prisms are now supported
  
  - Added the option to Import/Export Point Lists

- Added support to import Pipes from Autodesk Civil3D
- Added Horizontal (Hz) and Vertical (Vt) tolerance settings are stored to stake reports.
- Dramatically improved Autodesk DWG import and now support up to DWG 2024

## Coordinate Systems

- **The following coordinate system and geoid improvements have been added:**

- Added the option to download projections from the user interface.
- Added coordinate system selection to the new job screen.
- Legacy folder added to the Projection list to store not commonly used projections.
- Official/Custom NTv2-grid files support has been added.
- CRS - UA\_UCS-2000
- El Salvador national projection
- Ohio LPD Transformation parameters have been updated.
- Supported Molodensky datum via User interface as for custom datum.
- Vietnam's projection and datum parameters updated (VN-2000)
- Added Mexico GGM10 Geoid
- Portugal Coordinate Systems updated to 2023 revision.
- Portugal Geoid GeodAz2014 supported.

## Miscellaneous

- **Updated Demo mode**

- Users can now connect to any instrument. Jobs opened or created are limited to the number of points that can be added to the job.

- **Support Custom Symbols**

- Custom symbols are supported in Layers, Codes, Points. Options available for Custom Symbols allow users to select the custom symbol(s) to use, edit the symbols, set symbols to scale and choose whether to show or hide the symbol(s).

- **Raw Data Editing 8.0**
  - Support raw data editing for GNSS and Optical data.
- **Codes:**
  - Added control codes “Add to end”, “Add to start” and “Insert”.
  - In Topo, users can select a line to continue the Code/String
  - Added the Prompt for Code option to Topo
  - Added support for multiple codes to be added to a Quick Code button
- **Improved horizontal layout.**
  - Improved the Horizontal layout of MAGNET Field when in Landscape mode, Field now fills the screen.
- **Job Management**
  - In addition to controlling and storing job backups locally on the Field Controller, users now have the option to backup to MAGNET Enterprise all jobs/settings/license and then restore to the device.
- **Layers**
  - Added a Purge All button to allow users the option to delete all empty layers.
  - Added the option in the layers dialog to set any layer as the default layer.
- **Language**
  - Option to add custom language files.
  - Surveying terminology is the default one now.
  - Added Polish language.
  - Added Brazilian Portuguese language.