

# FieldGenius 2010 Release Notes

This document contains the release notes for all FieldGenius 2010 releases. The latest release notes can be found at the end of the document.

- [FieldGenius 2010 – 4.2.0](#) (Released on December 15, 2009)
- [FieldGenius 2010 – 4.3.0](#) (Released on August 20, 2010)
- [FieldGenius 2010 – 4.3.2](#) (Released on September 17, 2010)
- [FieldGenius 2010 – 4.3.4](#) (Released on November 16, 2010)

# FieldGenius 2010 – 4.2.0 Release Notes

Released on: December 15, 2009

FieldGenius 2010 4.2.0 is available as an upgrade. A new activation code will be required to run this latest version.

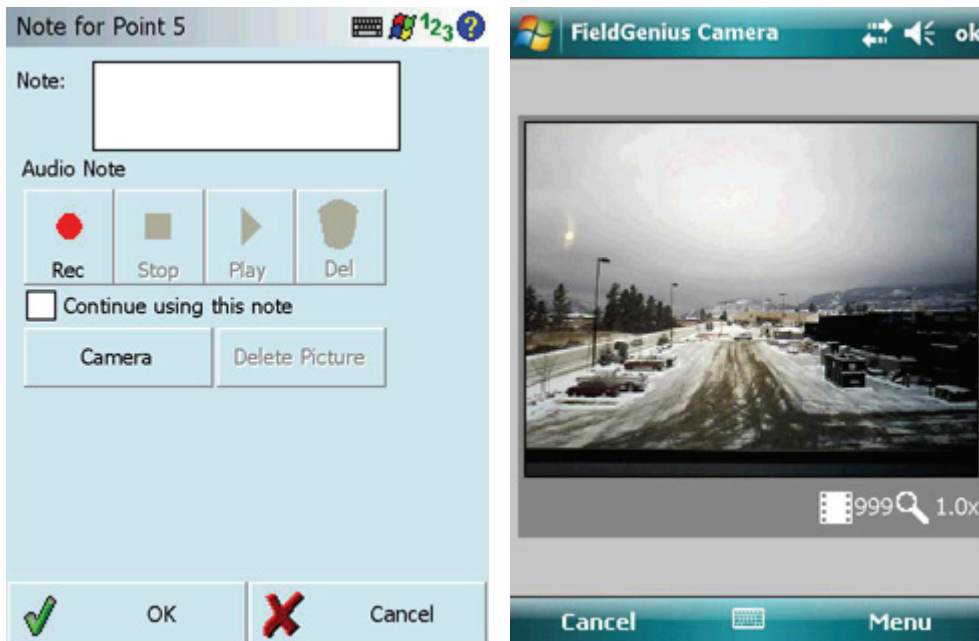
## Backup Important Files

We suggest you backup several import files before you proceed with the upgrade.

- **MSURVEY.INI** – This file contains program defaults and your instrument profiles. This file is located in the “MicroSurvey FieldGenius\Programs” directory.
- **GPSPROF5.DBF** – This file contains your GPS receiver settings. This file is located in the “MicroSurvey FieldGenius\Programs” directory.
- **AutoMap Files** – Any custom AutoMap files that you might have created should be backed up. These files usually reside in the “MicroSurvey FieldGenius\FG Projects” directory.

## New Features

**Nautiz X7** - Support for the camera function in the new Nautiz X7 data collector. Attach photo notes to points in your FieldGenius project.



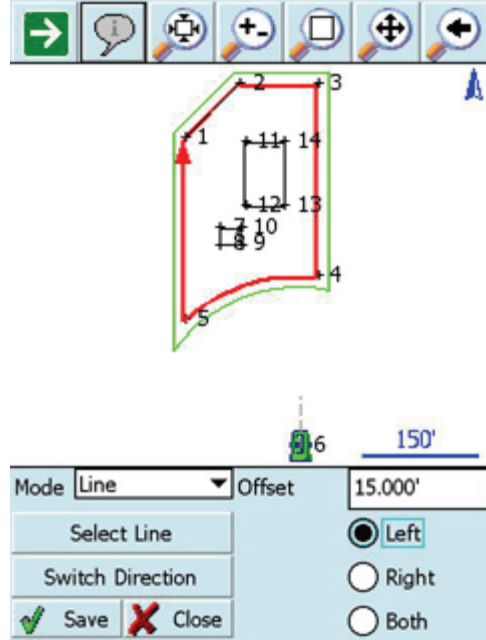
**Total Station Bluetooth Manager** – Control all your Bluetooth connections for Total Station profiles directly inside FieldGenius. Bluetooth settings automatically saved in the profile.

The screenshot shows the 'Model and Communication' dialog box. It features two sections for configuring Bluetooth connections. The first section is for the main instrument, with 'Make' set to 'Topcon' and 'Model' set to 'Robotic'. The status is 'Not Connected'. The 'Port' is set to 'Bluetooth', and there is a 'Bluetooth Search' button. The 'Device' is currently 'Not Selected'. The second section is for the 'RC Port', also set to 'Bluetooth' with a 'Bluetooth Search' button and 'Device: Not Selected'. At the bottom, there are three buttons: 'Connect to Instrument', 'Radio Settings', and 'Close' (with a red X icon).

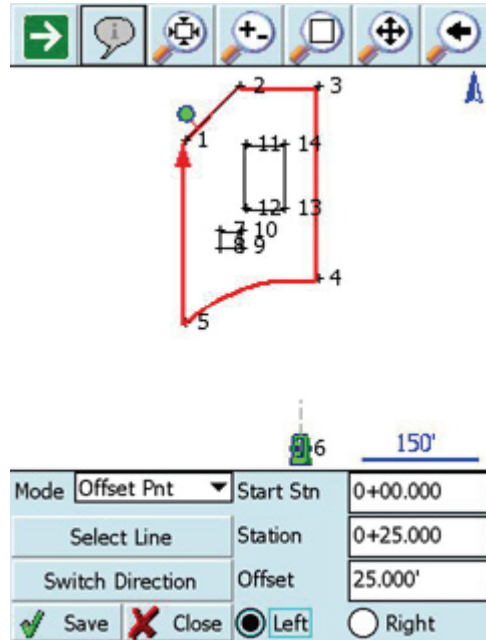
**Stake Line** – Updated stake line routine. You can now stake a whole figure / dxf entity. You can also specify a station interval, and use Previous and Next advance buttons to move down the line. After you store the stake line point, you are automatically taken back to the Line Staking dialog.

The screenshot shows the 'Line Staking' dialog box. It is divided into two main sections: 'Station' and 'Offset'. The 'Station' section has input fields for 'Start' (0+00.000), 'Interval' (10.000'), and 'Stake' (0+00.000), along with 'Prev' and 'Next' buttons. The 'Offset' section has input fields for 'Interval' (1.000') and 'Stake' (0.000'), along with 'Left' and 'Right' buttons. A 'Select Line' button is located below these sections. At the bottom, there are three buttons: 'Stake Point', 'Stake Line', and 'Close' (with a red X icon).

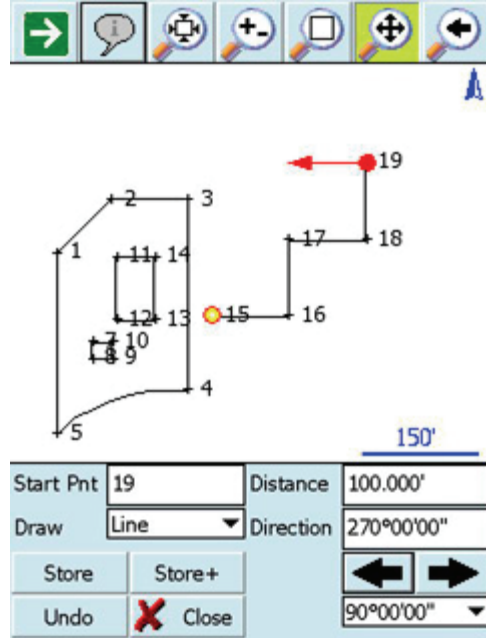
**Line Offset**– You can now offset figures in FieldGenius. You can offset to the left, right or both and FieldGenius will compute new points and offset lines for you automatically. Currently it only works with figures, not DXF entities.



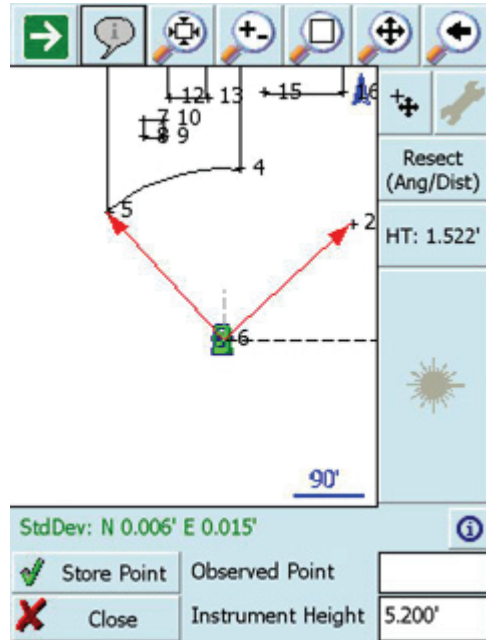
**Offset Points** – You can now compute points down individual segments, or along a whole figure. You can also switch directions now. You can select new segments, figures and DXF entities without leaving the toolbar.



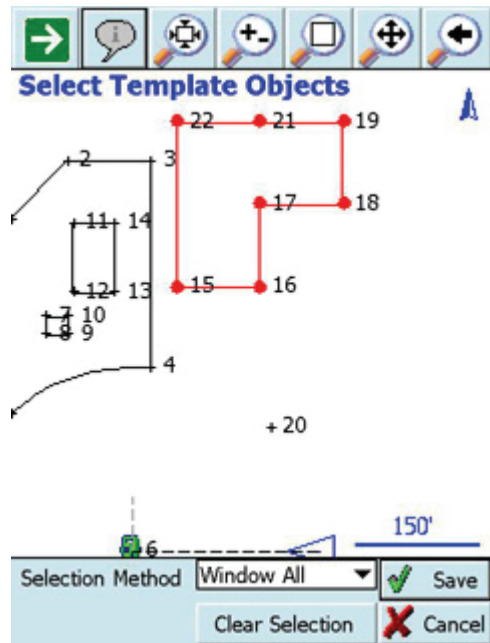
**Plan Builder** – A new tool replaces the old Tape Measure routine. New easier to use direction keys make it more intuitive. You can also now choose to only store points without lines connected. You can also draw arcs now as well.



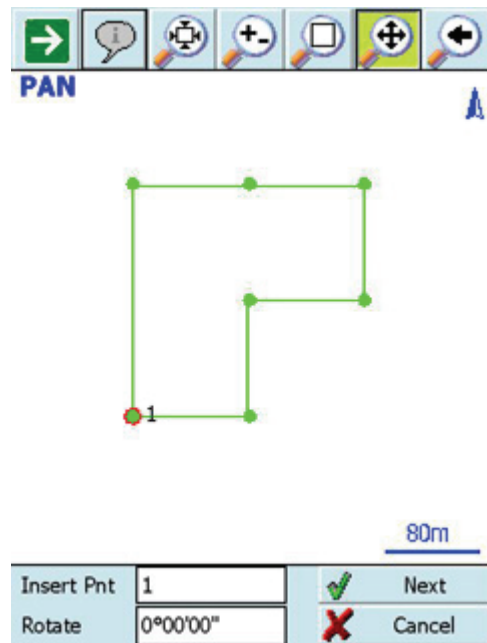
**Resection** – Improved resection routine stays minimized at the bottom of the screen while you take measurements. Also improved error reporting about the resected position.



**Export Templates** – You can copy and paste points and figures between projects by using a new export and import template feature. First you export the objects to a new template file.



**Import Template** - You can then import the template into any project on your data collector, for example into a brand new project.



## Improved/Updated Features

**Topcon RC3** – Improved instrument control when using RC3 units. FieldGenius will automatically determine if the RC unit should use low power or high power mode depending on environment conditions.

**Topcon Internal Radios** – FieldGenius now is fully compatible with the internal radios for the FC-2500, FC-200, and FC-250.

**Sokkia Instruments** – Improved the Bluetooth communication with Sokkia total stations to address connection issues.

**Sokkia RC-PR4** – FieldGenius now supports the trigger button on the RC-Handle.

**EDM Mode Button** – a new EDM mode button on the instrument toolbar allows for quick access to EDM modes for your instrument.

## Fixed

**Sokkia SRX** – When staking with tracking turned on, and the instrument set to feet, the in/out/left/right distances would be out by 3.28 feet.

**Archer / Leica** – When using the Archer and certain Leica instruments (400 & 700 series), if the user powered off the Archer while FieldGenius was running, then later turned it back on and continued surveying, the vertical angle of the last shot could get used by FieldGenius when a new measurement was made.

# FieldGenius 2010 – 4.3.0 Release Notes

Released on: August 20, 2010

## Important Notes

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- We will be dropping support for several older builds of FieldGenius including: Allegro CE, Toughbook, Recon.Net, Ranger.Net, Ranger CE, and the FC-100.
- The GPSPROF.DBF and GPSFUNC.DBF file will no longer be used by FieldGenius. All GPS related settings and profiles are now saved in the msurvey.ini file. Before installing this update, run FieldGenius and write down your GPS Profile settings on paper so they can be re-entered.
- Demo mode is now limited to a run time of 15 minutes. Also projects with more than 10 points cannot be opened with handheld devices running FieldGenius in demo mode.

## Backup Important Files

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We suggest you backup several important files before you proceed with the upgrade. In addition, manually copy all Total Station and GPS Profile settings as these will not be available after you reinstall.

- **MSURVEY.INI** – This file contains program defaults and your instrument profiles. This file is located in the “MicroSurvey FieldGenius\Programs” directory.
- **GPSPROF5.DBF** – This file contains your GPS receiver settings. This file is located in the “MicroSurvey FieldGenius\Programs” directory.
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## New Features

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**GPS Tolerances** – Friendly names can be saved for GPS Tolerances.

**GPS Profile and Function Files** – Starting with the 4.3.0 version, the GPSFUNC.DBF and GPSPROF.DBF files are no longer used. All GPS profile settings are now saved in the msurvey.ini.

**Observation Toolbar** – A new observation toolbar is now available. New features include:

- Multi page options lets you see different data views
- Easy text resize option lets you increase font size
- Current angles and distance from total station is displayed
- Current position Lat and Long, or Cartesian coordinates are displayed when connected to GPS receivers.
- RMS values and DOP value can be viewed
- Devices with continuous data updates such as robotic instruments and GPS receivers will display live updates of positions and measurements.
- Stakeout information now displayed in the toolbar
- Display direction and distance to stake point for easier navigation with GPS

**Coordinate Calculator** – You can now convert elevation between ellipsoid and orthometric heights for coordinate conversions

**GPS Bluetooth Manager** – You can now control and setup your Bluetooth connection directly inside of FieldGenius.

**GPS Disconnect** - We added a “Instrument Disconnect” to the GPS Task menu so you can easily disconnect from your GPS receivers.

**GPS Profile Changes** - You can now change settings in your GPS profile without disconnecting from the receiver first.

**Bluetooth** – Added a 5 second delay to ensure that the Bluetooth radio has had sufficient time to initialize before FieldGenius tries to connect.

**Bluetooth Power** – FieldGenius will always turn off the Bluetooth radio when you exit FieldGenius. It will also turn it on automatically when you initiate a Bluetooth connection from FieldGenius.

**Bluetooth Persist** – Added an option that forces FieldGenius to not turn off the Bluetooth radio when exiting the program. The setting is found in Options | System.

**Inverse Toolbar** – Inverse toolbar has been improved to fix focus issues when selecting points from the screen.

**Inverse Toolbar** – More intuitive controls with a consistent look and feel to other recently updated toolbars.

**Topcon GPT9000 Onboard** – A FieldGenius build is now available for the Topcon 9000 onboard instruments.

**Topcon FC-2500** – A new build is available for the Topcon FC-2500 data collector.

**Topcon FC200 and FC-250** – A new build is available for the Topcon FC-200 and FC-250 data collectors.

**Netherlands Grid and Geoid** – Added support for the Netherlands RD-NAP grid and geoid.

**Toolbar Help** – Added an option to get help on toolbars in FieldGenius. On the second level of the top toolbar you will see a new help button. Pressing it will display a list of toolbars that help can be displayed for.

**Nearest Point** – A new option is now available in the Stake Point screen. At least one measurement has to have been made before this option is available.

**ASCII Import** - Assigned Role feature now available in the ASCII import screen. Lets the user import a set of points and assign them to the staking list, as control points, user defined, or other.

**ASCII Import** - SP (Store Point) records can be omitted from the raw file when importing an ASCII file.



## Fixed

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**Altus Receiver** – Many changes and improvement for the Altus APS-3 receiver including:

- **External Antenna** – Added antenna offsets for the Septentrio PolaNt\* GG antenna
- **APS-3 Internal Antenna** – changed default offset from 104mm to 114mm.
- **APS-3 Internal Antenna** – added slant option for the internal antenna
- **Battery Status** – Can now see the battery state for the internal batteries
- **Logging Rate** – Added option for 15 seconds
- **RTK Float** – added option to define RTK Float in tolerance settings
- **Trimble Protocol** – added ability to use Trimble Trintalk protocol with the internal radio.
- **CMR and CMR+** - Glonass corrections now work with these message protocols.
- **Raw Data Logging** – antenna height saved in SBF file.
- **Raw Data Logging** – point id now saved in SBF file.
- **Raw Data Logging** – file warning if user tries to start logging in a previous file.
- **Raw Data Logging** – FieldGenius will no longer permanently change the recording method to file name.
- **Scrambling** – user can turn scrambling on for the internal radio
- **Pacific Crest PDL** – Added ability to set the radio as a repeater.
- **Pacific Crest PDL** – Added ability to set the Digi Squelch to low, medium or high.
- **Altus Playback** – Added support for playback of SBF files by including the necessary group definitions.
- **Altus** – Reset RTK Engine button added to GPS Tasks lists.
- **Altus / RINEX / LGO / TGO Support** – Better support for adding stop-and-go occupation records to the receiver raw data logging file. This allows LGO and TGO to process multiple occupations in a single RINEX file.
- **Marker Name** – Marker name in the SBF defaults to the name of the SBF file name specified by the user.
- **ANT# / TYPE** – Antenna type in SBF file now defaults to the NGS antenna name for the APS-3 which is “APS\_APS-3 NONE”

**Leica RX1250** – Bluetooth wasn't working in the 4.2.0 release.

**Topcon GR3, Ga and Gb** – Digital UHF radio now compatible with this release.

**Sokkia ISX 2700** – User can assign radio frequencies for the operation of the internal radio.

**Desktop Version Descriptions** – descriptions were not persistent.

**Startup Wizard** – Sometimes when starting a new project, the user would see the main menu instead of the occupy point dialog when using the new project setup prompts.

**Stake Point On Line** – The last point staked would be displayed on the “Turn To” dialog title.

**Predetermined Area** – Solution A or B text was not appearing in the map screen.

**Offset Line** – Descriptions are no longer copied from the points on the original line.

**Offset Line** – When offsetting a closed figure such as a box, the last figure would not appear when the project and closed and opened. This is now fixed.

**Offset Line** - Distances are now scaled according to the project input scale factor.

**Station Point** - Distances are now scaled according to the project input scale factor.

**Offset Point** - Distances are now scaled according to the project input scale factor.

**Plan Builder** – Distances are now scaled according to the project input scale factor.

**Projection Settings** – When switching projects, FieldGenius would use the projection settings from the previous project, not the current project. Note that transformation settings were used correctly.

**Esc in Curve Calculator** – Pressing the ESC key in a field could cause a crash.

**Trimble R8** – issues configuring external Trimark radio are resolved.

**Trimble R8** – the internal radio on base receiver would enable itself when configuring external radio port. This is now resolved.

**Trimble R8/R7** – Fixed problem where users could connect to the receiver but couldn't see any satellite, DOP or radio settings.

**GPS Staking** – GK record is now stored for point staked with GPS. This will allow cut sheets to function properly.

**Base Receiver AH Record** – The AH record is now recorded for the base position when using average position.

**Bluetooth Search** – Fixed an issue that could cause a crash if a found device was no longer available while FieldGenius was still searching for Bluetooth devices.

**Resection Routine** does not allow full screen keyboard input

**Leica 500** radio link problem resolved

**Javad Triumph** - Radio connection / configuration issues with the Javad Triumph have been resolved.

**Crash New Project** – If you tried to create a new project while a project was already open and a figure was active, the program would crash.

**File Names** – Some parts of the program allowed the user to save a file even when no name was specified.

**Invalid Characters** – Invalid characters that can cause issues with file exports are now validated before storing. For example the “character would cause parsing issues with LandXML files.

**Max & Min Point Range** – User was allowed to store points outside the min and max point range if the “use next id” option was used.

**Select Chain** – The select chain options when building a road to stake was broken.

**ASCII Import** - Importing ASCII files that have incorrect delimiter will now display a warning message that the point was skipped.

**ASCII Import** – Default file format is now standard.

**SRX Stakeout** – IR Rapid mode now used instead of IR Tracking for real-time stakeout with the SRX robot.

## Improved

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**Level Instrument** – Increased the size of the visual graphic of the level bubbles and made the text font larger for easier viewing outside.

**ISX 2700** – FieldGenius will now query and display the current frequency and transmit power.

**East / Northing ASCII Files** – If the user has the coordinate order set to East / North or X / Y, FieldGenius will assume that ASCII files imported or exported are also in this format.

**Inverse Toolbar** – The inverse toolbar sometimes had focus issues and wouldn't allow the user to pick the points from the map screen.

**Inverse Toolbar** – Organized options for arc inverse types from buttons to drop down lists.

**GPS Antenna Manager** – We updated the GPS antenna manager to conform more closely with the [NGS GPS Antenna Calibration Database](#). Antenna offsets used by FieldGenius can be easily cross referenced to the NGS website, or to existing antenna specifications documents.

**GPS Position Information** – When you select the Position Information from the GPS task list you will now see a detailed list of information relating to the current position being processed. You can see both Cartesian, Geodetic, RMS, PDOP, Baseline Length, horizontal & vertical datum, solution type, and satellites used in the solution all on one screen.

**Visibility Settings** – settings now saved to msurvey.ini file.

**Visibility Settings** – moved to Options Menu under “Point Labels”

**Visibility Settings** – Now accessed with a new button on the second level of the visibility toolbar.

**Visibility Toolbar** – Updated the second level of the visibility toolbar to include quick access to the Layer Manager, Surface Manager, Point Settings and a new help button.

**Translated Versions** – Non English versions of FieldGenius will now automatically detect localized resource files and automatically load them for the user.

**DXF Nodes & LandXML CgPoints** – You are no longer required to store coordinates for dxf nodes, or LandXML CgPoints. You can stake, inverse and perform calculations using the points directly without first storing them to the point's database.

**New Raw File** – The new raw file command will now default the new raw file name to the current project name, date and time.

**Import / Export ASCII** – both options now default the format to “standard”.

## FieldGenius 2010 – 4.3.1 Release Notes

Released on: September 7, 2010

### Fixed

**Export Template** – A crash could occur when exporting a template file containing figures.

## FieldGenius 2010 – 4.3.2 Release Notes

Released on: September 17, 2010

### Fixed

**RTS** – The RTS (Rotate/Translate/Scale) function did not work, nothing was adjusted.

## FieldGenius 2010 – 4.3.4 Release Notes

Released on: November 16, 2010

### New

**OnPoz Support** - Onpoz support added to GPS products. Special comments are now written to raw file for each GPS measurement and now include a time stamp that OnPoz can utilize along with a note about the GPS antenna. Two new comments are now recorded “- - Antenna and - - PP Time”.

**OnPoz Switch** - A new option is available in the GPS section of the Options menu. The default option is off for OnPoz Tagging. When turned on it will force occupation start and end tags to be omitted from the raw data file in the receiver. If option is off, occupation start and end markers will be written the raw file in the receiver during point occupations.

**Antenna Offsets** - Three new antenna models were added to the Trimble driver:

- **R8 GNSS (2)** - Centre of bumper, Horiz = 91.0mm, Vert= -55.0mm, ARP to APC (L1) Vert= 103.9mm
- **Zephyr Model 2 GNSS(1)** - bottom of antenna mount, Horiz = 0.0mm, Vert= 0.0mm, ARP to APC (L1) Vert= 81.3mm
- **Zephyr Model 2 GNSS(2)** - top of notch, Horiz = 93.7mm, Vert= -38.7mm, ARP to APC (L1) Vert= 81.3mm

**GPS Make and Model** - The GPS profiles have been separated into Make and Model similar to total station profiles.

**PM500 Data Logging** - Added support for occupation tagging to the raw file collected in the receiver for stop and go post processing. Point measuring work flow has changed so that the point id and description is prompted for before the measurement takes place..

**Radio Off** - Disconnecting from a rover does not stop any input correction streams (reconnecting as a rover will reset all input correction streams).

**Fast Connect** - When reconnecting to a rover, if an input stream is active, in other words the receiver is receiving a correction, the user can press cancel on the link configure screen without having to configure the receiver again.

**Alignment Staking** – You can now stake a horizontal alignment without a template or profile.

**Sokkia GRX-1** – Added support for the Sokkia GRX-1 receiver.

**Hemisphere** – Added support for the Hemisphere Crescent board.

## **Fixed**

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**GPS Reference Setup** - If you average a position and program a receiver, and without disconnecting, try to do another averaged position you will see a High RMS error towards the bottom of the reference measurement screen. This is now fixed so the correct RMS value is displayed.

**Reference Connection** - connection to reference receiver would cause the receiver to be put into rover (Autonomous) mode. This was done so an averaged autonomous position could be performed. We changed the connection sequence so that it is only changed to rover mode when the user chooses to average a position.

**Staking Nearest** - Wouldn't always select the nearest point when using NAD 27 coordinate systems or coordinates transformed to a local system with transformation parameters.

**Stake Surface** - will now warn you when you are staking outside the limits of a surface instead of using the last computed elevation.

**Template Export** - Can't export a template that includes a single figure

**Pencil Tool** - Fixed some focus issues on the pencil "connect points" toolbar.

**Delete Point** - A crash could occur when using the "Delete Last Saved Point" function.

**Offset Point** - Changing projects while offset toolbar was open could crash program.

**Figures** - Bad screen update could occur when deleting then reshooting first point of a figure.

**Point Database** - Min and Max options for find by coordinate option wouldn't always work correctly.

**High RMS** - When programming a reference, you could see High RMS message if programming the base again a second time without disconnecting first.