

Origin Software

Version 2022.01

July 2022

This release of the Spectra[®] Geospatial Origin software includes the following changes.

New hardware support

Spectra Geospatial SP30 handheld GNSS receiver

Origin version 2022.01 supports the new Spectra Geospatial SP30 handheld GNSS receiver.

The SP30 can be used as a handheld, with a monopole using the integrated antenna, or mounted on a pole and used with an external antenna.

The SP30 can only be used with Origin subscriptions, and is designed for GNSS-only surveying using the integrated GNSS receiver. It does not support connections to external GNSS receivers or total stations.

Resolved issues

- **Sign in using Edge browser:** We have fixed an issue where a server connection error message appeared if you signed in to Origin using the Microsoft Edge browser and then attempted to sign into Origin using a different Trimble ID when the Edge browser was still open.
- **Job files created from JXL:** We have fixed an issue where if you created a job from a JXL file, some settings from the JXL file were not copied into the job. These settings were **South Azimuth, Grid coordinates** orientation (North-East, South-West, etc.), **Distance** type (Grid, Ground, or Ellipsoid), and **Magnetic declination** value.
- **Available USB drive:** We have fixed an issue where the software did not always show that a USB drive was available after you had inserted the USB drive into a USB port on a Windows controller or PC.
- **DTM delta display in the map:** When using a LandXML or 12da file that does not include at least one alignment, deltas are now shown on the map when staking a DTM from the file.
- **Photo attributes:** We have fixed an issue where the **Photo** field displayed the previously used photo file name. The field is now cleared ready for a new name.
- **Stakeout with null target height:** We have fixed an issue where the stakeout angle deltas were not populated if the target height was not set (had a null value).
- **WFS:** We have fixed an issue to do with handling of GML position data in a WFS.

- **Time intervals in Danish:** We have fixed an issue where the software would not accept any value entered in a time interval field if the value included hours, not just minutes.
- **Performance issues:** We have improved the performance of the software. In particular:
 - When performing a resection.
 - When performing a site calibration.
 - When staking out roads, alignments, or polylines using GNSS, the eBubble could become unresponsive and the stakeout deltas could become slow to update.
- **Application errors:** We have fixed several issues that caused occasional application errors when using or closing the software. In particular:
 - When setting a DXF file to visible or selectable in the map **Layer manager** where the file included a spline for a hatching boundary.
 - When exporting to DXF without first opening the job containing the points you are exporting.

Roads

Enhancements

12da road improvements

Support for staking strings that do not follow the alignment, for example traffic islands and kerb returns. The software now shows stakeout deltas to the closest part of the string.

Support has been added for 12da files that include horizontal alignments defined using the Westrail cubic spiral.

Resolved issues

- **Design elevation:** We have made the following improvements to the display of the design elevation at the stakeout navigation screen:
 - We have fixed an issue where a vertical construction offset was applied a second time.
 - We have fixed an issue where, for certain workflows, you could not reload the original elevation.
 - The **Design elevation** value at the base of the form is no longer adjusted by any specified vertical construction offset.
 - The **Target elevation** value at the top of the form is now the design elevation plus any specified vertical construction offset.

- If you edit the **Design elevation** in the navigation screen or in the **Confirm staked deltas** screen, then once you measure and store the point the **Design elevation** returns to the original **Design elevation** value.
- **12da one string/two string stakeout:** We have made the following improvements to the **One string** and **Two string** stakeout methods for 12da roads:
 - When you select a string it is now highlighted correctly in the map.
 - We have fixed an issue where the **Start** button was sometimes missing, depending on the geometry of the string.
 - Improved handling for strings that cross over the alignment. Previously the computed target position could be on the wrong side of the road.
 - The target position in the cross section view now updates to the correct position after selecting a different string.
 - The target icon for a selected station on a string no longer remains onscreen when you switch to the **One string** stakeout method.
 - Incorrect handling of the scale factor resulting in some overlap of strings.
 - A tangency issue that resulted in some strings being drawn incorrectly.
- **LandXML roads:** We have fixed several issues with LandXML roads, including:
 - If the master alignment definition for a LandXML string road contained one or more station equation elements (StaEquation) these elements were not read and included in the road definition.
 - Improved support for horizontal alignments where consecutive elements are non-tangential. Previously selecting a non-tangential element produced an error message.
 - If you changed the station interval during stakeout, the new station interval was added and the LandXML road was saved with all records in the rxl file format, but the file had an xml file extension.
 - A display issue where triangles on curves were not shaded correctly in the map.
- **Application errors:** We have fixed several issues that caused occasional application errors when using or closing the software. In particular:
 - When you select an RXL road from the stakeout list when the road is set to visible but not selectable in the map, and then attempt to select the road in the map.

- When the **Stake** method is **Station on string** and you apply a calculated construction offset before selecting a side slope string.

Documentation clarification

BIM model support in Origin 2022.00

NOTE – In response to feedback, we are providing an updated explanation of the **DWG and NWD BIM model support** and the **Download BIM models as TrimBIM files** features that were added in Origin 2022.00. The main points to note are:

- BIM models are **not** supported when running Origin **on an Android device**. This limitation applies to all types of BIM models, including IFC, TrimBIM, DWG, and NWD files.
- Origin supports the reading of standard AutoCAD entities from DWG files. In many cases, it may be better to use a DXF file rather than a DWG file.

DWG and NWD BIM model support on Windows controllers

In addition to IFC and TrimBIM files, Origin on Windows now supports two additional BIM model file formats:

- Drawing (.dwg) files created using Autodesk AutoCAD software
- NWD (.nwd) files created using Navisworks software

NOTE – Origin supports the reading of standard AutoCAD entities from DWG files. Some CAD applications, for example Civil 3D, use AutoCAD extensions to create 3D objects which may not be supported by Origin. Using a DXF file may be better than trying to use DWG, or you could try converting a Civil 3D drawing to a standard AutoCAD DWG format. For more information, visit Autodesk's Knowledge Network to learn [how to convert Civil 3D drawings to standard AutoCAD format](#).

We have renamed the **IFC** group box in the **Map options** screen to the **BIM model (DWG, IFC, NWD, TRB)** group box. Use these options to change the transparency of objects in the map, and whether individual faces or whole objects are selected in the map.

When running Origin on a Windows controller you can use any supported BIM model file format for surveying fieldwork including measuring points, stakeout, and cogo calculations including scan to surface inspections, and center point or centerline calculations.

For more information, see the topic **BIM models** in the [Spectra Geospatial Origin Help](#).

Download BIM models as TrimBIM files on Windows controllers

The **Sync settings** screen now provides the **Download as TrimBIM** check box to download BIM or 3D models (including Industry Foundation Classes (IFC), Navisworks Drawing (NWD), AutoCAD Drawing (DWG) and SketchUp (SKP) files) from Trimble Connect as TrimBIM files. TrimBIM files are smaller, faster to download to the controller, and faster to load the first time you use them in Origin. Alternatively, to download IFC, DWG and NWD files in their original format, **clear** the **Download as TrimBIM** check box.

NOTE – Conversion of NWD files to TrimBIM format using Trimble Connect is in BETA. It is only supported when you upload NWD files to Trimble Connect using [Trimble Connect for Windows](#), not [Trimble Connect Web](#).

For more information on assimilating BIM models as TrimBIM files in Trimble Connect, refer to the [Trimble Connect documentation](#).

Supported equipment

Origin software version 2022.01 communicates best with the software and hardware products listed below.

NOTE – For best performance, hardware should always have the latest available firmware installed.

Supported controllers

Windows devices

The Origin software runs on the following Windows® 64-bit devices:

- Spectra Geospatial Ranger 7 data collector
- Spectra Geospatial ST10 or ST100 tablet

Android devices

The Origin software runs on the following Android™ devices:

- Spectra Geospatial Ranger 5 data collector
- Spectra Geospatial MobileMapper 60 handheld
- Spectra Geospatial SP30 handheld GNSS receiver

A small number of features are not supported when running Origin on an Android device. For more information, see the section **Tips for Android devices** in the [Origin Help](#).

Supported conventional instruments

Conventional instruments that can be connected to the controller running Origin are:

- Spectra Geospatial FOCUS® 50 total stations
- Spectra Geospatial FOCUS 35/30 total stations
- Supported Nikon and third-party total stations

The functionality available in the Origin software depends on the model and firmware version of the connected instrument. Spectra Geospatial recommends updating the instrument to the latest available firmware to use this version of Origin.

Supported GNSS receivers

GNSS receivers that can be connected to the controller running Origin are:

- Spectra Geospatial integrated GNSS receivers: SP85, SP80, SP60
- Spectra Geospatial modular GNSS receivers: SP90m
- Spectra Geospatial SP30 handheld GNSS receiver

NOTE – *The communication protocols the Spectra Geospatial Origin software uses to communicate with Spectra Geospatial GNSS receivers do not support all of the features available when using the same receivers with Survey Pro software. For more information, refer to the support bulletin [SP60, SP80 and SP85 Receiver Support with Spectra Geospatial Origin](#).*

Installation information

License requirements

You can install Origin 2022.01 using a perpetual license that is licensed to the controller or as a subscription license that is assigned to an individual user. Licenses are required for the General Survey app as well as for each Origin app you want to use.

Perpetual license

To install Origin 2022.01 onto a supported controller that has a **perpetual license**, the controller must have a Origin Software Maintenance Agreement valid up to **1 June 2022**.

Subscriptions

If you are using a Origin **subscription** rather than a perpetual license, you can install Origin 2022.01 onto any supported controller.

To use the software subscription:

1. The License Administrator in your organization must assign a subscription to you using the [License Manager webapp](#).
2. The first time you start the Origin software, you must sign in using your Trimble ID to download your Origin subscription license to the controller. Otherwise you are prompted to sign in only if you have previously signed out.

Subscriptions are locked to that controller until you sign out. Once signed out, you can run Origin on a different controller and sign in to lock the subscription to that controller and use the software.

Don't have a current license? You can still try out the software

You can use Spectra Geospatial Installation Manager to create a limited demonstration license and then install Origin 2022.01 onto any Windows 10 computer or a supported Spectra Geospatial controller running Android.



Demonstration licenses are limited to adding 30 points per job, however large jobs created elsewhere can be opened and reviewed. Demonstration licenses allow connections to GNSS receivers and total stations for the first 30 days. After 30 days you can emulate a total station survey using a manual instrument (Windows and Android), and emulate a GNSS survey (Windows only).

NOTE – You can only create a demonstration license for Origin on devices that do not already have a Origin license.


For more information, refer to the topic **To try out software** in the *Spectra Geospatial Installation Manager Help* for your controller operating system.


Installation and upgrades using Spectra Geospatial Installation Manager

To install the software to your controller, use the appropriate Spectra Geospatial Installation Manager for your controller operating system:

- Spectra Geospatial Installation Manager for Windows 
- Spectra Geospatial Installation Manager for Android 

To install the software to a Windows controller

To download and install Spectra Geospatial Installation Manager for Windows , connect the controller to the internet, and then go to <https://spectrageospatial.com/origin-installation>.

To run Spectra Geospatial Installation Manager on the controller, tap the **Search** icon in the Windows task bar and enter **Install**. Tap Spectra Geospatial Installation Manager , in the search results to open the Spectra Geospatial Installation Manager. When you run the software, it updates itself automatically with the latest changes and software releases.


Spectra Geospatial Installation Manager for Windows can be installed and uninstalled as required, without affecting the Origin software.

For more information refer to the [Spectra Geospatial Installation Manager for Windows Help](#).

To install the software to an Android controller

Spectra Geospatial Installation Manager for Android is **often preinstalled** on Spectra Geospatial Android devices.

To download and install Spectra Geospatial Installation Manager for Android , connect the controller to the internet, and then go to <https://spectrageospatial.com/origin-installation>.

To run Spectra Geospatial Installation Manager on the controller, go to the Android **Apps** screen and tap the Spectra Geospatial Installation Manager for Android  icon. When you run the software, it updates itself automatically with the latest changes and software releases.

NOTE – Spectra Geospatial Installation Manager for Android **must remain installed** on the controller for the Origin software to run.

For more information refer to the [Spectra Geospatial Installation Manager for Android Help](#).


Updating office software

You may need to update your office software, so that you can import your Origin version 2022.01 jobs.

All required updates to Survey Office are handled using the **Check for updates** utility provided with Survey Office.

Solution Improvement Program

The Spectra Geospatial Solution Improvement Program collects information about how you use Spectra Geospatial programs and about some of the problems you may encounter. Spectra Geospatial 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. At any time, you can choose to participate, or not to participate in the Solution Improvement Program. To do this, in Origin tap  and select **About**. Tap **Legal** and select **Solution Improvement Program**. Select or clear the **I would like to participate in the Solution Improvement Program** check box.

Legal information

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