Leica Geosystems

Release Notes

Product: Leica ScanStation P50, P40, P30, P16, P20, P15
Date: 22nd May 2019
From: Hans Tüxsen

Release Notes Leica ScanStation Pxx Firmware v2.90
These Release Notes contain important information about the new Leica ScanStation P50/P40/P30/P16/P20/P15 firmware v2.90

The new firmware can be obtained from your local Leica Selling Unit or can be downloaded from the Leica myWorld portal.

The firmware is license protected and can only be loaded onto instruments with a valid CCP maintenance contract.

<table>
<thead>
<tr>
<th>Firmware Version</th>
<th>FW File</th>
<th>Maintenance Date</th>
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<tbody>
<tr>
<td>2.90.1094</td>
<td>Pxx_2.90.1094.fw</td>
<td>01 March 2019</td>
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This firmware can be loaded to all scanners with maintenance expiry date on or after 01 March 2019.

If the CCP contract has expired, then please contact your local Leica Representative to learn about Customer Care Packages (CCPs) that include firmware maintenance so that you can benefit from the latest firmware improvements.

**WHAT’s NEW**

1. **Double Scan**

With the new firmware Double Scan is now also available for all Pxx scanners. Two new options *Double Scan* and *Double Scan & Image* have been added to the **Task** dropdown list. With this setting every object is scanned twice, once in face 1 and once in face 2. During import the new double scan filter reduces the data to a single scan. This allows to automatically eliminate moving objects (cars, pedestrians, …) from the scene. Double scan is also available for Detail scans and in the simplified UI. Imaging is not affected by this setting, every image is only taken once after the double scan acquisition.

2. **Pin Code Protection**

With the new firmware it is now possible to define a 6-digit numerical Pin Code. The **Pin Code Settings** panel can be accessed via **F3 Pin Code** in the **Display** page of the **Settings** Menu. When activated, the Pin Code lock screen comes up after the scanner is switched on or after a user defined period. The user has then 5 attempts to enter the correct pin code. Failing to enter the correct Pin Code five times will lock the scanner completely. In such a case the Leica Geosystems Service and Support team needs to generate an Unlock license code.
3. Full Format of Data Partition

Some companies are very sensitive regarding the security of the data that has been collected in their facilities. They do not allow that the data leaves their site after it has been collected. To guarantee that the data on the internal SSD cannot be recovered after it has been deleted the Full Format option has been implemented in the new firmware. Please be aware that the process can take up to an hour.

4. Current Check & Adjust Parameters

The information given in the Current Check & Adjust Parameters panel has been distributed over the 3 pages Angle, Range and Compensator. F4 Reset is available in every page of this panel and does only reset the parameters of the active page. With this new design it is now possible to e.g. reset the calibration parameters of the compensator without deleting the angle parameters which have been determined via the Check & Adjust application.

5. Known Backsight with multiple targets

For Known Backsight setups it is now possible to use any number of targets for the computation of the orientation of the instrument. Individual targets can be activated/deactivated via function key F4 Use. This new functionality is also available in the Traverse application.
6. Resection: Pick Targets from Target Map

When a resection has already been computed it is now possible to pick additional targets from a **Target Map**. The user first needs to pick 2 targets in the traditional way – **Video Image** or **Red Laser** - and compute a first resection. With function key **F2 Add** in the **Target List** page it is then possible to return to the **Define Resection Targets** panel and select **Target Map** in the **Pick Method** drop down list. **F5 PickT** does then display the Target Map screen and the user can pick additional targets from the Map. No matter how many control points are stored in the control point project, only targets which are within 50m to the scanner will be shown in the Map.

7. Resection: Confirmation message when picked target already in Target List

A new confirmation message has been implemented to inform the user that the ID of the latest picked target does already exist in the target list. In previous versions the existing target information was simply overwritten without informing the user which was in most cases the wrong decision because the user simply forgot to select the correct Target ID.

8. Tilt calibration when levelling accuracy is bad

Calibration of the compensator is now possible as long as the tilt readings are < 10.8’ in all directions. In the previous firmware the limit was 5’ which did sometimes lead to problems with the automatic calibration of the compensator before the first scan.
9. Rotate scanner display in case of upside-down setups

A new option to revert the scanner display in case of upside-down setups has been added to the Display page of the Settings panel.

10. Reworked Control Points panel

The Control Points panel has been completely reworked:

- Control point coordinates are now displayed in a list view with columns for Northing, Easting and Height.
- The new F6 Export function exports the control points to a CSV file on an attached USB stick.

11. Extended range for PPM parameters

Atmospheric PPM
- The maxium value of the pressure value has been extended to 1060 mbar.

Geometric PPM
- The minimum value for the Ground Height has been reduced to -2000 m to allow negative values.
12. Data Copy Tool

The following features have been added:

- **Export data to E57 format**
  - API Data Access option must be activated on the scanner when data is collected.
  - Data must be stored on local hard disk.
  - Complete projects or single stations can be exported.

- **Export Setup reports**
  - Creates PDF reports for data on scanner or on local hard disk.

- **Export Target measurement results**
  - Creates PDF reports for data on scanner or on local hard disk.

- **Reset Scale Factor**
  - Data must be stored on local hard disk.

- **Copy content of Data folder to PC**
  - Copies all projects from the scanner to a user defined folder on the local hard disk

**FIRMWARE INSTALLATION**

- The new firmware v2.90 can be installed on any ScanStation P50/P40/P30/P16/P20/P15 scanner with a valid CCP contract, independent of any previous firmware version.

- **Compatibility with Cyclone and Cyclone REGISTER 360**
  - Cyclone v9.4 or higher is required to import FW v2.90 data
  - Cyclone REGISTER 360 v1.6 or higher is required to import FW v2.90 data