These Release Notes contain important information about the new SmartWorx v7.00 software that can be loaded onto all models of TPS1200, GPS1200 and RX1250 instruments.

This firmware is protected and can only be loaded onto instruments with valid firmware (software) Maintenance date.

<table>
<thead>
<tr>
<th>Software</th>
<th>Version</th>
<th>Maintenance Date</th>
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<tbody>
<tr>
<td>SmartWorx</td>
<td>7.00</td>
<td>15 December 2008</td>
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</table>

If the Maintenance End date of the used instrument is on/after the 15 December 2008, then this firmware can be loaded.

If the Maintenance End date is no longer valid, then please contact your local Leica Representative to learn about Customer Care Packages (CCPs) that include software maintenance so that you can benefit from the latest software improvements.

To check Maintenance End date please start your sensor and access the STATUS/System Information panel. On the Firmware page the Maintenance End date, is displayed. The new Firmware can be loaded if the date shown is the 15th December 2008 or later.
Please do take your time to read these Release Notes!

These Release Notes contain information about the new functionality within the firmware, new loadable application programs and improvements to existing loadable application programs.
For information about how to obtain and load the firmware and loadable applications please refer to “System1200 SmartWorx upload instructions.doc” on the DVD.
For a summary of all the latest individual firmware components please refer to “System1200 SmartWorx v7.00 summary of latest firmware components.doc” on the DVD.

**SUMMARY OF NEW FEATURES AND IMPROVED APPLICATIONS**

**Support of GPS1200+ Series**

**SmartWorx version 7.0 supports GPS1200+**

Leica’s new GPS1200+ is the only real future proof GNSS with maximum productivity and reliability. GPS1200+ is ready for today and tomorrow and supports all GNSS systems like GPS, GLONASS, Galileo and Compass and as well the third civil frequency L5 of the GPS navigation system.

SmartWorx 7.0 is the onboard software to fully support GPS1200+

The new SmartWorx 7.0 is required for all new GPS1200+ Sensors. All new GPS1200+ sensors are already shipped with SmartWorx 7.0.
Note, GPS1200+ sensors will not operate properly with older SmartWorx version.

This is also applicable for SmartStation, if a new ATX 1230+ GNSS antenna is used, SmartWorx 7.0 must be loaded on the TPS1200.

When the controller RX1210 is used together with SmartWorx 7.0 it is required to have the latest RX1210 FW version 1.68 loaded to the RX1210 controller.

Due to new available options, SmartWorx 7.0 supports GPS L5 and Galileo.

- **Fully Support of GPS L5**
  - GPS L5 supported as an additional configuration setting.
  - More detailed status information includes GPS L5 as well.
  - Easy observe if GPS L5 is used due to improved satellite tracking icon.

- **Fully Support of Galileo System**
  - Galileo supported as an additional configuration setting.
  - More detailed status information includes Galileo as well.
  - Easy observe if Galileo satellites are tracked due to improved satellite tracking icon
• Easy upgrade from GX1200+ Sensors to GX1200+ GNSS sensors

• Support of new Leica 4G RT format – new RTCM based compact RTK format with extensions to GPS L5 and Galileo.

SmartWorx Improvements for both TPS and GNSS instruments

General SmartWorx Improvements

Support of DNS hostnames – It is now possible to enter the hostname directly into user panel instead of a difficult to remember server IP address (e.g. NTRIP caster).

RX1250 supports Windows Vista Mobile Device Center – Exchange your data between RX1250 and Windows Vista.

Improvements to loadable applications:

DXF Import – Support of 3D FACES
RoadRunner – Several Improvements to Road, Rail and Tunnel

SmartWorx changes specific to GNSS instruments

Logging of RTCM messages – Log messages provided e.g. from a Reference Station network due to the full support of RTCM message 1029

Combined L2C and L2P processing

Calibration of GLONASS biases

SmartWorx changes specific to TPS instruments

Traverse Adjustment – Improved work flow and adjustment program added.
XLS Files - are supported with the Traverse Adjustment functionality
PowerSearch – it is now possible to have an anticlockwise PowerSearch activated from a hotkey.
DETAILS OF IMPROVEMENTS

Leica’s new GPS1200+ is the only real future proof GNSS with maximum productivity and reliability. GPS1200+ is ready for today and tomorrow and supports all GNSS systems like GPS, GLONASS, Galileo and Compass and as well as the third civil frequency L5 of the GPS navigation system.

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When the controller RX1210 is used together with SmartWorx 7.0 it is required to have the latest RX1210 FW version1.68 loaded to the RX1210 controller

All existing GPS1200 sensors (including GX1200 series and ATX1200 series) can be easily upgraded to GPS1200+ GNSS Sensors.

GX1230 (GX1220)+ GNSS and the ATX1230+ GNSS support the new third GPS signal L5 and the European GNSS System Galileo. As soon as full orbit constellation is reached, additional satellites and signals will clearly increase the accuracy and speed of ambiguity resolution as well as increasing possible baseline lengths. The user will greatly benefit from the increased productivity!

SmartWorx FW 7.0 includes all the functionality to support GPS L5 and the Galileo system from the software & processing side.¹

Is there additional special Know How required, for the use of new GNSS signals together with System1200?

The simple answer is NO!

SmartWorx onboard software has embedded all required GPS L5 and Galileo settings seamlessly into the well known System 1200 configuration principle additional configuration settings are kept to a minimum.

Easy to understand, easy to operate, self explaining but most powerful in productivity.

¹ For the Galileo system a software upgrade might be needed at a later stage, which will be freely available for those who purchased the Galileo options.
New SW option to support GPS L5

A new onboard SmartWorx option supports the new third frequency GPS L5:

**768423** GSW705 GPS L5 option for GX1220+ GNSS, GX1230+ GNSS and RX1250 Controllers in usage with a ATX1230+ GNSS

**768424** GSW706 GPS L5 for TPS1200 series total stations (SmartStations with ATX1230+ GNSS)

Note, these licenses are only applicable on a GX1220+ GNSS, GX1230+ GNSS sensor or using an ATX1230+ GNSS.

GPS L5 is the new third GPS frequency. Through higher power emission GPS L5 offers easy and faster signal acquisition and tracking. Advanced signal modulation schemes improve multipath rejection performance. GPS1200+ with loaded GPS L5 option will track this new signal from day one!

New SW option to support Galileo

A new onboard SmartWorx option supports Galileo GNSS System:

**766716** GSW678 Galileo option for GX1220+ GNSS, GX1230+ GNSS and RX1250 Controllers in usage with a ATX1230+ GNSS

**766717** GSW679 Galileo option for TPS1200 series total stations (SmartStations with ATX1230+ GNSS)

Note, these licenses are only applicable on a GX1220+ GNSS, GX1230+ GNSS sensor or using an ATX1230+ GNSS.

Galileo will add another 30 satellites to the GPS and GLONASS constellation. This will provide an average of 20 satellites in view 24/7 and will further improve speed and accuracy. Leica Geosystems is the first to offer full upgrade-ability to the most modern and accurate Galileo AltBOC signal. Use GPS1200+ and you are ready for the future.

New Software upgrade options.

SmartWorx version 7.0 allows an easy upgrade from a **GX1200+** (GPS only sensor) to a **GX1200+ GNSS** Sensor.

Following two options are available:

**766719** GSW681 Sensor Upgrade from GX1230+ to GX1230+ GNSS

**766720** GSW682 Sensor upgrade from GX1220+ to GX1220+ GNSS

**Important note:**

An upgrade from a **GX1220(GG), GX1230(GG)** or **ATX1230 (GG)** to a **GPS1200+ GNSS** receiver requires a hardware exchange. Such an upgrade needs to be done via the local Leica Service centre.
In the **STATUS/ System Information** page additional information, which GNSS System is supported on the used sensor, can be read.

- **All GPS only sensors** (GX1210+, GX1220+, GX1230+):
  Status for **GLONASS, GPS L5, Galileo, Compass**: **NO**
  Those sensors are GPS only sensors.

- **All GNSS sensors** (GX1220+ GNSS, GX1230+ GNSS, ATX1230+ GNSS)
  Status for **GLONASS, GPS L5, Galileo, Compass**: **Ready** (if the respective software option is **NOT** loaded)
  Status for **GLONASS, GPS L5, Galileo**: **Yes** (if the respective software option **IS** loaded)
Support of GPS L5 and Galileo in the CONFIGURE Satellite Settings panel

In the **CONFIGURE Satellite Settings** panel, define whether GLONASS, Galileo, GPS L5 signals are tracked by the receiver.

Note, those configuration options are only available, when the used sensor is a GNSS sensor (GX1220+ GNSS, GX1230+ GNSS, ATX1230+ GNSS) and the respective software options are loaded properly onto the sensor.

Configure manually which Satellite can be used, for GPS, GLONASS and Galileo satellites

As well in the **CONFIGURE Satellite Tracking** panel, GLONASS and Galileo satellites can be set whether their signals should be tracked and used or not, by defining the health status.

This functionality can be accessed from the **CONFIGURE Satellite Settings** panel by pressing **F4(HEALTH)**

Via the **F5(USE)** button, the health status can be changed if the satellite should be used (setting **OK**) or not (setting **Bad**). In general, the setting **Auto**

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**FUNCTION integrated**

**LEICA SYSTEM 1200**

**BA Geomatics**
is recommended, which automatically allows the satellite to be tracked when it is healthy. When it is not healthy the satellite is automatically ignored.

Three individual pages, for GPS, GLONASS (GLO) and Galileo (GAL) satellites, give an easy to understand and clear overview of all available satellites.

Note, the availability of the GLO and GAL pages depends on the settings in the CONFIGURE Satellite Settings panel and are only available, if GLONASS or Galileo is set to be used.

Full support of GPS L5 and Galileo system in the STATUS Satellites Panel

The support of GPS L5 and the Galileo System as well is completely embedded into the STATUS Satellite panels.

Depending on which GNSS satellites are used by the system, the respective page for the GPS, GLONASS or Galileo satellites is listing the position and the signal quality of each available single satellite.

The GPS page is enhanced due to GPS L5 and lists the Signal to Noise ratio for the tracked GPS L5 signal.

To see the status information of the tracked satellites of the Reference a new F3(REF) button leads to the STATUS Satellite Reference panel. Again GPS, GLONASS and Galileo satellites are separately displayed in respective pages.

Depending on which GNSS Status page (GPS, GLONASS or Galileo) the F4(HEALTH) button leads to the STATUS Satellite Health panel which displays the satellite health of the currently displayed satellite system.

F5(MORE) allows to toggle between L1, L2 and L5 Signal to Noise ratio values in case of looking on the GPS Satellite list, or between, E1, E5a, E5b and AltBOC Signal to Noise ratio values looking on the Galileo satellite list.
The new integrated GPS/GLO/GAL Skyplot will support the Galileo system by showing the positions of available Galileo satellites as soon as an almanac for Galileo satellites will be available.

On the new Almanac page the date of the used almanac of the various GNSS systems is shown, additionally giving the user information about the available and tracked satellites.

Due to the support of all GNSS systems, the icon about the tracked satellites has been changed.
Touching the new icon allows the user to toggle between different GNSS systems, informing the user about how many satellites are used for the current position. Additionally the $\sum$ symbol shows the sum of all used satellites.

Example for:

- **GNSS Sensor, which tracks GPS, GLONASS and Galileo:**

  $\sum; 12$ satellites; 8 GPS, 4 GLONAS, 0 Galileo

- **GNSS Sensor, which tracks only GPS:**

  $\sum; 8$ satellites, 8 GPS on L1, 8 GPS on L2, 0 GPS on L5

**Important:** To have this functionality running correctly on any GX1200+ sensors, it is mandatory that the RX1210 terminal has **RX1200.fw version 1.68** loaded!

Please refer to **System1200 SmartWorx v7_00 summary of latest firmware components.doc**

**New Real Time Data-format:**

SmartWorx FW 7.0 introduces a new RTK format, **Leica 4G**, which has the big advantage of being the most compact RTK format.
Leica 4G

This format is based on the RTCM 3 format but includes additional GPS L5 and Galileo relevant raw data packages to be provided to the RTK rover.

- **Leica standard** format supports:
  - GPS L1, L2
  - GLONASS L1, L2

- **Leica 4G** supports:
  - GPS L1, L2, L5
  - GLONASS L1, L2
  - Galileo E1, E5a, E5b, AltBOC

Note, the **Leica 4G RTK format is not compatible** to the **Leica standard RTK format**.

 Combined L2C and L2P processing

Within the last couple of years the number of GPS satellites that transmit a civil code on the L2 carrier has increased considerably. Currently (4.12.2008) 6 GPS satellites are capable of transmitting both, the encrypted L2P code and the civil L2C code.

Overall, the L2C signal does not bring major benefits to surveying, however, compared to L2P its higher signal strength can lead to better tracking in difficult environments, e.g. under a tree canopy.

Furthermore, the US Department of Defence indicated that after 2020 L2P will no longer be transmitted or at least, will not be supported anymore.

Leica GPS 1200 receivers can track the L2C signal and store the raw data since 2006. With SmartWorx 7.0 L2C signals can now also be processed in RTK applications.

The RTK processing is enhanced to use any combination of L2C and L2P signal. With this new approach the best rover performance is guaranteed when mixing L2C and L2P data, this becomes necessary in the following situations:
• Since only satellites of the latest generation transmit L2C the rover normally has satellites in view which only transmit L2P. When GPS L2C is set to Always Track in the CONFIGURE Satellite Settings panel on the rover, the rover will track L2C for the newer satellites and L2P from the older satellites.

• Although the rover may track L2C, the correction data coming from a reference station may still be L2P or vice-versa.

When GPS L2C is set to Automatic in the CONFIGURE Satellite Settings panel on the rover, the rover will automatically select which signal to track taking into account the current satellite constellation.

Besides the higher signal strength there is a phase shift of ¼ cycles between L2P and L2C. This bias has to be taken into account when mixing L2C and L2P signals.

Unfortunately, until recently, there was no international agreement between manufacturers on how to deal with L2C when sending out reference station data.

Leica follows the strict rule that raw L2C data must be untouched and transmitted by the reference. This approach is acknowledged by the RTCM committee to be the standard for all new GNSS products.

Still some manufacturers do not follow this standard and apply the bias already to the reference data. Therefore, it is possible that the rover receives data which is labelled as L2C, although it is not original raw L2C anymore.

New SmartWorx v7.0 now as well supports this non-standard situation and does as well apply the appropriate biases when the reference receiver type is known and is not a Leica sensor.

When receiving Leica (4G) or RTCM v3 corrections the reference receiver type is typically included in the correction format and recognized automatically by the Leica rover. For other cases the reference receiver type can be set.
manually in the **CONFIGURE Real Time Mode** panel.

![Real-Time Mode configuration panel]

**Note**, for correct L2C handling on a **SmartRover** or on a **SmartStation** with an **ATX1230 GG** antenna, the **new measurement engine firmware** v 3.016 has to be loaded onto the ATX antenna. This firmware can be found on the Leica Geosystems download page and on the actual SmartWorx 7.0 DVD.

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**Calibration of GLONASS biases**

After a GNSS signal arrives at the antenna it travels through the antenna electronics and the analogue and digital sections of the receiver. Depending on the frequency of the signal the travel time of the signal will be different. Since all GPS satellites transmit on the same frequency the travel time within the receiver (also called receiver bias) is common to all satellites and will be solved as part of the receiver clock offset in the processing.

Due to the fact that each GLONASS satellite transmits on a different frequency the receiver bias is different for each individual satellite causing so called **inter-frequency biases**. These typically cancel in the processing when receivers from the same manufacturer are used on the reference station and on the rover. However, if this is not the case that on the reference and rover side the same type of sensor is used, the inter-frequency biases might cause problems in the ambiguity fixing.

A proper handling of the GLONASS inter-frequency biases improves the ambiguities fixing behaviour and additionally further increases the reliability of the results.

SmartWorx v7.0 brings GLONASS RTK processing to a new level by calibrating the GLONASS biases in real time. As mentioned above GLONASS biases are frequency and manufacturer dependent.

Therefore, the reference receiver type has to be known for correct handling of GLONASS biases. This information is typically transmitted within the RTCM v3 or Leica (4G) correction formats. For other cases the reference receiver type can be set manually in the same way as described for L2C above.
**GNSS Support on LGO Office Software**

All GNSS Systems (including GPS L5 and Galileo) are supported as well in Leica Geo Office version 7.0.

Note, due to changes in the MDB structure, it is required to update to LGO version 7.0, if GNSS raw data, which was measured with SmartWorx 7.0, needs to post-processed. Raw data captured with SmartWorx 7.0 cannot be processed with LGO 6.x or lower.

A job created by an older SmartWorx version, can still be used. In case an older job is used with SmartWorx 7.0 and additional raw data is recorded to this job, then, to post-process this new recorded data, LGO version 7.0 needs to be used.

For more information on LGO version 7.0 please refer to the LEICA Geo Office Release notes.

**Support of RTCM Info message**

SmartWorx v. 7.0 now has the possibility to display and log information messages provided by an RTK network.

RTK network providers have the possibility to communicate important status information about the RTK network, e.g. reasons why a specific site at the moment is not operating or account related status. This information is transmitted to the RTK rover and can be displayed and logged on the rover side due to the support of the RTCM message 1029.

Unicode text string messages can be packed into message 1029 and will be sent to the RTK Rover via the RTCM RTK format.

![Configure Additional Rover Options Panel](image)

To activate this useful functionality simply access the **CONFIGURE Additional Rover Options** panel, page **RTCM options** and select, if RTCM Info Messages should be displayed, logged, or both displayed on the screen and logged to the CF card.

Example:
When logging RTCM messages, then all the messages provided by RTCM 3 are recorded into a simple text file, named `RTK_MSG_Log.txt`. This file is stored under folder Data on the CF card.

Support of DNS and domain names to access IP Server

SmartWorx 7.0 provides supports access to an IP host direct via domain name.

If it is necessary to access an IP server from the Internet, e.g. NTRIP caster, then it is not mandatory to know the IP address anymore to access the server. More and more server administrators refuse to give information about IP addresses due to security reasons or because the IP addresses are dynamic, therefore only domain names (host names) are published. Domain names furthermore have the advantage to be kept in mind much easier then IP addresses.

Via DNS (Domain Name System), which operates similar as a “phone book”, the domain name is resolved into the respective IP address and the access to the server is allowed.

In example: www3.swisstopo.ch is translated to 162.23.41.9 by DNS

SmartWorx now supports both access possibilities, the server IP address as it self and now new, the use of domain names as well. Either input the IP address or the domain name.
Note, this functionality is only supported by RX1250 controllers and is not available on the GX1200 sensor or TPS1200 total station, which both operate on a different operating system than the RX1250 controller.

**RTK GSM or TCP/IP connection remains established within the SmartPole setup routine**

The RTK GSM or TCP/IP connection remains established within the SmartPole routine, when switching between GPS and TPS survey, when using Bluetooth Mobile Phones.

This gives benefit, that a RTK fixed position immediately is available, as soon accessing the GPS Survey panel with in the setup.
New Hot Key
FUNC/Connect and Disconnect on TPS1200 and RX1250 TPS mode.

If it required to interrupt the connection during the setup routine or whenever, the new hot key FUNC/Connect and Disconnect GSM can be used at any time. This functionality was previously available in GPS mode it is now available in TPS mode.

RX1250 supports Windows Vista Mobile Device Center

The RX1250 can now be used with Windows Vista Mobile Device Center to transfer data via USB.

Connect the RX1250 via GEV161 cable to your Windows Vista PC and start the RX1250 controller. Of course the PC needs to be equipped with Windows Mobile Device Center application.

The Windows Vista detects the RX1250 as a new hardware device and might ask for respective drivers. These RX1250 USB drivers for Windows Vista are available on the Leica Download web page and as well on the System1200 SmartWorx 7.0 DVD.
As soon as the connection to Windows Mobile Device Center is established, data transfer via USB between Windows Vista and RX1250 controller can be done.

**DXF Import improvement:**

**Fully support of 3D Faces.**

Due to the improved DXF Import application of SmartWorx 7.0 it is possible to import 3D Faces with 3 or 4 entities to a System1200 job.

In the example below the 3D FACE consists of 4 3D points. The DXF Import functionality will import all four points and 1 line, which consist of the 4 points.
AutoCAD:

RoadRunner Road: Second String option (GNSS and TPS)

Second String line (Road)

In addition to the selected stringline a second stringline can be selected and RoadRunner calculates the Offset, Height difference and local chainage of the measured point in relation to the 2nd stringline.

This option is available for following methods: Stringline, Individual Stringline, X-Slope and Crown Method.
Some rail projects (especially in Tunnels) require additional pendular displacement calculation for the design axis. The track is rotated based on a line with a defined height offset (pendulum length) from the track centre line. This defines a horizontal displacement for the track.

The pendular displacement calculation only influences the horizontal position of the design axis. It does not change the height of the track.
RoadRunner Rail: Display DTM in cross-section view (Rail)

When selecting an Info layer the relevant triangle of the DTM is shown on the Plot page.

SmartCode now supports Linework

It is now possible to have direct access for the Linework listbox inside SmartCode function.

a) Pendulum length: The difference in elevation of the pendulum centre on the original track and above the axis point
b) Resulting pendular displacement
c) Displaced design axis based on pendular displacement calculation
d) Design axis defined in horizontal alignment

α Pendulum angle
For this the user needs to select **Linework** from the **Show Info** list box in the **SURVEY Configuration** panel on page **SCode**.

This effects that the linework list box will show up in the **SCode** page within Survey application. This now enables to have direct access to the various Linework setting as it is known.

**Traverse Adjustment for TPS Traverse**

The current **TPS Traverse** application program has been extended with an **adjustment functionality**. The functionality is licence key protected and can be ordered with the following article number:

**765559**  
TPS1200 Traverse Adjustment (req Trav 734170)
Functionality:

After having viewed the traverse results the new adjustment functionality can be accessed by pressing F4 ADJST.

Please note that survey points have to be measured while the Traverse application is running to be part of the adjustment calculations.

A traverse adjustment can be performed on three components: 2D positions, angles and elevations.
Horz. Adjust.

**Compass** is suitable for surveys, where angles and distances were measured.

**Transit** suitable for surveys, where angles were measured with higher precision than distances.

**No distribution**: No distribution is made

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Angle Balance

**Equally**: The angle misclosure is distributed equally

**No distribution**: No distribution is made

Vert. Adjust.: 

**Equally**: The height error distributed equally

**By distance**: The height error is distributed by distance

**No distribution**: No distribution is made
Adjustment results are displayed within the Results panel.

**F3 N&E** is to view the misclosure error in north/east or **L&D** in length/direction.

Within the **Adjust. Results Points** page, the adjusted points are listed. Within the **Method** page the previously selected Traverse adjustment method is displayed.

When pressing **F1 CONT** the traverse adjustment is stored.

**XSL files for Traverse reporting**

**XSL Files** – are supported with the **Traverse Adjustment** functionality.

Using XSL file (Style sheet) it is possible to take an **XML file** into **HTML** for viewing and printing in a web browser. Since this is a text based operation and uses standard web browser protocols, the computer used to open the
XML file needs no special software other than a web browser. XSL files are easily edited in any text-editing program making them easy to customize giving the user ultimate flexibility.

After storing the adjusted traverse you have the option to generate a report, generating the report exports to XML.

**Functionality:**
To use the XSL file with the XML exported file from Traverse Adjustment, a template XSL file named adjust_report.xsl has to be placed in a directory named SRC in the folder containing the XML file. Since the location of the XSL file and the name of the file are hard coded into the XML file this directory and file need to be there for the reporting to work. The illustration below shows how this could look on a basic CF card format. Make an SRC folder and place the exported XML in the root directory. Similarly this could be done on a PC. The adjust_report.xsl file can be found on the release DVD.

To use any of the XSL files simply make a copy of the given XSL file and re-
name it to **adjust_report.xsl** and place it in the **SRC** directory (illustration below).

Now simply double click any XML file will automatically generate the HTML and display it in a web browser to save or print. The below illustration gives an example of this viewed in Internet Explorer 7. Note, Print F functionality is still supported. The XSL file can be found on the DVD in the following directory: _Tps1200\TPS1200_SampleData\Traverse_XSL_File_
A new **PowerSearch (PS) functionality** got implemented.

The functionality allows the user to do an anticlockwise prism search. The functionality can be configured on a **Hotkey**, **Shift Hotkey** or the in **User Menu** and accessed by these keys.

The common clockwise PowerSearch functionality, which can be accessed from the **Quick Setting Menu (F6)**, **Hotkey**, **Shift Hotkey** or the **User Menu**
operates the same as previously.

Customers can now activate a clockwise or anticlockwise search depending on the prisms position.

With new SmartWorx 7.0 version easy job transfer between a GNSS instrument or TPS1200 to a FlexLine series is possible.

In the CONFIGURE Interfaces panel, focus Interface Export to Job and activate the interface. Open the Device panel and access page Others. Leica FlexLine is supported as a default device.

In case this device is not visible, please press the shift F5 (DEFLT) button to recall all available default devices.

Bugs fixed in SmartWorx 7.0 and other minor improvements

- Problem solved where Field to Office application occasionally crashed with certain FTP configurations. Solved now.
- Problem solved where under certain circumstances Field to Office application copies database files into the CODE folder
- Problem solved, where a new reflector height has not always been...
correctly remembered when entered with a quick key entry (TPS only).

- Delta North and Delta East values are exported correctly when using Known BS setup method.
- Problem solved, where on occasions the touch on the second display on the TPS doesn’t function correctly.
- In Determine Coordinate system application it is now possible to fix parameters for a 1 step and 2 step transformation.
- Athletics application now remembers foul line when switched off.
- In 3D DXF export Pt id, Coordinates, Height and Pt code are now all written at the point height and not height zero as previously