

Frequently Asked Questions (FAQs)

Leica DISTO™ S910

- **How many zoom levels does the Leica DISTO™ S910 have?**

The integrated digital Pointfinder in the device has an overview camera and additional 1x, 2x and 4x zoom. You can see in the middle of the status bar of the screen, which zoom level you have selected. To change from one zoom level to the next one you have to press the “up/down arrow keys” or you zoom in on the touchscreen as you are used on mobile phones.

- **Can I take photos with the Leica DISTO™ S910 and what is the resolution?**

Yes, it is possible to take photos and screenshots. The photos taken have a resolution of 800 x 600 pixels and screenshots have a resolution of 240 x 400 pixels. The photos and screenshots are save in jpg format.

- **How can I download my photos from the Leica DISTO™ S910 to a computer?**

Photos and screenshots can be downloaded to a computer via USB interface. The DISTO™ will be automatically connected (plug and play). It is now possible to download data from the DISTO™ by using of a file manager like the Windows Explorer.

Please note: It is not possible to upload data to the DISTO™ and it is not possible to delete files from the computer. Deleting files must be directly done in the DISTO™ Gallery function.

- **Can the brightness in the digital Pointfinder be adjusted?**

Yes, when turning the digital Pointfinder on it is indicated in the display that you can change the brightness with the left and right arrow keys on the keypad.

- **Why is the laser dot on short distances not centred to the crosshair respectively jumps from the middle of the screen to the laser dot?**

Since the laser exit is not in the same axis as the camera there will be the so called parallax error. This means that on short distances the laser deviates from the hair cross on the display. The S910 uses a software which detects the laser dot and corrects the hair cross on the display accordingly. This also works in conditions with strong ambient light where the laser dot is not visible to the naked eye and ensures the user is measuring to the laser dot independently to any parallax error.

- **How accurate is the tilt sensor in the Leica DISTO™ S910?**

The accuracy of the tilt sensor in the device is $\pm 0.1^\circ$ to the housing of the device. To the laser beam the maximum deviation can be up to -0.1° and $+0.2^\circ$. This applies at room temperature ($20^\circ\text{C} - 30^\circ\text{C}$). At any other temperatures the maximum deviation increases by $\pm 0.1^\circ$.

- **What units of tilts are integrated into the Leica DISTO™ S910?**

You can set the DISTO™ S910 to use different tilt units. Select in the settings “Units inclination” and choose between $^\circ$, %, in/ft and mm/m.

-> The level function in the right hand top corner of the display can also be switched on/off in the settings “level”. It is always set to 0.0° and cannot be changed into a different unit for tilts.

■ **What is the angular range of the tilt sensor in the Leica DISTO™ S910?**

The integrated tilt sensor in the DISTO™ S910 functions in the range 360° and at a transverse tilt of $\pm 10^\circ$.

If the device is held at >math>\pm 10^\circ</math> transversely, the info code "i156" appears in the display and indicates that the device is tilted too much.

■ **Can the tilt sensor of a Leica DISTO™ S910 be calibrated by the user?**

You can recalibrate the zero level of the integrated tilt sensor. In the settings choose the icon for calibration. When you select calibration you will be guided through the process.

Please follow this procedure to recalibrate:

- 1) Lay the unit down on a flat surface. The side with the type label should be down on the table.
- 2) Carry out the first measurement by pressing "ON/DIST" key on a level surface. The device confirms the measurement.
- 3) Turn the device horizontally by 180° and place it again on absolutely flat surface with the type label side down.
- 4) Carry out the second measurement by pressing "ON/DIST" key on a level surface. The device confirms the measurement.
- 5) Pick the unit up and then place it the laser facing up on an absolutely flat surface.
- 6) Carry out the third measurement by pressing "ON/DIST" key on a level surface. The device confirms the measurement.
- 7) Keeping the laser up on the flat surface, rotate the device horizontally by 180° while keeping it in the same location on the flat surface.
- 8) Carry out the fourth measurement by pressing "ON/DIST" key on a level surface. The device confirms the measurement.
- 9) After 2 Sec. the device goes back to the basic mode and you have completed the calibration procedure.

Please note: The calibration process can be proceeded by placing the unit with the lens up or down to the surface. A better accuracy in the calibration procedure is achieved having the back of the unit down on the surface and the lens up.

■ **How can I fold out the smart base on the Leica DISTO™ S910?**

If you can see a red ring on the smart base this is a sign that the smart base is locked. This makes sure that the smart base is not coming out and activated during normal measurements. In order to unlock the smart base push the socket in the back towards the front of the instrument. You can now easily fold out the base. For locking just push the socket towards the back.

■ **For what is the plate in the pouch good for?**

For accurate measurements it is essential to work from a stable ground and the instrument is not moved between measurements. The plate (smart base extension) can be easily slide on the smart base and will act as a larger area of support.

■ **Why can I do levelling of the Leica DISTO™ respectively must do it for some of the functions?**

If measurement results should refer to a horizontal plane (e.g. absolute measurements or measurements to use in CAD systems) the instrument must be calibrated right before measuring. Doing this errors from slightly inclined measuring bases are automatically compensated. The range for this levelling is +/- 5°.

■ **What is the measuring accuracy using the smart base?**

The smart base itself has a tolerance of up to $\pm 0.1^\circ$. In practical applications (typical accuracy) the deviation on 10 m measuring distance is about 10 mm, on 5 m it is 5 mm and on 3 m it is 3 mm. Depending on the measuring situation higher accuracies on shorter distances are possible.

- **How can I increase the measuring accuracy using the S910?**
 Make sure you are using a stable supporting area respectively use a tripod (ideally Leica TRI 70, TRI 100 or TRI 200) together with the Leica FTA 360-S adapter. Trigger measurements from the Touchscreen (type on the function symbol above the DIST key).
- **Which views do I get when using the DXF data capturing function?**
 Depending on the measurements you will receive 2 or 3 different DXF files:
 2DG --> this is the floor plan (view from the top)
 2DW --> this is the front view. This file will only be created if between first and second measurement the horizontal movement was at least 10cm. Otherwise no horizontal axis can be defined for presentation.
 3D --> this is the 3D drawing
- **What is the criteria for defining the axes in the DXF files?**
 The first measured point is the reference for the drawing. The second point defines the x-axis. The y-axis and z-axis are rectangular to it also referenced to the horizontal plane (levelling).
 An exception to this would be if the horizontal distance between the first and second measured point is less than 10cm. In such case the DISTO™ will be the reference in the drawing and the direction to the first measured point will be the x-axis.
- **When doing DXF data capturing no photo is saved, why is this the case?**
 Generally, only when the Pointfinder is switched on photos will be transferred or saved!
- **How can I download DXF files respectively delete them on the device?**
 The three dxf files with photos (if Pointfinder is switched on) will be saved on the DISTO™ in one folder each. These files or the folder can be easily loaded from the DISTO™ to a computer using a USB cable. In order to delete files and folder on the DISTO™ you must use the corresponding function on the DISTO™ itself.
- **When measuring an angle in the room it is not 90°. How can this be?**
 This function is measuring the angle given by three points in its position. This means to measure the room angle all three measurements must be in the horizontal plane!
- **Which area is measured when using the Smart Area Function?**
 The area given by the measured points will be measured. So if the area is inclined as it is e.g. on a roof of a building the real area will be measured.
- **Can I measure the area of a rounded room?**
 The area of a rounded room cannot be measured exactly. Since the S910 allows to measure areas with up to 30 corners a good result can be achieved by measuring several points along the arc.
- **Is it possible to obtain detailed information about the measurements taken?**
 Yes, it is possible to obtain detailed information in the DISTO™ S910. If detail information is available this will be indicated with two small arrows in the centre of the status bar in the display. You can now navigate with the arrow keys up and arrow key down between the available measurements.
- **The Leica DISTO™ S910 includes functions for measuring with the picture. What is the accuracy of such measurements?**
 The accuracy highly depends on how the function is used. Best results can be achieved when the measuring object is displayed maximum size at the DISTO™. In such case the accuracy is below 1% of the measured object. This applies for width, area and diameter measurements.

■ **What accessories are recommended for the Leica DISTO™ S910?**

Leica Tripod TRI 70, TRI 100, TRI 120, TRI 200

For measuring longer distances we highly recommend the use of a tripod. A tripod enables to aim precisely on targets even for longer distances. We also recommend to use the tripod together with the FTA360-S adapter for best results.

Leica TRI 70

This is a compact tripod with lower working height. It is 45 cm long (folded) and therefore very compact.

Leica TRI 100

This tripod additionally has a tripod head and a larger working height.

Leica TRI 120

This tripod is very compact but sturdy and has twist locks for the legs.

Leica TRI 200

This is a compact construction tripod with a ¼" screw for fixing DISTO™ adapters or for use with line lasers. This tripod provides highest stability.

Leica FTA 360-S Adapter

In order to achieve higher accuracy we are offering the tripod adapter FTA 360-S with fine adjustment for convenient and accurate aiming. This adapter is designed to be used as a tripod head (TRI 70, TRI 100 and TRI 200) or can simply be placed on a flat ground.

For use with the smart base the measuring reference on the DISTO™ will be switched automatically.

Target Plate

For measurement especially outdoors and in very bright conditions it is very helpful to use a target plate. We offer different versions in our accessory range.

■ **What is the measuring accuracy when using the direct horizontal measuring function?**

For example, if a distance of 10m is measured at an angle of 10°, the error on uncertainty on measurement on the direct horizontal distance (fd) is 3mm.

-> in order to have best results with the direct horizontal distance measurements, considering the deviation of the tilt sensor, use the DISTO™ S910 as flat as possible.

The horizontal distance error (fd) and the height error (fh) can be calculated as follows:

fd = horizontal distance error

fh = error in height

d = measured distance

a = angle at which the distance is measured

fa = possible angular error

$$fd = d * \cos(a) - d * \cos(a + fa)$$

$$fh = d * \sin(a) - d * \sin(a + fa)$$

Further information and a table of measuring accuracies you can find online in the FAQ under "Measuring Accuracy".

■ **Can the historical storage memory of 30 values in the device be erased?**

Yes, the memory in the device can be erased by pressing the delete button when in the memory. All memory values will be deleted.

- Can I enter a value that is constantly added / subtracted to my measured value? (Offset)**
 Yes, in the “Settings” you can go to the “Offset Icon” and enter a value that will constantly be added / subtracted from your measured distance value. If an offset value is entered you will see the adequate symbol - a triangle with plus or respectively minus next to the laser symbol.

-> If you want to set the offset value back to zero, enter the setting “Offset” and reset it.

- How do I know if the device is still measuring in the digital Pointfinder mode?**
 When using the digital Pointfinder in any function, especially in the Long Range (LR) Mode, you will see a clock icon on the top of the display. The clock stays in the display until the measurement is finished. Please do not move the device before!
- How can I get one extra year of warranty for the Leica DISTO™ S910?**
 Our standard warranty of 2 years can be extended by one additional year if you register your device on our website www.disto.com within eight weeks of the purchase date. If the product is not registered, a two year warranty applies.
- What does it mean when I attempt a measurement but the unit shows a number on the display versus my measured value?**
 This is a message code. The numbers are displayed if a successful measurement could not be performed. The user itself can correct the measuring situation to achieve a measurement. Below you can find the spread sheet from the manual with the corrections:

No.	Cause	Correction
156	Transverse tilt greater than 10°	Hold the instrument without any transverse tilt
162	Calibration mistake	Make sure, the device is placed on an absolutely horizontal and flat surface. Repeat the calibration procedure. If the mistake still occurs, contact your dealer.
204	Calculation error	Perform measurement again.
240	Data transfer error	Repeat procedure
252	Temperature too high	Let device cool down.
253	Temperature too low	Warm device up.
255	Received signal too weak, measuring time too long	Change target surface (e.g. white paper).
256	Received signal too high	Change target surface (e.g. white paper).
257	Too much background light	Shadow target area.
258	Measurement outside of measuring range	Correct range.
260	Laser beam interrupted	Repeat measurement.
300	Smart base not folded out	Fold out smart base
301	Device was moved, levelling not valid any more	Perform levelling again. Measuring with invalid levelling is possible, but it affects the accuracy.
302	Point data transmission is selected but WLAN is off	Switch on WLAN
340	WLAN data transfer error	Repeat procedure
341	Authentication error	Use correct password

Other error messages not listed here may indicate a problem with the device. In such a case, please take the following measures:

- Switching the device off and on again
- Insert new batteries (please use quality batteries of known brand)
- RESET the device in the settings. Please note that all data on the device will be deleted. So save the data in advance if necessary.
- Repeat procedure
- If the message appears during a measurement, select a good target at close range with little ambient light and repeat the measurement. If a measurement is possible, please check whether the previously performed measurement is at the edge of the device specification.

If the message also appears repeatedly after these measures, please contact your dealer.

▪ **What can I do if my Leica DISTO™ can no longer be switched off?**

If you hold down the ON/DIST button for about 30 seconds, the instrument will perform a forced restart.

▪ **How can I activate the keypad lock?**

To activate the keypad lock, choose in the settings the lock icon and turn the keypad log on. To deactivate the keypad lock, press ON/DIST key and within 2 sec the plus/minus key.

▪ **How can I deactivate the keypad lock?**

To deactivate the keypad lock press the ON/DIST key and afterwards (within 2 Sec.) the plus/minus key. Now the keypad lock is deactivated and the device is switched on.

▪ **Measuring with tripod – is there anything to consider?**

The measuring reference has to be adjusted to the tripod thread. In the Function Screen choose the reference icon and change the measuring reference to tripod. After switching off the device goes back to the standard setting (rear of device).

▪ **What is measured with the height tracking?**

The height tracking displays an indirect height. The combination of inclination and distance measuring to the wall opens the possibility for such an indirect calculation. It is a useful function if the height cannot be measured directly or if several height points on the same vertical line need to be measured.

▪ **What does ISO 16331-1 tested mean?**

When products and services meet our expectations, we tend to take this for granted and be unaware of the role of standards. However, when standards are absent, we soon notice. We care when products turn out to be of poor quality or are unreliable or dangerous. An ISO Standard ensures consistent quality and reliability for a product.

The range and accuracy of laser distance meters depend greatly on lighting conditions and the reflective properties of the target object. For Leica Geosystems it is important that the performance of the device is maintained not only in the test laboratory but even more so on everyday site tasks. Therefore we have worked with external experts to develop a global standard to test and specify laser distance meters and allow comparisons between devices of different manufacturers. Instruments tested in accordance with ISO 16331-1 achieve their promises. Further information can be found on our website: www.disto.com.

▪ **How can I program my favourite (mostly used functions) on the self-programmable keys?**

Press the left or right top key for about 2 sec.. An overview (“Favourites”) with all functions appears on the display. Choose the preferred function and press then the left or right top key where you want to have the favourite behind. The favourite is now saved.

■ **What Bluetooth technology is integrated in the Leica DISTO™ S910?**

The DISTO™ S910 has Bluetooth® SMART (also called low energy) integrated. The device is working with Smartphones or tablets that have Bluetooth® 4.0 integrated or are Smart Ready. Also it is required that its operating system is supporting this Bluetooth® standard which is the case for iOS, Android 4.3 or newer, Windows 8.

■ **Can I send measurement data from a Leica DISTO™ S910 to Apple mobile devices?**

Yes with the DISTO™ S910 it is possible to communicate with Apple mobile devices. Send measurement data to iPhone (iPhone 4S, iPhone 5, iPhone 5s, iPhone 5c), iPad3, iPad 4, iPad mini, iPod touch (Gen. 5). (--> Bluetooth® 4.0)

It is possible to use DISTO™ supporting apps from the app store (use App mode in DISTO™ device) or to connect the DISTO™ in the Bluetooth manager as a keyboard device where you can send the measurement data to the cursor position in any app (use text or spreadsheet mode in DISTO™ device).

The corresponding modes in the DISTO™ device needs to be set in the Setting menu of the DISTO™.

■ **On my iOS device the keyboard is not showing up in the display once I transferred data from a Leica DISTO™ in keyboard mode.**

Press the left favourite key, the centre of the icon turns green. Press now the +/- key on the DISTO™. The keyboard in the display of your iOS device will appear.

■ **Can I send measurement data from a Leica DISTO™ S910 to Android devices?**

Yes with the DISTO™ S910 it is now possible to communicate with Android devices. Its operating system must be 4.3 or higher. Send measurement data to Android devices that include Bluetooth 4.0. Used Apps should support the corresponding Bluetooth® standard (e.g. Leica DISTO™ Plan).

■ **Can I send measurement data from a Leica DISTO™ S910 Windows computers?**

Yes with the DISTO™ S910 it is possible to transfer data to Windows computers. The DISTO™ S910 is "treated" as a keyboard. For this add the DISTO™ in the device manager as a keyboard device. You can then send the measurement data from the DISTO™ to the cursor position in any program (use text or spreadsheet mode in DISTO™ device).

The corresponding modes in the DISTO™ device needs to be set in the Setting menu of the DISTO™.

The Windows computer must have the operating system Windows 8.1 or higher and Bluetooth 4.0.

■ **Can I send measurement data from a Leica DISTO™ S910 to devices with Linux, Windows mobile, Windows RT or Blackberrys?**

No this is not possible.

■ **My software only supports comma as a decimal marker and not a dot. Can I change this on the Leica DISTO™ S910?**

Yes, this can be changed. In the settings menu for Bluetooth® press the right selection key to enter a submenu for Bluetooth setting. Here you can change the setting for this.

Please note: This setting can only be changed in the text or spreadsheet mode.

- **I need to fill out a form in the Internet or a spreadsheet and it is required to jump to the next input box with a Tab or with Enter after each measurement. Can I change this on the Leica DISTO™ S910?**
Yes, this can be changed. In the settings menu for Bluetooth® press the right selection key to enter a submenu for Bluetooth setting. Here you can change the setting for this.

Please note: This setting can only be changed in the text or spreadsheet mode.

- **It need to use navigation keys to move in my spreadsheet to the required input box. Can I do this remotely from my Leica DISTO™ S910?**
Yes, this is possible. When you have connected your DISTO™ device with a smartphone or tablet or computer the content of the selection keys change for supporting the Bluetooth communication. With the left selection key you can switch on and off the navigation function where you can use the arrow keys of the DISTO™ for navigation.

Please note: This function is available in the text or spreadsheet mode. In the app mode it depends on the support of the app used.

- **What is the difference between text or spreadsheet mode?**
In the text mode the measurement result will be transferred as shown in the DISTO™ display. This includes units or fractions for feet and inch. In the spreadsheet mode only numbers are transfers without any unit information. Units with fractions will be converted to the corresponding unit with decimal. This makes further calculations like e.g. in Excel much easier.

- **Is it possible to transfer point data (coordinates) respectively pictures using Bluetooth® connection?**
No, via Bluetooth® it is only possible to transfer distances, areas, volume and inclinations. For all other data a WLAN connection is required.

- **Which possibilities of WLAN connections are possible between S910 and computer?**
Hotspot Mode: The Leica DISTO™ can act as a hotspot. By doing this it is very easy to establish a connection from a computer, smartphone or tablet. Please note that with this connection it is not possible for the computer to be connected to another WLAN network in parallel.

Client Mode: This way it is possible to connect the DISTO™ to an existing network. We recommend this mode to be used only for specific applications. It will be required to enter the password of the Network by the DISTO™.

- **What kind of data can be transferred via WLAN connection?**
The use of WLAN is only supported in the corresponding data transfer function (Point Data Transmission). As long as the smart base is not folded out only distances can be measured and transferred. If the smart base is folded out distances, inclination, horizontal and vertical angle of the sensors are transferred. For each case it is possible to transfer the measurement data only (right favourite key) or the data and picture (left favourite key, Pointfinder must be activated).

- **Do I need a special software for the Leica DISTO™ data transfer?**
As long as the DISTO™ is used in keyboard mode no special software is required. For all other cases of data transfer a specific software is needed. For DISTO™ Leica Geosystems is providing DISTO™ transfer which can be downloaded from our webpage.

- **How long does it take to charge the Li-Ion battery of the Leica DISTO™ S910?**
This depends from the used charger. With the charger out of the scope of delivery it takes approx.. 4hours to charge the Li-ion battery.

- **Is it possible to replace the Li-Ion battery of the Leica DISTO™ S910?**

The Li-ion battery can be replaced in service cases only. Please contact your dealer for a replacement set of the Li-ion battery.

- **Is it possible to upgrade the software on my Leica DISTO™ S910 device?**

Yes, in MyWorld by Leica Geosystems (registering for free) and on the Website of the DISTO™ S910 you can always find the latest version of the DISTO™ software. It is recommended to use your DISTO™ always with the latest software version.

- **Does Leica DISTO™ offer Apps ?**

Yes. Leica Geosystems offers an App Leica DISTO™ Plan. This App is available for iOS on iTunes and for Android on Google play.