

Frequently Asked Questions (FAQs)

Leica DISTO™ D510

- **How many zoom levels does the Leica DISTO™ D510 have?**

The integrated digital Pointfinder in the device has 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”.

- **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 distance on short distances not centred in the crosshair?**

It is the parallax effect due to the distance between the laser window and the digital Pointfinder optics. This effect occurs only when the digital Pointfinder is used on targets below 10m. In this case the laser dot appears displaced in reference to the crosshair. This is not an error !
For distances below 10m please rely on the real laser dot.

- **How accurate is the tilt sensor in the Leica DISTO™ D510?**

The accuracy of the tilt sensor in the device is $\pm 0.2^\circ$ to the laser beam respectively and $\pm 0.2^\circ$ to the housing of the device. The tilt sensor has a range of 360°

- **What units of tilts are integrated into the Leica DISTO™ D510?**

You can set the DISTO™ D510 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™ D510?**

The integrated tilt sensor in the DISTO™ D510 functions in the range 360° and at a transverse tilt of $< \pm 10^\circ$.

If the device is held at $> \pm 10^\circ$ 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™ D510 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.

▪ **Is it possible to obtain detailed information about the measurements taken?**

Yes, it is possible to obtain detailed information in the DISTO™ D510. 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.

▪ **What accessories are recommended for the Leica DISTO™ D510?**

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 using the tripod together with the Leica FTA 360 adapter or Leica TA 360 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 adapter

To achieve higher accuracy, we are offering the tripod adapter Leica FTA 360 with fine adjustment for convenient and accurate aiming. This adapter is designed to be used as a tripod head (TRI 70, TRI 100, TRI 120 and TRI 200) or can simply be placed on a flat ground.

Leica TA 360 Adapter

In order to achieve more flexibility we are offering the tripod adapter TA 360. This adapter is made of aluminium which makes it very stable and accurate to be used as a tripod head. A major benefit of the TA 360 is that you can fix your DISTO™ exactly that way that the tripod tilt and rotating axis and the instrument laser axis meet exactly in one point. This allows to do exact measurements even when turning the unit horizontally. Please note: When using the TA 360 adapter you don't need to change the measuring reference on your DISTO™ because the tilt axis is exactly at the instrument back end.

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.

■ **Can the Leica DISTO™ D510 also be used to measure horizontal angles?**

No, the integrated tilt sensor only measures vertical angles. If the device is held at a transverse tilt angle greater than ±10° the display shows an info code "i156", which means that the device is required to be held level (transversely).

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

For example, if a distance of 10 m is measured at an angle of 10°, the error on uncertainty on measurement on the direct horizontal distance (fd) is 6 mm.

-> in order to have best results with the direct horizontal distance measurements, considering the deviation of the tilt sensor, use the Leica DISTO™ D510 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".

■ **Which customer segment would find the Leica DISTO™ D510 of most use for everyday tasks?**

The DISTO™ D510 is a great measurement tool for a wide range of target groups and is a superb device that's especially designed for outdoor tasks. The device is particularly suitable, but of course not exclusively, for the following users: Professions who measure (at least partly) outdoor: General Construction, Excavator, Gardener / Landscaper, Roofer, Solar panel installer, Metal and glass construction, Painter, Real Estate, Facility Manager, Architects, Innovative users.

■ **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.

■ **Which batteries should I use for the Leica DISTO™ D510?**

In general you can use any alkaline battery or any rechargeable batteries (2xAA). In the scope of delivery we provide high quality Lithium batteries (not rechargeable) and we recommend to use such batteries or any (NiMH) batteries. Lithium batteries or NiMH rechargeable batteries allow more than twice as many measurements as with regular Alkaline batteries.

■ **Can I use the Leica DISTO™ D510 with rechargeable batteries?**

Yes, it is possible to use with standard rechargeable batteries. The more powerful the charger system is, the longer you can measure with the DISTO™. We offer a powerful charger system, which is ideal to use with DISTO™: Leica universal quick charger with 2 Micro AA NiMH batteries. For more information, please check our accessories.

■ **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™ D510?**

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.
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.

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.

▪ **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).

Please note: The measuring reference must be changed except when using the tripod adapter TA 360 from Leica. There the tilt axis is exactly at the back end of the Leica DISTO™.

- **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 and right top keys for 2 Sec. The icons blink now you can choose the functions you would like to put on the left and right favourite keys. Pressing the left key puts the function on the left side. Pressing the right key puts the function on the right side. It is an easy way to put the functions on the keys that you use most.

- **What Bluetooth® technology is integrated in the Leica DISTO™ D510?**

The DISTO™ D510 has Bluetooth® SMART. The device is working with smartphones or tablets with Bluetooth® 4.0, or are "Smart Ready". It is also required that the operating system supports this Bluetooth® standard which is the case for iOS devices, Android devices 4.3 or higher, and Windows 8.0 or higher.

- **Can I send measuring data from a Leica DISTO™ D510 to iOS mobile devices?**

Yes, the DISTO™ D510 can communicate with iOS mobile devices. It's possible to send measuring data to an iPhone (iPhone 4S, iPhone 5, iPhone 5s, iPhone 5c), iPad3, iPad 4, iPad mini, iPod touch (Gen. 5). (--> Bluetooth® 4.0)

- **Can I send measuring data from a Leica DISTO™ D510 to Android devices?**

Yes, the DISTO™ D510 can communicate also with Android devices, with operating system 4.3 or higher, and which have integrated Bluetooth 4.0. Used apps should support the corresponding Bluetooth® standard (e.g. Leica DISTO™ Plan).

- **Can I send measuring data from a Leica DISTO™ D510 to a Windows computer?**

It is possible to send data to computers running with Windows 8.1 by using the free software Leica DISTO™ transfer. This free software you can download from our DISTO™ webpage. Windows 7 and older Windows operating systems do not support Bluetooth 4.0 and therefore do not support data transfer from the DISTO™ D510.

- **Can I send measuring data from a Leica DISTO™ D510 to Linux, Windows mobile, Windows RT or a Blackberry device?**

No, this is not possible.

- **Does the Leica DISTO™ D510 offer apps?**

Yes. We offer the Leica DISTO™ Plan app. The app is available free of charge for iOS devices on iTunes, and for Android devices on Google Play.

- **Can I trigger measurements on the DISTO™ D510 by the App?**

No, this is not possible for the Leica DISTO™ D510