Leica DISTO^{TM} transfer v6

Quick Start Guide

- when it has to be **right**

Leica Geosystems

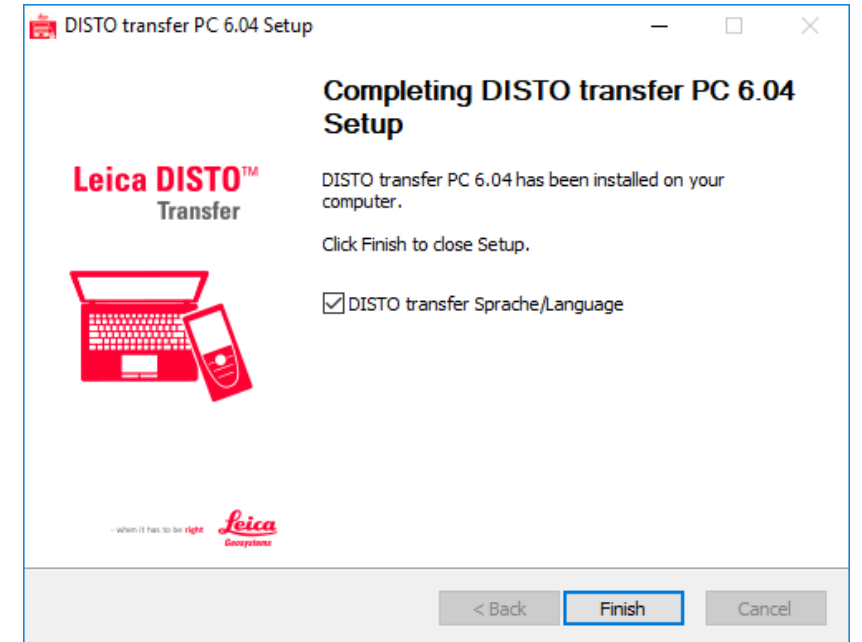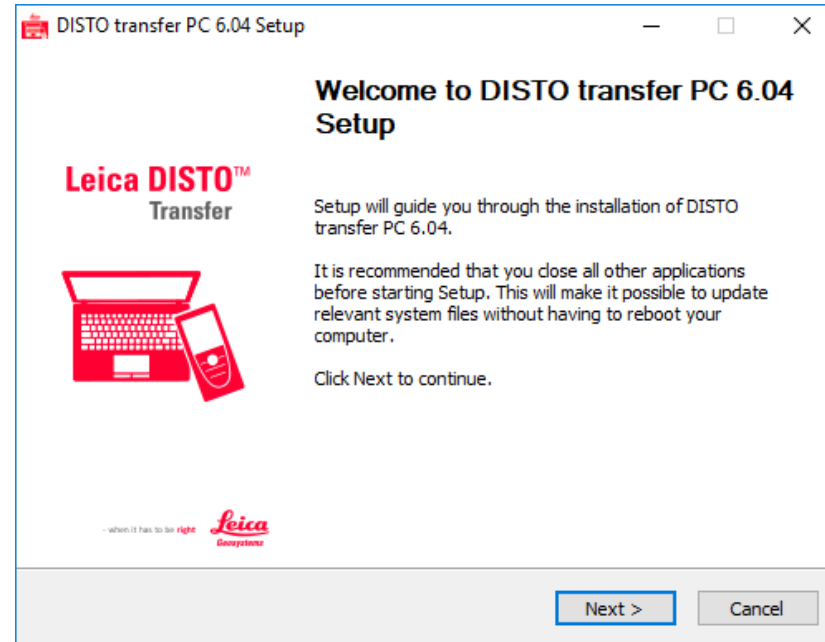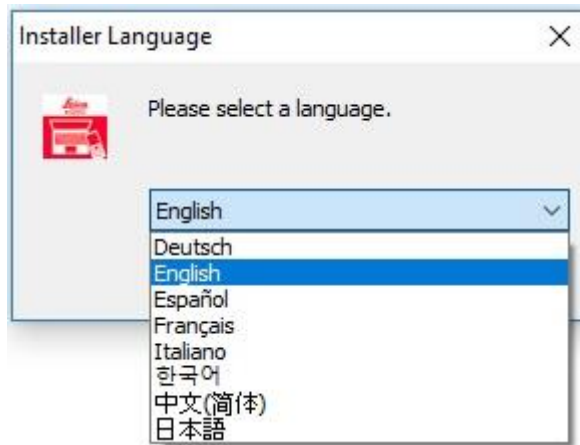# Leica DISTO™ transfer v6

Content

- when it has to be **right**

Leica Geosystems

Leica DISTO^{TM} transfer v6
Installation

- An Installation Wizard is displayed on the screen to guide the user, through the whole process.

- when it has to be **right**

Leica DISTO^{TM} transfer v6
Installation

- **DISTO transfer Sprache/Language allows the user to select different languages, accordingly to the user's preference.**

- **This setting can be changed later by clicking on the icon DISTO transfer 6.0 Sprache Language.**

- when it has to be **right**

Leica DISTO™ transfer v6
Connection with DISTO's

- The Leica DISTO™ transfer v6 is compatible with all Leica products which have Bluetooth® Smart and Wi-Fi technology.

D1	D110	D2	X3	X4	D510	D810	S910

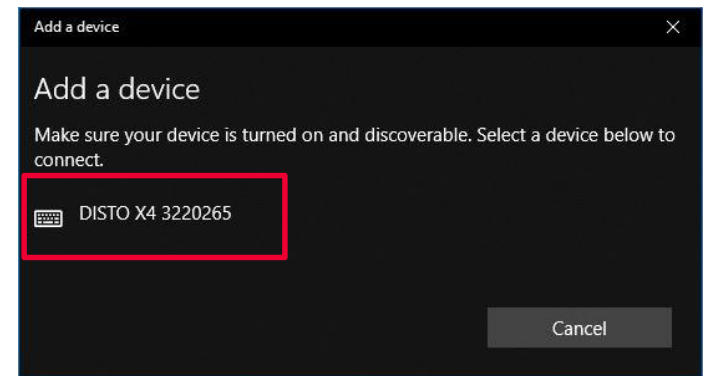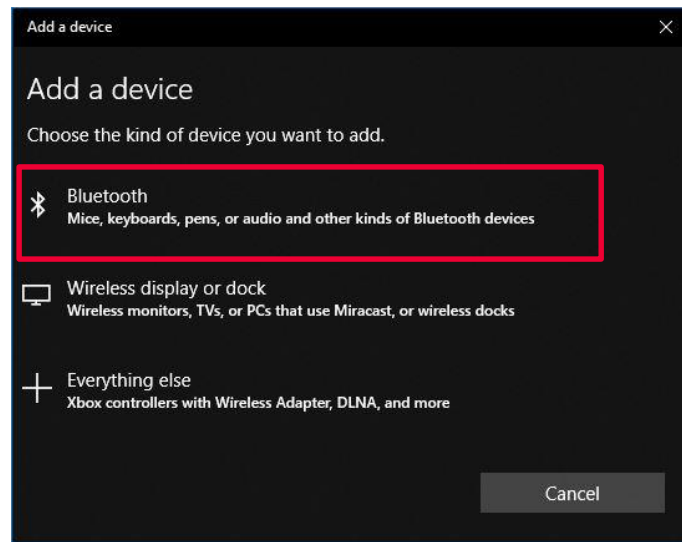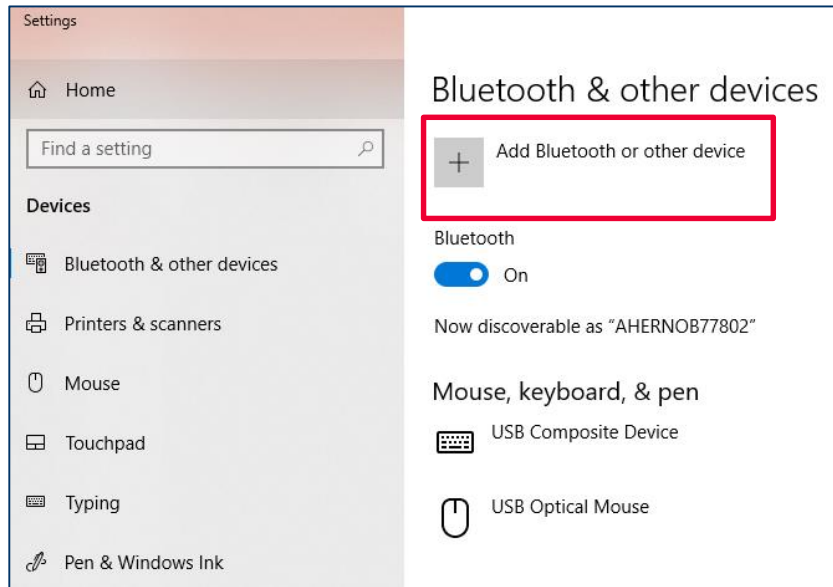S910

- when it has to be **right**

Leica DISTO™ transfer v6
Bluetooth Connection

- Establish a Bluetooth connection between your Leica DISTO™ device and your tablet/laptop, via Windows Operating System.
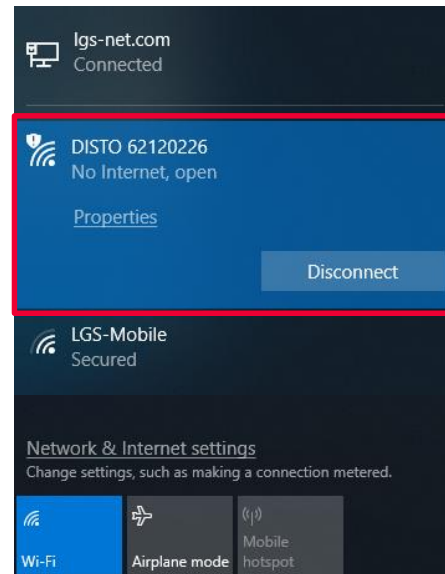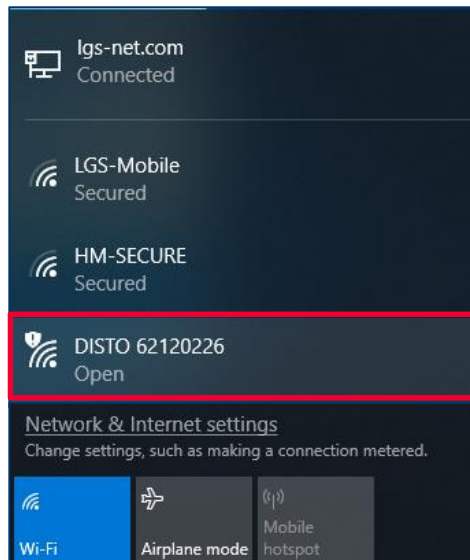
- when it has to be **right**

Leica DISTO™ transfer v6
Wi-Fi Connection

- **Establish a Wi-Fi connection between your Leica DISTO™ device and your tablet/laptop, via Windows Operating System.**


Simplified View

DISTO™ is connected
Please ensure that you have the latest firmware version installed
(https://lasers.leica-geosystems.com/global/firmware-update-s910)

- when it has to be **right**

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Leica DISTO™ transfer v6
Start screen – Connection Status

- When the software is started, the initial screen is displayed and starts immediately to look for a Leica DISTO™ device.
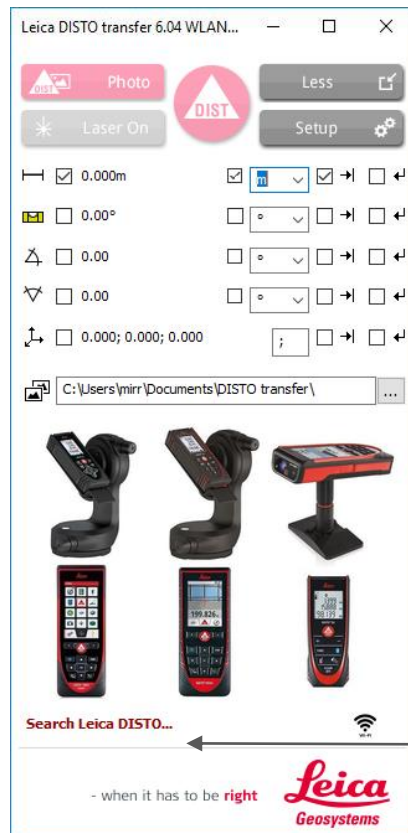
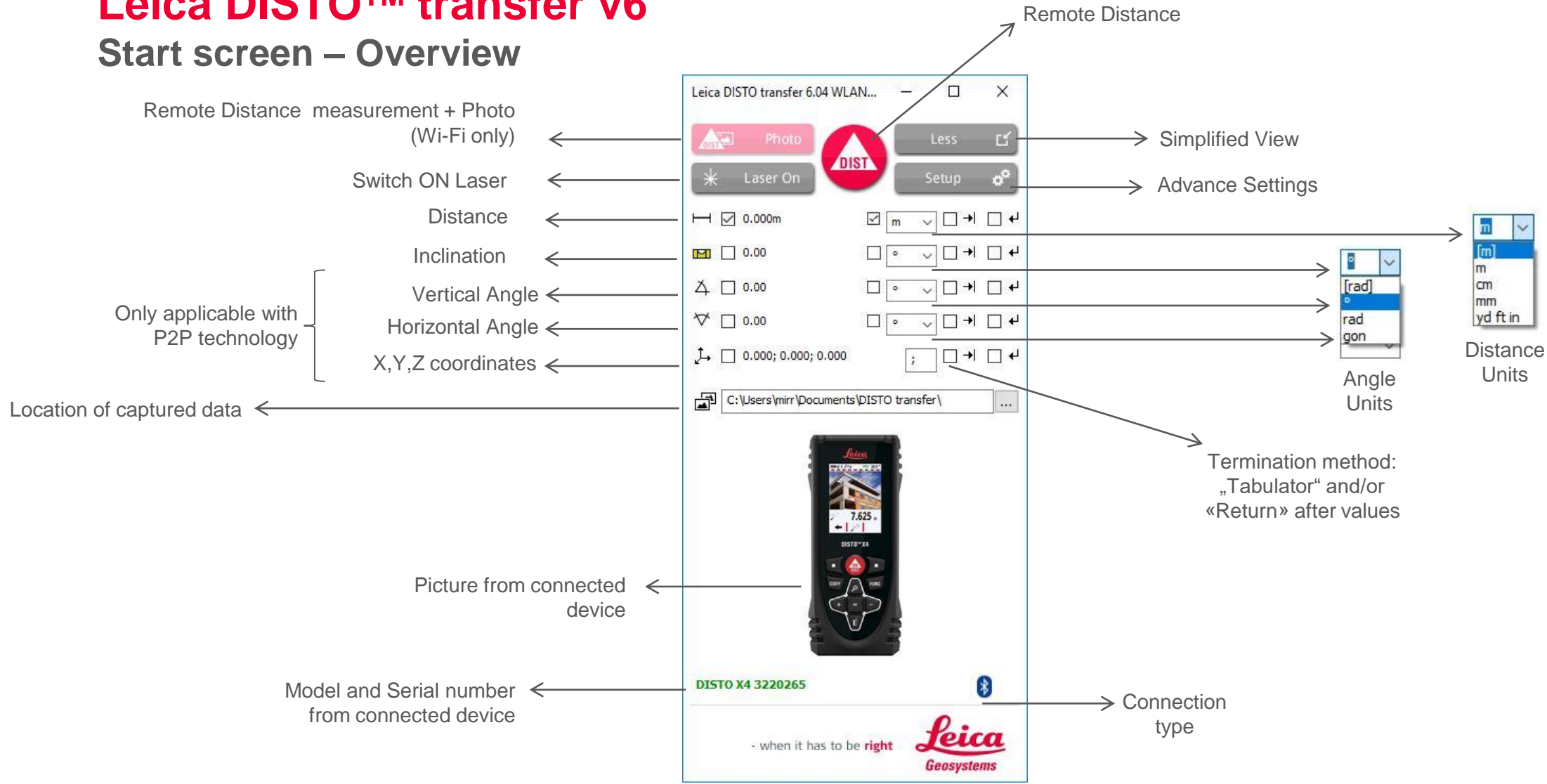Looking for DISTO™

DISTO™ connected

- when it has to be **right**

Leica DISTO^{TM} transfer v6
Start screen – Overview

Remote Distance

Remote Distance measurement + Photo (Wi-Fi only)

Switch ON Laser

Distance

Inclination

Vertical Angle

Horizontal Angle

Only applicable with P2P technology

X,Y,Z coordinates

Location of captured data

Picture from connected device

Model and Serial number from connected device

Simplified View

Advance Settings

Distance Units

Angle Units

Termination method: „Tabulator" and/or «Return» after values

Connection type

- when it has to be **right**

Leica DISTO™ transfer v6
Start screen – Overview

- **Please note that, when DISTO™ X3 / X4 are mounted on a DST360 adapter, the levelling process is automatically started and the levelling status is displayed on the Start screen.**

- **The same is applicable when the DISTO™ S910 has got the Smart Base folded down.**

- **These two modes, allow you to use P2P technology.**

DISTO S910 62120226

DISTO X4 3220265

- when it has to be **right**

Connection type

Levelling Status

Levelled – horizontal and vertical information correct

Move Alert – DISTO™ has been moved

Not Levelled – no information about horizontal and vertical

- when it has to be **right**

Leica DISTO™ transfer v6
Start screen – Overview

- **If you have connected previously, more than one Leica DISTO™ device to your tablet/laptop, the DISTO transfer software will display a multiple selection window.**

- **Inside this window, you will be offered the chance to select the desired DISTO™ and to switch between Wi-Fi and Bluetooth.**

Devices which are paired with the Windows Operating System

Displays the devices which support Wi-Fi

Confirm selection

- when it has to be **right**

Leica DISTO™ transfer v6
Basic Measurement Process

Measurements sent to Measurement Log only

Measurements sent to active window

Measurements sent to a pre-selected window

Window selection

Characteristics sent to other programs

Customized Data Format
(see next page)

- when it has to be **right**

Leica DISTO™ transfer v6
Basic Measurement Process

In this scenario the following characteristics will be sent:
Distance, Distance unit, Inclination, Inclination Unit

Active Configuration Window

Blue:	**Value format**
##	**Separators**
Black	**Control Signs**

Separators are mandatory between every item

Double click on the item in this list to move it into the active configuration

---

Format Transmitting String

Current Transmitting String:

Distance##Distance_Unit##**Tab**##Angle_Inclination##Angle_Inclination_Unit##**Return**

Double click in the lower list on the entry which you want to have in the transmitting string. It is then inserted into the current input position in the above field.

Entry	Description
##	These characters are omitted when transmitting.
Date	The current system date when the measurement was ...
Time	The system time when the measurement was receive...
Time_ms	The system time with milliseconds when the measure...
Position	The positon number of the measurement. This value i...
Distance	DISTOs distance measurement.
Horizontal_Dist	The horizontal distance measured by the DISTO
Vertical_Dist	The vertical distance measured by the DISTO
Distance_Unit	The unit of the last distance measurement.
Angle_Inclination	Inclination angle
Angle_Inclination_Unit	Unit inclination angle

OK   Cancel

- when it has to be **right**

Leica Geosystems

Leica DISTO™ transfer v6
Basic Measurement Process

Data format sent to an Excel spreadsheet

- when it has to be **right**

Leica DISTO™ transfer v6
Basic Measurement Process

Vertical & Horizontal Angle, X,Y,Z, coordinates
(see page 17)

Accuracy of measurement

Measurement record

Photo only available for Wi-Fi connection

Open Microsoft Excel

Free station function
(see page 19)

3D Viewer & P2P Calculator
(see page 18)

Send Selected Items to other program
(e.g. Excel spreadsheet)

- when it has to be **right**

Leica DISTO^{TM} transfer v6
P2P Measurement Process

- To perform P2P Measurements, a DST360 adapter is required or the Smart Base from the DISTO™ S910 must be folded down.

DISTO™ X4 + DST360
or
DISTO™ X3 + DST360

Connection type
Levelling status
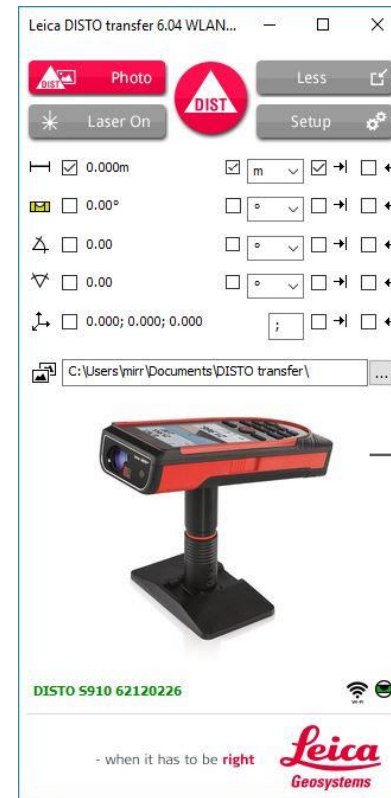
DISTO™ S910

Connection type
Levelling status

- when it has to be **right**

Leica DISTO™ transfer v6
P2P Measurement Process

V, Hz, X,Y,Z values are now displayed
(for detailed information, see page 42)

Send Selected Items to other program
(e.g. Excel spreadsheet)

3D Viewer & P2P Calculator
(see next page)

- when it has to be **right**

Leica DISTO™ transfer v6
P2P Measurement Process

3D Viewer

P2P Calculator

- Left Click to rotate the view
- Right Click to access additional settings
- Mouse Wheel Click to pan the view

X,Y,Z coord. from Point 1

X,Y,Z coord. from Point 2

Distance along X,Y,Z axis

P2P Distance

- when it has to be **right**
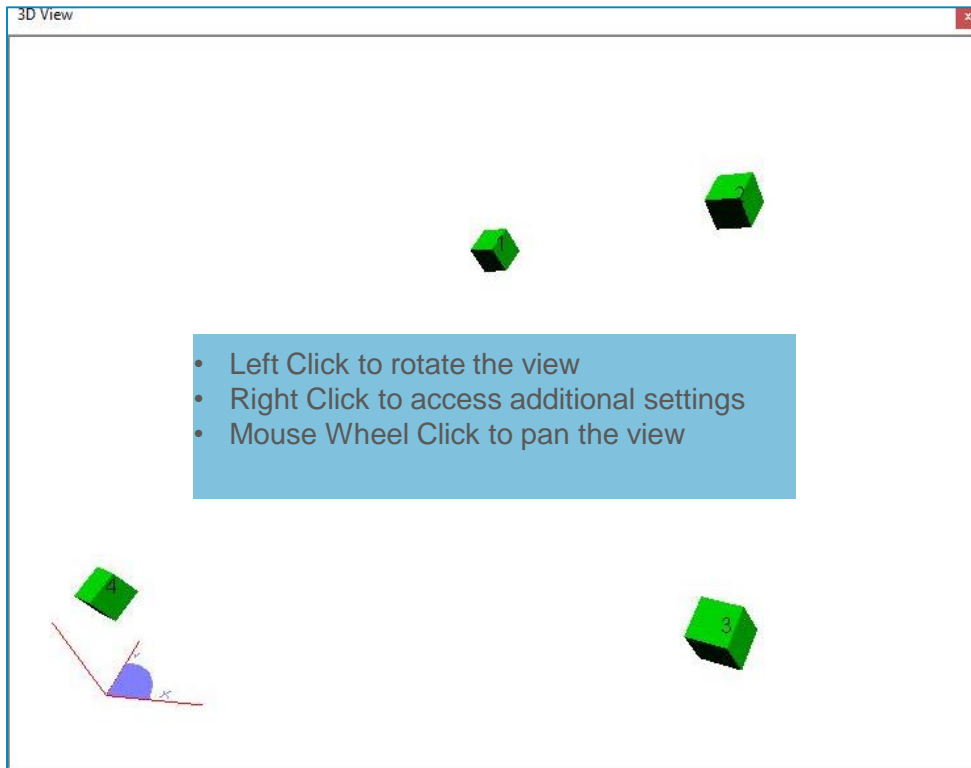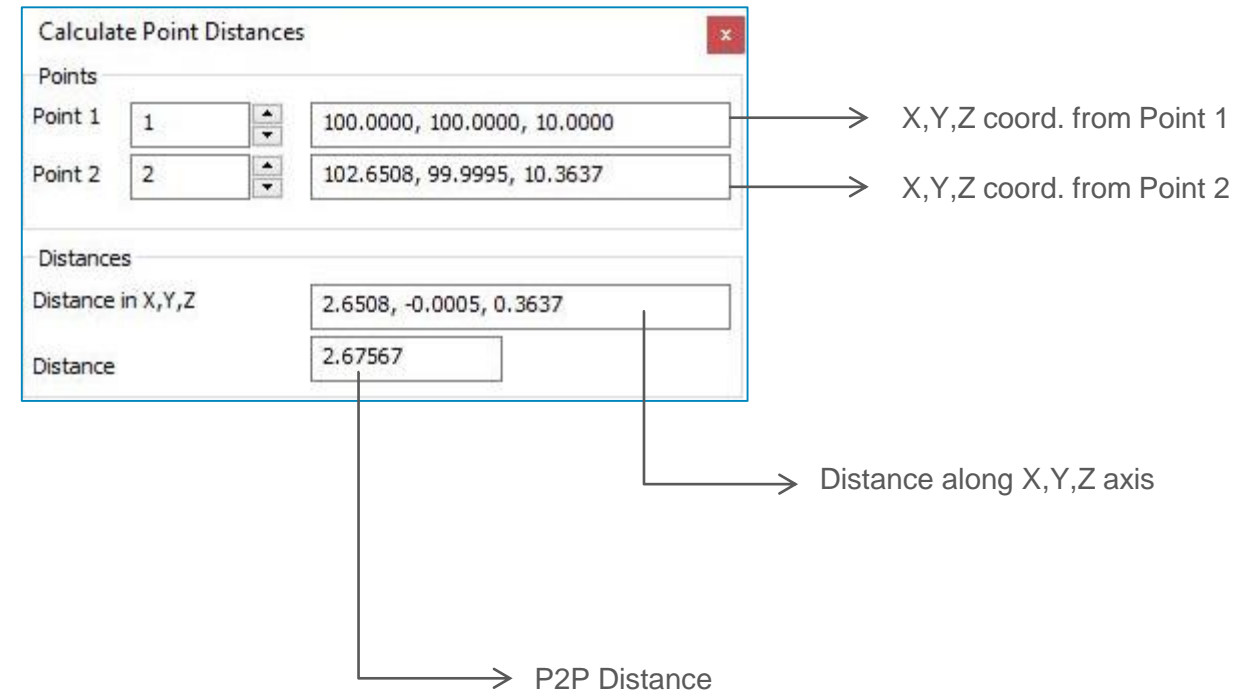
Leica DISTO™ transfer v6
Free Station

- **Free Station function allows the user to relocate with a new set-up and add relevant information to the existing drawing.**

- **Useful method when is not possible to measure all the desired data, from one single set-up.**

- **Please ensure good visibility between Leica DISTO™ device and the points to measure.**

- **Requires a DST360 adapter or the Smart Base from the DISTO™ S910 must be folded down.**

- when it has to be **right**

Leica Geosystems

Leica DISTO™ transfer v6
Free Station

- **When selecting Free Station function please read carefully the instructions on the screen.**

- **Select "Load old measurements" to load the reference points.**

- when it has to be **right**
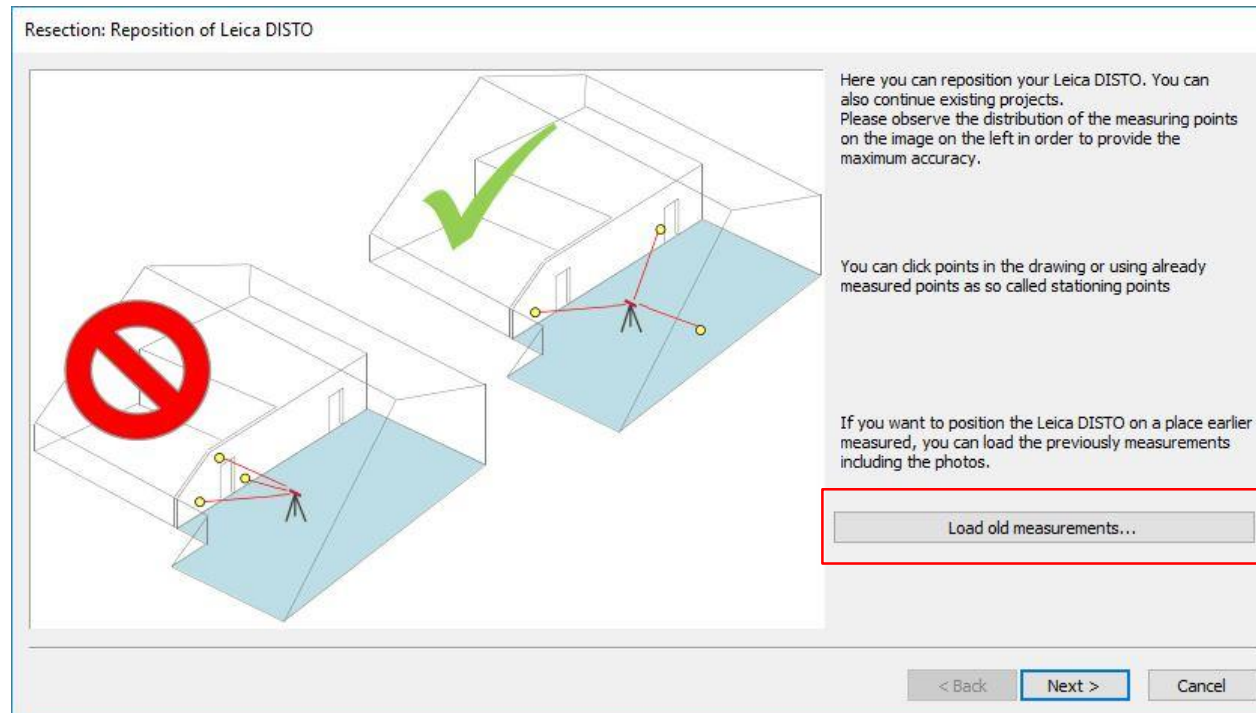
Leica DISTO™ transfer v6
Free Station

- **Select at least 3 points which you would like to use for your relocation.**

Active points

Point without photo associated

Point with photo associated

Right Click Menu

3D Viewer

- when it has to be **right**
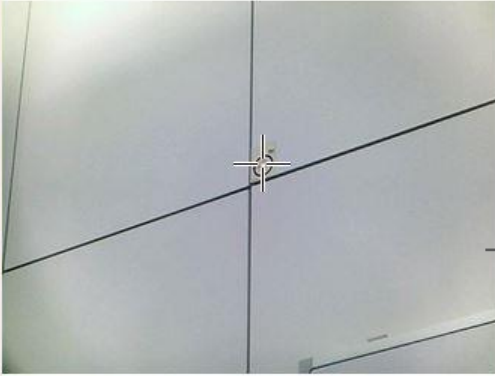
Leica DISTO™ transfer v6
Free Station

- **Select a line from the table and measure the matching point.**

Error associated to each point

A photo will be displayed if it's associated to a point

Accuracy of Relocation

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin

- **Set-up your DISTO™ S910 – Smart Base folded down and Wi-Fi turned ON**

- **Alternatively you can use a DISTO™ X3/X4 mounted on a DST360 adapter**

- **Open AutoCAD/BricsCAD → Start a new drawing and ensure that your CAD drawing has got the correct Unit system**

- **Make sure the DISTO™ transfer has been installed after your CAD installation or manually start the DISTO™ transfer before using it as a Plugin**

1) AutoCAD LT not supported

2) compatible with AutoCAD 13 or higher

3) compatible with BricsCAD V13 or higher

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin
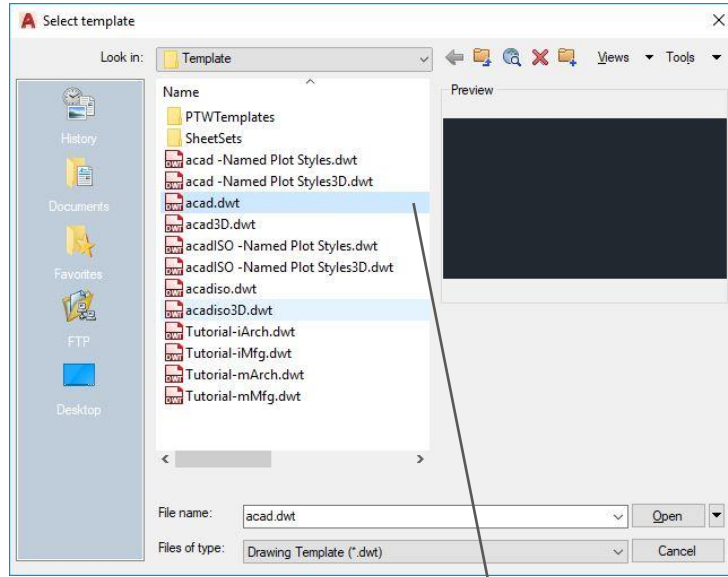
Star a new drawing by selecting an existing CAD template
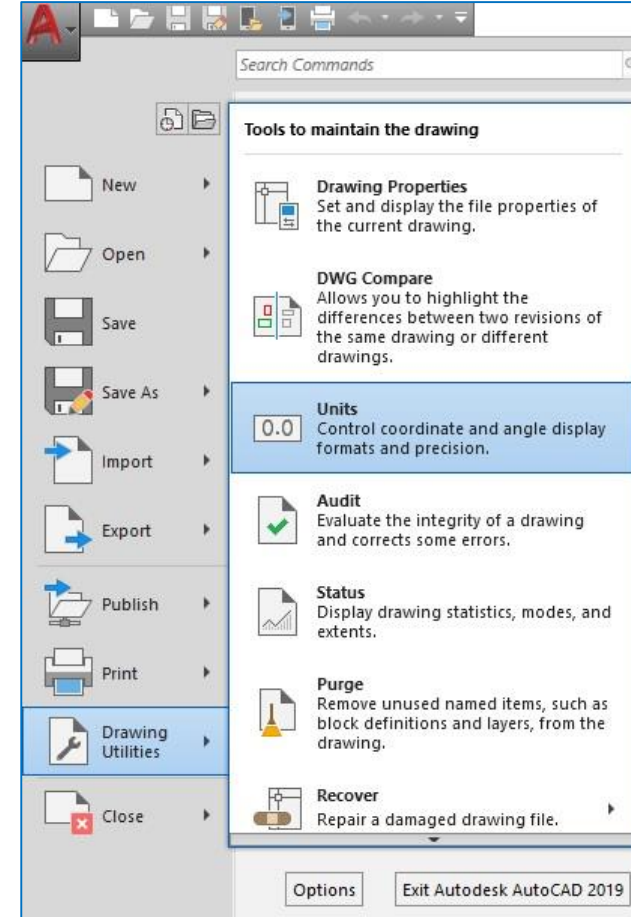
Adjust Unit system:

1) AutoCAD symbol
2) Drawing Utilities
3) Units
4) Set your preferred Unit System

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin

Press Load to execute the plugin
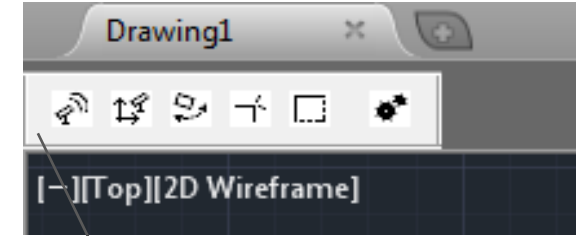
Plugin toolbar will appear and DISTO™ transfer will start

To start the plugin please enter LEICADISTO3D into the command line

Leica DISTO™ transfer v6
CAD Plugin

Execute the levelling process
on your DISTO™
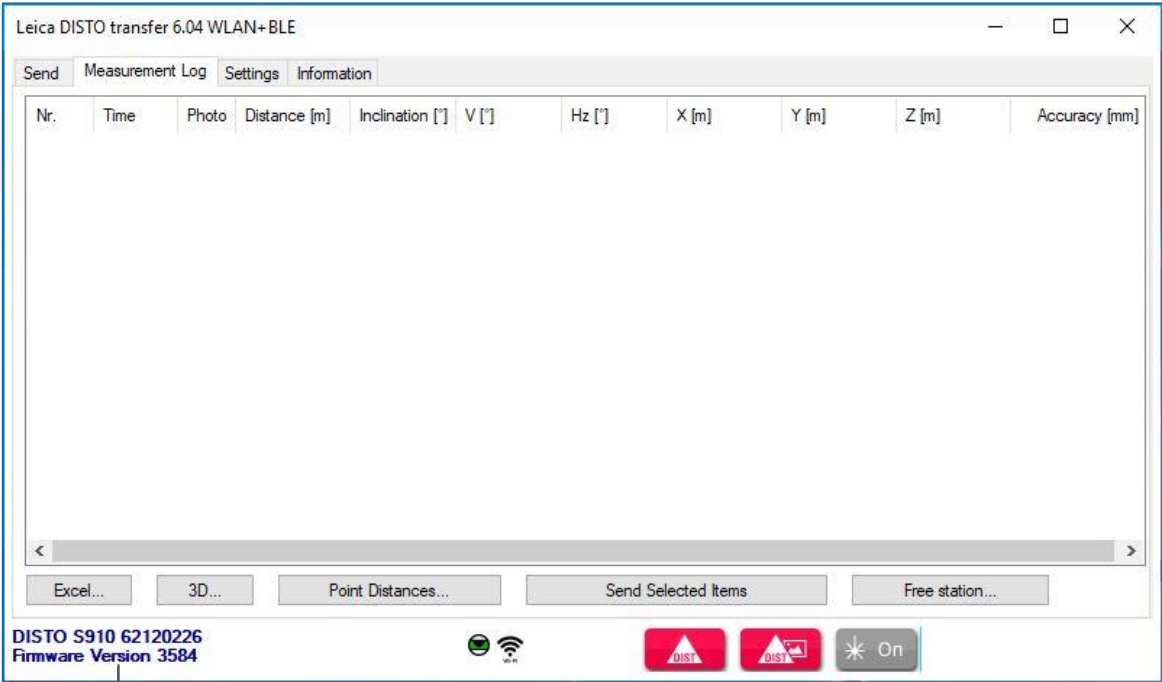
Highlighted in Blue → DISTO™ connected to CAD

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin
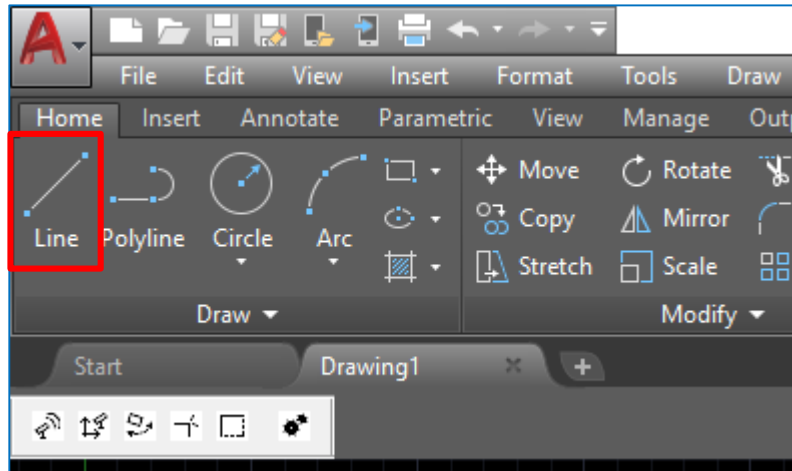
Select a drawing element (e.g. Line)
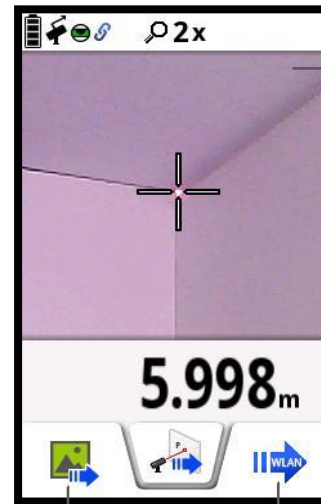
Now that the line has started, you can measure one point after another

NOTE: You need to have a drawing function active to get a value recognized by CAD

Transmit point without picture

Transmit point with picture

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin

Image from point

Point number

To end or close the line,
press ESC key

Measured point
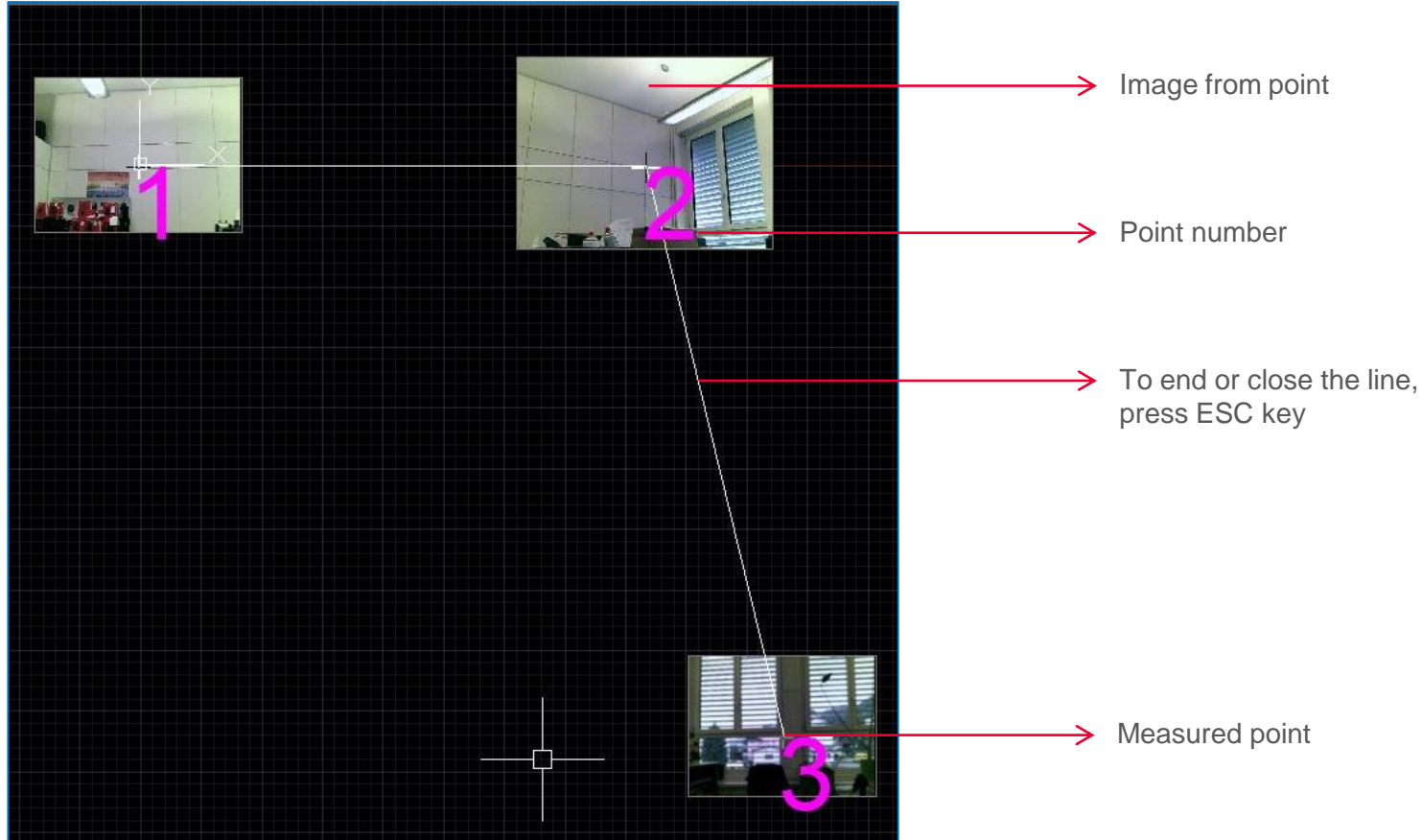
Collected data is organised by layers

- when it has to be **right**

Leica DISTO^{TM} transfer v6
CAD Plugin

Leica DISTO transfer

Settings for Text and Images

Draw Rectangle

Trim Lines

Auto Align Images

Free Station (see page 19)

Restarts DISTO™ transfer

- when it has to be **right**
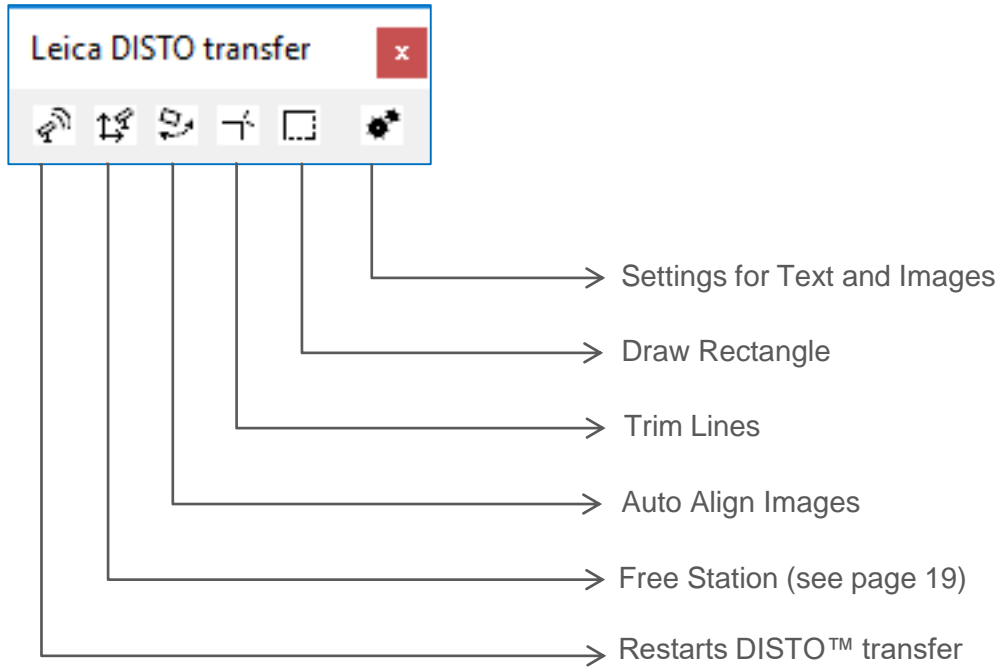
Leica DISTO^{TM} transfer v6
CAD Plugin
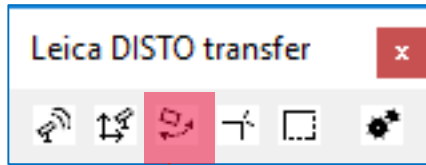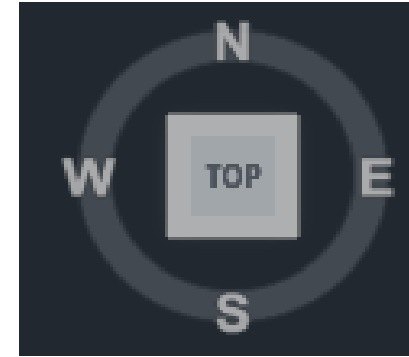
Auto Align Images

- Default view (Images are aligned)
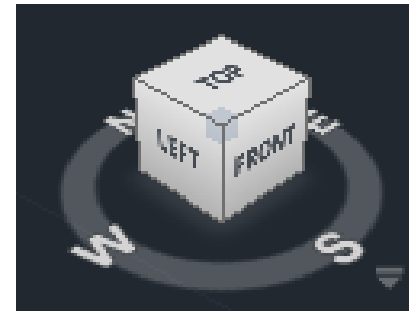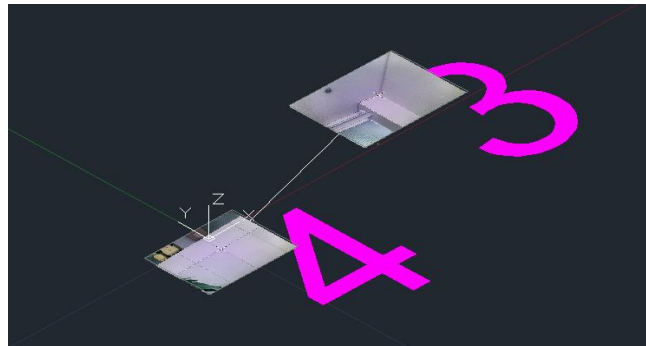
- When the view is changed, the Images are no longer aligned
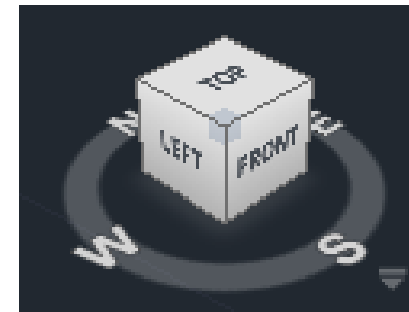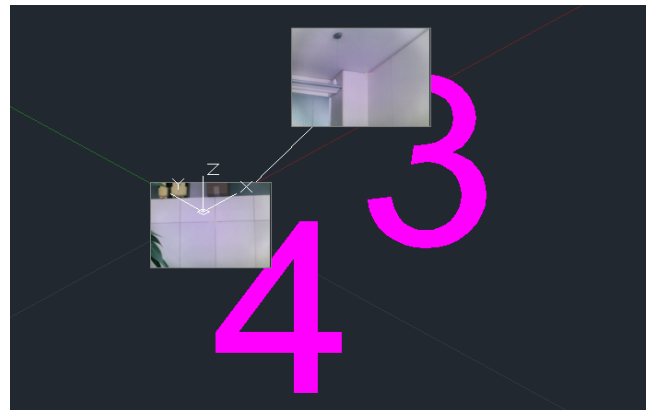
- when it has to be **right**

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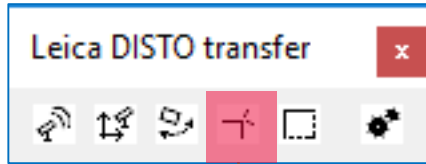# Leica DISTO™ transfer v6
CAD Plugin
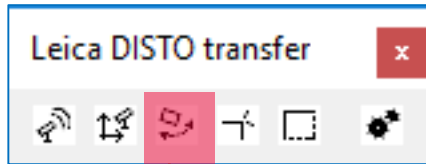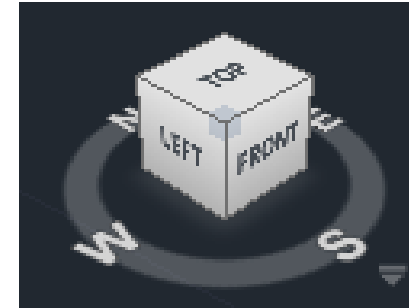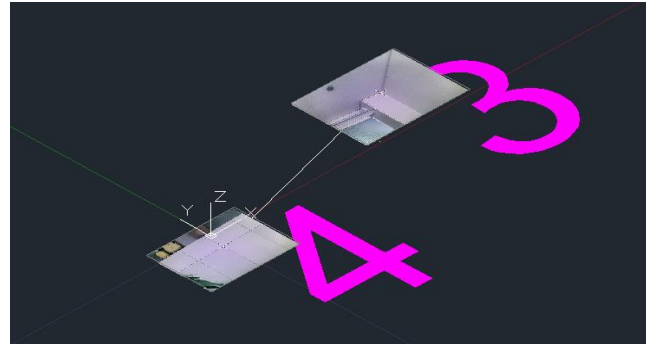
Auto Align Images

- Press Auto Align button and select one of the following options:

1) All

2) Individual Image
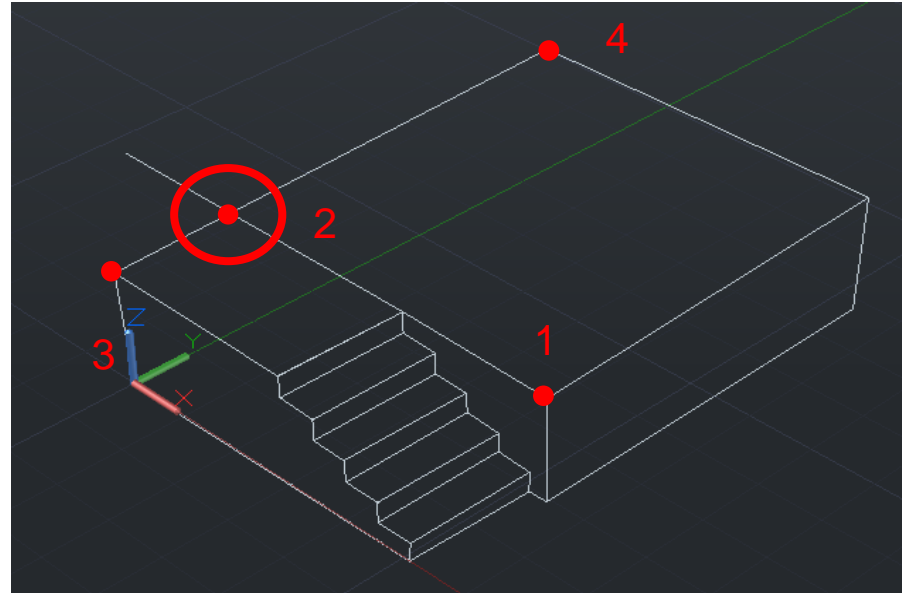

- Image and Text are now aligned with the current view

- when it has to be **right**

Leica DISTO^{TM} transfer v6
CAD Plugin

Trim Lines

Start Trim function in the toolbar and measure <u>two points</u> from the first line and then <u>two points</u> from the second line
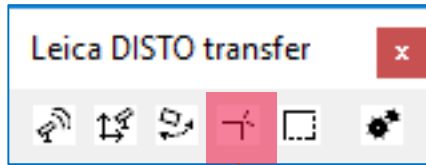

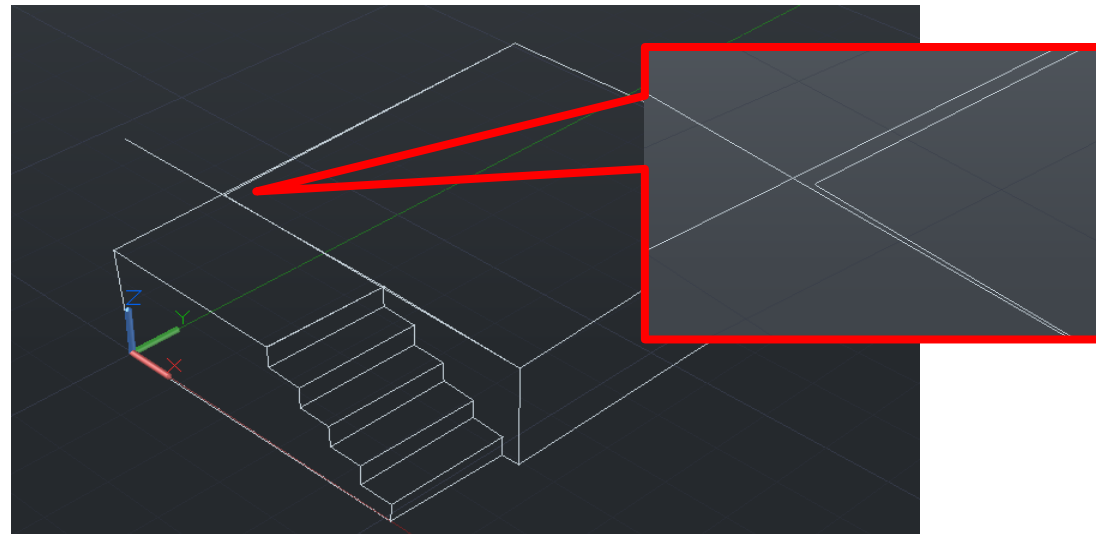In 3D space two lines most likely won't meet

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin
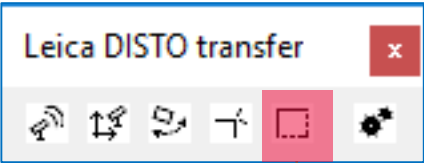
Leica DISTO transfer ✕

Trim Lines

Press enter to quit function and type in "yes" to draw remaining element

The line section was calculated and inserted within the drawing as TWO NEW lines at the closest point that they would meet
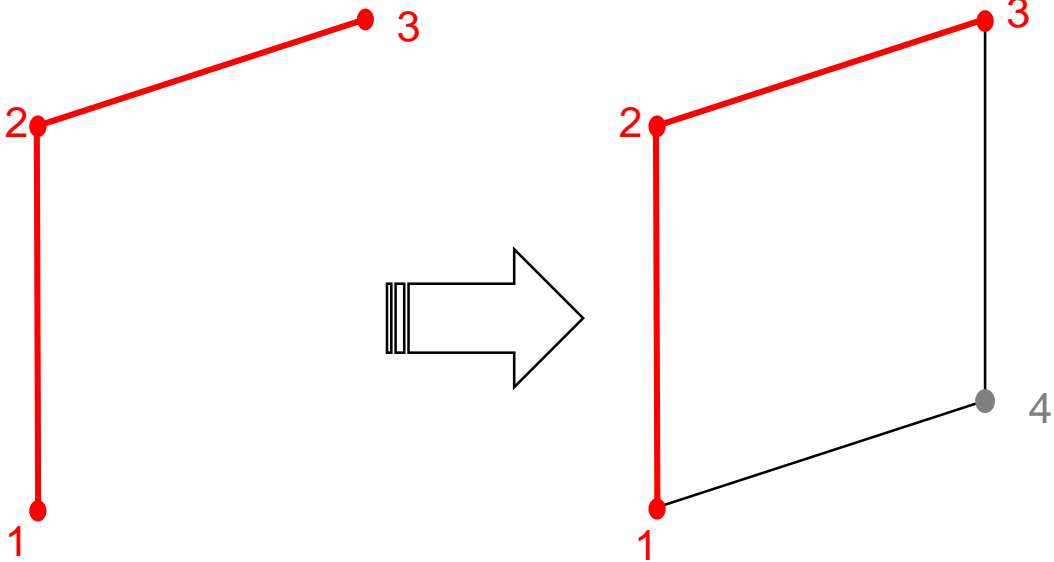
- when it has to be **right**

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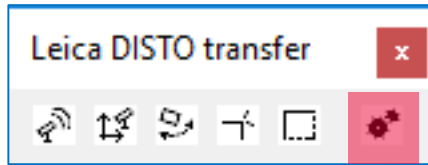# Leica DISTO™ transfer v6
CAD Plugin

Leica DISTO transfer

Draw Rectangle

Measure three points with your DISTO™S910 to create a rectangle in 3D space
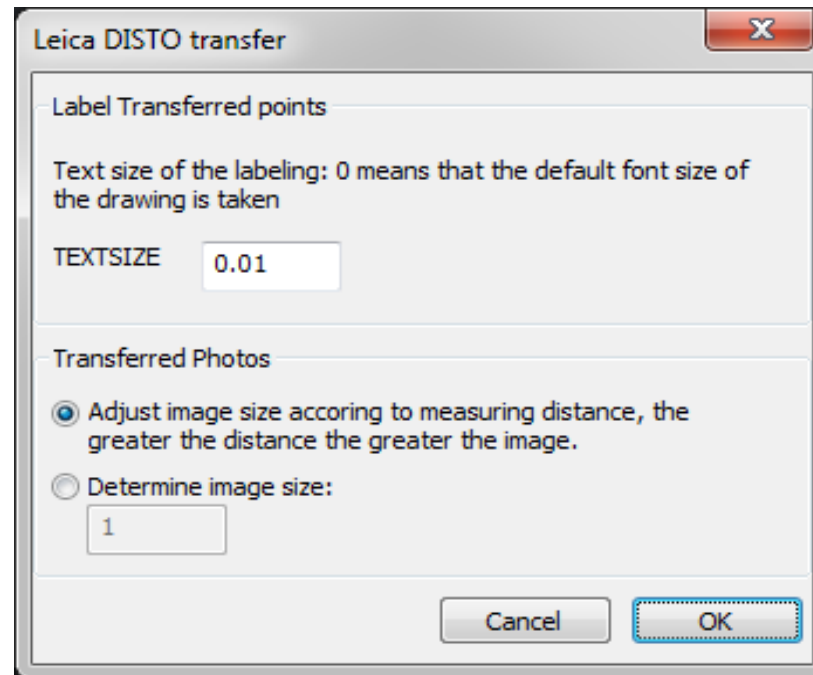
Automatically drawn lines and remaining point is added

- when it has to be **right**

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Leica DISTO™ transfer v6
CAD Plugin

Settings

Adjust the text and image size

TEXTSIZE is a relative value, that matches your drawing settings

Leica DISTO transfer

Label Transferred points

Text size of the labeling: 0 means that the default font size of the drawing is taken

TEXTSIZE   0.01

Transferred Photos

⦿ Adjust image size accoring to measuring distance, the greater the distance the greater the image.

◯ Determine image size:
   1

Cancel   OK

- when it has to be **right**

Leica DISTO™ transfer v6
CAD Plugin

- **Images transferred from the DISTO™ S910 into the drawing will be stored within the same directory as the drawing**

- **Captured images are displayed on DISTO™ transfer as well and saved on the Data directory**

- **Line functions and trimming is only available if the correct layer is selected**

- **Explanations regarding a function, are always within the command line**
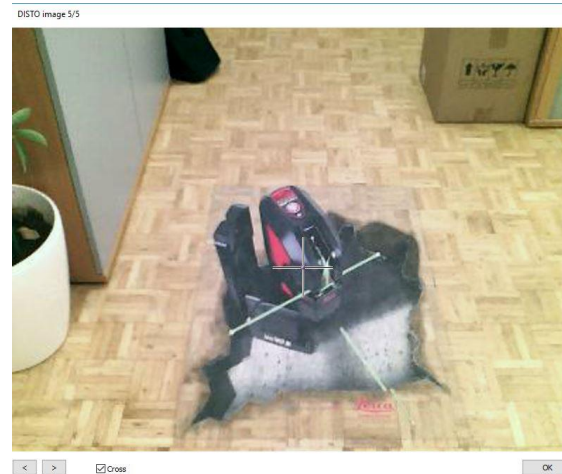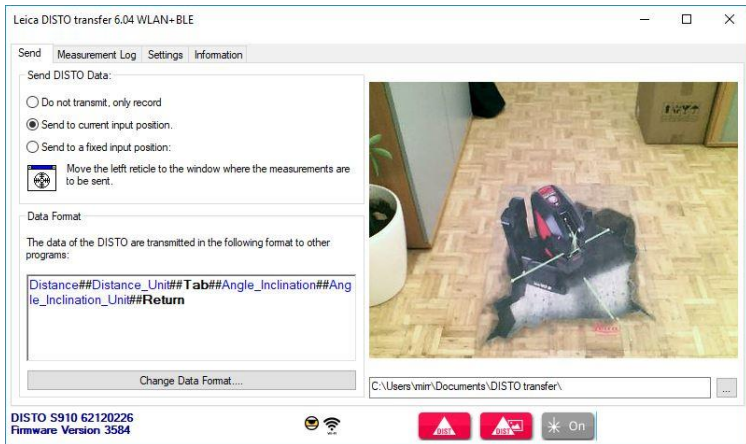
- when it has to be **right**

Leica DISTO^{TM} transfer v6
Settings

Orientation Configuration
(see page 39)

Start-up Configuration

Decimal Separator

Shortcuts

Automatic Measurements

Imperial Data Format Configuration (see next page)

- when it has to be **right**

Settings

- **Imperial Data Format Configuration**
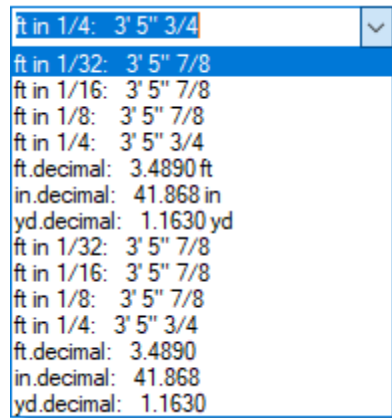
Distance Unit set on DISTO™ device	Imperial Format set on DISTO™ transfer	Transmitted result
0 1/8in	ft in 1/32: 3' 5" 7/8	3' 5" 7/8
	ft in 1/16: 3' 5" 7/8	3' 5" 7/8
	ft in 1/8: 3' 5" 7/8	3' 5" 7/8
	ft in 1/4: 3' 5" 3/4	3' 5" 3/4
	ft.decimal: 3.4890 ft	3.4890 ft
	in.decimal: 41.868 in	41.868 in
	yd.decimal: 1.1630 yd	1.1630 yd
	ft in 1/32: 3' 5" 7/8	3' 5" 7/8
	ft in 1/16: 3' 5" 7/8	3' 5" 7/8
	ft in 1/8: 3' 5" 7/8	3' 5" 7/8
	ft in 1/4: 3' 5" 3/4	3' 5" 3/4
	in.decimal: 41.868	3.489
	in.decimal: 41.868	41.868
	yd.decimal: 1.1630	1.163

Settings

- **Orientation Configuration**

- when it has to be **right**

Leica DISTO™ transfer v6
Good to Know

See actual angle and inclination values

Battery Voltage

- when it has to be **right**

Leica DISTO™ transfer v6
Good to Know

Distance
3.718m

Inclination 40.24°

Not available when using conventional Leica DISTO™ measurement

- when it has to be **right**

Leica DISTO™ transfer v6
Good to Know

5.521m

76.18°

88.70°

Distance

Vertical Angle

Horizontal Angle

Coordinates (x;y;z)

10.000

100.000

100.000
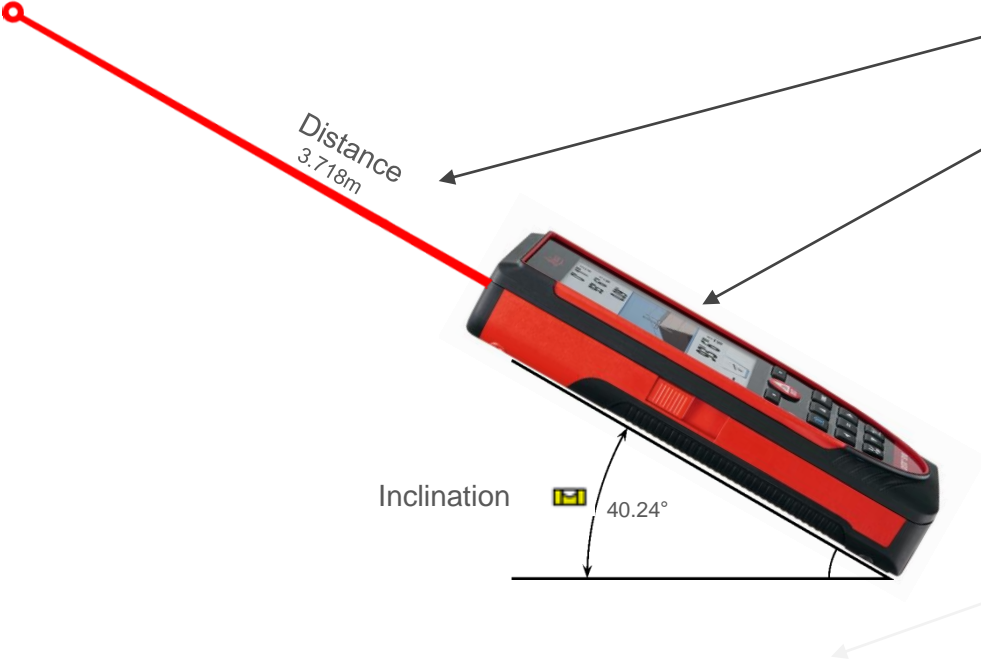
Leica DISTO transfer 6.04 WLAN...

Photo — Less

Laser On — Setup

DIST

☑ 5.521m   ☑ m ☑ →| □ ↵
□ °   □ ° □ →| □ ↵
□ 76.18   □ ° □ →| □ ↵
□ 88.70   □ ° □ →| □ ↵
□ 100.000; 100.000; 10.000   ; □ →| □ ↵

C:\Users\mirr\Documents\DISTO transfer\ ...

DISTO S910 62120226

- when it has to be **right** Leica Geosystems

Triggers remote measurement

When using P2P, the inclination value is ONLY transmitted when a remote measurement is made.

Horizontal and Vertical information correct

No horizontal and vertical correction

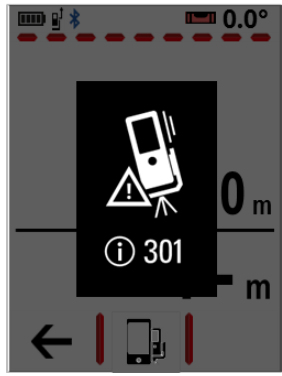- when it has to be **right**
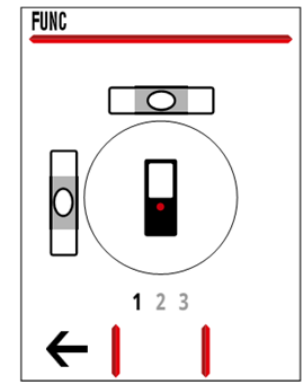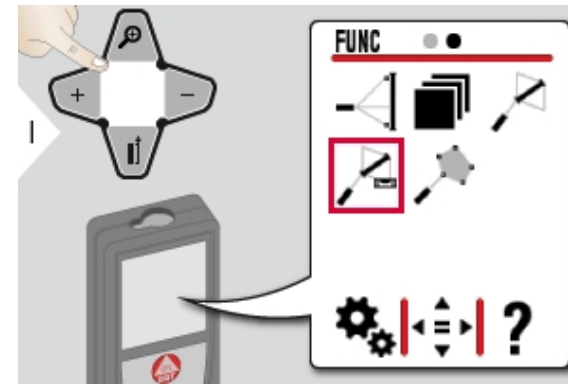
Leica DISTO™ transfer v6
Good to Know

When using a DISTO™ X3 / X4 together with a DST360 adapter and a loss of level is detected

Access the Main Menu screen and select P2P with Levelling function. Proceed with the levelling steps

Once the levelling is completed, access Single Measurement function and aim to the desired location.

Complete the measurement action, by pressing DIST button on DISTO transfer

The DISTO™ is now back to the original mode

- when it has to be **right**