Leica DISTO™ S910 with WIFI
DISTO™ transfer and CAD Plugin

PART OF HEXAGON

- when it has to be **right**

Leica
Geosystems

Leica DISTO™ S910
Overview

With the Leica DISTO™ S910 and DISTO™ transfer you can transfer

- ✓ distances and inclinations

- ✓ P2P measured points in 3D

- ✓ P2P measured points in 3D and the corresponding image

  ... to your Windows tablet, laptop or PC.

Leica DISTO™ transfer enables you to

- ✓ Send all received measurement data from the DISTO™ to the current cursor position into any program (e.g. Excel, Word, Notepad, ...)

- ✓ Send P2P measured points in 3D with images into AutoCAD

- ✓ Continue previous 3D measurements with relocation

- when it has to be **right**

Leica
Geosystems

Leica DISTO™ S910
Table of contents

- when it has to be **right**

Leica
Geosystems

Leica DISTO™ S910
WIFI Modes of operation

Hotspot Mode

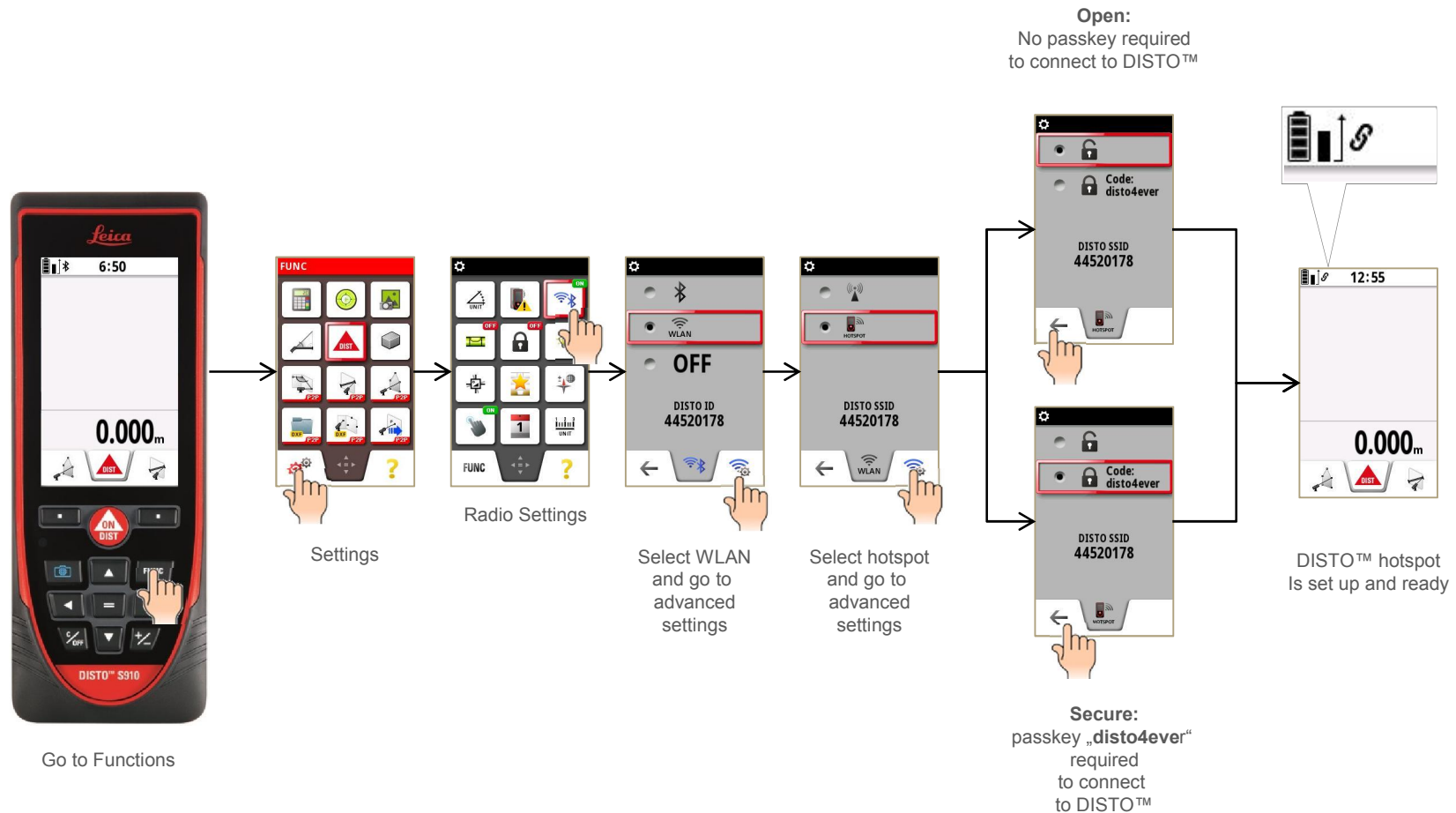The Leica DISTO™ S910 sets up a WIFI network to which the tablet can connect to

Client Mode

The Leica DISTO™ S910 and the tablet connect to an existing WIFI

- when it has to be **right**

Leica Geosystems

Leica DISTO™ S910
Start Hotspot Mode

Open:
No passkey required
to connect to DISTO™

Go to Functions

Settings

Radio Settings

Select WLAN
and go to
advanced
settings

Select hotspot
and go to
advanced
settings

DISTO™ hotspot
Is set up and ready

Secure:
passkey „**disto4ever**"
required
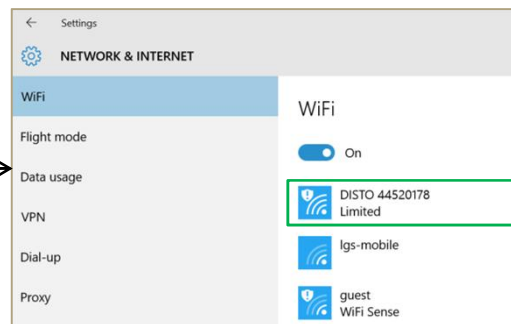to connect
to DISTO™

- when it has to be **right**

Leica DISTO™ S910
Connect to DISTO™ in Open Hotspot Mode

Long tap or right click
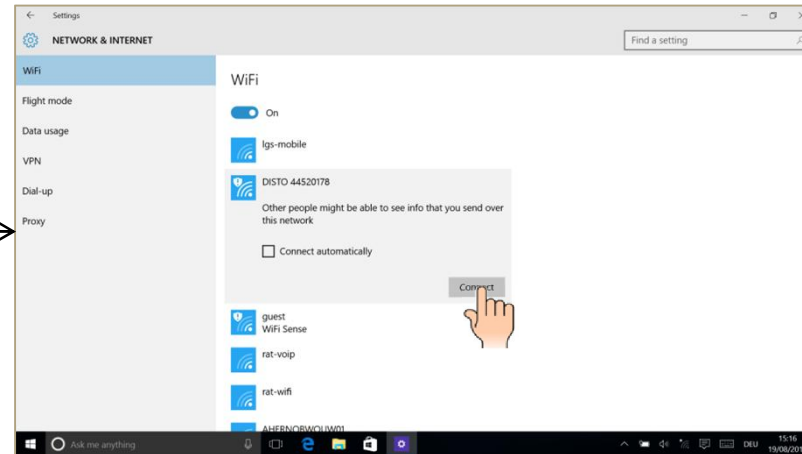
Choose you DISTO™ and connect
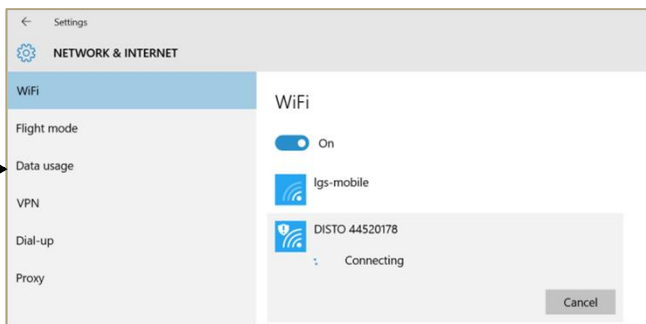
DISTO™ is connected
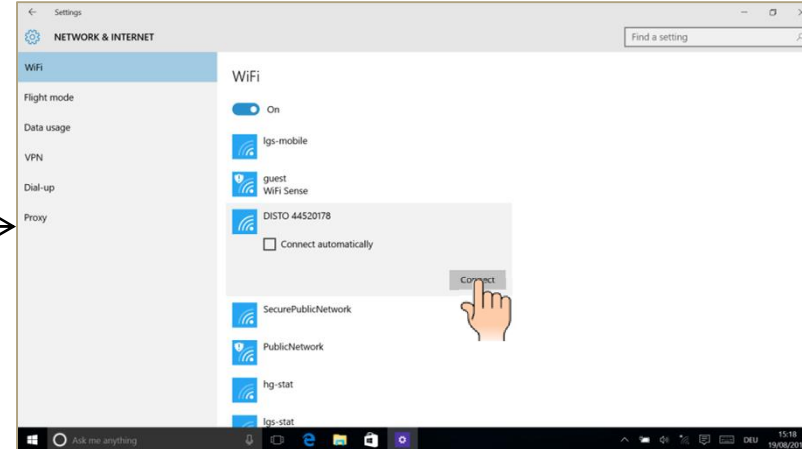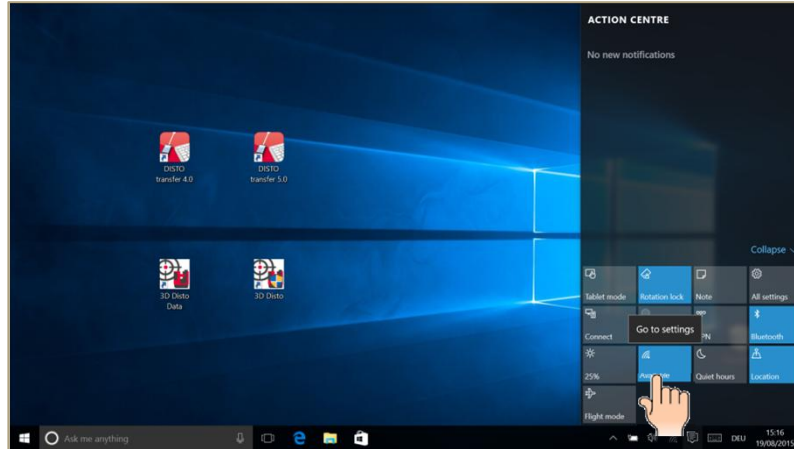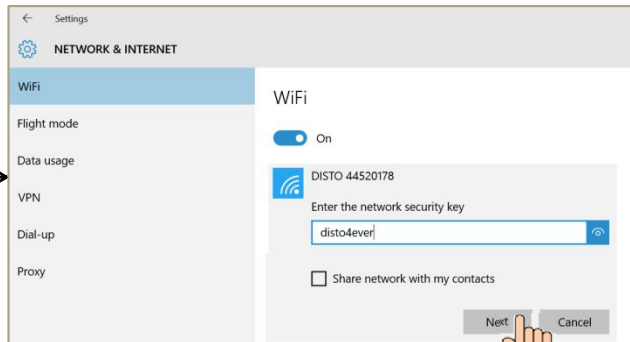

- when it has to be **right**
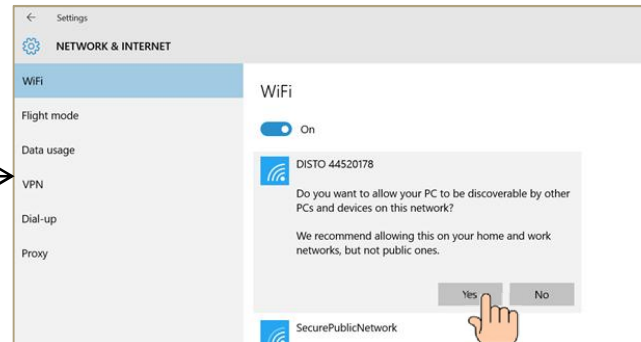
Leica DISTO™ S910
⟲ Connect to DISTO™ in Secure Hotspot Mode

Choose you DISTO™ and connect

Enter the passkey

Code:
disto4ever

Choose yes

DISTO™ is connected

- when it has to be **right**

Leica DISTO™ S910

✆ Hotspot Mode – Good to know

Please Note The Leica DISTO™ S910 supports WIFI Modes 802.11 b/g/n

Please Note The Leica DISTO™ S910 allows only one device to be connected at a time
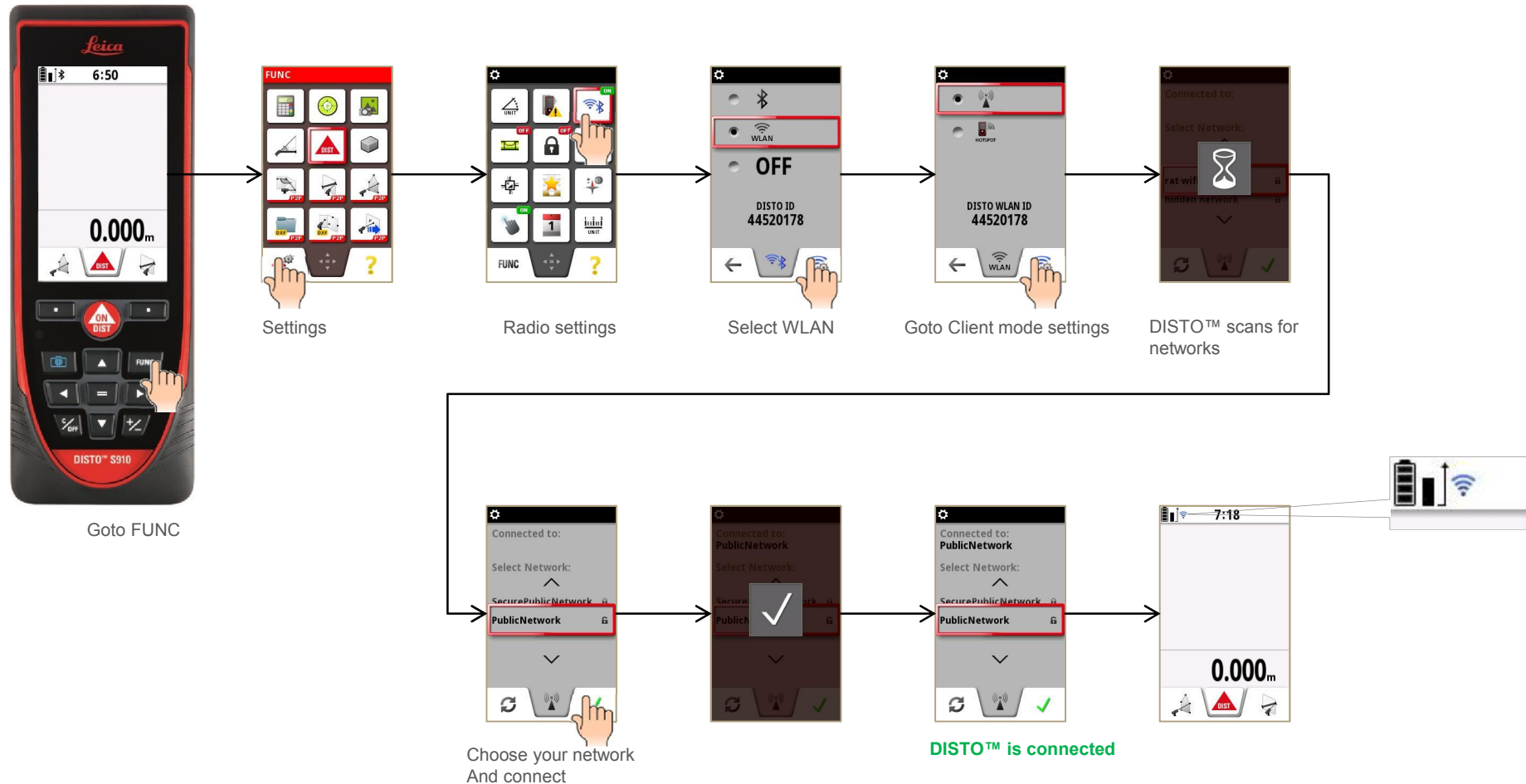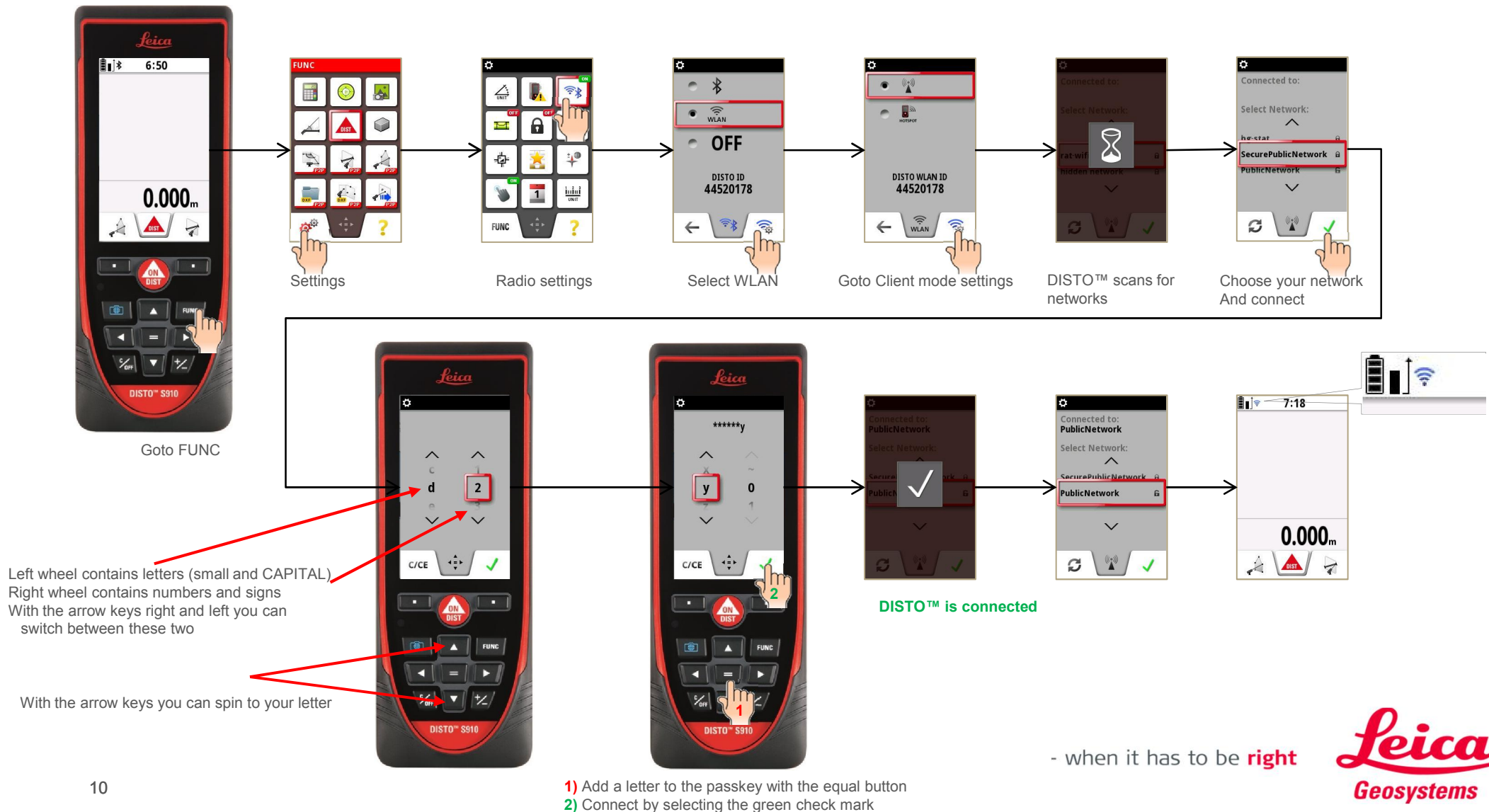
- when it has to be **right**

Leica DISTO™ S910
Client Mode – Connect to Open Network

Goto FUNC

Settings

Radio settings

Select WLAN

Goto Client mode settings

DISTO™ scans for networks

Choose your network
And connect

DISTO™ is connected

- when it has to be **right**

Client Mode – Connect to Secure Network

Goto FUNC

Settings

Radio settings

Select WLAN

Goto Client mode settings

DISTO™ scans for networks

Choose your network And connect

Left wheel contains letters (small and CAPITAL).
Right wheel contains numbers and signs
With the arrow keys right and left you can switch between these two

With the arrow keys you can spin to your letter

DISTO™ is connected

1) Add a letter to the passkey with the equal button
2) Connect by selecting the green check mark

- when it has to be **right**

Leica Geosystems

Leica DISTO™ S910
Client Mode – Good to know

Once you have successfully connected to a WIFI network, the Leica DISTO™ S910 remembers the network (and password if used)

The Leica DISTO™ S910 automatically reconnects to known networks if they are in range

Known networks can be deleted, when performing a „reset to factory"
CAUTION: All settings, measurement data and images will be deleted as well!

The Leica DISTO™ S910 can store up to 20 known networks

The Leica DISTO™ S910 supports WIFI Modes 802.11 b/g/n

- when it has to be **right**
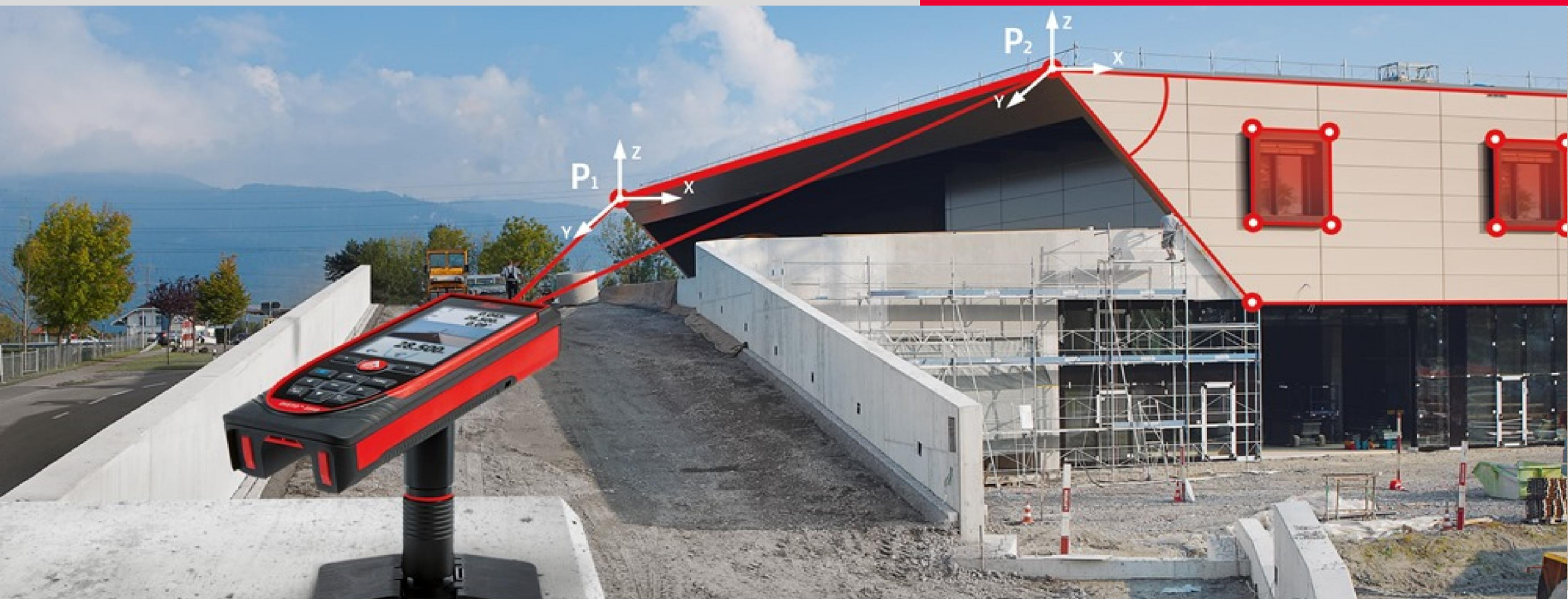
DISTO™ transfer with Leica DISTO™ S910

Getting started

- when it has to be right

DISTO™ transfer PC
General purposes

With the Leica DISTO™ S910 and DISTO™ transfer you can transfer

- ✓ distances and inclinations

- ✓ P2P measured points in 3D

- ✓ P2P measured points in 3D and the corresponding image

    ... to your Windows tablet, laptop or PC.

Leica DISTO™ transfer enables you to

- ✓ Send all received measurement data from the DISTO™ to the current cursor position into any program (e.g. Excel, Word, Notepad, ...)

- ✓ Send P2P measured points in 3D with images into AutoCAD

- ✓ Continue previous 3D measurements with relocation

- when it has to be **right**

Leica
Geosystems

DISTO™ transfer PC
General purposes

DISTO™ transfer for PC follows following purposes

1. **Receiving data from a Leica DISTO™ and forward it to current cursor position. E.g. running in the background put the cursor to an Excel cell to input data but instead of typing data on keyboard just send them via WIFI interface**

2. **Use DISTO™ transfer as a Plugin for AutoCAD or BricsCAD to directly draw a plan in the 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

   ▪ To start the Plugin for Autocad® and Bricscad you have to start the corresponding CAD software and write the command „leicadisto3d" in the command field. If Leica DISTO™ transfer is not already open it will be opened now automatically (further details after page 29)

- when it has to be **right**

Leica Geosystems

DISTO™ transfer PC
Getting started

- Download the latest version of DISTO™ transfer PC (Version 5.02 or higher) from our Leica DISTO™ webpage:

  http://www.leica-geosystems.com/common/shared/downloads/inc/downloader.asp?id=25050

- Follow instructions during the download.

The DISTO™ transfer works on all Windows operating systems from version Windows XP onwards with WIFI.

- when it has to be **right**

DISTO™ transfer for Windows 10
Start Software

- **Press Program Icon to start**

- **Startscreen will appear**

- **DISTO™ transfer starts immediatelly to look for a Leica DISTO™ S910**
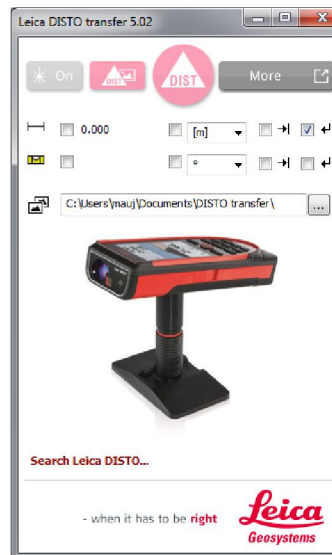
DISTO™ transfer for Windows 10
Connection Status
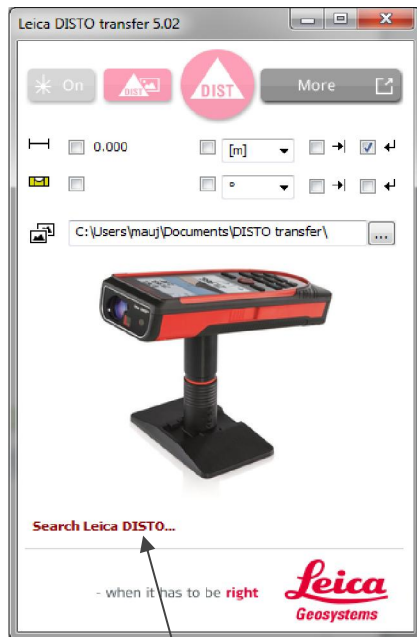
Looking for DISTO™S910
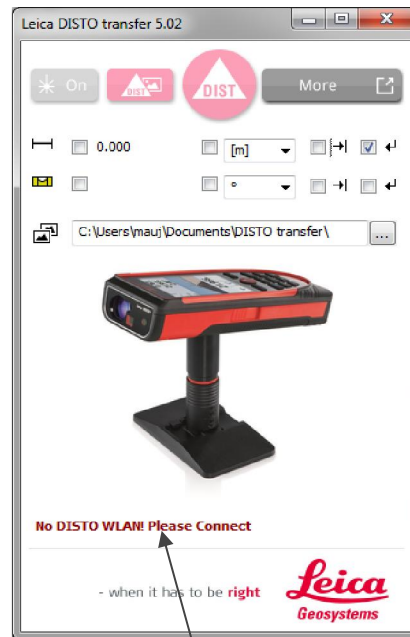
Autoconnect not possible
Please connect manually
continue on page 5

DISTO™connected

- when it has to be **right**
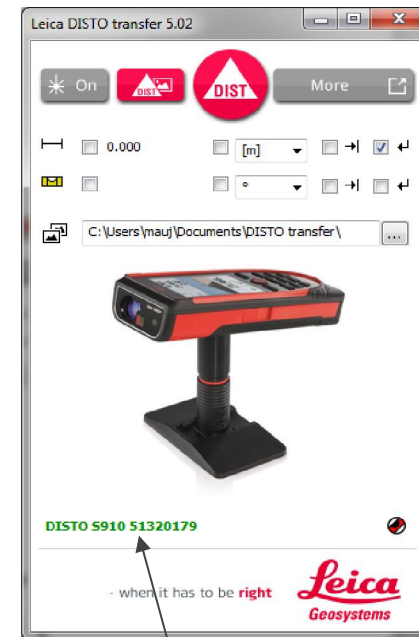
DISTO™ transfer for Windows 10
Options Overview

Trigger measurement with captured image

Trigger measurement

Open Window for Advanced settings (**see pext page**)

Switch on Laser

Transfered Distance

Transfered Inclination

Transfer „Tabulator" and/or «Return» after values → e.g. in Excel jump right or Down

Location of captured images

Image Area

Activate Units

This shows connected instrument

Levelling Status of instrument

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**
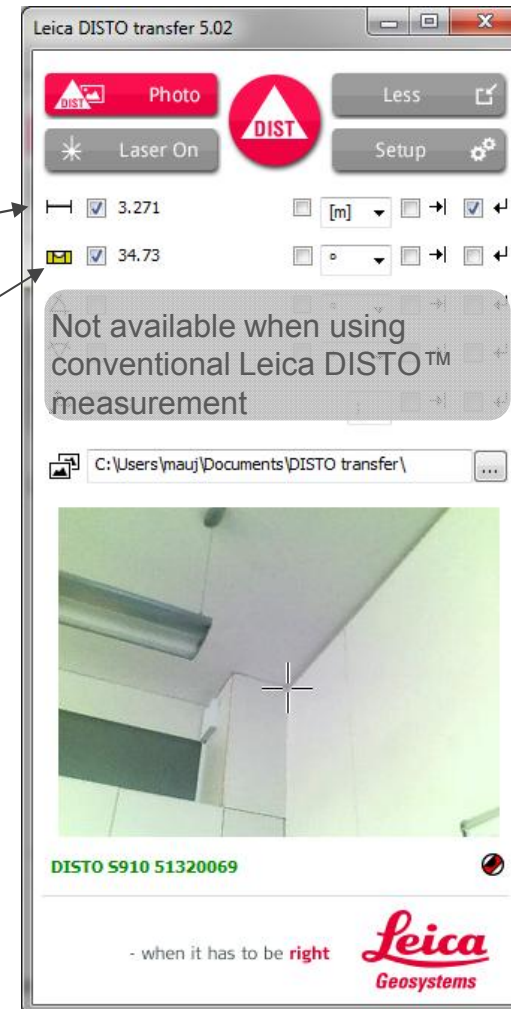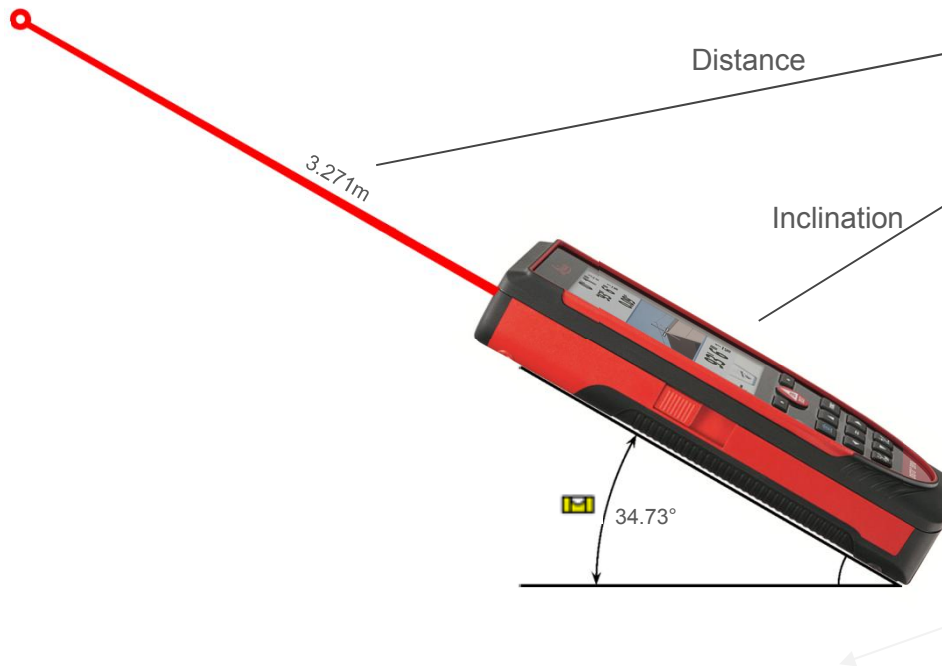
DISTO™ transfer for Windows 10
Advanced Options Overview

Distance

Inclination

3.271m

34.73°

Not available when using conventional Leica DISTO™ measurement

- when it has to be right

DISTO™ transfer for Windows 10
Advanced Options Overview

6.088m

68.73°

305.49°

Distance

Vertical Angle

Horizontal Angle

Coordinates (x;y;z)

z

1.027

0.673

3.374

x

y

Leica DISTO transfer 5.02

Photo

Less

DIST

Laser On

Setup

⊢⊣ 6.088 [m] ✓

Not available when using P2P-measurement

△ 68.73 °

▽ 305.49 °

⌐ 0.673; 3.374; 1.027 ;

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

DISTO S910 44520178

- when it has to be right

Leica Geosystems

Horizontal and Vertical information correct

No horizontal and vertical correction

- when it has to be right

DISTO™ transfer for Windows 10
Setup Send Overview

Select the method of sending

Image Area

Send your own data format
(see next page for configuration)

DISTO™Serial Number and
Firmware Version

Image Saving Path

- when it has to be **right**
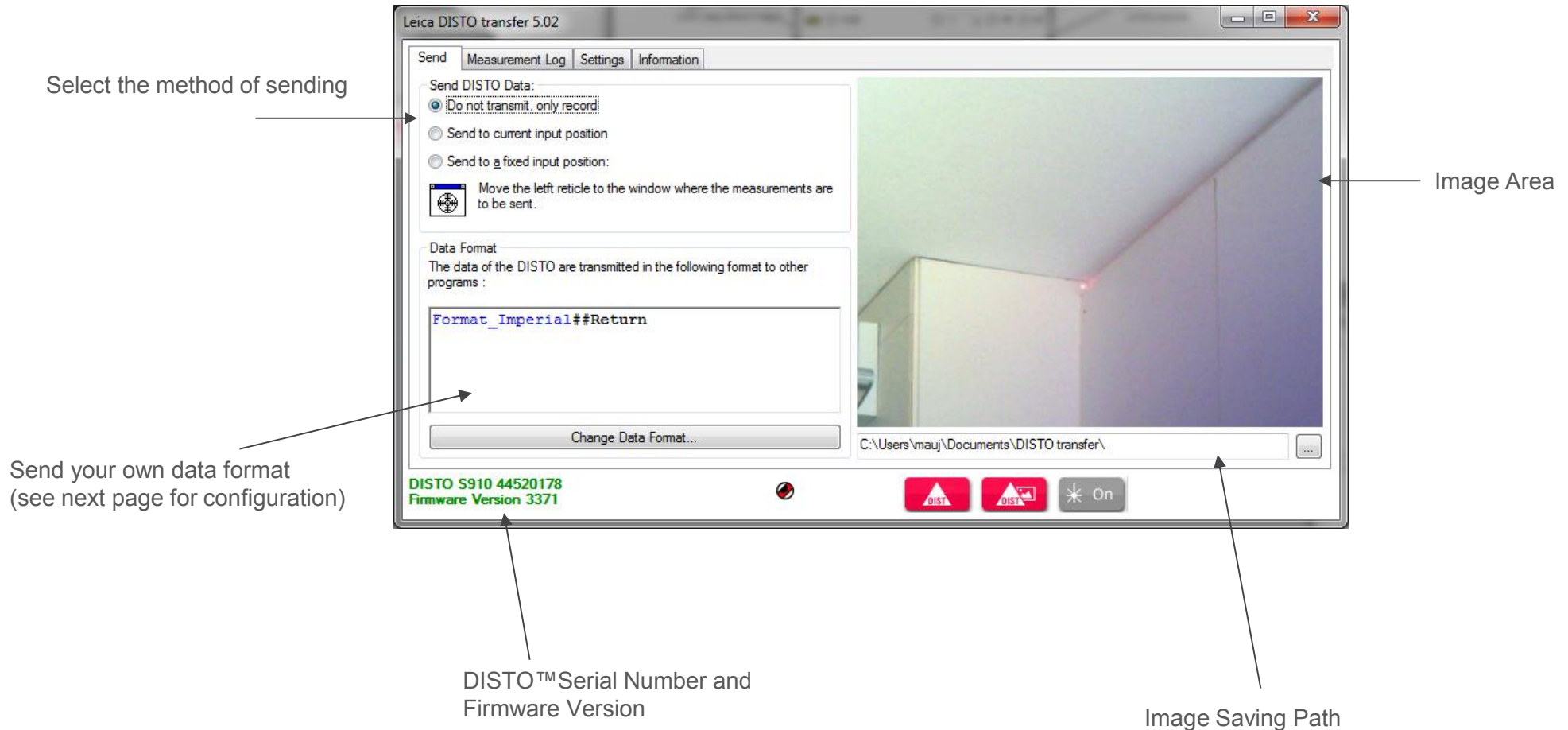
DISTO™ transfer for Windows 10
Transmitting String Configuration

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:

`Format_Imperial##Return`

Doubleclick 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 tr...
Date	The current system date when the me...
Time	The system time when the measurem...
Time_ms	The system time with milliseconds wh...
Position	The positon number of the measurem...
Distance	DISTOs distance measurement
Horizontal_Dist	The horizontal distance measured by ...
Vertical_Dist	The vertical distance measured by th...
Distance_Unit	The unit of the last distance measure...
Angle_Inclination	Inclination angle
Angle_Inclination_Unit	Unit inclination angle
Angle_Vertical	Angle vertical
Angle_Vertical_Unit	Unit of the vertical angle

OK   Cancel

Examples:

Active Configuration	Values in Text Program	Imperial Settings
`Date##Tab##Distance##Distance_Unit##Return`	2015.09.04 → 3.235m¶	--
`Distance##Tab##Angle_Inclination##Angle_Inclination_Unit##Return`	3.580→36.57°¶	--
`Distance##Format_Imperial##Return`	12'0"·3/32¶	ft in 1/32: 12' 0" 3/32
`Distance##Format_Imperial##Return`	13·9·7/16¶	ft in 1/16: 13 9 7/16

See Page 25

- when it has to be **right**

Leica Geosystems

DISTO™ transfer for Windows 10
Measurement Log

Measurement Log

Open Microsoft Excel

View the points in 3D (see next page)

Send the selcted measurement

Free station (see page 42)

- when it has to be **right**

DISTO™ transfer for Windows 10
3D Viewer

Change orientation by dragging
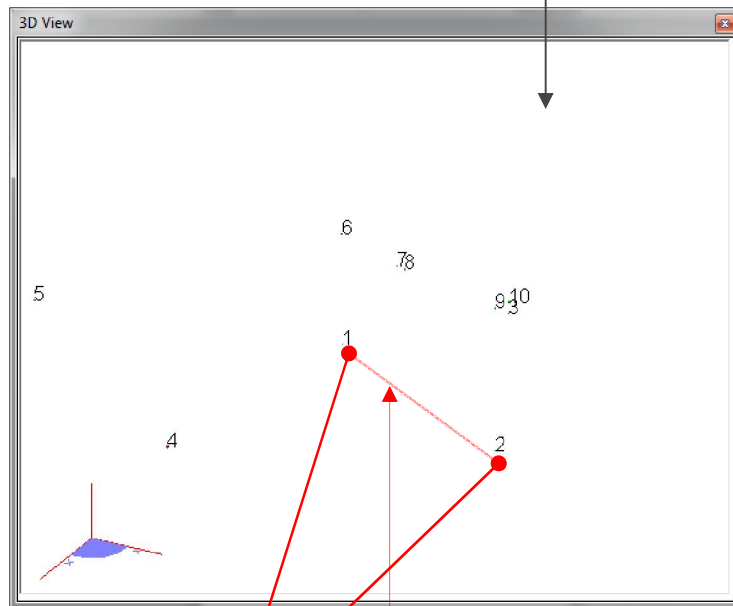
Right Click Menu
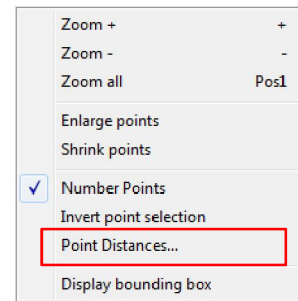
Point to Point Distances

- when it has to be **right**
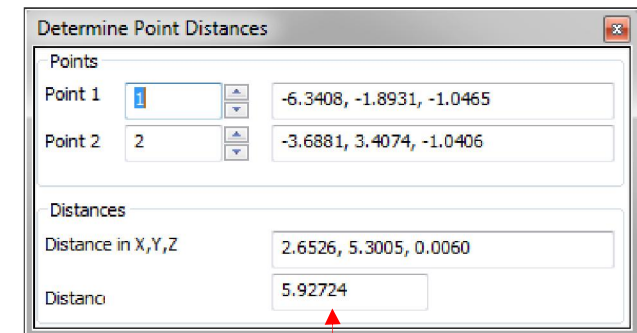
DISTO™ transfer for Windows 10
Professional Settings

Orientation Configuration
(please see next page)

Startup configuration

Decimal Separator

Shortcuts

Automatic
Measurements

Imperial Data Format
Configuration

- when it has to be **right**

DISTO™ transfer for Windows 10
Professional Settings – Axis definition

- when it has to be **right**

DISTO™ transfer for Windows 10
Information

See actual angle and inclination values

Battery Voltage

- when it has to be **right**
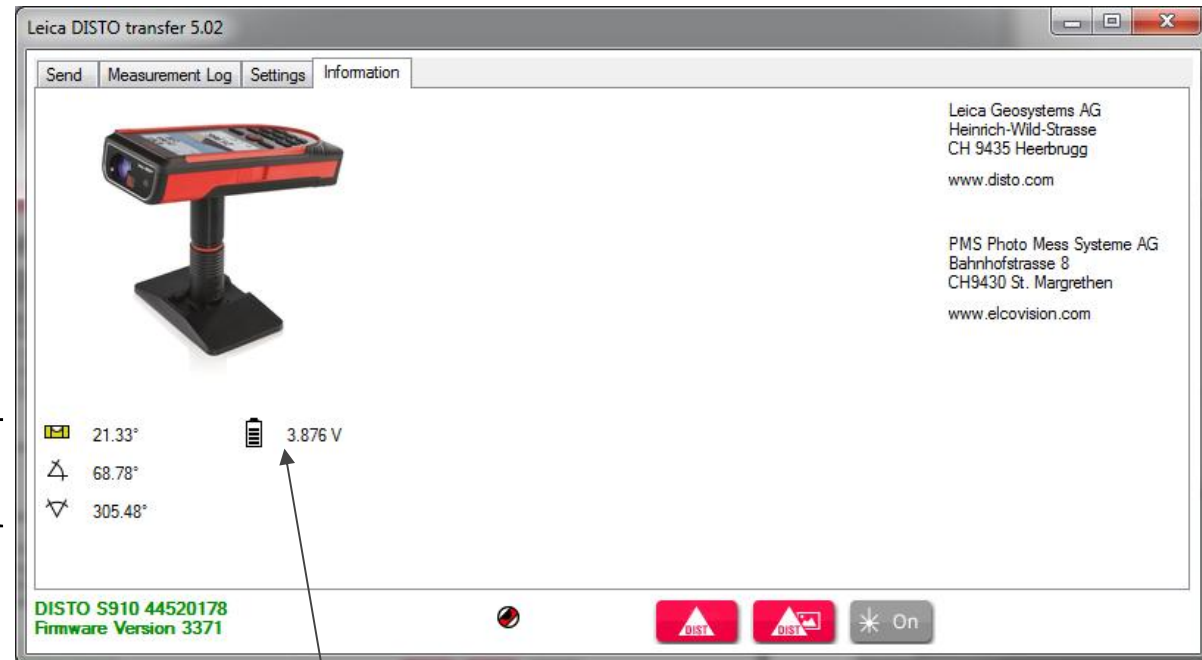
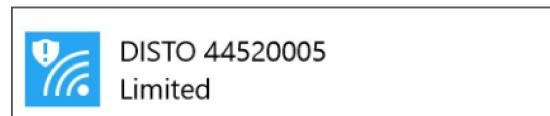# DISTO™ transfer for Windows 10
Connectivity – Good to know
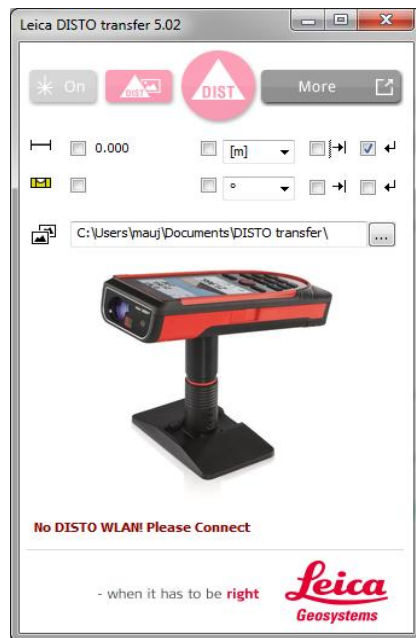
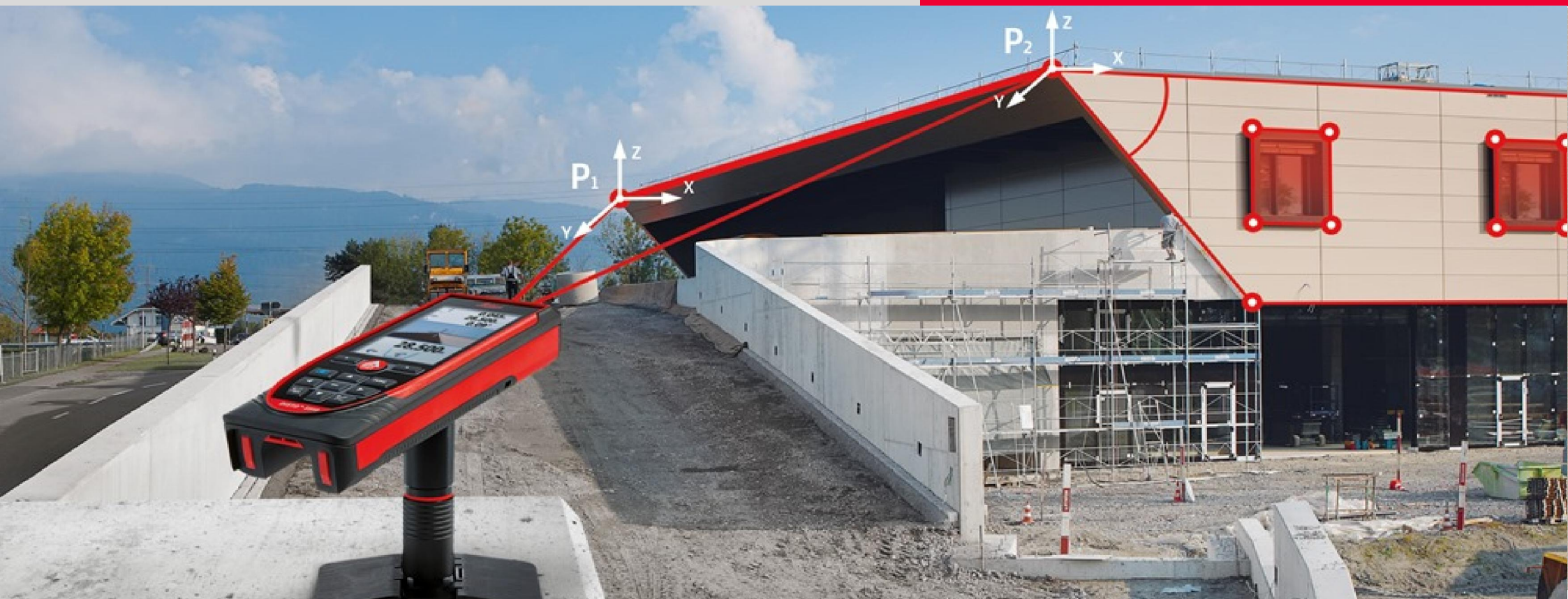**Please Note** DISTO™ transfer tries to (re-)connect to a DISTO S910 automatically

- If the connection status remains as seen on the picture to the left:

  - Please connect the DISTO S910 manually to your PC / tablet and start DISTO™ after connecting

  - Verify that no firewall or antivirus is blocking DISTO™ transfer from connecting

  - VPN connection will block DISTO™ transfer from connecting

  - Any 3rd party wifi tool installed will disable auto-connecting

Please Note „limited connection" indication from the WIFI is just

an information, **NO FAILURE**.

Autoconnect not possible
Please connect manually
continue on page 5

CAD Plugin for Leica DISTO™ S910

Getting started

Basic setup

Required:

✓ **AutoCAD** (2012-2016) installed on Windows PC (Windows 7 or higher)

OR

✓ **BricsCAD** (V12-V15) installed on Windows PC (Windows 7 or higher)

✓ **DISTO™Transfer for S910 installed** (Version 502)
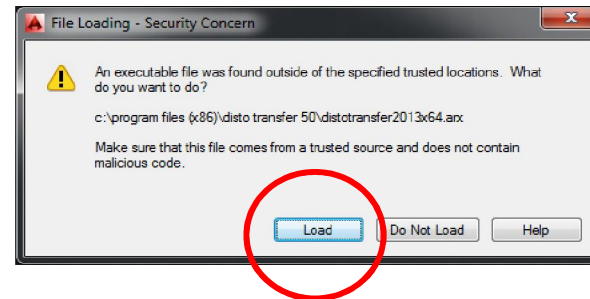
✓ **DISTO™S910** (Firmware Version 3254 or higher)

- when it has to be **right**

Connect DISTO™to CAD

- **Start AutoCAD/BricsCAD**

- **Setup your DISTO™S910 and enable WIFI**

- **To start the plugin please enter** **LEICADISTO3D** **into the command line**
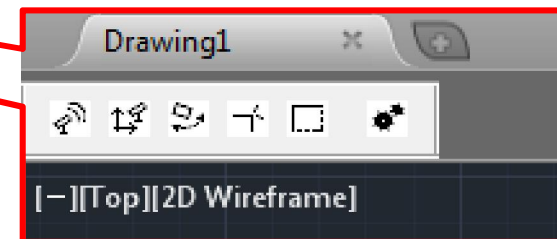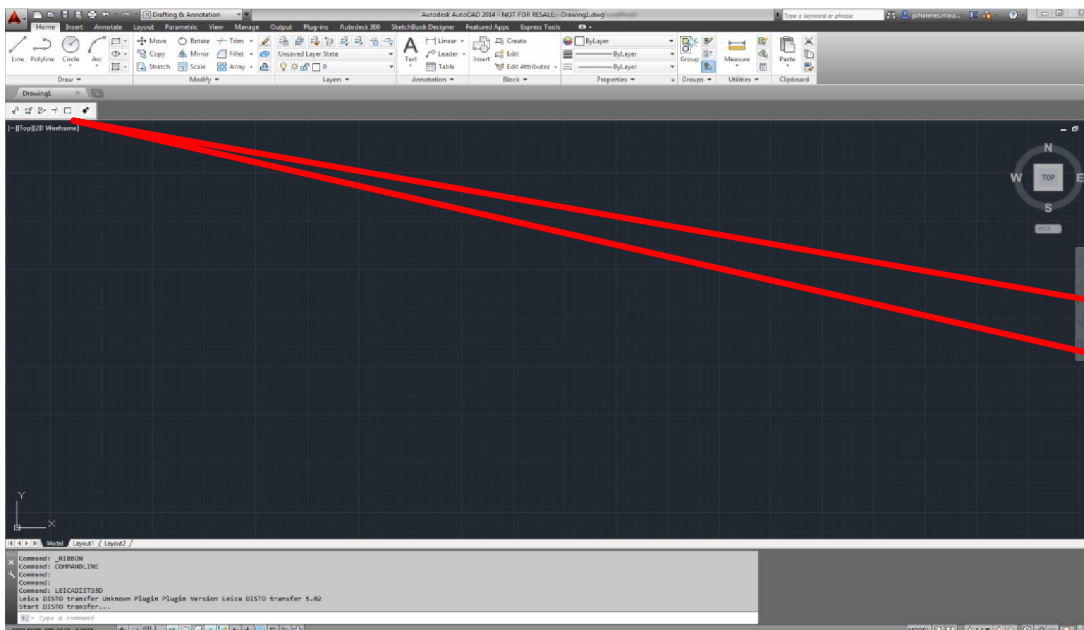

- when it has to be **right**
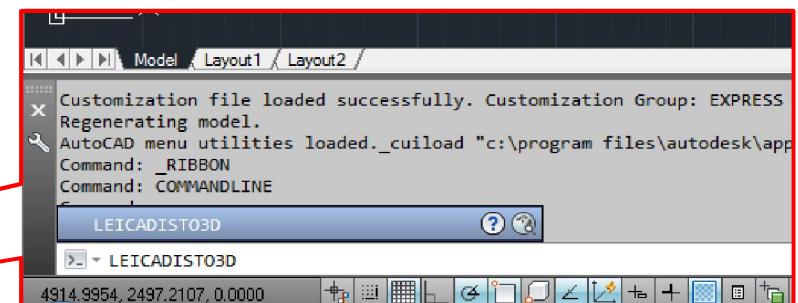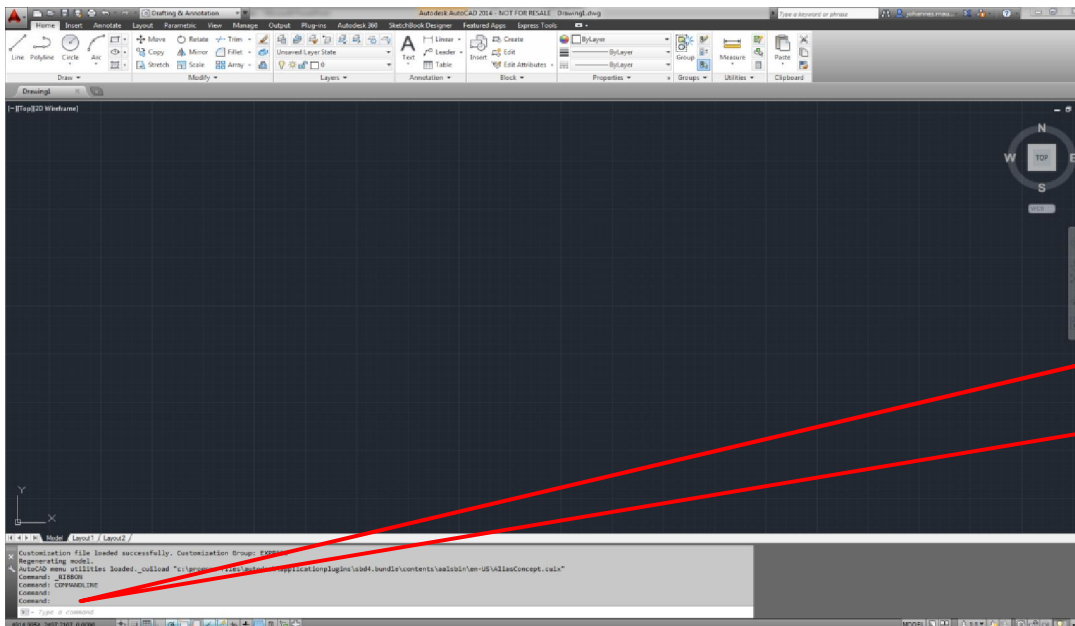
Start DISTO™transfer

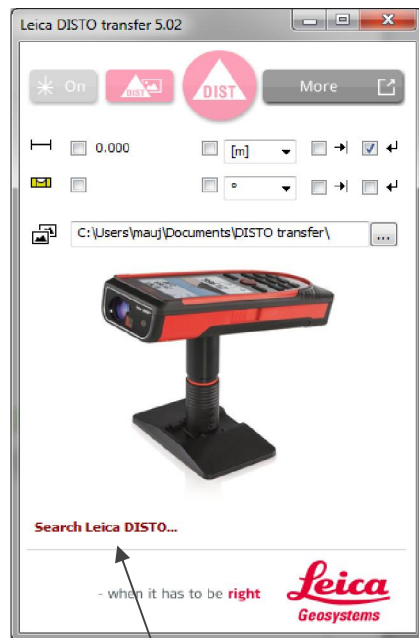- **Confirm to execute plugin**

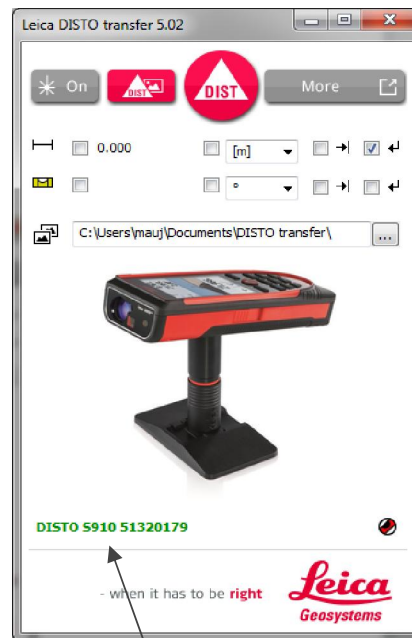- **Plugin toolbar will appear in CAD and DISTO™transfer starts**
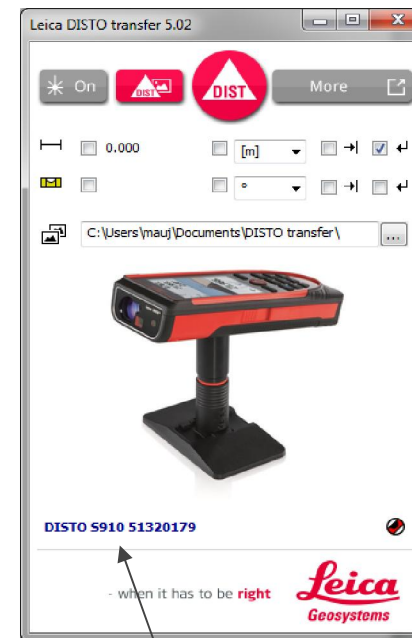
- when it has to be **right**

Connect to your DISTO

- **Ensure WIFI is enabled on the DISTO™S910**

Looking for DISTO™S910

DISTO™connected to PC

DISTO™connected to CAD

- when it has to be **right**

Start to work
DISTO™ enters WIFI P2P function

- **Execute leveling setup**

- **Bubble indicates the levelling setup**

- when it has to be **right**

Start a drawing in CAD

- **Start drawing by pressing on the according drawing element**

  (e.g. Line here)
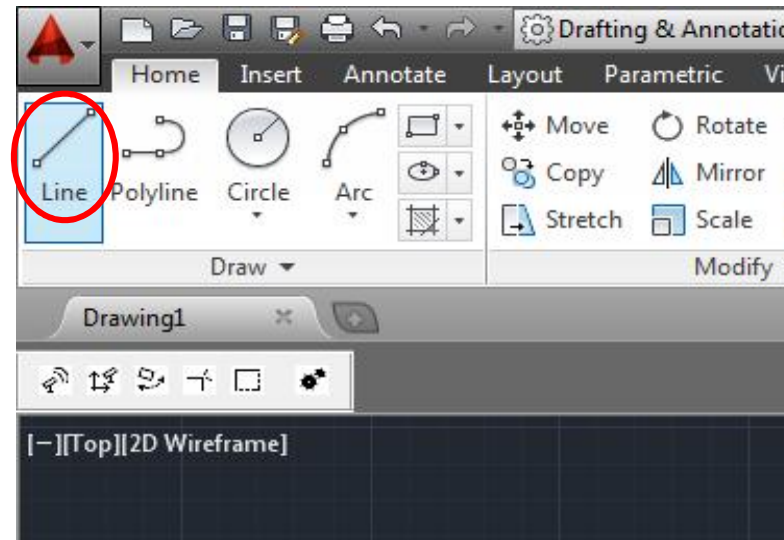
- **Now the line drawing has started and you can measure one point after each other**

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

- when it has to be **right**

Measure your object Point by Point

- **When measurement has been triggered, transmit the point into CAD**

Transmit..   Point with picture   Point without picture
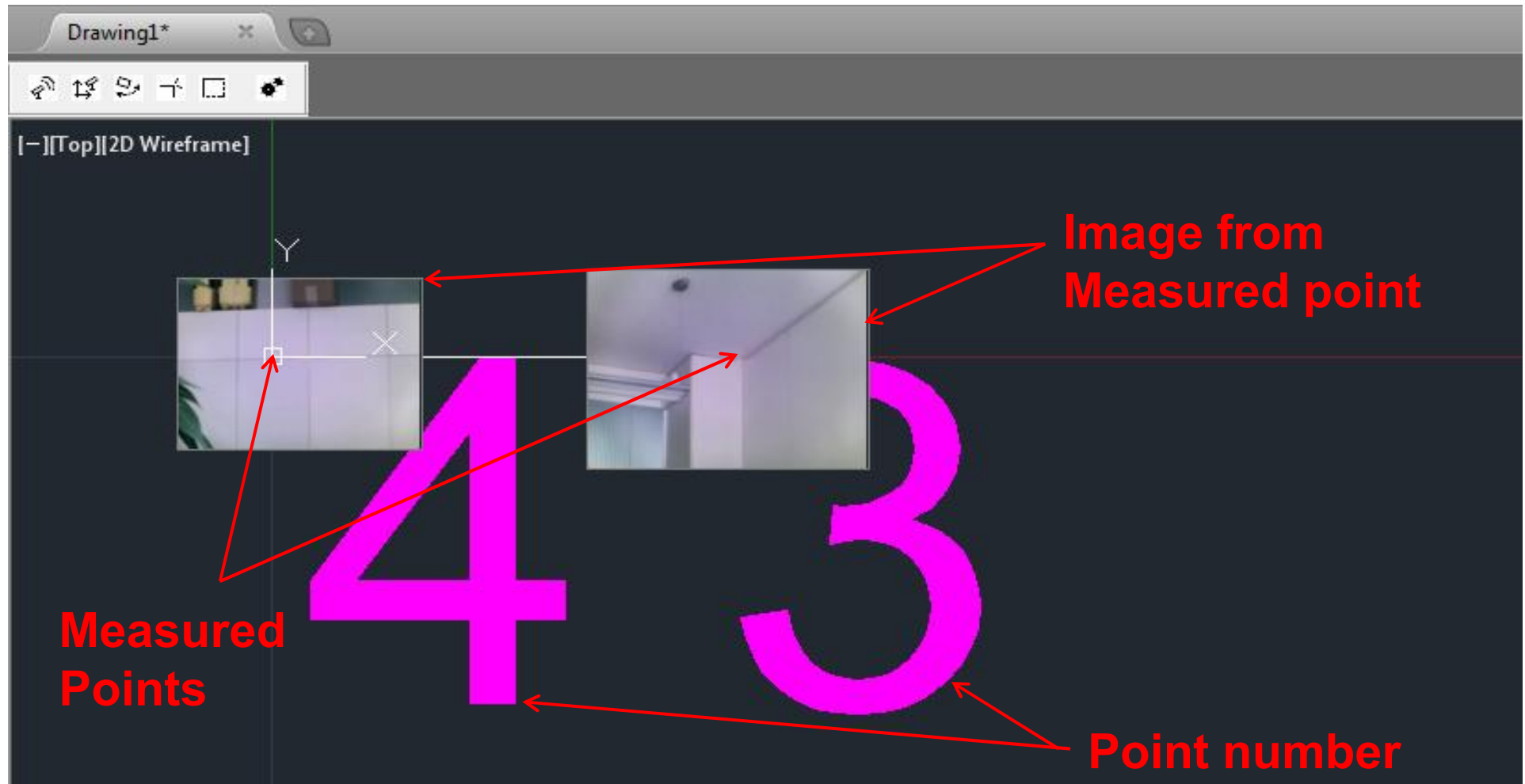
- when it has to be **right**

Measure your object Point by Point

- When you have measured the points you can close the line drawing by pressing escape

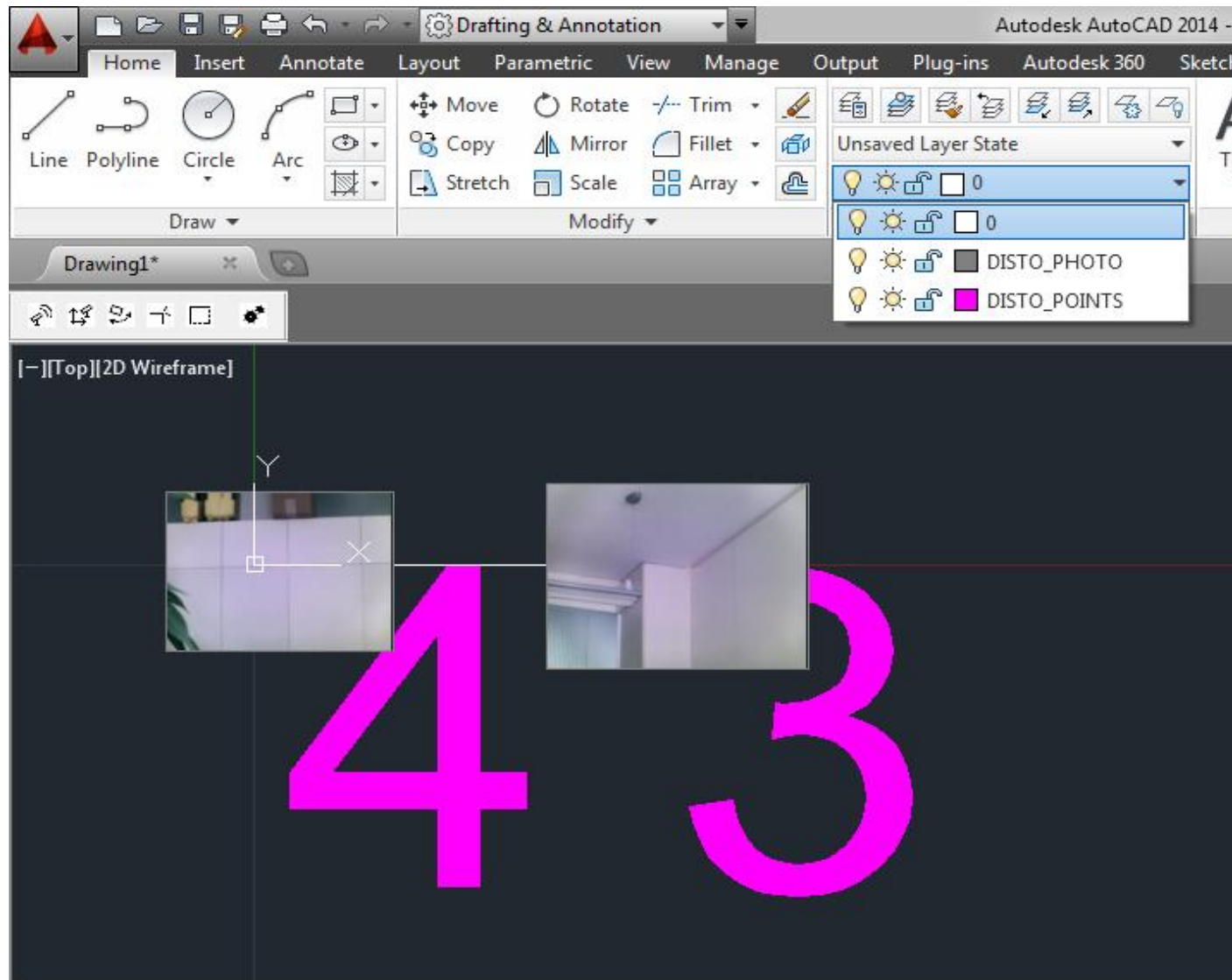- Click on "Scale to fit" to see your measured points
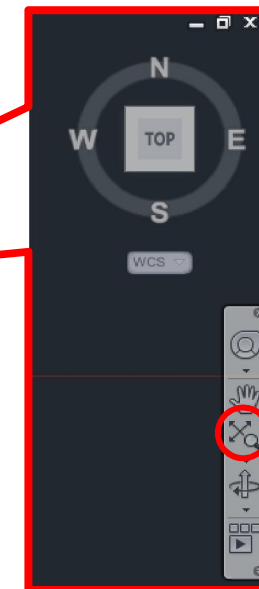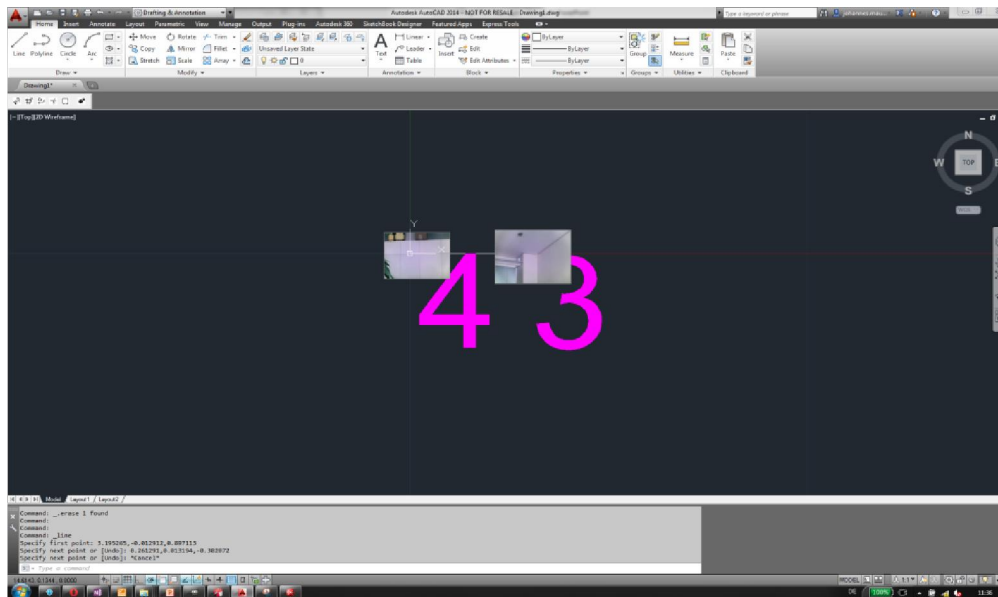
- when it has to be **right**

Know your drawing

Know your drawing

→ point numbers and photos are in separate layers

→ Layers can be (de) activated if (not) required

- when it has to be **right**

Leica
Geosystems

Toolbar Functions
Overview

- **Connect to DISTO™ manually**

- **Relocation**

- **Auto Align Images**

- **Trim Lines**

- **Draw Rectangle**

- **Settings for Text and Picture**

- when it has to be **right**

Leica Geosystems

Toolbar Functions
Connect to DISTO

- **Establish connection to the DISTO™ S910**

- **Connect your CAD to DISTO™ transfer**

- **Reconnect if connection is lost**

- when it has to be **right**

Toolbar Functions
Relocation

- **Reposition within a measured drawing or site**

- **Measure your site from various position to avoid blind spots**

- **Continue an already started drawing or site by measuring selected points again to reposition**

- **Once selected, please follow the guided steps within DISTO™transfer to relocate your DISTO™S910**

- when it has to be **right**

Leica Geosystems

Toolbar Functions
Relocation

- **Please read the instructions carefully**

- when it has to be **right**
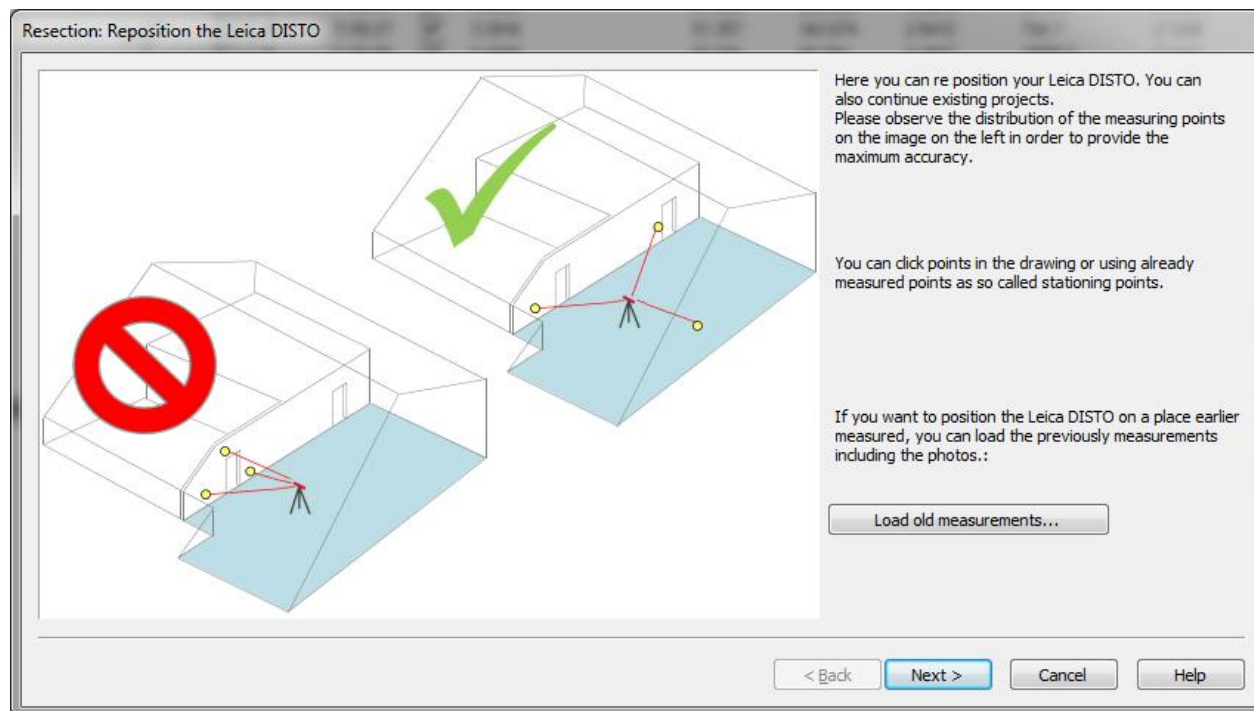
Toolbar Functions
Relocation

- Choose three or more points which you want to use for your relocation
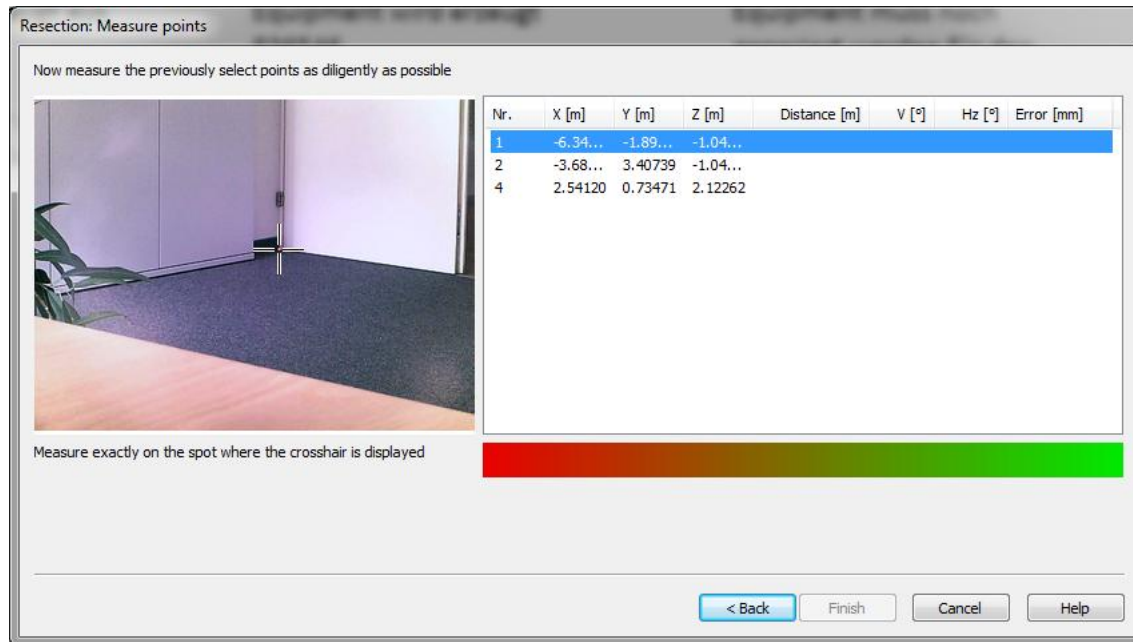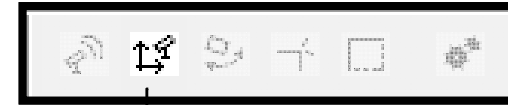
- when it has to be right
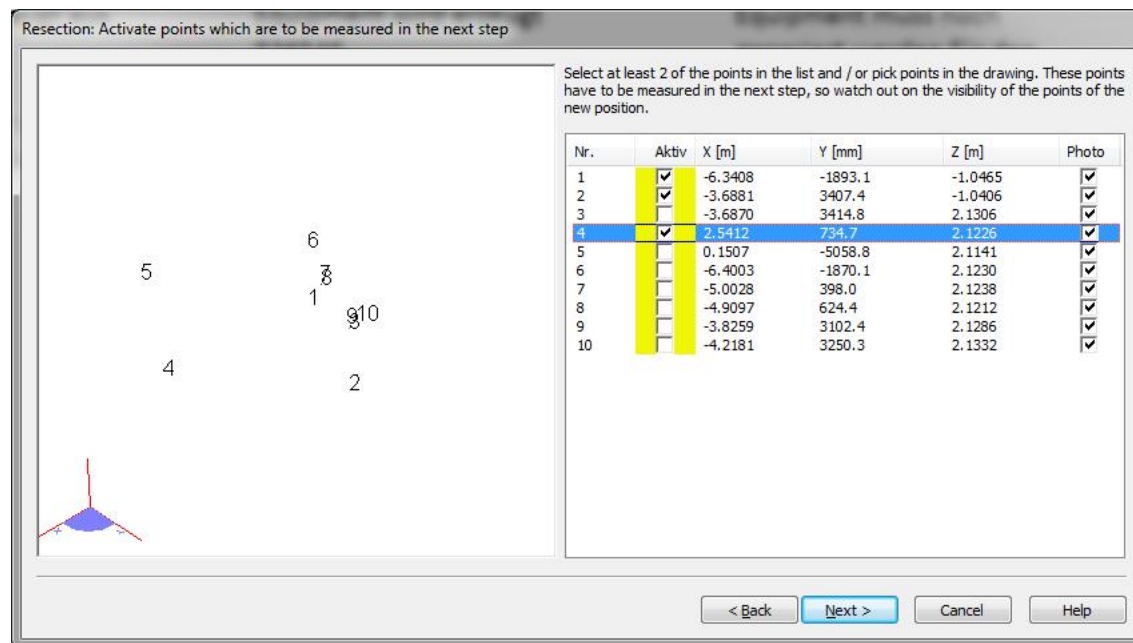
Toolbar Functions
Relocation
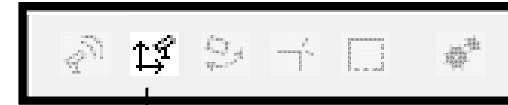
- **Measure the points again, that you have measured before**

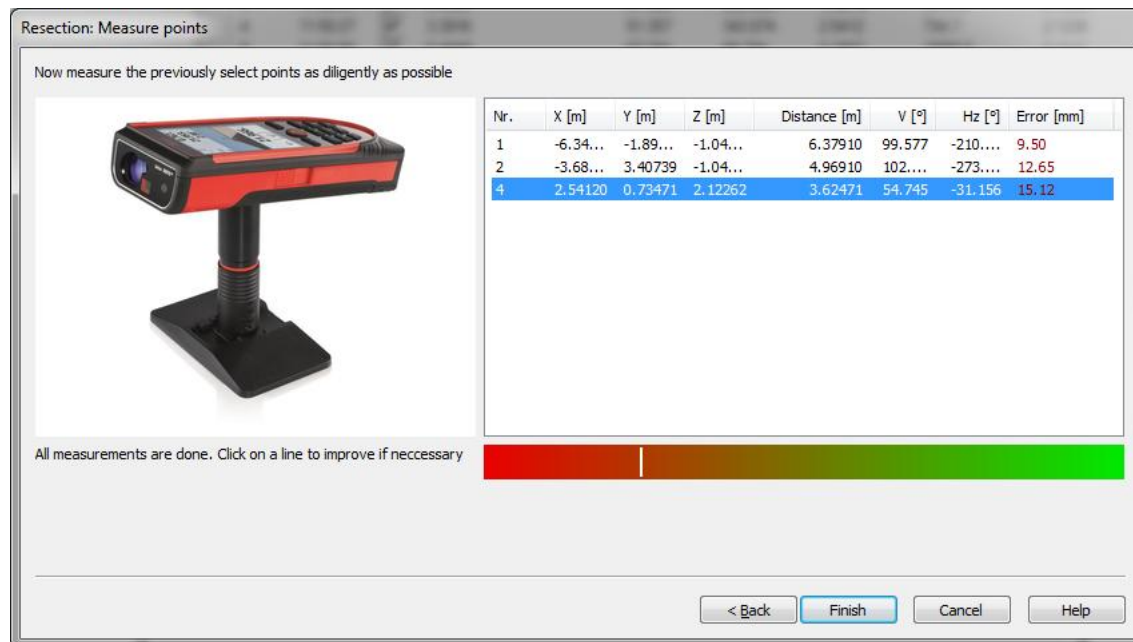- **DISTO™ transfer will also display the images for recognition**

- when it has to be **right**

Toolbar Functions
Relocation

- **At the end you will get a prompt of how accurate your relocation was**

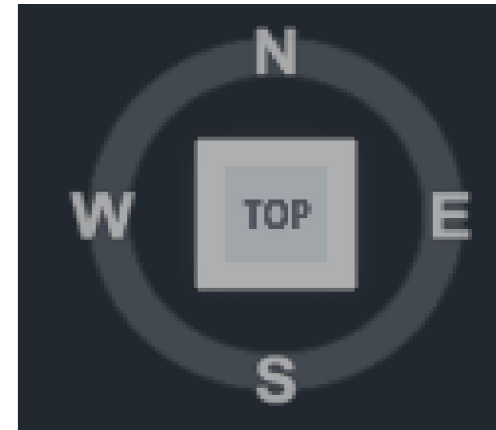- **The error resulted from relocation goes on with every next point**
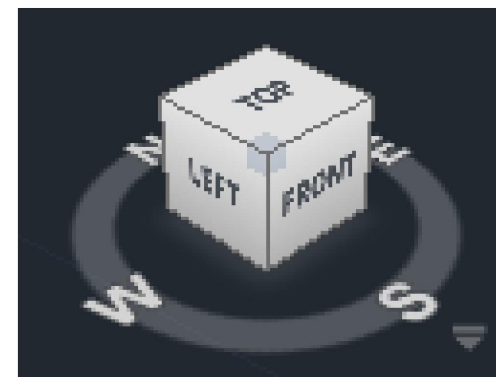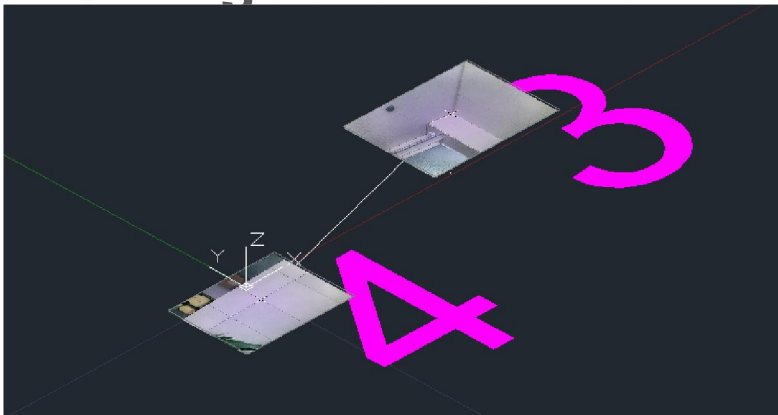

- when it has to be **right**

Toolbar Functions
Auto Align Images

- **This is your drawing**

- **Change the view from Top to different view**
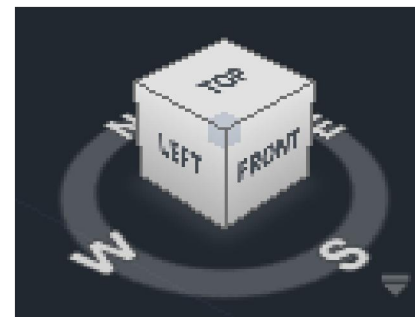

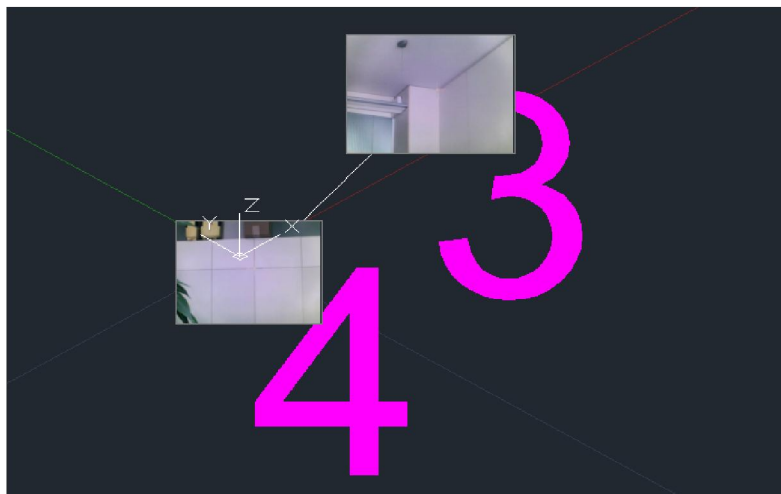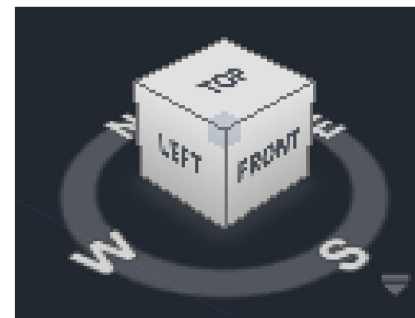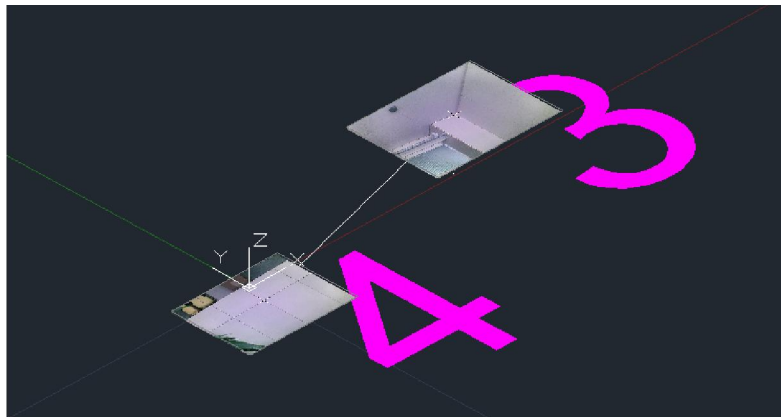- when it has to be **right**

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Toolbar Functions
Auto Align Images

- **Select the Auto Alignment Button and press enter**

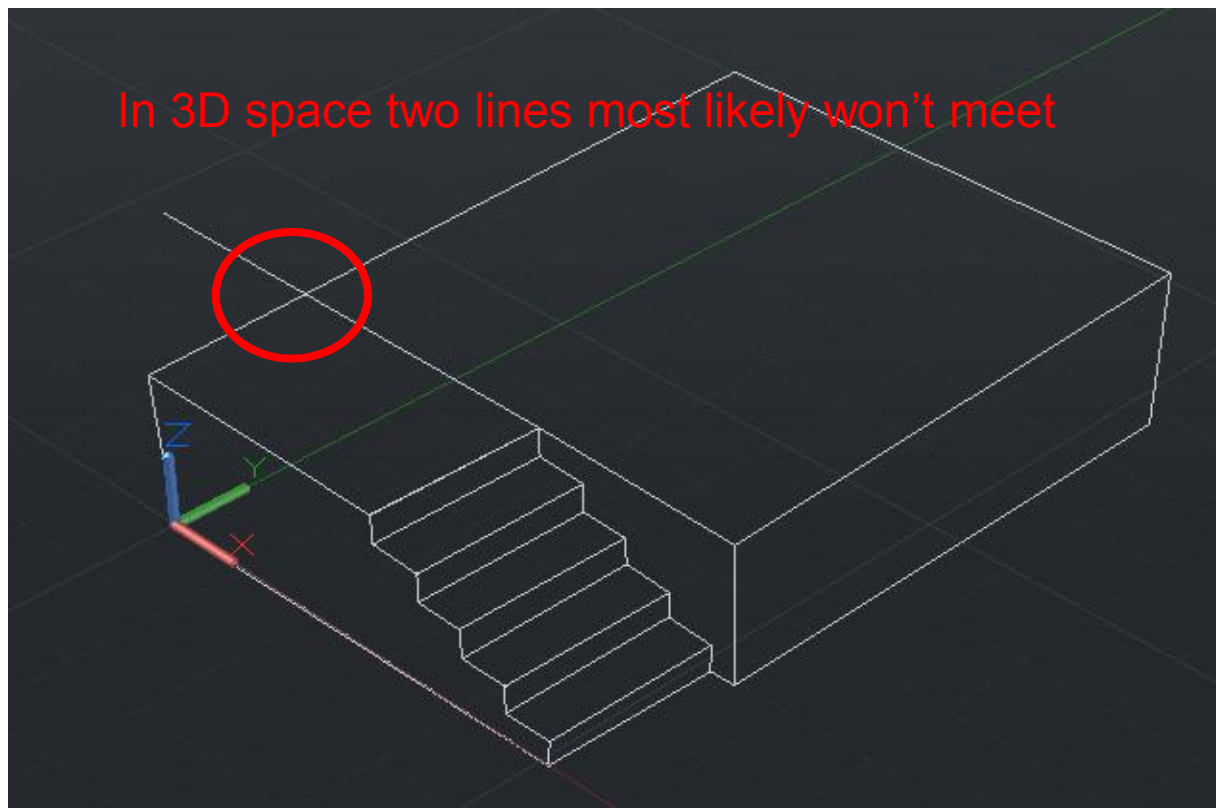✓ **Images and text are perfectly aligned to your new view**

- when it has to be **right**

Toolbar Functions
Trim Lines

- **Trim two lines together**

In 3D space two lines most likely won't meet
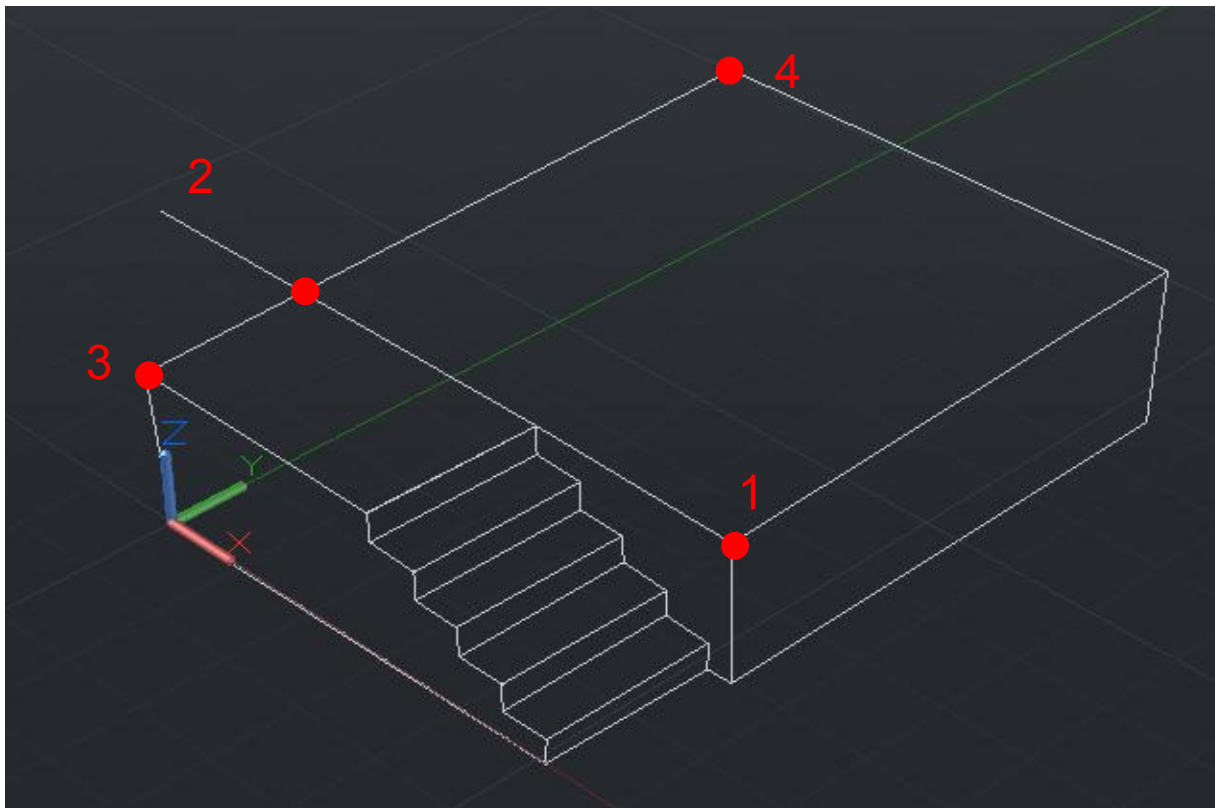
- when it has to be **right**

Toolbar Functions
Trim Lines

- **Start Trim function in the toolbar and measure two points from the first line, and the two from the second line**
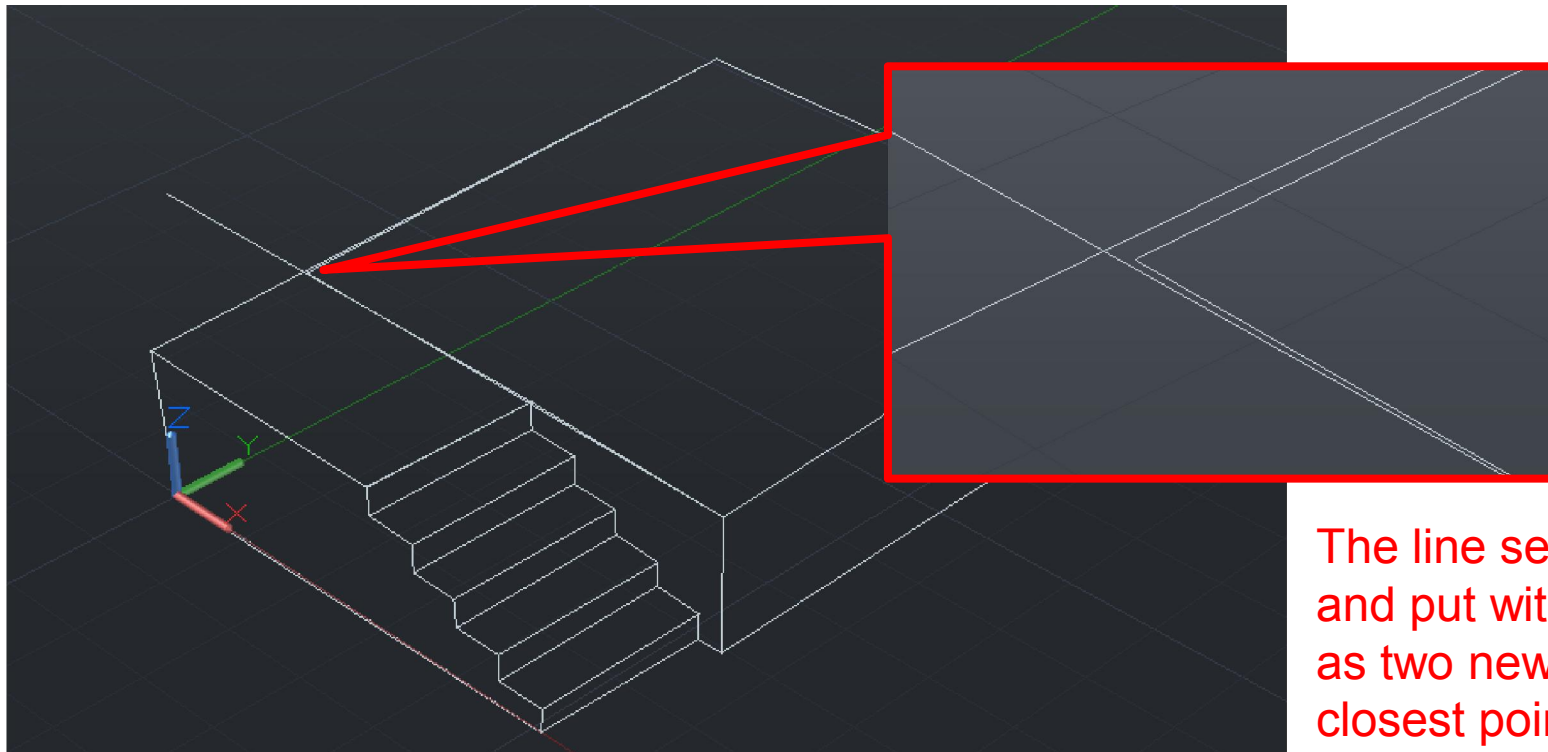
Toolbar Functions
Trim Lines

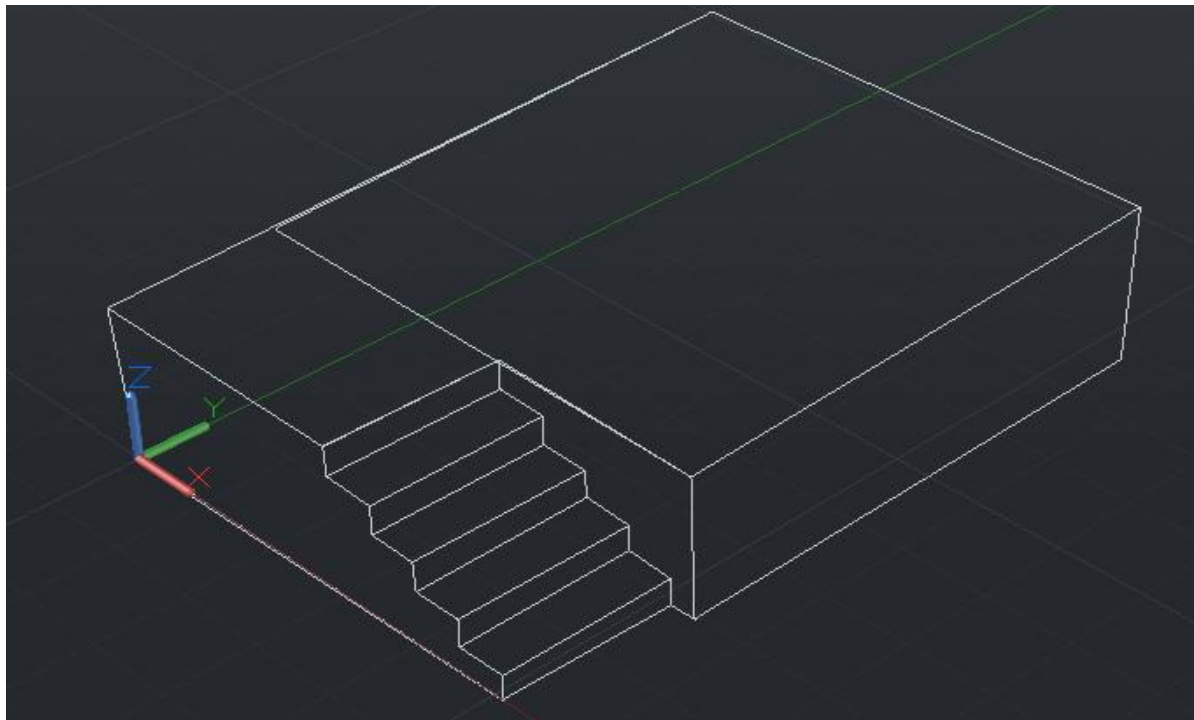- **Press enter to quit function and type in "yes" to draw remaining element**

The line section was calculated and put within the drawing as two new lines at the closest point they would meet

- when it has to be **right**

Toolbar Functions
Trim Lines

- If you remove the first line sticking out you can clearly see your intersecting new lines
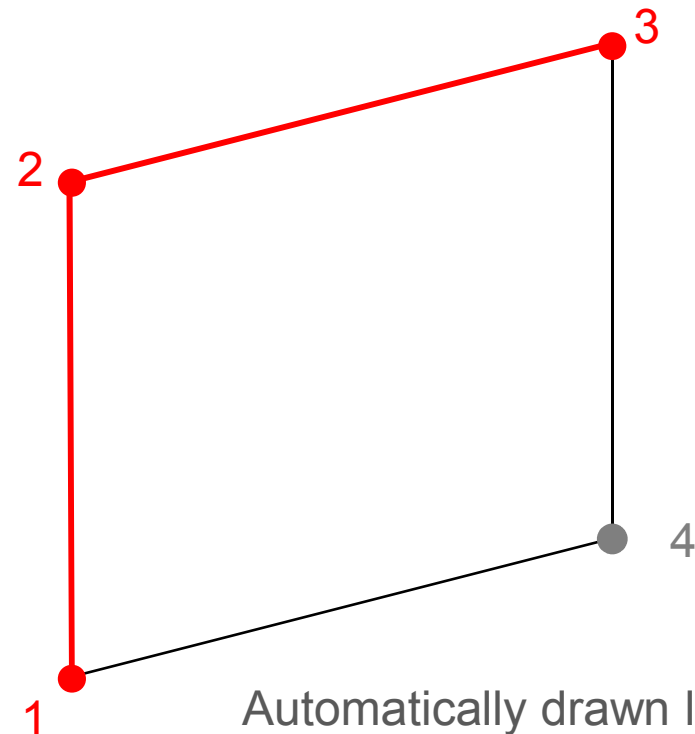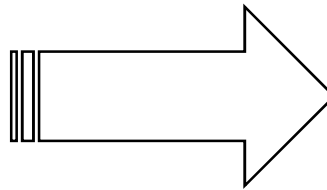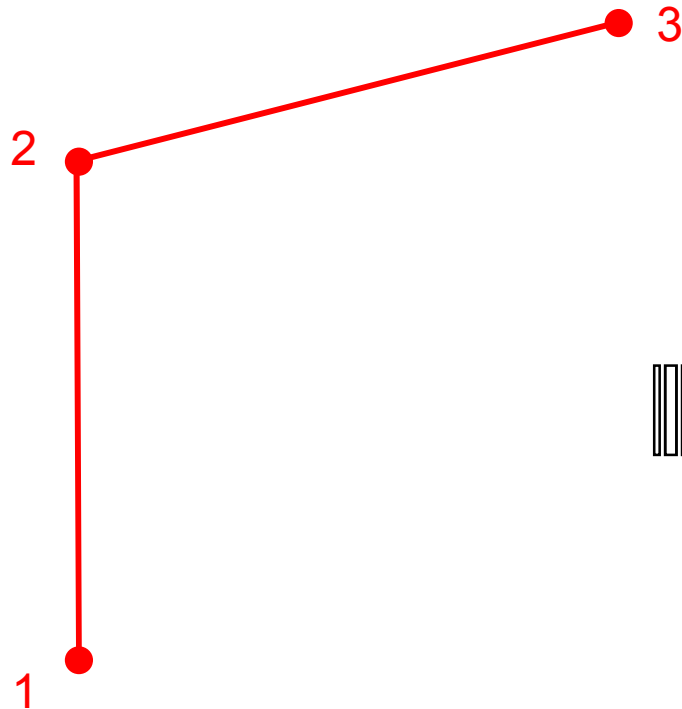
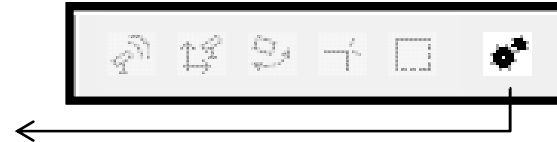- when it has to be **right**

Toolbar Functions
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**

Toolbar Functions
Settings for Text and Pictures

- **Adjust the text and image size**

- **TEXTSIZE is a relative value, that matches to your drawings preferences**

- when it has to be **right**

Good to Know

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

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

- ✓ **Explanations to the single steps of a function are always within the command line**

- when it has to be **right**

Measure anything from anywhere
right into CAD

- when it has to be **right**

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Measure anything from anywhere
right into CAD

- when it has to be **right**

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