



# X-PAD Ultimate – Learn how to use the SP features

**Service Pack #2 2023**

Autumn 2023



# Learn how to use the SP features



- This presentation is intended to guide the user to use the main functions introduced with the new X-PAD Ultimate Service Pack
- This presentation does not cover all news in the Service Pack
- For more information on all updates please refer to the X-PAD Ultimate presentation and to release notes

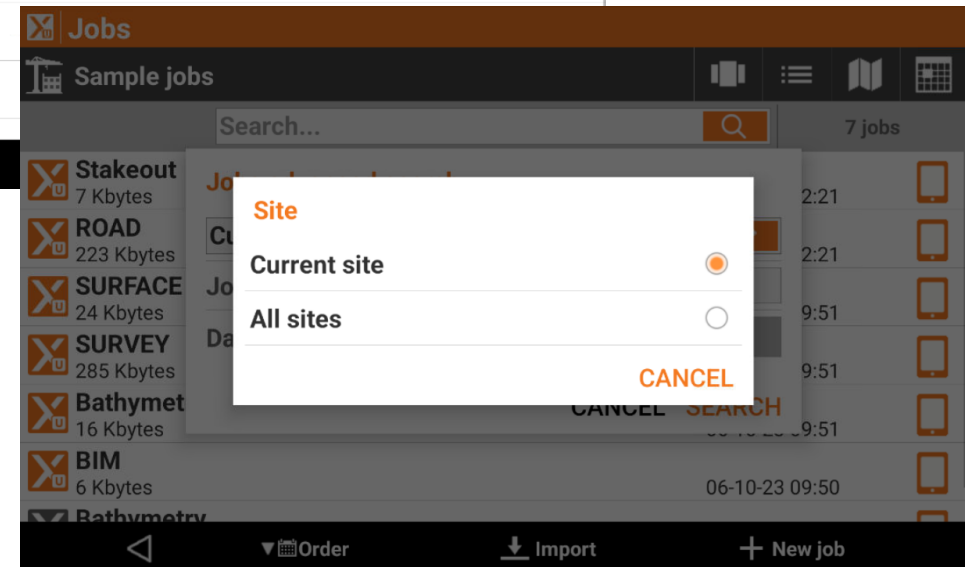
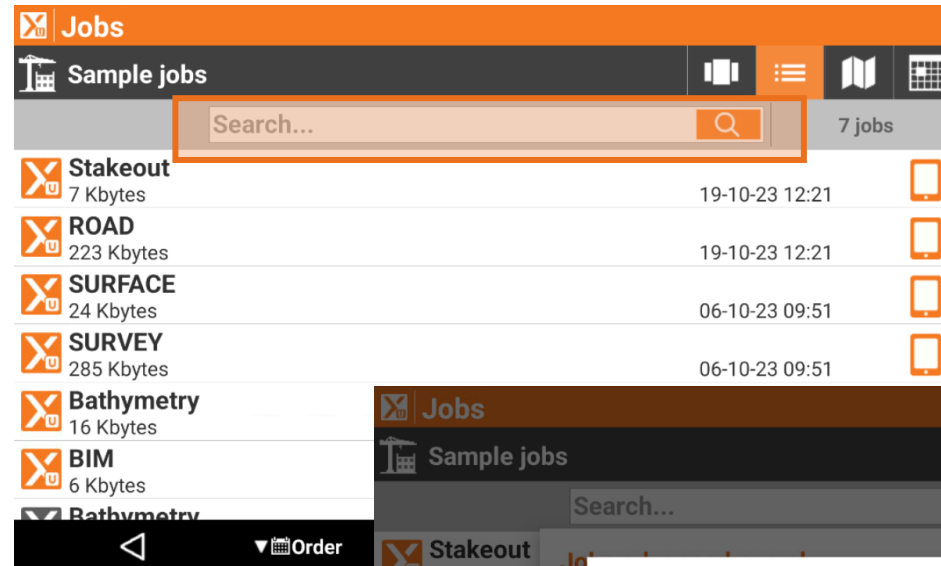
# MISCELLANEOUS

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# Jobs – Advanced search



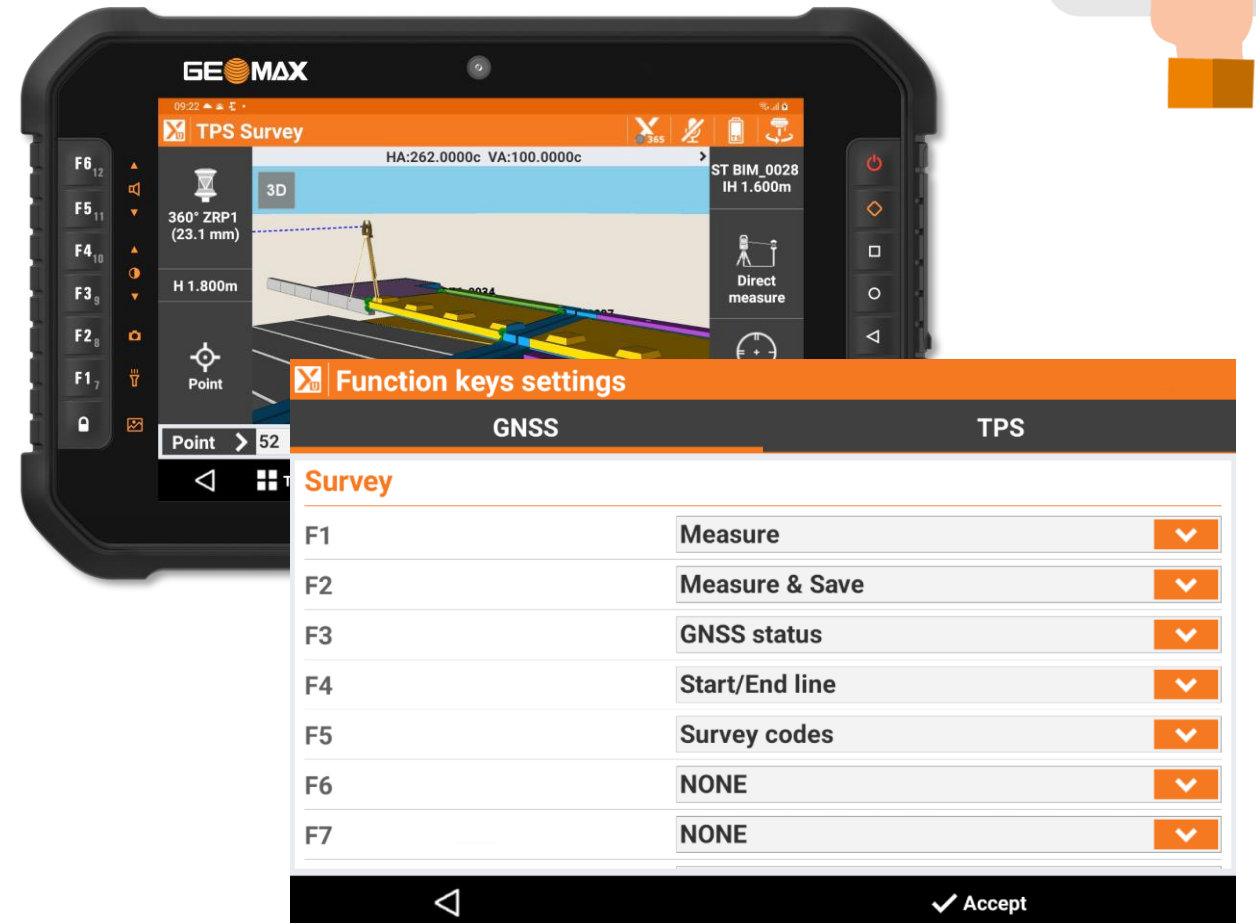
1. Open a site
2. Type in the top bar the job name to search it in the site
3. Click on the icon to open the advanced search. Advanced search allows also to search jobs in all sites and in a specific time interval



# Zenius08 – Function keys

New tablet Zenius08 has 12 configurable buttons.

1. You can assign the function in Settings -> Function keys
2. Functions can be separately assigned for GNSS and TPS, in survey or stakeout



# GNSS

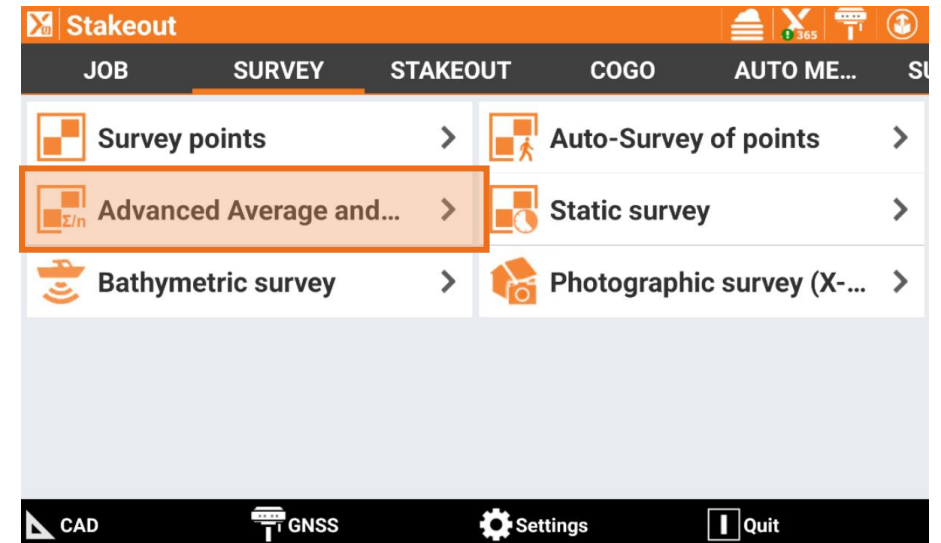
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# GNSS averaging & analysis



This new function allows to perform redundancy measurements with possibility to verify all data in graphical and analytical form, in order to ensure the highest accuracy to specific measurements.

1. Open the function from SURVEY page
2. Configure the requested parameters



# GNSS averaging & analysis



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2. Configure the requested parameters

A screenshot of the 'GNSS Advanced Average' configuration screen. The screen shows various parameters for surveying, including coordinates, antenna height, time on point, number of sessions, pause between sessions, and tolerances. The 'Time on point' is set to 60 seconds, 'Sessions to execute' to 5, and 'Pause between sessions' to 30 seconds. The tolerances are set to 0.025m for both H and V. The screen also shows a 'Start' button at the bottom and a 'Point' field with the value 100.

Parameter	Value
Coordinates	E -90340.365m N 5018529.511m Z 436.127m
Antenna height	0.000m
Time on point (sec)	60
Sessions to execute	5
Pause between sessions (sec)	30
Tolerance H	0.025m
Tolerance V	0.025m

Occupation on the point in each session

Nr of sessions

Time between the sessions, RTK will be reinitialized

Tolerance for outliers

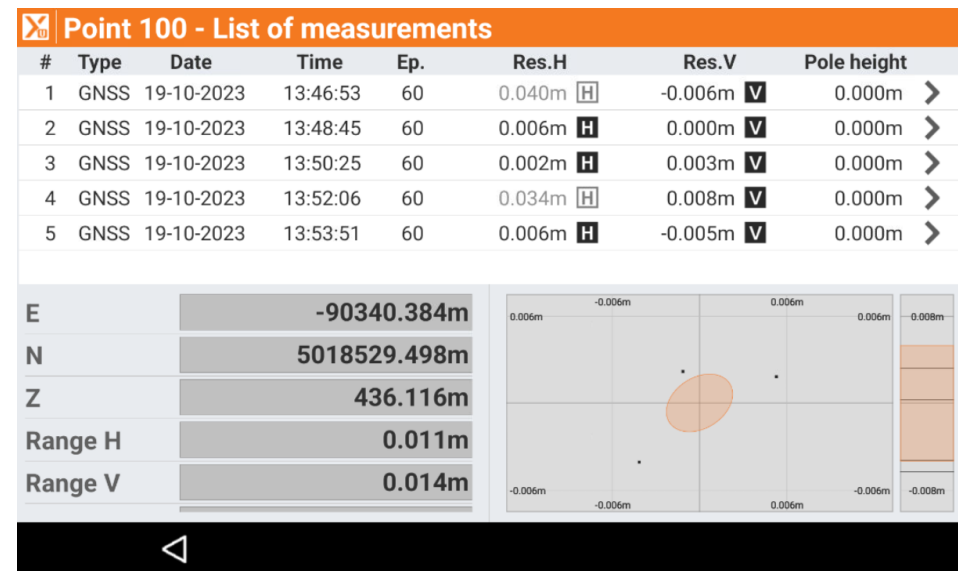
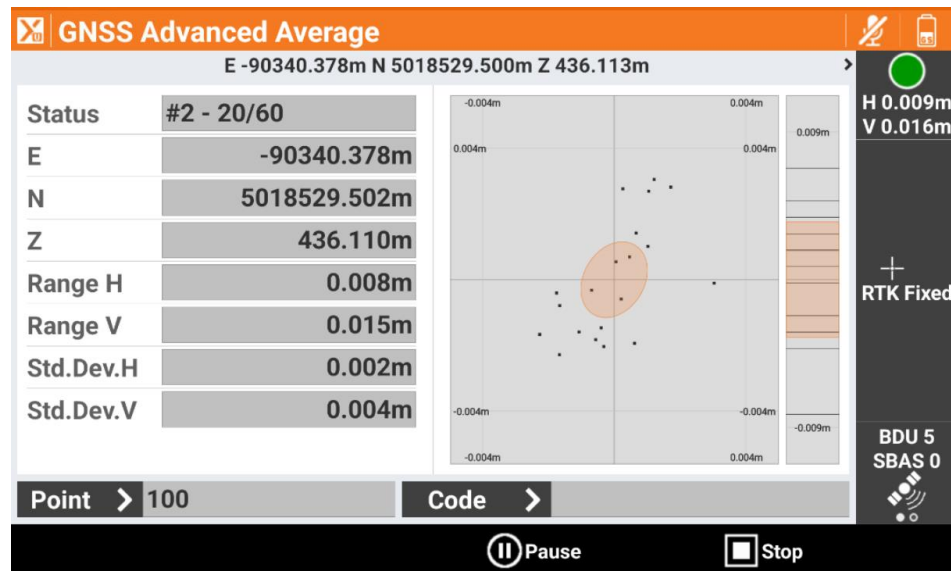
A screenshot of the 'Stakeout' menu in the software. The menu is titled 'Stakeout' and has several options: 'Survey points', 'Advanced Average and...', 'Bathymetric survey', 'Auto-Survey of points', 'Static survey', and 'Photographic survey (X-...)'. The 'Advanced Average and...' option is highlighted with an orange box. The menu also shows a 'JOB' tab and other navigation options like 'COGO' and 'AUTO ME...'. At the bottom, there are icons for 'CAD', 'GNSS', 'Settings', and 'Quit'.



# GNSS averaging & analysis



3. Start the session. RTK is reinialized between each session
4. You can check in real time the measured data during each measurement session
5. At the end of the measurements sessions, you can select which session to use, and save the final point coordinate

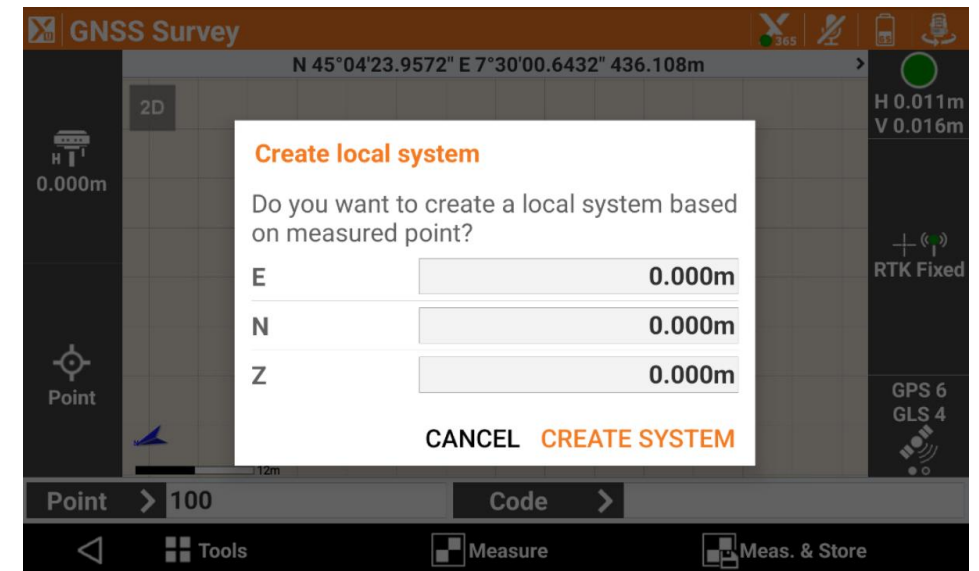


# Local system - origin



To create a GNSS local system, with an origin different than 0;0

1. Start a job without a cartographic system or any GNSS localization
2. Measure the first GNSS point
3. X-PAD will ask you to create a local system, entering the origin

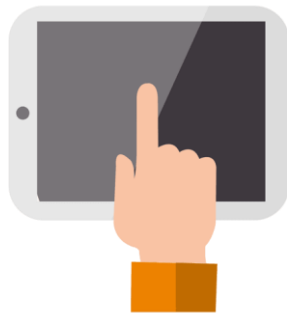




**TPS**

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# Atmospheric corrections, PPM and other



To clarify the used PPM, now atmospheric and geometric PPM are separated and visible for each measurement done

1. Open Points/Measurements/Codes page. Open Measurements
2. Select a measurement done, and in the Measure Detail page you can see the values of geometric PPM and atmospheric PPM for the measurement
3. Also in reports and export, the values are now separated and clarified

POINT	CODE&DESCR	MEASURE D...	STATION	SKETCH
Horizontal angle				43.7825c
Vertical angle				97.3572c
Slope distance				34.825m
Horizontal distance				34.781m
Vertical distance				1.445m
Target type			360° ZRP1 (23.1 mm)	
PPM (cartographic)				-400 - (0.999600000)
PPM (atmospheric)				26
Prism aim mode			Manual aiming	

Export ASCII	
<b>Fields</b>	
<input checked="" type="checkbox"/>	Target type
<input type="checkbox"/>	Measure type
<input type="checkbox"/>	Aim mode
<input checked="" type="checkbox"/>	PPM (cartogr.)
<input checked="" type="checkbox"/>	PPM (atmos.)
<input type="checkbox"/>	GIS data
<input type="checkbox"/>	GIS values only
<input type="checkbox"/>	Date



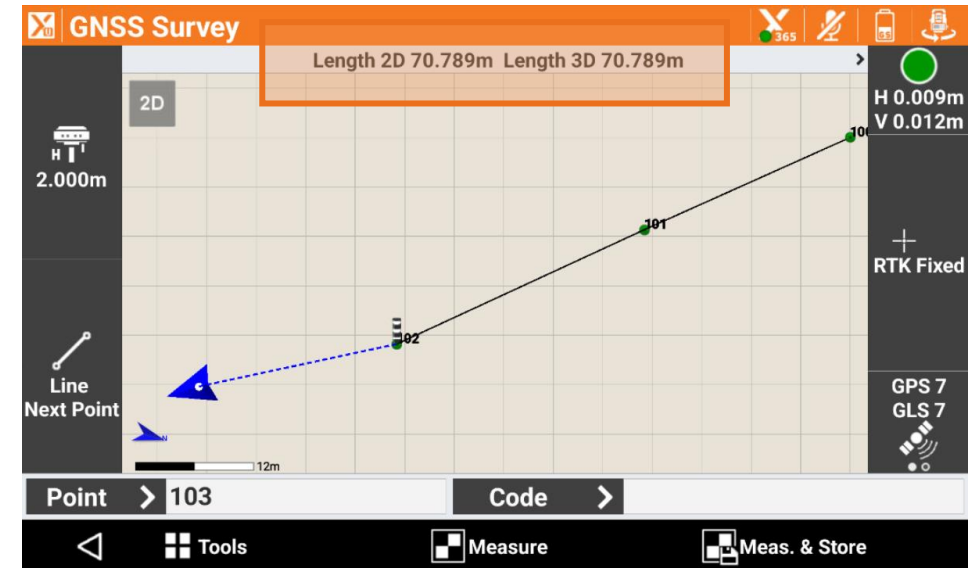
# SURVEY

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# Survey wheel



1. With TPS or GNSS open the Survey function
2. Select Line as drawing type
3. While drawing the line click on top bar to visualize the line length in real time



# STAKEOUT

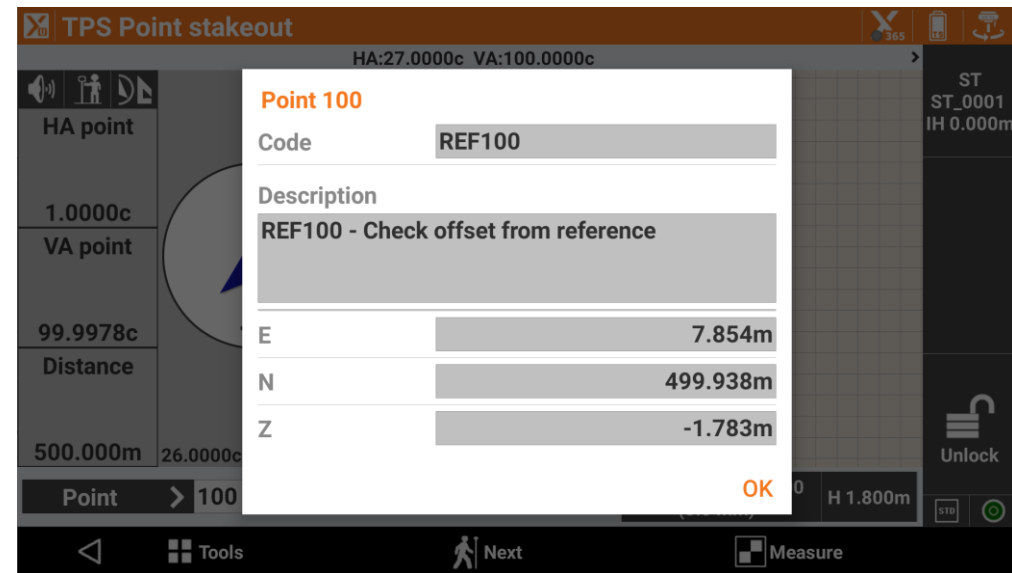
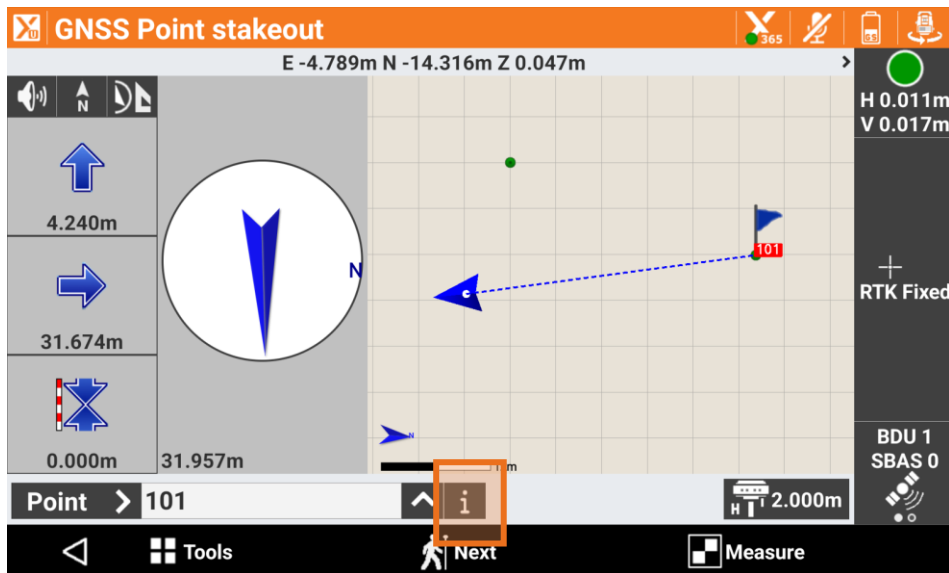
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# Code & description



To view additional information for the points to stakeout

1. Open stakeout application
2. Press on i button to check the point code and description







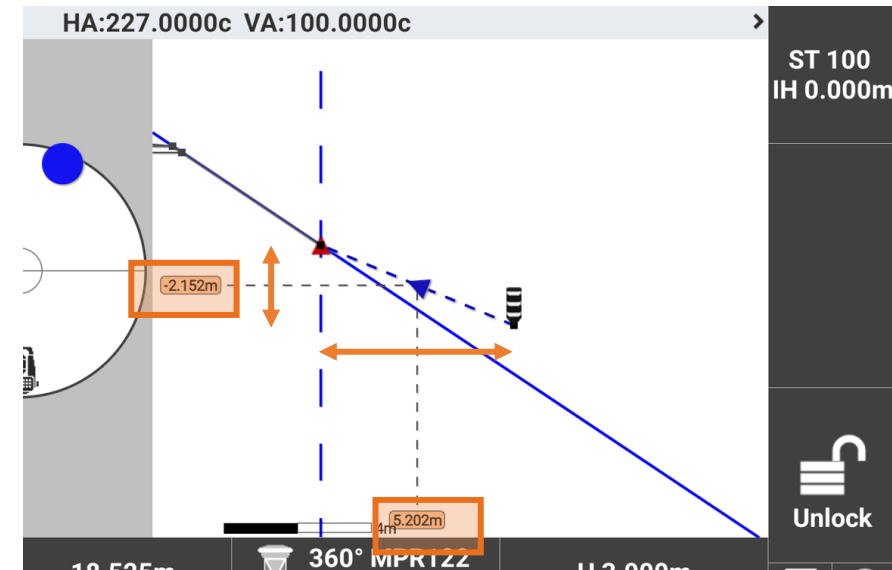
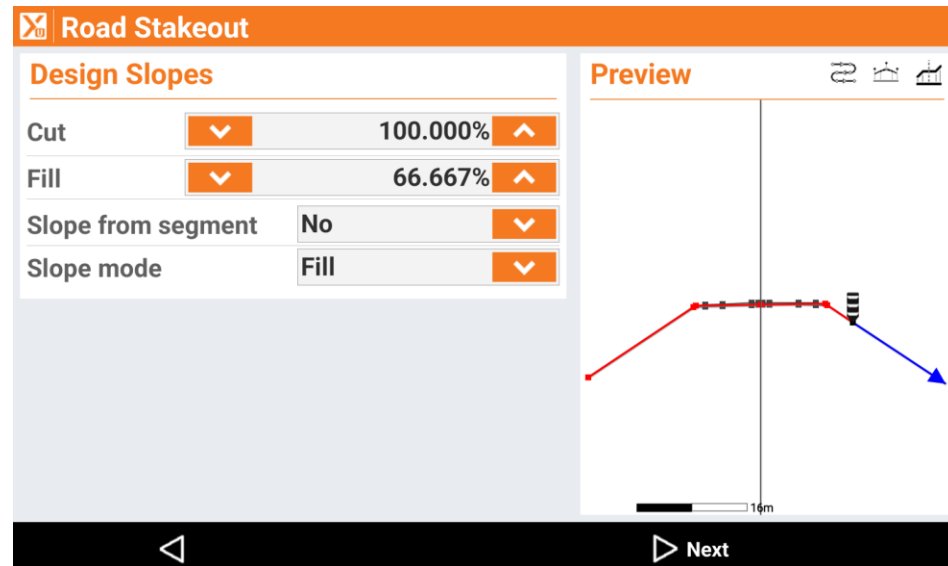
# ROAD

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# External reference: LandXML



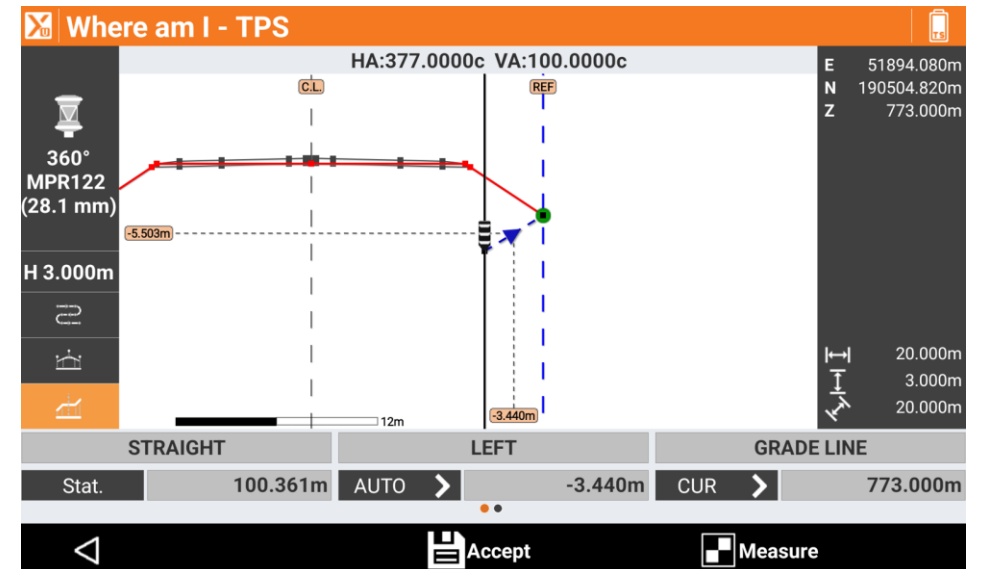
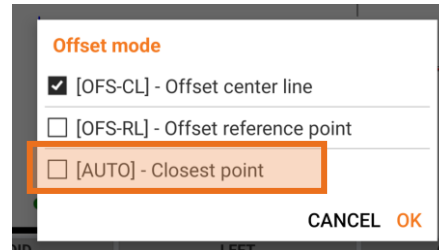
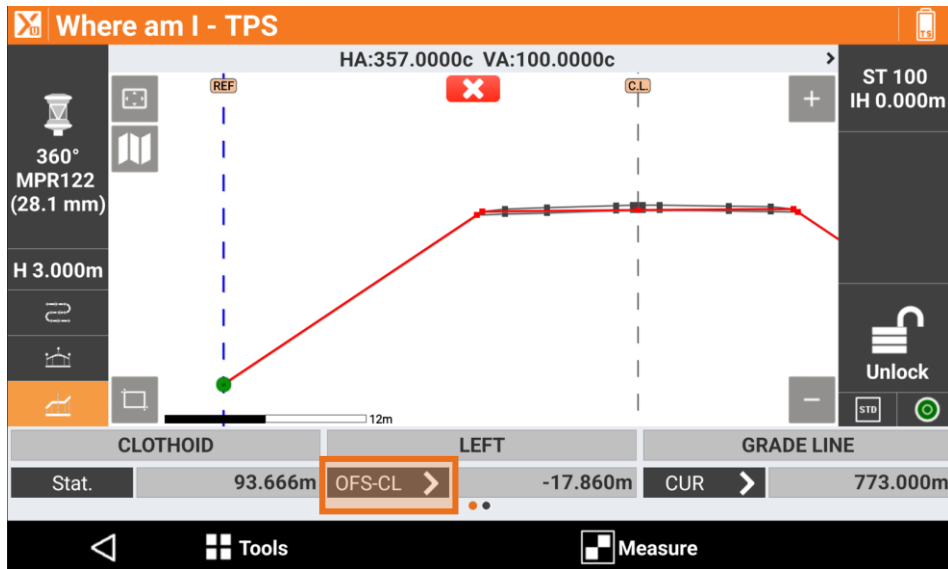
1. Open the function Sideslope stakeout in Roads application
2. Define the slope information
3. X-PAD provides horizontal and vertical distance to hince point as additional info



# External reference: LandXML



1. Open the Where am I function in Road application
2. Click on Offset mode to change offset mode to AUTO
3. Measure with instrument, and offset information are automatically referred to the closest reference point



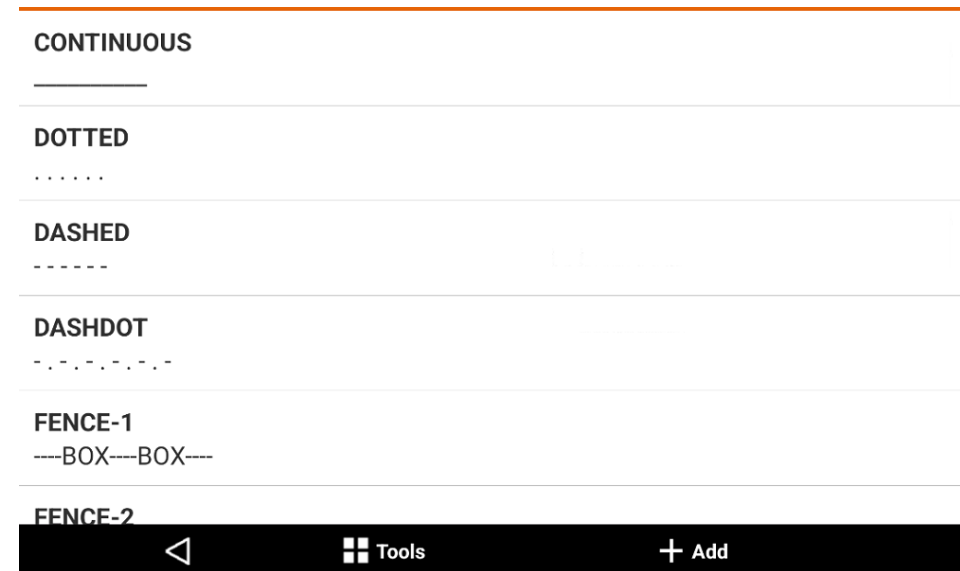
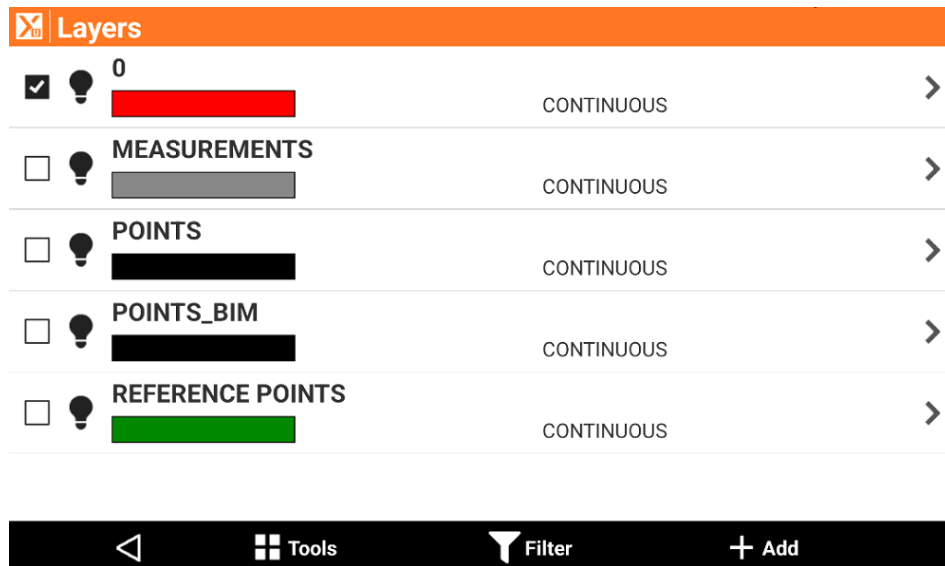
# CAD & MAPS

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# Advanced linetypes



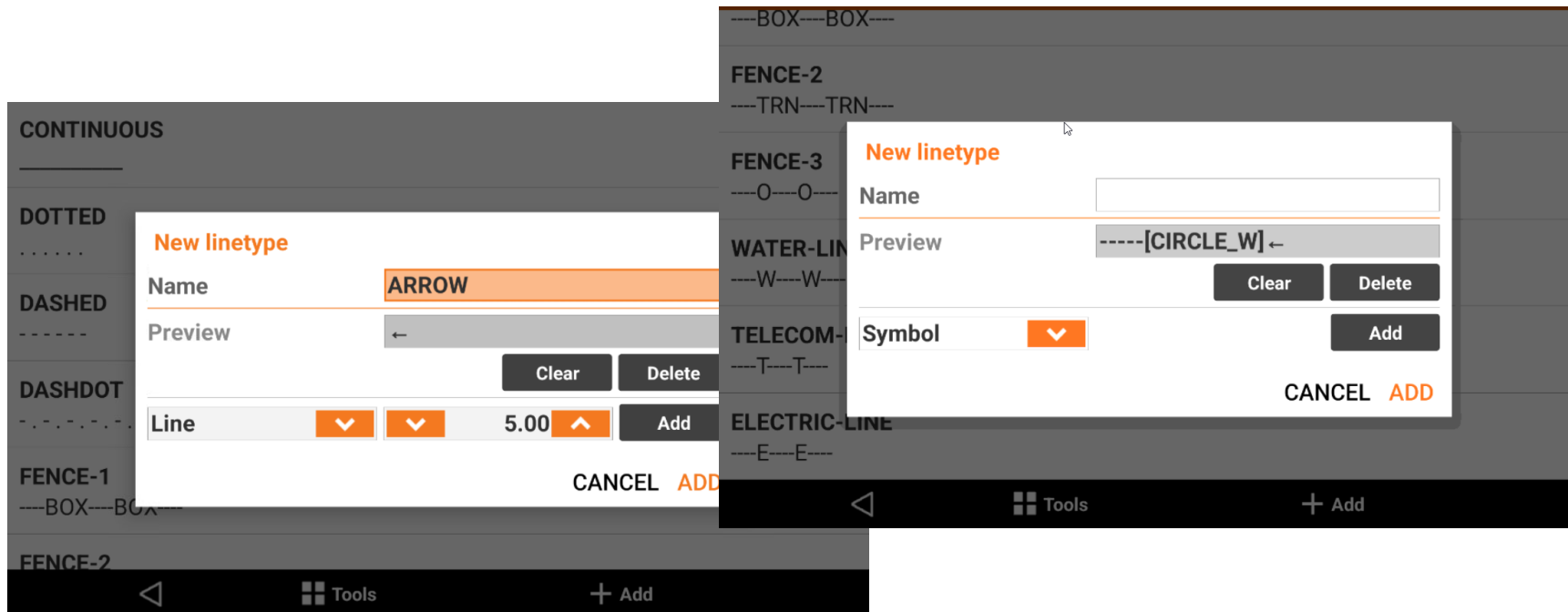
1. In CAD open the layer manager
2. Click to modify or add a new layer
3. Click on the layer to open the linetype



# Advanced linetypes



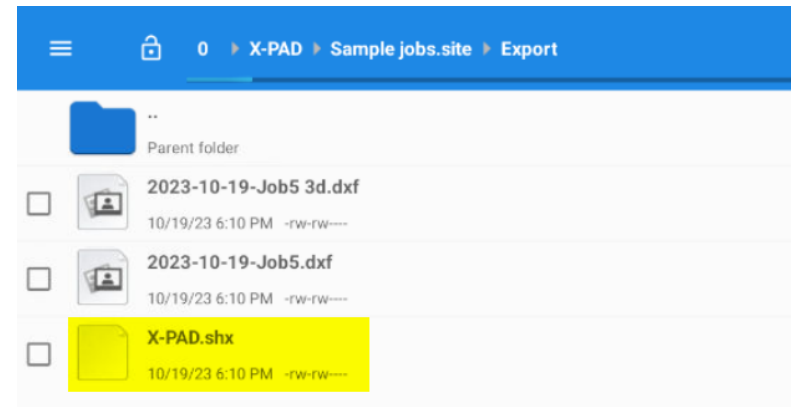
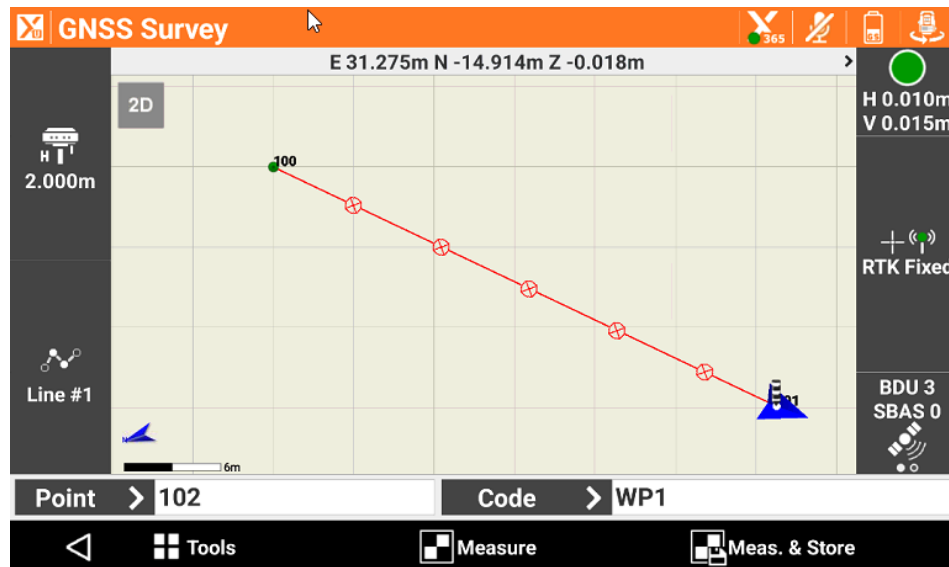
4. You can select one of the new linework or create a customized linework
5. Click on Add to create a customized linework
6. You can add line and symbols. For example add 5 parts of line and a symbol



# Advanced linetypes



7. Create a code where this layer is used
8. The linetype is the new linetype you created
9. To open the linetype also in CAD software, when exported remember to copy also the corresponding .shx file exported with the DXF/DWG





# **IMPORT & EXPORT**

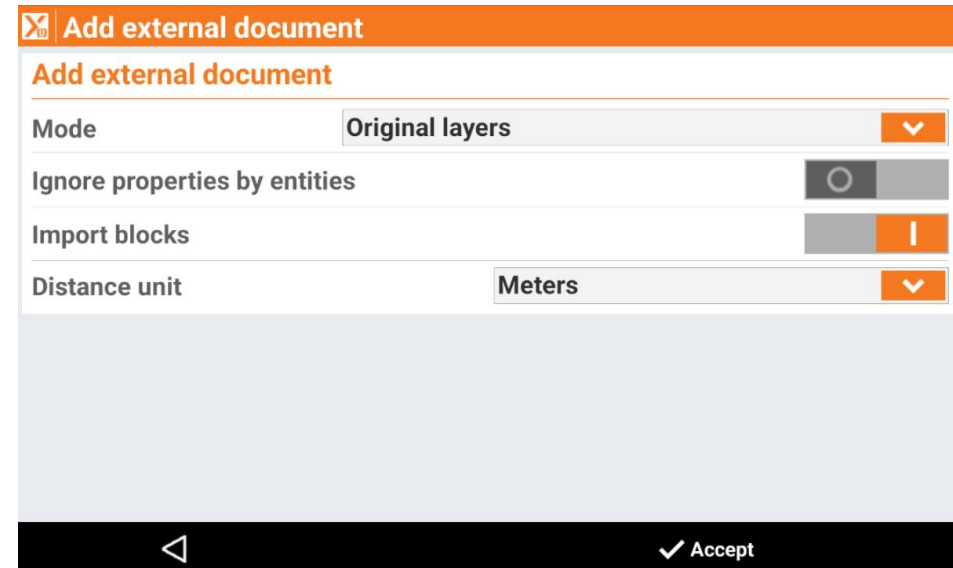
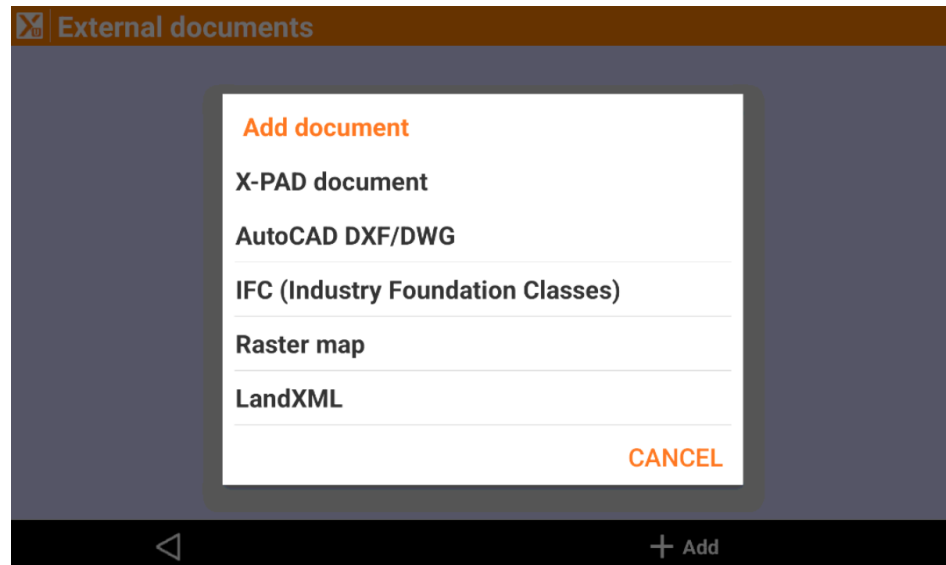
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# External reference



1. In Job page select External reference
2. Click on Add to add DXF/DWG file as external reference
3. As Mode select Original layers



# External reference



4. Open the CAD
5. Open the layer manager
6. Select the external reference to manage its layers, separated from layers of the X-PAD job file

