

Leica iCON Field v7.8

Software Release Notes

Product iCON site, iCON build
Date 15th May 2023
From Anastasios Angelidis, Jan Zimmermann

icon
intelligent **CON**struction

Version 7.8

Download <https://myworld.leica-geosystems.com/irj/portal>

These Release Notes contain important information about

Software	Version	Maintenance Date
iCON build	7.8	01.05.2023
iCON site	7.8	01.05.2023

iCON Software is protected and can only be loaded onto instruments with a valid software maintenance date.

Please do take your time to read these Release Notes!

The release notes contain information about the new iCON Field software and application programs. Please read the release notes in conjunction with the User Manual delivered with every instrument.

Table of Content

1.	New version iCON Field software v7.8.....	5
1.1	Latest iCON firmware versions.....	5
1.2	Customer Care Product (CCP) date.....	5
1.3	Download new versions	5
1.4	Training Material for iCON Field.....	5
2.	What is new for the iCON Field software v7.8	7
2.1	Country specific default settings.....	7
2.2	ConX auto-sync functionality.....	7
2.3	Exclusion areas of surfaces	9
2.4	Temporary points.....	10
2.4.1	Auto Snap.....	10
2.4.2	Temporary road cross sections	11
2.5	3D selection with select foremost.....	12
2.6	New Indicator for Project height and combination with scale factor.....	13
2.7	As-built walls with point shift.....	13
2.8	IFC selection for setup with coordinates	14
2.9	Angle display precision to one more angle decimal	14
2.10	Improvements of screenshots in reports	15
2.11	US survey feet - undefined units, checkbox only for concerned files.....	16
2.12	DXF - Improvements in import and support of new elements	17
2.13	Easing cloud access with iCONS's persistent authentication	18
2.14	AP20 Tilt status indicator: Introducing the 3 rd initialization state	18
2.15	New Pole extension feature for AP20	19
2.16	Autostaking elevation repeat possibility	21
2.17	Automatic pixel size for thin point clouds	21
2.18	Expanded 3D Line feature in Stakeout, Layout Points, Lines and Objects.....	21
2.19	iCON Site Excavator Features	24
2.19.1	Bucket calibration	26
2.19.2	Guidance to point	28
2.19.3	Line creation	29
2.19.4	Automatic point logging	29
2.19.5	Hold slope for road models	30
2.19.6	Height reference from tool point.....	31
2.19.7	Crosshairs and cutting edge of the bucket.....	32
2.19.8	Sound notification	33
2.19.9	Dual Cut & Fill view	35
2.19.10	Additional smaller improvements	35
3.	iCON Field software improvements and bug fixes	35
3.1	2D area calculation in volume calculation	35
3.2	Number of points restriction removed when editing large surfaces	35
3.3	Update of Czech Republic coordinate systems	35
3.4	Online map not available on CC200.....	36
3.5	CCD17 not working with v7.6	36
3.6	Sending points to ConX using TPS failure	36
3.7	Sets of angles with user defined prism	36
3.8	AP20 connection improvements.....	36
3.9	Dxf block naming on the map.....	36
3.10	Dxf block attribute as a name.....	36
4.	General information & recommendations	36
4.1	How to update manuals on the CC80/ CC200	36
4.2	Crash reporting function	37

4.3	Connectivity to cloud services	37
4.4	Projects compatibility after upgrading from older version than v3.5 to v6.7/6.8	37



1. New version iCON Field software v7.8

We are pleased to announce the release of the new iCON Field software v7.8
This version of iCON Field software contains important new features and bug fixes.

1.1 Latest iCON firmware versions

It is recommended to always use the latest available firmware version for iCON Field software and sensors.

- iCON build v7.8.0.4080
- iCON site v7.8.0.4080
- iCON gps 60 v6.8.0
- iCON gps 70 v7.07.253
- iCON gps 160 v2.0.0
- iCON iCT 30 v7.8.0.4080
- iCON robot 70 v7.8.0.4080
- iCON robot 80/S v7.8.0.4080
- iCON builder 50/70 v7.8.0.4080
- Leica Builder v2.12
- iCON robot 50 v7.13
- iCON robot 60 v4.5.0
- iCON builder 60 v4.5.0

Captivate sensors

- TS16 / MS60 v7.53

On machine sensors (iCON site excavator)

- SJB21 v4.2.0
- iCON gps 100 v2.1.0
- CR50 v2.1.0

It is recommended to upgrade all iCON system components to the latest available software version.

If the iCON system is running on v6.5 or older it is recommended to upgrade to v6.7/6.8 first and afterwards proceed upgrading to v7.8.

1.2 Customer Care Product (CCP) date

The iCON Field software v7.8 can only be loaded onto iCON Field equipment which has a valid **CCP date of 1st of May 2023 or later.**

1.3 Download new versions

The new version of iCON Field software can be downloaded from the iCON section within Leica world.

1.4 Training Material for iCON Field

Since iCON Field v1.5, many training videos have been introduced to demonstrate the usage of different applications but also to show how the software can be configured to the customer's needs.

The videos can be downloaded from the iCON section within Leica world.

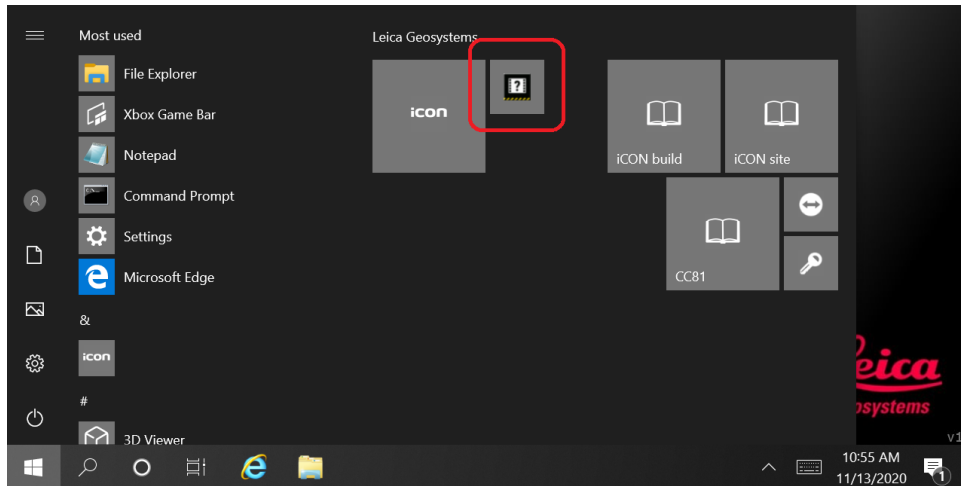
All videos are also available from the Leica YouTube channel.

http://www.youtube.com/playlist?list=PL0td7rOVk_IVTTMQZVWJn6t8qw-zPVwLF

New training videos have been created and are available from:

<https://leicageosystems.how/usingiconsite>

The new videos are accessible on iCON field controllers from the Windows start menu providing extra help to customers on the field.

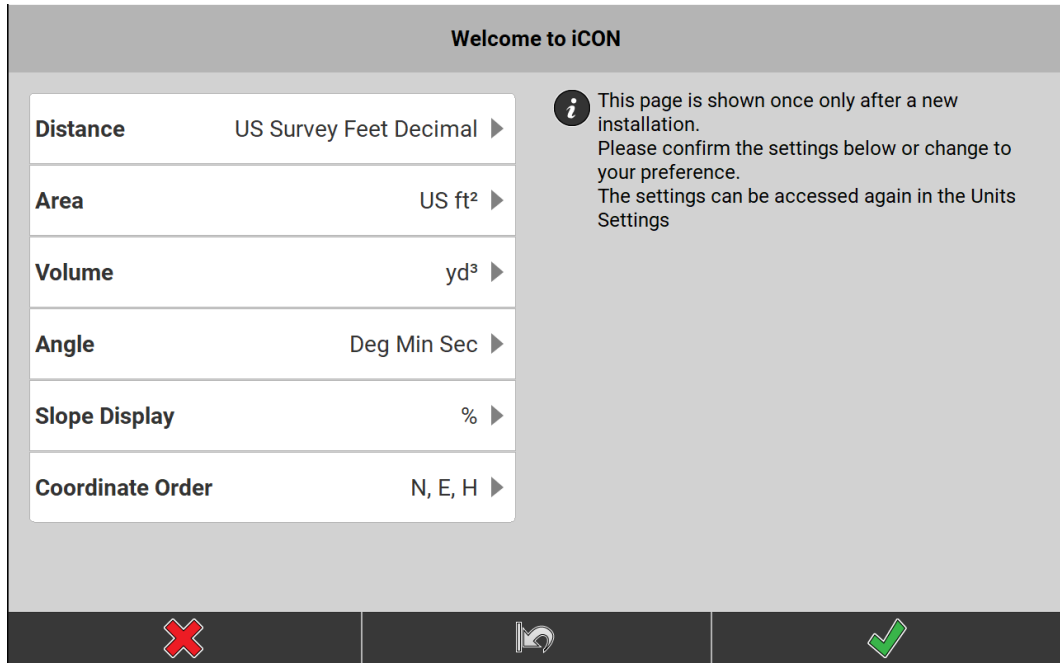


Access to videos from iCON field controller

2. What is new for the iCON Field software v7.8

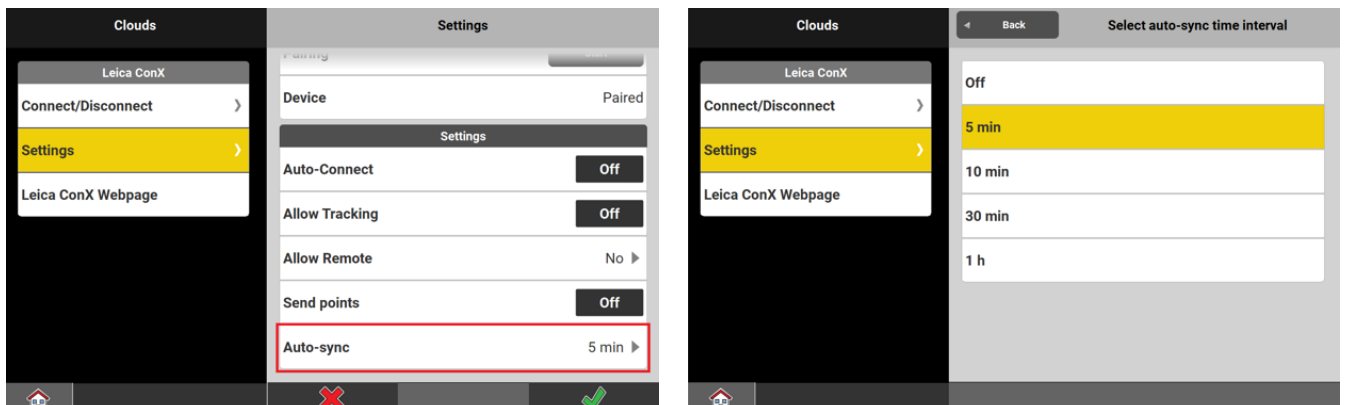
2.1 Country specific default settings

From some countries we have received feedback to be able to set specific default settings for the country. Therefore from now on, a welcome page will be shown after installation of the software. In this page the default settings for the selected country are displayed. The settings can be checked and changed if needed. It is possible to change those settings later from Units Settings.

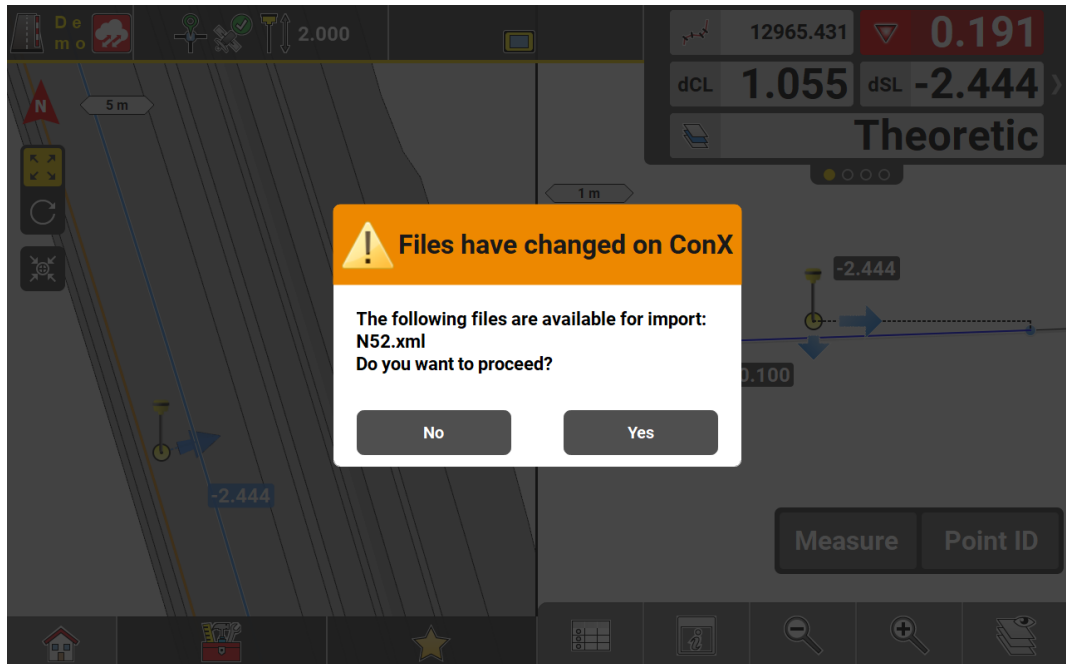


2.2 ConX auto-sync functionality

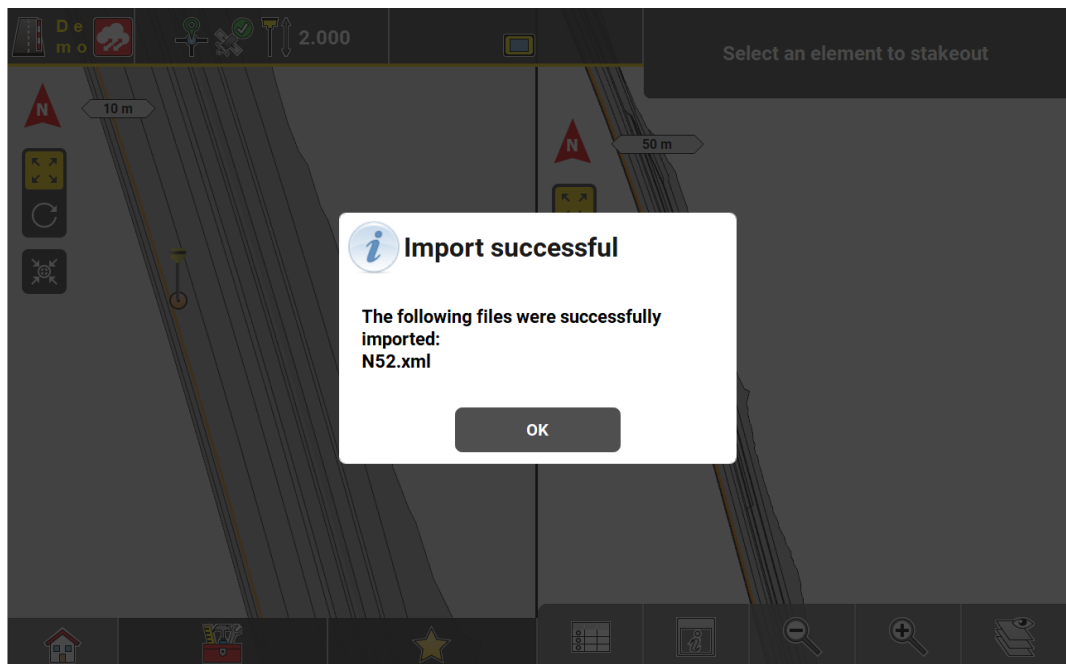
With the new version, an auto-sync functionality allows to sync files in the active project from ConX server. Any file(s) change on the server will be reflected in iCON based on the chosen time setting. The assigned files get imported in the background with no need to exit the application and manually import the file (except for .dxf, .txt, .csv file formats which require configuration of settings).



As soon as we access any of the applications, a check gets triggered for file changes after 15 seconds to identify if there is any file assigned to the controller. If true, a new warning will pop up, asking the user to decide whether he wants to import the files or not.



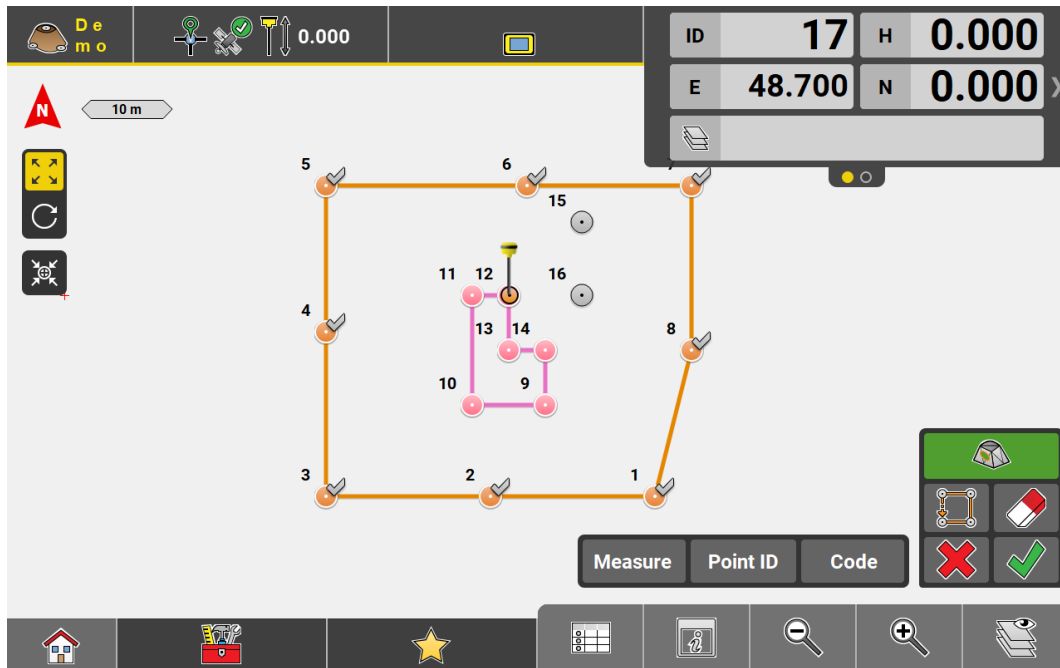
If “Yes” is pressed and there are no additional import settings required, the files will be imported successfully and the user can resume his work immediately after, without existing the application.



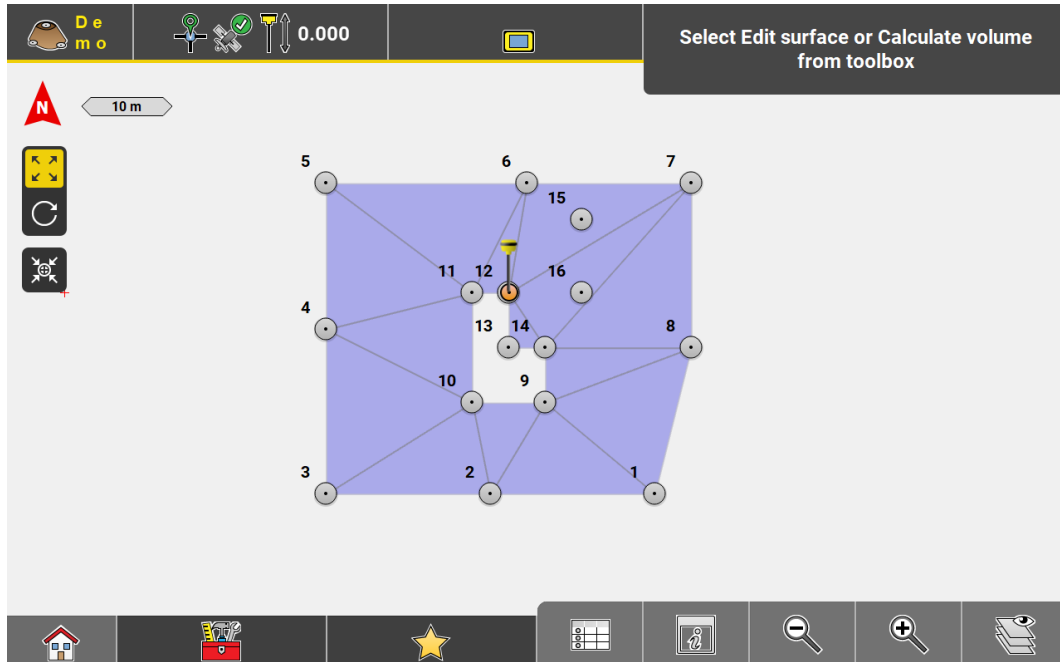
When a file (.dxf, .txt, .csv) is assigned to the controller, the user will be redirected to the “Import Data” screen and will need to manually define the settings prior to import. Finally, there is also the possibility postpone the file(s) import at that specific time by pressing the “No” button. The work can be continued and based on the auto-sync time interval option, the user will be asked again about the recently ConX project changes.

2.3 Exclusion areas of surfaces

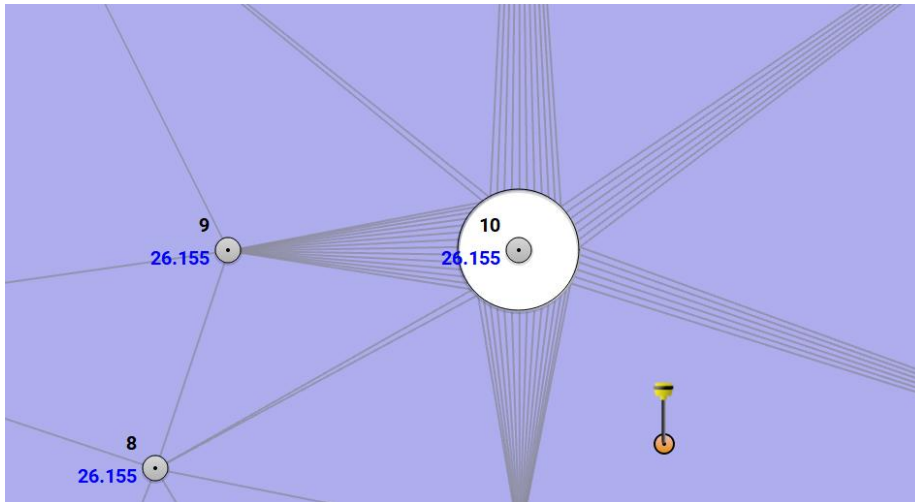
New functionality has been introduced in Volumes application giving the ability to define and create exclusion areas (holes) on the measuring surface.



Within the boundary creation mode, press  to start creating surface inner boundaries and form areas that will be excluded from the surface.



The excluded areas are removed from the volumetric calculations (area and volume calculations).



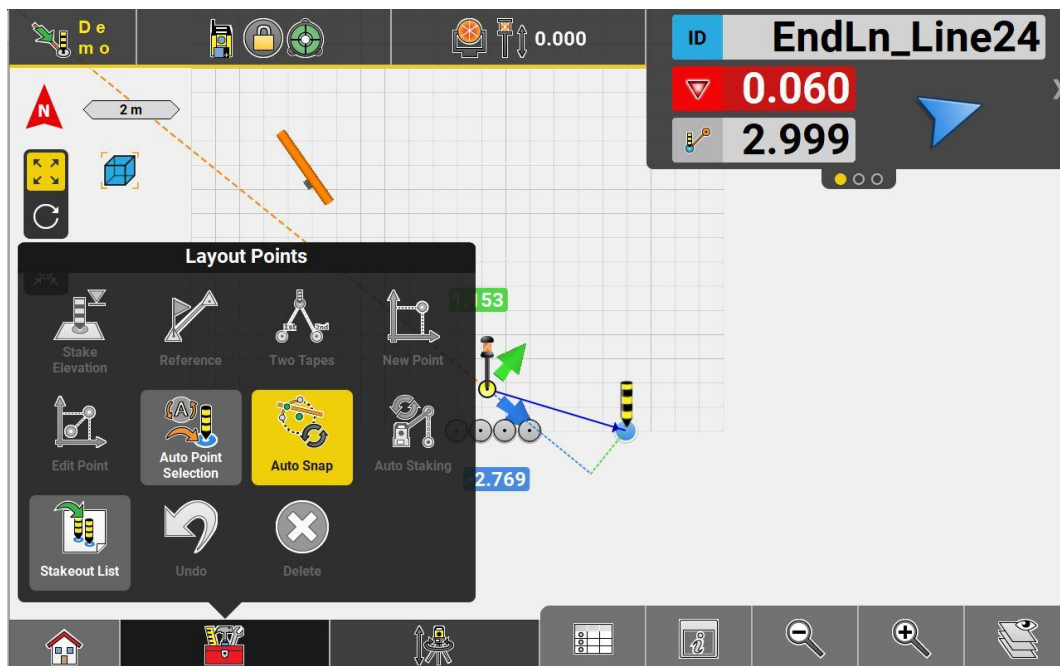
Additionally, circular objects are now selectable in volumes application for example, to remove the areas of manholes or roundabouts. This was not possible in previous version.

2.4 Temporary points

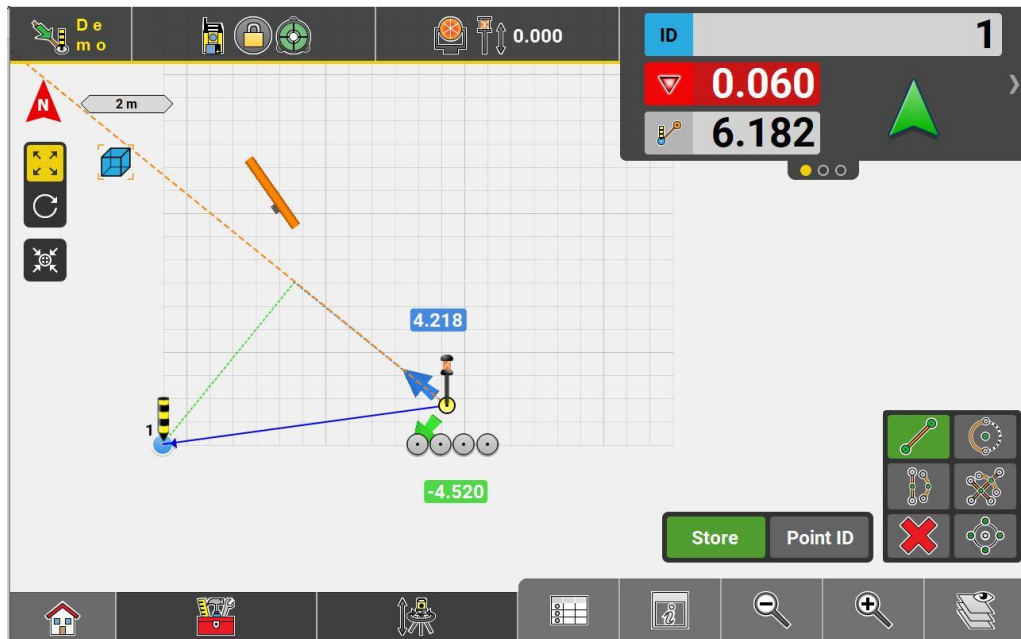
Temporary points is available in two variations.

Auto Snap in Stakeout, Layout Points and Layout Objects, and Temporary Cross Sections in Roding.

2.4.1 Auto Snap



This feature is started by calling the tool from the toolbox. This requires an active measurement to begin. Once Auto Snap is activated from the toolbox, a small tool panel opens on the right hand side.

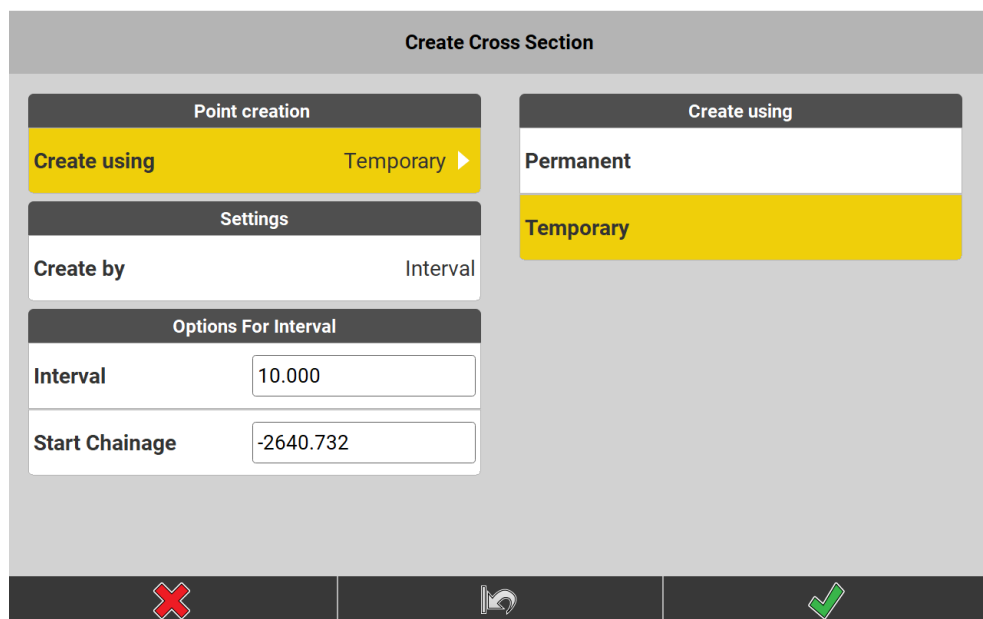


From the tool panel, select the object snap that you are interested in, for example circle centres. When you approach a circle on the map (reference or sketched) a temporary point will appear for the centre. You must be within 2m (6 feet) of the object for it to appear, this includes elevation. When the temp point appears you can select it for layout. If you do not select it, it will disappear once you move more than 2 metres from it.

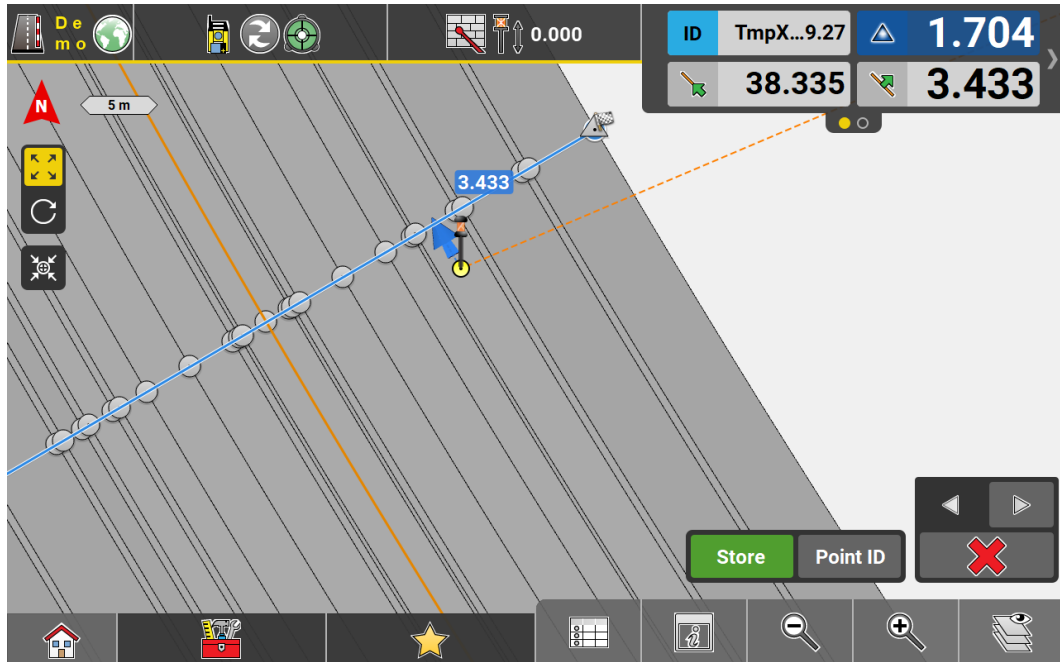
A suggestion for this workflow is to split the screen so that you see a map and a bullseye, and try this in combination with the auto point selection in dynamic mode.

2.4.2 Temporary road cross sections

So far it was possible to create cross section lines along the imported road model. All those cross section lines were stored in the active Job. In v7.8 it is possible to define temporary cross sections at desired stationing intervals resulting to a cleaner map.



Start chainage and interval values can be configured in the cross section creation screen.

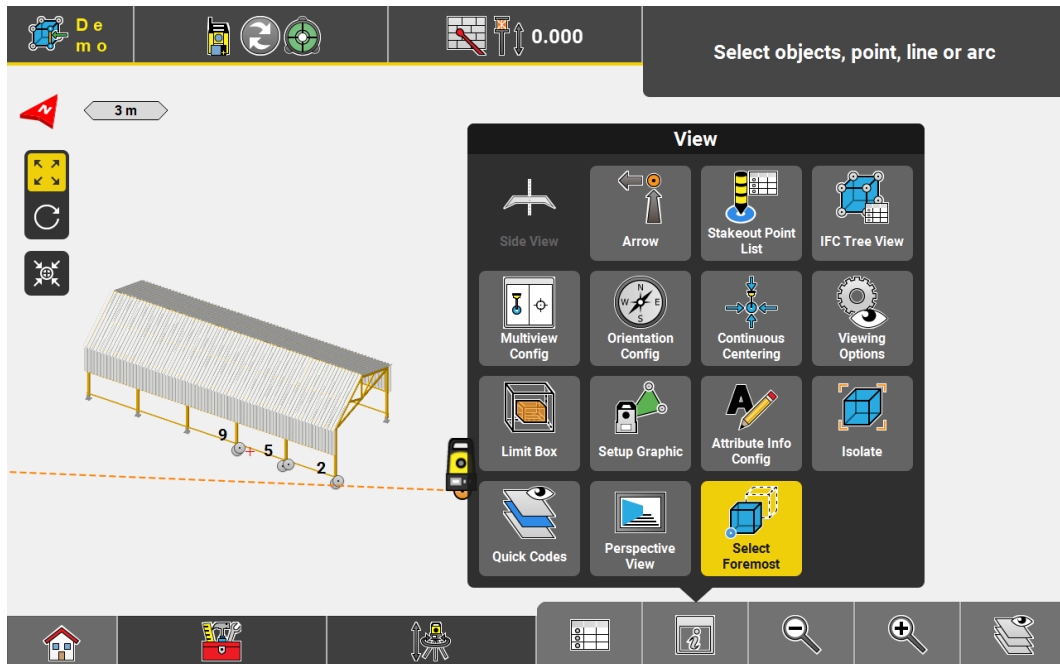


The temporary cross section mode will automatically select the first cross section line. Using the left/right arrows, the next/previous available cross section gets activated. The cross section lines/points can be staked as normal. Efficiency on the job site can be increased when combined with automatic point selection functionality.

2.5 3D selection with select foremost

There are two improvements to the element selection behaviour in iCON.

- A general improvement in the zooming, the zoom steps and the listing of elements when you tap on an area where multiple items could be selected.
- A new selection mode that works for IFC elements and is switched on by default in Layout Objects and Verification. This mode will also be on in Checks if a Layout Objects license is present. This is called “Select Foremost” and is accessible through the View menu.



When this mode is active it will select the IFC element that is closest to the viewer. There will be no list selection. Once an IFC element is selected then you can select points and lines, again the most forefront objects are picked.

This mode is for the user who likes to zoom, rotate and pan naturally and does not like to interact with lists.

The setup methods with IFC objects are not changed, there it is the legacy behaviour.

2.6 New Indicator for Project height and combination with scale factor

To indicate the different stati regarding height shift or scale factor, which have both influence of the whole project, we introduced new indicators for the stati in the statusbar:



Project height attached



Scale factor attached



Project height and Scale factor attached

2.7 As-built walls with point shift

The existing behaviour for the As Built Walls setup is to measure 4 points to define 2 walls, then select the corresponding 2 lines in the reference file to complete the shift. In this version you can instead select 2 points to define each line to shift, or a combination. For example, measure 4 points then use a line and 2 points to shift onto. This is supported for IFC elements also in Layout Objects and Verification

2.8 IFC selection for setup with coordinates

Points from IFC objects can now be selected for use in the Coordinated setups, Setup Anywhere, Over Known Point, Set Orientation.

2.9 Angle display precision to one more angle decimal

iCON now includes the ability to set the display resolution for angle measurements to one more decimal. This feature provides users with more accurate readings from yellow instruments, allowing for more precise calculations and decisions based on the measured values when angle unit is set to Degree Minute Second. This is particularly useful for projects that require angle measurements to the nearest 0.1". The precision level is displayed in 0.1" decimals when "Precise" is set as the display accuracy level (**Figure 1**).

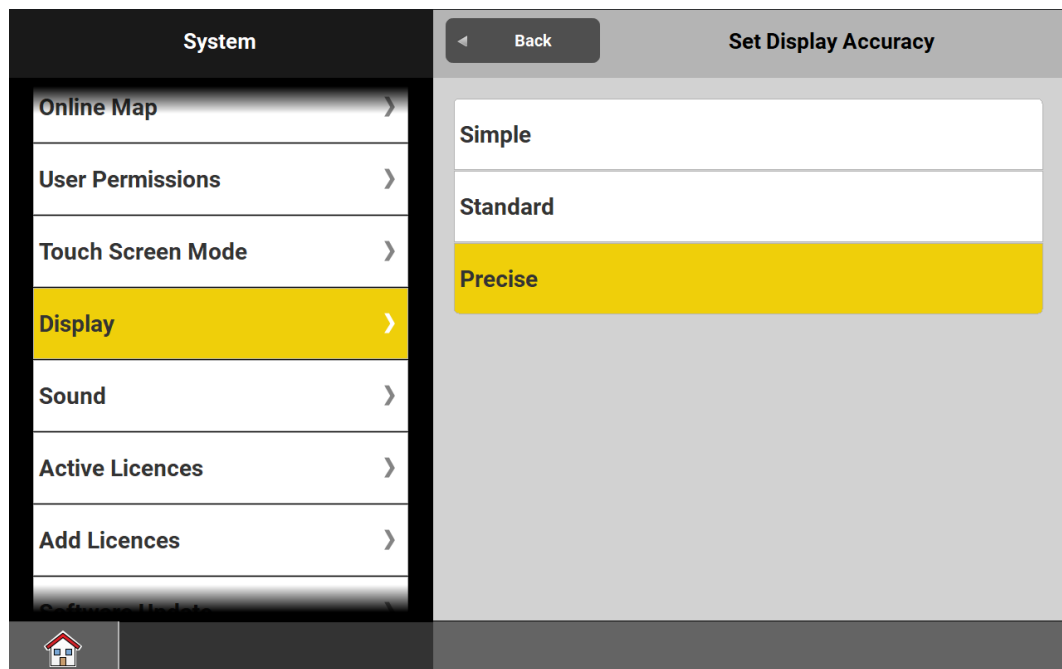


Figure 1: Selecting the display accuracy to Precise in the list

Upon setting the display accuracy to Precise, the angle values to be measured will be displayed in one more decimal as shown in **Figure 2**.

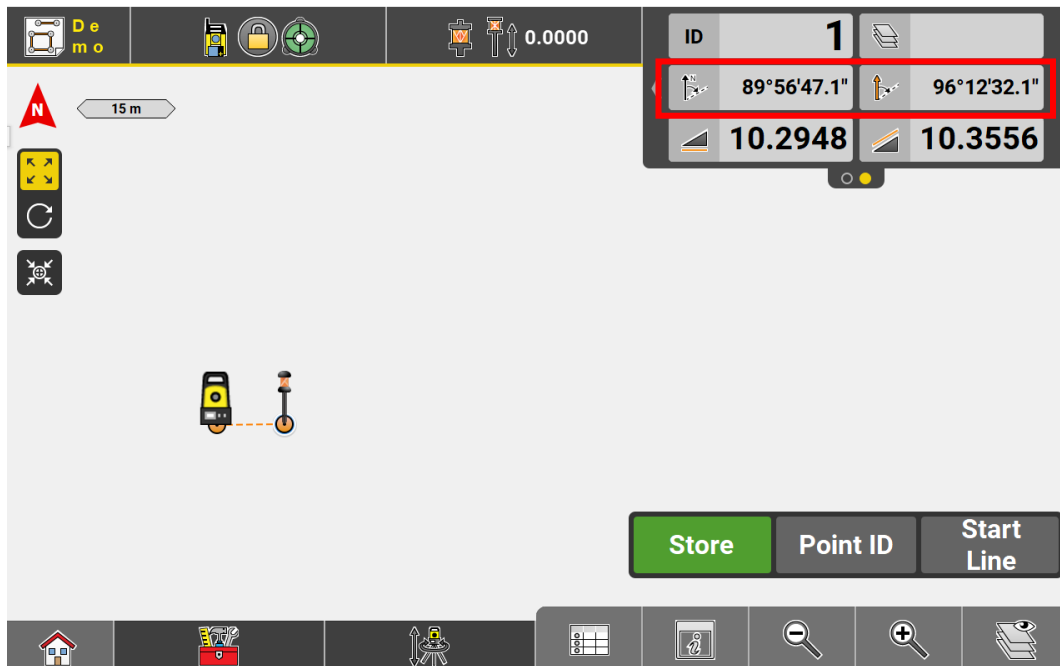


Figure 2:Horizontal and vertical angle values display in as-built app

The horizontal, vertical, delta horizontal, included angles, and azimuth value will be displayed with one more decimal value for their respective angle values. Generated reports also include the sub-second display information for angle values, along with other relevant data points (Figure 3).

DATA COLLECTION INFO

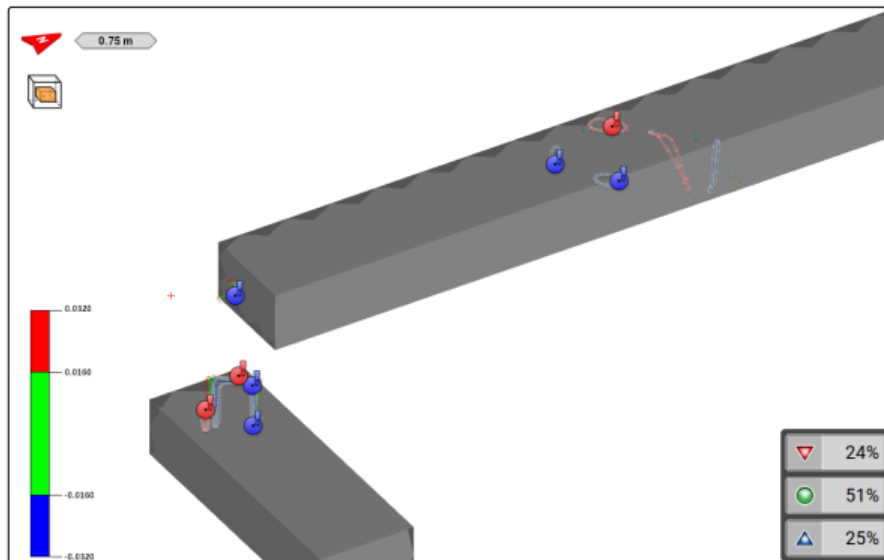
POINT

#	Point Name	Easting	Northing	Height	Hz Angle ³	V Angle ⁴	Slope Dist ⁵
1	1	10.2948	0.0096	-1.1200	89° 56' 47.1"	96° 12' 32.1"	10.3556
2	2	10.2948	-17.9904	-1.1200	150° 13' 12.1"	93° 05' 34.5"	20.7579
3	3	-10.7052	-17.9904	-1.1200	210° 45' 17.1"	93° 03' 44.7"	20.9645
4	4	-16.7052	0.0096	-1.1200	270° 01' 58.9"	93° 50' 08.4"	16.7427
5	5	-7.7052	9.0096	-1.1200	319° 27' 44.9"	95° 23' 49.1"	11.9079

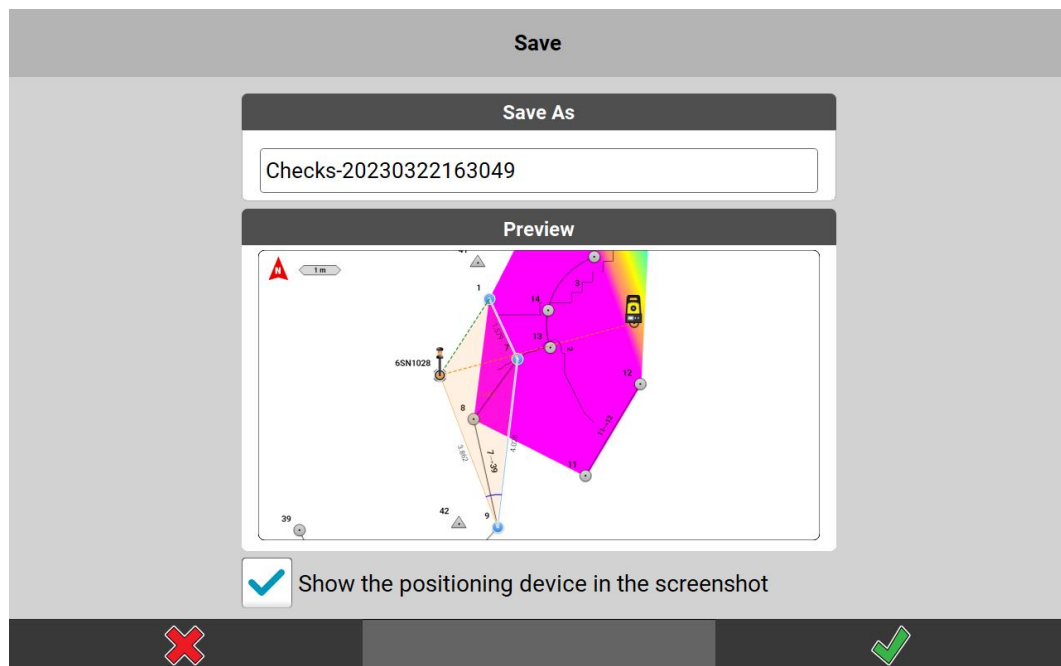
Figure 3:Horizontal and vertical angle values display in the data collection report

2.10 Improvements of screenshots in reports

In this version, the report screenshots include the North arrow and scale bar indicators for better documentation of the data set. In addition, the Limit box indicator is shown in case the view of the data set was changed beforehand.



For Checks and Floor Flatness report screenshots, a checkbox allows to decide whether the positioning device should be shown in the screenshot or not.



2.11 US survey feet - undefined units, checkbox only for concerned files

Previously in iCON field v7.5 release, a new checkbox has been introduced to work with US Survey feet to more easily integrate IFC into BIM workflows. Although the IFC standard does not support US Survey feet, certain software such as Tekla allow exporting of IFC with US Survey Feet; this may cause an additional shift when importing to iCON in previous versions of iCON. In this release, the "apply default scale" checkbox (**Figure 4**), which allows iCON to import IFC with predefined setting in model, has been made available only for files from Tekla and in Imperial Unit.

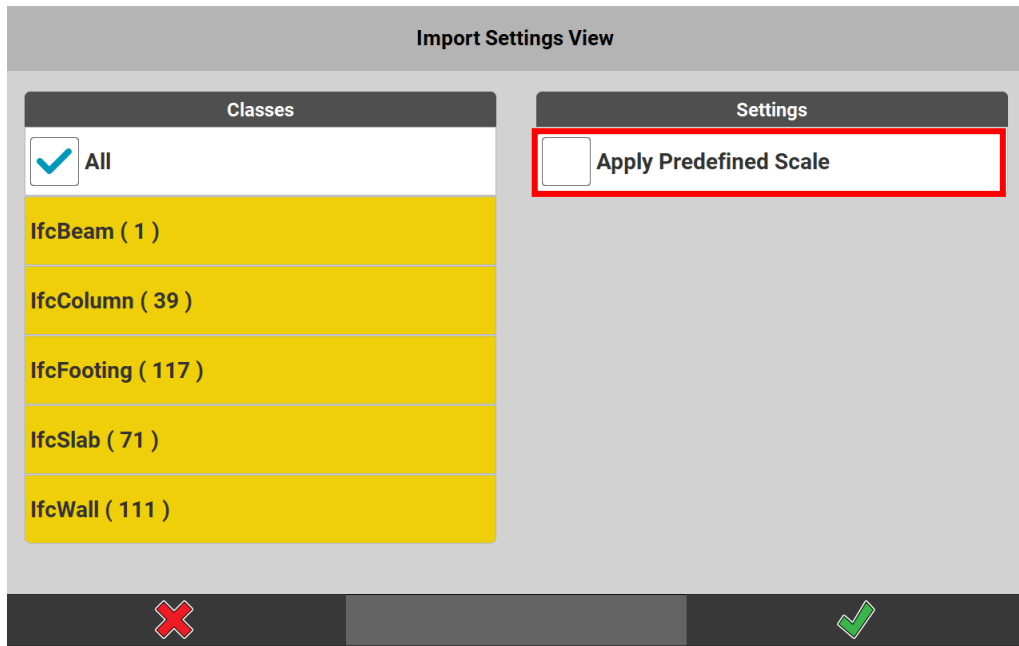
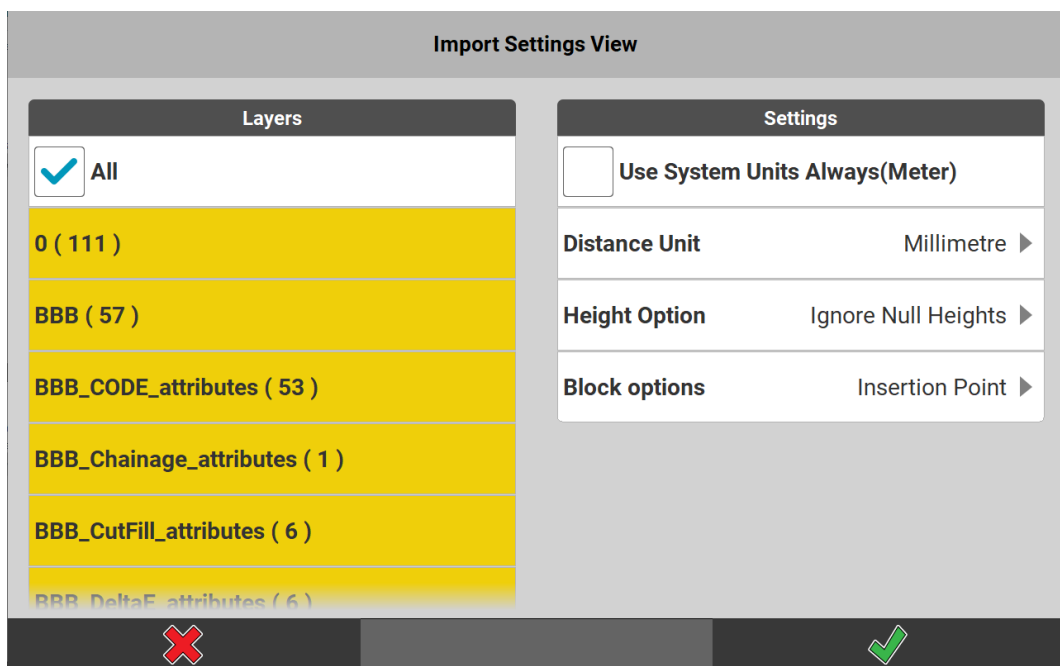


Figure 4: Apply Predefined Scale checkbox in import settings view.

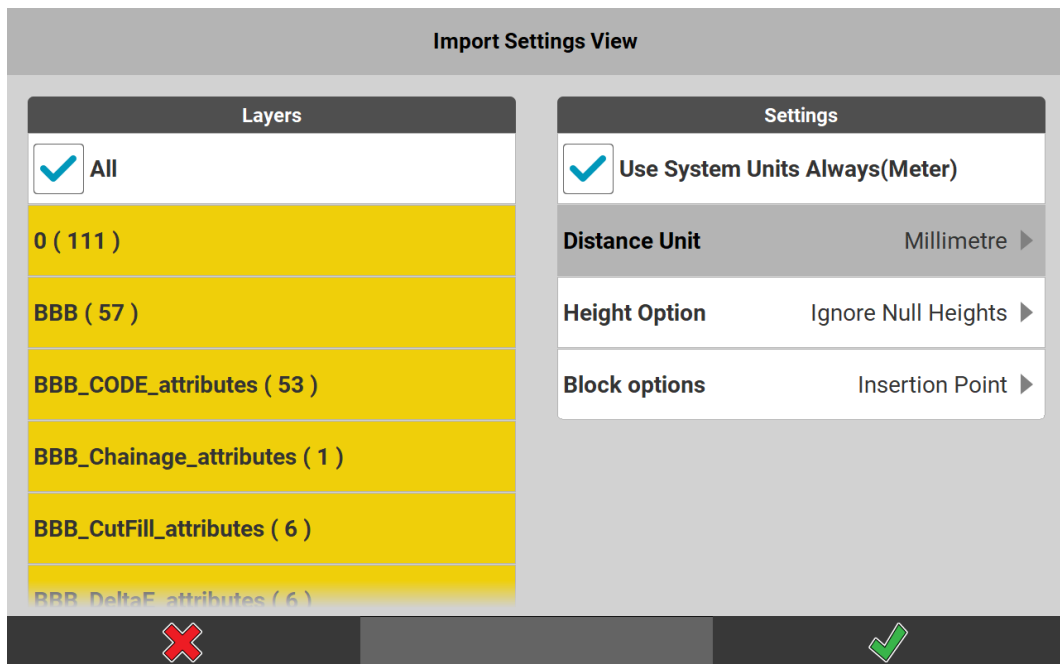
2.12 DXF - Improvements in import and support of new elements

The unit setting of a DXF file (if set on the file) get automatically detected during import. With this version the workflow, to define whether the file gets imported using the detected unit setting or defined unit set in System, is improved.

The option to use the System unit is now on top of the list of settings.



For iCON Build license, the checkbox to use System units is unchecked per default, meaning that the DXF file will be imported with the detected unit.



For iCON Site license, the checkbox to use System units is checked per default, meaning that the DXF file will be imported with the set System unit.

Another feature involves 3D solids which are now supported as selectable elements. An additional layer for the wireframe is now shown for each layer with 3D solids. This can be enabled in a similar way to how polyface is handled. You can also show points for the 3D solid vertices. This also applies to 3D region objects.

Hatching is also supported, the hatch patterns are converted to a solid fill in the colour of the original layer.

2.13 Easing cloud access with iCONS's persistent authentication

With this release, users of the supported cloud services will no longer be required to manually authenticate their chosen service each time iCON restarts. Once a user has entered their credentials and completed the authentication process for a cloud service, iCON will store the information and there will be no need to re-authenticate via the Clouds menu in iCON.

2.14 AP20 Tilt status indicator: Introducing the 3rd initialization state

When using an AP20 with tilt functionality, there may be instances where the tilt is initialized and ready for measuring, but not yet fully stable. To provide a better indication to the user about the tilt's status, a new state indication has been introduced in iCON.

To use this new status indicator, make sure that you have an AP20 device with tilt functionality.

Turn on AP20 and once the AP20 tilt is initialized, check the status bar on the screen for the new tilt status indicator.

After the tilt is initialized, a loading bar will appear to indicate the stability of the initialization process (**Figure 5**). If the device is not moving, the tilt initialization may become unstable and the loading bar will turn yellow to indicate this. Once the loading bar turns fully green, it means the tilt is stable and will remain so even if the device is not moving.

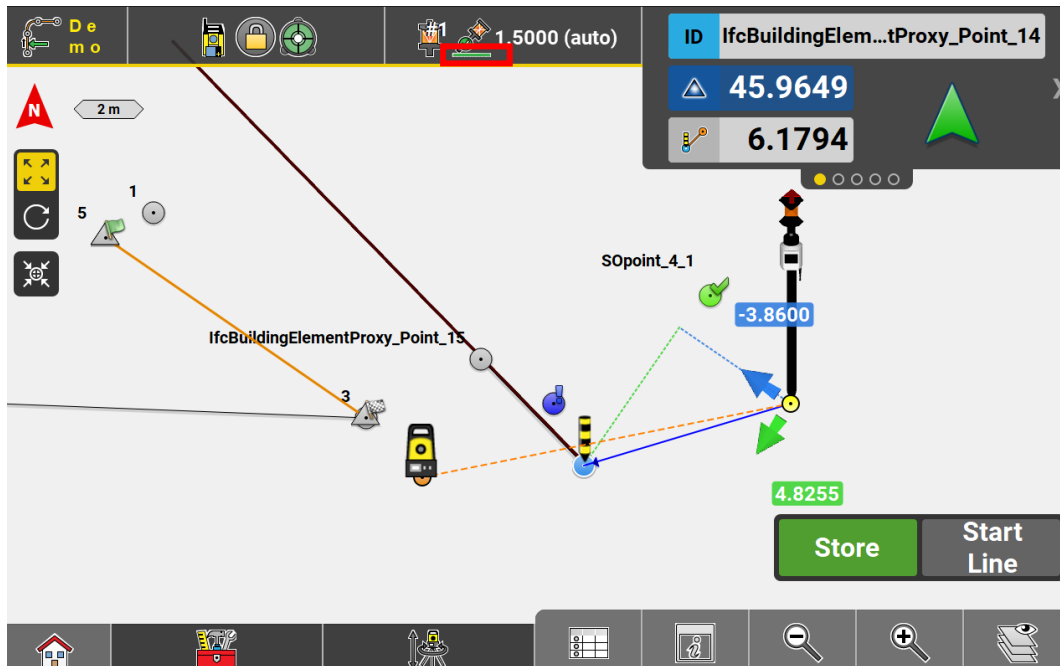


Figure 5: The status indicator is shown in the status bar when fully loaded.

To use the tilt functionality in this new state, you can continue measuring points as usual. However, you should be aware that the tilt might be lost more easily if the device is not moved (Figure 6).

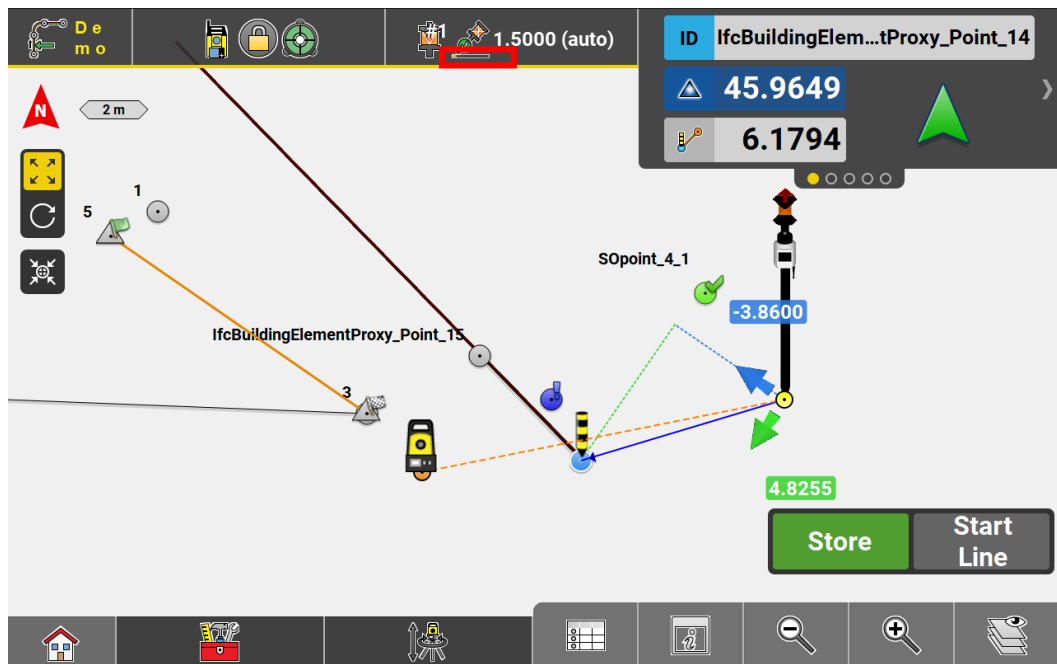


Figure 6: The tilt status indicator is displayed in the status bar when the tilt is initialized but not yet fully stable with nearly empty bar, serving as a warning that the tilt may be lost more easily if the AP20 is not moved.

2.15 New Pole extension feature for AP20

iCON now supports the use of a new pole extension for the AP20 poles with extensions of 1m and 2m and these values are adjusted according to the selected unit system. This new feature allows for more flexibility when measuring points in environments such as manholes, where a longer pole may be necessary. The

Autoheight feature can still be used with the extension attached, as long as it is properly set in the iCON software.

To use the new pole extension feature with iCON and AP20, simply attach a compatible pole extension (1m or 2m) to the AP20 pole, then navigate to the "pole extension" option within the AP20 settings in the iCON software (**Figure 7**), set the extension length (**Figure 8**), save the changes, and start measuring points as usual while utilizing the Autoheight feature as needed and keeping in mind that the pole has been extended by the chosen length.

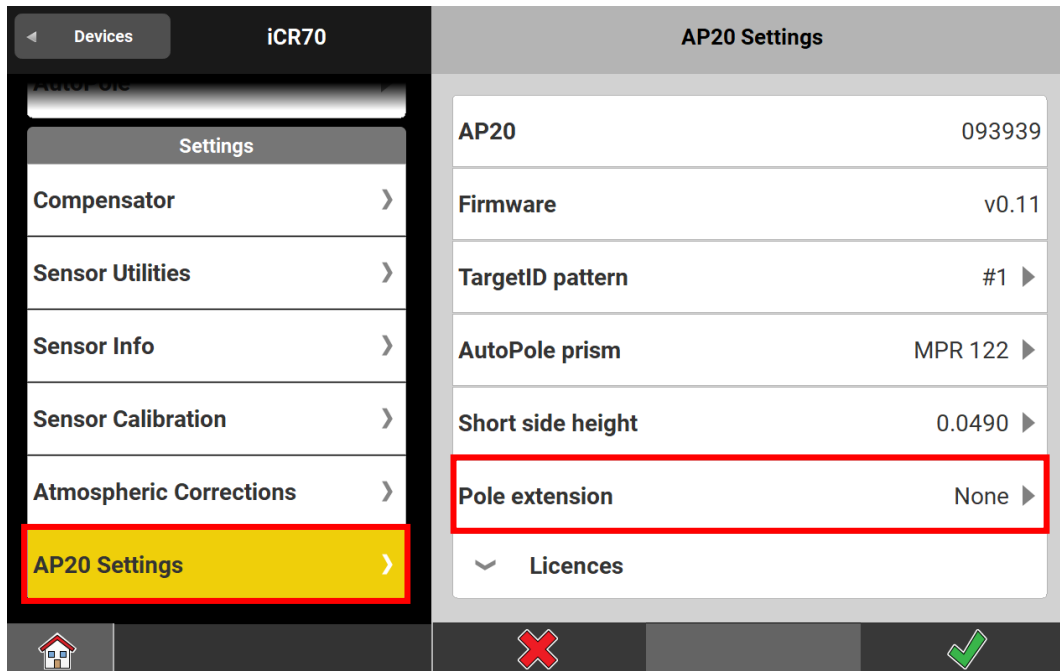


Figure 7: The Pole extension option can be found under the Device Manager section within the AP20 settings.

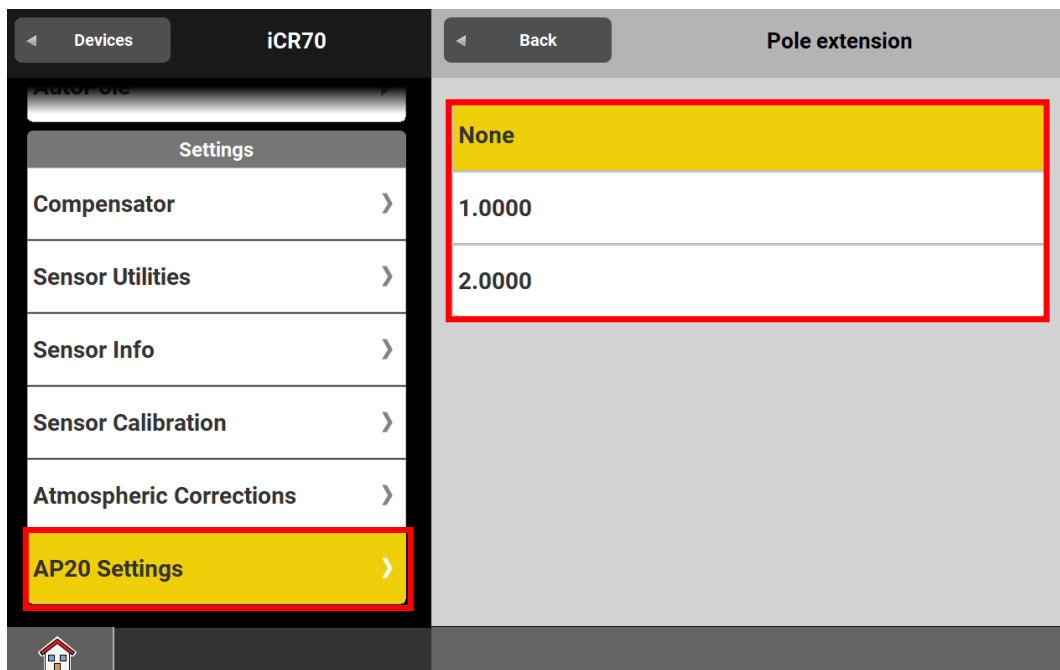


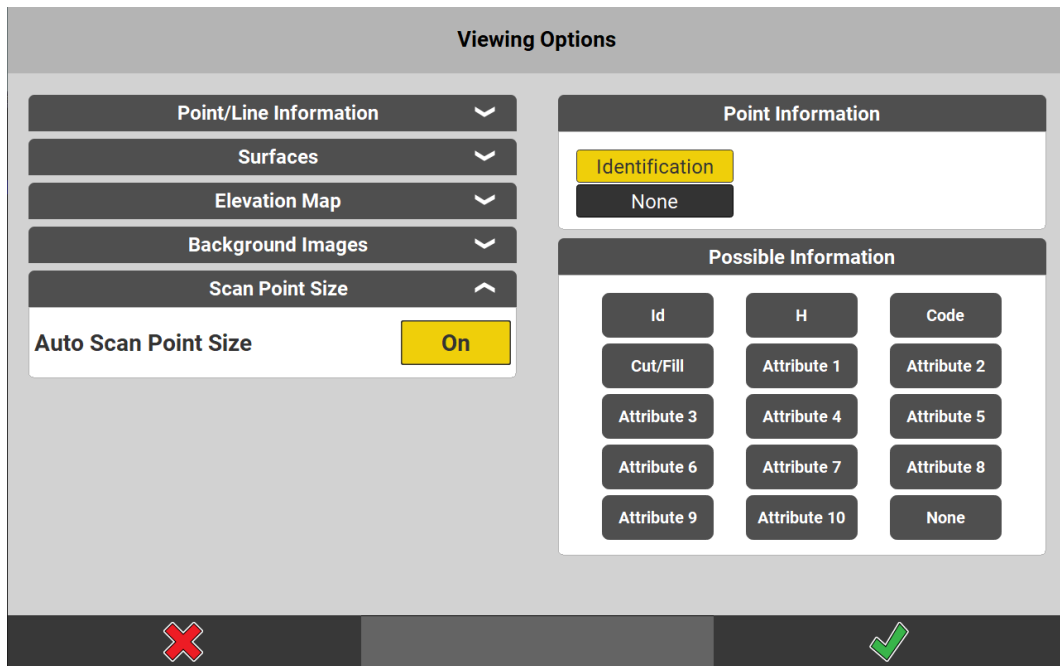
Figure 8: The pole extension option selected within the Device Manager section of the AP20 settings. The available extension lengths of 1m and 2m are listed, and these values will adjust accordingly based on the unit system that has been set within the software.

2.16 Autostaking elevation repeat possibility

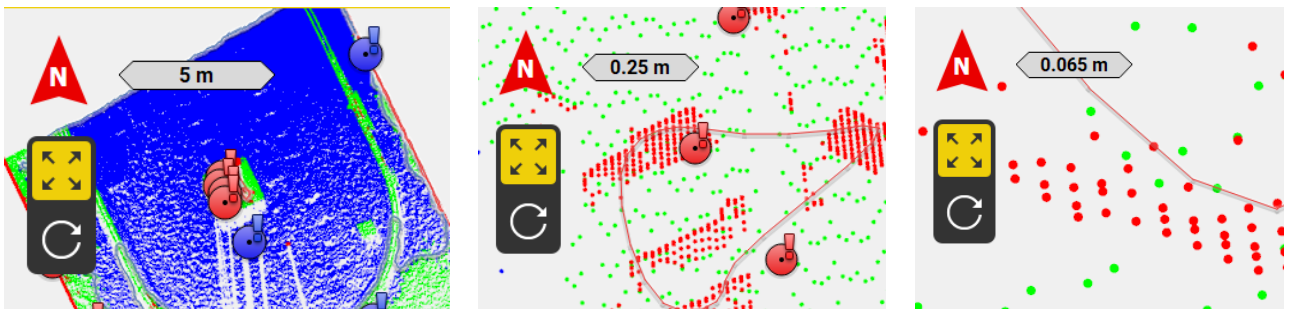
With this implementation, we improved the functionality of stake to elevation with autostake. Missing was, in one man mode the joystick was not accessible after a measurement was done in tolerance. After the autostaking in stake to elevation has reached the height position in tolerance the user can now use the joystick to aim to the next wall for the next stake to elevation without the must of storing the point.

2.17 Automatic pixel size for thin point clouds

A new setting in the viewing options allows the user to have the pixels size of a point cloud automatically increase when zooming in to the data. This is to allow the clear visualisation and selection of point clouds (in verification) when viewing close to sparse data.



The Scan point size is now set default to auto. The manual Scan point size is still available when the Auto Scan Point is set to off.



The Scan Point size is set that the points are still visible if there were only a view left, due increasing the size.

2.18 Expanded 3D Line feature in Stakeout, Layout Points, Lines and Objects

With version 7.8 onwards, 3D Line feature is expanded to be available in Layout Points, Layout Lines, and Layout Objects apps, without the need to exit any of these applications to go to the Stakeout app. This feature is in response to a request from the market, which requires the ability to check the position of the line on site at specific chainages along the 3D line.

3D Line calculation is enabled for Layout Points and calculated in case there is a reference line and when a point is selected for laying out in the layout points app (**Figure 9**). The extension for calculating the 3D line value while having the reference line and staking a point is also now the case for the Stakeout app.

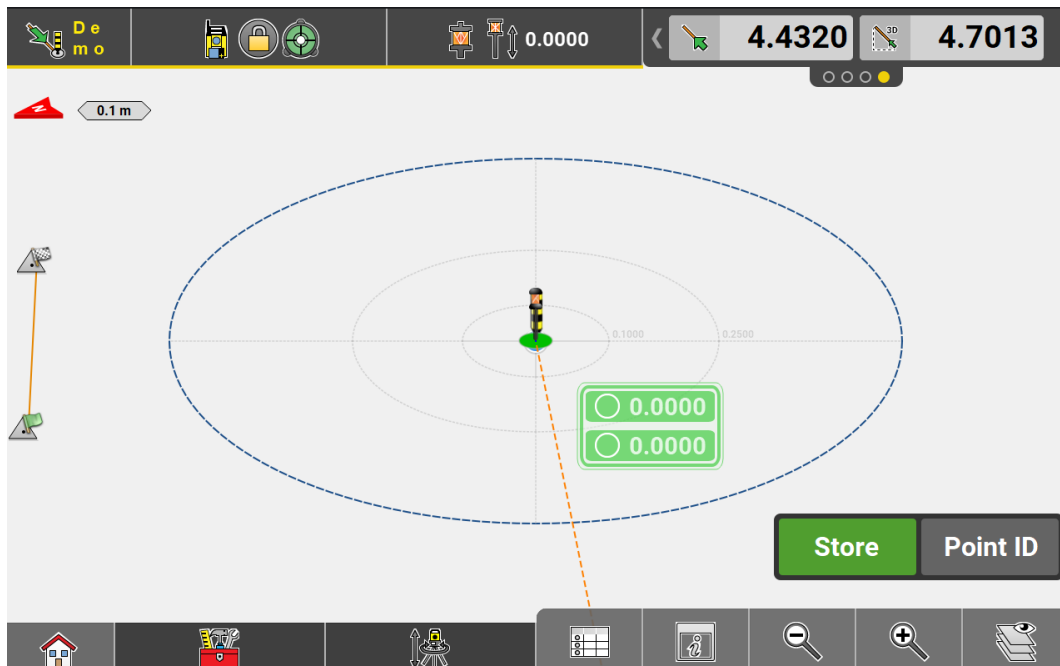


Figure 9: Displaying 3D Line Info in the info panel when there is a reference line in the layout points app

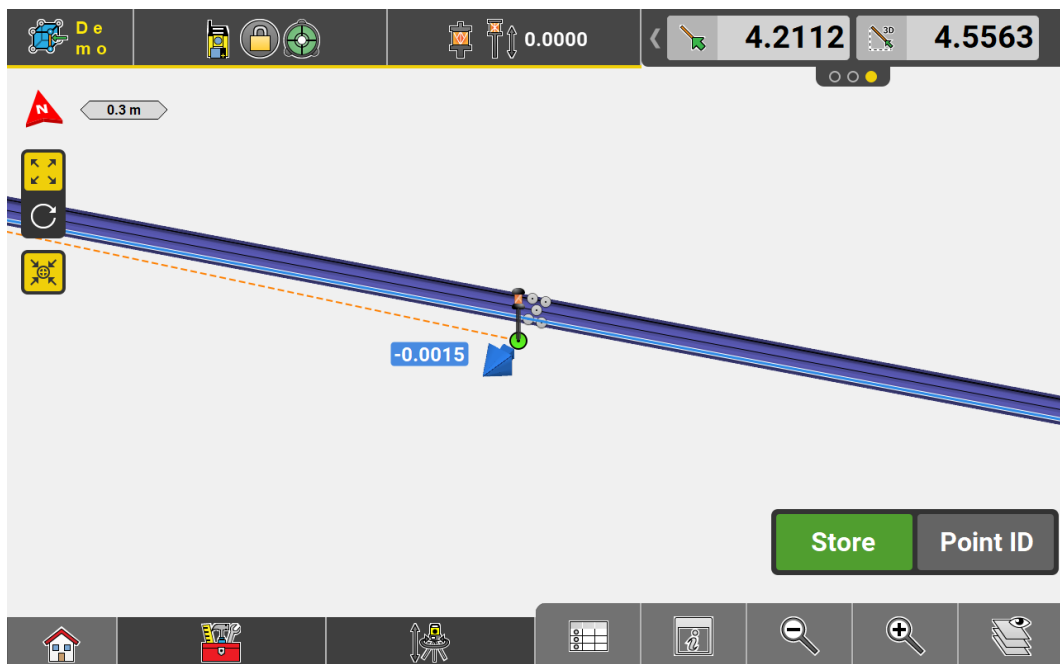


Figure 10: Displaying 3D Line Info in the info panel when there is a line selected from an IFC object in the layout objects app

The 3D Line Value is now also by default included in a stakeout report (**Figure 11**). To exclude it, uncheck the corresponding box in the stakeout information section of the report.

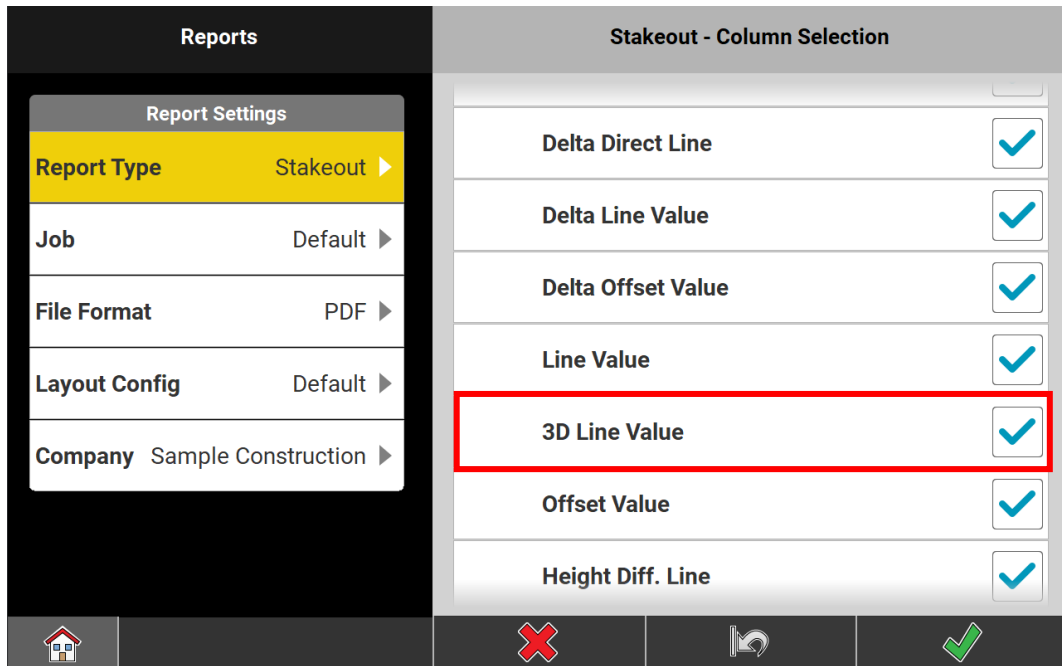


Figure 11: Displaying 3D Line Value checkbox in the reports

After configuring a block including the 3D Line Value, users can also easily view its corresponding value (Figure 12).

The screenshot shows the 'Point List' table with the following data:

<	Point ID	Line Value	3D Line Value	Offset Value	>
⦿	...ildingElementProxy_Point_4				🔑
⦿	...ildingElementProxy_Point_5				🔑
⦿	...ildingElementProxy_Point_6				🔑
🚧	...ildingElementProxy_Point_7				🔑
🟢	...ingElementProxy_Point_7_2	4.4320	4.7013	0.0000	🔑

At the bottom, there are navigation icons: a red toolbox icon, a green circular arrow icon, and a grey bar.

Figure 12: Displaying 3D Line Value in the point list.

2.19 iCON Site Excavator Features

The new version 7.8 introduces new functionality and improvements to the iCON site Excavator solution.

iCON site Excavator v7.8 is not compatible with Smart Junction Box (SJB21) v4.1.3 or older.

Prior to installation of iCON field v7.8, the Smart Junction Box must run on v4.2.0.

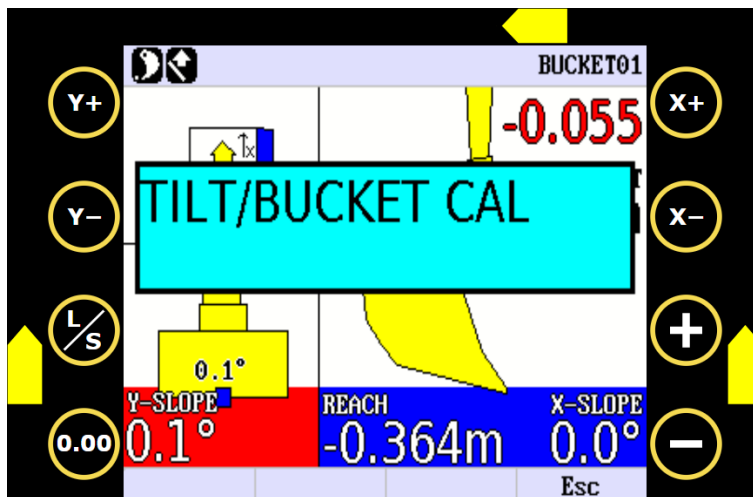
Please contact the machine installer or the local selling unit for the upgrade of the Smart Junction Box.

After upgrading the Smart Junction Box (SJB21) to v4.2.0, it might be required to recalibrate the swing boom wire sensor if used. More information can be found in the excavator machine calibration reference manual (CRM 953834).

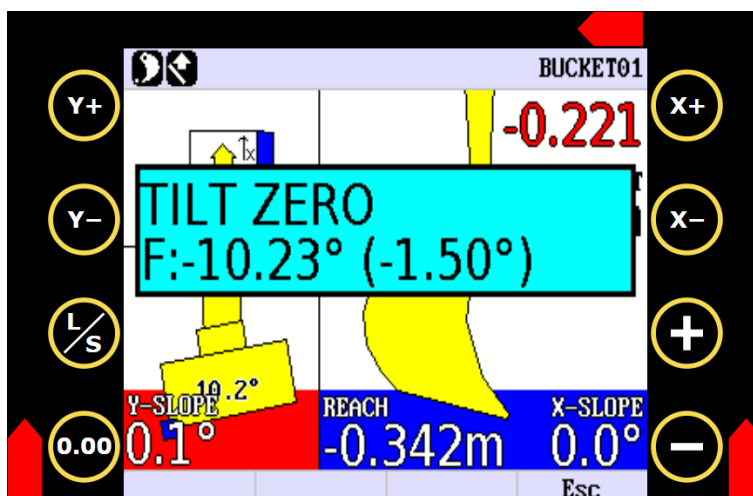
In addition, it is required to recalibrate the tilt zero angle of the exiting buckets if a tilt sensor is used.

This can be done either from the SJB21 user interface or in iCON site excavator app within the bucket calibration function.

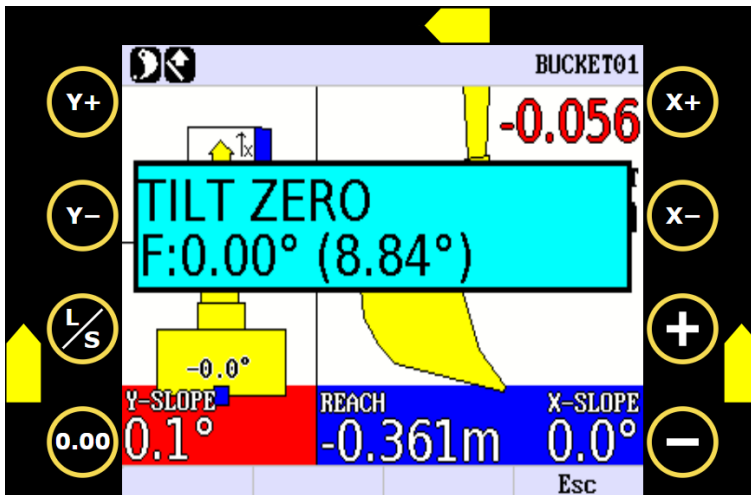
From the SJB21 user interface:



Access Tilt/Bucket calibration

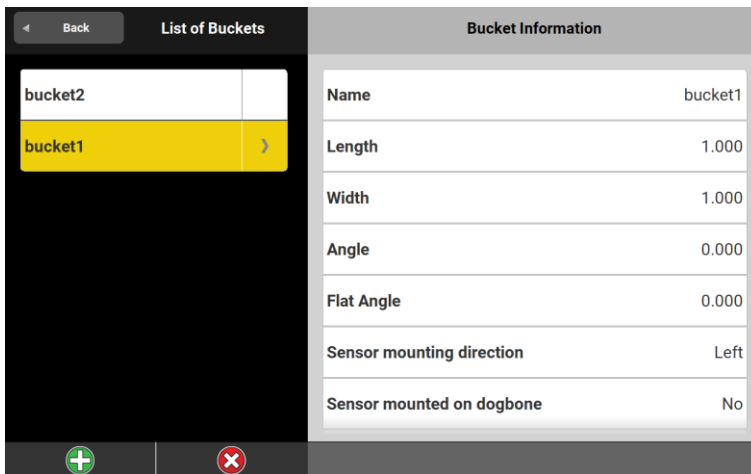


Proceed to the step where the tilt zero angle can be calibrated.

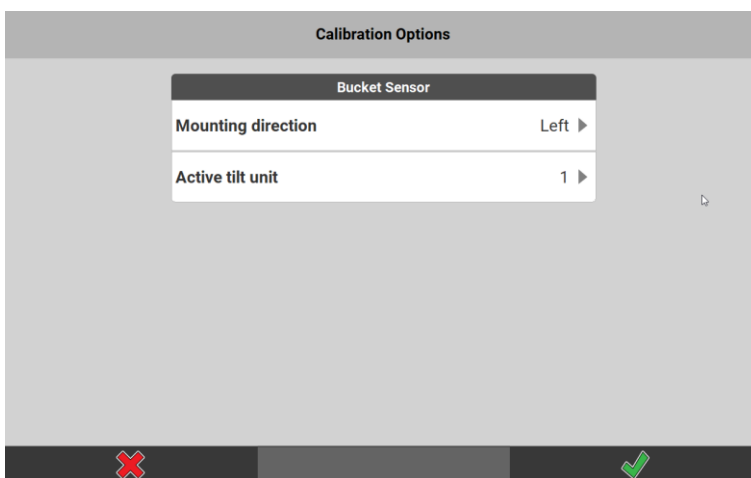


Calibrate the Tilt zero angle by pressing the 0.00 button

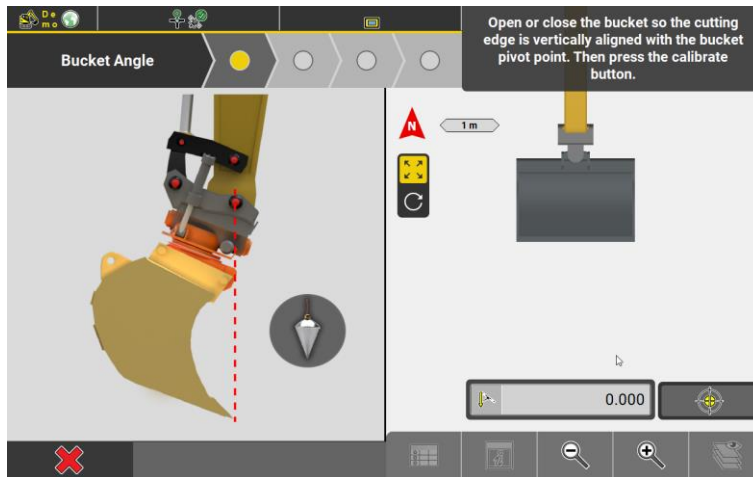
From the iCON site excavator app:



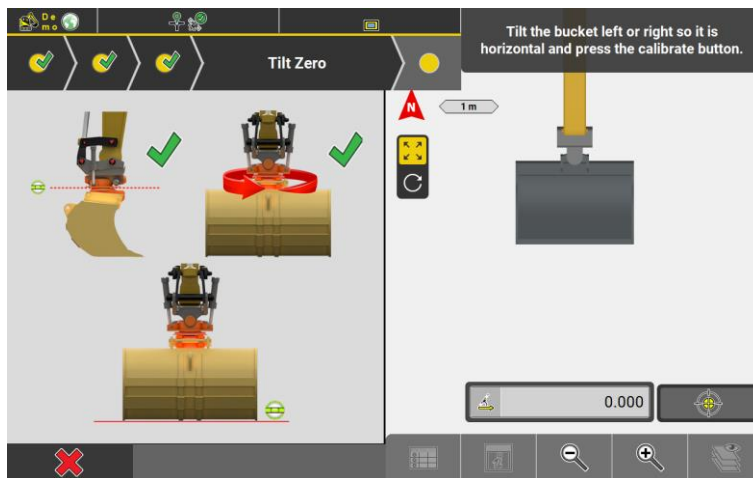
Select the bucket and press the right arrow



Ensure the correct settings are applied and confirm.



Proceed to the 4th wizard step.



In the 4th wizard step, the tilt zero angle can be calibrated.

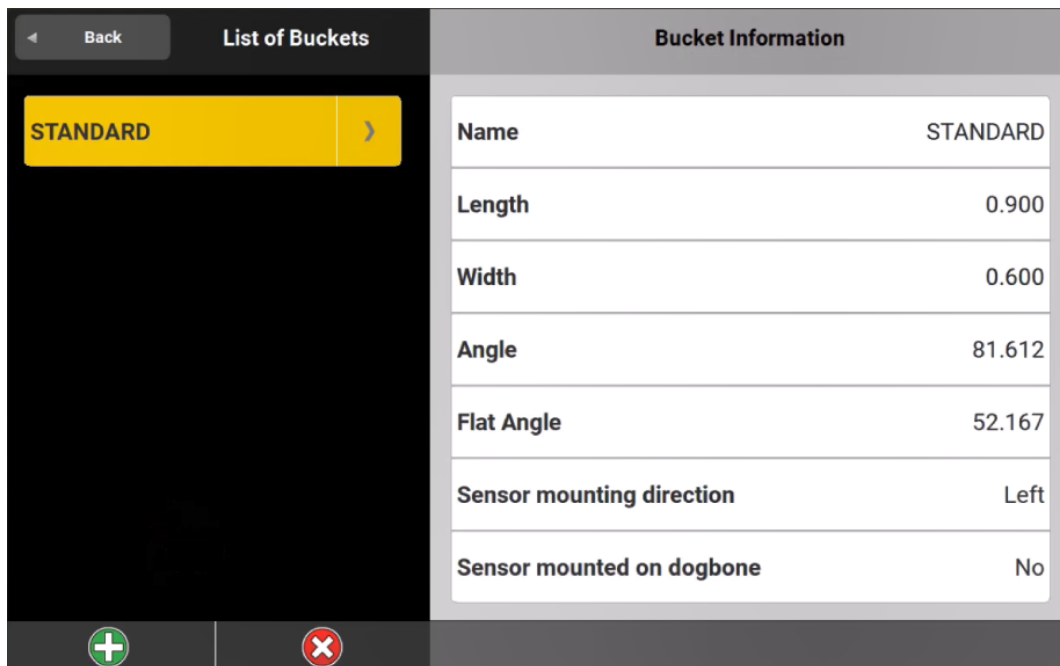
As soon as the tilt unit is levelled and rotation angle is zero (if used), the tilt zero angle can be calibrated by levelling the cutting edge and pressing the  button.

2.19.1 Bucket calibration

In previous version, it was possible to change the active bucket within iCON site excavator application but the creation and calibration of the bucket was possible via the Smart Junction Box user interface.

In v7.8 it is now possible to:

- create new
- delete
- recalibrate and
- select buckets within the iCON site Excavator application.



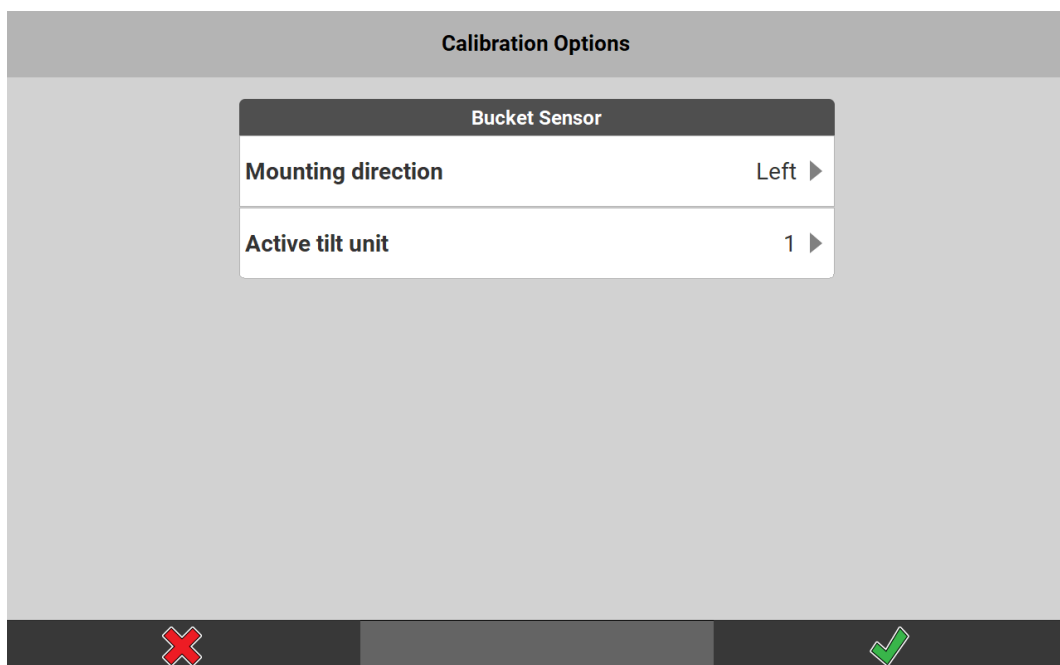
Screen shows the menu to manage the lists of buckets

To create a new bucket press

To delete a bucket press . Note: the active bucket cannot be deleted.

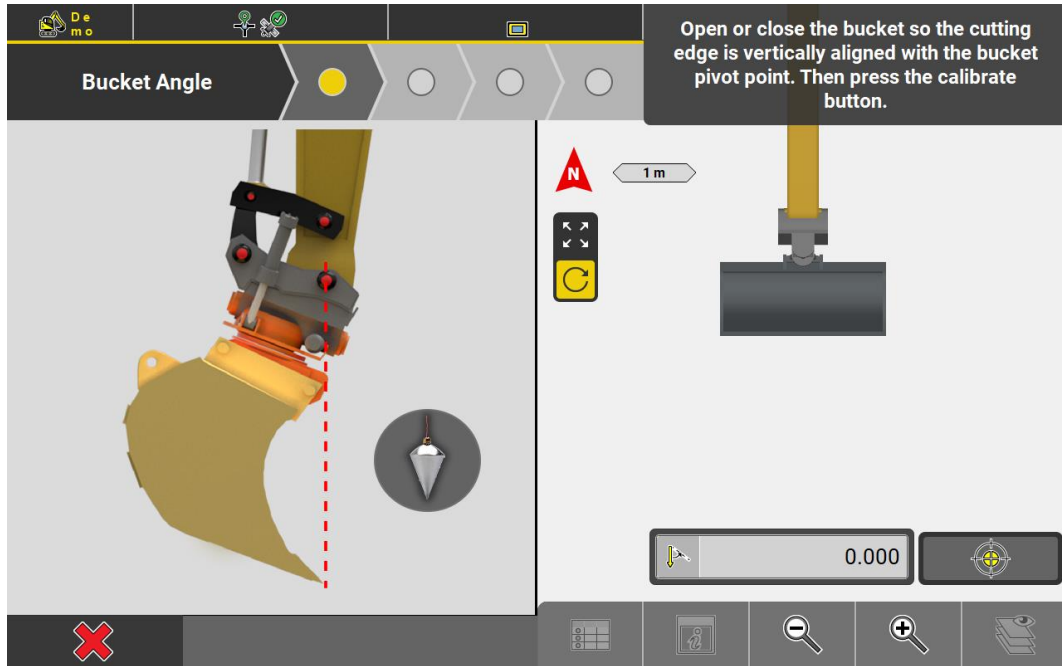
To recalibrate a bucket, select it and press

To change a bucket, select it and press to Back button located on top left corner.




When the bucket is attached to a Tilt/Tilt Rotator unit, the active unit needs to be selected.

Remark: The calibration of the tilt unit must be done by the installer within the Smart Junction Box user interface, typically after the excavator calibration.

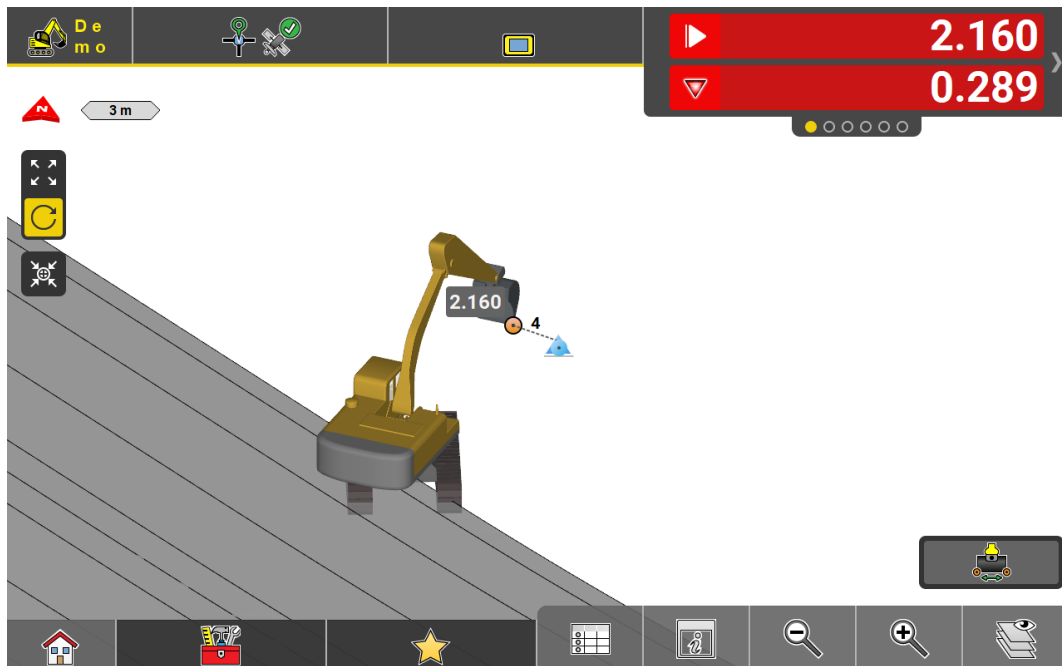


The bucket calibration is done in a step-by-step wizard driven workflow.

Pressing  the relevant angle gets calibrated and the value field shows the mounting offset angle of the sensor.

2.19.2 Guidance to point

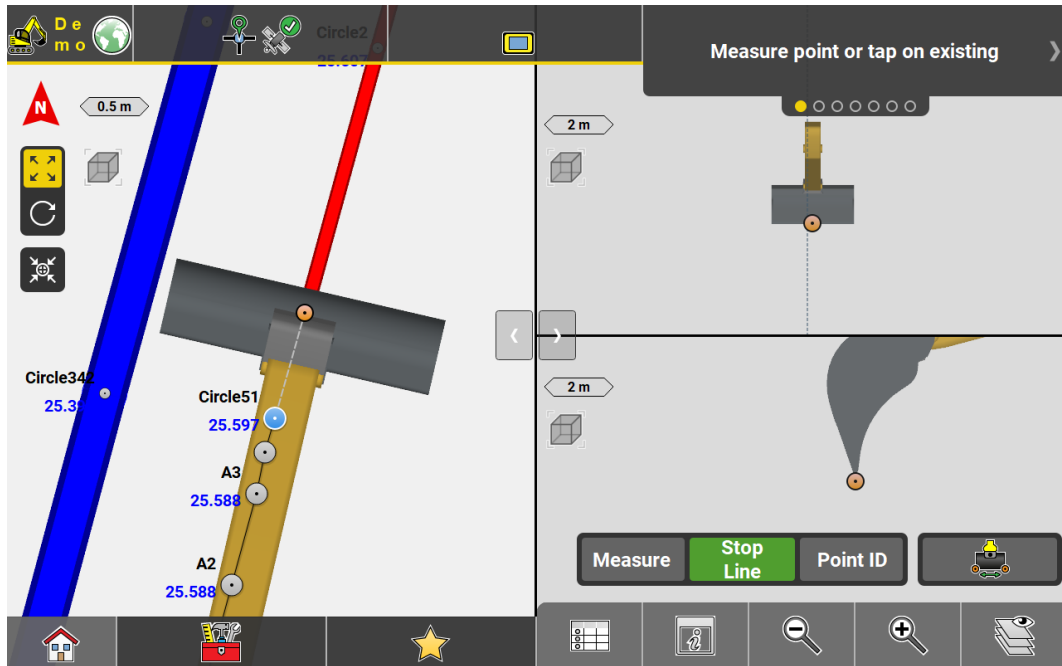
Points selection has been added to be able to place the bucket on a known point for checking or starting the excavation. This was not possible in previous version.



Select a point and get guided on it.

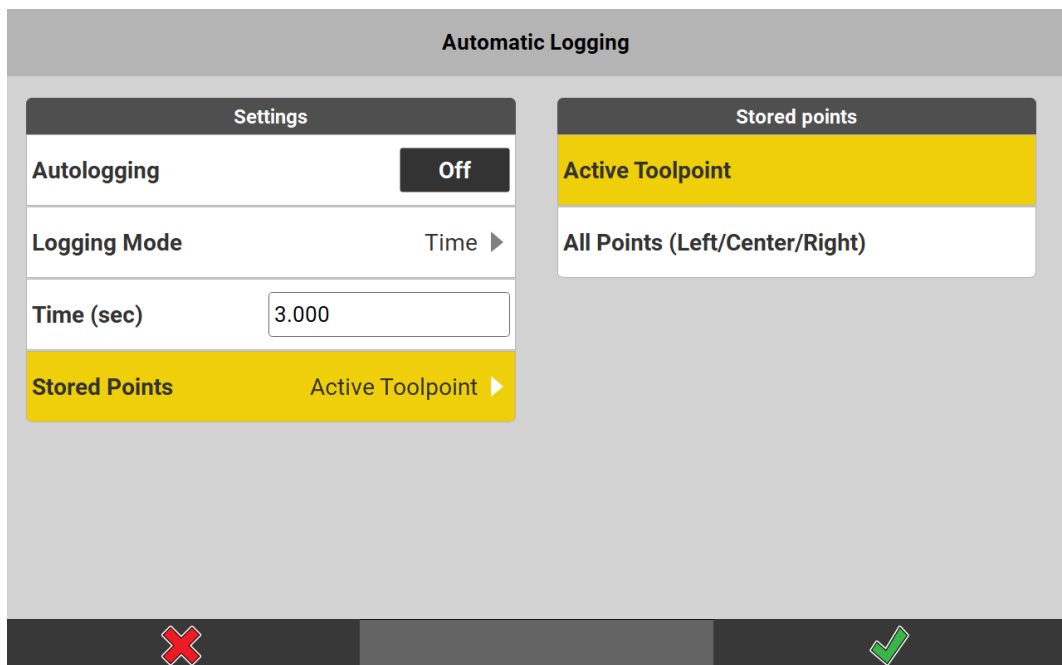
2.19.3 Line creation

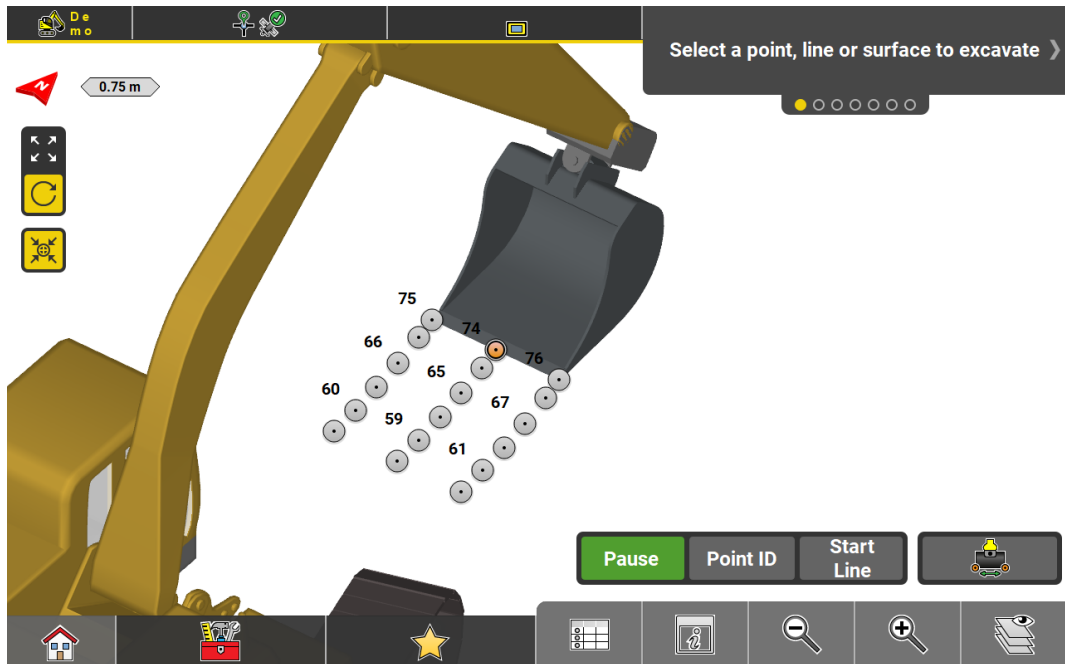
Measure bar is enhanced with a Start/Stop line functionality allowing the operator to create lines by measuring points with the bucket or tapping on existing points. It does no longer require to switch to another application (e.g. Draw) to create lines as this can be done directly within iCON site excavator app.



2.19.4 Automatic point logging

Automatic point logging functionality has been introduced in v7.8. The operator can now log points automatically using the active tool point or all 3 bucket points (left edge, center and right edge) at a defined distance or time interval.

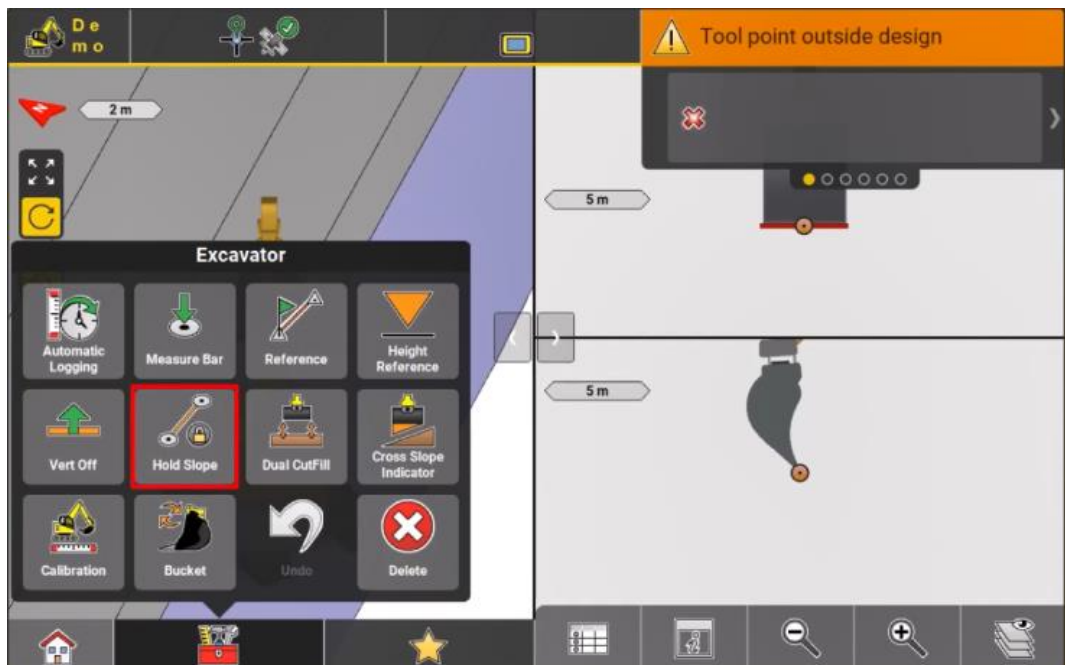




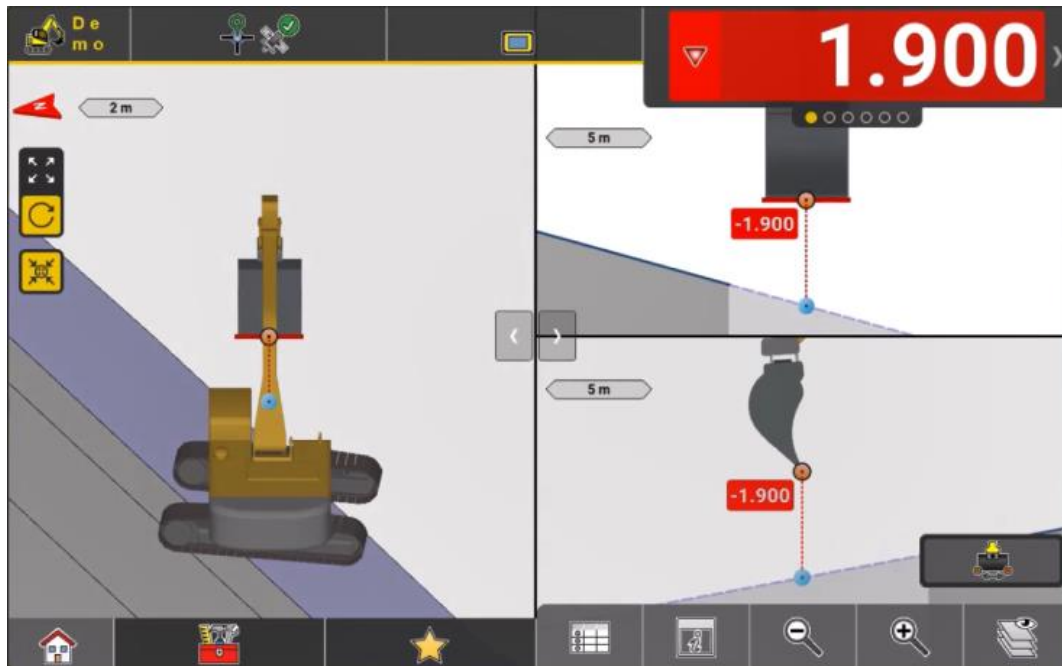
Remark: Pause automatic logging before lifting the bucket in the air.

2.19.5 Hold slope for road models

With v7.8 a cross slope of a road model can be selected and extended. This functionality allows to work outside the road design edges.



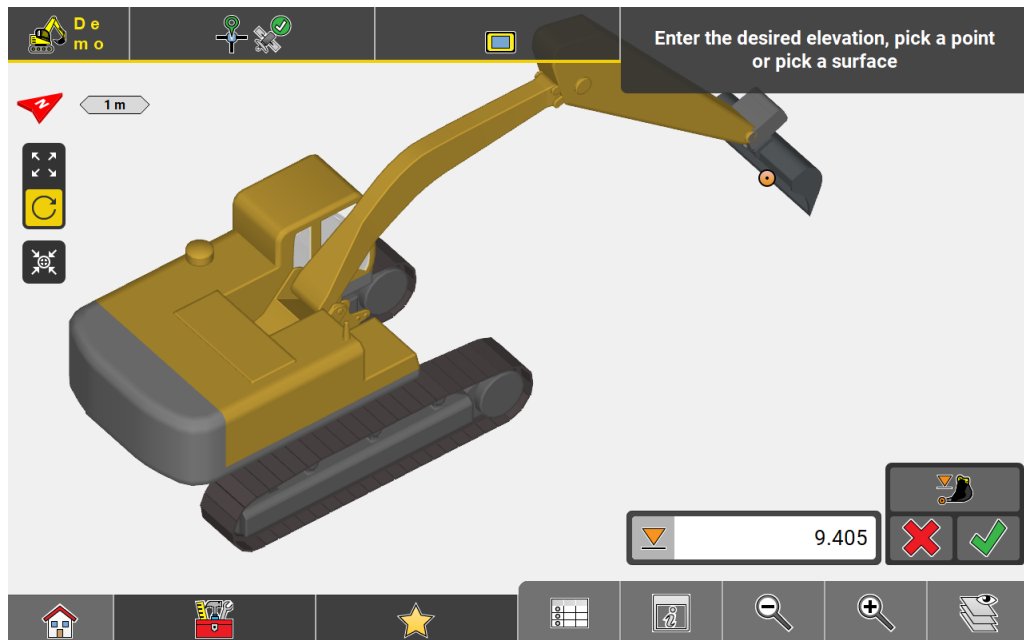
Select the cross slope and activate the Hold slope button.



The slope is extended and operator can work outside the road design edges.

2.19.6 Height reference from tool point

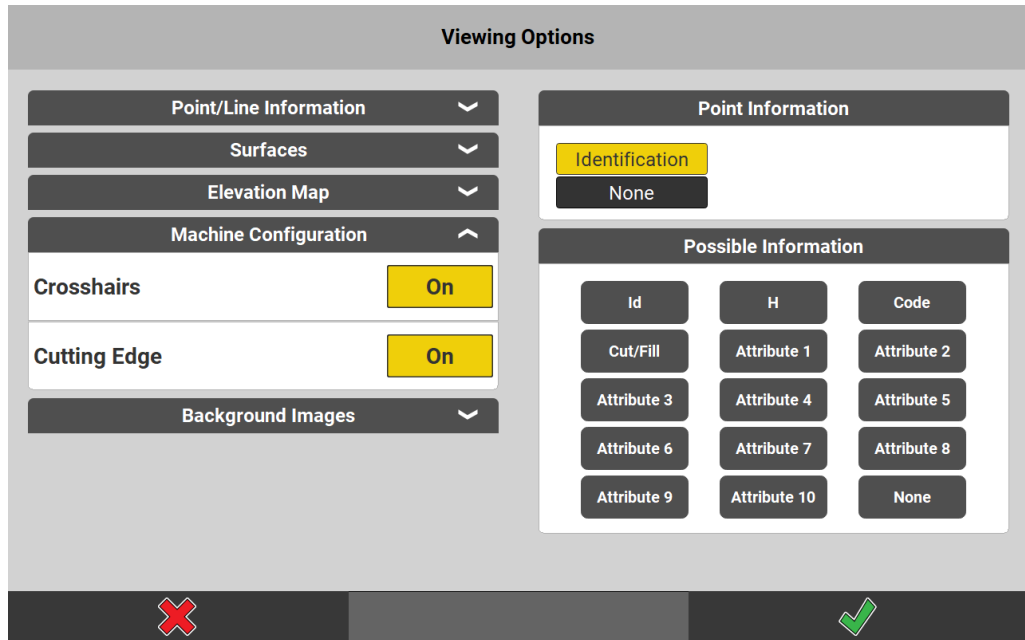
The current height of the bucket toolpoint can be set as a height reference with one button press. The workflow to make a surface flat becomes easier now as it is no longer required to store and select the point or type in the height value.



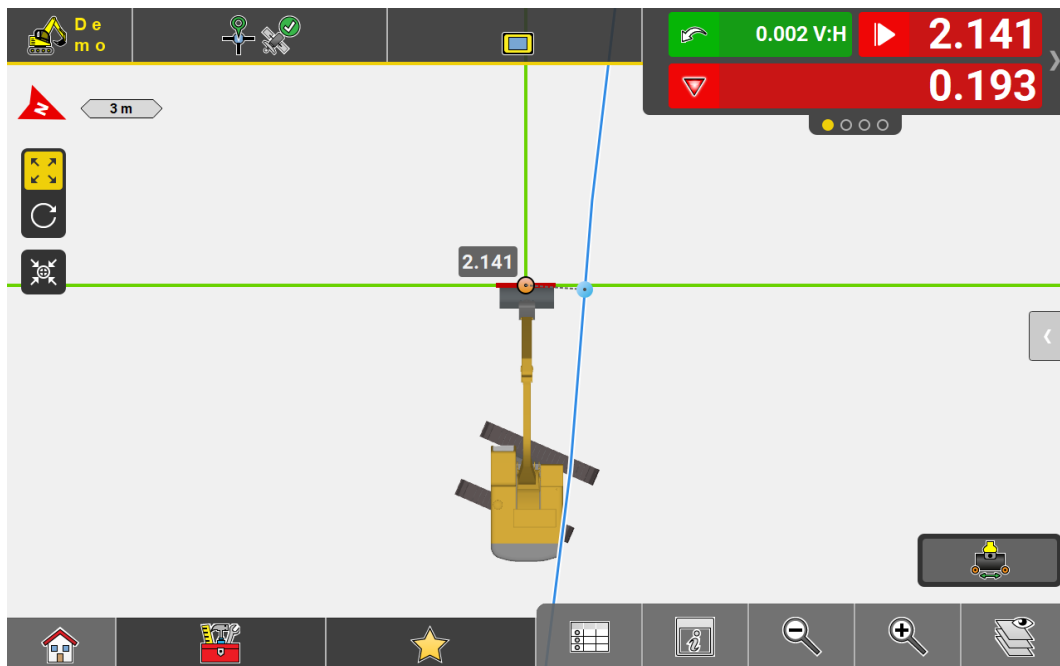
Press the  button to apply the height of the toolpoint as a height reference.

2.19.7 Crosshairs and cutting edge of the bucket

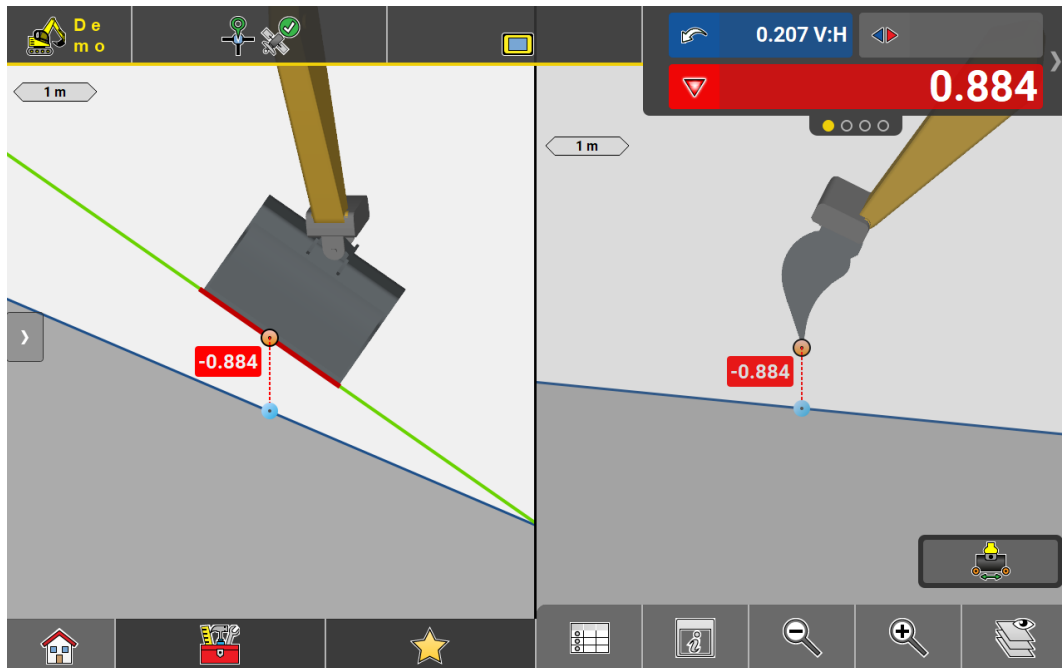
Visualisation of the bucket has been enhanced with the introduction of crosshairs and cutting edge indicators. Bucket visibility is improved with the cutting edge line. In addition, it becomes now easier to use the crosshairs to align the bucket with lines and surfaces.



Crosshairs and Cutting Edge can be activated independently.



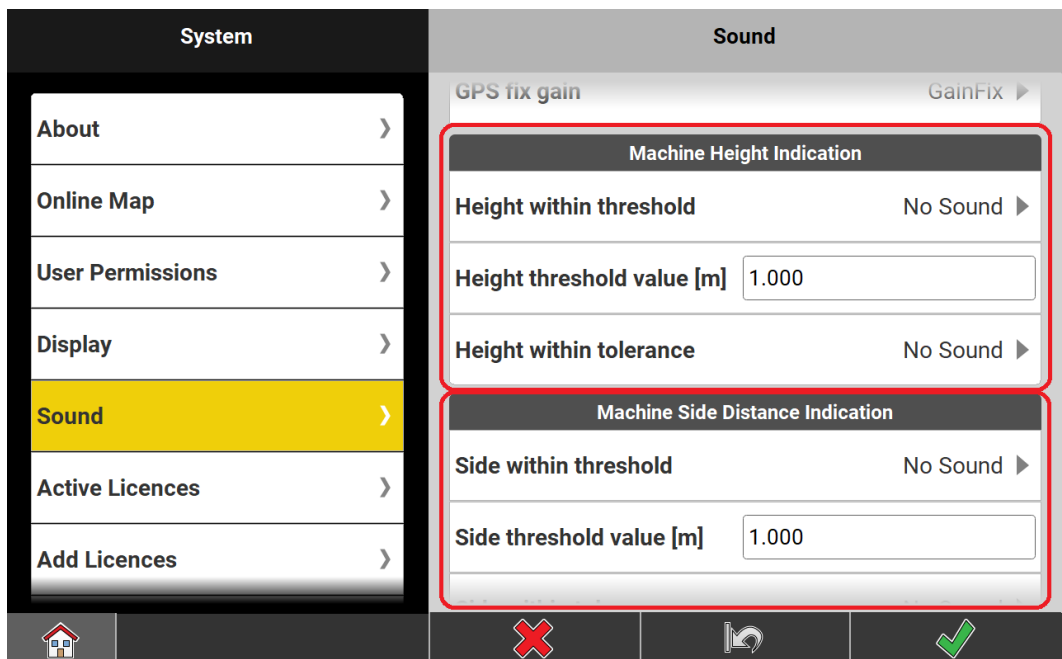
Crosshairs helps to align the bucket parallel or perpendicular to a design line.



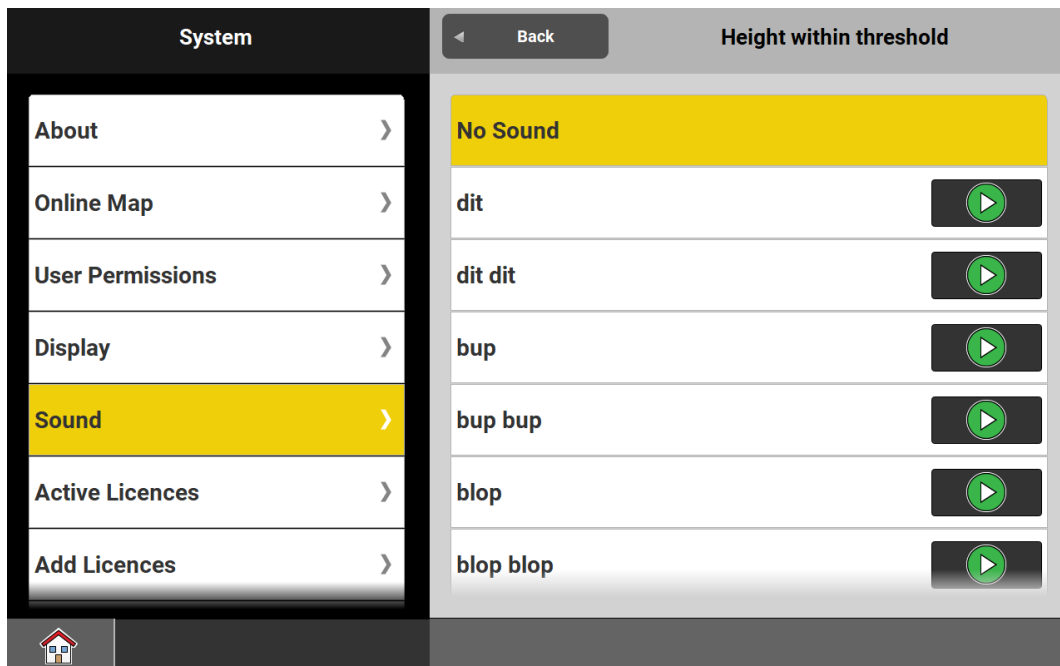
Cutting Edge and Crosshair helps to align the bucket with the slope.

2.19.8 Sound notification

Sound notification within iCON site excavator has been introduced in this version. Different sounds can be configured for the height and/or the side distance.



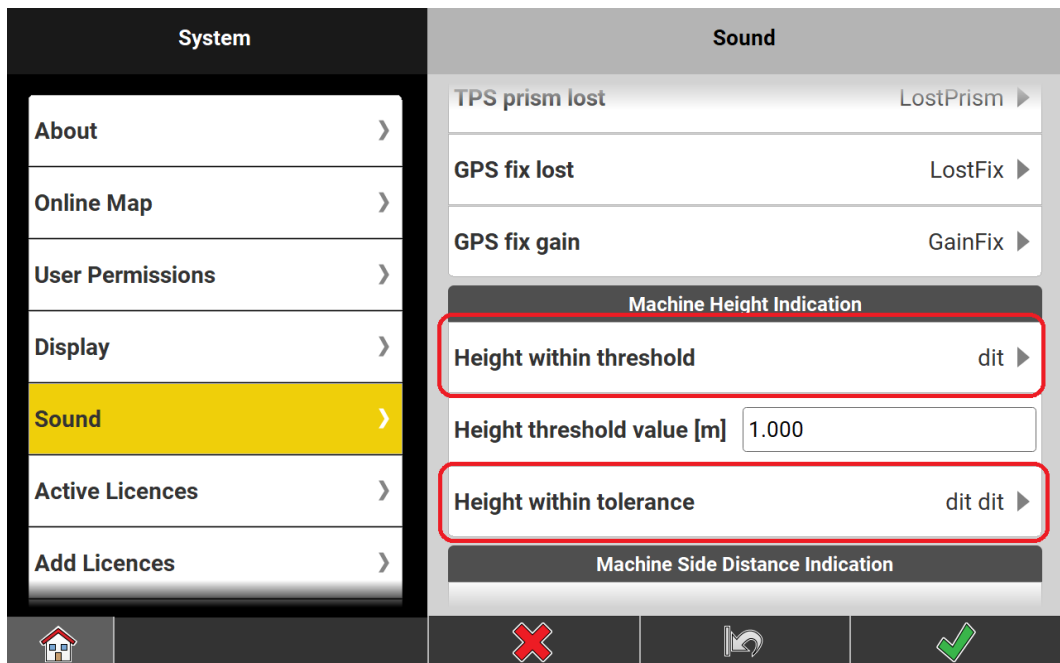
The configurable sound can be triggered when e.g the Cut&Fill (height indication) is within the defined tolerance. To avoid over digging, a different sound can be set together with the threshold value to alert the user when the bucket gets closer to the desired height.



A list of different sound files is available. To listen the sound, press the play button.

It is possible to adjust the volume of the sound from windows.

A recommended configuration would be as following:



Configure the “dit” sound when the bucket is within the height threshold and the “dit dit” when the bucket is within the height tolerance. In this example the software will play the “dit” sound when the bucket reaches 1m Cut or Fill whereas, the “dit dit” sound will be played when the bucket reaches the green tolerance band.

2.19.9 Dual Cut & Fill view

Combining the Cut & Fill View together with the Dual Cut & Fill tool from the toolbox results to a screen showing the Cut & Fill values of the Left and Right bucket edges. This configuration helps the operator to focus more on the excavation work and easier check the status of the excavation.



Full screen view showing Left and Right bucket edges Cut/Fill information.

2.19.10 Additional smaller improvements

iCON site excavator application include also the following improvements:

- CQ quality values (1D, 2D, 3D) for the primary GNSS antenna are now added in the infobar.
- Current bucket tilt angle is added in the infobar.
- A warning message is now shown when the connection to the tilt sensor is broken.
- Fix of bucket visualization when the bucket is tilted

3. iCON Field software improvements and bug fixes

3.1 2D area calculation in volume calculation

In iCON field v7.8, volume calculations and report include the 2D area information of the surface.

3.2 Number of points restriction removed when editing large surfaces

In iCON field v7.6, it was not possible to edit large surfaces (>400.000 points). In version 7.8 this restriction has been removed.

3.3 Update of Czech Republic coordinate systems

The CZ_JT18 North-East and South-West coordinate systems are added in the installer.

3.4 Online map not available on CC200

In iCON field v7.6, the online Bing map function was not available for CC200 controller. This is now fixed in v7.8.

3.5 CCD17 not working with v7.6

In iCON field v7.6, it was not possible to connect to a TPS using the CCD17 LRBT stick. This is now fixed in v7.8.

3.6 Sending points to ConX using TPS failure

In some cases, although the synching/sending points option was active, the points measured/stored with TPS were not sent to the ConX project. This is now fixed in v7.8.

3.7 Sets of angles with user defined prism

In some cases, when measuring the sets of angles using a user defined prism an wrong prism constant was applied to the measurement. This is now fixed in v7.8.

3.8 AP20 connection improvements

In this version, we have implemented improvements to resolve the reported AP20 connection issues from the market.

3.9 Dxf block naming on the map

For some dxf files the block name and insertion point were not shown on the map. This is now fixed in v7.8.

3.10 Dxf block attribute as a name

In v7.8 the block attribute becomes the insertion point ID.

4. General information & recommendations

4.1 How to update manuals on the CC80/ CC200

On the Start screen and Windows desktop of the CC80, there are links to the iCON site and iCON build PDF manuals. These manuals are NOT updated as part of the installation of the new version.

If you wish to have the latest version of the manuals available on your CC80/CC200, follow these steps:

- Download the manual(s) from myWorld / myDownloads / iCON / iCON Field / Manuals / ... download the "iCON build How To Guide" and/or "iCON site How to Guide" in the language of the manuals which are currently installed on your CC80. Ensure to keep the naming of the downloaded PDF file(s).
- Copy the downloaded PDF file(s) to your CC80/CC200 in the folder D:\iCON-Manuals.
- Delete the old versions of the manuals from the same folder.

- Check that the update was OK, by tapping on one of the manual icons from the Start screen or Windows desktop.

4.2 Crash reporting function

In order to improve the robustness of iCON Field even further, and to ensure good customer support, a function to report software crashes was introduced with iCON Field v2.5. This common tool to improve worldwide used software products is implemented for iCON Field controllers.

In case the software detects a malfunction, the report containing important information about the event is sent automatically to the server – if an internet connection is established or after this is established. Only information related to the malfunction is sent and NO personal customer data is collected.

4.3 Connectivity to cloud services

Due to security updates on the ConX server, the connection from iCON Field software version 4.5 or older is for technical reasons not possible anymore.

To be able to connect to the ConX server, please upgrade iCON Field software to the latest version.

4.4 Projects compatibility after upgrading from older version than v3.5 to v6.7/6.8

Direct upgrade from very old iCON Field version (e.g v3.0 or older) to versions 6.7/6.8 causes a compatibility issue to the active project.

To avoid the issue from happening, please follow the steps:

- a) When using an older version, install the intermediate v3.5
- b) Start iCON and activate each project, one after the other, so they all get updated to v3.5
- c) Exit icon and install desired version (up to v6.7/6.8). After installation all the projects work as normal.