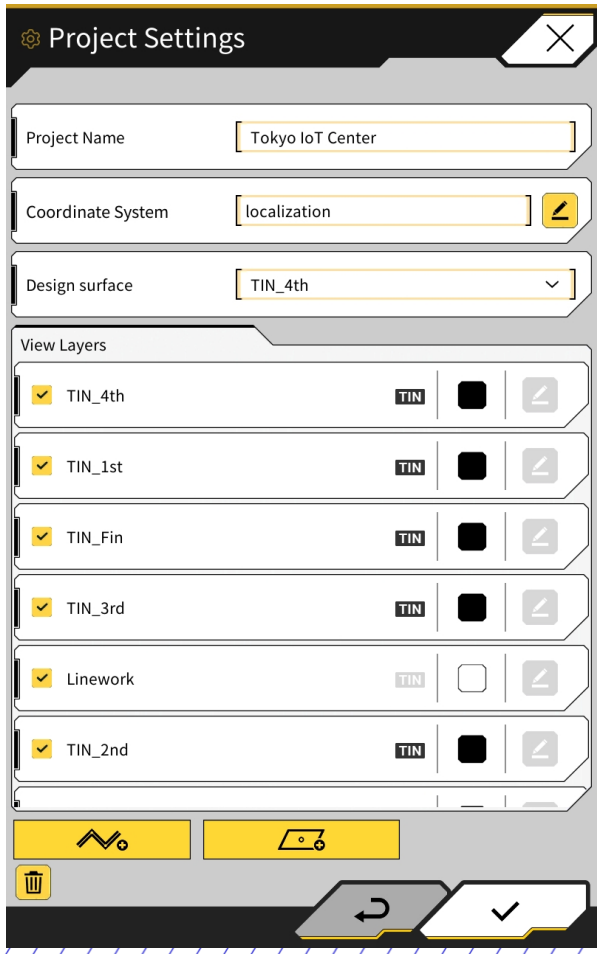
Smart Construction Pilot v1.0.04 Updates

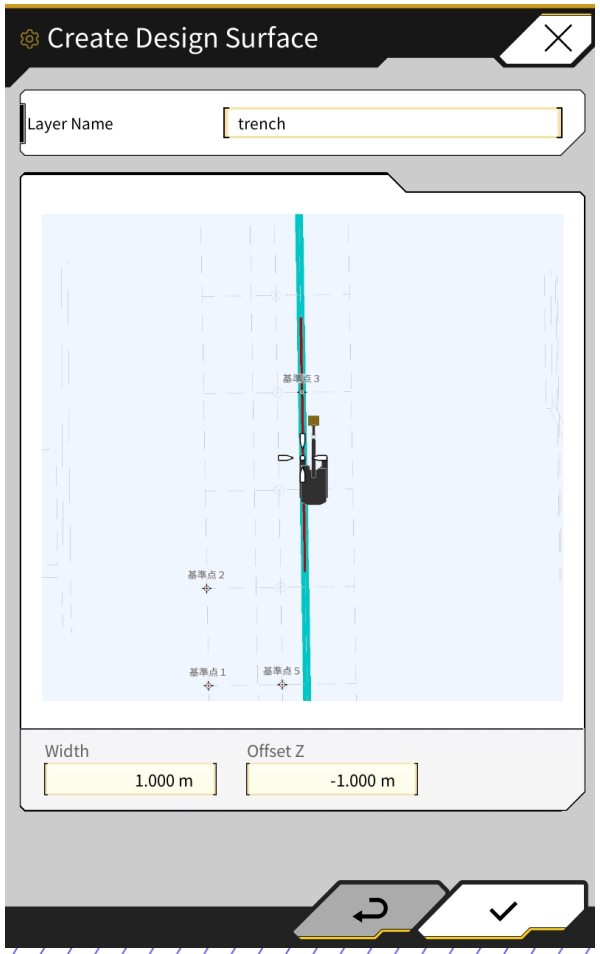
EARTHBRAIN

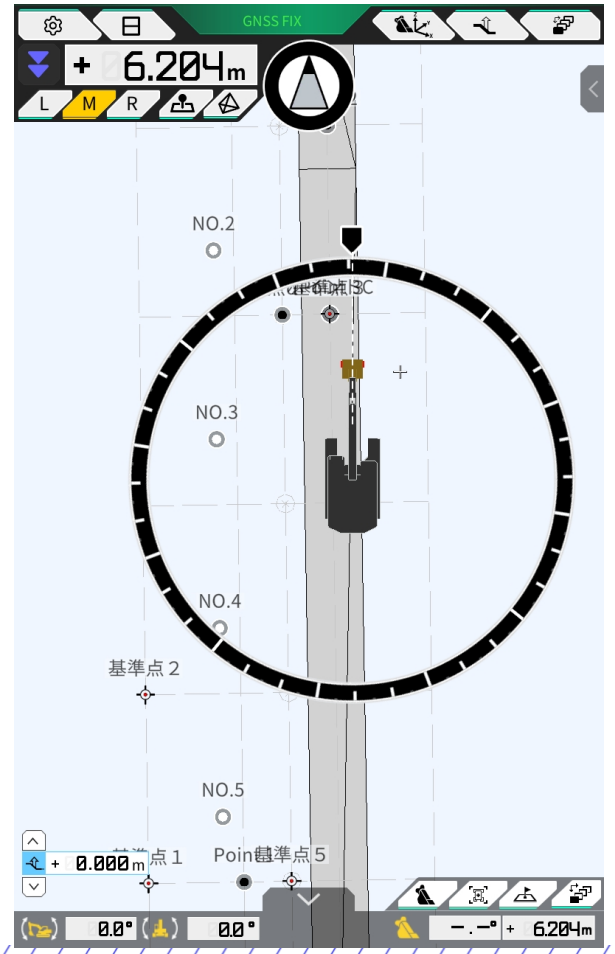
Design surface creation from linework

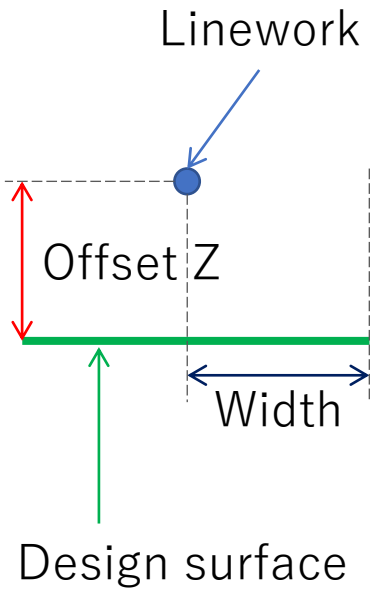
This function can create a design surface from linework.

This function can be accessed from the following button  in Project Settings.To create a design surface from linework, move the cursor over the linework to select it and enter “Width” and “Offset Z” values.







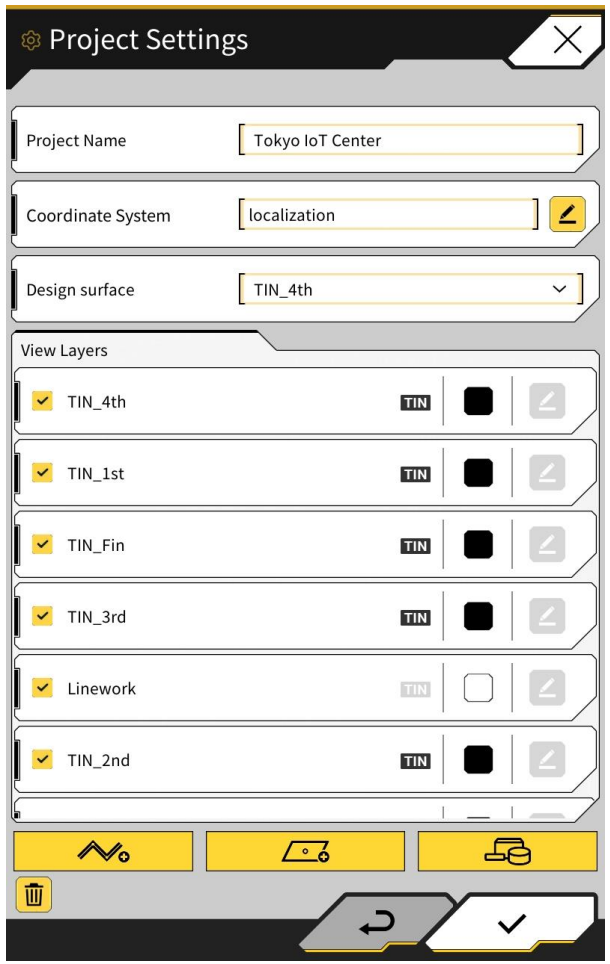


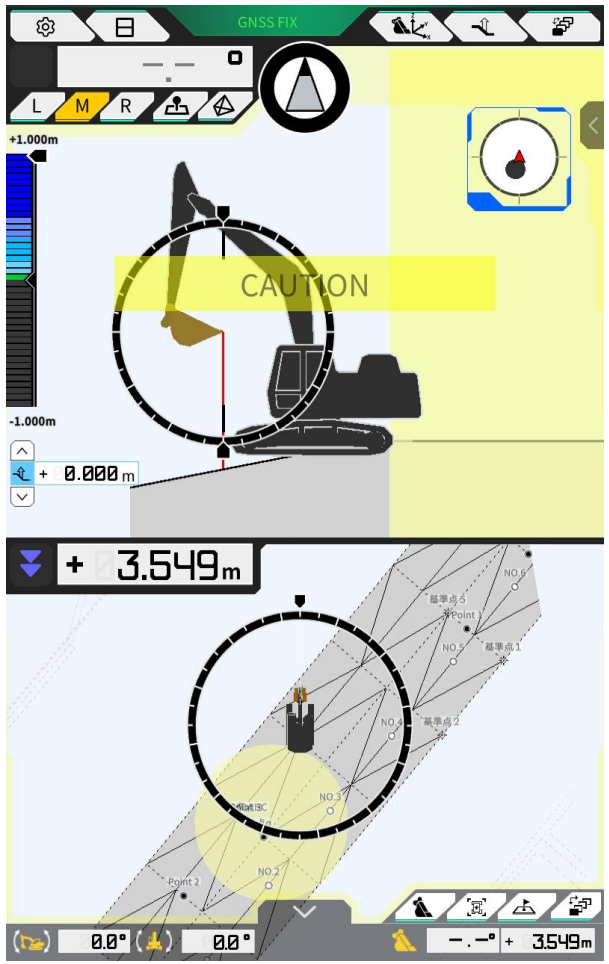
EARTHBRAIN

Geofencing

A Geofence function is now available to avoid entering restricted areas, collisions with walls, structures… Also buried objects and overhead wires can be excluded from your work zone.

A geofence can be created from the following button in Project Settings.



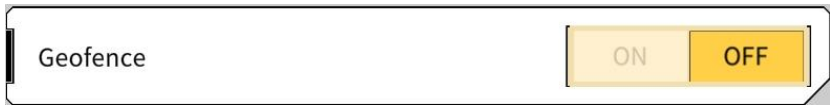


Important

The geofence contact detection/alert notification function may not function properly depending on the environment and conditions in which it is used. Do not overconfidently use the function and make sure you understand the function and conditions of use.

*Geofence is not available for 2 Piece Boom and Swing Boom at this moment

Geofence can be activated in the common settings :

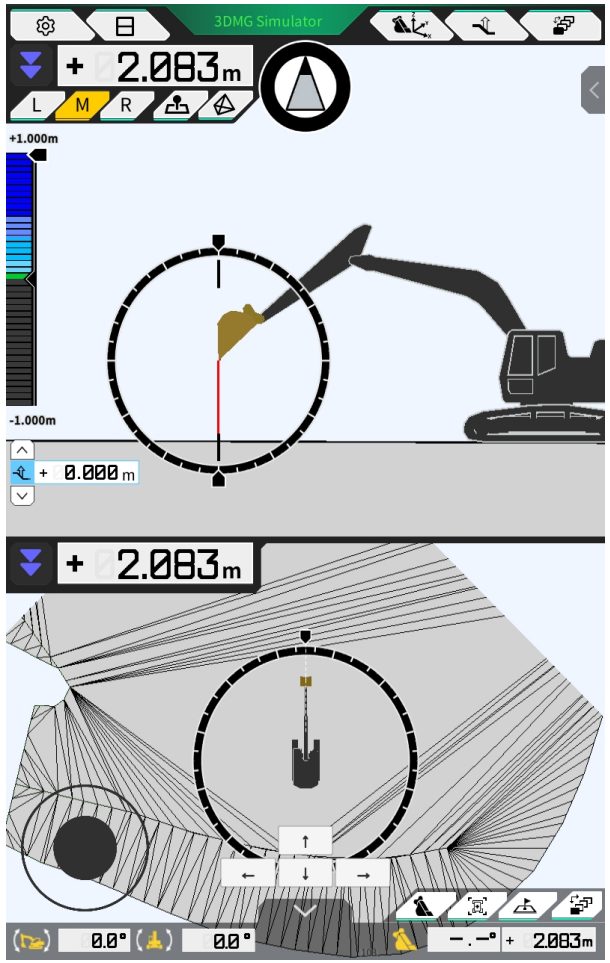


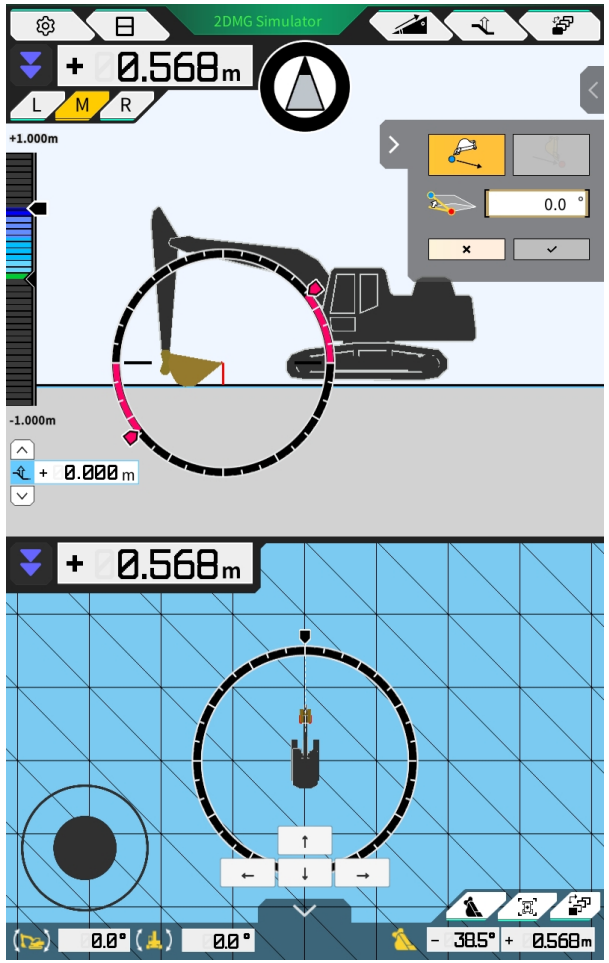
EARTHBRAIN

Simulator

A Simulator Mode is now available. Please use this function for training, demonstration, etc.

Simulator Mode is available with both 3D and 2D machine guidance.





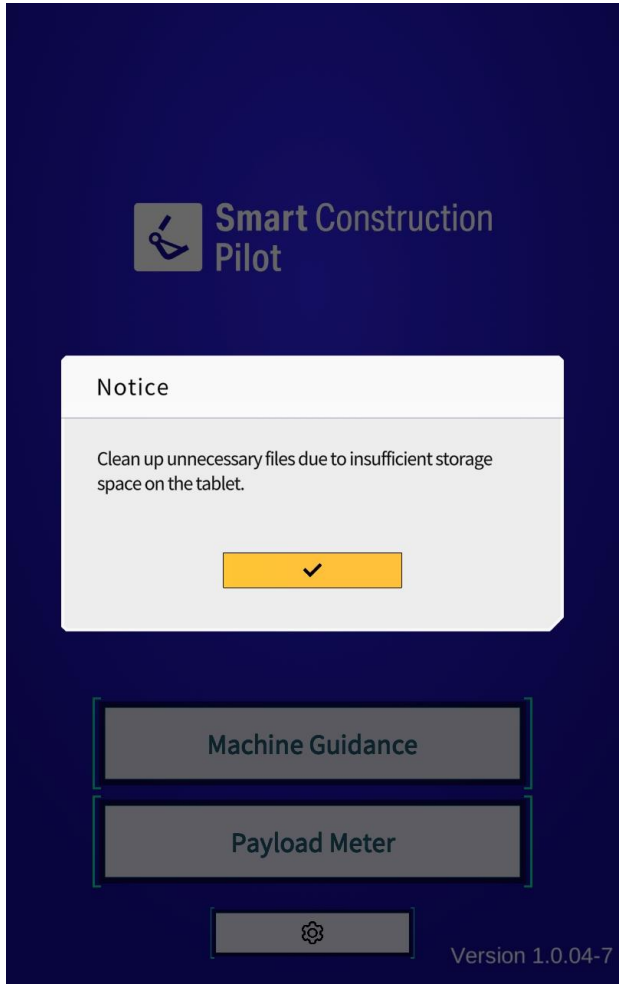
Limitations:
- Payload Meter is not available
- Geofence is not available
- Some menus are not displayed or unusable
- Three display is not available in Machine Guidance
- It is not possible to download project files, buckets, etc. from the server

Simulator Mode can be activated in the common settings :

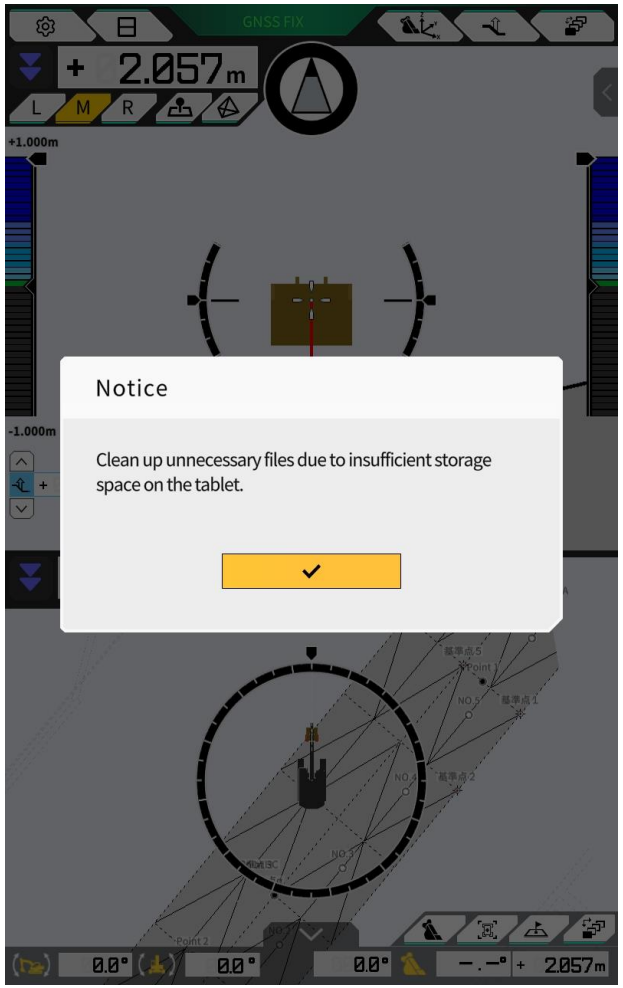
EARTHBRAIN

Storage capacity check

When the tablet's free storage space is running low, a message is displayed and unnecessary files such as cache files are deleted.

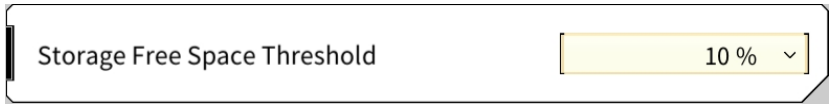


Startup screen



When application is running

This threshold can be changed in the common settings :
“Storage Free Space Threshold”



The default value is 10%

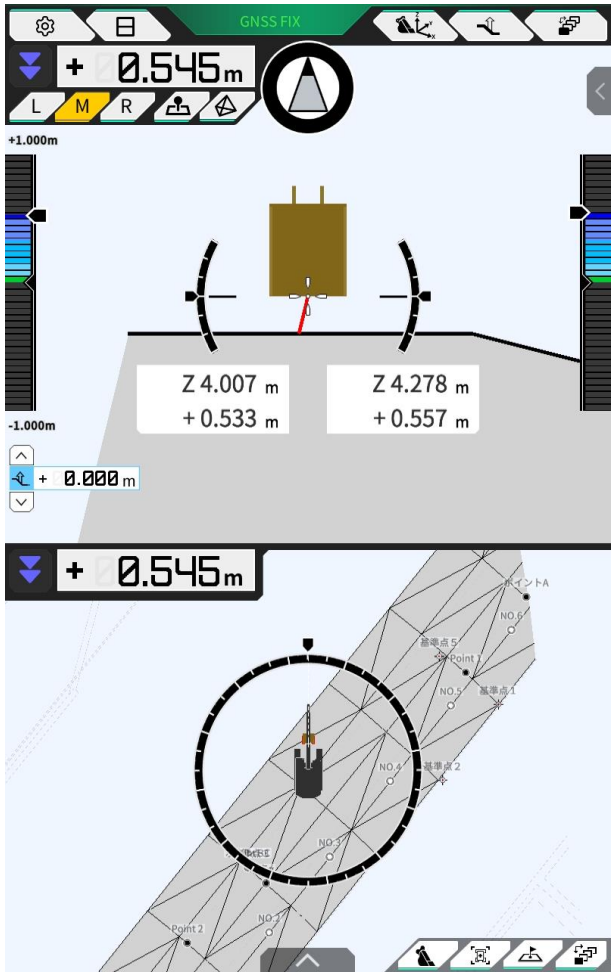
Important

The target files to be deleted are log files, etc. Data such as construction results are not deleted.

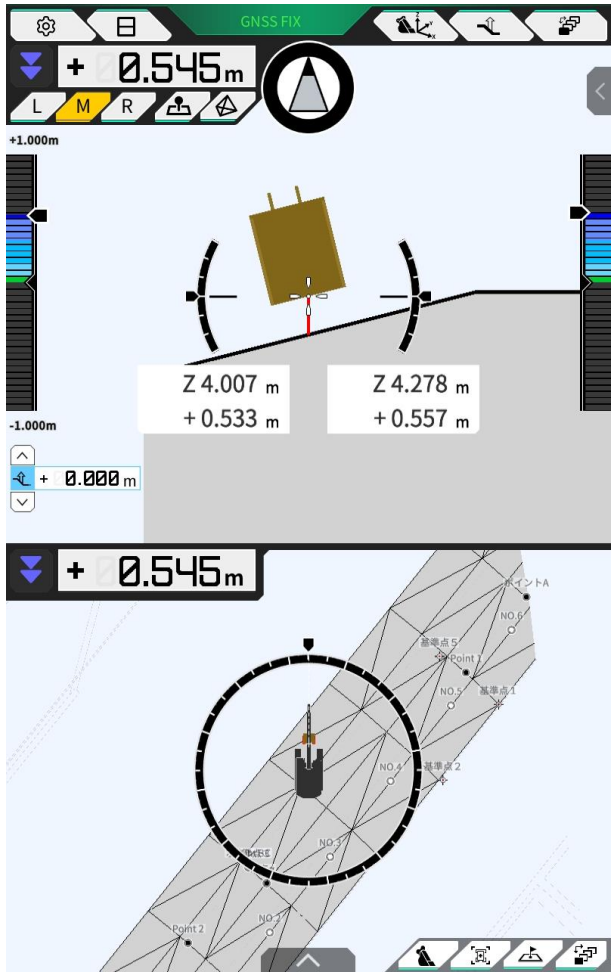
EARTHBRAIN

“Fixed rotational display” in Section View

The Section View can be set to display a fixed machine roll.
In case of “OFF”, the design surface is displayed horizontally.

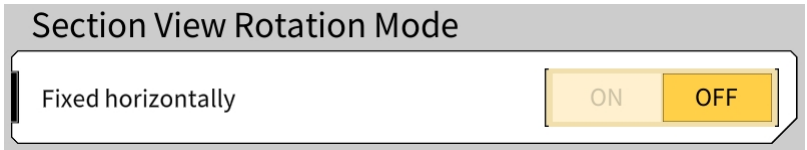


ON : Bucket is horizontal



OFF : Design surface is horizontal

This setting can be changed from
Menu > Guidance Settings
> Application Settings
> Section View Rotation Mode

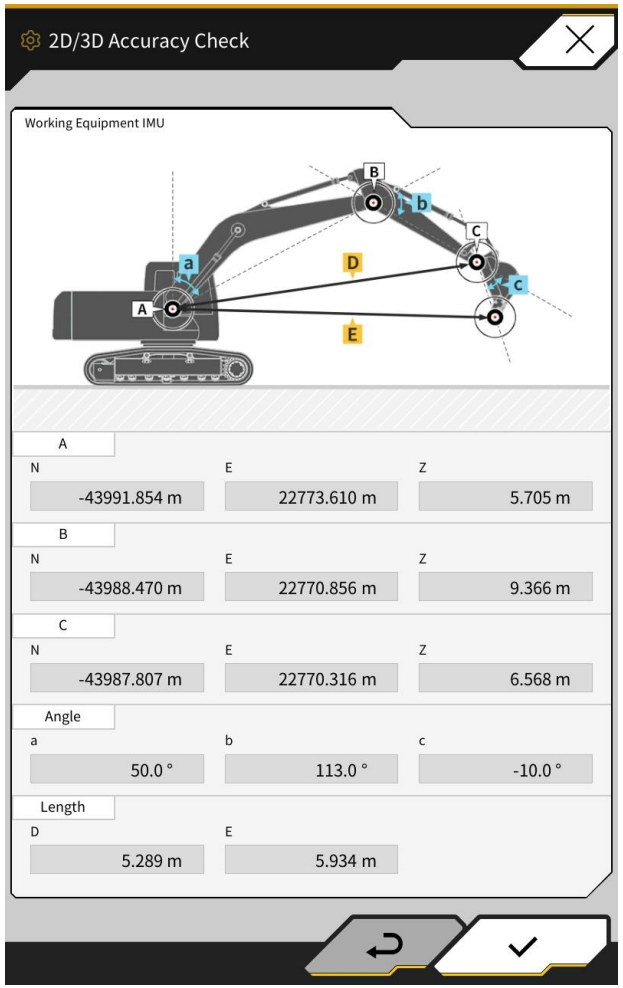


The default is “ON”

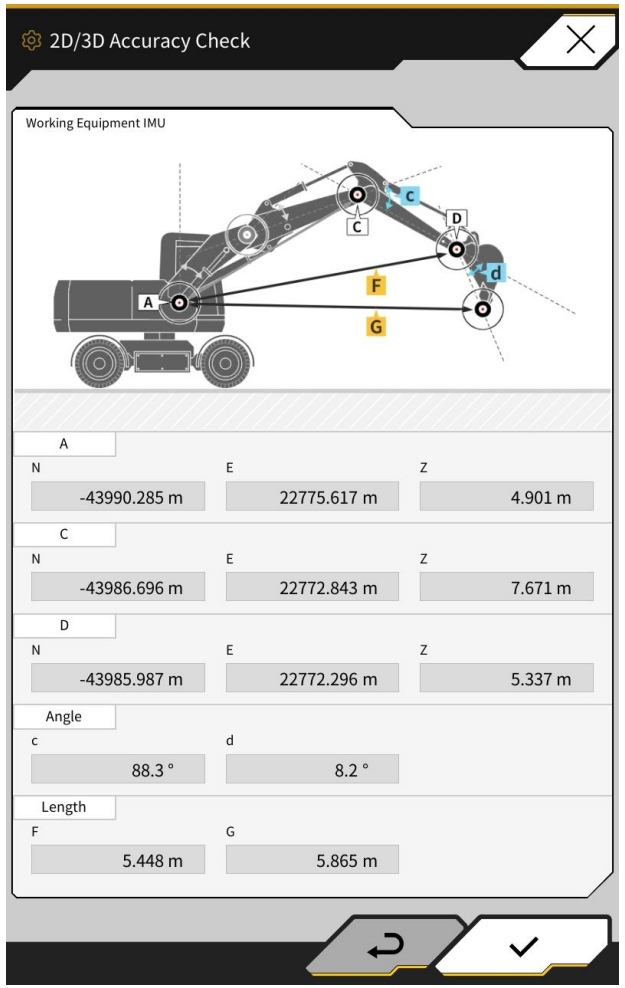
EARTHBRAIN

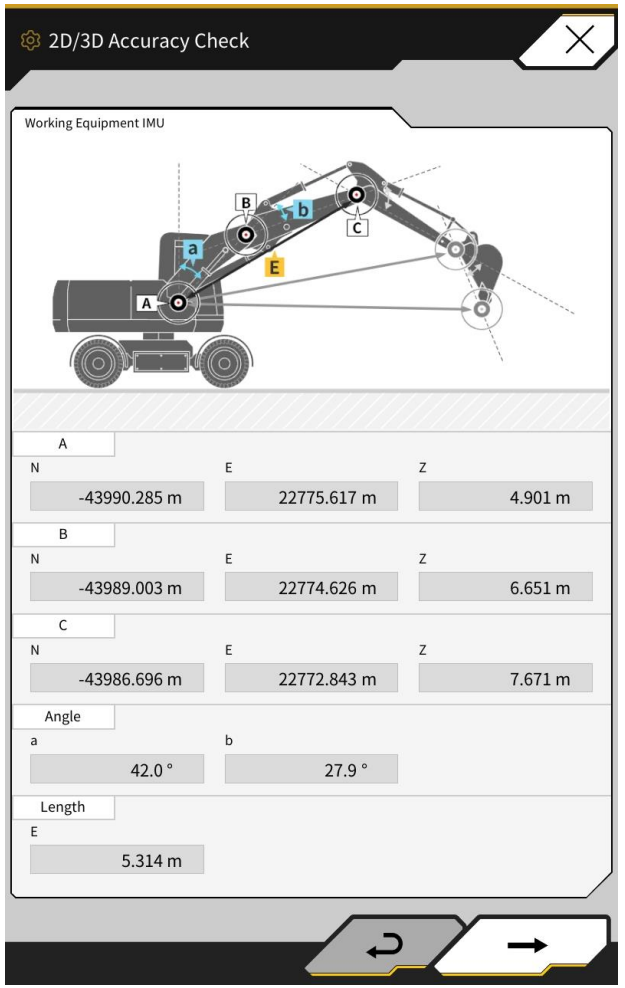
2D/3D Accuracy check

Real-time confirmation of work equipment pin coordinates, angles, and distance from boom foot.



Standard/Swing Boom Model





2 Piece Boom Model

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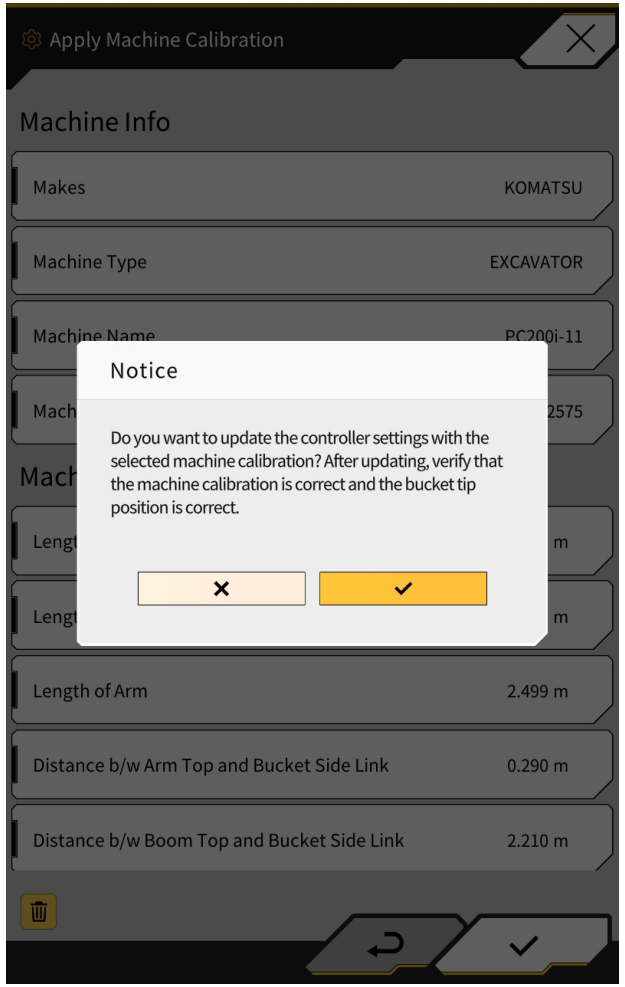
Restore machine calibration

Past machine calibration data can now be restored.

If the controller needs to be replaced, please download the calibration file from the server and use it for restoration.



This menu can be accessed from Menu > Administrator Settings > Machine Calibration Settings > Restore Machine Calibration.

: Download calibration data from the server

: Import calibration data from storage such as an SD card

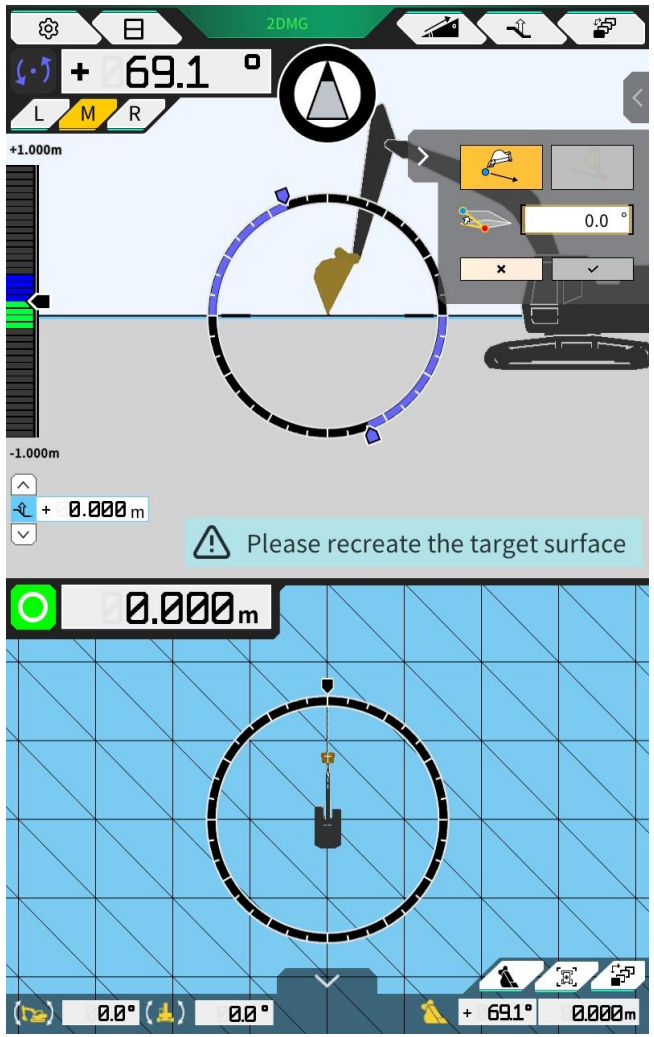
■Important

After restoration, please make sure that the machine calibration and the bucket tip position are correct.

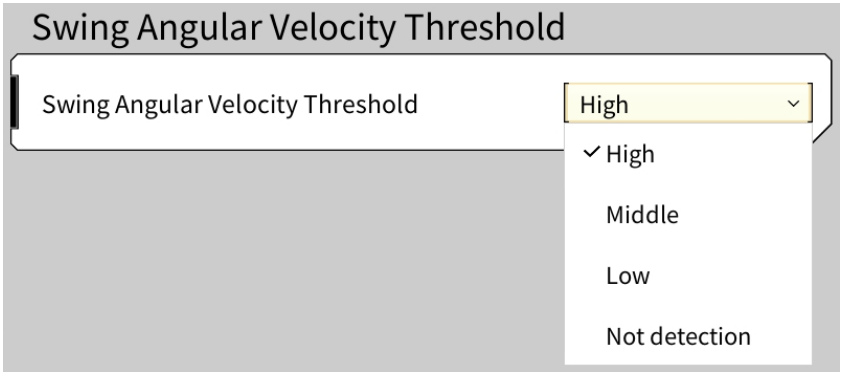
EARTHBRAIN

Functional modification of 2DMG

To improve usability, the error message is moved to the bottom right so that you can keep operating. Additionally, a setting to change the threshold of swing detection was added.



Addition of swing detection thresholds “High”, “Middle”, “Low” and “No detection”.
In the case of “No detection”, the error message never appears.
This setting can be changed from
Menu > Guidance Settings > Application Settings



The default is “High”

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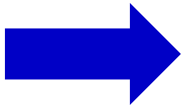
New startup screen

The image on the startup screen changes to our Smart Construction Pilot logo.



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Other updates and fixes

Right hand coordinate input for Machine Calibration.

Modified to be able to perform machine calibration regardless of the total station coordinate system.

Addition of buttons to obtain latest projection info and payload parameters.

The latest projection info and payload parameters can be downloaded manually with these added buttons.

Application settings can be copied over when the application is updated.

The settings in the Application Settings can be copied over when the application is updated from the previous version.

Addition of region selection to the common settings.

“Region” is now available to select in the common settings if you made a mistake in selecting the wrong region, etc.

Changed the bucket shape of the tilt bucket.

The bucket shape of the tilt bucket is created identical to the 3D model of the standard bucket.

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Other updates and fixes

Bucket calibration value change not reflected when checking accuracy.

Fixed a bug where a changed value in the bucket calibration did not affect the accuracy.

Machine display in Plan View differed.

Fixed a bug in which the Plan View display of machine differed depending on whether the Heatmap was turned ON/OFF.

Control points not displayed in “3D” and “3DMesh”.

Fixed a bug where control points were not displayed in "3D" and "3DMesh".

Improved performance of Machine Guidance.

Improved performance for project files with dense TINs, which could cause application performance issues.