

3DMG Basic User Manual



【Attention】

3DMG Basic is available with tablet app version 1.0.06 or later.

Construction width function is available with tablet app version 1.0.06.2 or later.

If you are using an older version, please update the app.

This feature is specifically designed to easily utilize the 3D machine guidance function.

With no need for localization or design data, it allows the creation of a 3D target surface from the bucket tip position, enabling straightforward usage of machine guidance.

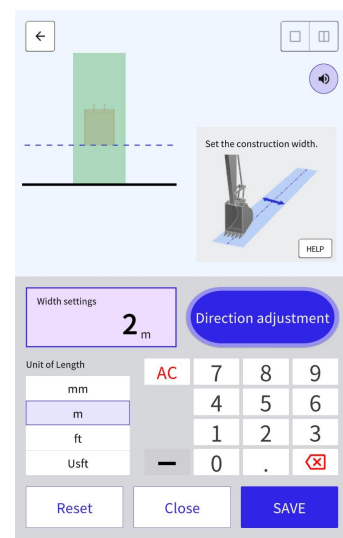
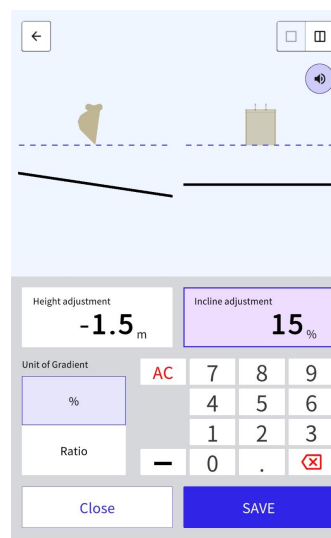
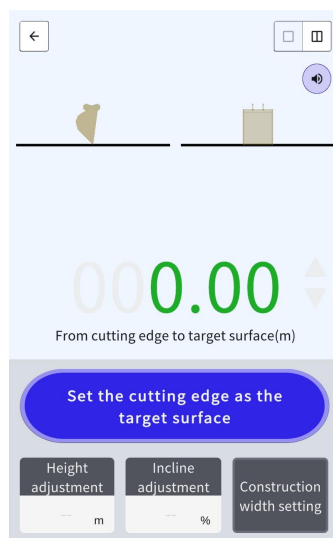
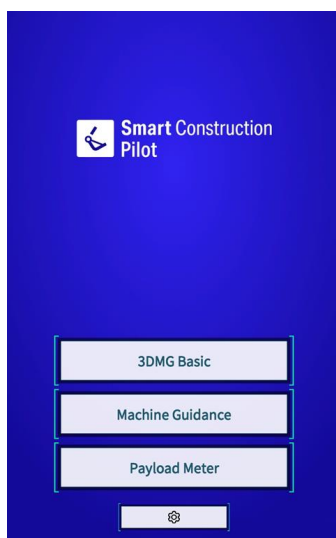
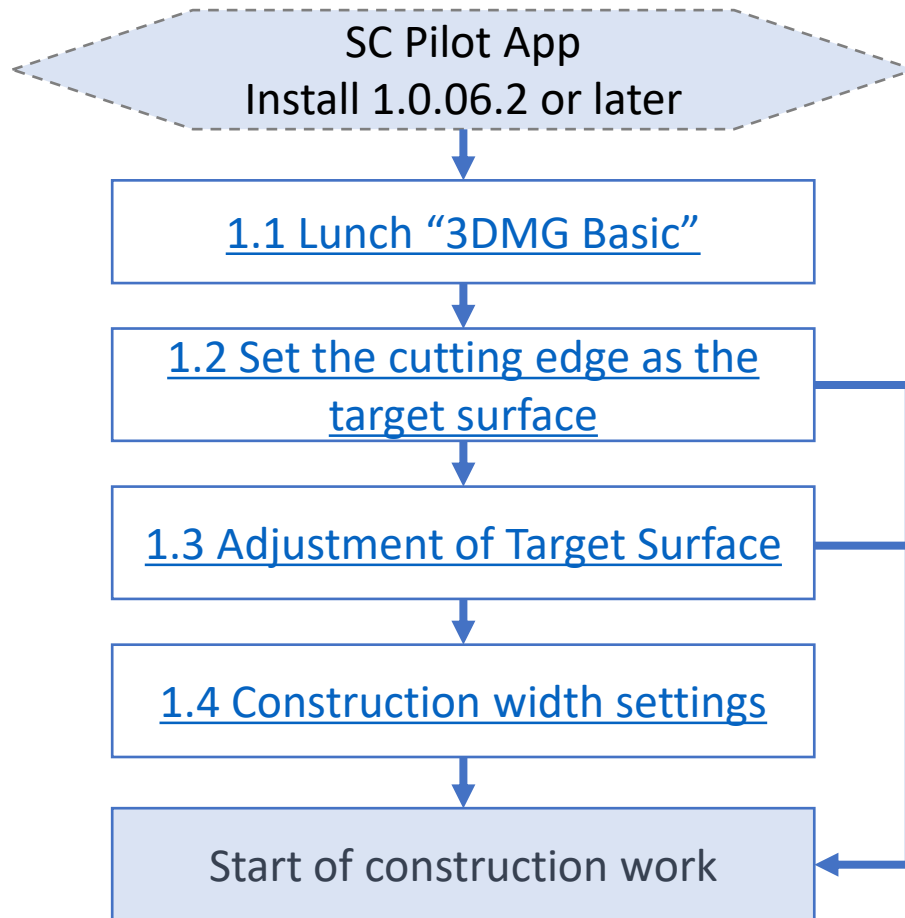
Notes

- Please perform various initial settings such as machine calibration, bucket configuration, GNSS settings, etc., required to utilize the Machine Guidance using the "Machine Guidance" function in advance.
- You can download the above-mentioned setup manual from the following support site.

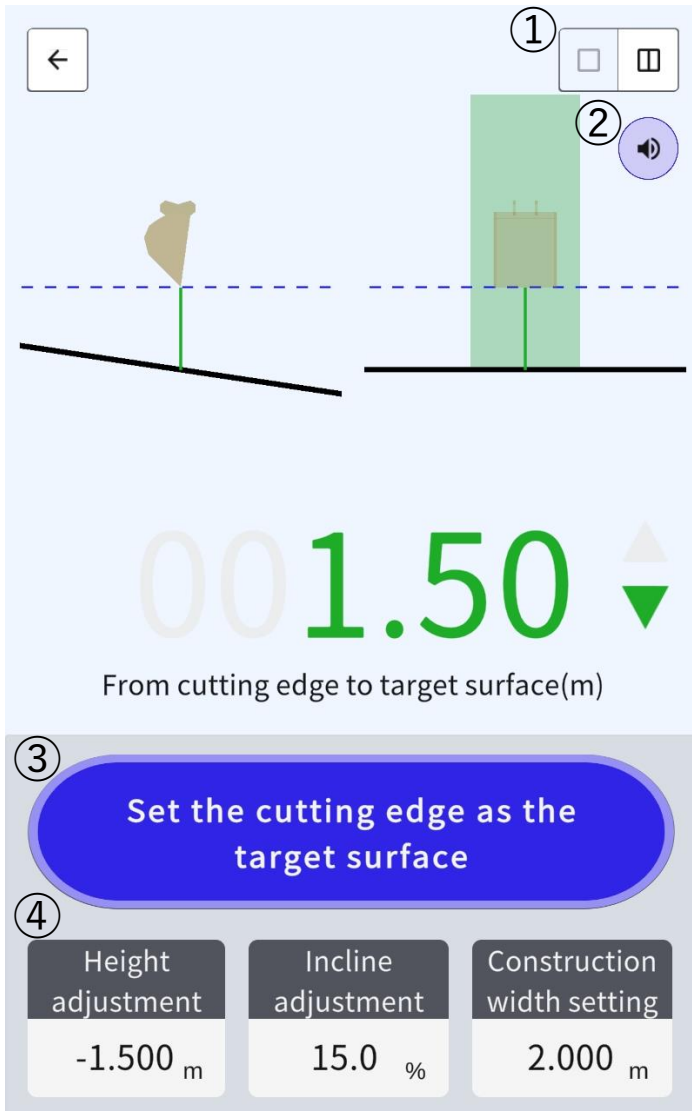
Tablet application manual

- There is no menu to change various settings in 3DMG Basic. Please handle any errors or issues using the "Machine Guidance" function.
- 3DMG Basic, the payload function is not available.

Usage flow



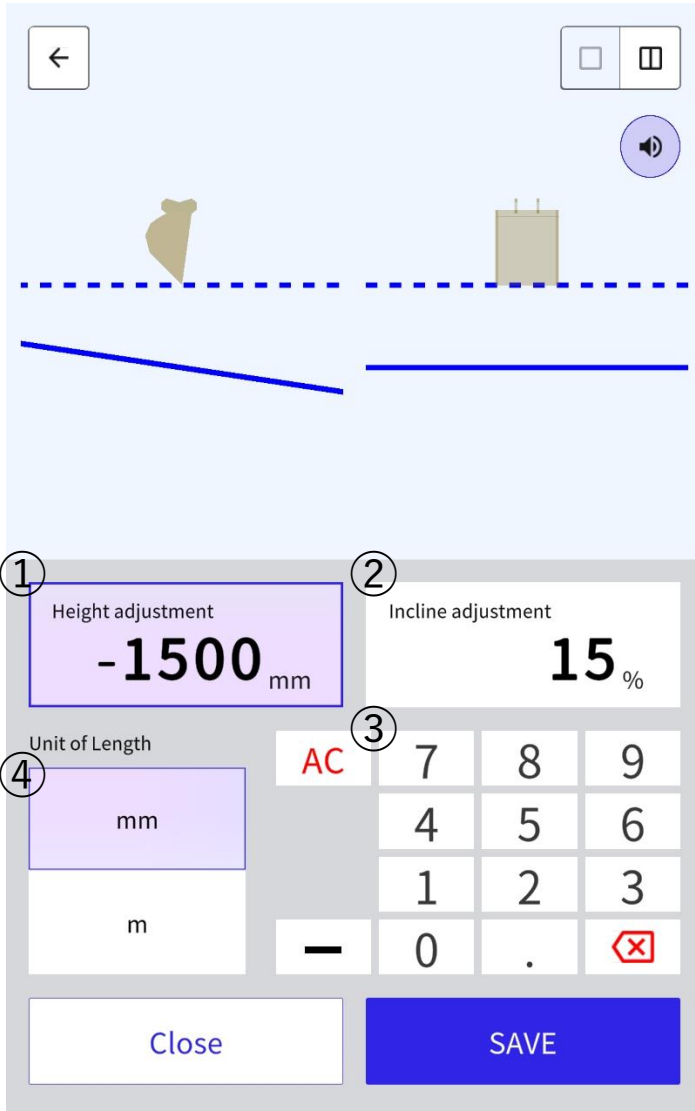
Guidance Screen



- ① Switch between a 1-screen (profile view) and a 2-screens (profile/section view).
- ② Toggle the audio output ON/OFF for proximity alerts to the target surface.
- ③ Sets the cutting edge (center of the bucket) to the target surface.
- ④ Displays the height and incline values set relative to the cutting edge's target surface. Tapping switches to the adjustment screen for the target surface.

- Dotted Line : Represents the surface where the "cutting edge is set to the target surface."
- Solid Line : Represents the target surface.
- From cutting edge to target surface : Displays the distance from the cutting edge (center of the bucket) to the target surface.

Target surface adjustment Screen



- ① Height Adjustment
Adjust the height of the target surface based on the height set at the bucket tip position. The target surface can be raised with a positive value or lowered with a negative value.

<Input Range>
-20m to 20m

- ② Incline Adjustment
Adjust the incline of the target surface.

<% Input Range>
-400% to 400%

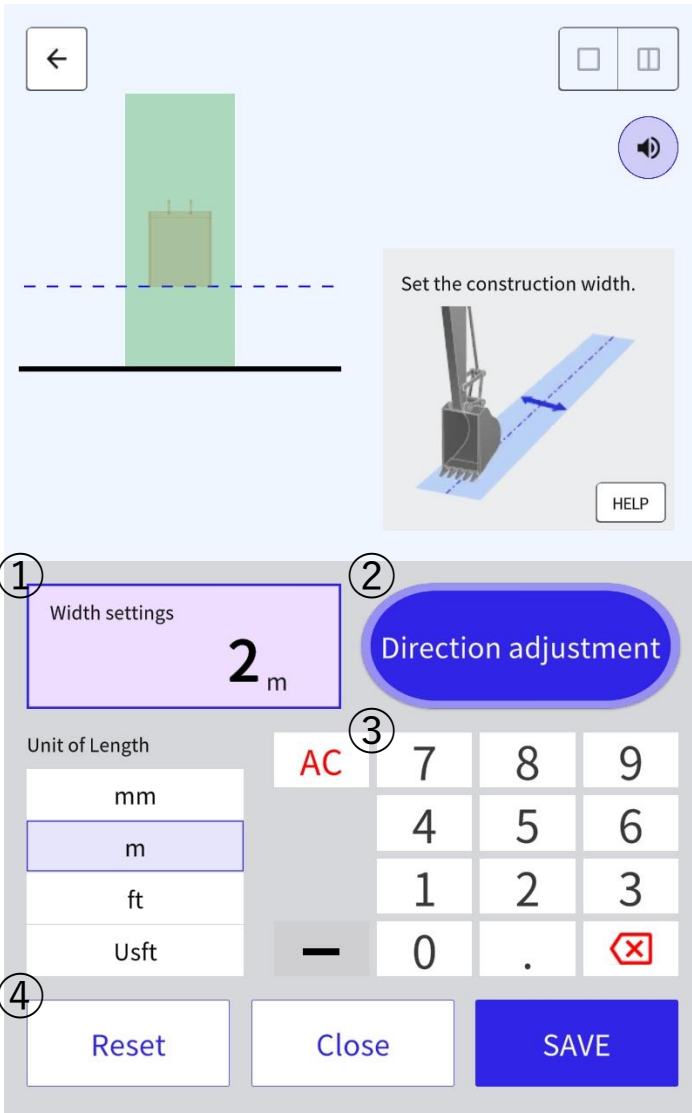
<Ratio Input Range>
-1000~-0.25 0.25~1000

- ③ Numeric Keypad
Tap to input values for height and incline adjustment.

- ④ Length Units
Switch the units of length. The set unit will be reflected on the guidance screen.

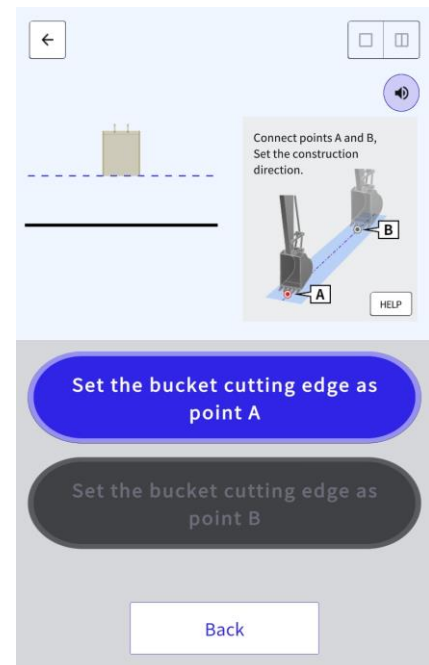
Construction width/direction adjustment

By default, the construction direction is set to the direction of the work equipment.



① Width settings
Enter the construction width. The construction width is displayed in color on the guidance screen.

② Direction adjustment
The screen will switch to the direction adjustment screen.



④ Reset
Reset construction width settings.

③ Numeric Keypad
Tap to input values for construction width.

01

Chapter

How to Use

1.1 Lunch "3DMG Basic"

1. After launching the app, tap on "3DMG Basic"
2. The "3DMG Basic" screen will be displayed.

✂During startup, you may encounter errors such as "Controller not connected" due to connection delays with the controller, or "Positioning accuracy decreased" due to delays in GNSS FIX. Please wait until the connection is established or the FIX process completes. If you also see sensor errors like IMU errors, please contact the support center for assistance.

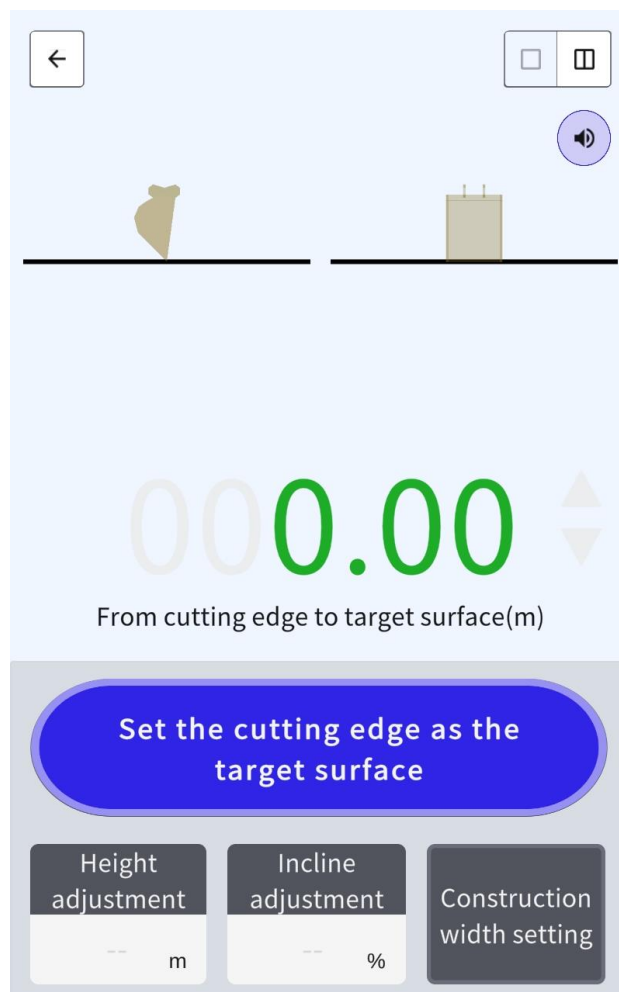


1.2 Set the cutting edge as the target surface

1. Place the bucket to the place where you want to create the target surface.
2. Tap "Set the cutting edge as the target surface"
3. A 3D target surface is set at the position of the cutting edge.

If you want to adjust the height or incline, tap "Height adjustment" or "Incline adjustment"

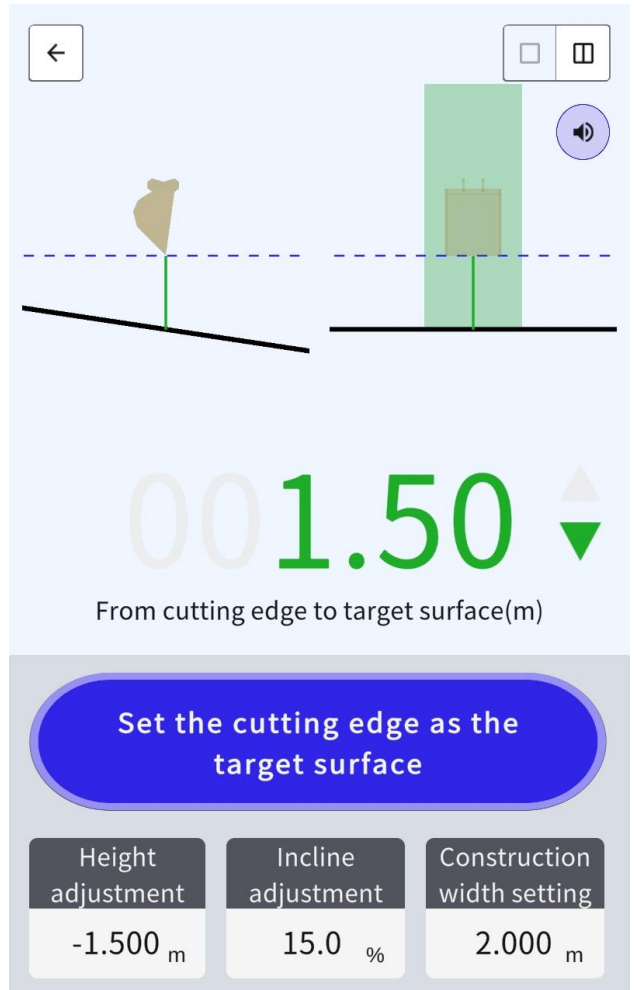
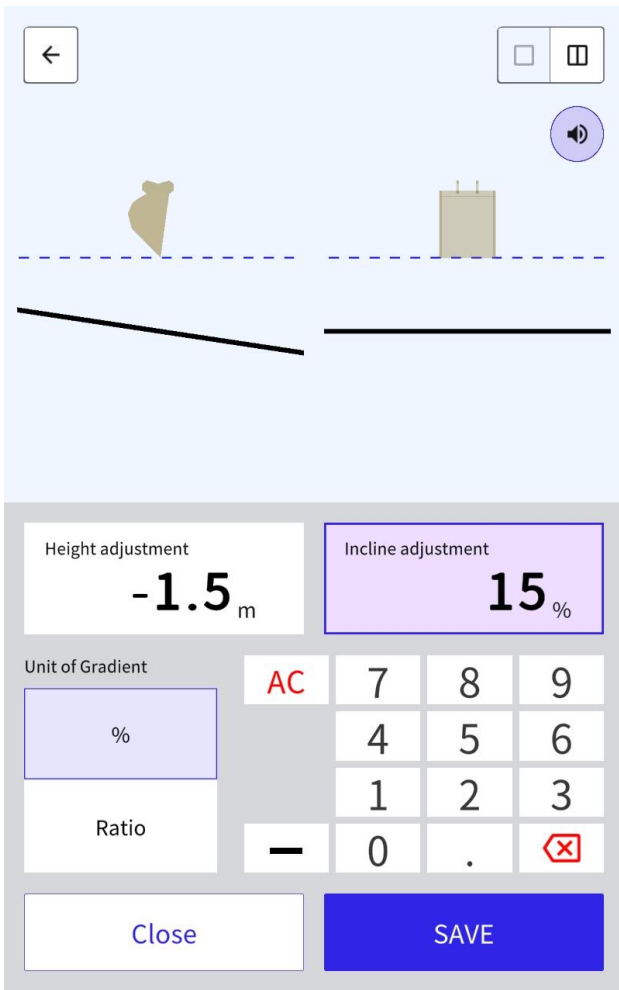
→ [1.3. Adjusting of target surface.](#)



1.3 Adjustment of Target Surface

1. Tap Heigh/Incline adjustment.
2. Enter the value to adjust using the numeric keypad.
3. After inputting the value, tap "SAVE" to proceed to the guidance screen and start the construction.

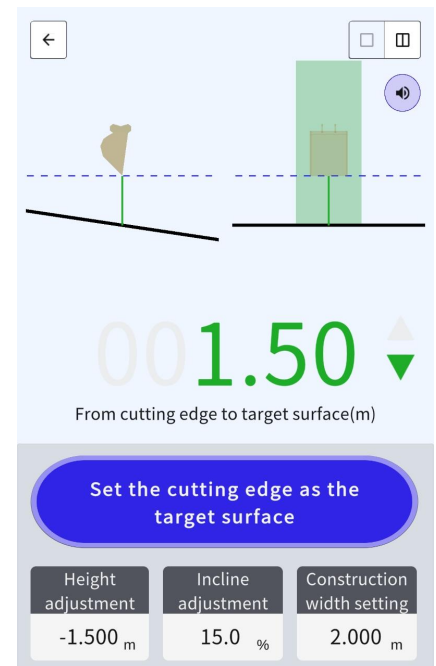
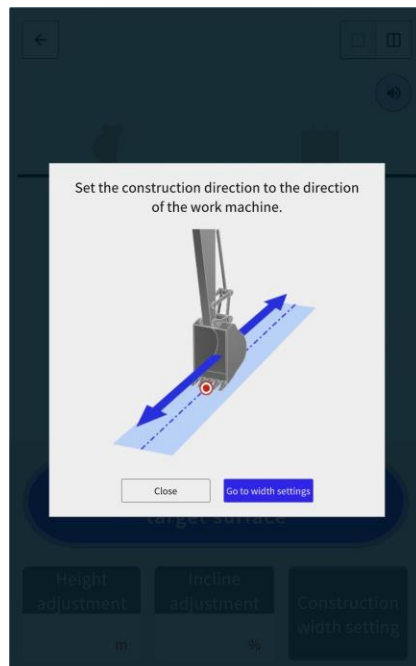
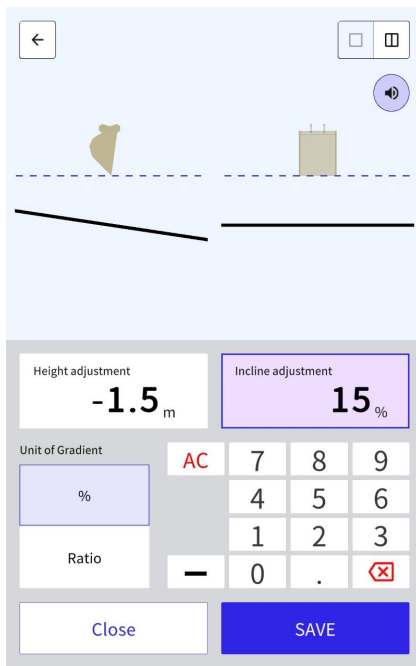
- ✘Height adjustment: The height set by the cutting edge is the reference.
- ✘Incline adjustment: The direction of bucket when setting the cutting edge target surface is the reference.



1.4 Construction width settings

When setting the construction width and direction, the area will be displayed in color on the guidance screen.

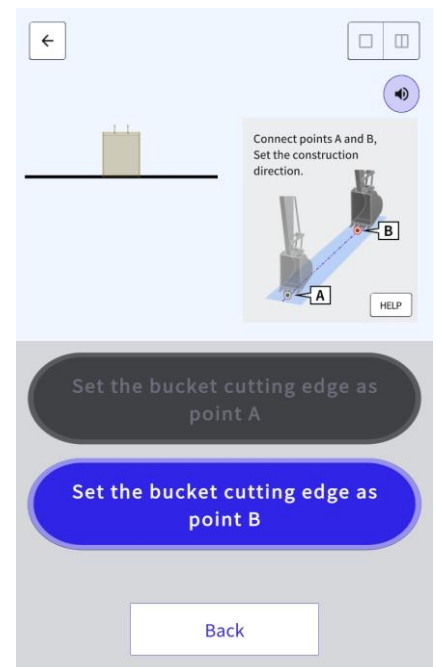
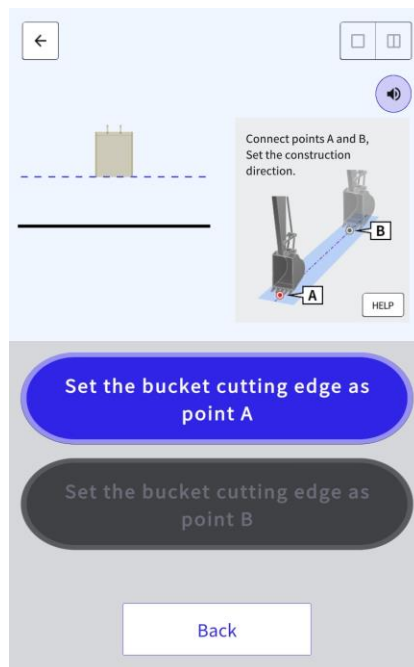
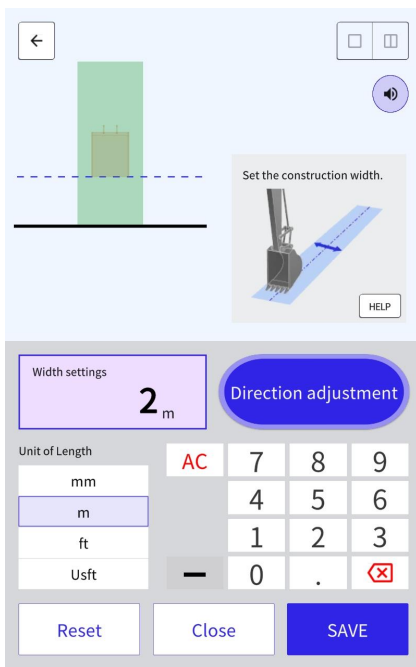
1. Point the machine in the construction direction and align the center of the bucket with center of the construction width.
2. Tap “Construction width settings”
3. By default, the direction is set to the direction of the work equipment.
4. Enter the width using the numeric keypad.
5. After inputting the value, tap "SAVE" to proceed to the guidance screen and start the construction.



1.4 Construction width settings

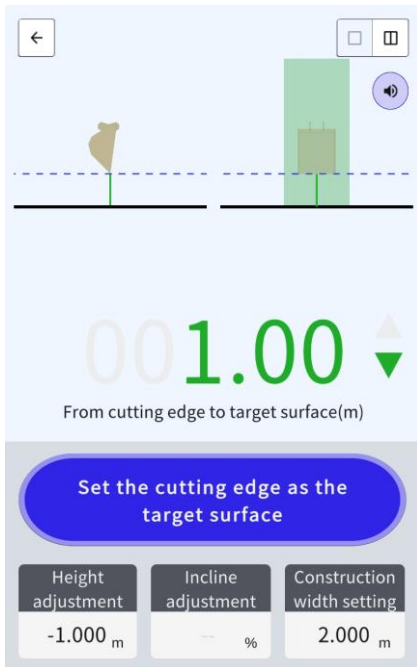
By measuring two arbitrary points at the center of the cutting edge, you can set the construction direction that connects the two points.

1. Tap "Direction adjustment"
2. Place the bucket at the starting point to be set in the construction direction and tap "Set the bucket cutting edge as point A"
3. Place the bucket at another point that determines the construction direction and tap "Set the bucket cutting edge as point B"

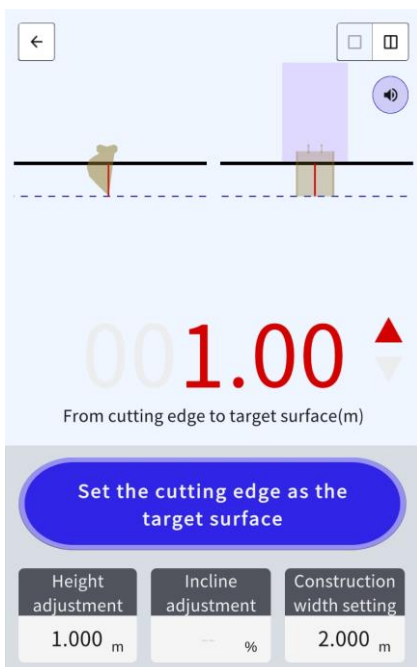


1.4 Construction width settings

The guidance screen is colored in the following two colors.



- The cutting edge exists in the colored area and directly faces the construction width direction within a range of $\pm 0.5^\circ$. And the position of the cutting edge is higher than the target surface.



- The cutting edge exists outside the colored area.
- The cutting edge exists in the colored area, but there is a deviation of $\pm 0.5^\circ$ or more from the construction width direction.
- The cutting edge is lower than the target surface.

02

Chapter

Notes

2.1 Notes

- Please perform various initial settings such as machine calibration, bucket configuration, GNSS settings, etc., required to utilize the Machine Guidance using the "Machine Guidance" function in advance.
- You can download the above-mentioned setup manual from the following support site.

[Tablet application manual](#)

- There is no menu to change various settings in 3DMG Basic. Please handle any errors or issues using the "Machine Guidance" function.
- 3DMG Basic, the payload function is not available.
- The construction history data in the "3DMG Basic" feature is not uploaded to the server. Therefore, please be aware that construction history will not be registered in the SC Dashboard.

Contact information



Inquiries about products and defects:

EARTHRAIN Co., Ltd.
Support site inquiries :

[Europe](#)

[US](#)

[Australia](#)

[Asia](#)