

AG601 Pro Autosteer system

User manual



AG601 Pro

Autosteer system User Manual

For use with Software Version 6.0.0.0

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September, 2026

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This manual provides information about operating and maintaining this ComNav Precision Agriculture product. Correct use and servicing are important for safe and reliable operation of the product.

It is very important that you take the time to read this manual before using the product.

Information in this manual is current at the time of publication. A system may vary slightly. The manufacturer reserves the right to redesign and change the system as necessary without notification.

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Chapter 1-System Overview

1.1 Introduction

The AG601 Pro autosteer system consists of a drive motor, touchscreen tablet, SA300 GNSS receiver, and auxiliary hardware components. Designed for planting, transplanting, furrowing, ridging, chemical spraying, harvesting and other field operations, the system delivers row guidance accuracy of ± 2.5 centimeters. It is engineered to boost labor productivity, maximize crop yields, and optimize the efficiency of agricultural input usage.

Equipped with full ISOBUS compatibility, the AG601 Pro autosteer system enables seamless communication with all ISOBUS-compliant agricultural machinery terminals. It supports cross-equipment sharing of field operation data and centralized machine control, streamlining workflows when pairing multiple implements.

Note: Thoroughly review all safety instructions and this operator's manual prior to operating the auto-steering system. Contact your authorized dealer for technical support during installation or operation.

The tablet features a capacitive touchscreen. Click the target area lightly with your fingertip to select on-screen menu items or functions.

1.2 Product Overview

1.2.1 Packing List

This Packing list shows the standard and optional package for AG601 Pro, it may vary as your specific requirements. If any of the following items are missing in your package, please contact ComNav Technology or your local dealer.

Tablet and its Components:

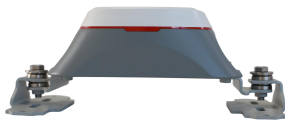


Tablet



Tablet Bracket

Smart Antenna and Cable:



SA300 GNSS Receiver with
Bracket



UHF Antenna



Main Cable



Power Cable

Steering Wheel, Motor and its Components:



Steering Wheel



Motor



Motor Bracket



Spline Nut

Angle Sensor and its Components:



Front Wheel Angle
Sensor



Front Wheel Angle Sensor
Subplate



Front Wheel Angle Extension
Cable (5m)

Optional:



Camera



Hand Controller



Wireless Bluetooth
Controller



Single-Button
Bluetooth Controller



ISOBUS Cable



ISOBUS Adapter
Cable



Body Gyro



Body Gyro Adapter
Cable

Others:



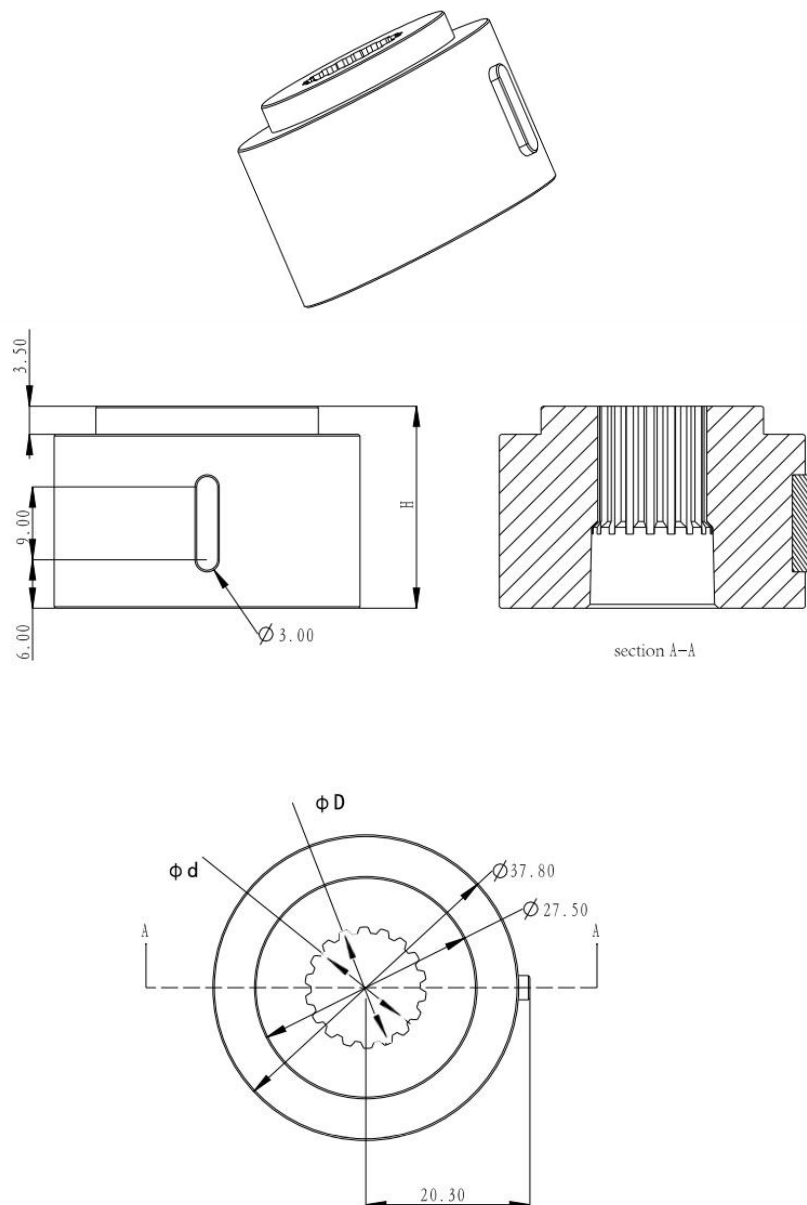
Screw Suit



Cable Ties

1.2.2 Spline Selection

After removing the original steering wheel, select the appropriate spline according to the Teeth Number and Diameter



Spline Drawing :

All type spline and gasket Parameters:

TYPE NAME	DIAMETER Φ D MM	DIAMETER Φ D MM	TEETH NUMBER
18-36	17.5	18.8	36
18-36S	17.2	18.2	36
22-36	21	22.2	36
16-36	14.8	15.8	36
15-18	13.5	15	18
15-30	13.5	15	30
18-40	16.5	17.6	40
21-36	19.5	20.6	36
TN25		25.25	1
NHL18		17.88	1
WMD		19.5	1
XQB		19.5*	1
GASKET Φ 14		Equipped with 15-18, 16-18 splines	
GASKET Φ 16		Equipped with 18-36, 18-36S, 18-40 splines	
GASKET Φ 18		Equipped with NHL18, WMD, XQB splines	
GASKET Φ 20		Equipped with 21-36, 22-36 splines	

1.2.3 Product Details

● SA300 Pro GNSS receiver

Here are three LED status indicators to show SA300 Pro work status and from left to right represent ‘Power’, ‘Satellite’, ‘Differential data’.



	States	Description
Power	On	Power is ready
	Off	No power
Satellite	Fast flashing	No satellite received
	Flashes N times every 5s	Received N satellites signals
Differential Data	Flashes once per second	Receiving differential data

- **P500 Plus Tablet**

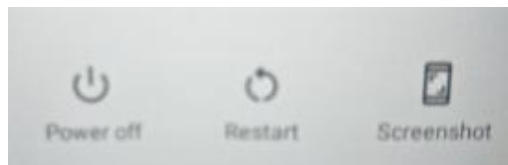
When the tablet is turned on, the LED indicator at the top center of the screen lights up green. If the tablet is turned off, the LED indicator will not light up.

There are two buttons in the upper-left corner of the back of the tablet:



: This button adjusts the brightness by increasing the brightness level. To decrease the brightness, you can adjust it from the status bar.

: A short press turns off the screen; a long press displays a menu bar on the right side of the home screen. You can choose to power off, restart, or take a screenshot.



Note: The LD tablet does not support shutting down through the tablet's power button. This feature is designed to prevent battery drain caused by improper power-off.

- **Motor**



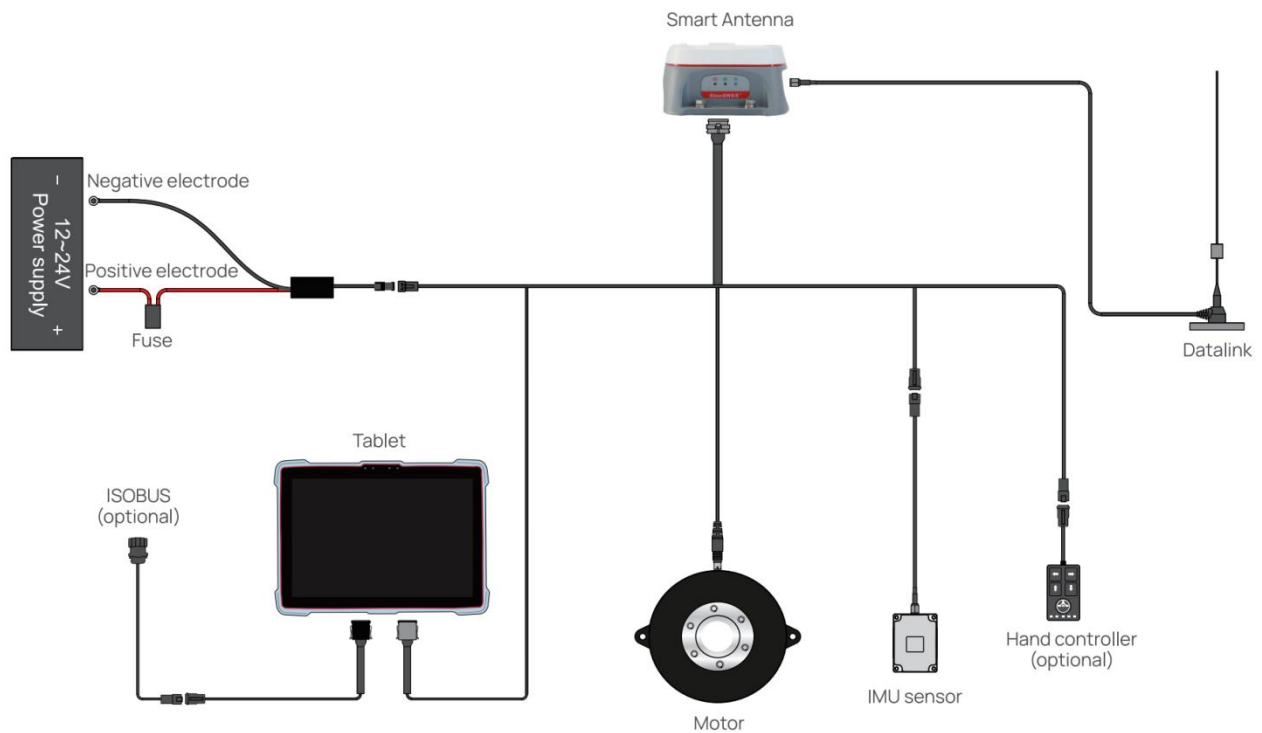
The steering wheel is equipped with a power assist mechanism that provides assistance to the driver during manual driving, making steering easier.

1.3 Installing the System

For videos of Installation and Calibration, please visit the ComNav Agriculture Channel on YouTube:

<https://www.youtube.com/channel/UCnZe7r5tQN8Hy-d-chJ3pvg>.

1.3.1 Wiring Diagram



Note: Please align the connector with the installation position (match the notch) when inserting. When removing, press the latch near the connector and pull out. Do not twist the connector.

1.3.2 Installation Diagram



➤ Please install the smart antenna perpendicular to the vehicle's centerline. Follow

the instructions on the top of the antenna and align the arrow so that it points directly toward the front of the vehicle.

- The front wheel steering angle sensor can be installed on either the left or right wheel; it must be mounted in a position where it can rotate left and right with the tire. Please ensure that its mounting surface remains level with the ground.
- If you need to install the vehicle gyroscope, first remove the front wheel steering angle sensor and install the gyroscope in a location where the vehicle is stable, such as under the seat.
- We recommend mounting the tablet on the right side of the cab for ease of operation, while ensuring it does not obstruct the driver's entry or exit through the left door.
- Please select a spline adapter model compatible with your tractor to prevent slippage.

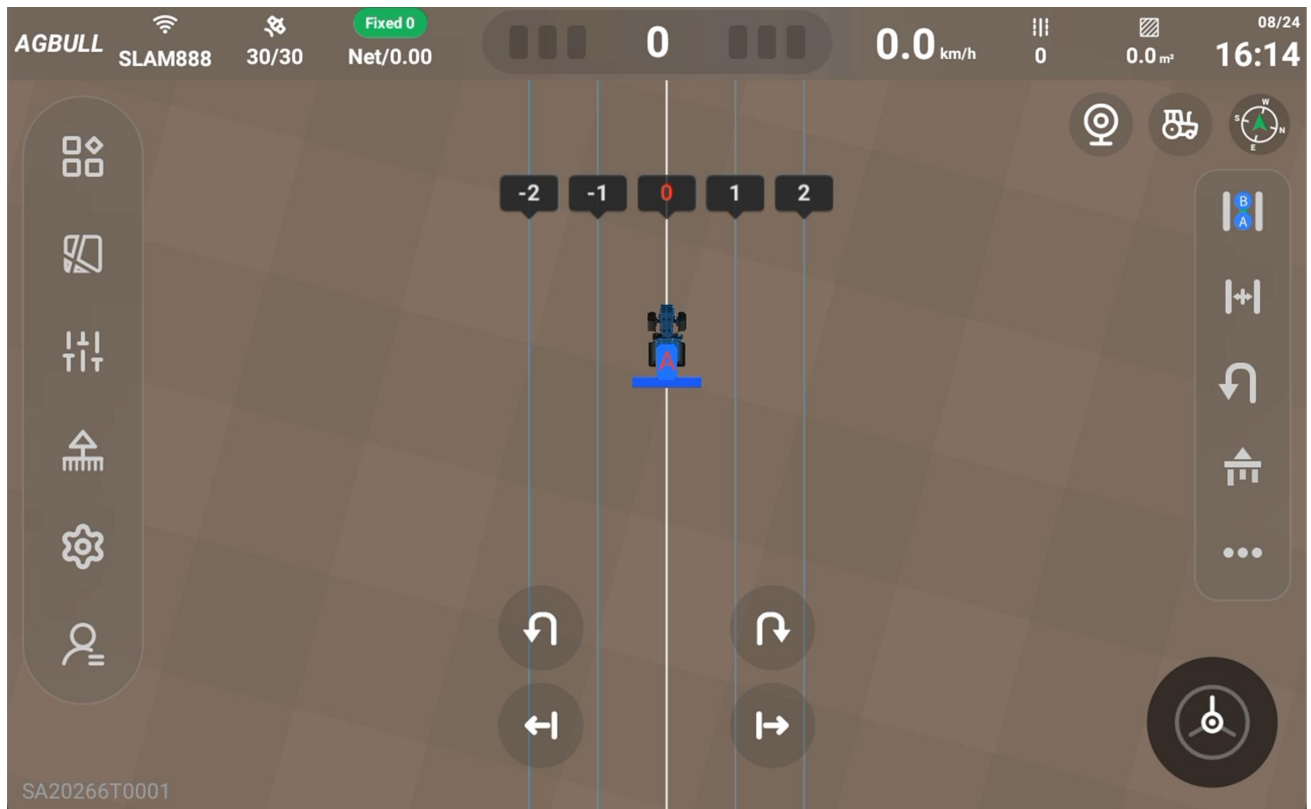
1.3.3 Power Requirements

Electric Steering Wheel	Input voltage	12-24V DC
	Rated power	160W
SA300Pro GNSS receiver	Input voltage	9-36V DC
	Power Consumption	2.6W Maximum
P500 Plus	Input voltage	5-16V DC
	Power Consumption	<15W

Chapter 2-Software Description

To help users understand how to operate and use the software, this section will briefly explain the main features and button functions of the software interface from a new user's perspective.

2.1 Main Interface Icon Descriptions



The following figure is the main interface with 2D display of all function buttons turned on. The current background color is brown.

2.1.1 Top Status Button Icons

The top button icons are displayed from left to right:

AGBULL, Software icon; click to hide or show the left sidebar.

SLAM888, WiFi and Mobile Network, "[WiFi](#)".

30/30, Satellite status, "[Satellite](#)".

Fixed 0
Net/0.00, GNSS connectivity, "[GNSS](#)".



, Lateral deviation, Vehicle lateral deviation in real time.



, Vehicle speed, display the vehicle's current speed in real time.



, Guideline number.



, Worked area, “[Field](#)”.



, Time, “[Time](#)”.

2.1.2 Left Function Button Icon

The button icons on the left are displayed in the following order from top to bottom:



, Main menu.



, Field, boundary, guidance line and task management, “[Field](#)”.



, Parameter Settings, “[Parameters](#)”.



, Adjust Implement width, “[Adjust Implement](#)”.



, Settings menu, “[Settings](#)”.



, Service menu, “[Service](#)”.

2.1.3 Right Function Button Icon

The button icons on the right are displayed in the following order from top to bottom:



, Create guideline or boundary, “[New Guideline or Boundary](#)”.



, Nudge menu, “[Nudge](#)”.



, U-Turn menu, “[U-Turn](#)”.



, Manually record tracks, “[Tracks](#)”.



, More features menu, “[More](#)”.



, Turn on/off autosteer, “[Turn on/off](#)”.

2.1.4 Other Icon

The other button icons are displayed from left to right as follows:



, Camera, “[Camera](#)”.



, Guide line mode, “[Guide line mode](#)”.



, Boundary mode, “[Boundary mode](#)”.



, Demo mode, “[Demo](#)”.



, Compass, Display vehicle azimuth angle in real time, “[Compass](#)”.



, The device SN uniquely matches the smart antenna label and is used for registration and maintenance.



, U-turn shortcut key, “[U-turn key](#)”.

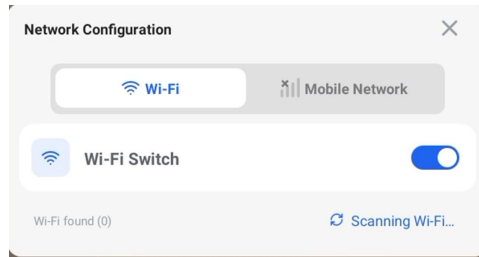


, Nudeg shortcut keys, “[Nudeg key](#)”.

2.2 WiFi and Mobile Network

2.2.1 WiFi

This icon  indicates the current Wi-Fi signal strength.



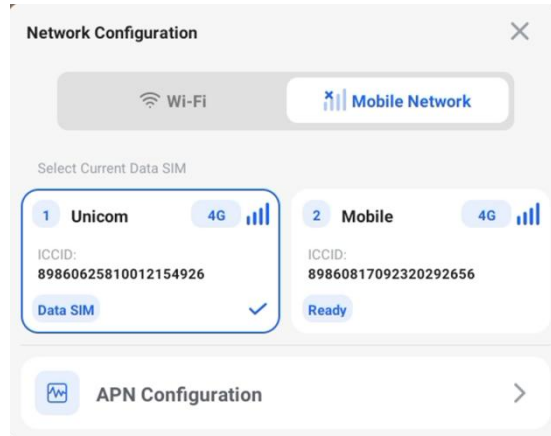
When the Wi-Fi signal is strong, the icon typically shows full bars; if the signal weakens, the icon will change accordingly. The text below the icon shows the name of the currently connected Wi-Fi network. If the name is too long, it will not be displayed in full.

Click  to turn Wi-Fi on or off, click  to refresh the current Wi-Fi list.

2.2.2 Mobile Network

The AG601 PRO features two SIM card slots, so you can switch between different SIM cards to access network services.

Click  to change your carrier or view other SIM card information.



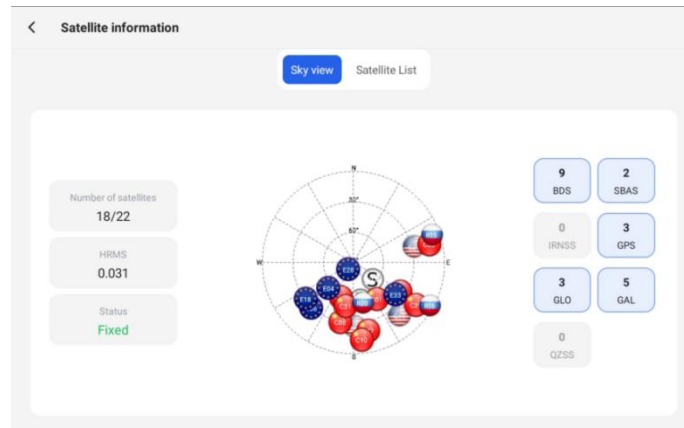
2.3 Satellite Status

This icon  displays the number of satellites currently in use and those that have been detected in real time.

Click it to view satellite information; you can choose between “Sky View” and “Satellite List” to view detailed information (the default view is “Sky View”).

2.3.1 Sky View

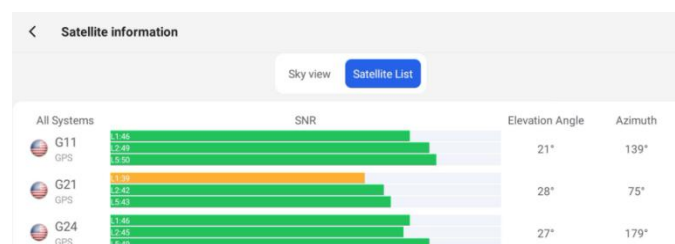
ComNav autosteer system supports receiving full-constellation and multi-frequency satellite signals, including BDS, GLONASS, GPS, Galileo, QZSS, and IRNSS.



The Sky View screen displays real-time satellite metrics, including the count of tracked satellites and satellites currently in use, HRMS(Planar Positioning Accuracy) data, and solution status (fixed at present). It also renders a satellite sky plot and shows the quantity of each satellite constellation in active use, as indicated in the status bar on the right side of the interface.

There are four GNSS status conditions: fixed, floating, single-point, and PPP. When the system is in the fixed state or PPP convergence is complete (i.e., PPP fixed), the icon will appear green; in all other cases, it will appear red.

2.3.2 Satellite List



Displays the parameter values of each frequency point of the satellite in the form of data, which is beneficial to the judgment of areas with severe signal interference. You can scroll all the way to the bottom to view an overview of the current SNR.



2.4 GNSS and Network Status

2.4.1 Networks Icon Meaning

This icon  indicates the current cellular signal strength.

When the cellular signal is strong, the icon typically shows full bars; if the signal weakens, the icon will change accordingly. The number below the icon indicates the differential delay; “NET” on the right indicates that network mode (such as CORS) is being used, and “Radio” indicates that data transmission mode is being used.

2.4.2 GNSS Status Icon Meaning

This icon  directly reflects the current GNSS status.

Currently, there are four GNSS statuses: fixed, floating, single, and PPP. The number below indicates the HRMS accuracy.

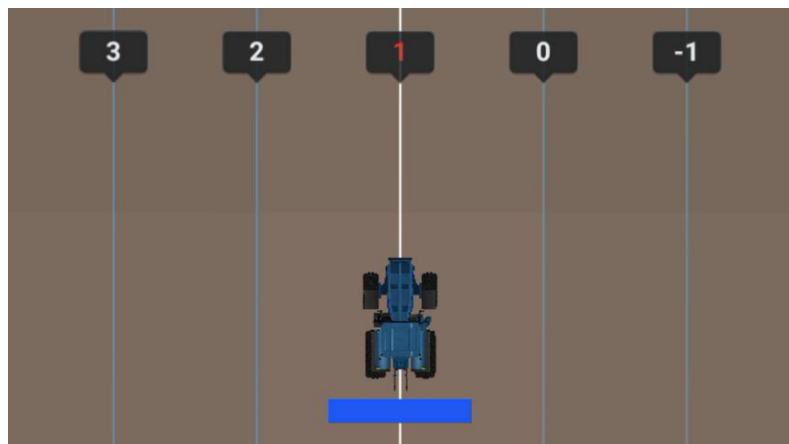
2.4.3 GNSS Settings

Click this icon() to open the GNSS settings screen, where you can directly configure the GNSS connection method.

2.5 Guideline Number

The number displayed on the icon  indicates the current guideline where the vehicle is located.

User-defined or imported guide lines are labeled as 0(The current screen displays 1). The system-generated guide lines decrease in number to the left and increase in number to the right.



2.6 Time

The time displayed is the system time. If you need to adjust the time display, you must do so in the tablet's system settings.

To set the time:

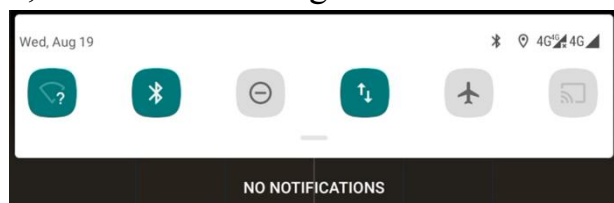
- Exit the app, locate the System Settings icon, and click it to open the System Settings screen.
- Select the “System” menu from the drop-down menu, then find “Date & Time.” You can adjust the time from this screen.

Note: By default, the time is set to automatically retrieve the time from the network and the local time zone.

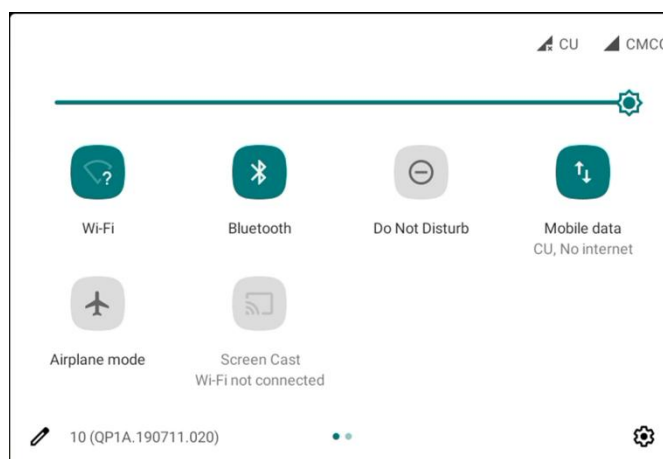
- Once you've finished making your adjustments, click “Save,” then reopen the app for the changes to take effect.

2.7 Brightness Adjustment

When users need to adjust the screen brightness to suit their environment, they can pull down the status bar, as shown in the figure below:



Continue to open the drop-down dialog box by clicking the icon  shown. As shown in the figure below:



Drag the slider in the image below to adjust the brightness.



Chapter 3-Function Button Description

This chapter primarily introduces the functions of certain control buttons, including track tracing, the user menu, and Nudeg.

3.1 Track

When you click  the icon, you can start recording your current route.

This feature is automatically enabled in autonomous driving mode; it is disabled in manual mode. To enable it, simply click “Record.”

If you want to disable automatic recording in autonomous driving mode, you can toggle the setting to switch between manual and automatic modes.

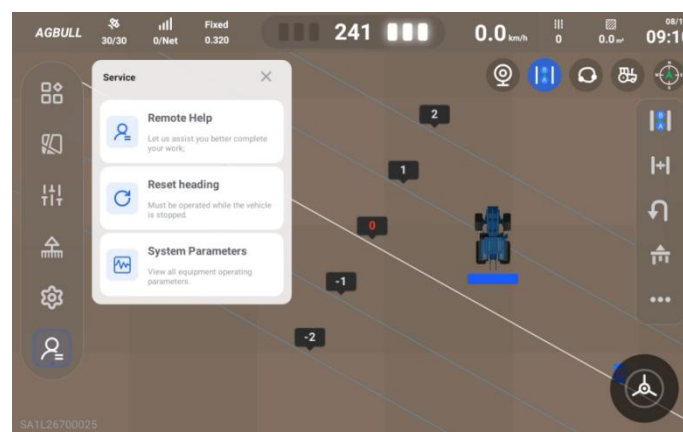
Click the icon  to access Settings, then select “Navigation Settings.”



3.2 Service Menu

On the main screen, click “Help” to open the remote interface, reset the heading angle, or view the current system parameters.

Click  to open Service Management to view the features available on this screen.



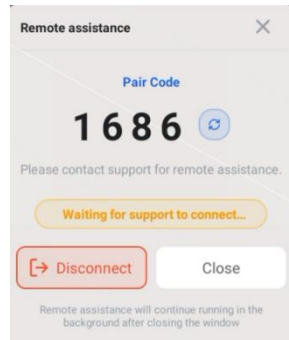
3.2.1 Remote help

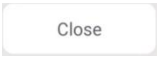
Click “Remote Help” to open the remote interface.

After connecting the tablet to the internet, users can remotely access this device using the ID.

You can view your current remote assistance code by contacting your dealer or our technical support team. Then, send this code to our technical support team, and we will resolve the issue remotely.

Note: The remote assistance code changes each time. Once the remote connection is established, a message stating “Remote connection successful” will appear.



Click  to refresh the remote help code. Click  to disconnect. Click  to close this page.

3.2.2 Reset Heading

Click “Reset heading” to enable the “Reset heading” feature. A message stating “Reset heading successfully” indicates that the reset is complete.

3.2.3 System Parameters

Click “System Parameters” to open the system parameters screen. View the current parameter information.

System Parameters

Real-time Info

(X, Y)

542873.547, 3781641.938

Roll

0.000°

Heading angle

0.000°

DR_Roll

0.000°

SIM Card Information

SIM 1 Carrier

Unicom

SIM 1 Signal Strength

-74dBm

SIM 1 IMEI

af787753240eefa6

SIM 1 ICCID

89860624540015756069

Dimension Parameters

Wheelbase

2.00

To rear axle

0.00

To middle axle

2.00

Front hitch

2.00

Antenna height

2.00

To rear axle

0.00

Row Spacing

1.00

Implement width

4.00

Center offset

0.00

Installation Parameters

Vehicle

Regular tractor

Actuator

Wheel

Angle sensor

None

Steering controller

—

Nav. controller

SA300

Front wheel gyro

Type

None

Rate

0.0

History average

0.0

Body gyro

Type

Three-axis Gyro

Rate

0.0°/s

Roll Zero

0.0

Pitch Zero

—

Driver Parameters

Wheel Diameter

60

Frequency

0

Steering Gap

18.0

Installation offset

Pitch Deviation

0.000

Roll Deviation

0.000

Motor Parameters

Current Angle

0.0°

Current Voltage

12.0 V

Electricity

-1.0 A

Other Information

Wheel Version

231103

Software Code

6000052

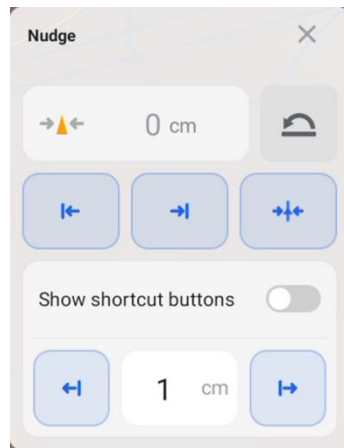
ISOBUS Library

1.17.1

3.3 Nudge Menu

Click  to open the Nudge menu, where you can perform operations such as line

offsetting.



- Click  to cancel all current micro-moves that have been made, including those accumulated over time.
- Click  or  to move half a tool width to the left or right.
- Click  to set the current position as the reference line and clear any lateral deviation;  this will be displayed in the top status bar .
- Show shortcut buttons: Users can find “Feature Settings” in the Settings menu and toggle the “Offset” switch on. A quick-action button for the offset function will then appear on the main screen. To turn  off, simply click the button.



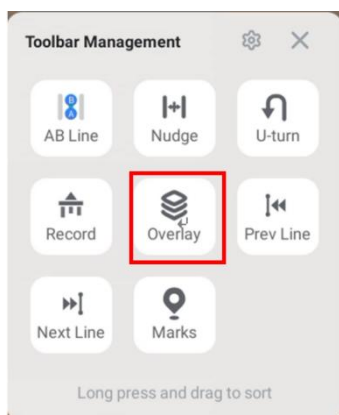
- Click  the input field to enter a value, and then click  or  to move left or right by the corresponding distance.

3.4 More Features

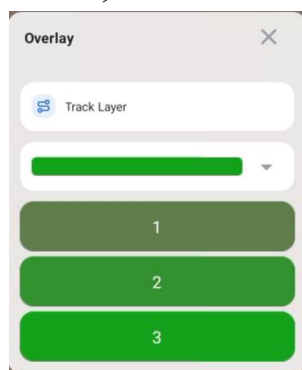
Click  to open more feature information. You can view the features currently displayed in the right sidebar or some hidden features.

Press and hold a feature icon to reorder them.

3.4.1 Overlay

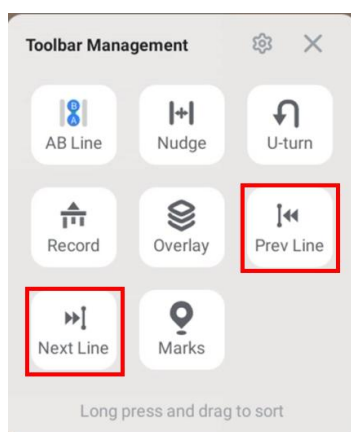


Click to view more feature information, then select “Overlay” to open it.



Click  to switch the track color; currently, green, blue, and red color schemes are supported.

3.4.2 Prev Line and Next Line

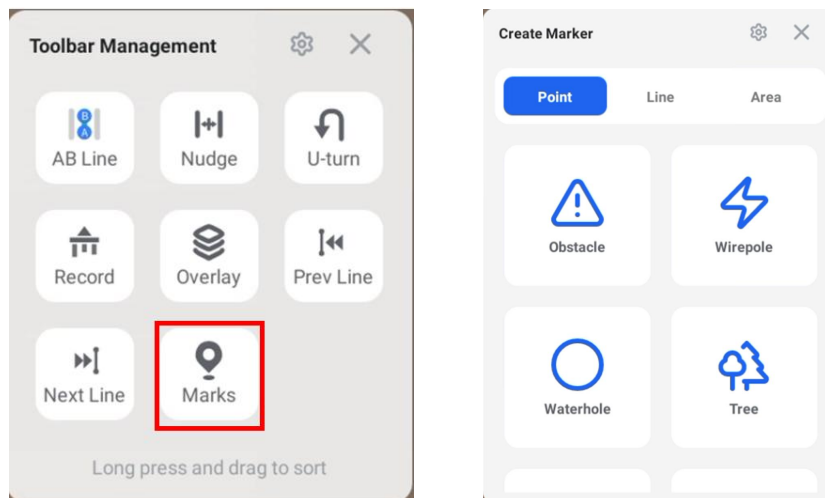


Prev Line: Click  to switch to the previous planning line.

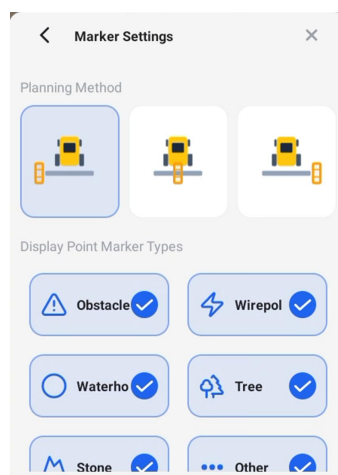
Next Line: Click  to switch to the next planning line.

3.4.3 Marks

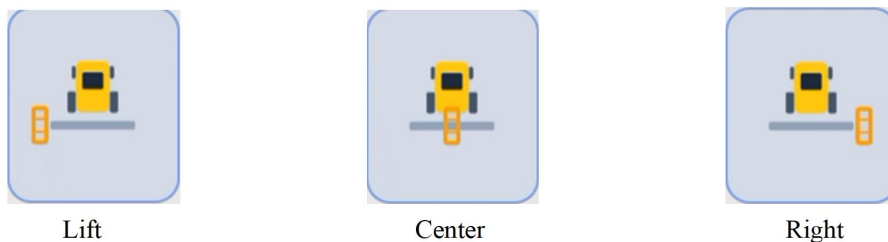
Click to enter “Marks” to mark obstacles.



Click  to access the marker settings screen.



You can select the appropriate planning method, and the marker will lean toward the selected side. Click to choose left-aligned, centered, or right-aligned.



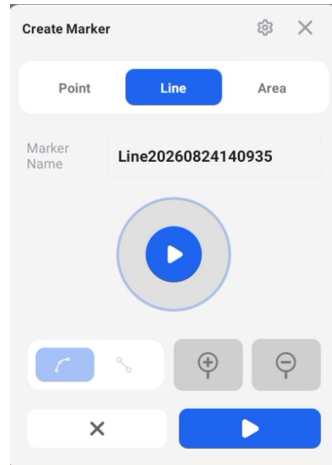
You can click “Display Point Marker Types” to choose which markers appear on the main interface. Click  again to hide them from the main interface.

: Click to mark obstacles at individual locations, including the following types:



Line

:Click to set line obstacles. This will take you to the following screen:



If there is a straight line within the curve, click  to switch to straight-line mode.

In this mode, the device will only record the two endpoints and draw a straight line. If

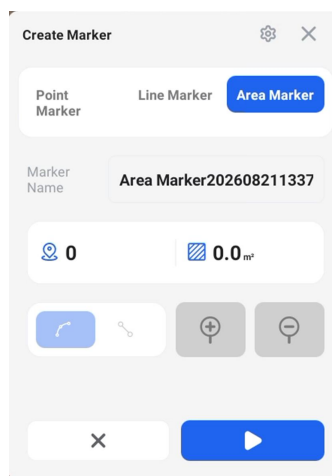
you want to switch back to the curve, click  to switch. Click   to

increase or decrease the number of points in line mode .

Area

:Click here to set up obstacles on the surface, which will take you to the

following screen:



You can change the name of the current marker.

If there is a straight line within the curve, click  to switch to straight-line mode. In this mode, the device will only record the two endpoints and draw a straight line. If you want to switch back to the curve, click  to switch. Click   to increase or decrease the number of points in line mode .

3.5 Turn On or Off Autosteer



: Autopilot is off.



: Autopilot is on.



: A fault message has appeared, and Autopilot cannot be activated. Please check the cause of the fault. For details, see “[12 Troubleshooting Guide](#)”.

Chapter 4-Software Customization Button

Description

4.1 Camera

Allows the operator to monitor tractor operations on the display by connecting a standard camera via.

Click the icon  in the upper-left corner of the screen to open the camera interface. Click the icon again or click icon  to exit the camera interface.

Connect the camera to the tablet and make sure the power switch is turned on to view the live feed. The video resolution is 1280×720, and the preview window can be dragged to reposition it.

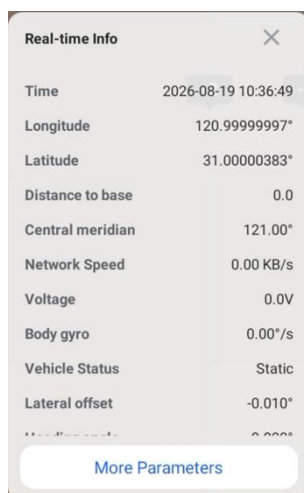
Click the icon  to flip the current image. Click it again to restore the normal view.

Click the icon  to rotate the current view clockwise. If you accidentally click this icon, try clicking it several times to restore the normal viewing angle.

Click icon  to zoom in on the current view; click it again to exit the zoom mode.

4.2 Compass

Click  to open the list of current vehicle specifications and view a summary of the information.



Real-time Info	
Time	2026-08-19 10:36:49
Longitude	120.99999997°
Latitude	31.00000383°
Distance to base	0.0
Central meridian	121.00°
Network Speed	0.00 KB/s
Voltage	0.0V
Body gyro	0.00°/s
Vehicle Status	Static
Lateral offset	-0.010°
More Parameters	

You can also click to go to a more parameters page to view the complete specifications.

System Parameters

Real-time Info

(X, Y)

542873.547, 3781641.938

Roll

0.000°

Heading angle

0.000°

DR_Roll

0.000°

SIM Card Information

SIM 1 Carrier

Unicom

SIM 1 Signal Strength

-74dBm

SIM 1 IMEI

af787753240eefa6

SIM 1 ICCID

89860624540015756069

Dimension Parameters

Wheelbase

2.00

To rear axle

0.00

To middle axle

2.00

Front hitch

2.00

Antenna height

2.00

To rear axle

0.00

Row Spacing

1.00

Implement width

4.00

Center offset

0.00

Installation Parameters

Vehicle

Regular tractor

Actuator

Wheel

Angle sensor

None

Steering controller

—

Nav. controller

SA300

Front wheel gyro

Type

None

Rate

0.0

History average

0.0

Body gyro

Type

Three-axis Gyro

Rate

0.0°/s

History average

0.0

Roll Zero

—

Pitch Zero

—

Driver Parameters

Wheel Diameter

60

Pitch Deviation

0.000

Frequency

0

Roll Deviation

0.000

Steering Gap

18.0

Installation offset

Motor Parameters

Current Angle

0.0°

Current Voltage

12.0 V

Electricity

-1.0 A

Other Information

Wheel Version

231103

Software Code

6000052

ISOBUS Library

1.17.1

4.3 Guide Lines and Boundary Patterns



: When a user creates a planning line, the system automatically switches to planning line mode for operation.



: When a user creates a boundary line, the system automatically switches to boundary line mode for operation.

When both a boundary line and a planning line exist, the user can manually switch

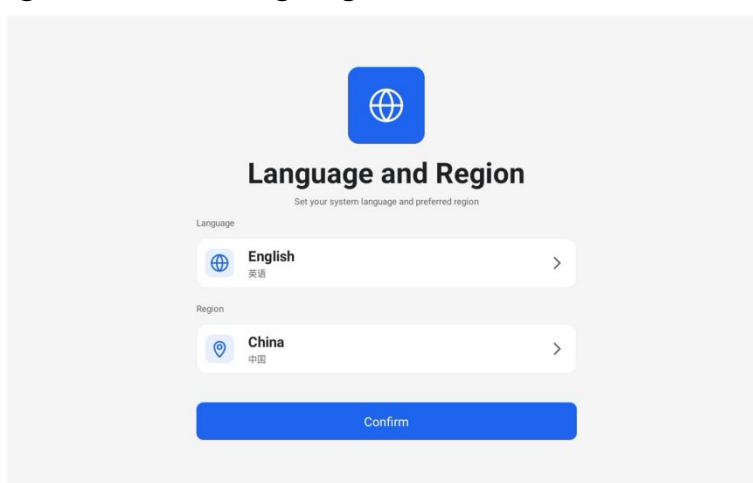
between the two modes for operation. Click   to switch modes.

Chapter 5-Quick Setup Guide

This chapter explains how to create a vehicle when you first start the software, calibrate the vehicle to obtain the corresponding parameters, and check whether the software and firmware versions are up to date.

5.1 Choose language and Region

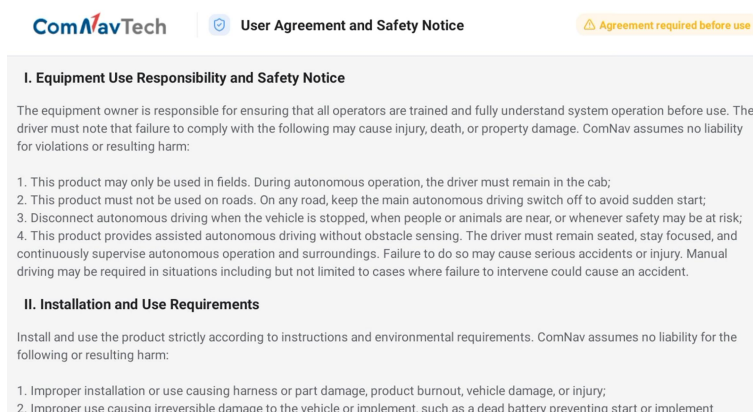
When users launch the AG601Pro for the first time, they will be prompted to select a language. The software currently offers multiple language options, and more languages are being added on an ongoing basis.



In the future, users will be able to switch languages via the Settings > Language and Units page.

5.2 Safety Instructions

Before using the ComNav AG601 Pro Autosteer System, make sure that you have read and understood all the safety requirements.



3. Use in unsuitable environments preventing normal operation, such as inability to acquire satellites indoors.

III. Liability Disclaimer

To the maximum extent permitted by law, ComNav disclaims liability for personal or property loss from data loss due to normal aging, human error, negligence, or other causes, and for any special or indirect damages. Some jurisdictions do not allow such limitations; where not allowed, ComNav's total liability shall not exceed your actual payment.

IV. Product Data and Data Traffic

1. This product uploads location and other data to the platform;
2. Data card recharge supports only ComNav data cards.

V. User Consent

If you agree to the following, press the "Agree" button:

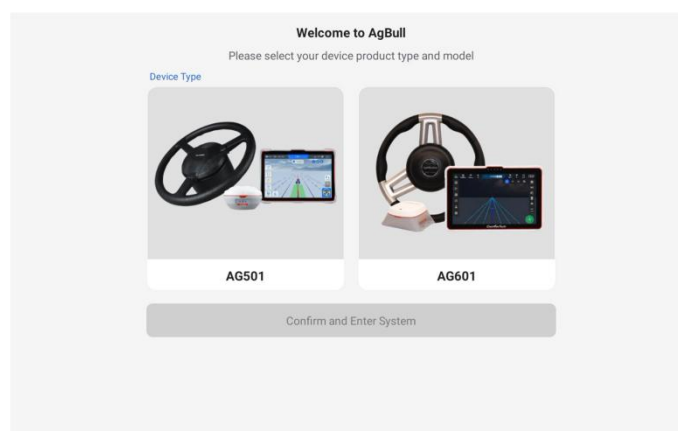
1. You have read and understood the above and will comply with all warnings;
2. You will operate and control the vehicle accordingly;
3. You have completed autonomous driving system training and have read and understood the operation manual.

When the tablet is powered on, the AG601Pro software will automatically start. The first time you enter the software, safety warnings will pop up, as shown in the image below.

Note: Please read the User Agreement carefully, then click 'Agree' to enter the software.

5.3 Choose Device Type

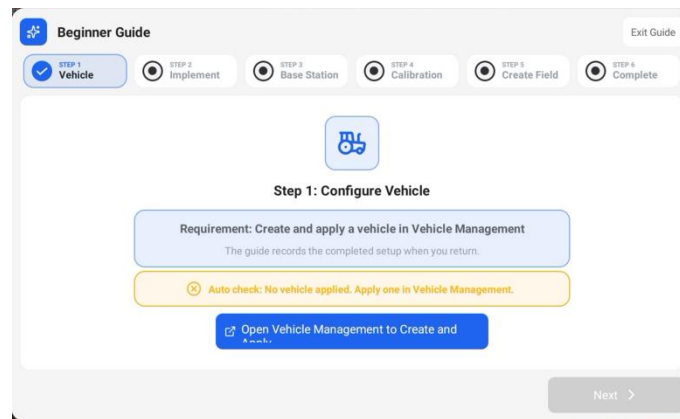
When logging into the system for the first time, select the appropriate system and click to proceed. Currently, the AG501 PRO and AG601 PRO systems are available.



Note: Before selecting a system, please ensure it is compatible with your device; otherwise, various error messages may appear after startup, and these issues cannot be resolved.

5.4 Create Vehicle

When you log in for the first time, the system will automatically redirect you to the New User Guide screen. The first step on this screen is “Create a New Vehicle”; click it to access the vehicle creation screen.



If you accidentally exit the tutorial, you can also create a new vehicle by clicking  on “Vehicle.”



Use the correct vehicle measurement data to create a new vehicle configuration profile.

5.4.1 Create Vehicle:

Currently, when creating a new configuration, you can choose from four vehicle types: Regular tractor, Articulated tractor, Combine harvester, Tracked tractor, and Transplanter.

1. Click on the image to select the corresponding tractor type:



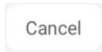
2. After selecting the vehicle type, fill in the corresponding information based on the vehicle details.

The screenshot shows a form with the following fields and controls:

- *Vehicle Brand**: A dropdown menu with "Other" selected.
- * Model**: A dropdown menu with "Other" selected.
- *Vehicle name**: A text input field containing "AG601_20260817".
- License Plate / Device ID**: An empty text input field.
- Steering Wheel Nameplate No.**: An empty text input field.
- ULTRA-LOW SPEED MODE**: A toggle switch currently turned off.

- **Vehicle Brand**: Click  to select the appropriate vehicle brand. Currently, only "Other" is supported.
- **Model**: Click  to select the appropriate model. Currently, only "Other" is supported.
- **Vehicle Name**: Enter the corresponding vehicle name. By default, the format AG601_current date will be generated.
- **License Plate/Device ID**: Enter the license plate or device ID to ensure the vehicle and device match.
- **Steering Wheel Nameplate No.:** Enter the Steering Wheel Nameplate No. to ensure that the steering wheel and equipment information match.
- **ULTRA-LOW SPEED MODE**: Select whether to use Ultra-Low Speed Mode. If you choose this mode, please be careful not to drive too fast while using it.

3. Cancel, Apply, Next.

Click  to cancel the creation of the current vehicle;

Click  to apply the current vehicle

Note: make sure all vehicle parameters have been entered before clicking; otherwise, a message will appear asking you to complete the vehicle parameter entry, and you will be redirected to the parameter entry screen;

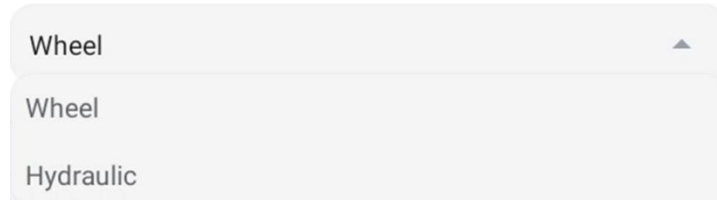
Click  to proceed to the next step.

5.4.2 Set the Vehicle Power Type and IMU Sensor Type

► Set Vehicle Power Type :

Click  to select the corresponding vehicle powertrain and control mode; currently, Wheel and Hydraulic modes are supported.

* Drive Type



Wheel

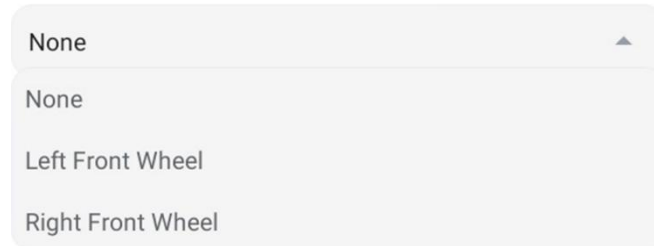
Wheel

Hydraulic

► Set IMU Sensor Type :

When using a regular tractor, articulated tractor, combine harvester, or transplanter, you can choose whether to use an angle sensor; the system offers three options: None, Left Front Wheel, and Right Front Wheel.

* Angle sensor



None

None

Left Front Wheel

Right Front Wheel

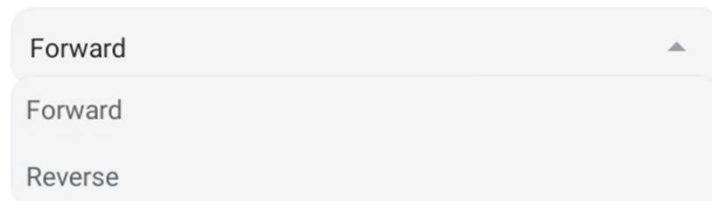
If you need to use a front wheel angle sensor, it must be installed in a position where it can rotate with the tire. Please ensure the sensor is installed horizontally.

Select “Left Front Wheel” or “Right Front Wheel” based on the actual installation location; if no sensor is installed, select “None.”

Note: Installing a front wheel angle sensor on an articulated tractor is not recommended.

When using a tracked tractor, the system does not recommend using the front wheel sensors, so this mode is disabled. Instead, you can select from the available steering modes, which include forward and reverse.

* Steering Mode



Forward

Forward

Reverse

► Configuring the External Body Gyro

If your device requires an external body gyro, you can click  to enable the external body gyro option and configure the corresponding parameters in Step 3. For details, please refer to Section 3.

Note: In addition, when using the body gyro, the front wheel angle sensor will not be available.

EXTERNAL BODY GYRO



The external body gyro must be installed in a stable, non-vibrating location, such as under a vehicle seat.

Note: When using an external body gyro, the external body gyro in the built-in antenna will not be available.

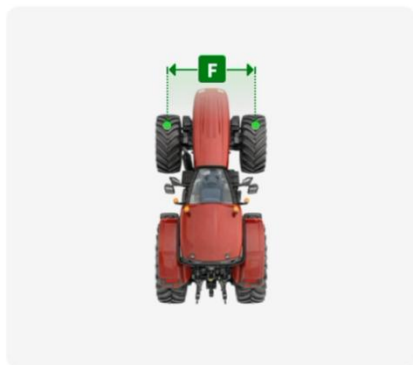
5.4.3 Setting the Vehicle Geometry:

Sets the vehicle measurements so that guidance can work accurately. Measurement methods may vary slightly depending on the vehicle model; please follow the instructions provided in the specifications when taking measurements and entering the data.

Note: Measure the vehicle dimensions as accurately as possible. The recommended tolerance is +/- 5 cm.

On the “Vehicle Dimensions” and “Antenna Position” parameter input screens, when you click on each parameter, the system will display instructions on how to measure that parameter on the left side of the screen.

● Regular tractor:



* **F** Front Wheel Track Width

1.850

Meter



* **W** Front-Rear Wheelbase

2.850

Meter



* **E** Distance from Rear Axle Center to Ground

0.750

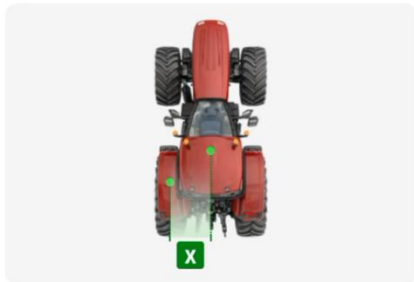
Meter

Click the “Maximum Steering Angle” field to enter a value and ensure that the tractor's maximum steering angle is set correctly.

* **B** Maximum Steering Angle

30

Only positive values can be entered for antenna position parameters. Please ensure that the front-to-back and left-to-right directions of the antenna position are correct, select the corresponding position, and enter the parameters.



* **X** To middle axle

CL Left 0.000 Meter
 CL Left Antenna to Rear Axle
 CL Right 1.200 Meter

* **Y** Distance from Antenna to Rear Axle

RA Front 1.200 Meter
 RA Front Antenna to Ground
 RA Rear

* **Z** Distance from Antenna to Ground

2.850 Meter

Z



* **F** Rear Wheel Track Width

1.850 Meter

* **W** Front-Rear Wheelbase

2.850 Meter

* **E** Distance from Rear Axle Center to Ground

0.750 Meter

Click the “Maximum Steering Angle” field to enter a value and ensure that the tractor's maximum steering angle is set correctly.

* **B** Maximum Steering Angle

30

Only positive values can be entered for antenna position parameters. Please ensure that the front-to-back and left-to-right directions of the antenna position are correct,

select the corresponding position, and enter the parameters.



* **X** To middle axle

CL Left
 CL Left
 CL Right

0.000 Meter
 Antenna to Rear Axle
 1.200 Meter



* **Y** Distance from Antenna to Rear Axle

RA Front
 RA Front
 RA Rear

1.200 Meter
 Antenna to Ground
 Meter



* **Z** Distance from Antenna to Ground

2.850 Meter

● Combine harvester:



* **F** Front Wheel Track Width

1.850 Meter



* **W** Distance from articulation point to front axle

2.850 Meter



* **B** Distance from articulation point to rear axle

0.000 Meter



* **E** Distance from Front Axle Center to Ground

0.750 Meter

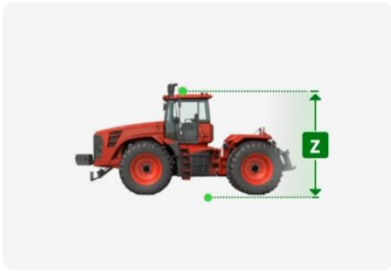
Click the “Maximum Steering Angle” field to enter a value and ensure that the tractor's maximum steering angle is set correctly.

* **B** Maximum Steering Angle

30

Only positive values can be entered for antenna position parameters. Please ensure that the front-to-back and left-to-right directions of the antenna position are correct, select the corresponding position, and enter the parameters.





X

To middle axle

CL Left

0.000

Meter

CL Left

Antenna to Rear Axle

1.200

Meter

CL Right

1.200

Meter

Y

Distance from Antenna to Rear Axle

RA Front

1.200

Meter

RA Front

Antenna to Ground

Meter

RA Rear

Meter

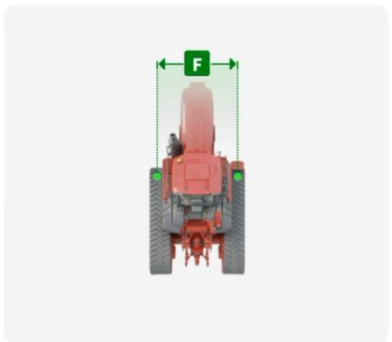
Z

Distance from Antenna to Ground

2.850

Meter

● Tracked tractor:





F

Front Wheel Track Width

1.850

Meter

W

Front-Rear Wheelbase

2.850

Meter

E

Distance from Rear Axle Center to Ground

0.750

Meter

Click the “Maximum Steering Angle” field to enter a value and ensure that the tractor's maximum steering angle is set correctly.

B

Maximum Steering Angle

30

Only positive values can be entered for antenna position parameters. Please ensure that the front-to-back and left-to-right directions of the antenna position are correct, select the corresponding position, and enter the parameters.





X

To middle axle

CL Left

0.000

Meter

CL Left

Antenna to Rear Axle

1.200

Meter

CL Right

1.200

Meter

Y

Distance from Antenna to Rear Axle

RA Front

1.200

Meter

RA Front

Antenna to Ground

Meter

RA Rear

Meter

Z

Distance from Antenna to Ground

2.850

Meter

● Transplanter:



* **F** Front Wheel Track Width

1.850

Meter



* **W** Front-Rear Wheelbase

2.850

Meter



* **E** Distance from Rear Axle Center to Ground

0.750

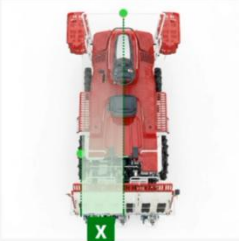
Meter

Click the “Maximum Steering Angle” field to enter a value and ensure that the tractor's maximum steering angle is set correctly.

* **B** Maximum Steering Angle

30

Only positive values can be entered for antenna position parameters. Please ensure that the front-to-back and left-to-right directions of the antenna position are correct, select the corresponding position, and enter the parameters.



* **X** To middle axle

CL Left 0.000
 CL Left Antenna to Rear Axle
 CL Right 1.200



* **Y** Distance from Antenna to Rear Axle

RA Front 1.200
 RA Front Antenna to Ground
 RA Rear



* **Z** Distance from Antenna to Ground

2.850

Meter

5.4.4 Set the External Body Gyro

When using an external body gyro, you need to enter the parameters in the interface (using a regular tractor as an example).



External Body Gyro Position

* **X** Distance from Gyro to Centerline

CL Left 0.000

* **Y** Distance from Gyro to Rear Axle

RA Front 1.200

* **Z** Distance from Gyro to Ground

0.000

Only positive values can be entered for the External Body Gyro parameter. Please verify that the front-to-back and left-to-right orientations of the External Body Gyro are correct, select the appropriate position, and enter the parameter.

● Regular tractor:



* **X** Distance from Gyro to Centerline

CL Left 0.000 Meter

CL Left Gyro to Rear Axle

CL Right 1.200 Meter

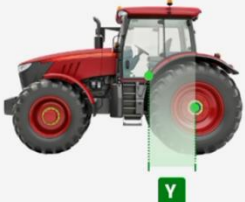


* **Y** Distance from Gyro to Rear Axle

RA Front 1.200 Meter

RA Front Gyro to Ground

RA Rear



* **Z** Distance from Gyro to Ground

0.000 Meter

● Articulated tractor:



* **X** Distance from Gyro to Centerline

CL Left 0.000 Meter

CL Left Gyro to Rear Axle

CL Right 1.200 Meter



* **Y** Distance from Gyro to Rear Axle

RA Front 1.200 Meter

RA Front Gyro to Ground

RA Rear



* **Z** Distance from Gyro to Ground

0.000 Meter

● Combine harvester:



* **X** Distance from Gyro to 提取文字 更多功能

CL Left 0.000 Meter

CL Left Gyro to Rear Axle

CL Right 1.200 Meter



* **Y** Distance from Gyro to Rear Axle

RA Front 1.200 Meter

RA Front Gyro to Ground

RA Rear



* **Z** Distance from Gyro to Ground

0.000 Meter

● Tracked tractor:



* **X** Distance from Gyro to Centerline

CL Left 0.000 Meter

* CL Left Gyro to Rear Axle

CL Right 1.200 Meter



* **Y** Distance from Gyro to Rear Axle

RA Front 1.200 Meter

* RA Front Gyro to Ground

RA Rear Meter



* **Z** Distance from Gyro to Ground

0.000 Meter

● Transplanter:



* **X** Distance from Gyro to Centerline

CL Left 0.000 Meter

* CL Left Gyro to Rear Axle

CL Right 1.200 Meter



* **Y** Distance from Gyro to Rear Axle

RA Front 1.200 Meter

* RA Front Gyro to Ground

RA Rear Meter



* **Z** Distance from Gyro to Ground

0.000 Meter

Once you have finished configuring your vehicle, click [Complete and Return](#) to return to the tutorial screen, where you will proceed to Step 2: Farm Equipment Setup. You can also click [Previous](#) to go back to the previous step to view related information.

Beginner Guide
Exit Guide

STEP 1 Vehicle

STEP 2 Implement

STEP 3 Base Station

STEP 4 Calibration

STEP 5 Create Field

STEP 6 Complete

Step 1: Configure Vehicle

Requirement: Create and apply a vehicle in Vehicle Management

The guide records the completed setup when you return.

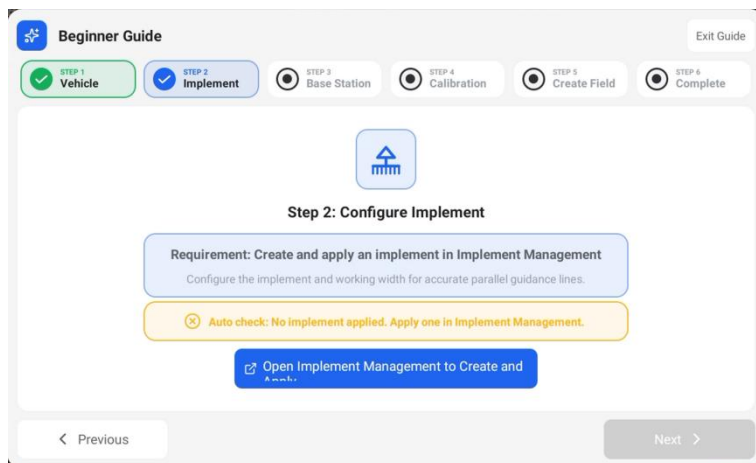
Auto check: Complete (applied vehicle: AG601_20260819)

[Open Vehicle Management to Create and](#)

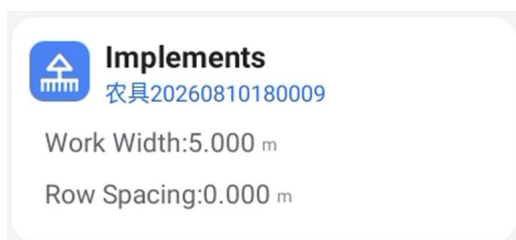
Next >

5.5 Create Implement

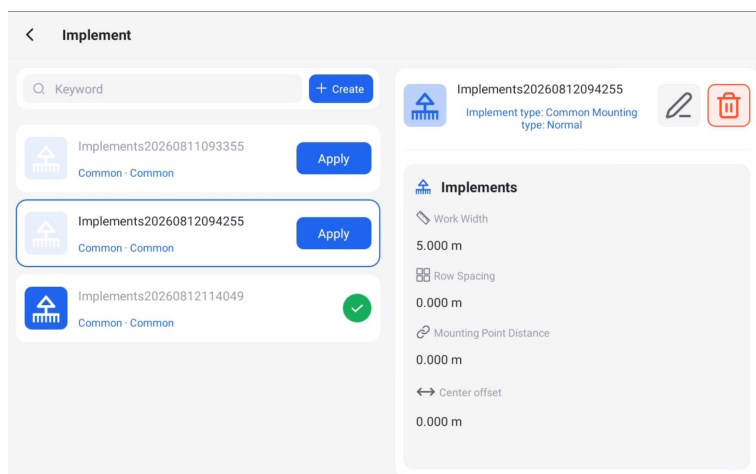
After completing the vehicle setup, return to the tutorial screen, where you can then configure your farming tools.

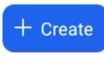


Alternatively, you can click  the main menu icon to open the menu bar, then select the “Implements” module.



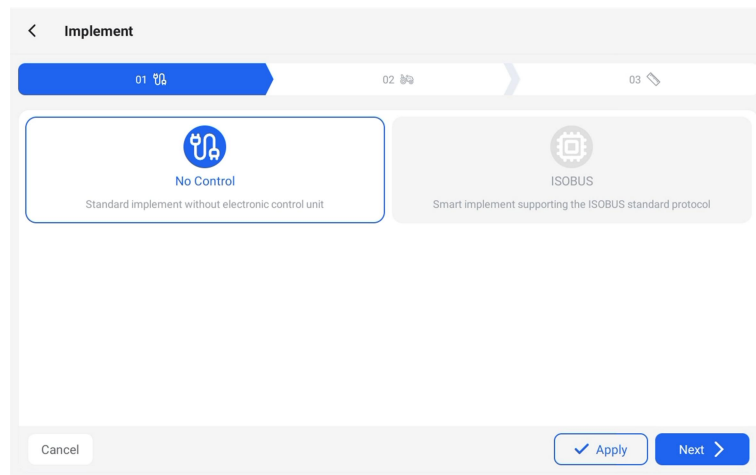
Click to open the “Implements” screen, where you can manage various types of agricultural equipment.



Click the “Create” icon  to open the farm tool creation interface.

► Steps 1:

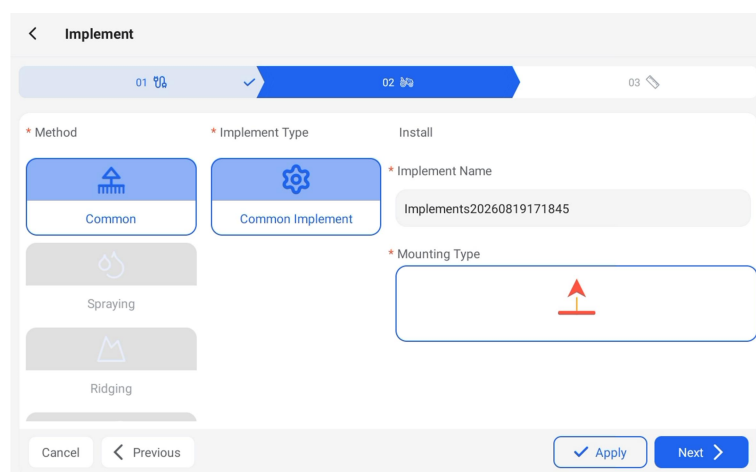
Open the Implements interface. Click the “Create” icon  to open the farm tool creation interface.



Select the appropriate mode and click Next . You can click Cancel  to exit the creation interface.

Note: When you click Apply  in this step, the system will automatically proceed to the second step and display the prompt “Please enter the implement name.”

► Steps 2:



Select an operation mode (Method), including Common, Spraying, Ridging, Planting, Fertilizing, Harvesting, Spreading, Water and Fertilizer, Tillage, Land Leveling, and other modes.



Select the implement type. Currently, the default implement type is “Common Implement.” Manually enter the name of the implement.

Note: Please enter the name of the farming tool according to the relevant requirements; otherwise, the name will be set by default in the format “implements+number.”

Select the mounting type; the current default is the rear-suspension mode. Once you've finished configuring the settings, click Next .

Note: If you click “Apply 

► Steps 3:

In Step 3, set the relevant parameters based on the image content and the farming tools, then click “Apply 

38

Implement

01 02 03

A Swath Width
0.000 Meter

B Pass-to-Pass Spacing
0.000 Meter

C Distance from Implement to Mounting Point
0.000 Meter

D Implement Center Offset
0.000 Meter

E Implement Actual Width

Cancel < Previous ✓ Apply

A, Swath Width: Effective working width in actual operation.

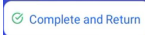
B, Pass-to-Pass Spacing: This refers to the width between two adjacent rows of operations; the default value is typically 0.

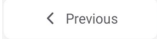
C, Distance from Implement to Mounting Point: This refers to the distance from the working position of the implement to its attachment point on the vehicle; the default value is typically 0.

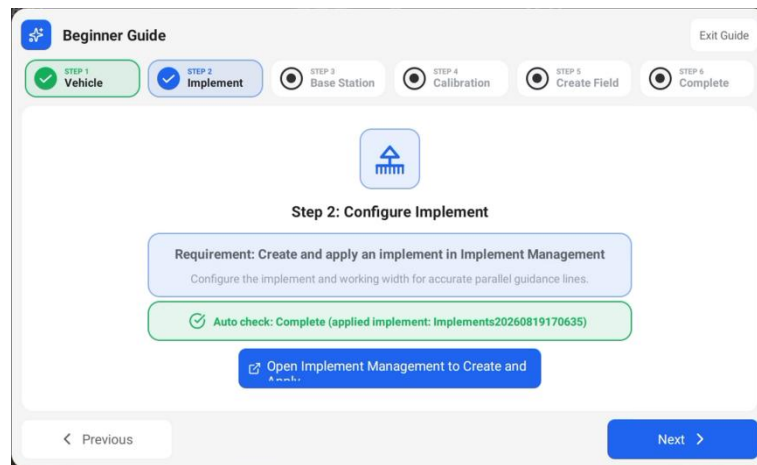
D, Implement Center Offset: This refers to the distance by which an agricultural implement is offset to the left or right during installation; under normal installation conditions, this value is typically 0.

E, Implement Actual Width: This refers to the actual width of the implement. Generally, the implement's width is the same as the actual working distance, i.e., the same as the swath width.

Once you've entered the parameters listed above that evening, the implement setup is complete, and you can click "Apply " to save the settings.

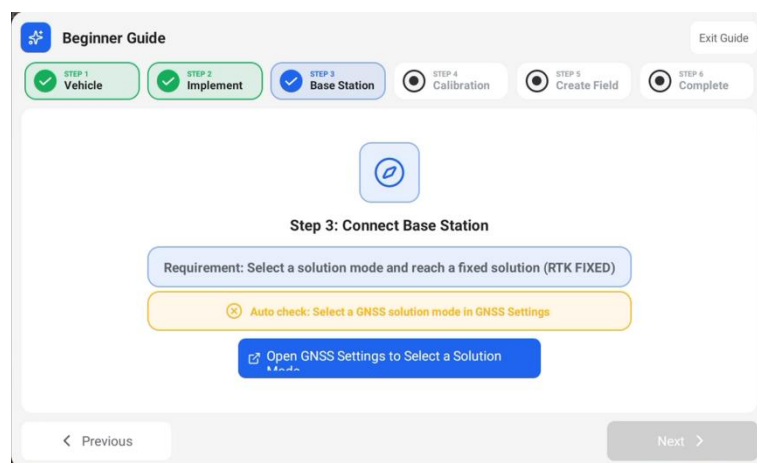
Once you have finished configuring your implement, click  to return to the tutorial screen, where you will proceed directly to Step 3: Base Station Setup. You can

also click  to go back to the previous step to view related information.

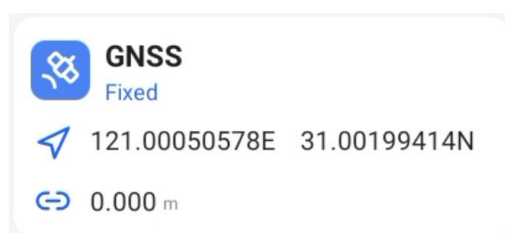


5.6 Signal Configuration

After completing the implement setup, return to the tutorial screen, where you can then configure your signal configuration.

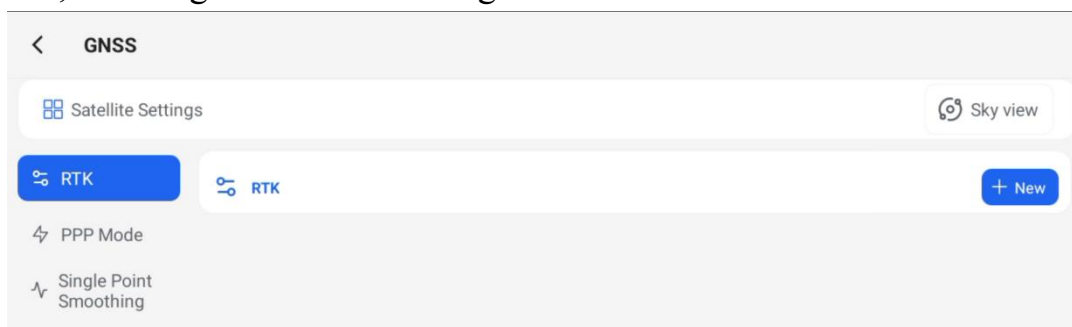


Alternatively, you can click the icon  to open the main menu, then select the GNSS menu to complete the relevant configuration, or click the icon  to go directly to the GNSS configuration menu.



In the GNSS configuration menu, you can choose from three processing modes: RTK,

PPP Mode, and Single Point Smoothing.



5.6.1 CORS

Use a cellular delivered RTK correction source from a network provider. Precision: 2.5 cm.

Note: Please consult your local CORS service provider to purchase an account before use.



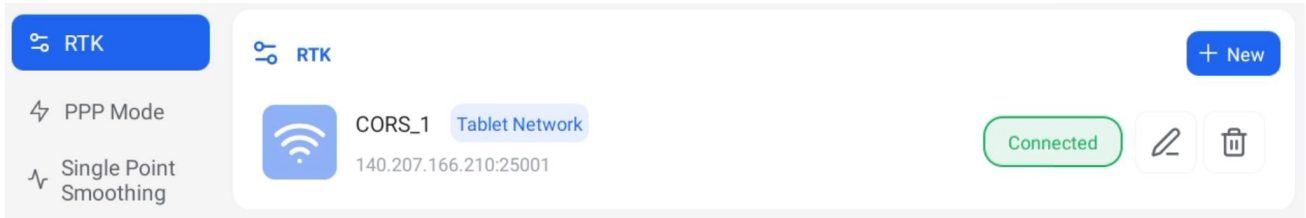
1. Ensure the tablet is connected to the internet before use.
2. Select the RTK mode, click the icon  to open the RTK configuration interface, and select the Tablet Network mode.

3. Enter the server IP and port.
4. Click  to retrieve the Source list, then select the desired mount point from the dropdown menu. If there is no internet connection, Mount Point will fail to retrieve the source list and display the message: "Fail to get source list."

5. Enter the Username and Password.

6. Click “Apply”  to apply the current CORS mode.

If this image appears,  it means the connection was successful.



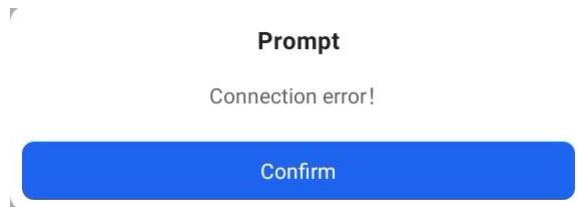
7. View  to check the connection status. See “[2.3 Satellite status](#)” and “[2.4 GNSS and Network Status](#)” to check the icon meaning.

The system will automatically save the CORS configuration.

1. Click  /  /  to apply/modify/delete the selected configuration.

2. Click  to add a new CORS configuration.

3. Click  the link. If the device is not connected to the internet, the following message box will appear.



4. When connecting via CORS, if the device has no network connection, it will display an icon  indicating that the tablet is currently offline.

5.6.2 Datalink

No need Internet. Must be used with a receiver as a base station. Precision: 2.5 cm.

► The SA300 Pro GNSS receiver is equipped with the ‘Longlink’ datalink module, which requires the use of a U70 module receiver as the base station. Operating range: 15 km.

Note: In addition to Longlink, it support for, TT450S, TRANSEOT, and SOUTH

protocols. Operational range: 5 km.

- The SA300 Pro GNSS receiver is equipped with the 'HX' datalink module, compatible with various datalink receivers as a base station. Operational range: 5 km.

ComNav offers a customized receiver T80 designed specifically for agricultural users.



Note: If you need detailed information about receivers and different SA300 Pro or you cannot choose the instrument you need, please feel free to contact our sales or technical staff, we will do our best to provide you with satisfactory service.

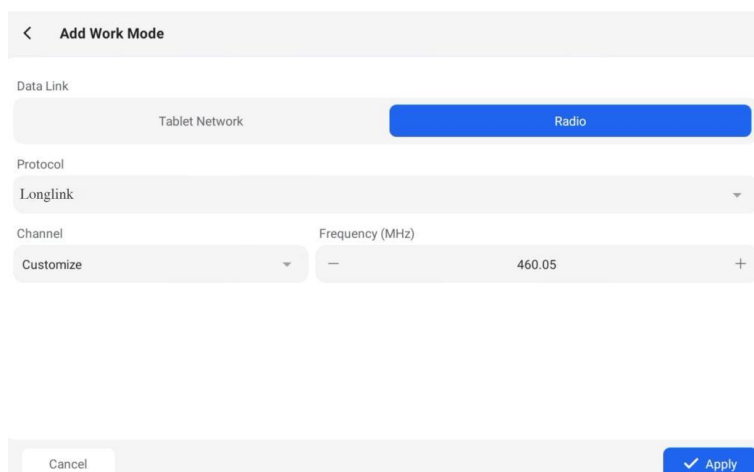
Configuration:

For example, using the T80 as a base station. **Note:** Ensure that both the receiver and the SA300 Pro are correctly connected to the UHF antenna.

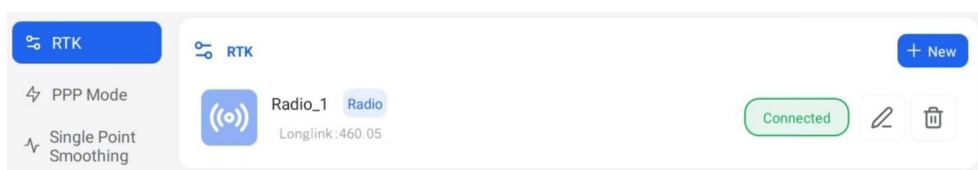
1. Press and hold the power button to turn on the T80. Use the two front panel buttons to configure the base station frequency. There are 11 channels (453.050~463.50) to choose from.

For the detailed process, please refer to the video on configuring agricultural T80 base stations: <https://youtu.be/2a6BwRoRcE0?si=3qi6iIobBwQ0AyOE>.

2. Ensure the tablet is connected to the internet before use.
3. Select the RTK mode, click the icon  to open the RTK configuration interface, and select the Radio mode.

A screenshot of a tablet screen showing the "Add Work Mode" configuration interface. At the top, there is a title bar with a back arrow and the text "Add Work Mode". Below this, there is a section labeled "Data Link" with two buttons: "Tablet Network" and "Radio". The "Radio" button is highlighted in blue. Below the "Data Link" section, there is a section labeled "Protocol" with a dropdown menu showing "Longlink". Below the "Protocol" section, there is a section labeled "Channel" with a dropdown menu showing "Customize". To the right of the "Channel" dropdown, there is a section labeled "Frequency (MHz)" with a text input field showing "460.05" and a "+" button. At the bottom of the screen, there are two buttons: "Cancel" and "Apply". The "Apply" button is highlighted in blue.

4. Click “Protocol” and select the Longlink or Longlink+ protocol.
5. Select the appropriate Channel (customizable) and Frequency (MHz).
6. Select the ‘CUSTOM’ Mode, set the Protocol and Frequency to match that of the base station.
7. Set the baud rate to 9600. Select Base station type.
8. Click  to apply. A successful application will look as shown in the figure.



The system will automatically save the Radio configuration.

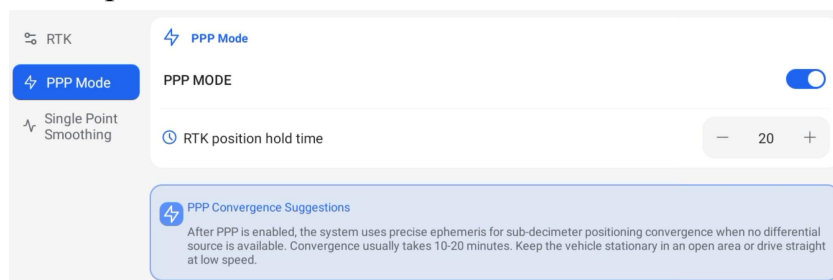
1. Click  /  /  to apply/modify/delete the selected configuration.
2. Click  to add a new Radio configuration.

5.6.3 PPP

No Internet or Datalink base station is required. The vehicle should remain stationary in an open area for approximately 15-20 minutes to converge satellite signals. Precision: approximately 10-15 cm.

Currently supports Beidou B2B high-precision service and Galileo high-precision service HAS. Note: Depending on the satellite coverage, the performance effects and convergence times vary in each region.

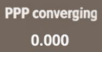
Note: At present, the coverage of the BeiDou PPP-B2b signal only includes the Asia-Pacific region. The Galileo PPP-HAS signal has global coverage, with improved signal quality in Europe.



1. Select the PPP mode, Click  to open the PPP mode.
2. Setting the RTK position hold time: When used in combination with the RTK signal, the system automatically switches to PPP signal after the RTK differential data is disconnected for a preset duration, which defaults to 20 seconds.
3. Click  to begin the convergence of the PPP signal. Once the settings are completed, they will be automatically saved. For future use, simply enable the PPP signal option.

Note: You can enable only one of Precise Point Positioning (PPP) or Single-Point Positioning.

Each time before use, a convergence time of 15-20 minutes for the signal is required.

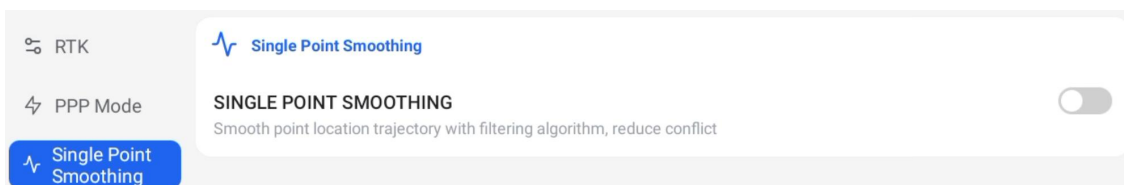
Users can check the convergence status in the upper right corner.  indicates that the PPP signal is converging. If the convergence is completed, the signal source will display as PPP. 

Note: Disabling and re-enabling the PPP signal option requires a fresh convergence.

5.6.4 Single-Point Smoothing

Single-point smoothing means that the GNSS board smooths the beating positioning without accepting any differential data to obtain relatively smooth and stable positioning data.

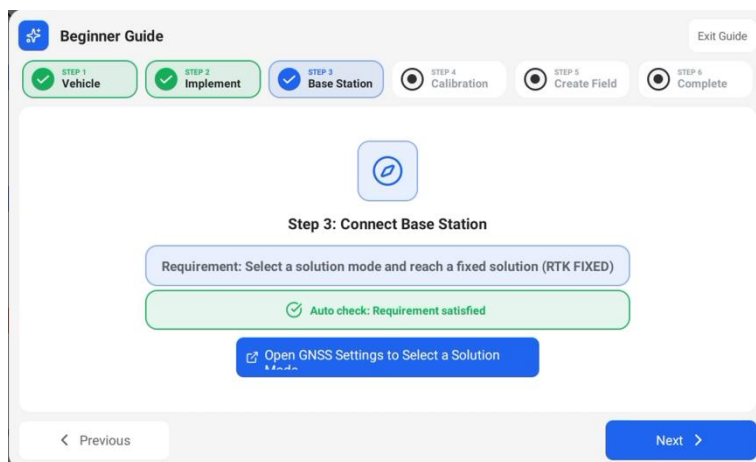
ComNav uses DP-filter Smooth Technology, it delivers consistent position error and assures a smooth (pass to pass) accuracy within the sub-meter to centimeter range. Precision: Over a 15-minute window, the Pass to Pass accuracy can reach about 15cm.



Select the Single Point Smoothing mode, Click  to open the PPP mode.

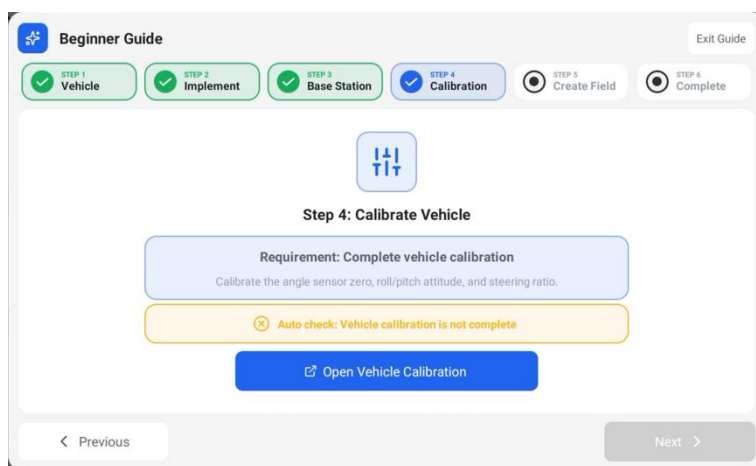
Note: You can enable only one of Single-Point Positioning or Precise Point Positioning (PPP).

Once you have finished configuring your signal configuration, click [Complete and Return](#) to return to the tutorial screen, where you will proceed directly to Step 4: Vehicle Calibration. You can also click [Previous](#) to go back to the previous step to view related information.

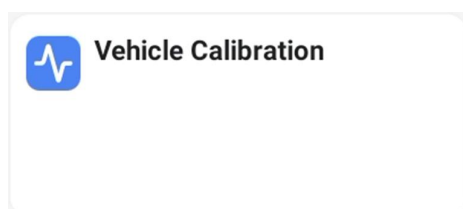


5.7 Vehicle Calibration Process

After completing the implement setup, return to the tutorial screen, where you can then configure your signal configuration.

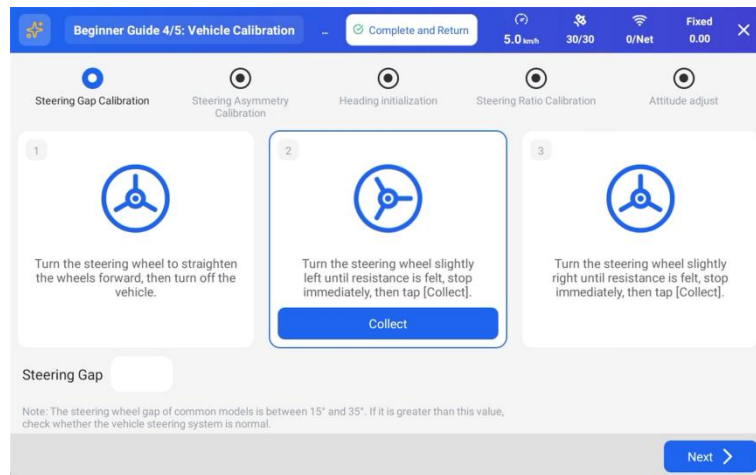


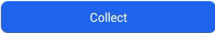
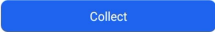
Alternatively, you can click the icon  to open the main menu, then select the Vehicle Calibration to complete the relevant configuration.



5.7.1 Steering Gap Play Calibration

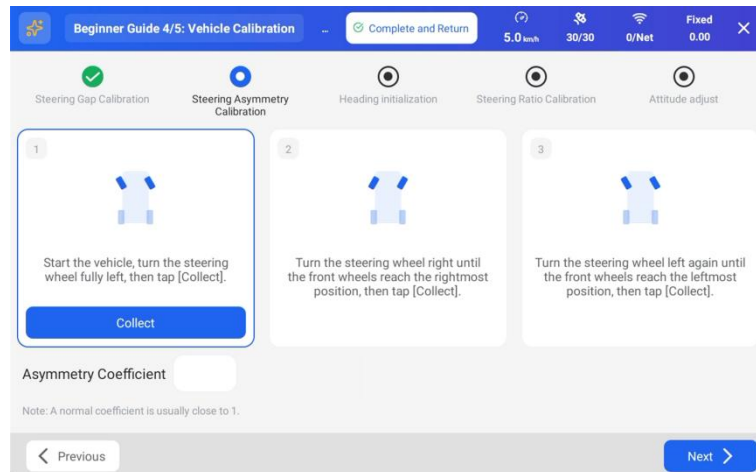
Perform Steering Gap Play Calibration on the vehicle. This procedure eliminates the delay in steering response caused by mechanical backlash in the steering system. When the controller issues a steering command, the steering wheel or wheels do not respond immediately due to this free play, resulting in a lag between the commanded and actual steering angles. This calibration also enhances steering precision and prevents system oscillation.



1. Please turn off the engine, stop the vehicle, and ensure that the front of the vehicle is facing straight ahead.
2. Turn the steering wheel to the left, and when you feel slight resistance, click  to record the data.
3. Turn the steering wheel to the right, and when you feel slight resistance, click  to record the data.
4. Normal calibration parameters typically range from 15 to 35.
5. Once you're done, then, click 'Next' to proceed to the Steering Asymmetry Calibration

5.7.2 Steering Asymmetry Calibration

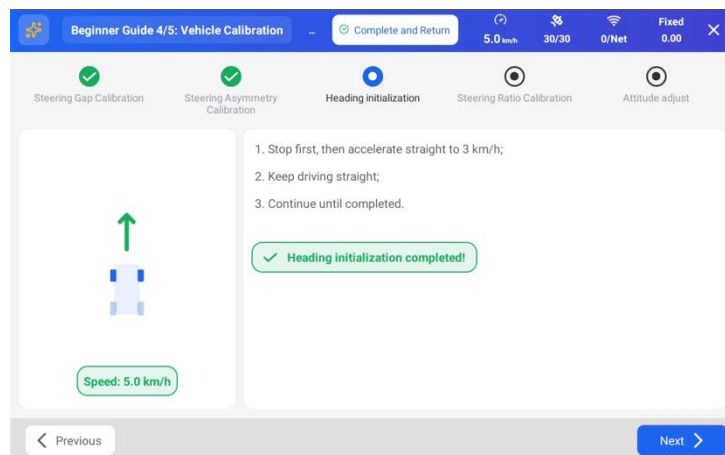
Completing the Steering Asymmetry Calibration improves path-following accuracy and ensures steering symmetry.



1. Start the vehicle and ensure it is traveling straight.
2. Turn the steering wheel all the way to the left, then click  to record the current value.
3. Turn the steering wheel all the way to the right, then click  to record the current value.
4. Turn the steering wheel all the way to the left again, then click  to record the current value. This will give you the current calibration value.
5. The calibration value is typically around 1. Once calibration is complete, save the settings.
6. Then, click 'Next' to proceed to the Heading initialization.

5.7.3 Heading Initialization

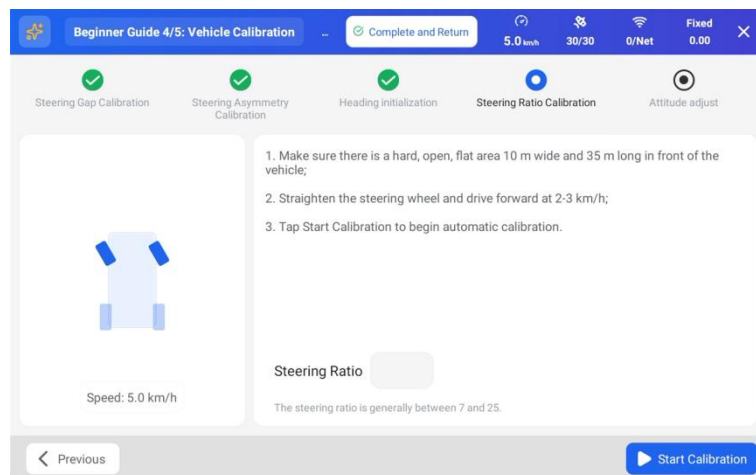
Stop the vehicle, then drive forward at a speed greater than 3 km/h. When the guidance indicator changes to 'Heading initialization' and the checkmark appears, it indicates that calibration is successful.



Then, click 'Next' to proceed to the Steering Ratio Calibration.

5.7.4 Steering Ratio Calibration

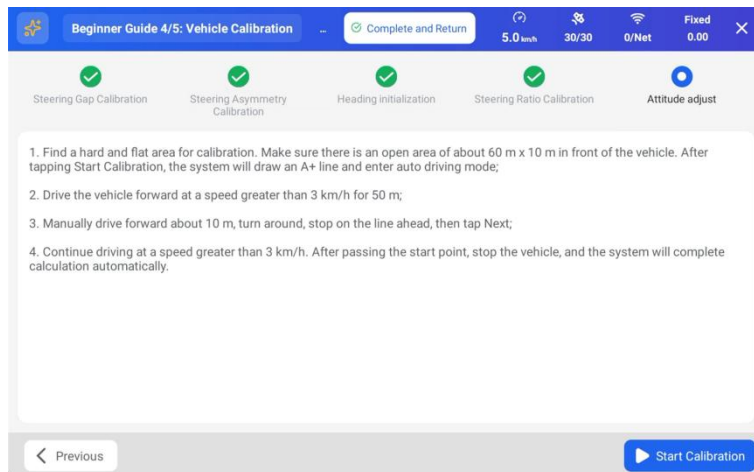
To accommodate vehicles with different horsepower ratings, adaptive calibration is required to determine the appropriate steering control force parameters for each vehicle. At the same time, during the parameter measurement process, the system can monitor and verify the consistency of the previously configured Steering Gap Play Calibration and Steering Asymmetry Calibration. Make sure there is a hard, open, flat area 10 m wide and 35 m long in front of the vehicle.



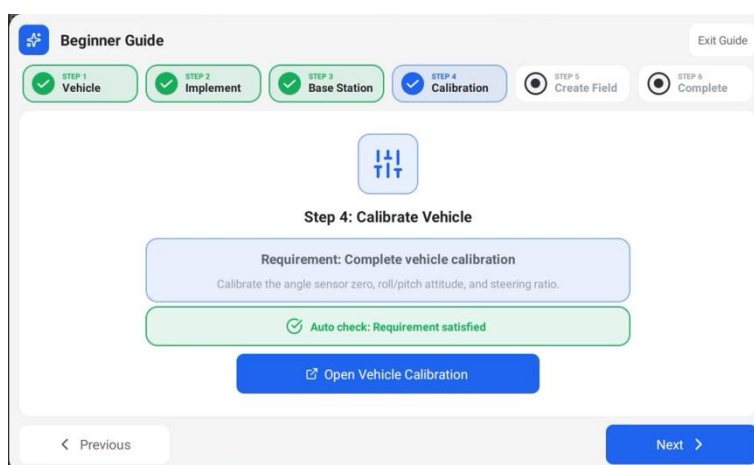
1. Start vehicle on flat ground and center steering wheel.
2. Drive vehicle at a speed greater than 2.0 km/h.
3. Click  button and release the steering wheel.
4. Wait for the progress bar to complete calibration.
5. Once the message indicating successful calibration appears along with a green check mark, you may click 'Next' to proceed to Attitude Adjust.

5.7.5 Attitude Adjust

Attitude adjust is to obtain the calibration value of roll angle and pitch angle of the vehicle. Find a hard and flat area for calibration. Make sure there is an open area of about 60 m x 10 m in front of the vehicle. After clicking Start Calibration, the system will draw an A+ line and enter auto driving mode;

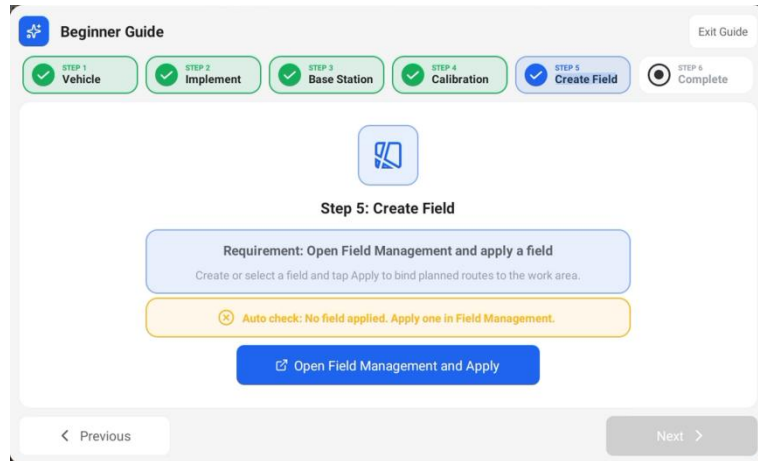


1. Click [Start Calibration](#) to go to the calibration page; you will then be automatically redirected to the main screen.
 2. Click [Start Calibration](#) to drive the vehicle straight for 50 meters at a speed greater than 3 kilometers per hour;
 3. Then, manually drive forward about 10 meters, make a U-turn, and stop at the marked line ahead, then click "Next";
 4. Continue driving at a speed greater than 3 kilometers per hour, and stop after passing the starting point; the system will automatically complete the calculation.
- Once you have finished configuring your signal configuration, click [Complete and Return](#) to return to the tutorial screen, where you will proceed directly to Step 5: Create Field. You can also click [Previous](#) to go back to the previous step to view related information.

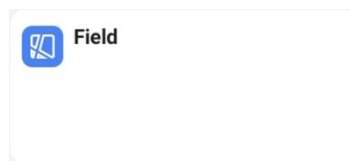


5.8 Create Field

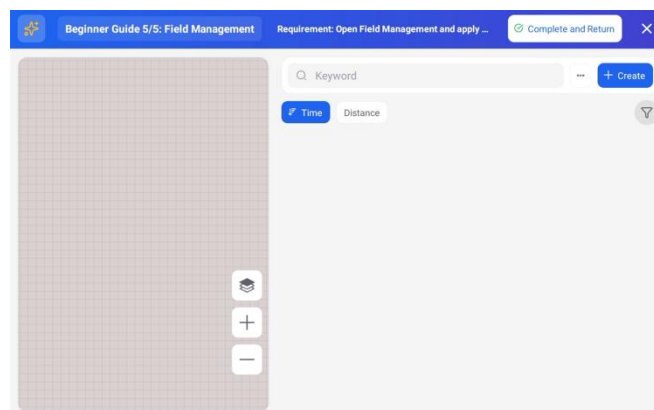
Once the vehicle has been calibrated, you need to create a new farm and a new user.



If you accidentally exit the tutorial, you can also create a new field by clicking  on “field.”



Click  to create a new farm and farmer.



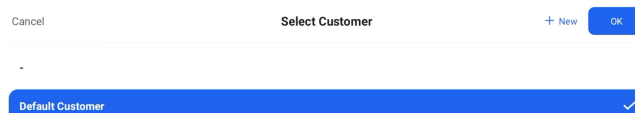
The creation interface appears as follows:

Field name: Create a new farm name.

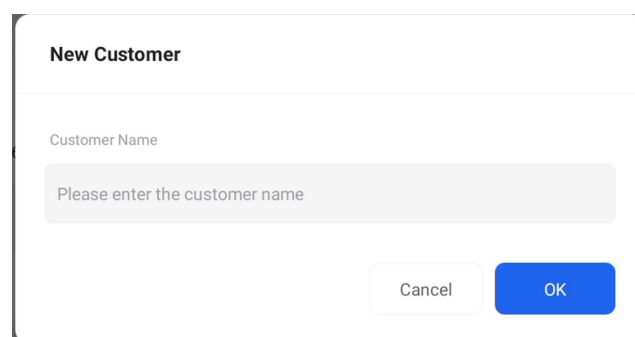
Note: If you do not enter a farm name, the system will automatically generate one

and save it.

Customer Name: Click  to select the appropriate Customer; click  to create a new Customer. Once you've made your selection, click  to save, or click  to Cancel.



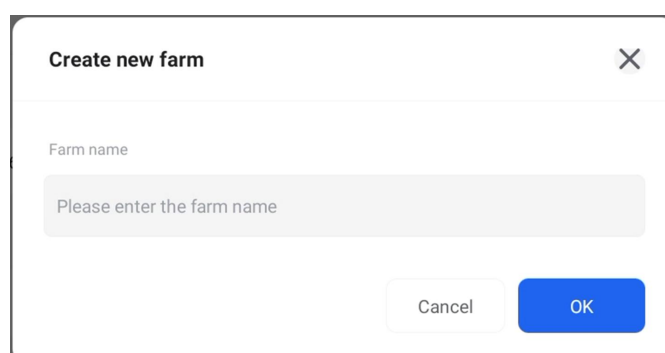
When you click “Create New Customer,” enter the new Customer name in the screen below, then click   ‘Save’ or “Cancel.”



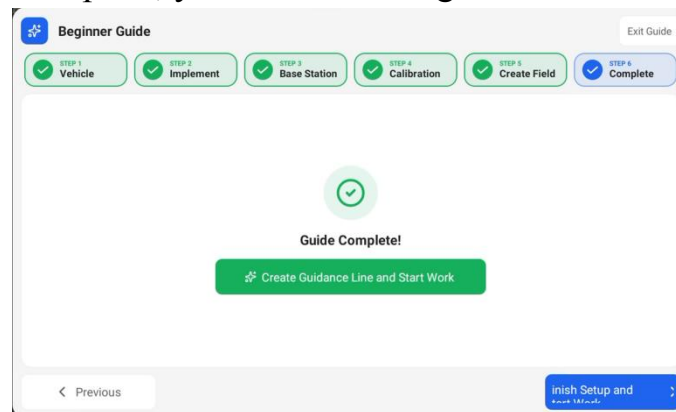
Farm Name: Click  to select the appropriate Customer; click  to create a new farm. Once you've made your selection, click  to save, or click  to Cancel.



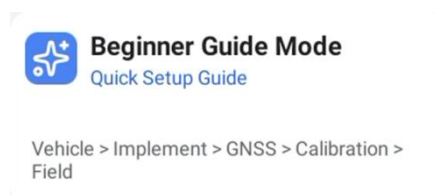
When you click “Create New farm,” enter the new farm name in the screen below, then click   ‘Save’ or “Cancel.”



Once all the setup is complete, you can start using it as usual.



If you accidentally exit the tutorial, you can click  to return to the tutorial screen.



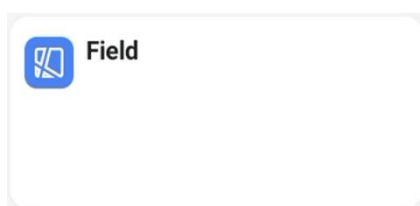
Chapter 6-Field Menu and Data Transmission

This section primarily covers features such as farm and farmer management, route planning, task management, and data import and export. It is designed to effectively assist Customers in managing farms and planning routes.

6.1 Field

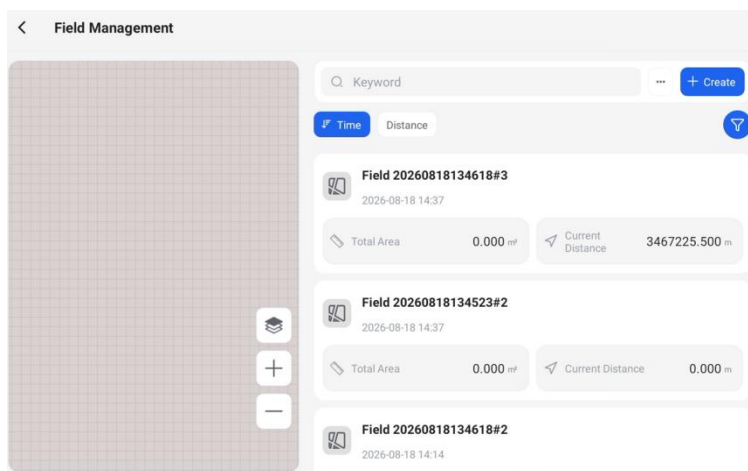
Click the main menu icon  to open the menu bar, then select the “Field” module.

Users can also click  to go directly to the farm management interface.

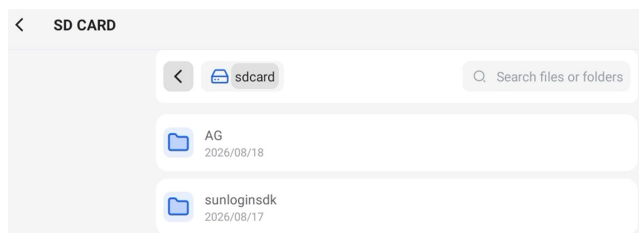


6.1.1 Field Interface Features

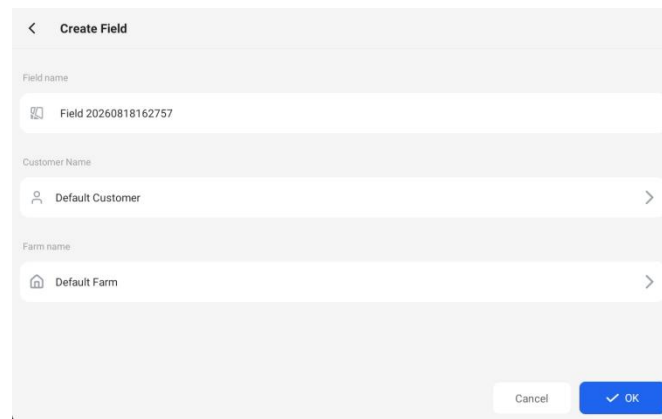
Customers can manage their farms here.



- Click    to switch maps, zoom in, or zoom out.
- Click  to select and import an ISOXML file. The following screen will appear; select the appropriate file to import. **Note:** Only the ISOXML file format is supported.



- Click  to create a new farm.



The 'Create Field' dialog box contains three input fields: 'Field name' with the value 'Field 20260818162757', 'Customer Name' with a dropdown showing 'Default Customer', and 'Farm name' with a dropdown showing 'Default Farm'. At the bottom right are 'Cancel' and 'OK' buttons.

- Field name: Create a new farm name.

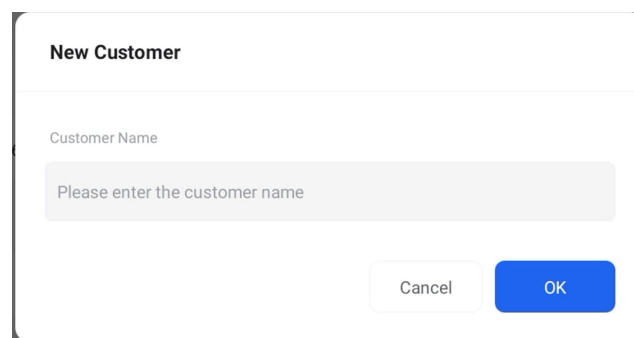
Note: If you do not enter a farm name, the system will automatically generate one and save it.

- Customer Name: Click  to select the appropriate Customer; click  to create a new Customer. Once you've made your selection, click  to save, or click  to Cancel.



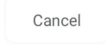
The 'Select Customer' dialog box has a search bar at the top with 'Cancel', 'Select Customer', '+ New', and 'OK' buttons. Below the search bar is a list with one item, 'Default Customer', which is highlighted in blue and has a checkmark icon to its right.

- When you click “Create New Customer,” enter the new Customer name in the screen below, then click   ‘Save’ or “Cancel.”

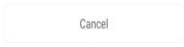


The 'New Customer' dialog box has a title bar 'New Customer' and a 'Customer Name' label. Below the label is a text input field with the placeholder text 'Please enter the customer name'. At the bottom right are 'Cancel' and 'OK' buttons.

- Farm Name: Click  to select the appropriate Customer; click  to create a new farm. Once you've made your selection, click  to save, or click  to Cancel.

- When you click “Create New farm,” enter the new farm name in the screen below, then click   ‘Save’ or “Cancel.”

- Click   to sort by time or by distance from your current location, from nearest to farthest.

- Select the farms or Customers you want to filter by, click  to apply the filter, or click  to cancel.

6.1.2 Field Management Features

Select a field, click to open it, and then click to view details, Edit, Delete, or Apply.

 Details

:Click this icon to view the farm's details. For the farm's details, see “[6.2](#)

Farm Details

 :Click this icon to edit the farm's information. For the farm's information, see [“Create a New Farm.”](#)

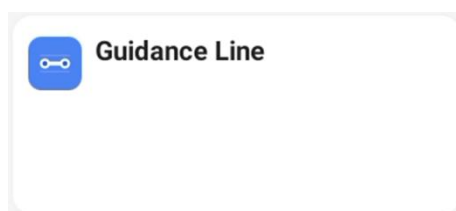
 :Click this icon to delete the current farm's information.

Note: Farms that have already been applied cannot be deleted.

 :Click this icon to apply the current farm.

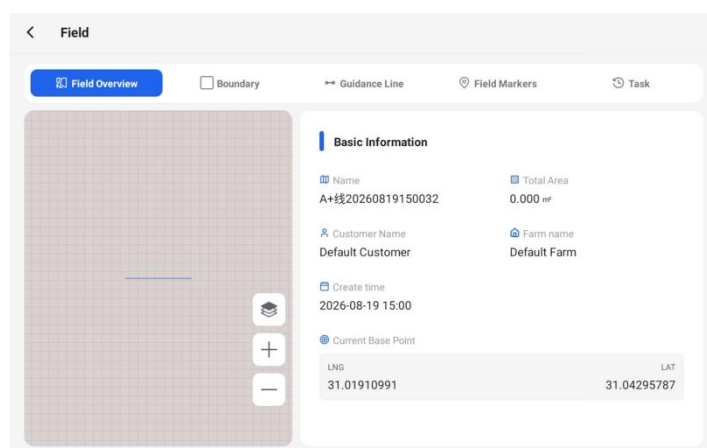
6.2 Farm Details

Click the main menu icon  to open the menu bar, then select the Field Overview, Boundary, Guidance Line, or Task module.



6.2.1.Field Overview

Select the “Field Overview” module to view detailed information about the current farm.



➤ Click    to switch maps, zoom in, or zoom out.

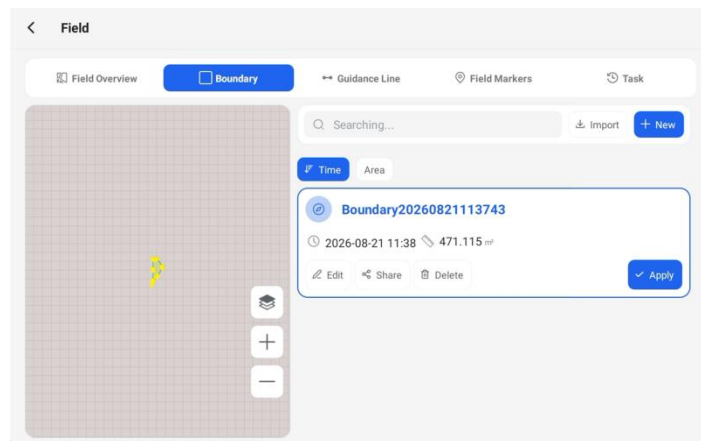
➤ Basic Information

- Name: Full Name of the Farm.
- Total Area: Total farm area—displayed only when boundaries are present.

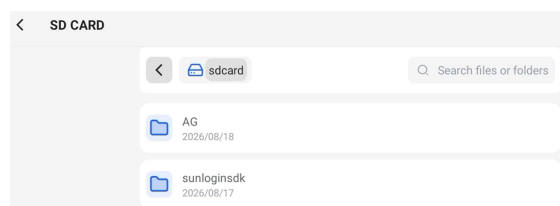
- Customer Name: Farmer's Name.
- Farm name: Farm Name.
- Create time: Display the creation date and time in the format of year, month, day, and hour.
- Current Base Point: Displays the coordinates of the current reference center.

6.2.2.Boundary

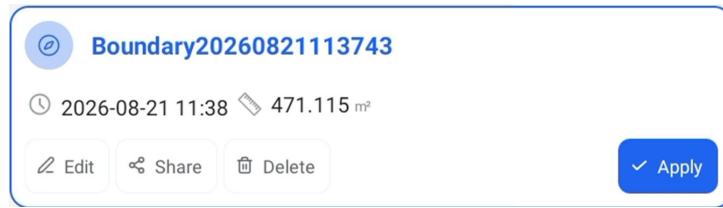
Select the “Boundary” module to view detailed information about the current farm.



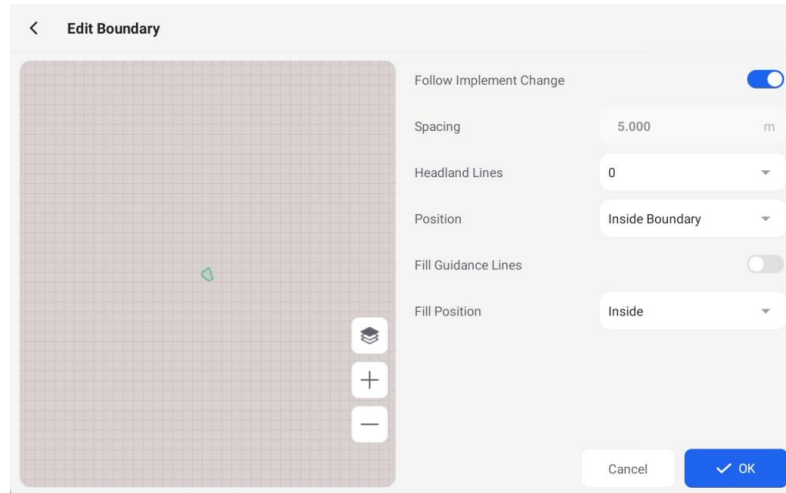
- Click    to switch maps, zoom in, or zoom out.
- Click   to sort by time or current boundary area, from highest to lowest.
- Click  to select and import an ISOXML or SHP file. The following screen will appear; select the appropriate file to import.



- Click  to go to the “Create Boundary” screen, where you can create a new boundary as needed. For more information, see [“11.8 Boundary.”](#)
- When you click “Boundary,” you can edit, share, delete, and apply it, among other actions.

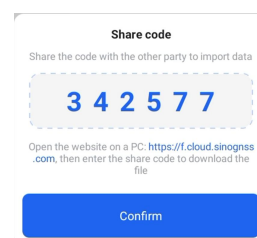
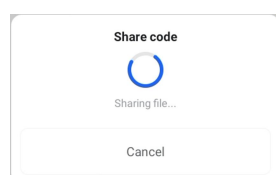


- : Click the “Edit” button to open the following interface:

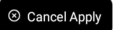


- ✧ Click    to switch maps, zoom in, or zoom out.
- ✧ Follow Implement Change: Select this option to maintain a constant distance from the implement’s edge; currently enabled by default;
- ✧ Spacing: Displays the current implement width. If the width is incorrect, please adjust the implement width;
- ✧ Headland Lines: Creates multiple boundary planning lines; you can select between 0 and 10 lines; **Note:** You must set a planning line; otherwise, the system will display an error message and you will not be able to use boundary mode.
- ✧ Position: Choose whether to place the guidance lines inside or outside the boundary;
- ✧ Fill Guidance Lines: Fill in a specified number of guidance lines;
- ✧ Fill Position: Choose whether to place the guidance lines inside or outside the boundary.

- : Click “Share” to go to the following screen.

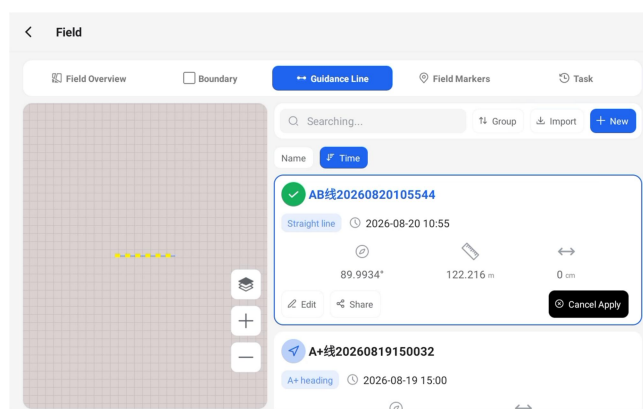


After a moment, a corresponding numeric sharing code will be generated. You can provide this code to another device and apply it. **Note:** Please do not share this code with others indiscriminately.

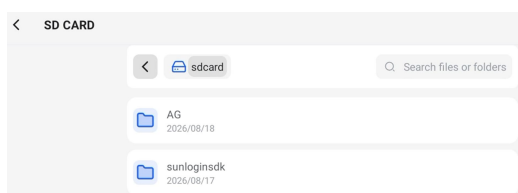
-  : Click to delete this boundary directly.
-  : Click to apply the current boundary.
-  : Click to cancel apply the boundary.

6.2.3.Guidance Line

Select the “Guidance Line” module to view detailed information about the current farm.

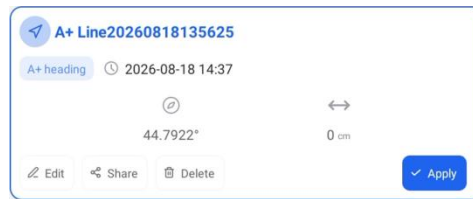


- Click    to switch maps, zoom in, or zoom out.
- Click  to select and import an ISOXML or SHP file. The following screen will appear; select the appropriate file to import.

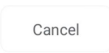


- Click  to go to the “Create Guideline” screen, where you can create a new guideline as needed. For more information, see [“11 Create a New Guideline or Boundary.”](#)
- Select any route, then click to view details, edit, share, delete, apply, or cancel the

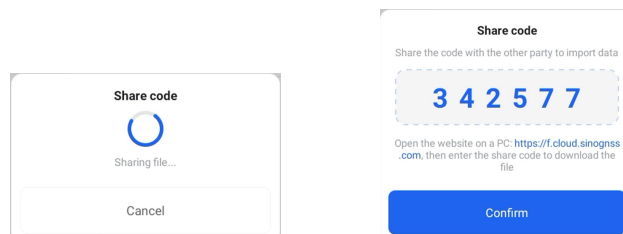
route.



- : Click “Edit” to open the following screen.

- ✧ Line Name: Change the name of the current planning line.
- ✧ Line Offset (CM): To apply an offset effect to the current layout, use a positive number to offset to the right and a negative number to offset to the left.
- ✧ Coordinate Input Format: Select “Input Format”; the software offers two modes to choose from: ‘Degrees’ and “Degrees Minutes Seconds.” Enter the longitude and latitude for points A and B, respectively; on the right, you can select your current location.
- ✧ Click  to apply the current edited changes; click  to cancel the application.

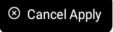
- : Click “Share” to go to the following screen.



After a moment, a corresponding numeric sharing code will be generated. You can provide this code to another device and apply it. **Note:** Please do not share this code with others indiscriminately.

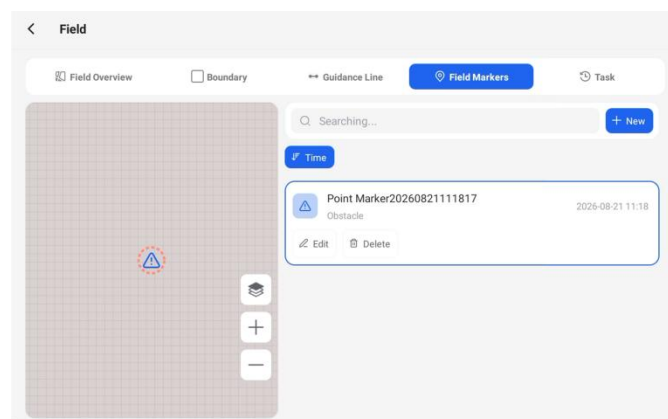
-  : Click to delete this route directly.

Note: Routes within the app cannot be deleted; there will be no second confirmation when deleting, so please do not click this button carelessly.

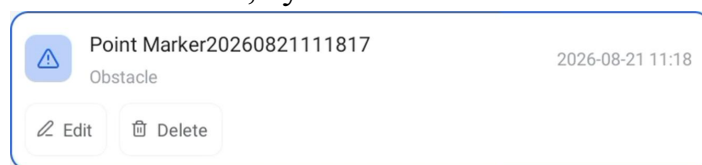
-  : Click to apply the current planning line.
-  : Click to cancel apply the current route.

6.2.4.Field Markers

Select the “Field Markers” module to view detailed information about the current farm.



- Click    to switch maps, zoom in, or zoom out.
- Click  to create a new field markers. For more details, please refer to the “Markers” section.
- When you click “Field Markers,” you can edit and delete.



-  : Click “Edit” to open the following screen.

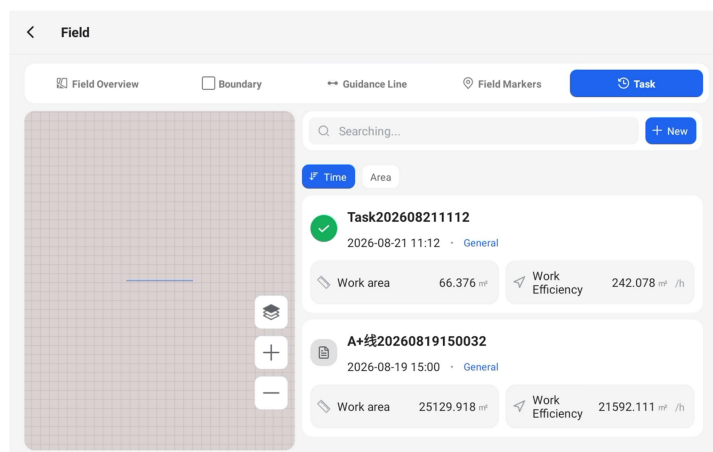


You can edit the marker name on this screen.

-  : Click to delete this field markers directly.

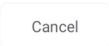
6.2.5.Task

Select the “Task” module to view detailed information about the current farm.



- Click    to switch maps, zoom in, or zoom out.
- Click  to create a new task. The following dialog box will appear.

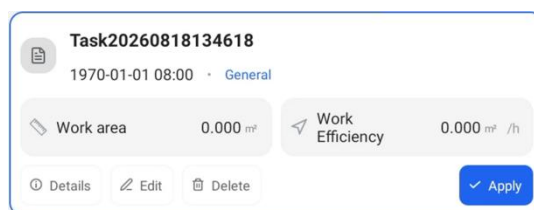
- Task name: Enter the task name.
- Type: Select the appropriate method; the following options are available:

- Prescription Map: Select the Prescription Map you need. Click  to apply the current prescription map; click  to cancel the application.

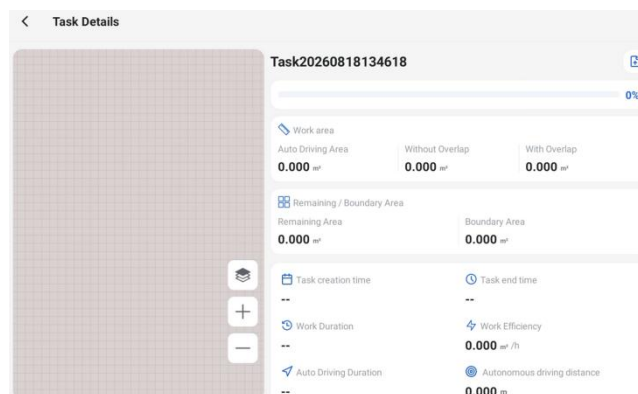


- Click  to apply the current prescription map; click  to cancel the application.
- Click   to sort by time or by the actual work area size in the current task, from largest to smallest.

- Select any task, then click to view details, edit, delete, apply, or cancel the task.



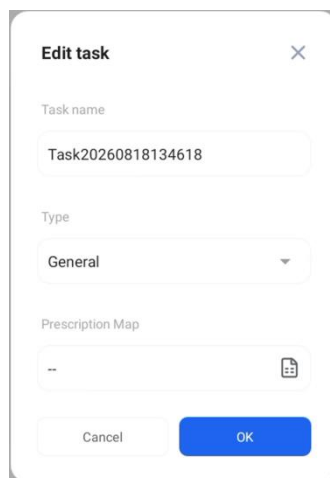
-  :Click this icon to view the task's details.



- ✧ Click    to switch maps, zoom in, or zoom out.
- ✧ You can view various details about the current task in the information panel on the right.
- ✧ Click  to go to the data export screen. For instructions on exporting data, see [“6.4.2 Export”](#).

● : Click “Edit” to open the following screen.

✧ Click  to edit a task. The following dialog box will appear.

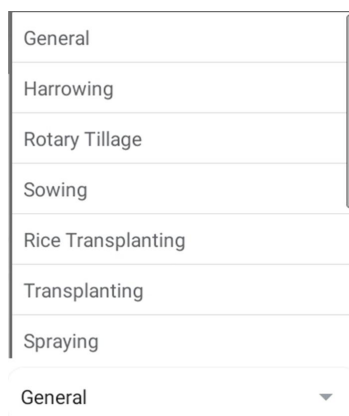


The "Edit task" dialog box contains the following fields:

- Task name:** A text input field containing "Task20260818134618".
- Type:** A dropdown menu currently set to "General".
- Prescription Map:** A field with "--" and a calendar icon.
- Buttons:** "Cancel" and "OK" buttons at the bottom.

✧ Task name: Enter the task name.

✧ Type: Select the appropriate method; the following options are available:



A list of task types with a scroll bar:

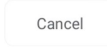
- General
- Harrowing
- Rotary Tillage
- Sowing
- Rice Transplanting
- Transplanting
- Spraying

Below the list is a dropdown menu currently set to "General".

✧ Prescription Map: Select the Prescription Map you need. Click  to apply the current prescription map; click  to cancel the application.

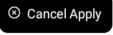


The "Prescription Map" selection bar shows a blue bar with "--" on the left and a checkmark on the right. Above the bar are "Cancel" and "OK" buttons.

✧ Click  to apply the current prescription map; click  to cancel the application.

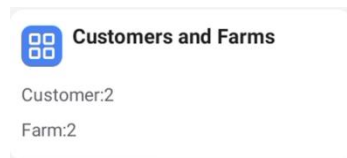
● : Click to delete this task directly. **Note:** Tasks within the app cannot be

deleted; there will be no second confirmation when deleting, so please do not click this button carelessly.

-  **Apply**: Click to apply the current planning line.
-  **Cancel Apply**: Click to cancel apply the current route.

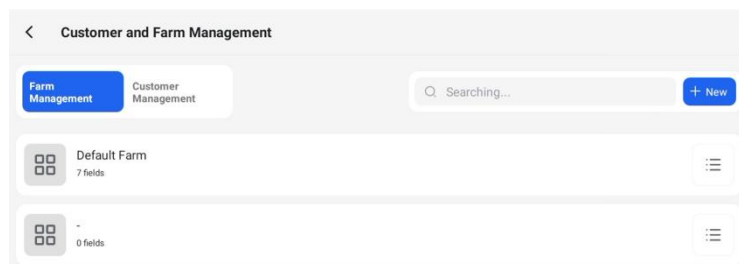
6.3 Customers and Farms Management

Click the main menu icon  to open the menu bar, then select the “Customers and Farms” module.

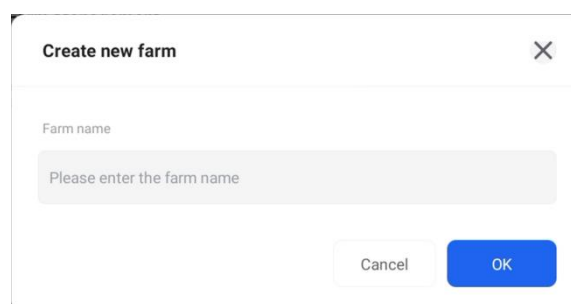


► Farm Management

By clicking “Farm Management,” Customers can view current farm information; clicking  again takes them to the detailed farm management page. For more details, see Section “[6.1 Field](#)”.



Click  to create a new farm. After entering a name, Click  to save the farm information; Click  here to cancel.

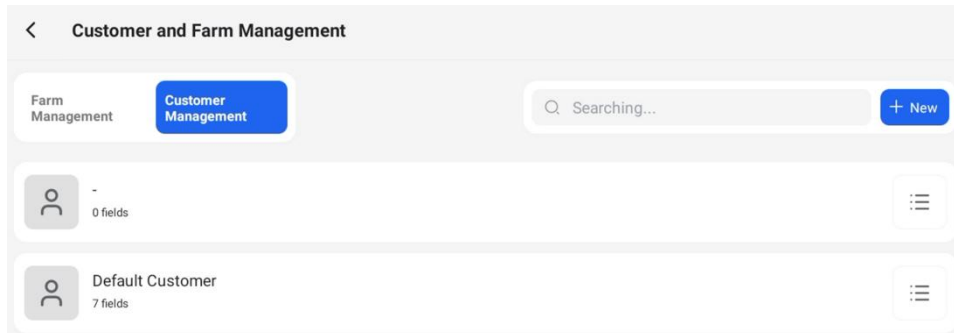


► Customer Management

By clicking “Customer Management,” Customers can view current Customer

information; clicking  again takes them to the detailed farm management page.

For more details, see Section “[6.1 Field](#)”.

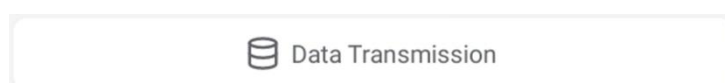


Click  to create a new Customer. After entering a name, Click  to save the Customer information; Click  here to cancel.

6.4 Data Transmission

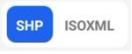
Select files for import and export. Currently, the supported import formats are SHP and ISOXML.

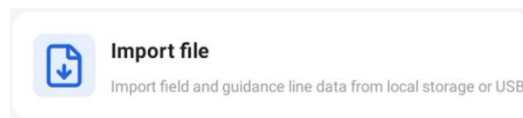
Click the main menu icon  to open the menu bar, then select the “Data Transmission” module.



6.4.1 Import

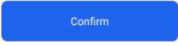
► Import via File

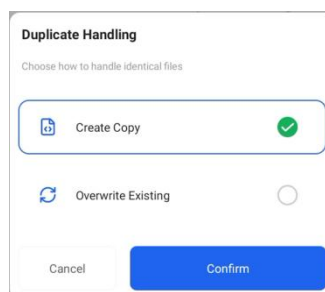
Open “Import File,” where you can click  to select a file format; in the selection box below, choose the files you need, or click  to select all; you can also choose  a “Duplicate Handling” method, including “Create Copy” and “Overwrite Existing.”



Note: The files are located in either `/storage/emulated/0/AG/DataExchange/ISOXML` or `/storage/emulated/0/AG/DataExchange/SHP`. Please make a note of the file location.

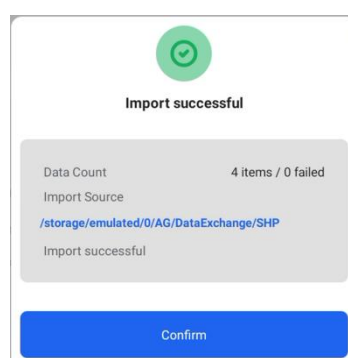
After confirming that the import file is correct, click  to “Import.” A dialog box like the one shown below will appear; select the appropriate option and click

 to import. Click  to cancel.

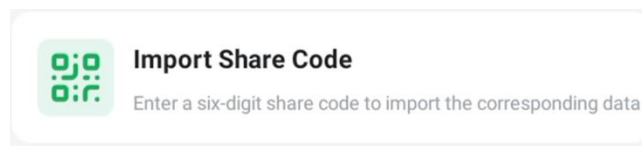


When the following dialog box appears, it indicates that the import was successful.

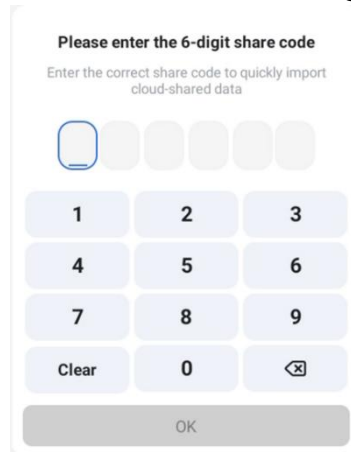
“Data Count” will show the total number of files and the number of failed imports. The import location is: `/storage/emulated/0/AG/DataExchange/SHP`.



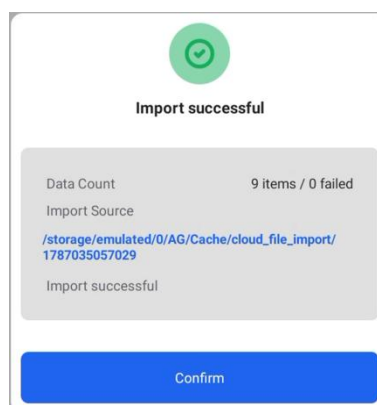
► Import via Share Code



Open “Import Share Code” to access the following screen.



Use the relevant sharing code to retrieve the files and save them to a folder. The following screen indicates that the retrieval was successful:

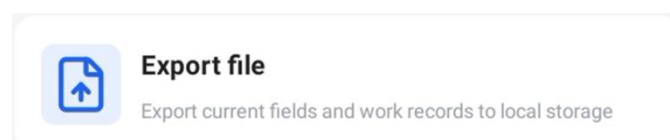


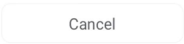
“Data Count” will show the total number of files and the number of failed imports. The import location is: /storage/emulated/0/AG/Cache/cloud_file_import/.

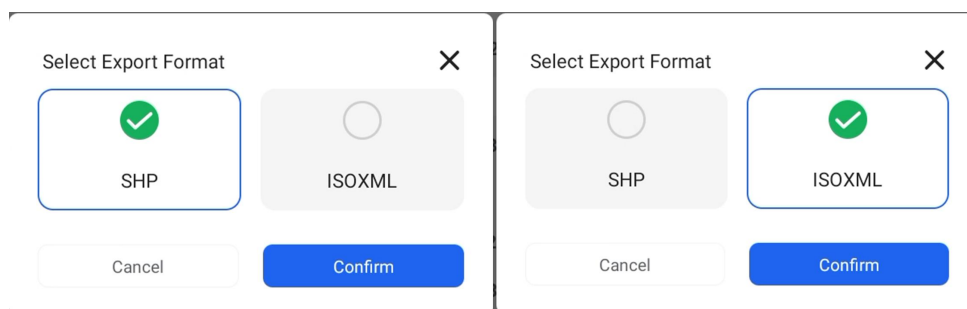
6.4.2 Export

► Export via File

Open “Export File” to view the export formats supported by the current file, select the desired files, or click Select All to select all;



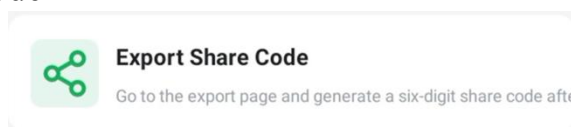
Click  to begin exporting; please select a file format before exporting; click  to export; click  to cancel.



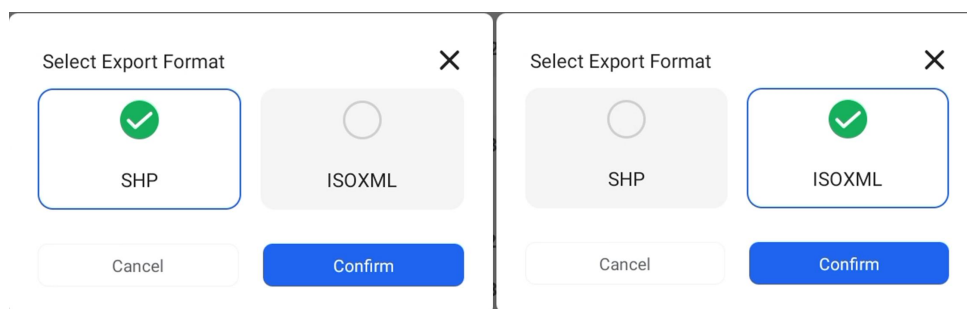
The import location is: /storage/emulated/0/AG/DataExchange/SHP or /storage/emulated/0/AG/DataExchange/ISOXML.

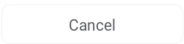
Note: If the file contains ISOXML files, it cannot be exported as an SHP file.

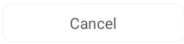
► Export via Share Code

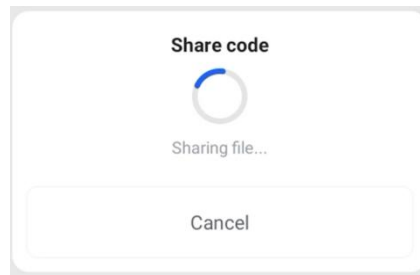


Open “Export Share Code” to view the export formats supported by the current file, select the desired files, or click  to select all;

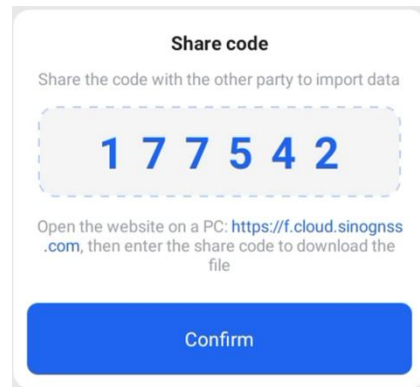


Click  to begin exporting; please select a file format before exporting; click  to export; click  to cancel.

If the following message box appears, it means a share code is being generated; click  it to cancel.



Once the share code has been generated, the following prompt will appear:



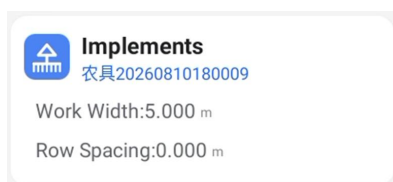
Note: Do not share this referral code with others without good reason.

Chapter 7-Implements and U-turn Settings

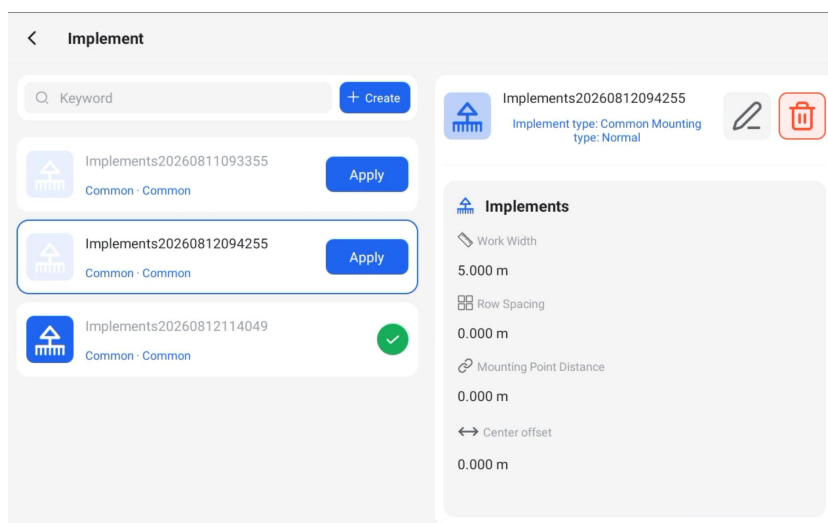
This section will explain in detail how to manage and create new agricultural implements and configure parameters such as U-turn radius, while also introducing methods for quickly adjusting implements and U-turn.

7.1 Managing Implements

Click the main menu icon  to open the menu bar, then select the “Implements” module.



Click to open the “Implements” screen, where you can manage various types of agricultural equipment.



Click the “Create” icon  to open the farm tool creation interface. For details on creating farm tools, see [“7.2 Create a new implement”](#).

The icon  indicates the implement currently in use. Click the icon  to select the current implement for use. The settings and details for the current implement will be displayed on the right.

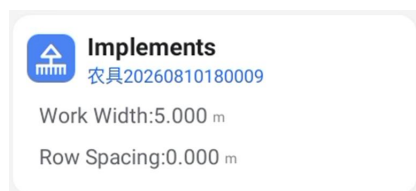
Click the icon  to modify the current implement's parameters, operation type, and other settings. For details, please refer to "[Sections 1 through 3](#)" of "7.2 Create a New Implement."

Click the icon  to delete the selected implement.

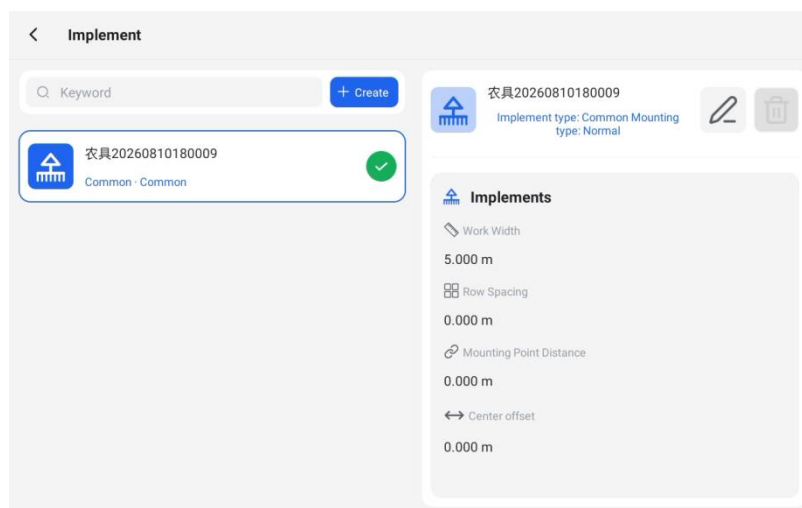
Note: If there is only one implement, it cannot be deleted.

7.2 Create a New Implement

Click the main menu icon  to open the menu bar, then select the "Implements" module.



Click to open the "Implements" interface, where you can create various types of agricultural machinery.

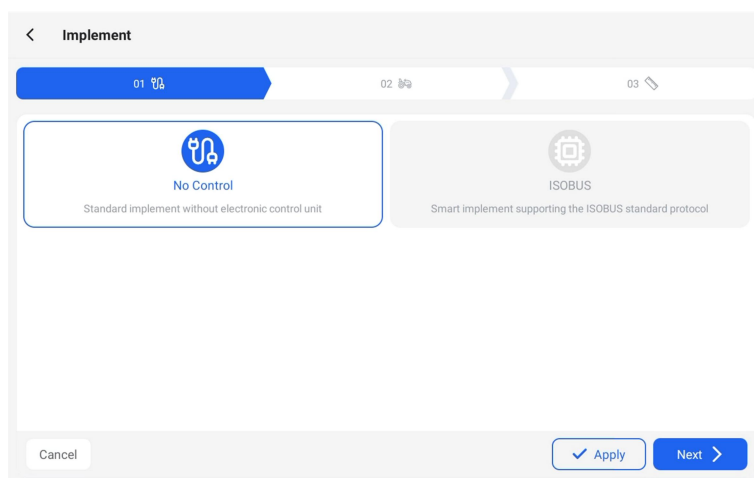


Click the "Create" icon  to open the farm tool creation interface.

► Steps 1:

Open the Implements interface. Click the "Create" icon  to open the farm tool

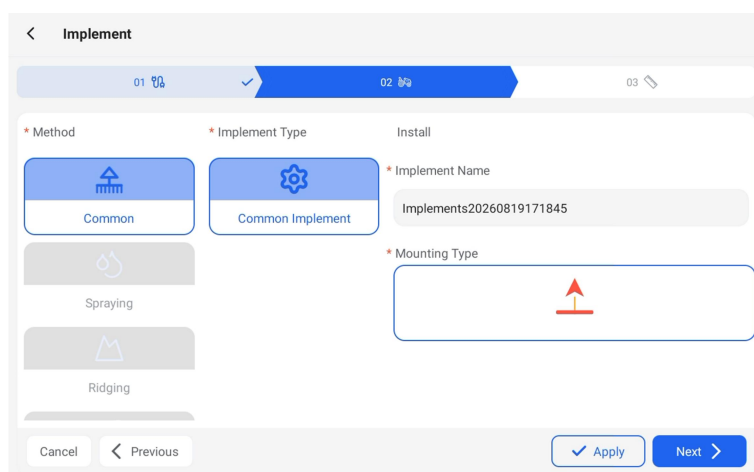
creation interface.



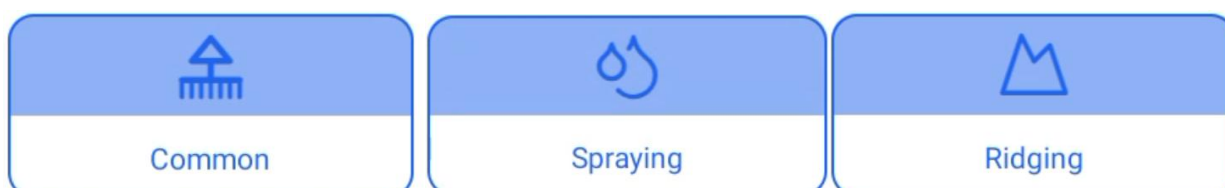
Select the appropriate mode and click Next . You can click Cancel  to exit the creation interface.

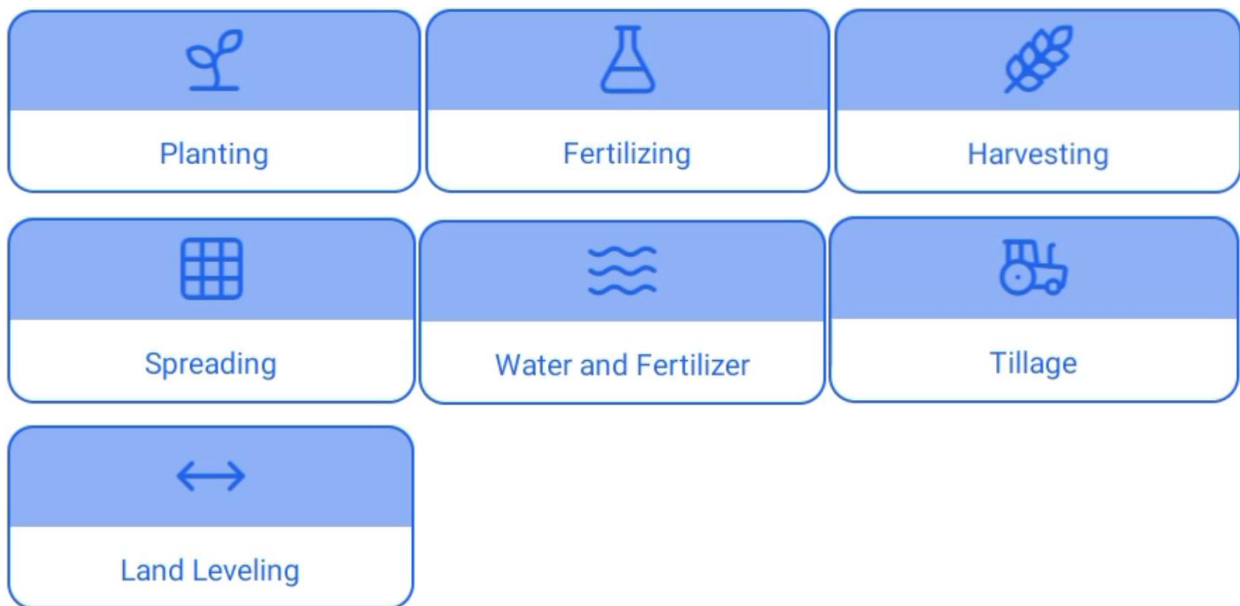
Note: When you click Apply  in this step, the system will automatically proceed to the second step and display the prompt “Please enter the implement name.”

► Steps 2:



Select an operation mode (Method), including Common, Spraying, Ridging, Planting, Fertilizing, Harvesting, Spreading, Water and Fertilizer, Tillage, Land Leveling, and other modes.





Select the implement type. Currently, the default implement type is “ Common Implement.” Manually enter the name of the implement.

Note: Please enter the name of the farming tool according to the relevant requirements; otherwise, the name will be set by default in the format “implements+number.”

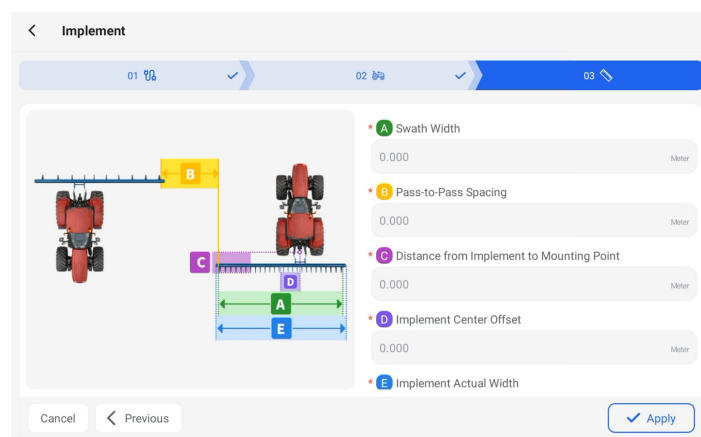
Select the mounting type; the current default is the rear-suspension mode. Once you've finished configuring the settings, click Next .

Note: If you click “Apply  ” at this point, the system will automatically proceed to Step 3 and display the prompt: “Please enter the swath width.”

► Steps 3:

In Step 3, set the relevant parameters based on the image content and the farming

tools, then click “Apply  ” or “Next  .”



A, Swath Width: Effective working width in actual operation.

B, Pass-to-Pass Spacing: This refers to the width between two adjacent rows of operations; the default value is typically 0.

C, Distance from Implement to Mounting Point: This refers to the distance from the working position of the implement to its attachment point on the vehicle; the default value is typically 0.

D, Implement Center Offset: This refers to the distance by which an agricultural implement is offset to the left or right during installation; under normal installation conditions, this value is typically 0.

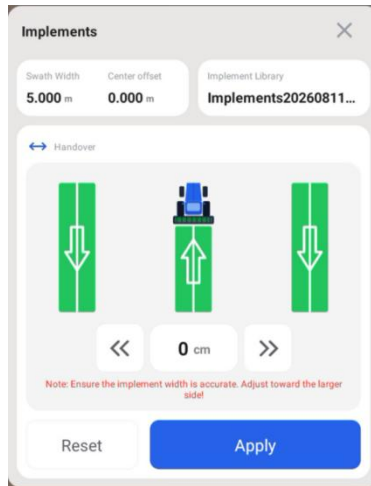
E, Implement Actual Width: This refers to the actual width of the implement. Generally, the implement's width is the same as the actual working distance, i.e., the same as the swath width.

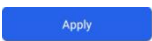
Once you've entered the parameters listed above that evening, the implement setup is complete, and you can click "Apply 

7.3 Quickly Adjust Implement Width

Click the icon  to quickly adjust the current position of the farming tool. Click the icon  again or the icon  to close the window. Click the icon   to move the current farming tool to the left or right; the unit is centimeters.

Note: Adjusting this value does not change the position of the planning line. To adjust the planning line, please refer to "Nudge."



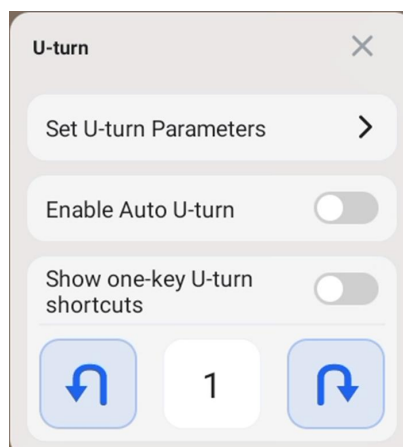
Click the icon  to apply the current input parameters. Click the icon  to reset the modified parameters and restore them to the center offset specified in the original implement parameters.

Click the icon  to access the current implement width settings screen, where you can easily make adjustments. For more information, see 7.2, Create a New Implement, “[Steps 3](#)”.

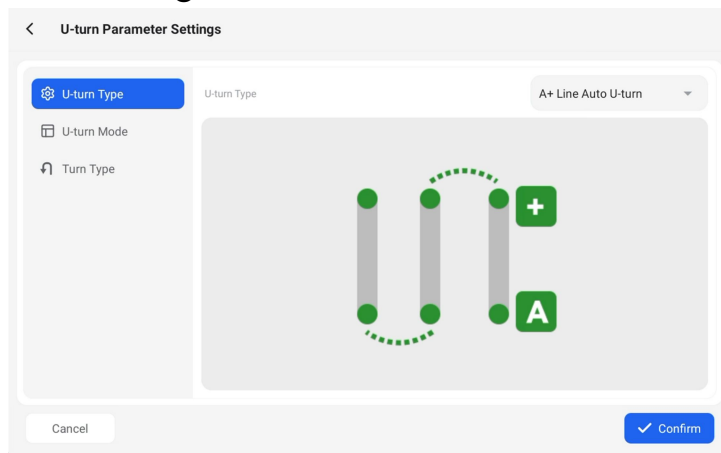
Click the icon  to view implement management information. For more details, see Section “[7.1 Managing Implements](#)”.

7.4 U-Turn Settings

You can click  to open the U-turn menu and select “Set U-turn Parameters  ”.

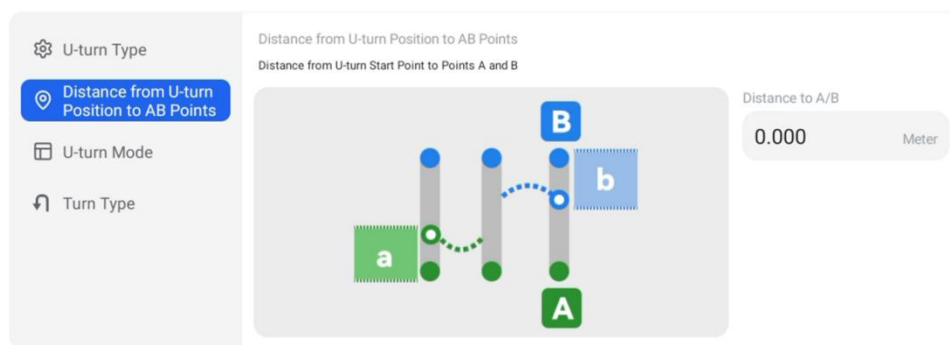


You will then see the following screen:



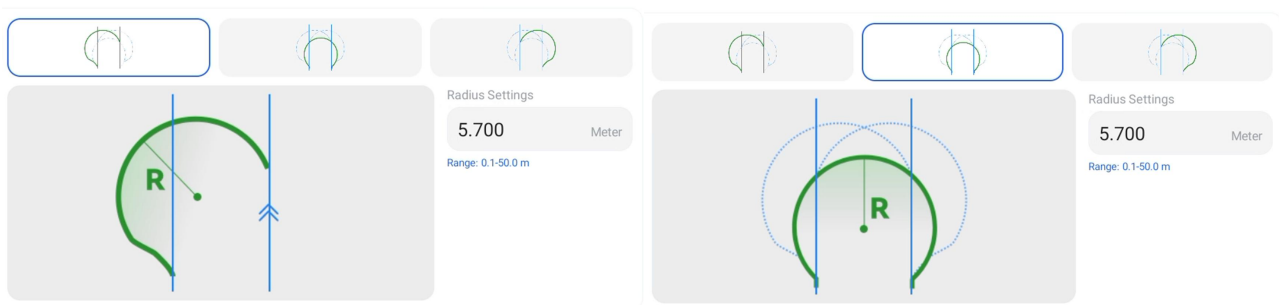
Go to Settings and select a different U-turn type, as shown in the red box in the figure. There are three U-turn options: AB Line U-turn, A+ Line Auto U-turn, and Boundary Auto U-turn. Select the appropriate U-turn type based on the type of guideline you are going to set up.

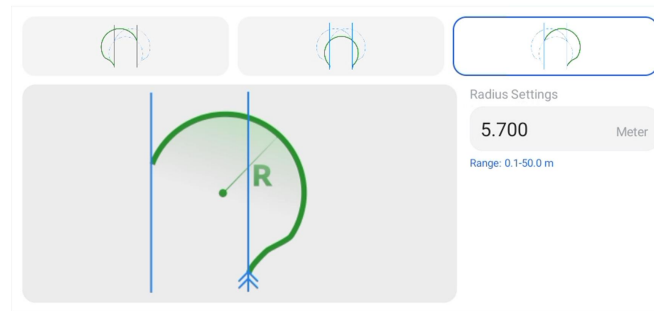
- **AB Line U-turn:**



To select the AB line as a guideline, you need to set the “Distance from U-turn Position to AB Points,” which is the distance from the U-turn position to point A or point B.

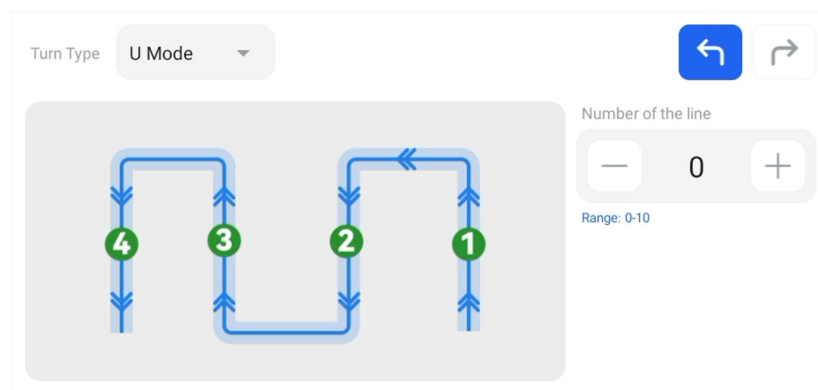
After setting the distance between points A and B, you need to set the U-turn Mode. The system will offer three options: left-leaning U-turn, centered U-turn, and right-leaning U-turn.





You must also enter the turning radius parameter in the Radius Settings; this parameter can range from 0.1 to 50 meters.

Note: The turning radius must generally be greater than the vehicle's length; otherwise, the vehicle will not be able to turn properly.



After completing the U-turn Mode settings, please configure the Turn Type. Currently, U Mode is available, and more modes will be added in the future.

Click the icon   to configure left or right U-turns. The icon  indicates that the U-turn will be made to the left, while the icon  indicates that the U-turn will be made to the right.

Set the number of rows  0  for the U-turn—that is, how many junction rows to cross during the U-turn. The value range is 0–10 rows.

Note: The “left/right U-turn” (indicating a U-turn to the left or right) and the “upper U-turn” type (indicating a U-turn toward the left, center, or right) are not the same; please do not confuse them.

Enable Auto U-turn

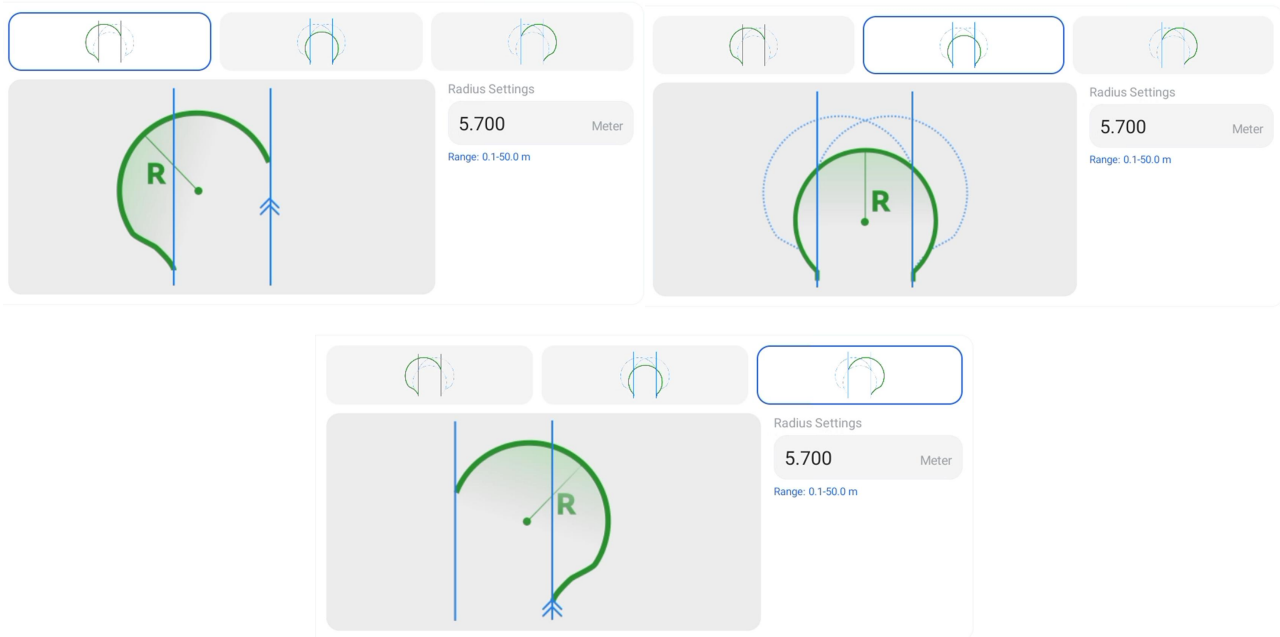


Note: After completing the relevant settings, be sure to turn on the U-turn switch; otherwise, the settings will not take effect.

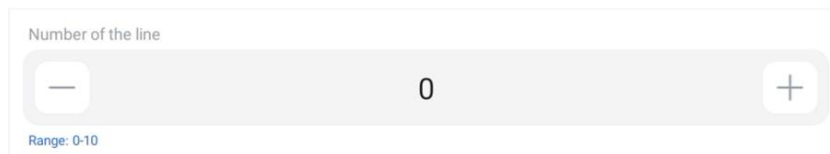
- A+ Line Auto U-turn:

When using the A+ Line Auto U-turn mode, there is no need to set the U-turn distance; simply enter U-turn Mode to configure the settings.

The system will offer three options: left-leaning U-turn, centered U-turn, and right-leaning U-turn.

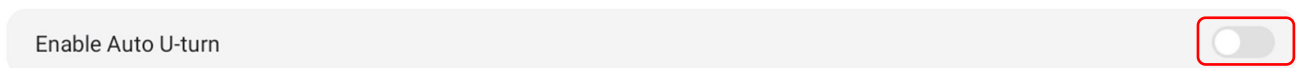


You must also enter the turning radius parameter in the Radius Settings; this parameter can range from 0.1 to 50 meters.



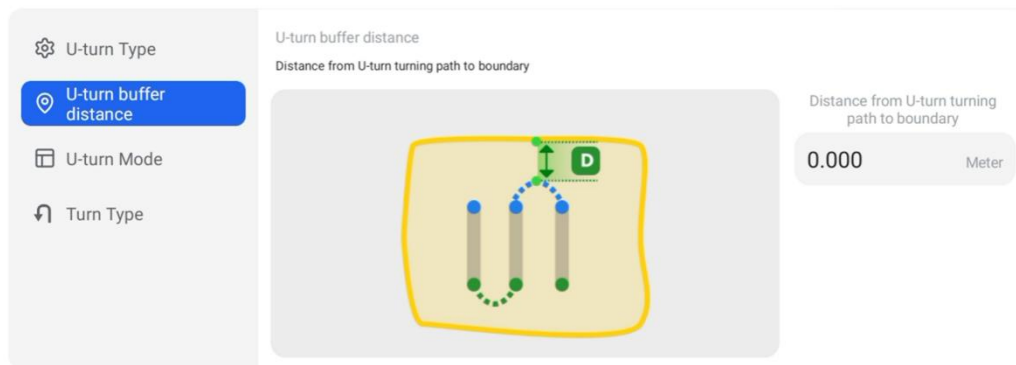
Once you have completed the U-turn Mode setup. Set the number of rows

for the U-turn—that is, how many junction rows to cross during the U-turn. The value range is 0–10 rows.



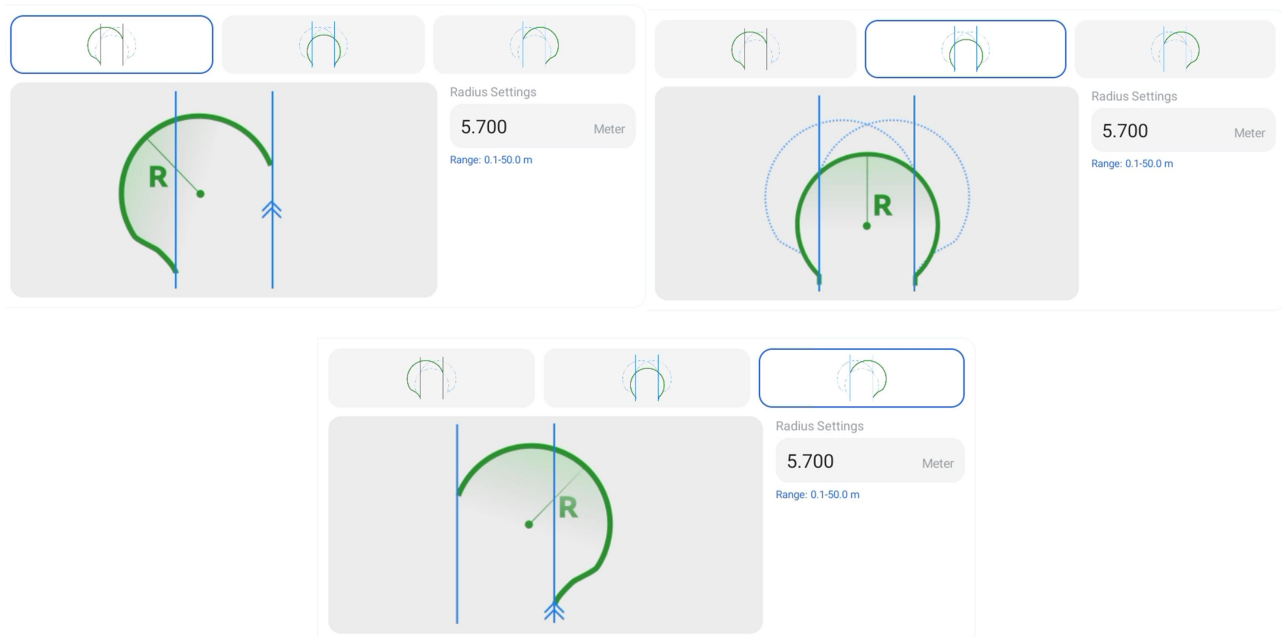
Note: After completing the relevant settings, be sure to turn on the U-turn switch; otherwise, the settings will not take effect.

● Boundary Auto U-turn:



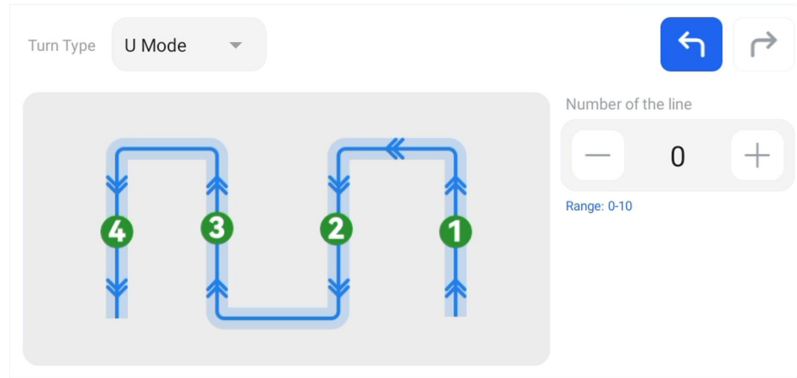
To select a boundary (with route planning inside it) as a reference, you must set the “Distance from U-turn turning path to boundary” parameter, which specifies the distance from the U-turn location to the boundary.

After setting the distance at which the vehicle will turn around when approaching the boundary, you need to set the U-turn Mode. The system will offer three options: left-leaning U-turn, centered U-turn, and right-leaning U-turn.



You must also enter the turning radius parameter in the Radius Settings; this parameter can range from 0.1 to 50 meters.

Note: The turning radius must generally be greater than the vehicle's length; otherwise, the vehicle will not be able to turn properly.



After completing the U-turn Mode settings, please configure the Turn Type. Currently, U Mode is available, and more modes will be added in the future.

Click the icon   to configure left or right U-turns. The icon  indicates that the U-turn will be made to the left, while the icon  indicates that the U-turn will be made to the right.

Set the number of rows  0  for the U-turn—that is, how many junction rows to cross during the U-turn. The value range is 0–10 rows.

Note: The “left/right U-turn” (indicating a U-turn to the left or right) and the “upper U-turn” type (indicating a U-turn toward the left, center, or right) are not the same; please do not confuse them.

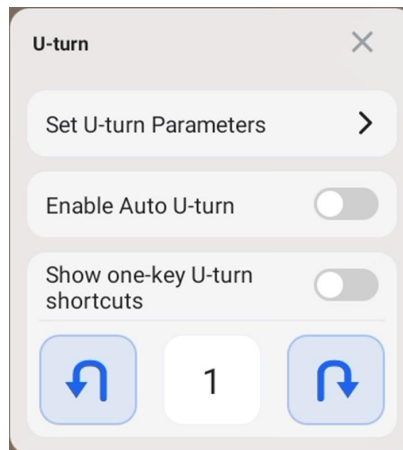
Enable Auto U-turn



Note: After completing the relevant settings, be sure to turn on the U-turn switch; otherwise, the settings will not take effect.

7.5 Quickly Adjust U-turn

When the Auto U-turn feature is enabled, click the icon  to access the U-turn interface and try out the related features. Click the icon  again or the icon  to close the window.

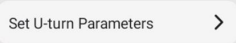


Enable Auto U-turn: You can enable  the auto U-turn feature, but please make sure you've completed the setup before enabling it. For detailed setup instructions, see Section [“7.4 U-Turn Settings”](#)

You can click  to enable the one-click U-turn feature. Afterward, the icon shown below will appear on the main screen, allowing you to easily perform a U-turn to the left or right with a single click.



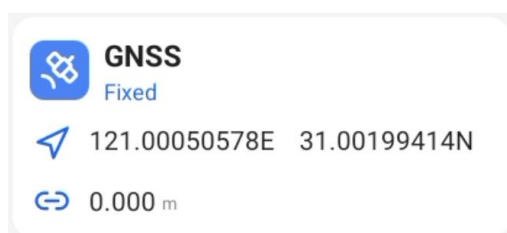
If you need to make a manual U-turn with a single click, you can simply click the icon   to make a left or right U-turn. At this point, you can enter the number of lines to span in order to wrap text. The default number of lines to span is 0, and the valid range is 0 – 10; entering a value outside this range will result in an error message.

Clicking the icon  will take you to the current U-turn settings screen. For details, see [“7.4 U-Turn Settings”](#).

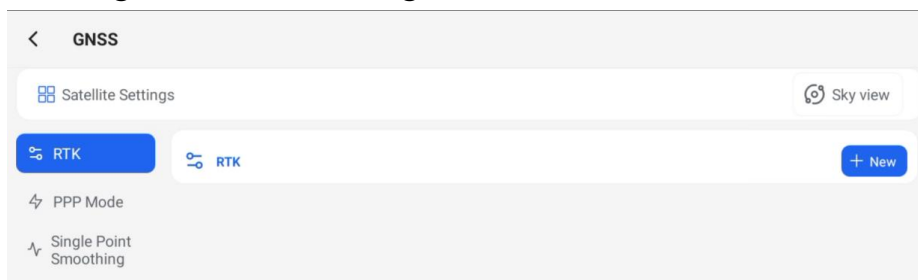
Chapter 8-Signal Configuration

This chapter provides a detailed introduction to each signal configuration method. To activate autosteering, the system must connect to differential signals. AG601Pro offers multiple signal connection methods.

Click the icon  to open the main menu, then select the GNSS menu to complete the relevant configuration, or click the icon  to go directly to the GNSS configuration menu.



In the GNSS configuration menu, you can choose from three processing modes: RTK, PPP Mode, and Single Point Smoothing.



Click the icon  to access the satellite information; for details, see “[2.3 Satellite status](#)”.

8.1 CORS (RTK NTRIP)

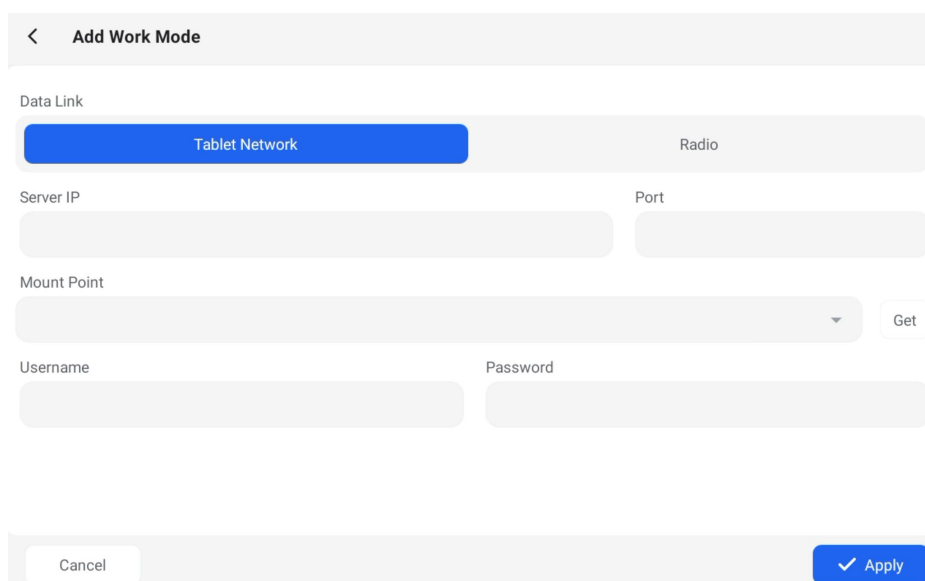
Use a cellular delivered RTK correction source from a network provider. Precision: 2.5 cm.

Note: Please consult your local CORS service provider to purchase an account before use.



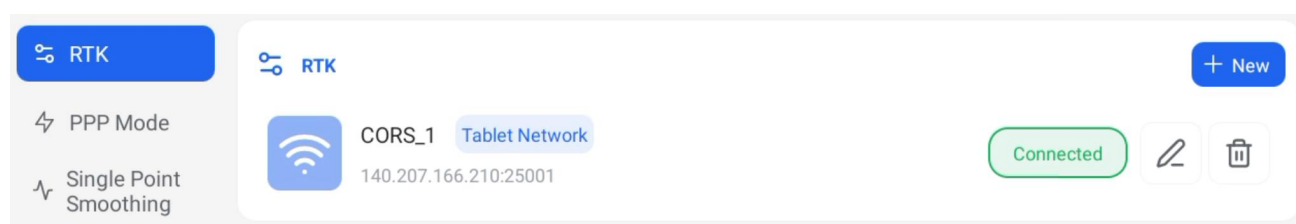
8. Ensure the tablet is connected to the internet before use.

9. Select the RTK mode, click the icon  to open the RTK configuration interface, and select the Tablet Network mode.



10. Enter the server IP and port.
11. Click  to retrieve the Source list, then select the desired mount point from the dropdown menu. If there is no internet connection, Mount Point will fail to retrieve the source list and display the message: “Fail to get source list.”
12. Enter the Username and Password.
13. Click “Apply”  to apply the current CORS mode.

If this image appears,  it means the connection was successful.

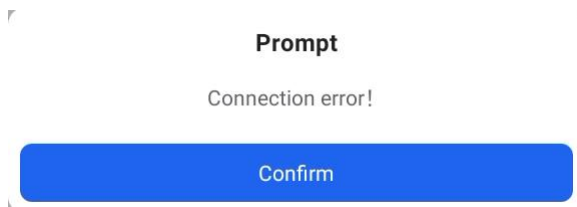


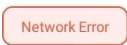
14. View  to check the connection status. See “[2.3 Satellite status](#)” and “[2.4 GNSS and Network Status](#)” to check the icon meaning.

The system will automatically save the CORS configuration.

5. Click  /  /  to apply/modify/delete the selected configuration.

6. Click  to add a new CORS configuration.
7. Click  the link. If the device is not connected to the internet, the following message box will appear.



8. When connecting via CORS, if the device has no network connection, it will display an icon  indicating that the tablet is currently offline.

8.2 Datalink

No need Internet. Must be used with a receiver as a base station. Precision: 2.5 cm.

- The SA300 Pro GNSS receiver is equipped with the 'Longlink' datalink module, which requires the use of a U70 module receiver as the base station. Operating range: 15 km.

Note: In addition to Longlink, it support for, TT450S, TRANSEOT, and SOUTH protocols. Operational range: 5 km.

- The SA300 Pro GNSS receiver is equipped with the 'HX' datalink module, compatible with various datalink receivers as a base station. Operational range: 5 km.

ComNav offers a customized receiver T80 designed specifically for agricultural users.



Note: If you need detailed information about receivers and different SA300 Pro or you cannot choose the instrument you need, please feel free to contact our sales or technical staff, we will do our best to provide you with satisfactory service.

Configuration:

For example, using the T80 as a base station. **Note:** Ensure that both the receiver and

the SA300 Pro are correctly connected to the UHF antenna.

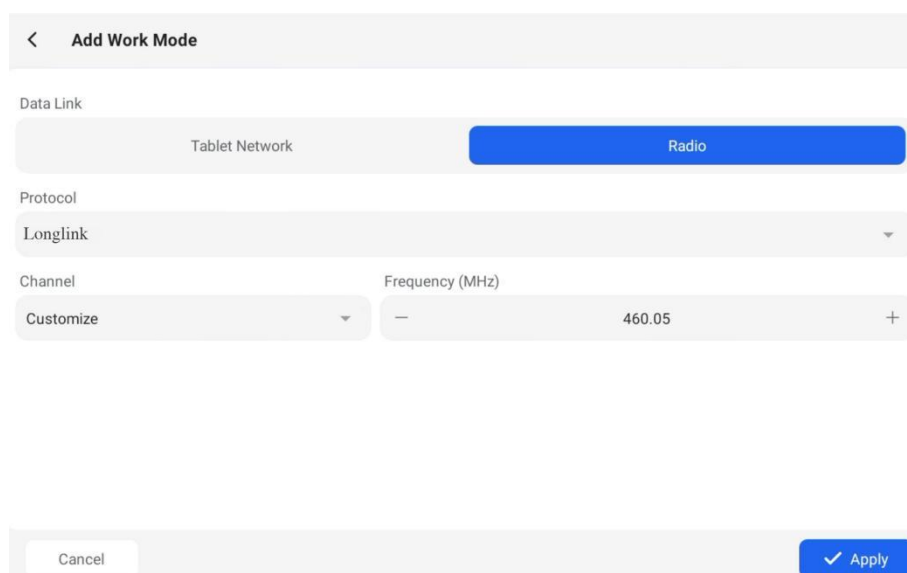
► Longlink/Longlink+:

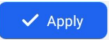
9. Press and hold the power button to turn on the T80. Use the two front panel buttons to configure the base station frequency. There are 11 channels (453.050~463.50) to choose from.

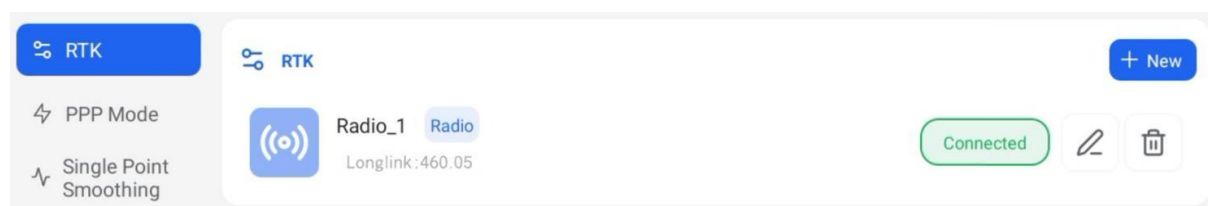
For the detailed process, please refer to the video on configuring agricultural T80 base stations: <https://youtu.be/2a6BwRoRcE0?si=3qi6iIobBwQ0AyOE>.

10. Ensure the tablet is connected to the internet before use.

11. Select the RTK mode, click the icon  to open the RTK configuration interface, and select the Radio mode.



12. Click "Protocol" and select the Longlink or Longlink+ protocol.
13. Select the appropriate Channel (customizable) and Frequency (MHz).
14. Select the 'CUSTOM' Mode, set the Protocol and Frequency to match that of the base station.
15. Set the baud rate to 9600. Select Base station type.
16. Click  to apply. A successful application will look as shown in the figure.

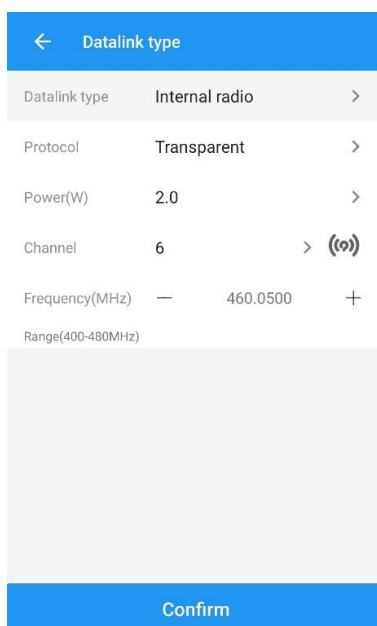


The system will automatically save the Radio configuration.

3. Click  /  /  to apply/modify/delete the selected configuration.
4. Click  to add a new Radio configuration.

► HX:

1. Configure the base station through the relevant software, set the Protocol and Frequency, and adjust the transmission Power to the maximum. (Using SM APP as an example.)

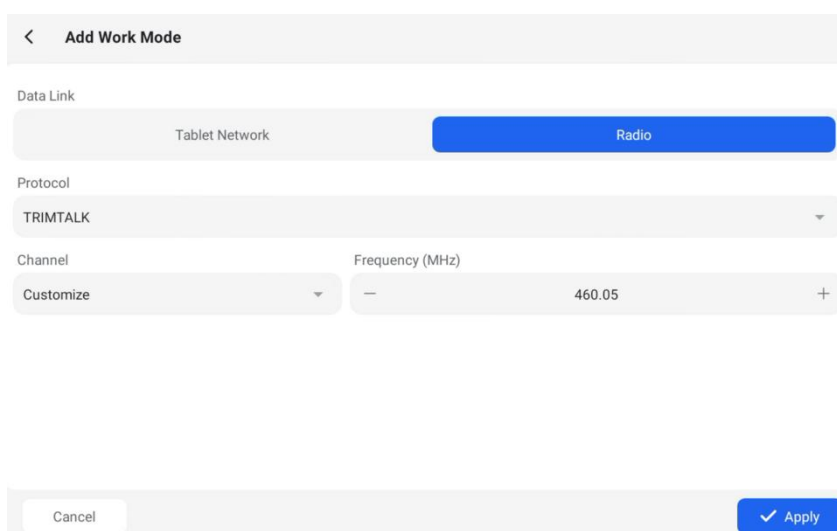


← Datalink type

Datalink type	Internal radio	>
Protocol	Transparent	>
Power(W)	2.0	>
Channel	6	> (9)
Frequency(MHz)	460.0500	+
Range(400-480MHz)		

Confirm

1. Ensure the tablet is connected to the internet before use.
2. Select the RTK mode, click the icon  to open the RTK configuration interface, and select the Radio mode.



< Add Work Mode

Data Link

Tablet Network Radio

Protocol

TRIMTALK

Channel Frequency (MHz)

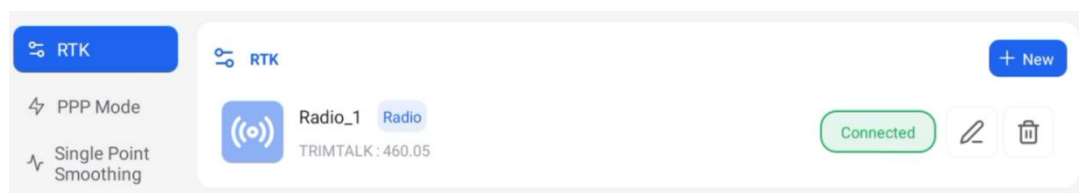
Customize 460.05

Cancel Apply

3. Click “Protocol” and select TRIMTALK, TRIMMK3, TT450S, TRANSPARENT,

SOUTH, HUACE, or SATEL.

4. Select the appropriate Channel (customizable) and Frequency (MHz).
5. Select the 'CUSTOM' Mode, set the Protocol and Frequency to match that of the base station.
6. Set the baud rate to 9600. Select Base station type. When using the Trimble base station, enable forward error correction.
7. Click  to apply. A successful application will look as shown in the figure.



The system will automatically save the Radio configuration.

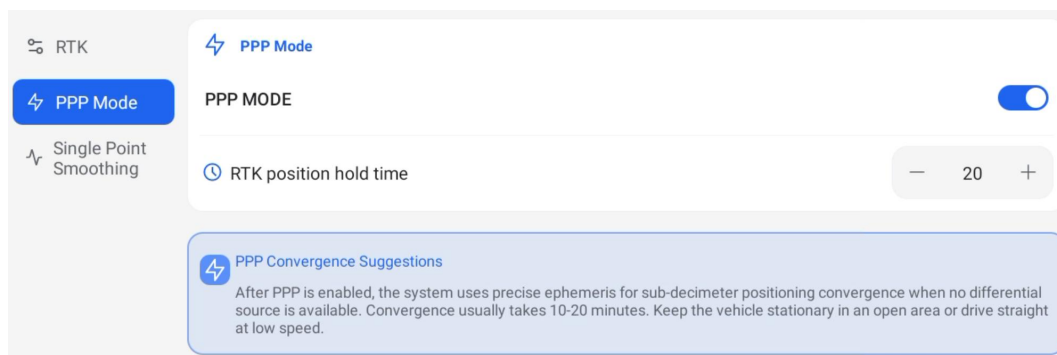
1. Click  /  /  to apply/modify/delete the selected configuration.
2. Click  to add a new Radio configuration.

8.3 PPP (Precise Point Positioning)

No Internet or Datalink base station is required. The vehicle should remain stationary in an open area for approximately 15-20 minutes to converge satellite signals. Precision: approximately 10-15 cm.

Currently supports Beidou B2B high-precision service and Galileo high-precision service HAS. Note: Depending on the satellite coverage, the performance effects and convergence times vary in each region.

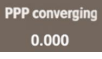
Note: At present, the coverage of the BeiDou PPP-B2b signal only includes the Asia-Pacific region. The Galileo PPP-HAS signal has global coverage, with improved signal quality in Europe.



4. Select the PPP mode, Click  to open the PPP mode.
5. Setting the RTK position hold time: When used in combination with the RTK signal, the system automatically switches to PPP signal after the RTK differential data is disconnected for a preset duration, which defaults to 20 seconds.
6. Click  to begin the convergence of the PPP signal. Once the settings are completed, they will be automatically saved. For future use, simply enable the PPP signal option.

Note: You can enable only one of Precise Point Positioning (PPP) or Single-Point Positioning.

Each time before use, a convergence time of 15-20 minutes for the signal is required.

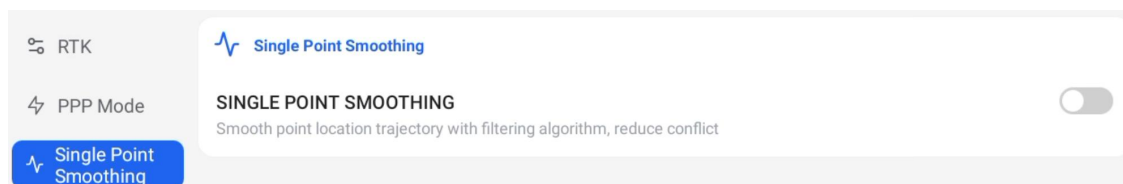
Users can check the convergence status in the upper right corner.  indicates that the PPP signal is converging. If the convergence is completed, the signal source will display as PPP. 

Note: Disabling and re-enabling the PPP signal option requires a fresh convergence.

8.4 Single Point Smoothing

Single-point smoothing means that the GNSS board smooths the beating positioning without accepting any differential data to obtain relatively smooth and stable positioning data.

ComNav uses DP-filter Smooth Technology, it delivers consistent position error and assures a smooth (pass to pass) accuracy within the sub-meter to centimeter range. Precision: Over a 15-minute window, the Pass to Pass accuracy can reach about 15cm.



Select the Single Point Smoothing mode, Click  to open the PPP mode.

Note: You can enable only one of Single-Point Positioning or Precise Point Positioning (PPP).

8.5 Combined Signal Settings

CORS, Datalink, and Bluetooth RTK can each be combined with PPP or Single Point Smoothing. Using combined signals allows the vehicle to maintain sub-decimeter accuracy in the field, regardless of any RTK signal loss. This prevents significant steering movements caused by unexpected RTK disconnections.

Only two signal sources can be combined simultaneously. Single Point Smoothing and PPP cannot be used together.

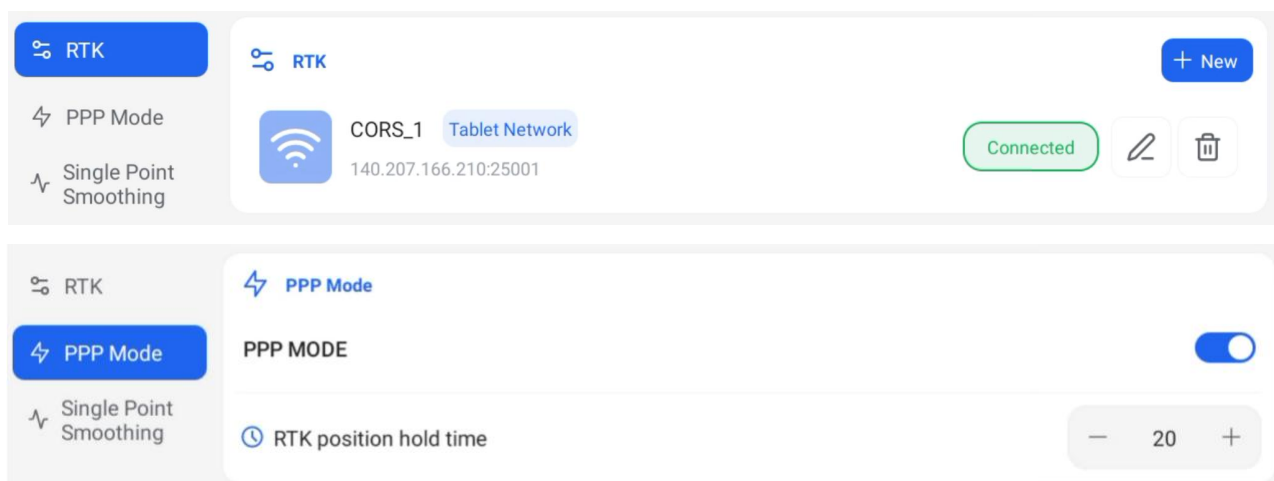
8.5.1 RTK PPP Function

ComNav PPP-RTK Fusion Function integrates Precise Point Positioning (PPP) with Real-Time Kinematic (RTK) technology, addressing the challenge of coordinate shifts caused by the different reference frames used in these two positioning methods. This fusion ensures seamless switching between PPP and RTK, enhancing positioning stability and accuracy in various operational environments.

When using CORS or Datalink with PPP, PPP will converge in the background:

1. Enable both **RTK** and **PPP** signal sources simultaneously. Any of the three **RTK** signal sources can be used. Select the commonly use one.

Note: If PPP signal source fails to converge in the background, the fusion function will not be available.



2. Once PPP signal source has converged and fusion is enabled, if RTK disconnects unexpectedly for any reason, the system will seamlessly switch to the PPP signal source without causing trajectory drift. When the high-precision RTK signal is restored, the system will immediately switch back to RTK.

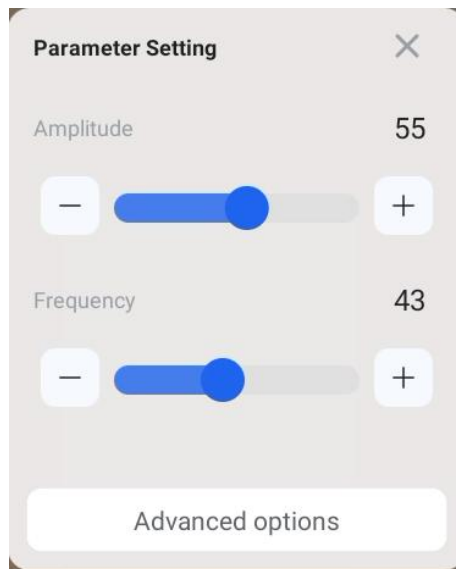
Chapter 9-Parameters Settings

This chapter will provide a detailed description of how to configure various parameters to ensure the stability of different vehicles during operation.

9.1 Basic Parameter

The Basic parameters are obtained after the vehicle undergoes Adaptive Adjustment.

Select 'Param'  on the main interface to manually change parameters. The basic parameters include amplitude and frequency. Click the icon  again or the icon  to close the window.



- Amplitude: Controls the angle of the motor's rotation; the higher the amplitude, the greater the rotation during autonomous driving. The same applies in reverse. The value ranges from 0 to 100.
- Frequency: Controls the speed of the motor's rotation; the higher the frequency, the faster the motor responds during autonomous driving. The same applies in reverse. The value ranges from 0 to 100.

You can increase or decrease the value by manually clicking the icon  , or you can quickly adjust it by dragging the icon . The changes take effect in real time.

9.2 Advanced Options

When basic parameters cannot ensure stable driving, or in rare cases where the vehicle deviates while driving on slopes, it may be necessary to adjust advanced parameters to restore stability.

Modifications to advanced parameters should be done in consultation with our technical specialists. To resolve your issues as quickly as possible, please contact your local dealer or reach out to us using the following methods:

E-mail: ag.support@comnavtech.com.

Teams: comnav.support

Chapter 10-Vehicle Setup and Steering Calibration

This section provides a detailed tutorial on vehicle creation and calibration. For detailed instructions on vehicle creation, please refer to “[5.4 Create Vehicle](#)”.

10.1 Create and Calibrate a New Vehicle

10.1.1 Create a New Vehicle

When you need to create a new vehicle, you can click  to create a new vehicle.

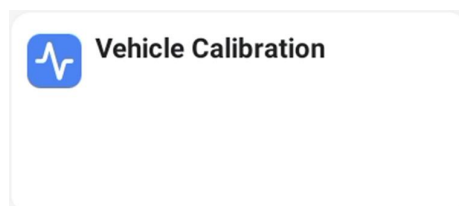


Use the correct vehicle measurement data to create a new vehicle configuration profile.

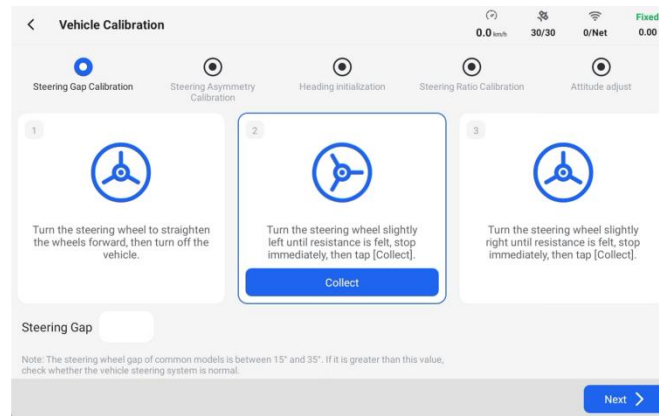
For information on how to create a vehicle, please refer to “[5.4 Create Vehicle](#)”.

10.1.2 Steering Gap Play Calibration

Users can click the icon  to open the main menu, then select the Vehicle Calibration to complete the relevant configuration.



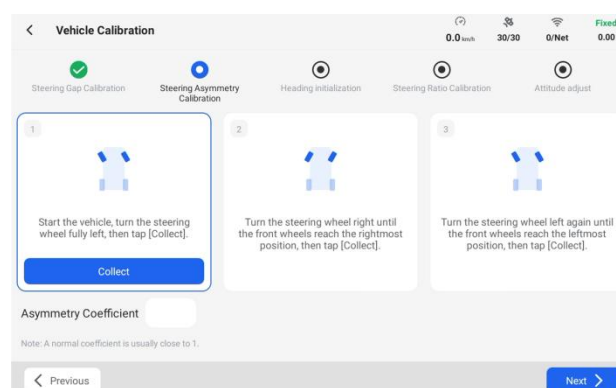
Perform Steering Gap Play Calibration on the vehicle. This procedure eliminates the delay in steering response caused by mechanical backlash in the steering system. When the controller issues a steering command, the steering wheel or wheels do not respond immediately due to this free play, resulting in a lag between the commanded and actual steering angles. This calibration also enhances steering precision and prevents system oscillation.



1. Please turn off the engine, stop the vehicle, and ensure that the front of the vehicle is facing straight ahead.
2. Turn the steering wheel to the left, and when you feel slight resistance, click  to record the data.
3. Turn the steering wheel to the right, and when you feel slight resistance, click  to record the data.
4. Normal calibration parameters typically range from 15 to 35.
5. Once you're done, then, click 'Next' to proceed to the Steering Asymmetry Calibration.
6. Click  to open the signal settings screen and view the current connection status; click  to open the SKY screen and view the current satellite status information, etc; click  to view the current network connection status and information. The interfaces for subsequent features are similar.

10.1.3 Steering Asymmetry Calibration

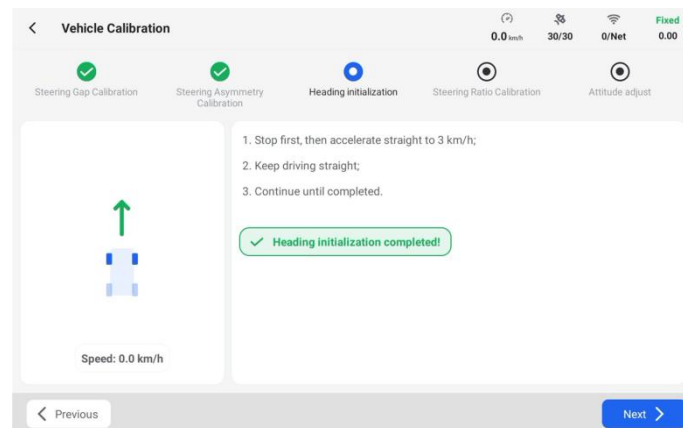
Completing the Steering Asymmetry Calibration improves path-following accuracy and ensures steering symmetry.



1. Start the vehicle and ensure it is traveling straight.
2. Turn the steering wheel all the way to the left, then click  to record the current value.
3. Turn the steering wheel all the way to the right, then click  to record the current value.
4. Turn the steering wheel all the way to the left again, then click  to record the current value. This will give you the current calibration value.
5. The calibration value is typically around 1. Once calibration is complete, save the settings.
6. Then, click 'Next' to proceed to the Heading initialization.

10.1.4 Heading Initialization

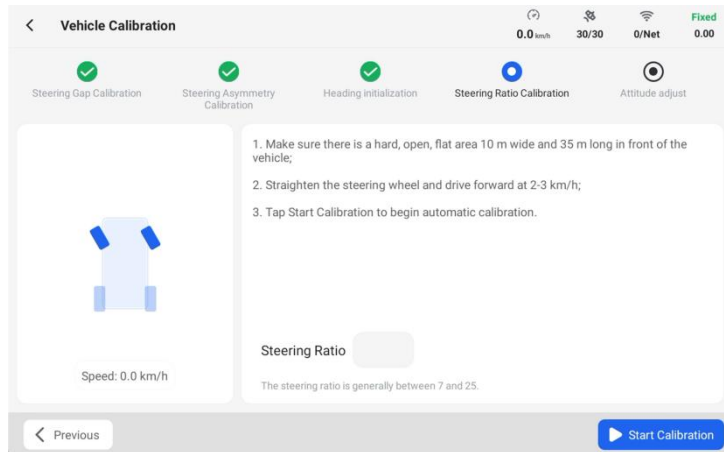
Stop the vehicle, then drive forward at a speed greater than 3 km/h. When the guidance indicator changes to 'Heading initialization' and the checkmark appears, it indicates that calibration is successful.



Then, click 'Next' to proceed to the Steering Ratio Calibration.

10.1.5 Steering Ratio Calibration

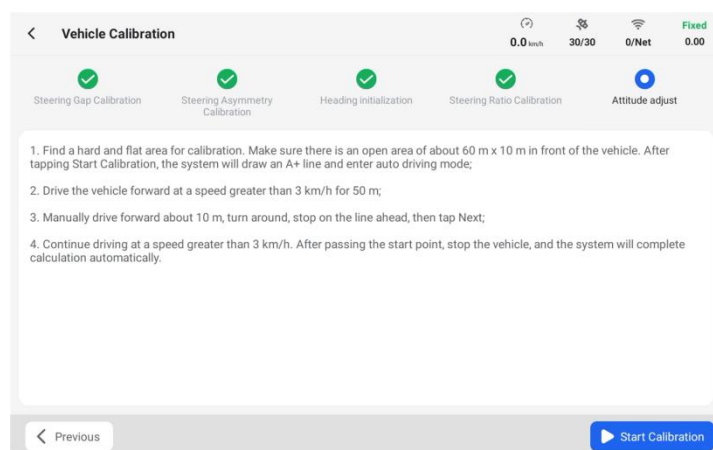
To accommodate vehicles with different horsepower ratings, adaptive calibration is required to determine the appropriate steering control force parameters for each vehicle. At the same time, during the parameter measurement process, the system can monitor and verify the consistency of the previously configured Steering Gap Play Calibration and Steering Asymmetry Calibration. Make sure there is a hard, open, flat area 10 m wide and 35 m long in front of the vehicle.



1. Start vehicle on flat ground and center steering wheel.
2. Drive vehicle at a speed greater than 2.0 km/h.
3. Click  button and release the steering wheel.
4. Wait for the progress bar to complete calibration.
5. Once the message indicating successful calibration appears along with a green check mark, you may click 'Next' to proceed to Attitude Adjust.

10.1.6 Attitude Adjust

Attitude adjust is to obtain the calibration value of roll angle and pitch angle of the vehicle. Find a hard and flat area for calibration. Make sure there is an open area of about 60 m x 10 m in front of the vehicle. After clicking Start Calibration, the system will draw an A+ line and enter auto driving mode;

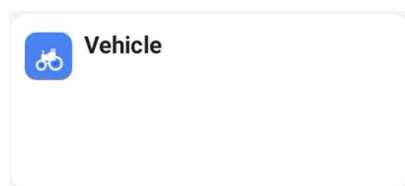


1. Click  to go to the calibration page; you will then be automatically redirected to the main screen.
2. Click  to drive the vehicle straight for 50 meters at a speed greater than 3 kilometers per hour;

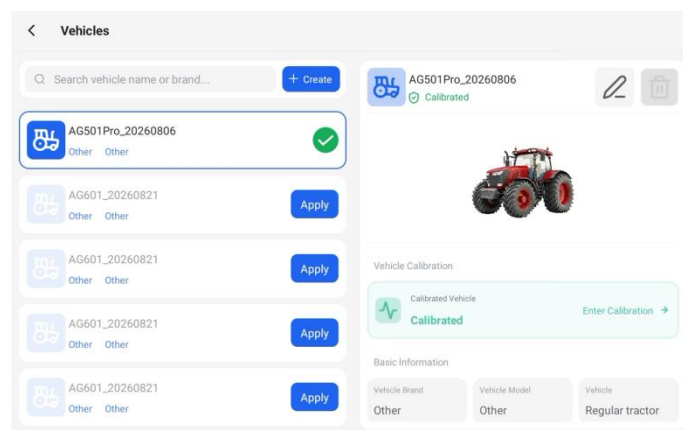
3. Then, manually drive forward about 10 meters, make a U-turn, and stop at the marked line ahead, then click “Next”;
4. Continue driving at a speed greater than 3 kilometers per hour, and stop after passing the starting point; the system will automatically complete the calculation.

10.2 Manage Vehicles

When you need to manage vehicles, you can click  to manage vehicles.



Click to go to the vehicle management interface.



- Click  to create a new vehicle. For details, see “[5.4 Create Vehicle](#)”.
- Click  to apply a vehicle you've already created.
- When the vehicle has been calibrated, the status is displayed as follows  . When the vehicle has not yet been fully calibrated, the status is displayed as follows  .
- Click  to edit various parameter settings for the currently selected vehicle. For details, please refer to “[5.4 Create Vehicle](#)”.
- Click  to delete the current vehicle.

Note: Vehicles cannot be deleted from the app; please make sure the vehicle is no

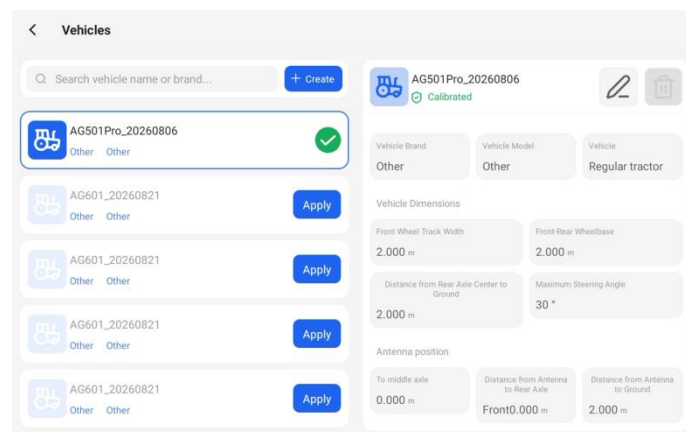
longer in use before deleting it.

- When the vehicle needs to be calibrated, you can click



to quickly access the calibration screen.

- You can use the drop-down list to view more information about the vehicle. As shown in the image below:

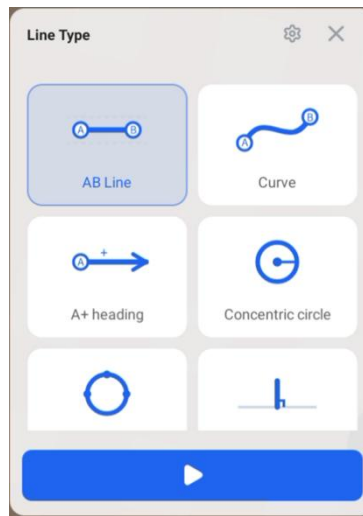


Chapter 11-Create a New Guideline or Boundary

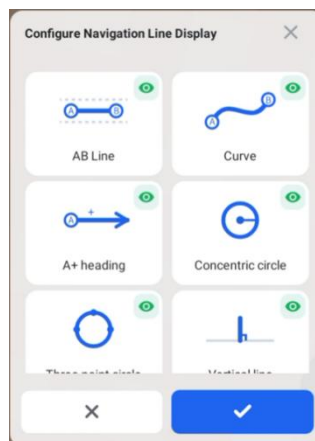
AG601Pro autosteer system supports multiple types of guidelines. It is possible to create several guidelines within the same field.

Click  to open “New Planning Line” to create a new planning line or boundary.

(The steps for creating new planning lines will not be described again here.)



Click the icon  to open the planning line settings interface, where you can edit the currently displayed lines. Click the icon  to hide the planning lines, and click the icon  to show them. Click  to save your changes, or click  to cancel.



Note: You must keep at least one type of planning line.

11.1 Straight Line

Two points are used to define a straight line, and the custom points serve as the boundary line for the U-turn feature.

1. Select the AB Line(Straight line) mode , click  to enter, and complete the route planning.
2. Select “Collect ” or “Input ” to collect coordinate data.
3. Enter an appropriate line name to avoid forgetting it.

Note: If you do not enter a line name, the system will automatically generate one and save it.

► Data Collection While Driving

1. Select “Collect ” to collect coordinate data.
2. Click  to record Point A, an icon  will appear once data collection is complete. Click  to record Point B, an icon  will appear once data collection is complete. And click  to save once recording is complete.

Note: Point A and Point B must be at least 10 meters apart.

► Enter manually

1. Select “Input ” to collect coordinate data.
2. Select “Input Format”; the software offers two modes to choose from: ‘Degrees’ and “Degrees Minutes Seconds.”
3. Enter the longitude and latitude for points A and B, respectively; on the right, you can select your current location. Please confirm the vehicle's current position.
4. Click  to save once recording is complete.

11.2 Curve

Some fields are not rectangular and have a curved or shaped boundary. For these, identical curves may be the best option for guidelines. This can be useful for steering the boundary of a field and using this guideline for future operations.

Identical curves allow the operator to set a curved guideline and the system will create equidistant guidelines across the field, based on the implement and handover row width.

1. Select the Curve mode , click  to enter, and complete the route planning.

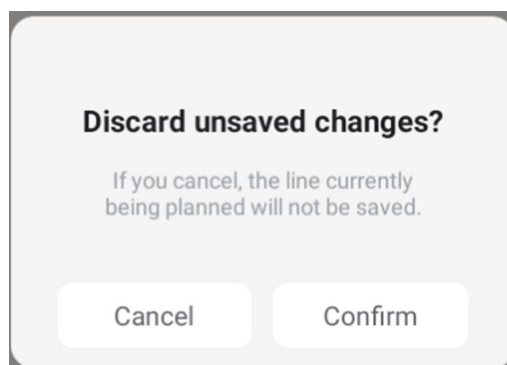
2. Enter an appropriate line name to avoid forgetting it.

Note: If you do not enter a line name, the system will automatically generate one and save it.

3. Click  to open the Curve feature. Please drive along the corresponding curve; the device will automatically record points along the curve. Click  or  to finish drawing the curve.

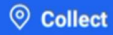
Note: If there is a straight line within the curve, click  to switch to straight-line mode. In this mode, the device will only record the two endpoints and draw a straight line. If you want to switch back to the curve, click  to switch. Click  to increase or decrease the number of points in line mode .

If you wish to cancel, please click  and confirm the cancellation.



11.3 A+Heading

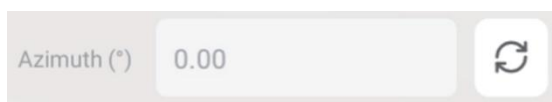
1. Select the A+ heading mode , click  to enter, and complete the route planning.

2. Select “Collect  ” or “Input  ” to collect coordinate data.
3. Enter an appropriate line name to avoid forgetting it.

Note: If you do not enter a line name, the system will automatically generate one and save it.

► Data Collection While Driving

1. Click  to get the location information for the current coordinate point. An icon  will appear once the information has been successfully retrieved.
2. The system will automatically detect the current heading, which refers to the direction the front of the vehicle is facing.



Azimuth (°) 0.00 

3. Click  here to refresh the directions. And click  to save once recording is complete.

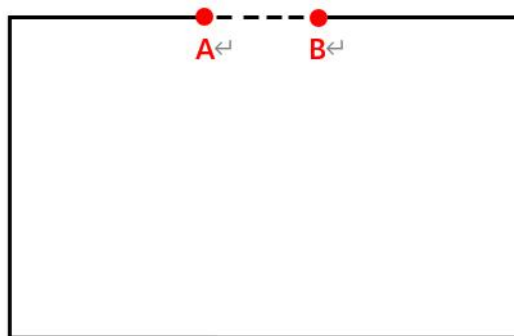
► Enter manually

1. Select “Input  ” to collect coordinate data.
2. Select “Input Format”; the software offers two modes to choose from: ‘Degrees’ and “Degrees Minutes Seconds.”
3. Please enter the latitude and longitude of Point A; you can select your current location on the right. Then enter the desired bearing angle.
4. Click  to save once recording is complete.

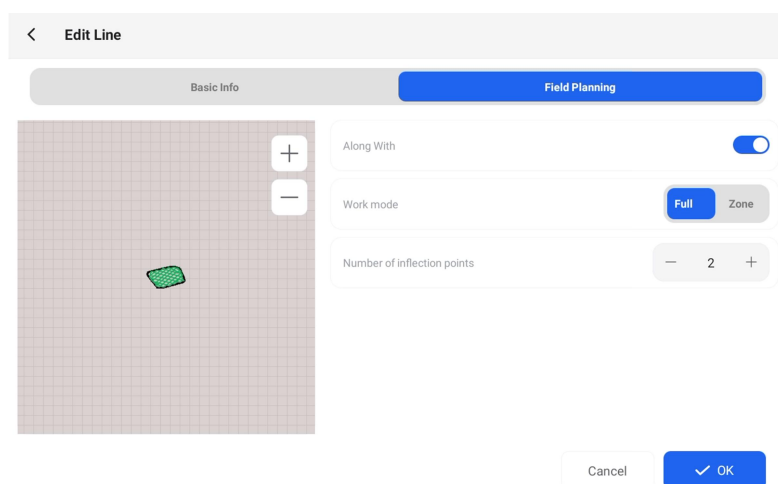
11.4 Diagonal Rake

Specially used for raking the ground. The turning angle is more reasonable during use.

The working area is defined using the AB two-point plus trajectory method. Collect Point A as the start point, track the path by collecting points every meter, and collect Point B as the endpoint. The system automatically connects Points A and B to close the area and generate a guideline.



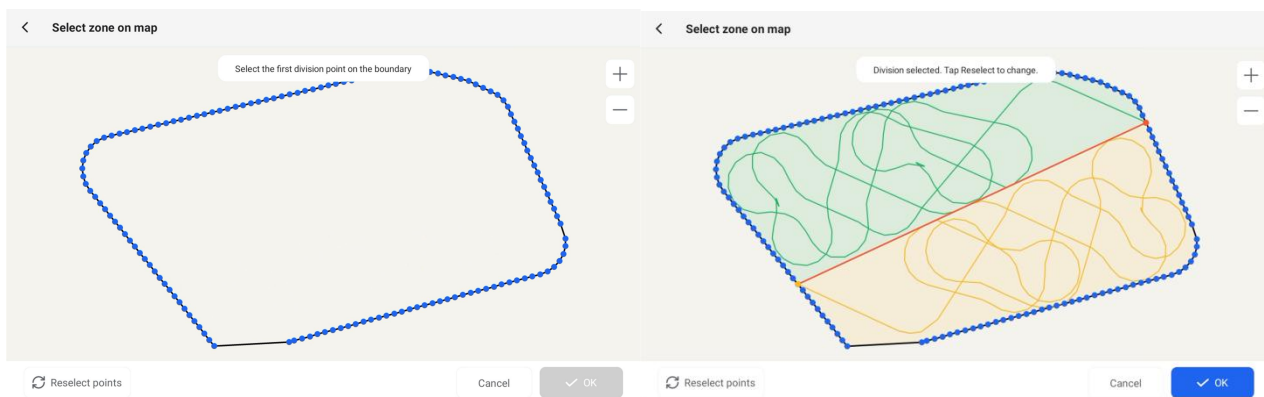
1. Select the Diagonal rake mode , click  to enter, and complete the route planning.
2. Please trace along the appropriate diagonal rake planning line. The system will automatically record points A and B. When you are finished, click  to complete the data capture and proceed to the next step.
3. Click “Basic Info” to view the current information for points A and B; here, you can edit the information for points A and B.
4. When you finish data collection, the system will automatically proceed to Field Planning.

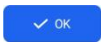


- Click   to zoom in or out on the map to view more detailed information.
- Along With: Click  to turn this mode on or off. It connects the current areas to form a grid-like pattern. This mode is enabled by default.
- Work mode: Here, you can select a work mode, including full-area mode and block mode.

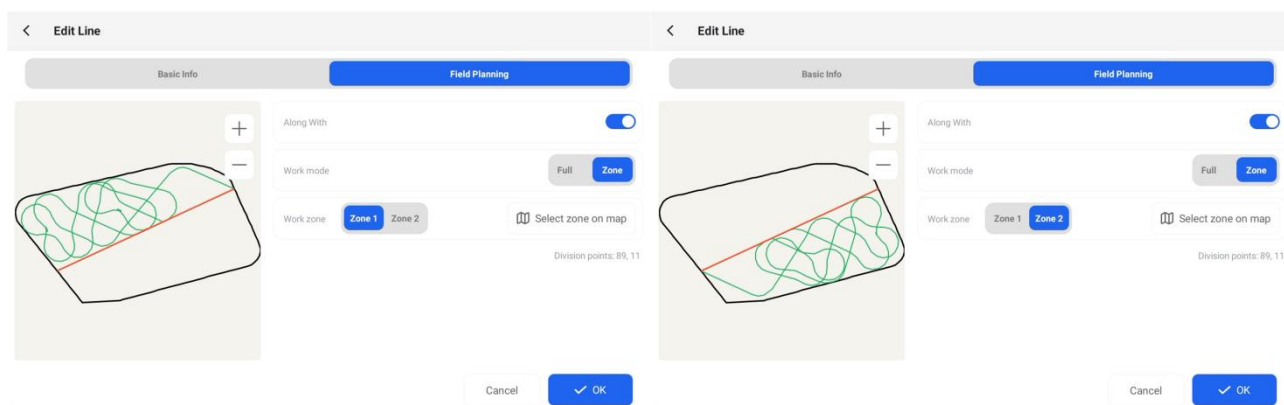
Full; If you select this mode, target lines will be created across the entire area. Number of inflection points: In Full-Area mode, you can select the number of inflection points—that is, the number of turns at each turn.

Zone; If you select the region mode, you'll need to choose appropriate cut lines for that region; click  Select zone on map to enter the region-division mode; you can click   to zoom in or out on the map; then select the appropriate boundary points to define the region; Click  Reselect points to reset the current selection. See the diagram for details.



Once you have finished dividing the area, you can click . At this point, you will see **Division points: 89, 11** the currently divided points on the screen.

On this screen, you can view the Work Zone, which consists of Zone 1 **Zone 1** and Zone 2 **Zone 2**. Click on them to see the layout lines for the divided areas.



11.5 Concentric Circle

1. Select the Concentric circle mode , click  to enter, and complete the route planning.

2. Select “Collect  ” or “Input  ” to collect coordinate data.

3. Enter an appropriate line name to avoid forgetting it.

Note: If you do not enter a line name, the system will automatically generate one and save it.

► Data Collection While Driving

1. Click  to get the location information for the current coordinate point. An icon  will appear once the information has been successfully retrieved.
2. Drive the vehicle to the appropriate radius. Then click  to get the location information for the current coordinate point. An icon  will appear once the information has been successfully retrieved.
3. The system will automatically calculate the corresponding radius based on the distance between the coordinates of the two points.

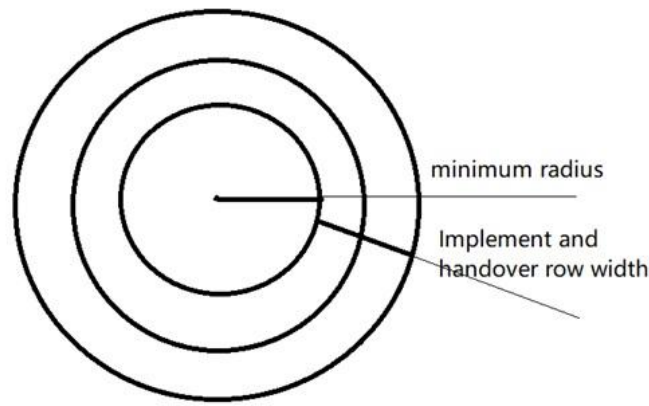
Calculated Radius	12.45 m
-------------------	---------

4. Click  to save once recording is complete.

► Enter manually

1. Select “Input  ” to collect coordinate data.
2. Select “Input Format”; the software offers two modes to choose from: ‘Degrees’ and “Degrees Minutes Seconds.”
3. Enter the coordinates of the origin (i.e., the center of the circle), and enter the desired radius below.
4. Click  to save once recording is complete.

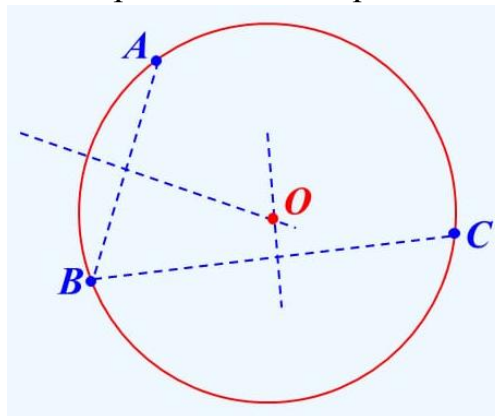
Based on the implement and handover row width, the system generates concentric circular guidelines at equal distances outward.



11.6 Three Point Circle

When there are obstacles at the center pivot point, the Three point circle can be used to generate circular guidelines for circular fields.

As shown in the figure, the principle of the three-point circle method is to connect three non-collinear points and draw the perpendicular bisectors of these segments. The intersection of these bisectors will be the center of the circle, and the distance from the center point to the three points will be equal.



1. Select the Three point circle mode  , click  to enter, and complete the route planning.
2. Click  to record Point A, an icon  will appear once data collection is complete.
3. Click  to record Point B, an icon  will appear once data collection is complete.

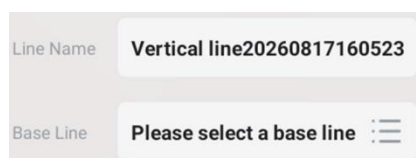
- Click  to record Point C, an icon  will appear once data collection is complete.
- And click  to save once recording is complete.

11.7 Vertical Line

- Select the Vertical line mode , click  to enter, and complete the route planning.

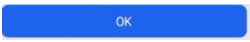
- Enter an appropriate line name to avoid forgetting it.

Note: If you do not enter a line name, the system will automatically generate one and save it.



- Select the appropriate baseline, then click  to open the baseline selection.



- Click  to select the baseline.
- And click  to save once recording is complete.

11.8 Boundary

- Select the Boundary mode , click  to enter, and complete the route planning.

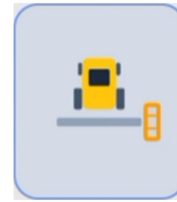
There are three ways to create boundaries:



Lift



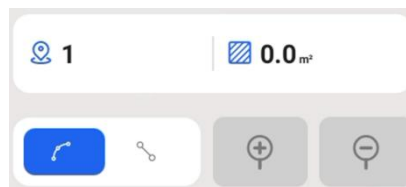
Center



Right

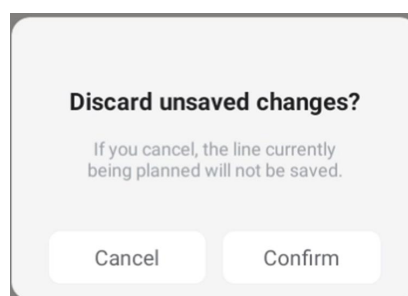
2. Choose whether the boundary drawing point is on the left, right, or center of the implement.

The icon  **1** will display the number of real-time data points; the icon  **0.0 m²** will display the area within the current boundary.

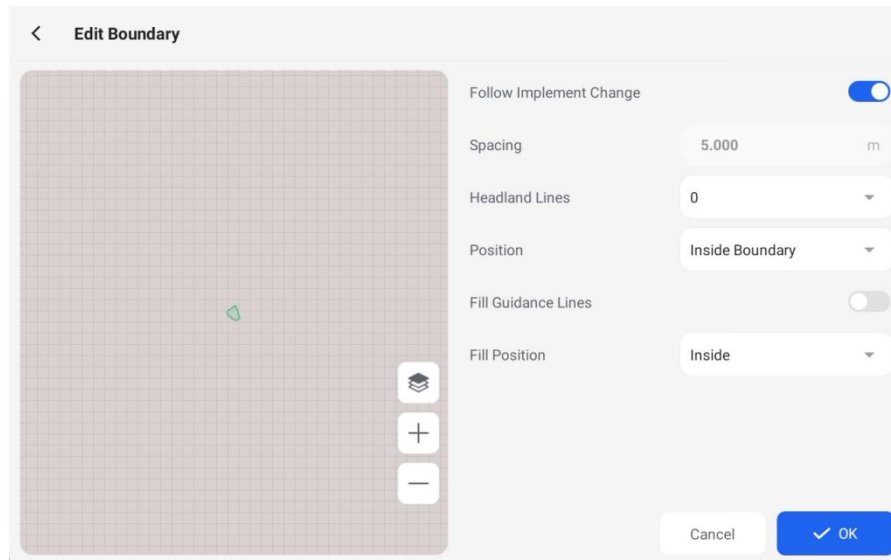


Note: If there is a straight line within the curve, click  to switch to straight-line mode. In this mode, the device will only record the two endpoints and draw a straight line. If you want to switch back to the curve, click  to switch. Click  to increase or decrease the number of points in line mode .

If you wish to cancel, please click  and confirm the cancellation.



3. And click  to save once recording is complete.
4. Once the boundary has been created, the following message will appear, allowing you to make additions:



- ✧ Click    to switch maps, zoom in, or zoom out.
- ✧ Follow Implement Change: Select this option to maintain a constant distance from the implement's edge; currently enabled by default;
- ✧ Spacing: Displays the current implement width. If the width is incorrect, please adjust the implement width;
- ✧ Headland Lines: Creates multiple boundary planning lines; you can select between 0 and 10 lines; **Note:** You must set a planning line; otherwise, the system will display an error message and you will not be able to use boundary mode.
- ✧ Position: Choose whether to place the guidance lines inside or outside the boundary;
- ✧ Fill Guidance Lines: Fill in a specified number of guidance lines;
- ✧ Fill Position: Choose whether to place the guidance lines inside or outside the boundary.

Click  to exit the boundary information entry screen, but please note that the boundary mode will no longer be available at this point. Click  to finish creating the boundary.

If you accidentally log out, simply click “ Troubleshooting ” and follow the instructions to resolve the issue promptly.

Chapter 12-Troubleshooting Guide

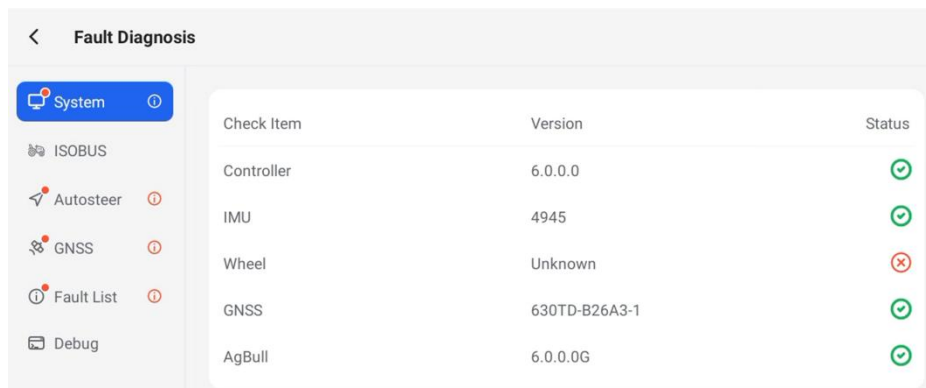
How to use the self-test function to troubleshoot vehicle issues and provides solutions to common problems encountered.

12.1 Self-check

Users can click  to open the Fault Diagnosis screen to view current fault information.



In addition, when a fault message appears on the main screen, clicking  will take you to the fault diagnosis screen.



Access the fault diagnosis interface, which consists of six screens: System, ISOBUS, Autosteer, GNSS, Fault List, and Debug.

Users can view fault issues in the four interfaces—System, ISOBUS, Autosteer, and GNSS.

► System

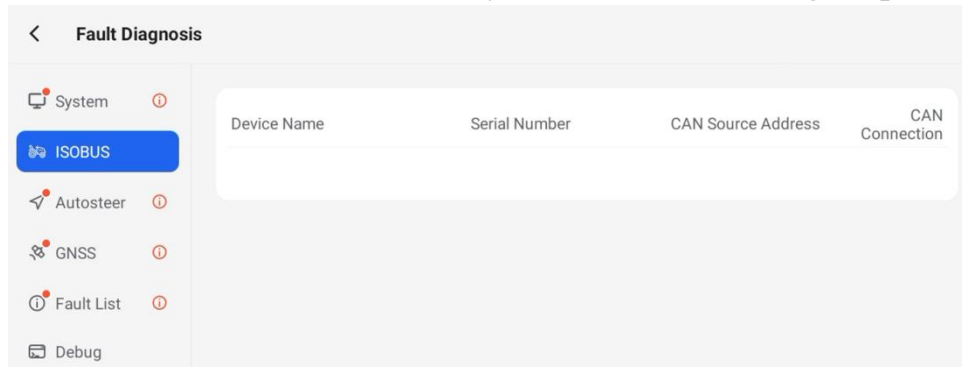
On the system interface, you can check whether the Controller, IMU, Wheel, GNSS, and AgBull are functioning properly. This page primarily verifies whether the devices are currently connected correctly. If a device is malfunctioning or not properly connected, an error message will appear on the right side of the screen.

The situation is shown in the figure above. Example: If an unknown version of Wheel appears during the process, the system will display an error message, indicating that

Wheel needs to be checked and the issue confirmed. After that, you can go to “[12.3 Debug](#)” to check the information and verify that the data is being output correctly.

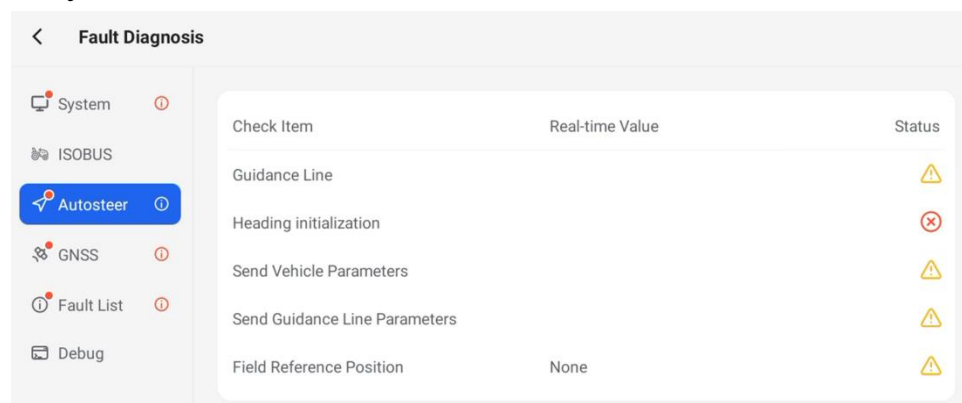
► ISOBUS

If you encounter an ISOBUS issue, you can check the information on this page to identify the possible cause of the problem. This screen is primarily used to verify whether the ISOBUS cables are properly connected. After that, you can go to “[12.3 Debug](#)” to check the information and verify that the data is being output correctly.



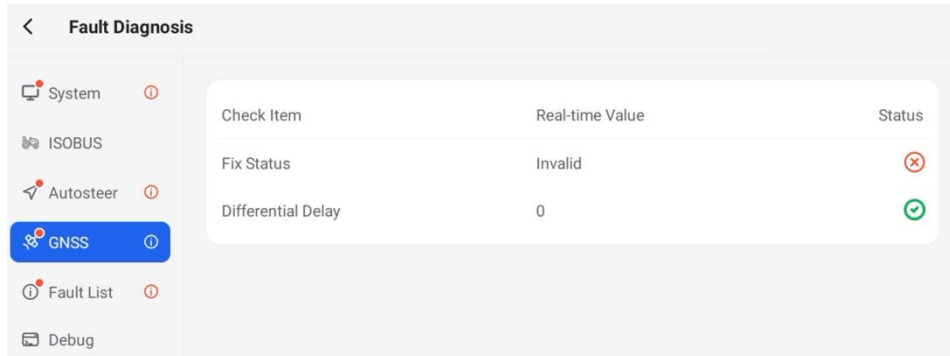
► Autosteer

If you encounter a problem while using autonomous driving, you can check this screen right away to identify the cause of the problem and resolve it. After that, you can go to “[12.3 Debug](#)” to check the information and verify that the data is being output correctly.



► GNSS

If a GNSS signal issue occurs, you can check this screen promptly to identify the problem. After that, you can go to “[12.3 Debug](#)” to check the information and verify that the data is being output correctly.



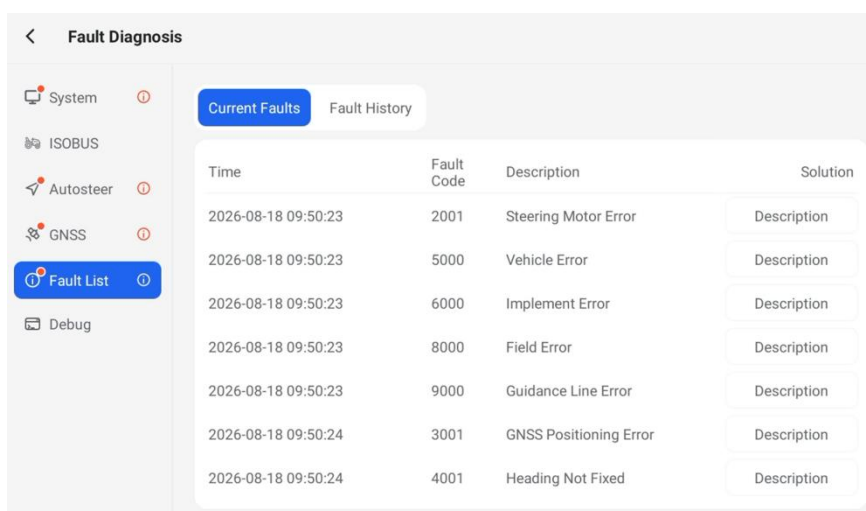
The list of fault messages is as follows:

Module	Fault
Motor	Motor status does not meet working requirements. Motor may be faulty, stopped or unavailable
Hub	Failed to connect or communicate with Hub device
Sensor	NMEA data is not updated within expected time. Communication delay or data loss may occur
	Body gyroscope data is missing, invalid or out of valid working range
	Head gyroscope data is missing, invalid or out of valid working range
	Heading sensor module disconnected or communication abnormal
	GNSS module disconnected or communication broken, no valid positioning data received
Differential data	No valid position result, or positioning accuracy cannot meet working requirement
	Heading module not initialized, cannot provide stable and valid heading data
	Unknown undefined fault, cannot match specific fault type
	Cannot connect to vehicle control hardware device
	Application cannot connect to version check and upgrade service
Other	Vehicle is not selected or bound for current working task
	Vehicle parameters or sensors have not been calibrated
	Farm tool is not selected or bound for current working task
	No valid field selected for current operation
	Vehicle position exceeds field allowable radius, outside valid working

	area
	No valid working line selected for task The number of boundary /headland lines is incorrect, working path cannot be generated Vehicle speed violates safety requirement when enabling auto-pilot; speed too high, too low or out of range

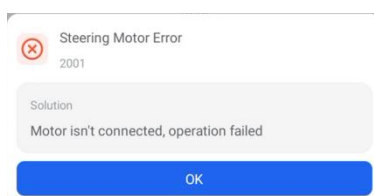
12.2 Fault List

When you click the “Fault List” page, you can click [Current Faults](#) to view the current error messages. You can also click [Fault History](#) to view historical error messages.



If you encounter a problem, you can click [Description](#) to confirm the fault details on this screen; for some faults, you can be redirected to the appropriate location to resolve them.

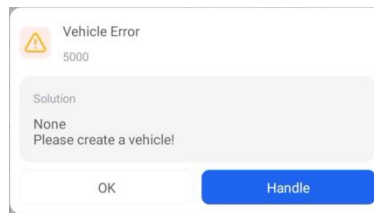
► Query Fault Information:



► Fault Information Redirect Class

Click [OK](#) to close the pop-up window; click [Handle](#) to navigate to

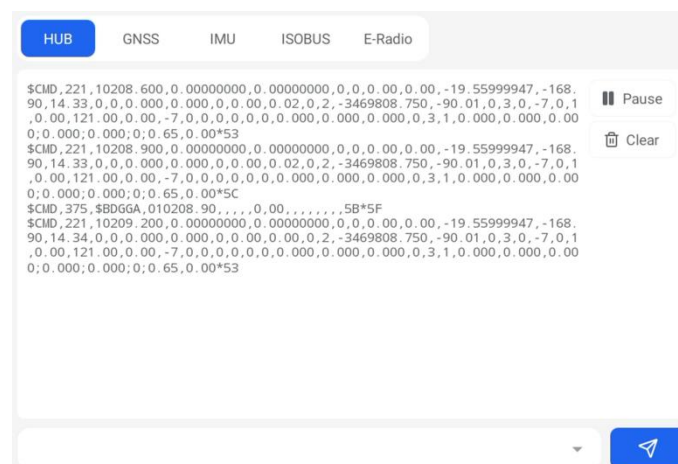
the relevant page and resolve the issue.



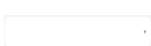
12.3 Debug

► HUB

Click the HUB interface under “Debug” to view the current HUB data output.



Click  to pause data output for easier viewing; click  to resume output; click  to clear the current data output.

When you need to enter commands to perform actions such as output, input, or retrieving information, you can click  to open a dialog box, enter the command yourself, and send it , or click  to view existing commands and select one to send.

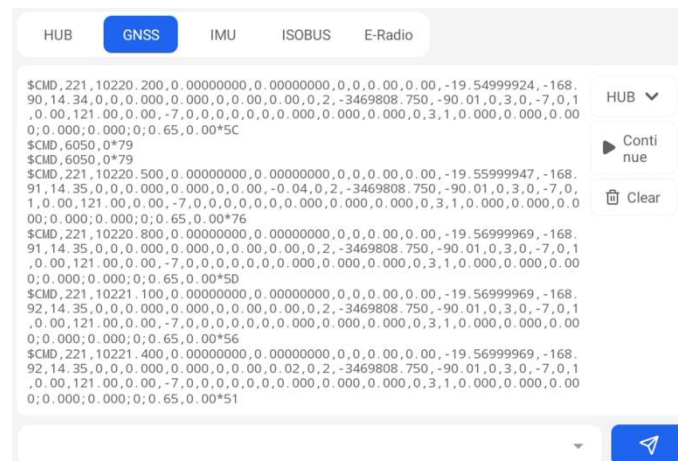


It is recommended that you pause the interface to view the output after entering a command.

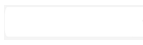
► GNSS

Click the GNSS interface under “Debug” to view the current GNSS data output.

● HUB Port



Click  to pause data output for easier viewing; click  to resume output; click  to clear the current data output.

When you need to enter commands to perform actions such as output, input, or retrieving information, you can click  to open a dialog box, enter the command yourself, and send it , or click  to view existing commands and select one to send.

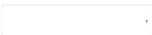


It is recommended that you pause the interface to view the output after entering a command.

● Direct Port



Click  to pause data output for easier viewing; click  to resume output; click  to clear the current data output; Click  to save the current data.

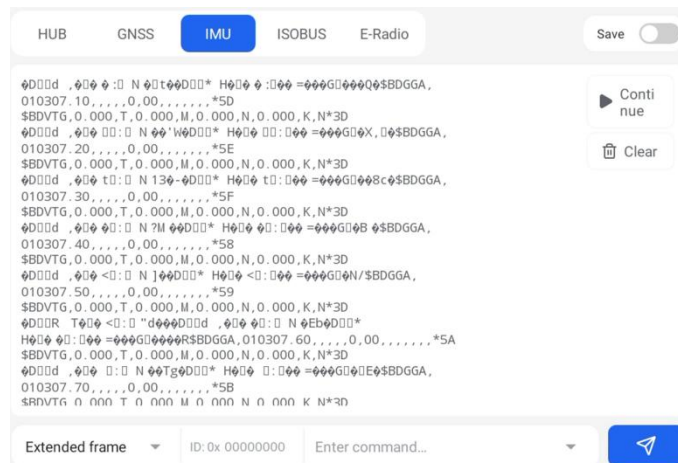
When you need to enter commands to perform actions such as output, input, or retrieving information, you can click  to open a dialog box, enter the command yourself, and send it , or click  to view existing commands and select one to send.



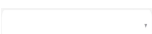
It is recommended that you pause the interface to view the output after entering a command.

► IMU

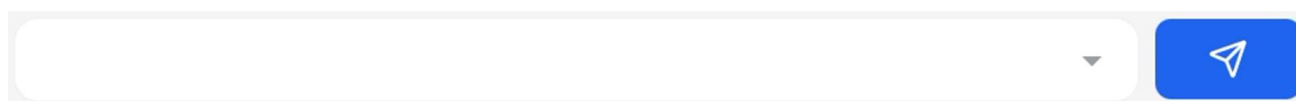
Click the IMU interface under “Debug” to view the current IMU data output.



Click  to pause data output for easier viewing; click  to resume output; click  to clear the current data output; Click  to save the current data.

When you need to enter commands to perform actions such as output, input, or retrieving information, you can click  to open a dialog box, enter the

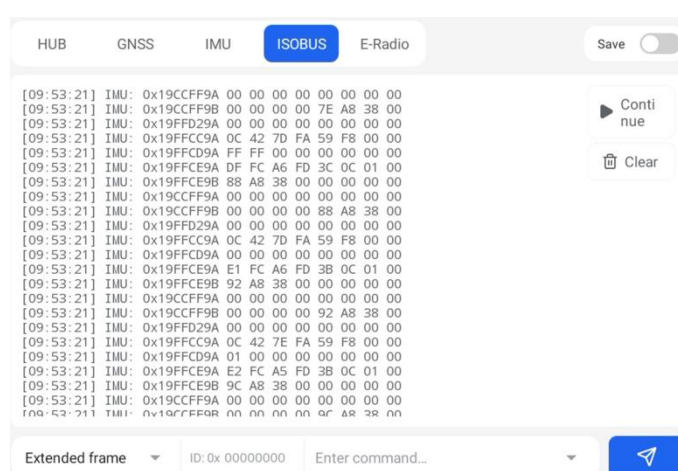
command yourself, and send it , or click  to view existing commands and select one to send.



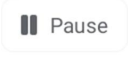
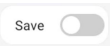
It is recommended that you pause the interface to view the output after entering a command.

► ISOBUS

Click the ISOBUS interface under “Debug” to view the current ISOBUS data output.



The screenshot shows the ISOBUS interface with tabs for HUB, GNSS, IMU, ISOBUS (selected), and E-Radio. A 'Save' toggle is in the top right. The main area displays a list of data frames, each starting with a timestamp [09:53:21] and an IMU identifier, followed by a hexadecimal data string. On the right side of the list are 'Continue' and 'Clear' buttons. At the bottom, there is a dropdown menu set to 'Extended frame', an 'ID: 0x 00000000' field, an 'Enter command...' input field, and a send button.

Click  to pause data output for easier viewing; click  to resume output; click  to clear the current data output; Click  to save the current data.

When you need to enter commands to perform actions such as output, input, or retrieving information, you can click  to open a dialog box, enter the command yourself, and send it , or click  to view existing commands and select one to send.

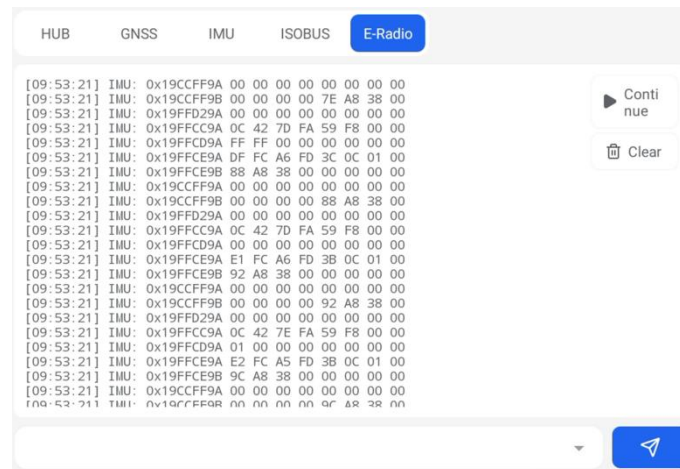


It is recommended that you pause the interface to view the output after entering a command.

Note: If there is no ISOBUS connection, this interface will not display any data.

► E-Radio

Click the E-Radio interface under “Debug” to view the current E-Radio data output.



Click  to pause data output for easier viewing; click  to resume output; click  to clear the current data output;

When you need to enter commands to perform actions such as output, input, or retrieving information, you can click  to open a dialog box, enter the command yourself, and send it , or click  to view existing commands and select one to send.



It is recommended that you pause the interface to view the output after entering a command.

Note: If there is no E-Radio connection, this interface will not display any data.

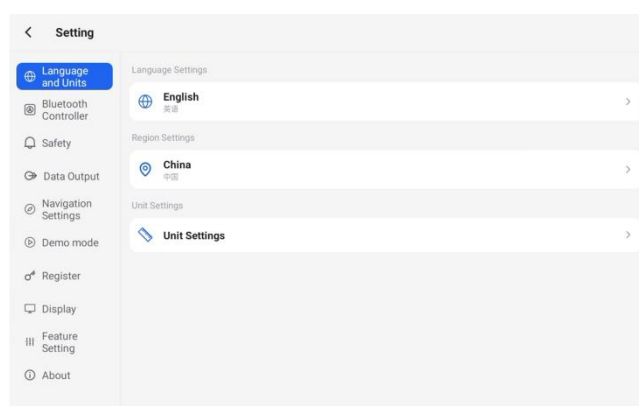
Chapter 13-Settings Menu

This chapter introduces basic information viewing and software settings, how to upgrade and data output.

13.1 Language and Units

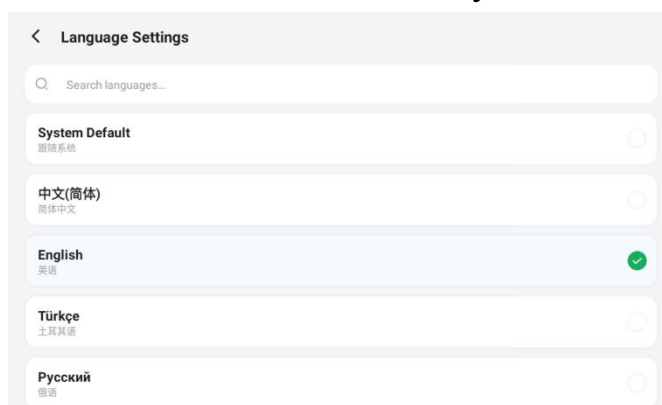
Under “Language” and “Units,” you can change the current system language, region and units of measurement.

Click the icon  to access Settings, then select “Language and Units.”



13.1.1 Language

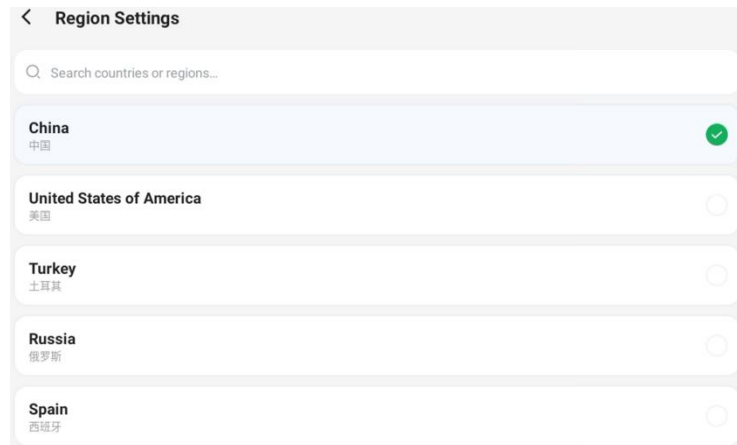
Click the icon  to open the language settings screen, select the appropriate language, and once you’ve made your selection, the system will automatically save and apply the changes. During this process, the software may restart or the screen may go black (this is normal and indicates that the system is switching languages).



Currently, the system supports Chinese, English, and so on; additional language versions will be developed in the future.

13.1.2 Region

Click  to go to the region selection screen, where you can switch your current region.

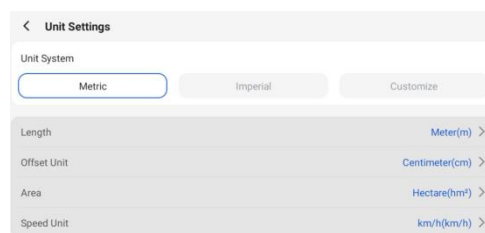


Currently supports switching between multiple countries and regions.

13.1.3 Units

Click the icon  to open the unit settings screen, where you can select Metric, Imperial, or Customize mode.

► Metric



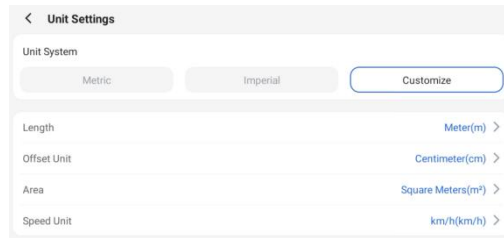
In Metric mode, the units will be locked and cannot be changed.

► Imperial



In Imperial mode, the units will be locked and cannot be changed.

► Customize



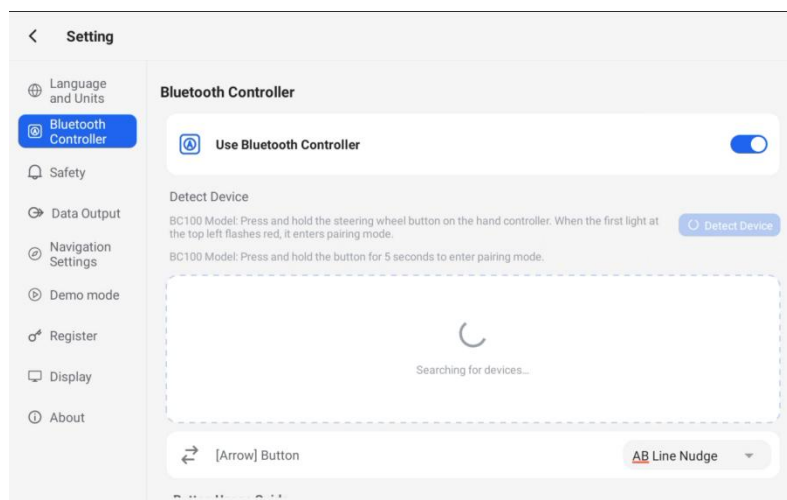
- Length: Click > to open the length units menu. Supported options: m; ft; cm; in.
- Offset Unit: Click > to open the Offset Unit menu. Available options: cm, in.
- Area: Click > to open the Area menu. Supported options: mu; Ha; Acre; m².
- Speed Unit: Click > to open the Speed Unit menu. Available options: KM/H, MP/H.

13.2 Bluetooth Controller

In the Bluetooth Controller, you can connect devices using the Bluetooth controller and use the Bluetooth controller to control the AG601 PRO.

Click the icon  to access Settings, then select “Bluetooth Controller.”

Click  to open the Bluetooth controller search page, and the system will automatically search for compatible Bluetooth controllers.

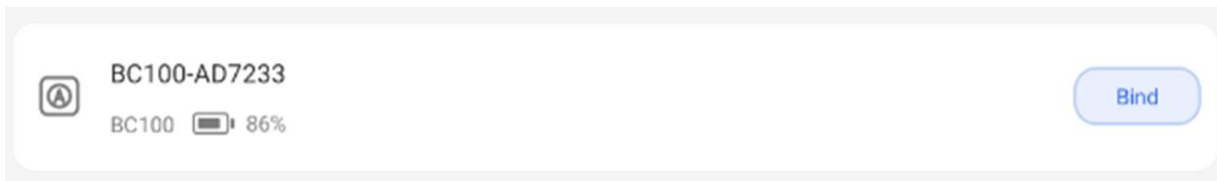


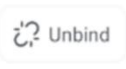
Currently supported devices include:

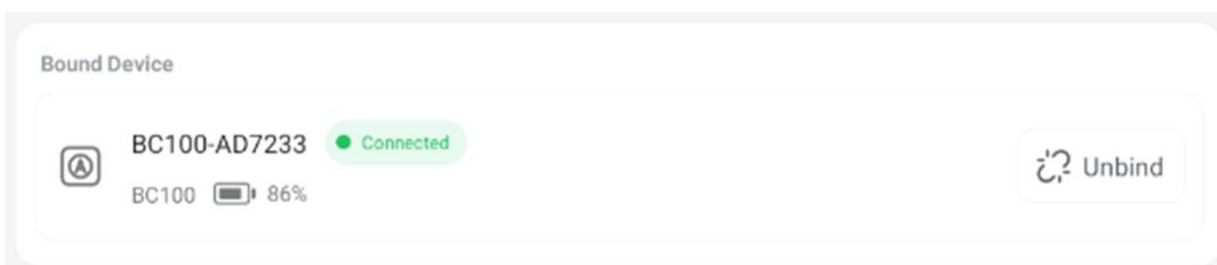
BC100 Model: Press and hold the steering wheel button on the hand controller. When the first light at the top left flashes red, it enters pairing mode.

BC100 Model: Press and hold the button for 5 seconds to enter pairing mode.

When the device detects a compatible Bluetooth controller, the screen shown below will appear. Click  to Bind.



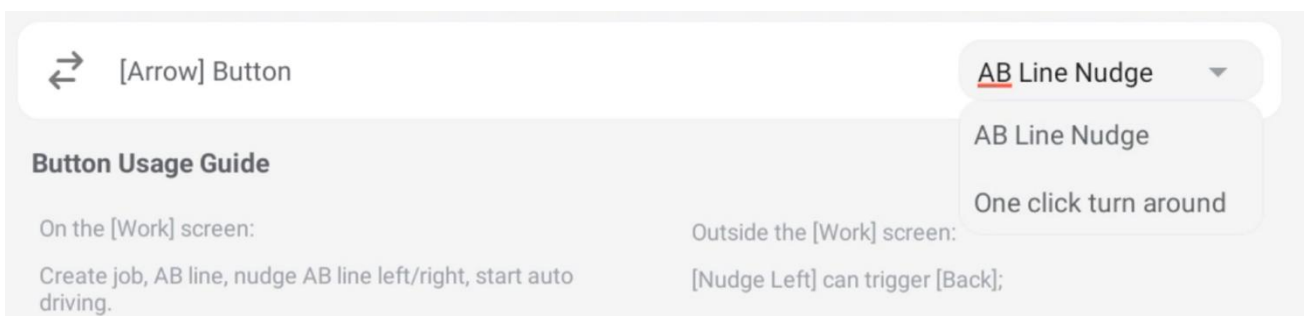
After you connect the device, the following screen will appear. Click  to unbind the device.



Note: If there are multiple Bluetooth devices, please select the appropriate device to connect to.

When you need to rescan for devices, you can click the icon  to enter rescan mode.

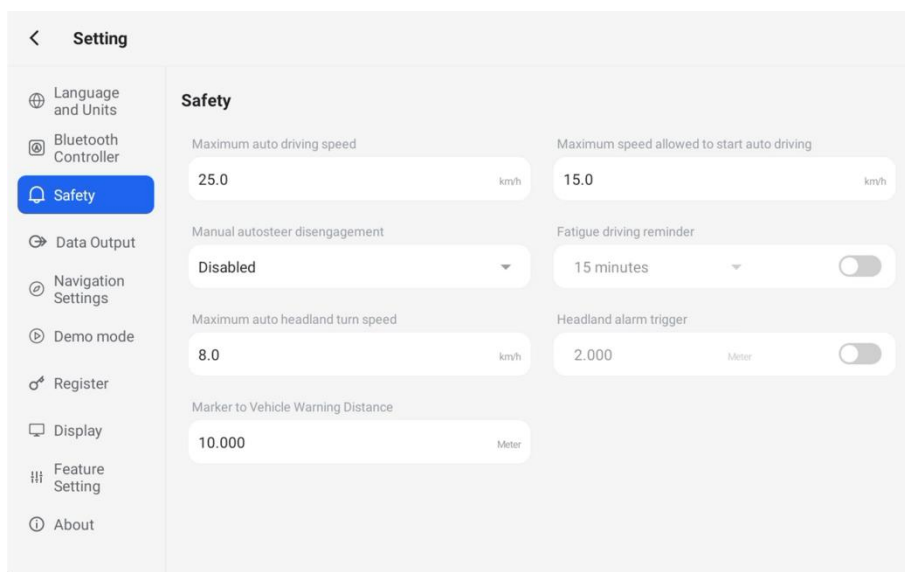
Once the Bluetooth controller has been detected, click  to select either “AB Line Nudge” or “One-Click Turn Around” mode for convenient device control.



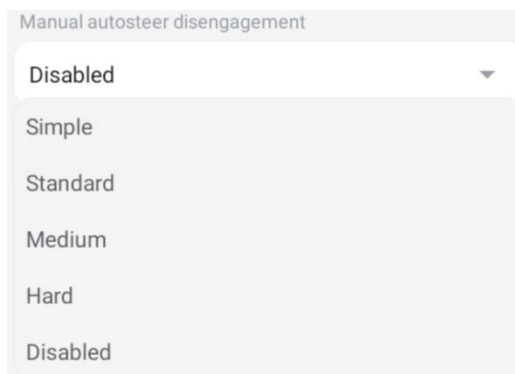
13.3 Safety

This section covers key safety alert settings, including enabling/disabling warnings, boundary alerts, and speed-limit notifications to enhance safe operation.

Click the icon  to access Settings, then select “Safety.” You can configure the relevant security settings.



- You can adjust the “Maximum Auto Driving Speed” setting. Once autopilot is enabled, if the vehicle's speed exceeds this threshold, you will receive a warning. At that point, you should slow down or take manual control of the vehicle to prevent an accident. The value range is 2–100.
- You can adjust the “Maximum speed allowed to start auto driving” setting. Before enabling autopilot, if the vehicle exceeds this speed, autopilot will not start; you must reduce the speed to this threshold for autopilot to start normally. The value range is 1–100.
- You can adjust the “Manual Autosteer Disengagement” setting, which allows you to quickly disengage autosteer by manually controlling the steering wheel while the vehicle is in autosteer mode, thereby preventing accidents. There are five modes: Simple, Standard, Medium, Hard, and Disabled. Click the icon ▼ to select the appropriate mode.

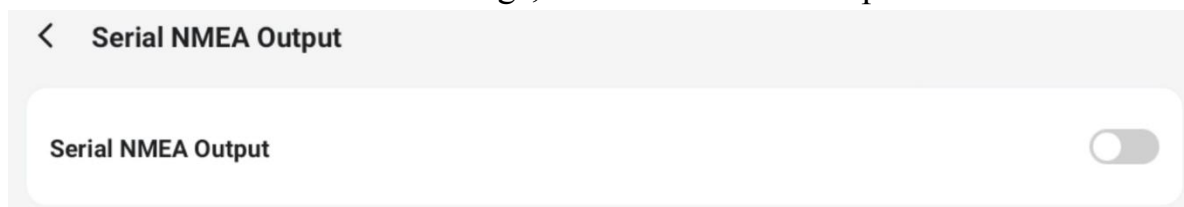


- You can adjust the “Fatigue Driving Reminder” setting, which alerts you not to drive while fatigued after a period of autonomous driving. The available time settings are 15, 30, and 60 minutes. Click  to enable this feature.
- You can adjust the “Maximum auto headland turn speed” setting, which limits the maximum turning speed during automatic headland turns to prevent accidents such as rollovers caused by high-speed turns. The setting range is 0–15.
- You can adjust the Headland Alarm Trigger, which alerts you when the vehicle is approaching the boundary. The setting range is 0–100.
- Marker to Vehicle Warning Distance: You can adjust this value to better display the distance between the current road sign and the vehicle, so you can be alerted when you get too close to the distance threshold.

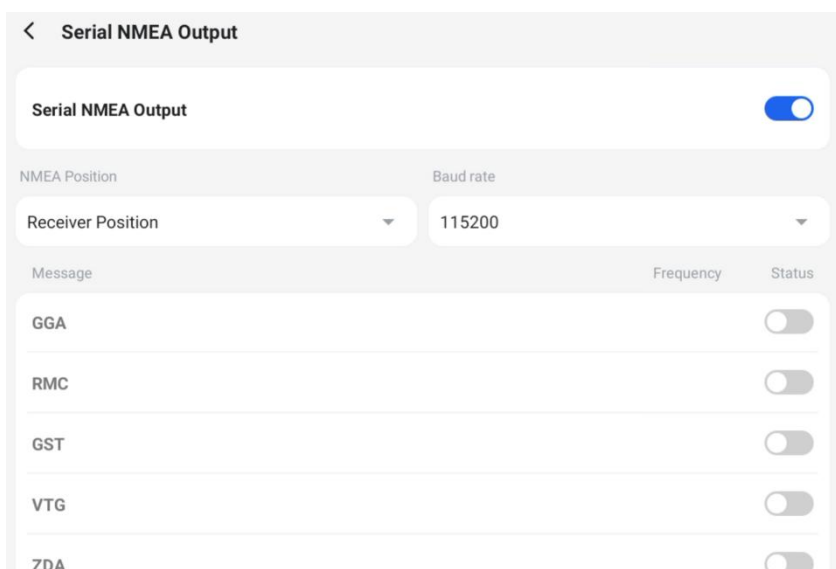
13.4 Serial NMEA Data Output

Through the Data output port on the main cable, select the same baud rate and output real-time NMEA0183 data to other devices.

Click the icon  to access Settings, then select “Data output.”



Click  to open Serial NMEA Output.



Support Baud rate: 9600 bps, 19200 bps, 38400 bps, 57600 bps, 115200 bps. Click



to display the list and select the appropriate baud rate.

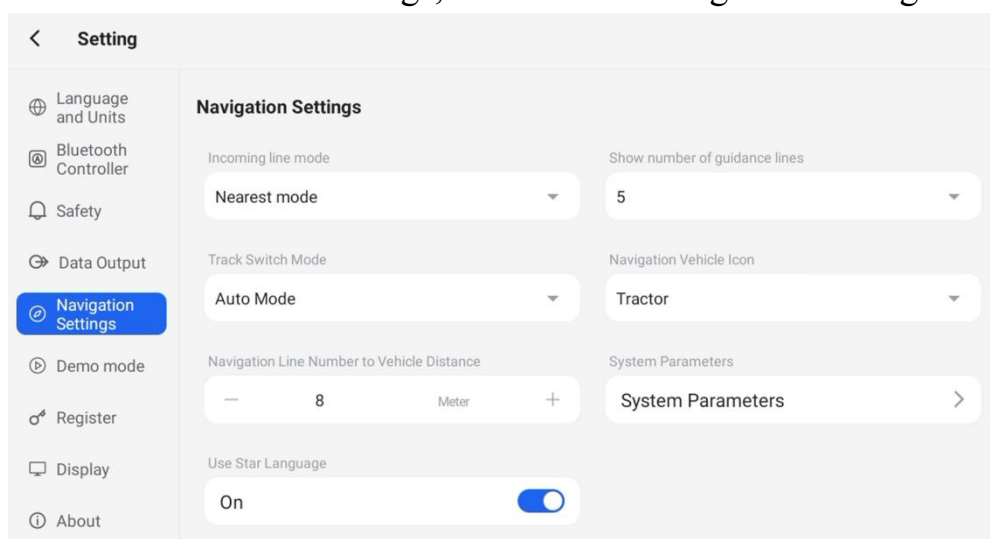
Support data: GPGGA, GPRMC, GPTRA, GPGST, GPVTG, GPZDA, GPNTR,

GPGSA. Click  to enable the corresponding NMEA data channel, and the data will be output automatically.

13.5 Navigation Settings

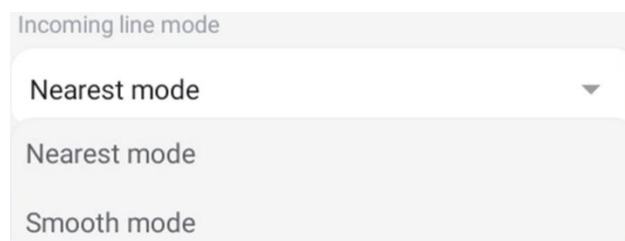
In Navigation Settings mode, you can adjust settings such as Incoming Line Mode, Track Switch Mode, and Navigation Vehicle Icon.

Click the icon  to access Settings, then select “Navigation Settings.”



► Incoming line mode

Click “Incoming line mode” to toggle this mode. When engaging autosteer, you can choose the incoming line mode between Nearest and Smooth. Default: Nearest Mode.

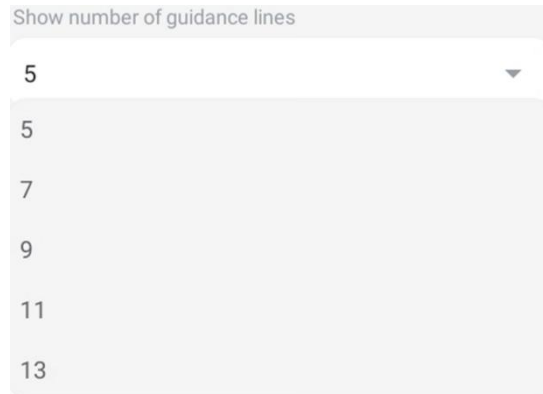


- Nearest Mode: The vehicle moves directly to the nearest point of the guideline and aligns immediately, ensuring quick and efficient entry.
- Smooth Mode: The vehicle approaches the guideline gradually, following a

smoother path to reduce sharp steering movements and improve comfort.

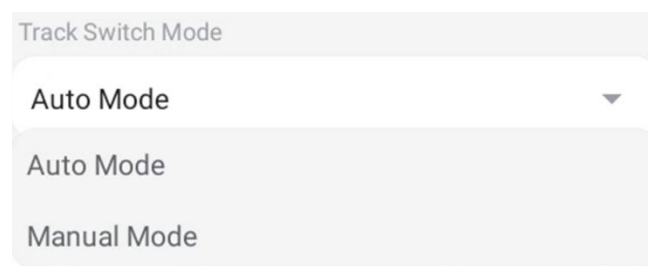
► Show number of guidance lines

Click “Show number of guidance lines” to adjust the number of guidance lines displayed on the current main screen; the default is 5.



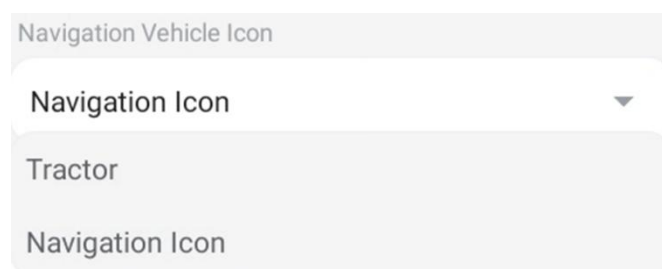
► Track Switch Mode

Click “Track Switch Mode” to toggle between the two track recording modes: automatic and manual.



► Navigation Vehicle Icon

Click the Navigation Vehicle icon to toggle between the Tractor and Navigation icons.



● Tractor



● Navigation



► Navigation Line Number to Vehicle Distance

Click “Navigation Line Number to Vehicle Distance” to set the distance between the icon and the vehicle.

Navigation Line Number to Vehicle Distance

—
8
Meter
+

The figure shows the result when the navigation distance is set to 5.



► System Parameters

Click “System Parameters” to access the system parameters details page and view the real-time status of the vehicle, implements, and other equipment.

System Parameters

Real-time Info

(X, Y)542867.106, 3782110.019

Roll0.000°

Heading angle0.000°

DR_Roll0.000°

SIM Card Information

SIM 1 CarrierUnicom

SIM 1 Signal Strength-75dBm

SIM 1 IMEIaf787753240eefa6

SIM 1 ICCID89860624540015756069

Dimension Parameters

Wheelbase2.00

To rear axle0.00

To middle axle2.00

Front hitch2.00

Antenna height2.00

To rear axle0.00

Row Spacing1.00

Implement width4.00

Center offset0.00

Installation Parameters

VehicleRegular tractor

ActuatorWheel

Angle sensorNone

Steering controller-

Nav. controllerSA300

Front wheel gyro

TypeNone

Rate0.0

History average0.0

Body gyro

TypeThree-axis Gyro

Rate0.0°/s

History average0.0

Roll Zero-

Pitch Zero-

Driver Parameters

Wheel Diameter60

Frequency0

Steering Gap18.0

Installation offset

Pitch Deviation0.000

Roll Deviation0.000

Motor Parameters

Current Angle0.0°

Current Voltage0.0 V

Electricity0.0 A

Other Information

Wheel Version-

Software Code6000052

ISOBUS Library1.17.1

► Use Star Language

Select “Use Star Language,” then click  to open it and launch Star Language; you'll see the indicator light at the top of the screen change accordingly.



For a detailed explanation of Star Language, please refer to the table below:

Function Information	Function Status	Display Status	Lamp Duration
Software Startup	Show Infinite Progress	●●●○○	Cycle interval: 200 ms
		○●●●○	
		○○●●●	
		●○○●●	
		●●○○○	
Offset Information	0	○○●○○	100 ms
	-1	○●●○○	
	≤ -2	●●●○○	
	1	○○●●○	
	≥ 2	○○●●●	
U-Turn Left Information	Turning left or making a U-turn	○○○○●	100 ms
		○○○●●	100 ms
		○○●●●	100 ms
		○●●●●	100 ms
		●●●●●	100 ms
U-Turn Right Information	Turning Right or making a U-turn	○○○○○	100 ms
		●○○○○	100 ms
		●●○○○	100 ms
		●●●○○	100 ms
		●●●●○	100 ms
Enter Auto Driving		●●●●●	100 ms
		○○○○○	120 ms
		○○●○○	120 ms
		○●●●○	120 ms
		●●●●●	180 ms
		○●●●○	120 ms

Disable Auto Driving	○○●○○	120 ms
	●●●●●	240 ms
	●●●●●	200 ms
	○●●●○	150 ms
	○○●○○	150 ms
	○○○○○	300 ms

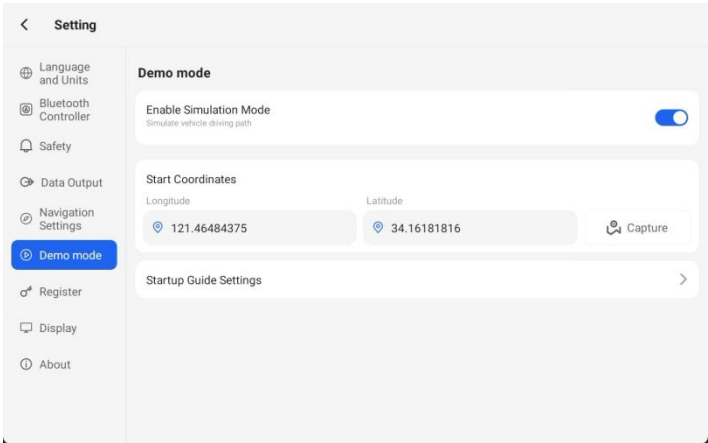
13.6 Demo Mode and Startup Guide Settings

In Demo mode, once this mode is enabled, the system allows you to perform basic operations to try out and learn the features. Once you have finished learning, you can disable this mode and proceed to actual operation.

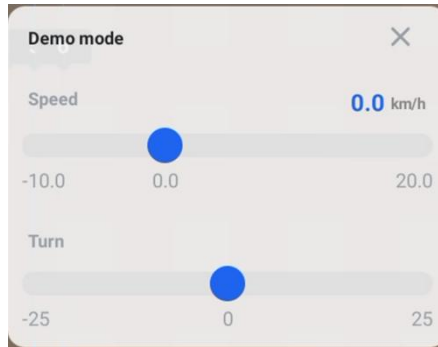
Click the icon  to access Settings, then select “Demo mode.”

► Demo mode

Click  to open demo mode. When the following screen appears, it indicates that the process was successful. You can enter coordinates manually, or the app will automatically detect approximate coordinates if the antenna is in an open area.



When you launch demo mode, an icon  will appear in the upper-left corner of the main screen. Click  the icon to access the vehicle speed and angle control center in simulation mode.



Speed ranges from -10 to 20, where negative values indicate reverse.

Steering angle ranges from -25 to 25, where negative values indicate turning left.

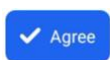
Note: Autonomous driving is not available in Demo mode; this mode does not have the capability to move directly on the ground.

► Startup Guide settings

Click “Startup Guide settings” to access the screen where you can reselect the system and device modes; the software will automatically restart.



Select the language for the system, read the relevant notes, and then click the icon



to proceed to the next step.

ComNavTech

User Agreement and Safety Notice

⚠ Agreement required before use

I. Equipment Use Responsibility and Safety Notice

The equipment owner is responsible for ensuring that all operators are trained and fully understand system operation before use. The driver must note that failure to comply with the following may cause injury, death, or property damage. ComNav assumes no liability for violations or resulting harm:

1. This product may only be used in fields. During autonomous operation, the driver must remain in the cab;
2. This product must not be used on roads. On any road, keep the main autonomous driving switch off to avoid sudden start;
3. Disconnect autonomous driving when the vehicle is stopped, when people or animals are near, or whenever safety may be at risk;
4. This product provides assisted autonomous driving without obstacle sensing. The driver must remain seated, stay focused, and continuously supervise autonomous operation and surroundings. Failure to do so may cause serious accidents or injury. Manual driving may be required in situations including but not limited to cases where failure to intervene could cause an accident.

II. Installation and Use Requirements

Install and use the product strictly according to instructions and environmental requirements. ComNav assumes no liability for the following or resulting harm:

1. Improper installation or use causing harness or part damage, product burnout, vehicle damage, or injury;
2. Improper use causing irreversible damage to the vehicle or implement, such as a dead battery preventing start or implement

3. Use in unsuitable environments preventing normal operation, such as inability to acquire satellites indoors.

III. Liability Disclaimer

To the maximum extent permitted by law, ComNav disclaims liability for personal or property loss from data loss due to normal aging, human error, negligence, or other causes, and for any special or indirect damages. Some jurisdictions do not allow such limitations; where not allowed, ComNav's total liability shall not exceed your actual payment.

IV. Product Data and Data Traffic

1. This product uploads location and other data to the platform;
2. Data card recharge supports only ComNav data cards.

V. User Consent

If you agree to the following, press the "Agree" button:

1. You have read and understood the above and will comply with all warnings;
2. You will operate and control the vehicle accordingly;
3. You have completed autonomous driving system training and have read and understood the operation manual.

Select the system and software versions corresponding to the device.

Welcome to AgBull

Please select your device product type and model

Device Type



AG501



AG601

● AG501

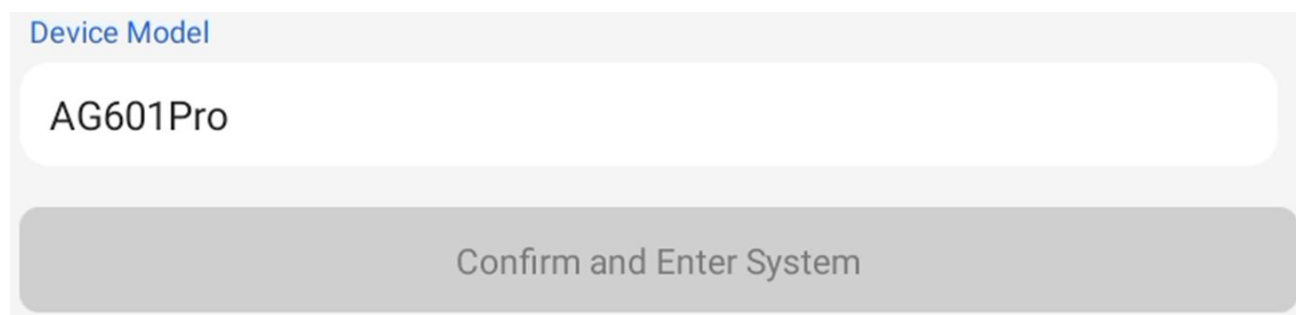
Select AG501 and verify which version you are using. Currently, two versions of the system software are available: AG501 PRO and AG501 PRO S.

Device Model

● AG601

Select AG601 and verify which version you are using; the AG601 PRO system

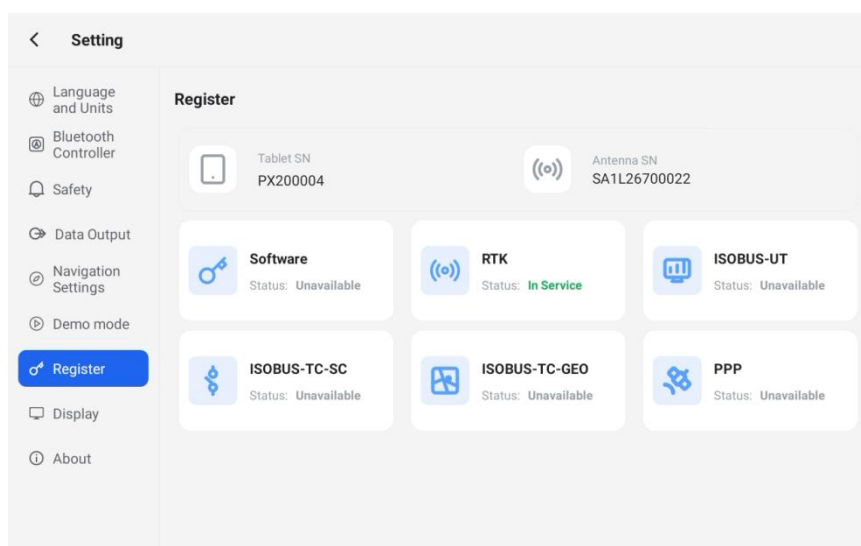
software version is currently available.



Once you have made your selection, click “Confirm and Enter System” to log in. The first time you log in, it may take a while, so please be patient.

13.7 Register

In Register mode, you can register software, RTK, and ISOBUS-related features to obtain permission to use them.



Click the icon  to access Settings, then select “Register.” You can view the serial numbers (SN) of the Dear Tablet and the antenna.

Click the icon  to register the software; once registration is complete, you will be able to use the software’s features.

Click the icon  to register the RTK feature; once registration is complete, the RTK feature will be enabled.

Click the icon  to register ISOBUS; once registration is complete, you can use ISOBUS features such as UT, TC-SC, and TC-GEO.

Click the icon  to complete registration for the satellite-based feature. Currently, the satellite-based feature requires the satellite-based version of the AG601 PRO. For more information, please contact your local dealer or reach out to us.

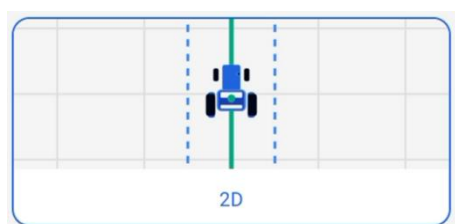
13.8 Display

In Display mode, you can customize the Map View and Display Mode to suit your needs.

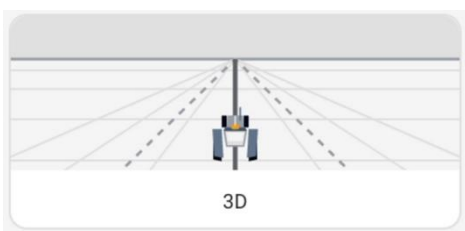
You can choose between 2D and 3D display modes, as shown in the figure below.

You can also choose from three different modes—Auto, Day, and Night—to switch the current interface. The Auto mode automatically switches between Day and Night modes based on the time of day.

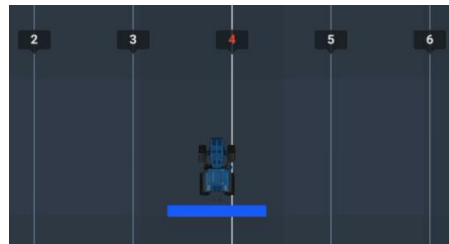
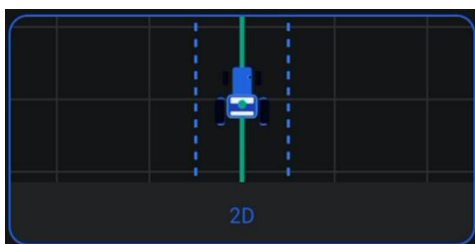
► Daytime 2D Effects



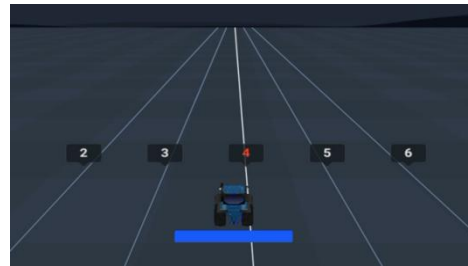
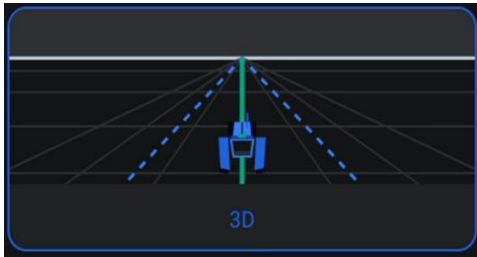
► Daytime 3D Effects



► Nighttime 2D Effects

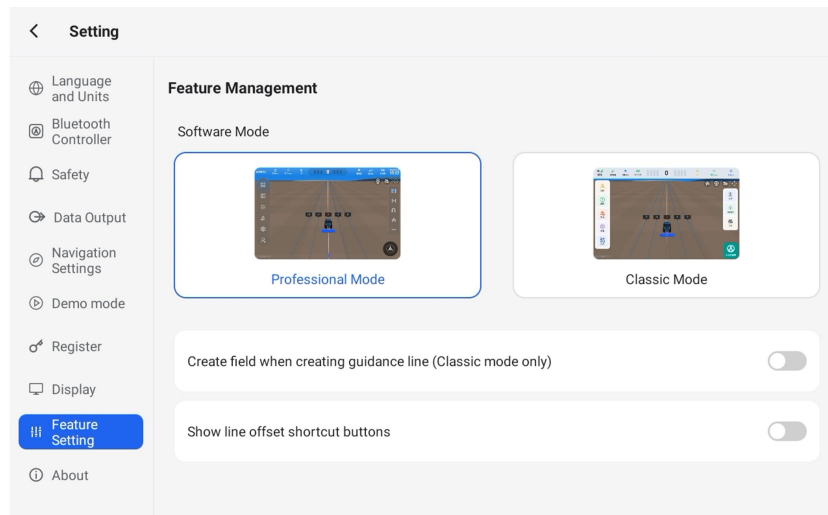


► Nighttime 2D Effects



13.9 Feature Setting

Click “Feature Setting” to switch between feature modes, including Professional Mode and Standard Mode (Note: This manual covers Professional Mode; for Standard Mode, please refer to the Standard Mode manual). You can also configure settings related to line creation and micro-movement operations.



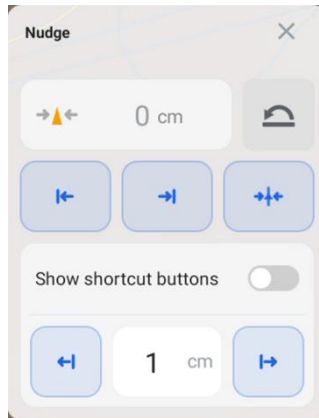
Click to switch. A prompt will appear asking if you want to switch; simply click “Confirm” to proceed.

Create field when creating guidance line (Classic mode only): In Professional mode, the field will not be created automatically.

Show line offset shortcut buttons: Click  to enable this feature; a button for this operation will appear on the main interface.

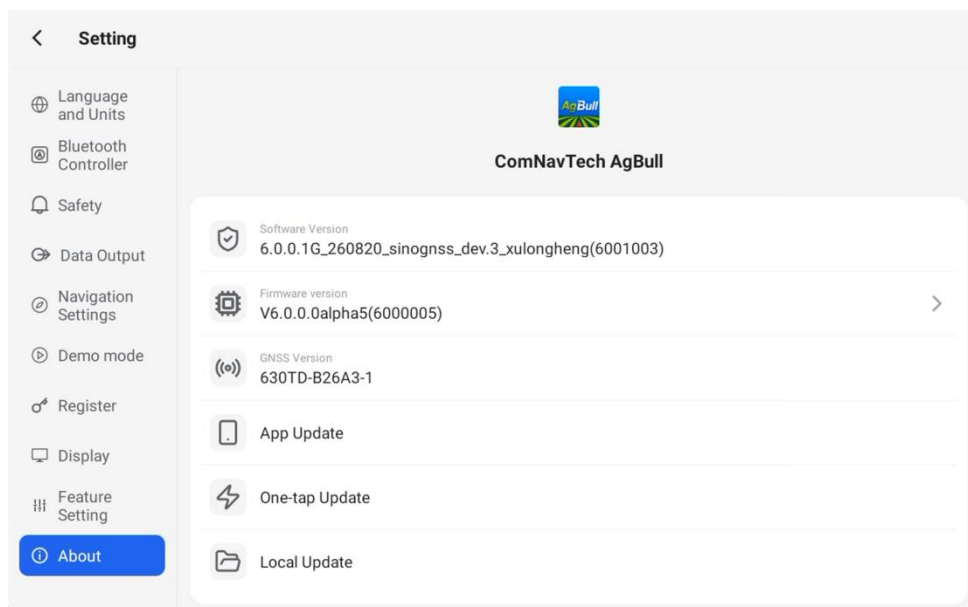


Once enabled, you can also disable  it in the line offset settings.

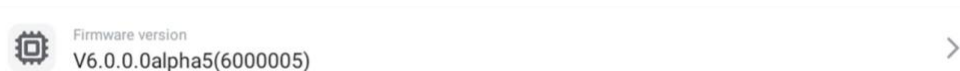


13.10 About

Once you enter About mode, you can view the current device software and firmware information, and you can also upgrade them or switch to other versions.



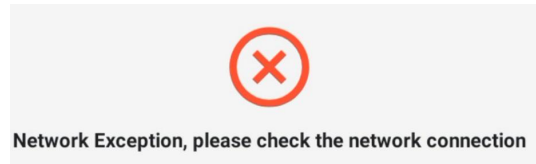
If you want more detailed information about the firmware, click  to open the “Firmware Version” page to view additional details.



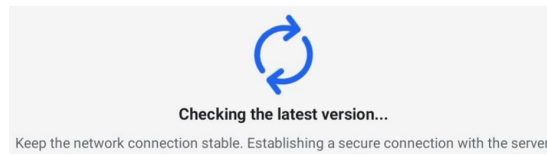
When you open the firmware information, you can view the Controller Firmware Version, GNSS Firmware Version, Motor Firmware Version, Body Gyro Firmware Version, and Radio Firmware Version to check the current versions.

13.9.1 App Update

You can click “App Update” to perform a cloud-based update. Please note that a cloud-based update requires an active internet connection.



When your tablet is connected to the internet, click to enter. The system will display the following dialog box. Please wait while the system automatically retrieves the latest software information from the cloud and downloads them to perform an automatic update.

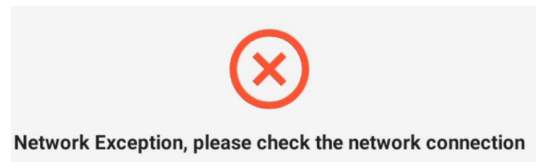


When the software detects available software updates, it will automatically download and install them from the cloud, as shown in the figure below. Once the progress bar is complete, simply restart the system to finish the update.

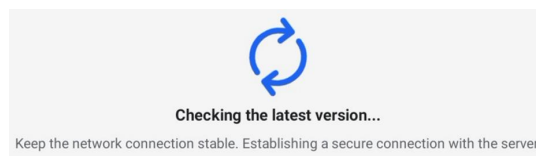


13.9.2 One-Tap Update

You can click “One-Tap Update” to perform a cloud-based update. Please note that a cloud-based update requires an active internet connection.



When your tablet is connected to the internet, click to enter. The system will display the following dialog box. Please wait while the system automatically retrieves the latest firmware information from the cloud and downloads them to perform an automatic update.



When the software detects available firmware updates, it will automatically download and install them from the cloud, as shown in the figure below. Once the progress bar is complete, simply restart the system to finish the update.

13.9.3 Local Update

Click “Local Update” to view the software and firmware information currently recognized by the software. Select the appropriate file to perform the update.

