

## 5 Start Operation

### 5.1 Operation Interface

●The interface of FastMode



Figure 3.5.1 Operation interface

1. **Operation record button:** Yellow means that the current operation data is recording. And white means that the current operation data is not recorded. Click to switch the recording status.

2. **Auto-driving button:** Yellow means it is in auto-driving status. White means it is not in auto-driving status. Click to switch driving status.

3. **Operation setting:** Including marking field, multi-line/single-line mode, translation guidance line, translation guidance line to the current position, offset adjustment and other functions.

4. **Offset distance:** The offset distance of the current operation relative to the guidance line is displayed in a real time manner, and the offset unit can be changed in the settings.

5. **Real-time speed:** Display the current driving speed of the agricultural machinery, the speed unit can be changed in the settings.

- 6. **Guidance line for operation:** The navigation line during operation.
- 7. **End task:** Click to end the task. And user can view the details of this operation in the History data.

● **The interface of Advanced Mode**



Figure3.5.2 InterfaceofAdvancedMode

- 1. **Real-time task information:** On the bottom column you can see the serial number of the guidance line where the vehicle is currently located, the total area of the field, the area that has been worked, the proportion of the area that has been worked, and the real-time speed.
- 2. **Task record:** If it is in yellow it indicates that the current task data is being recorded, and if in white it indicates that the current job data is not recorded. Click to switch it on and off.
- 3. **Auto mode:** If it is in yellow it means it is in auto-steering state, and if in white means it is not in auto-steering state. Click to switch between two driving modes.
- 4. **Translate guidance line:** Translate guidance line according to user

needs during operation.

5. **Switch multi-single line mode:** Click to switch between multi line mode and single line mode of guidance line.

6. **Offset distance:** The offset distance between the current path and the guidance line is displayed in real time, and the unit can be changed in the settings.

7. **Guidance line:** Guidance line for auto-steering

8. **Boundary:** The red one is the recorded boundary, and the black is the scaled boundary. A prompt will pop up when the distance to the black border is 30m, and the black border can be set as the position where to turn around (Uturn position) or the real edge of the field.

9. **End task:** Click to end the task, and you can view the details of this task in the task data.



**If the guidance line has not been imported before starting the task, an icon for creating a new baseline will appear in the operation interface.**

Create a new guidance line/boundary: If the guidance line and boundary are not chosen during task configuration, when entering the operation interface, you can directly create a new guidance line and boundary in the operation interface, and the task data of this creation would also be recorded.

## 5.2 Operation Setting

After completing the installation and commissioning and task configuration procedures in sequence according to the above operations, it will start automatic driving operation. During the operation, according to the user's actual operation needs, six operations can be carried out: switching operation record status, switching driving mode, shifting the guidance line, switching operation mode, marking the field and switching guidance lines and boundaries. The specific operation process is as follows:

### (1) Switch operation record status

Click "Start Recording/Recording" button in the lower left corner of the main interface to switch the status of the operation record.



Non-recording operation status: The operation data and operation traces during the non-recording time are not recorded in this operation.



Record operation status: operation data and operation traces during the recording time are recorded in this operation.

### (2) Switch driving mode

Click "Start/Stop" at the bottom right corner of the main interface to switch the driving mode.



Manual driving status: The user manually controls the steering wheel to assist straight line operations. When driving manually, user can perform operations such as shifting the guidance line, switching operation modes, and marking the boundary.



Autopilot status: Navigation automatically controls the steering wheel to assist straight line operations. The operation of marking the field can be carried out during automatic driving, and other operation setting

operations should be switched to manual mode.

**(3) Guidance Line Translation**

In the manual mode after starting the task, the user adjusts the guidance line in the current multi-line mode to the left and right according to the needs of the actual operation, and drives according to the adjusted guidance line.



Figure 3.5.3 Selecting Guidance Line Translation

**1 . Guidance Line Translation:** Tap **Guidance Line Translation**, and tap **Translate to the Current Position** or **Translate to the Fixed Position** based on the operation.

- **Translate to the Current Position:** Tap **Translate to the Current Position** and then tap **OK** to translate the guidance line to the position of the agricultural machinery.



Figure 3.5.4 Translate to the current position

● **Translate to the Fixed Position:** Tap **Translate to the Fixed Position**, select the moving direction, enter the moving distance, and then tap **OK**.



Figure 3.5.5 Translate to the fixed position

**2. Offset adjustment.**Click "Offset fine-tuning" button in the operation setting, the user can shift the current guidance line to the left and right according to the actual operation needs, and click "√" to complete an

adjustment. This operation will adjust the machine calibration parameters synchronously, which can be used to quickly solve the problem of inconsistent row operation spacing.



Figure 3.5.6 Offset correction

**Note for The Use of Shifting Guidance Line:**

Shift guidance line function is available only in the manual driving status in the multi-line mode.

**(4) Switch operation mode**

The operation mode is divided into single-line mode and multi-line mode. The user can click "multi-line mode/single-line mode" in the operation setting to switch the current operation mode. If the specific operation mode is easy to be confused, please judge the current operation mode status based on the single-line/multi-line interface background of the operation

Multi-line mode: Auxiliary straight line operation under equidistant conditions;

Single-line operation: Auxiliary straight line operation under free spacing;



Figure 3.5.7 Multi-line mode



Figure 3.5.8 Single-line mode



### (5) Mark the Edge

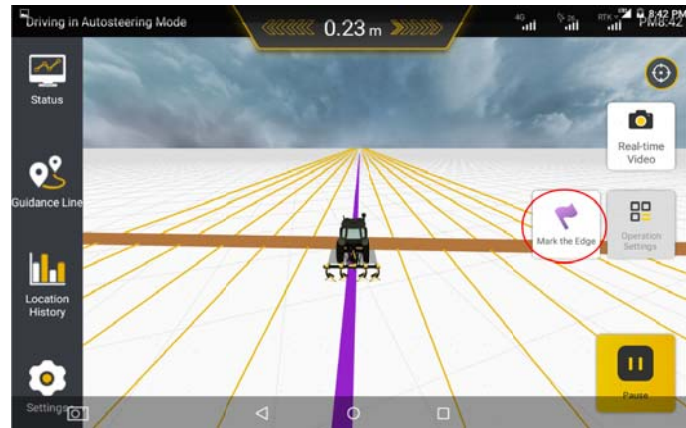


Figure 3.5.9 Marking the field edge

After importing guidance line or during the intelligent operation, you can enable the function of marking the field edge according to the actual needs. This function can alert the user when the vehicle is about to reach the field edge of another side, thereby effectively avoiding safety accidents especially in dark environment.

1. After importing the guidance line or during an intelligent operation, if you want to use this function, drive the vehicle to the field edge and tap Mark the Edge to mark the current position of the vehicle as the field edge.
2. The system will provide an alert sound and alert message for careful driving when the vehicle travels 30m away from the marked field edge.
3. When the system warns driver, you can tap Pause to suspend the current autosteering driving and resume the manual driving mode. Then, the alert sound and alert message will disappear immediately.

#### **Notes for marking the field edge:**

Only one field edge is allowed in the same direction.

In addition to completing commissioning and autosteering operations, you also can check the real-time status of the operating vehicle and

undertake other system settings on the in-vehicle control terminal.

( 6 ) Switch guidance lines

When not in the work state, you could enter the “Task” to switch guidance lines and boundaries.

( 7 ) Continue the task

In advanced mode, you may call the same task to continue if it is not completed, and the task data will be cumulated and shown in history data. The previous task settings will be implemented by default this time, otherwise you need to change it manually.

When resuming the task, history task traces of the last task will appear, with a red dotted line guiding the vehicle to the position where the last task ended. After clicking the “Start” button, the red guide line will disappear.

The red guide line is only for instruction and you can continue to work at any position.

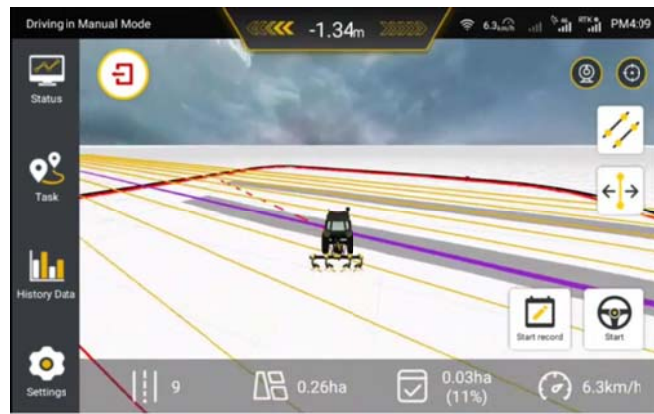


Figure3.5.10 A red dashed line that guides the tractor

## 6 Advanced Functions

The existing advanced function is Uturn. You need to purchase the activation code from the dealer and perform the following steps to activate the function:

1. Tap **Enter activation code** in **Settings>Advanced Functions**.

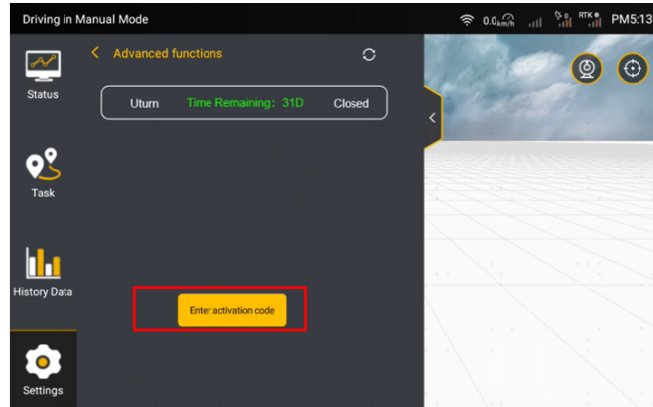


Figure3.6.1Advanced functions

2. Enter the activation code in the pop-up dialog, and tap **OK**.

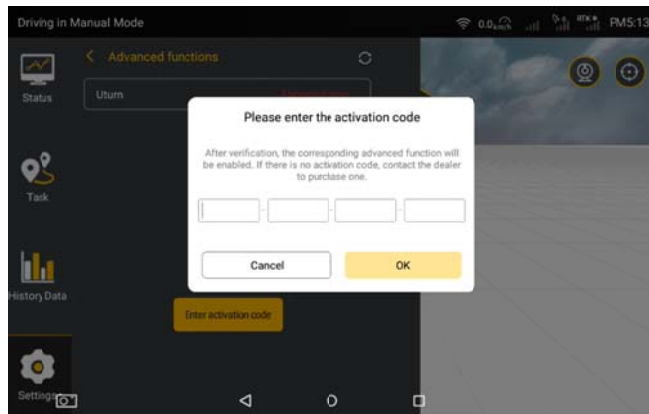


Figure 3.6.2 Enter the activation code

3. After the activation code is verified, an **Information Confirmation** dialog pops up. Tap **Activate** to activate the function.

4. After the function is activated, you can view its status and remaining valid time on the Advanced Functions screen. Tap the function to enter the screen of function details to enable or disable the function.

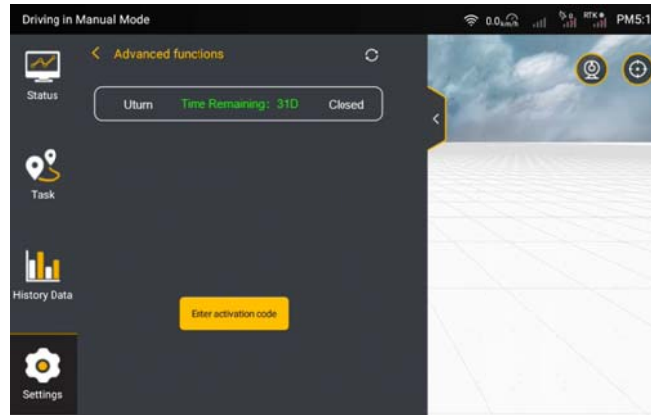


Figure 3.6.3 Advanced functions

●**Uturn:** Automatically plans paths at any position in the field for automatic Uturns and headland operations.

**Applicable field types:**

1. Rectangle or approximate rectangle fields



Figure 3.6.4 Rectangle or approximate rectangle fields

2. Quadrilateral fields with large included angles

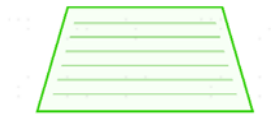


Figure 3.6.5 Quadrilateral fields with large included angles

3. Approximate quadrilateral fields with small missing parts



Figure 3.6.6 Approximate quadrilateral fields with small missing parts

**Shapes of fields that can be partially planned:** 1. Quadrilaterals with large missing parts 2. Polygons, triangles, teardrops, and other shapes with large triangular space

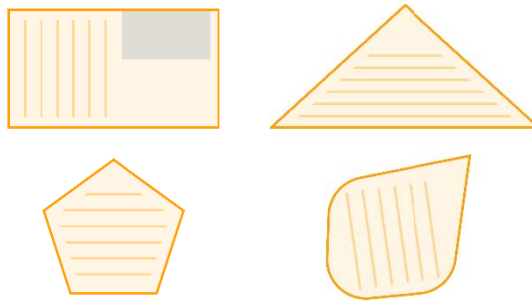


Figure 3.6.7 Shapes of fields that can be partially planned

**Fields that cannot be planned:** 1. Overly narrow fields 2. Overly small fields

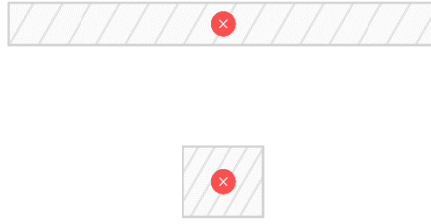


Figure 3.6.8 Fields that cannot be planned

The operation procedure is as follows:

1. Set the vehicle and implement parameters in **Settings>Vehicle Information**. Ensure that the turning radius is correct. To get the turning radius, drive the vehicle to make a circle at the maximum steering angle and measure the radius of the outer ring that the vehicle leaves on the ground.

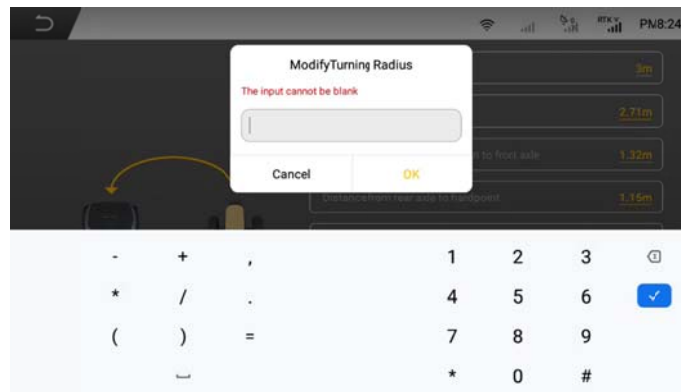


Figure 3.6.9 Set the turning radius

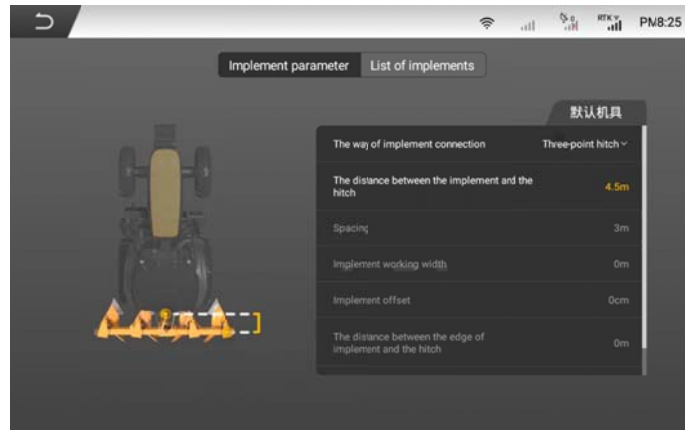


Figure 3.6.10 Set the implement parameters

2. Choose **Settings>Advanced functions>Uturn**, and enable or disable the function.

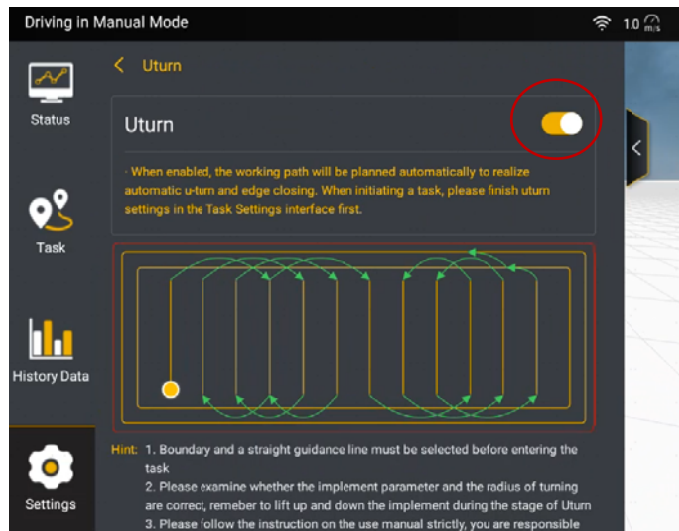


Figure 3.6.11 Uturn details

3. Tap **Task** and choose the field, boundary, and guidance line. If you select **No guideline**, the guidance line will be generated automatically when the Uturn function is enabled.

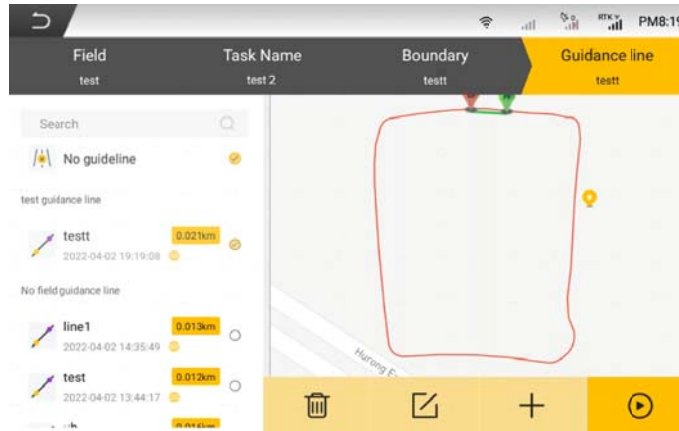


Figure 3.6.12 Choose the boundary and the guidance line when creating an operation

4. Tap **Start**, drive the vehicle to the Uturn start point, and tap the Uturn icon on the right.

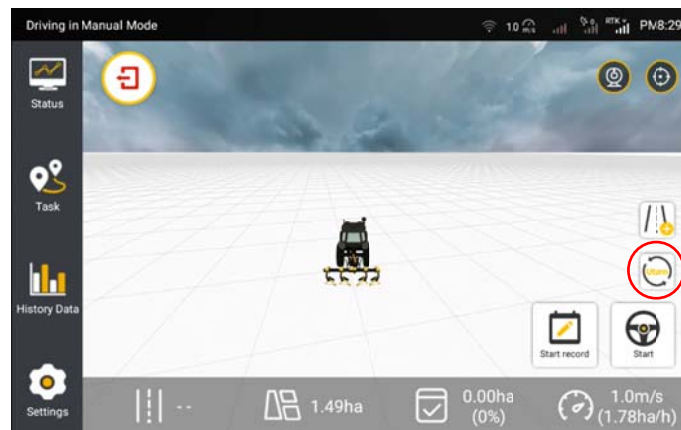




Figure 3.6.13 Operation screen

Note: If **No guideline** is selected, the pop-up dialog "There is no guidance line, whether to generate it automatically?" appears. Tap **OK** and select the direction to generate the guidance line.

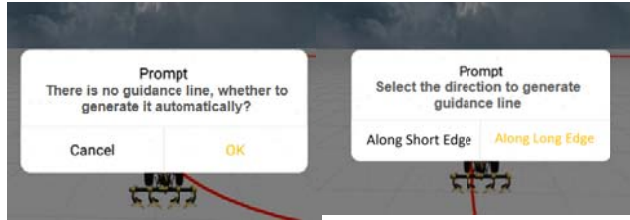


Figure 3.6.14 Pop-up dialog displayed when **No guideline** is selected

5. Choose the Uturn direction and whether to perform the headland operation and tap **Save**. Then, the system plans the working path and displays a pop-up prompt.

- If you choose to perform the headland operation, the vehicle performs it based on the boundary shape.

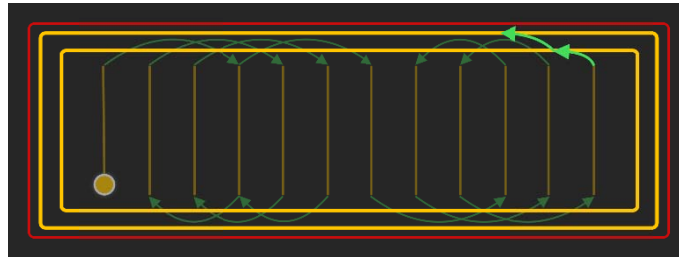


Figure 3.6.15 Automatic headland operation when you choose to perform it

- If you choose not to perform the headland operation, the system recommends the optimal headland path when autosteering is completed. You need to manually drive the vehicle to the start point of the recommended headland path.

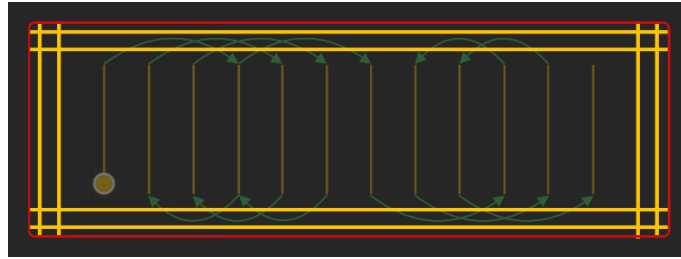


Figure 3.6.16 Optimal headland path recommended when you choose not to perform the headland operation

6.The Uturn coverage is displayed if it is not higher than 95%. Tap **OK** to return to the operation screen.

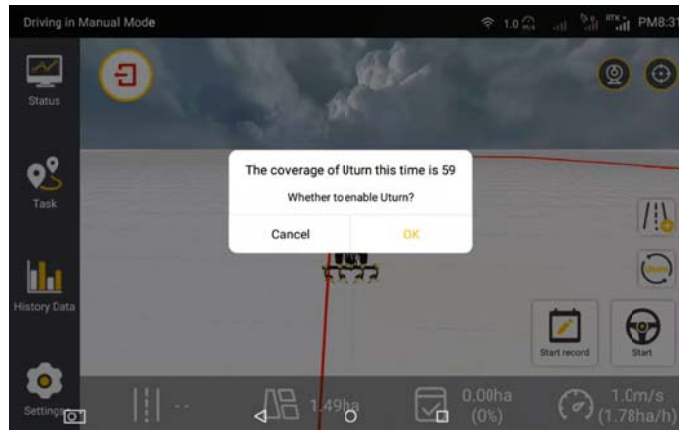


Figure 3.6.17 Uturn coverage

7.Follow the green line to drive to the start point, and tap **Start**.

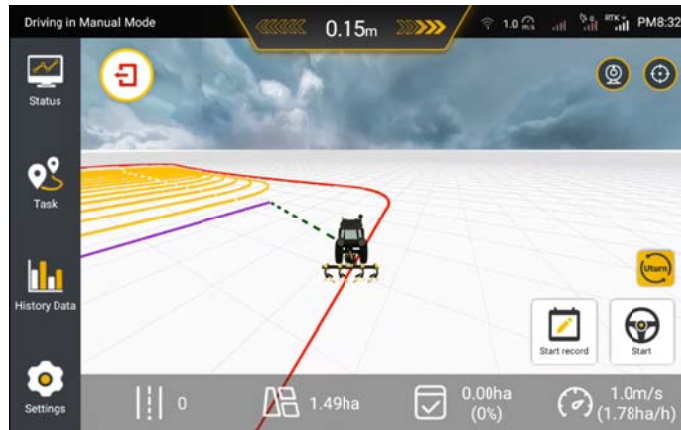


Figure 3.6.18 Start the Uturn task

Note:

- Before confirming the Uturn settings, ensure that your vehicle is close to the start point, and heading to the working direction of a guidance line.
- If the vehicle deviates from the guidance line with a large angle, the Uturn operation cannot be started. If the Uturn operation cannot be started when the vehicle is aligned to the guidance line, the vehicle might be heading to the opposite direction.

● **Fault prevention:**

Scenario 1 When the user exits the task and enters it again without changing any parameters:

**The original paths will be kept.**

Scenario 2 When any of task, boundary, guidance line, vehicle parameters, implement parameters, whether to perform the headland operation, or turning direction is changed:

**The original Uturn paths will be canceled. You need to set the parameters and plan the Uturn paths again.**

Scenario 3 Before Uturn planning, part of the task is already completed:  
**Uturn planning is effective only on the remaining part to avoid repeated operation.**

## 7 Other Functions

### 7.1 Status

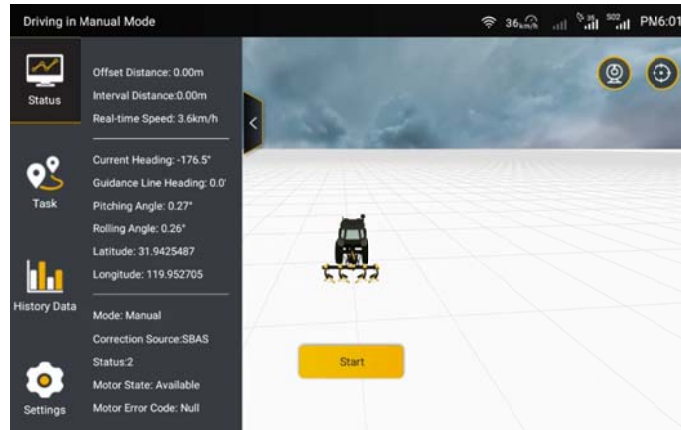


Figure 3.7.1 Status

Users click the "Status" to access the working status and operation of the vehicle.

**Offset distance:** Offset distance of the vehicle;

**Real-time speed:** Real-time speed of the vehicle;

**Current heading:** Current heading angle of the vehicle;

**Guidance line heading:** The heading angle of the AB line;

**Pitching angle:** the overall pitching angle of the vehicle;

**Rolling angle:** the overall rolling angle of the vehicle;

**Longitude and latitude:** The real-time latitude and longitude of the vehicle;

**Mode:** Manual, automatic interval such as AB line, misalignment of

heading, the distance of AB point is too small, heading update timeout, position update timeout, and heartbeat timeout;

**Park brake:** Emergency braking;

**Correction Source:** Connection mode of the correction source;

**Status:** Connection status of the correction source. The value 2 indicates connection succeeds.

**Motor status:** The status of the motor;

**Motor error code:** the error number when an error occurs;

**7.2 Location History**

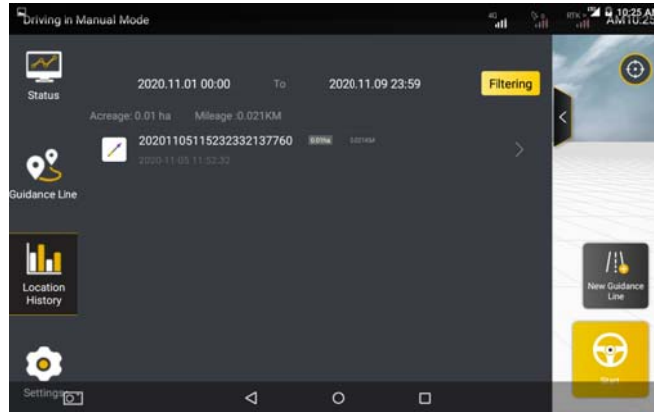


Figure 3.7.2 Operation Data

1. **Check the operation list.** After expanding the operation data details page, users can view the single information of historical operations here, including: operation time, operation width, operation area, operation efficiency etc.

2. **Filter the job list.** Users can filter the operation information by month. After the data is filled in, click "FILTERING" to refresh the list.

3. **Filter the operation list.** In the Fast Mode , users can filter the operation data by the operation time; in the advanced mode, users can

filter the historical operation information by date, field and operation type. After the filter data is filled in, click "Filter" to refresh the operation data list.

**Precautions of operation data:**

1. Historical operation data is the operation data accumulation of each Guidance line.
2. The latest operation is placed on the top of the list, sorted by date.
3. The date on the list is the date on which the field was saved, not the date of the last job operation.
4. The acre and time are cumulative items of historical operations instead of a single data of the latest operation.

**7.3 Settings**



Figure 3.7.3 Setting list

The user clicks "Setting" to expand the setting details page and display the setting items.

### 7.3.1 Correction Source

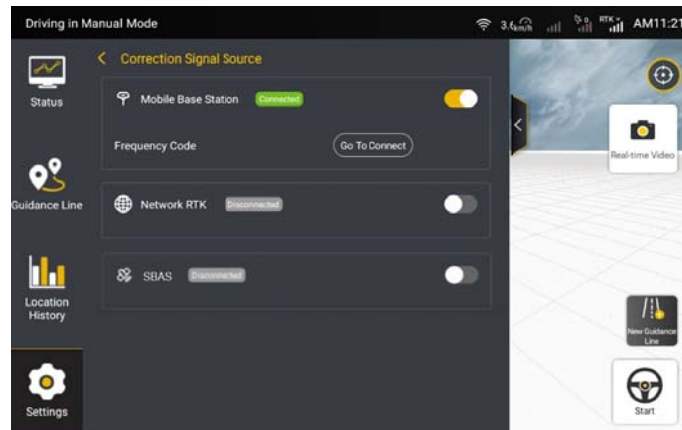


Figure 3.7.4 Correction source settings

After finishing the vehicle parameter settings, you need to select the connection mode of the correction source before operation. The system supports three connection modes: Mobile Base Station, Network RTK, and SBAS. The default mode is Mobile Base Station. Follow the steps below to select the connection mode:

1. Tap Settings and choose Correction Source.
2. Use the toggles to select the connection mode. The Mobile Base Station mode is selected by default.

When using the mobile base station for the first time, you need to pair with it first. Tap Frequency Connecting, enter the frequency code in the pop-up dialog, and then save the settings to establish the RTK connection.

3. After connection, check the signal icon in the top status bar. If the RTK mode is used, "RTK" is displayed; if the SBAS mode is used, "SXX" is

displayed, and XX is the age of differential, which is a number from 0 to 20. If the icon does not change after a few minutes, reconnect or switch the connection mode. For details, see section 3.2.5 "Source Connection".

### 7.3.2 Working Width Alerts

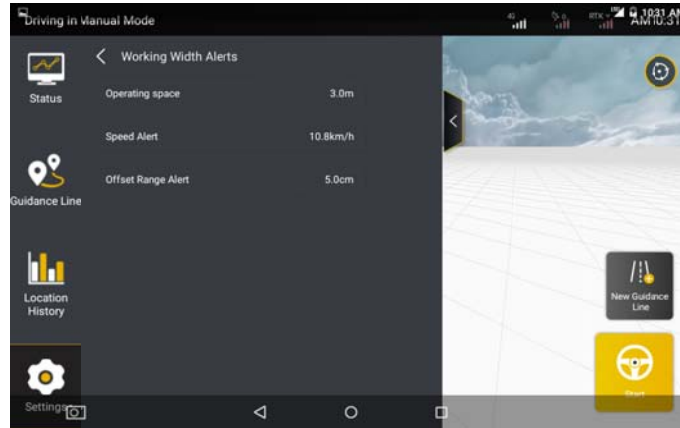


Figure 3.7.5 Working width alerts

On the displayed Parameter Settings screen, tap the Working width Alerts tab. The displayed details screen allows setting Operating space, Speed Alert, Offset Range Alert, and Driving distance warning. tap the item that needs to be set and enter the corresponding value.

**Operating spacing:** indicates the distance between adjacent guidance lines in multi line mode.

**Speed alert:** indicates the warning speed preset. It allows the system to prompt the driver to manually slow down the vehicle in auto steering driving mode in the case of speeding.

**Offset range alert:** indicates the warning offset preset for the vehicle in autosteering driving.



### 7.3.3 Accessibility

- **NMEA**

Turn on the NMEA function to transmit the GPS information received by the automatic navigation device to other electronic devices. User should enable it in Settings-Accessibility and set the intended format and transmission frequency.

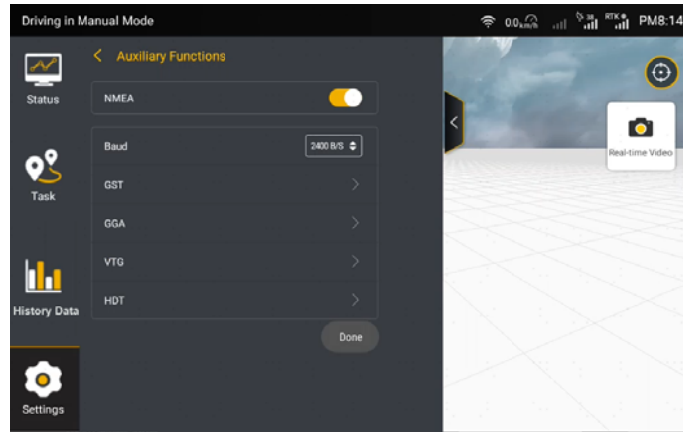


Figure 3.7.6 NMEA settings

- **Data Transfer**

Map information, including field, boundary, guidance line, and task data, can be exported out of or into the FJD autosteering kit through online sharing or USB flash drive.

**Online Sharing:**

Before the USB flash drive is inserted, data can be transferred to the designated user through online sharing. The steps are as follows:

Step 1: Go to **Settings>Auxiliary Functions>Data Transfer**, select the data to be shared, and tap the sharing button at the top right.

Note: Only field, boundary, and guidance line information can be shared online.

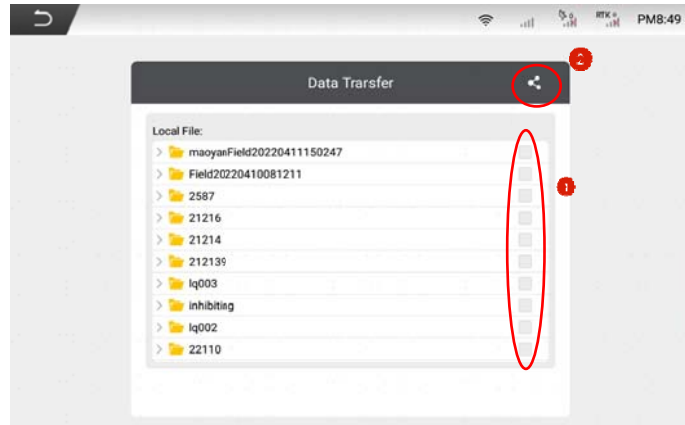


Figure 3.7.7 Data transfer

Step 2: Enter the user account, and tap **Confirm**.

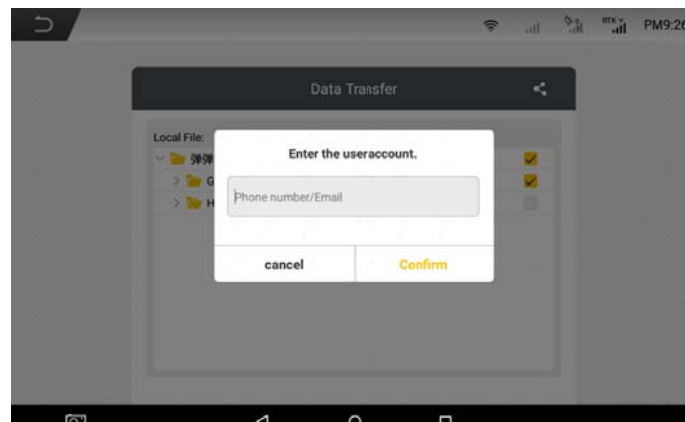


Figure 3.7.8 Enter the account of designated user

Step 3: Select the current device SN and tap **OK**. A window pops up if the sharing is successful.

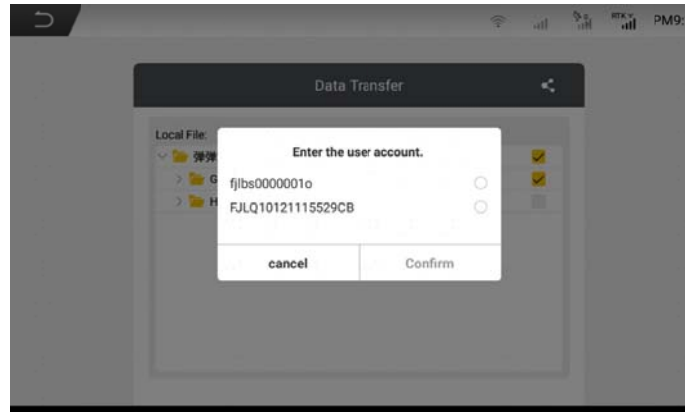


Figure 3.7.9 Select the device SN

**USB flash drive:**

Step 1: Insert the mobile storage device into the T1 port above the vehicle display control terminal (the T1 port is a USB Type-C port, if the mobile storage device is a Type-A port, it is required to purchase a connector converter).



Figure 3.7.10 Connection diagram of mobile storage device

Step 2: Enter the data transfer interface, user can export map information via USB, such as: fields, boundary, guidance line, mission data etc., for use by other terminals, and user can also import map information

from other devices to FJDynamics Autosteering kit. Data information in some formats may not be imported. For details, refer to the description of the importable format displayed in the interface.

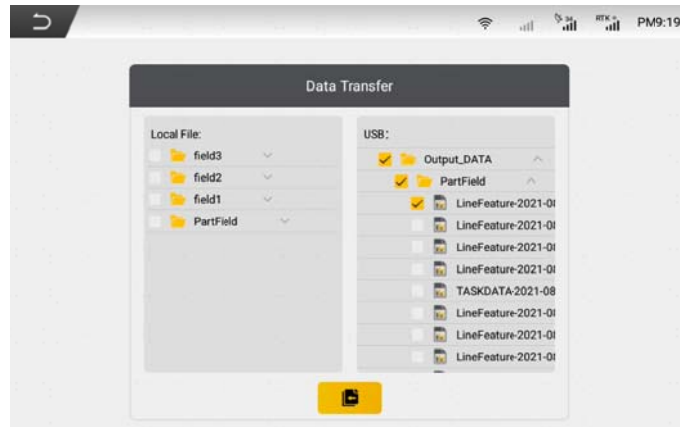


Figure 3.7.11 Data transfer interface

Notes:

1. Only data in the formats specified on the screen can be imported.
2. Before inserting the USB flash drive, you can share the boundary and guidance line online. After the USB flash drive is inserted, online sharing is not supported.
3. Task data cannot be shared online.

● **Terrain Compensation**

If the operation field contains more slopes, the terrain compensation can be turned on to achieve a more precise navigation effect.

● **Super Low Speed**

When using the Hall angle sensor, the ultra-low speed mode can be turned on to ensure the accuracy and stability of the operation at ultra-low speeds below 0.3km/h.

●Manual Intervention

You can get disengaged of the automatic driving mode manually when this function is turned on. The sensitivity of manual intervention can be adjusted.

7.3.4 Vehicle Parameters

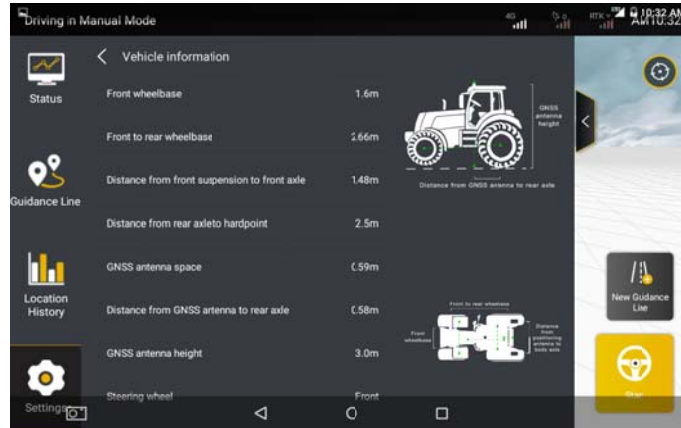


Figure 3.7.12 Vehicle parameter settings

Tap the “Vehicle Parameters” tab. On the displayed details screen, tap the required items and enter the corresponding vehicle data to complete vehicle parameter settings. For specific measurement details, please refer to the instruction video.

**Positioning antenna spacing calibration**

If there is a problem of large and small lines in the multi-line mode during the operation, the user is required to calibrate the positioning antenna spacing according to the following diagram.

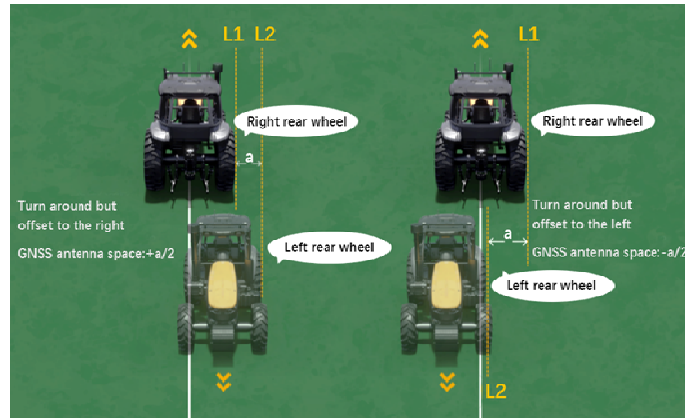


Figure 3.7.13 Positioning antenna spacing calibration

Step 1: Create a guidance line: create and import a guidance line. (The starting point is point A, the end point is point B)

Step 2: Set the line spacing and select the operation mode: set the operation spacing in the "parameter setting" to 10 meters, and select the operation mode as multi-line mode.

Step 3: Drive two times.

First driving: Drive the vehicle at a low speed from point A to point B. If the vehicle is stable (the offset error displayed on the screen is less than 2 cm), stop after the driving distance is not less than 10 meters, and mark at the right rear tire position of vehicle, confirm the marking line L1.

Second driving: After marking the marking line L1, turn the vehicle around and continue driving in the reverse direction along the driving route just now. When driving to the vicinity of the marking line L1 in the second step (note: ensure that the driving status is stable at this time, that is, the offset distance displayed on the screen is less than 2 cm), stop and draw the marking line L2 at the left rear wheel position.

Step 4: Measuring error: use a tape measure to measure the distance

between the two marking lines, and record the value a (unit: m)

Step 5: Please enter a value in the interface of "Positioning Antenna-Central Axis Distance", and click "OK" to complete the corresponding positioning antenna spacing calibration.

**7.3.5 Parameter Setting**

Choose Settings -> Parameter Settings. On the displayed screen, you can set Angle Sensor, Vehicle Calibration and Calibration of Accessories to ensure operational accuracy.

**● Angle Sensor**

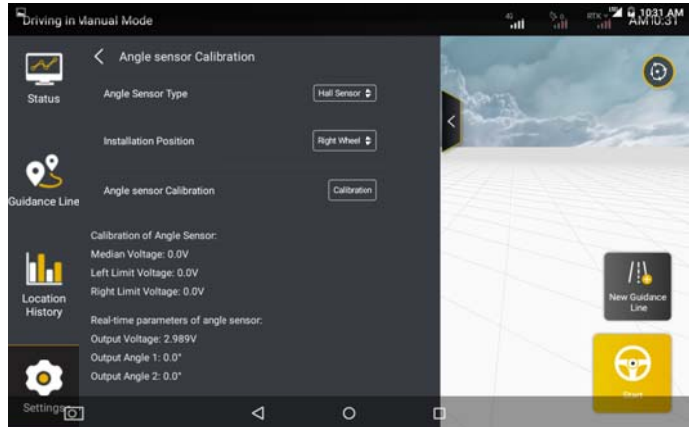


Figure 3.7.14 Angle sensor settings

Tap the Angle Sensor Calibration tab in parameter calibration page. On the displayed details screen, set Angle Sensor Type, Installation Position and tap Calibration to calibrate the angle sensor in this position. For details, see section 2.5 "Calibrate the angle sensor" in Chapter IV "Software Operation Instructions of In-vehicle Control Terminal"

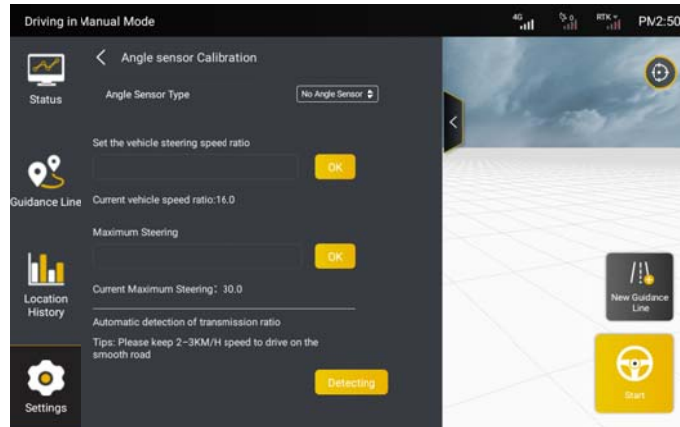


Figure 3.7.15 Settings for no angle sensor

● Calibration of Accessories



Figure 3.7.16 Settings for calibration of accessories

When auto-driving path has a offset within 3 cm after the implement is equipped, please measure the value. If the auto-driving path tends to the left comparing to the pre-set guidance line, please select "implement offset to the left" and enter the deviation value "a", and then click "OK" to save the setting; if the auto-driving path tends to the right, select



"implement offset to the right" and enter the deviation value  $a$ , and click "OK".

● **Parameters Commissioning (for FAE Only)**

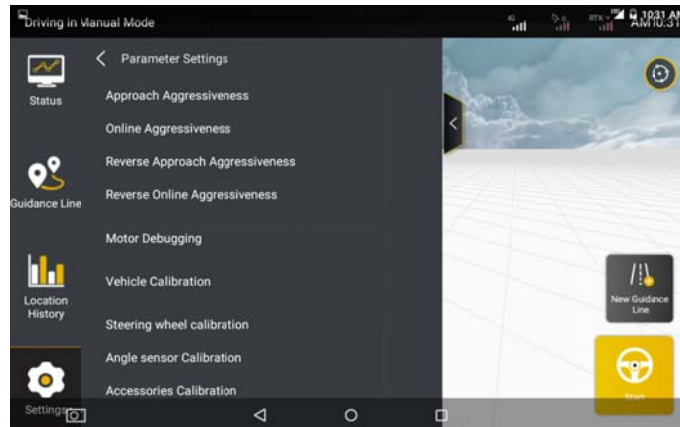


Figure 3.7.17 Parameter settings

**Approach Aggressiveness:** affects the time for the vehicle to enter the next guidance line when making a turn. The larger the value is, the shorter adjustment time the process needs. However, the driving instability is higher.

**Online Aggressiveness:** affects the linear driving accuracy of the vehicle. The smaller the value is, the higher the control degree, but the instability will increase accordingly. For example, the possibility of an "S" turn is greater.

### Vehicle Calibration

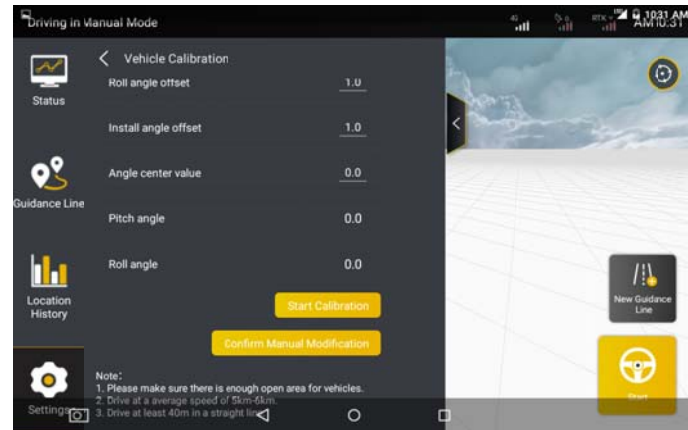


Figure 3.7.18 Vehicle calibration

For detailed operations, see section 2.8 Vehicle Calibration in Chapter IV Software Operation Instructions of In-vehicle Control Terminal.

### 7.3.6 Implement Information

Tap **Implement Information** in **Settings** to view the implement parameters and list of implements.

Tap **Implement Parameters** to view the way of implement connection, the distance between the implement and the hitch, and implement working parameters.

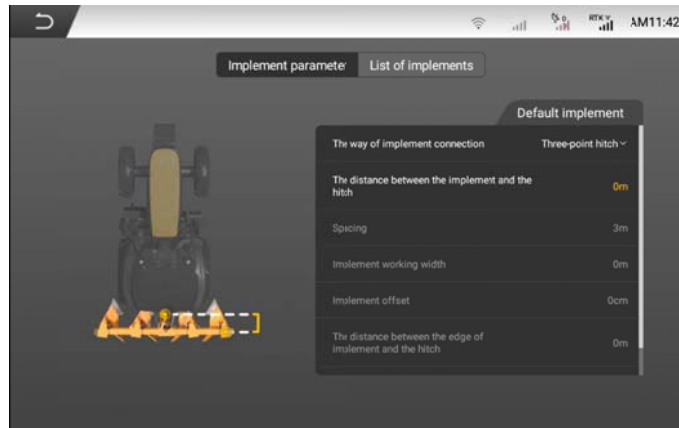


Figure 3.7.19 Implement parameter

Tap **List of Implements** and delete, edit, create, upload, and synchronize implements to create and manage the implement library. Note: The implement library can contain a maximum of 10 implements.

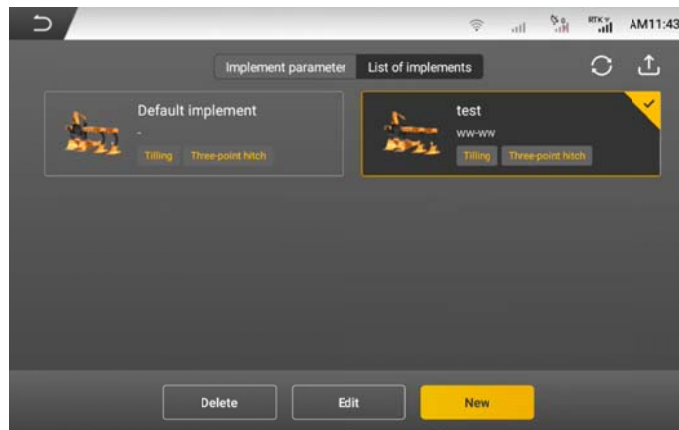


Figure 3.7.20 List of implements

- Delete the Implement: Select an implement and tap **Delete** to delete

the implement information.

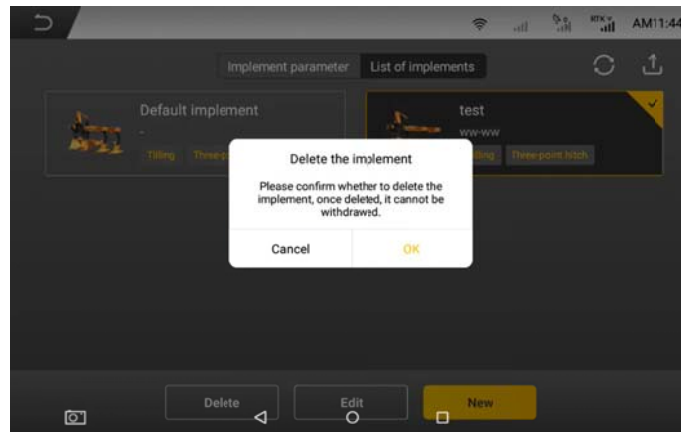


Figure 3.7.21 Delete an implement

- **Edit the Implement:** Select an implement and tap **Edit** to modify the implement information.

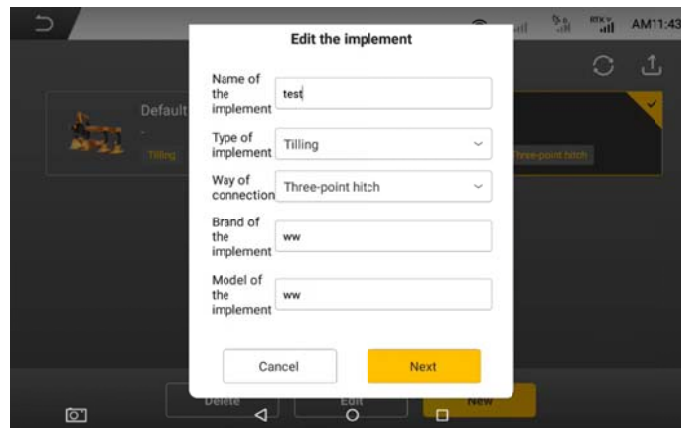


Figure 3.7.22 Edit an implement

- Create New Implements: Tap **New** and then perform the following steps:

Step 1: Fill in the basic information of the new implement and tap **Next**.

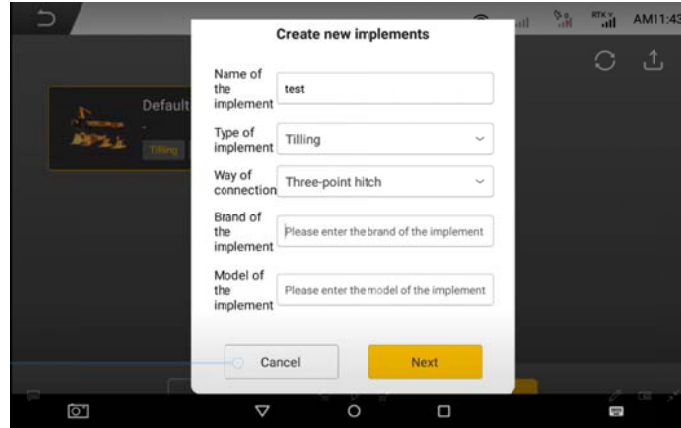


Figure 3.7.23 Create new implements - basic information

Step 2: Fill in the working information of the new implement, and tap **Save**. If any item is not set, the information cannot be saved.

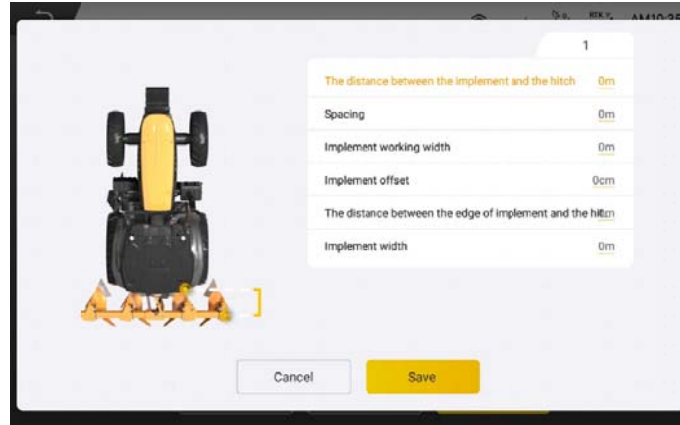


Figure 3.7.24 Create new implements - work information

- Upload the Implement: Tap the upload icon to upload implement information.

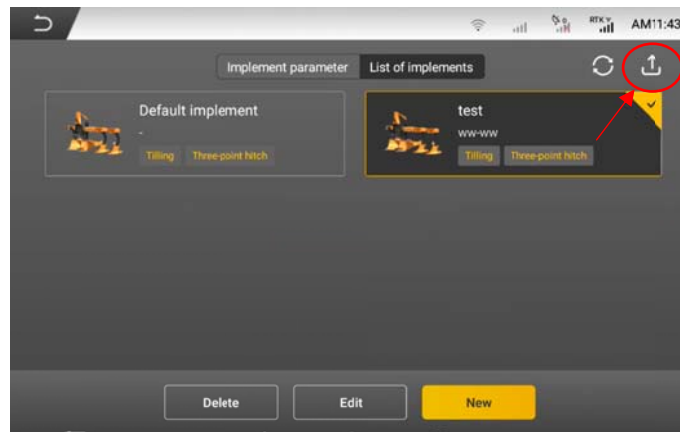


Figure 3.7.25 Upload implements

- Synchronize the Implement: Tap the synchronize icon to synchronize

the previously uploaded implement information.

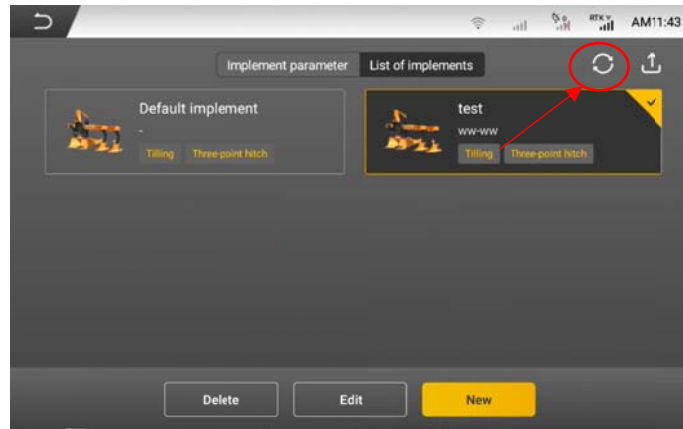


Figure 3.7.26 Synchronize implement

### 7.3.7 Troubleshooting

If encountering any problem during use, the user can enter "Troubleshooting" to perform software and hardware detection of the vehicle. The user can promptly adjust the fault items displayed as "x" in the screen, the interface is as shown in the figure above.

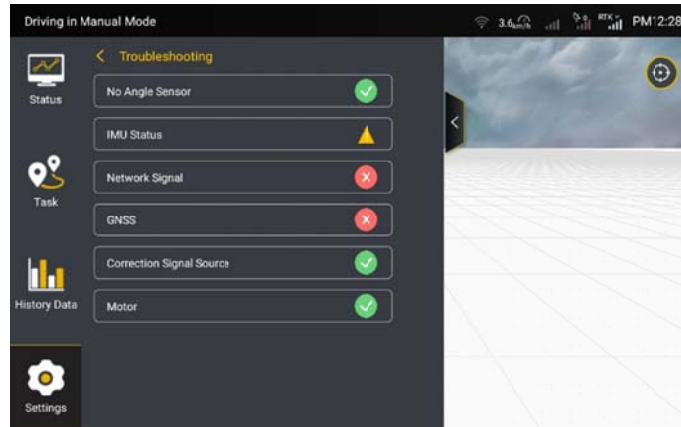


Figure 3.7.27 Troubleshooting

### 7.3.8 System Settings

#### ● System version (OTA upgrade)

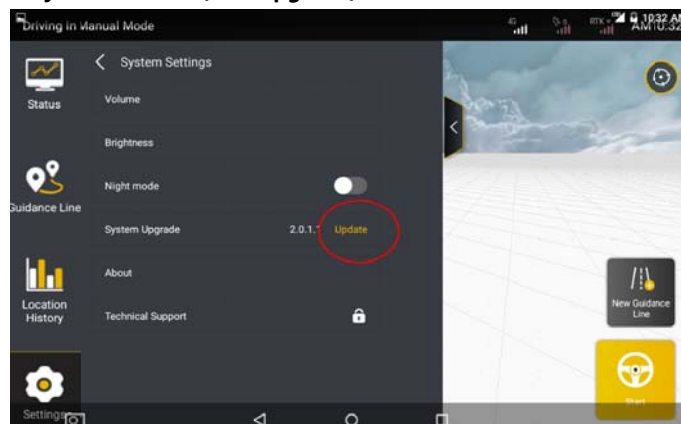


Figure 3.7.28 OTA Upgrade

When there is an update to the software version, you can perform the following operations to achieve a one-tap upgrade of the auto steering kit:

1. Turn on the in-vehicle control terminal of the autosteering kit. Make sure that the control terminal can access the Internet through network SIM



card/Wi-Fi network and that the network status is stable (please make sure the 4G antenna is connected properly).

2. If there is a new version, the system will automatically display a prompt for upgrade.

3. Tap Confirm Update in the prompt box to enter into the upgrade process.

4. Do not take any operation during the upgrade. You can check the upgrade progress through the displayed information and wait for its completion.

5. After the upgrade is successful, the system will display a prompt that the upgrade is successful and then automatically enter the new version.

6. If the upgrade fails, the system will prompt you to retry. tap Retry to re-upgrade the system.

**Notes for OTA upgrade:**

1. Ensure that the network status is stable throughout the upgrade process.

2. Do not power off the terminal during the upgrade process.

3. If you encounter any problems during the upgrade, please contact your local dealer for help or call the technical service hotline.

- **Mode selection**

User can switch between Fast Mode and advanced mode here.

- **Recycle bin**

Boundary, guidance line and History data deleted within 30 days can be restored in the recycle bin.

- **Unit settings**

User can choose the unit to display as metric or imperial units, or define own unit combination based on unit usage habits.

- **Language Settings**

You can select a system language from more than 20 languages, such as Chinese, English, Spanish, and Russian. Note: Language switching is not supported during operation.

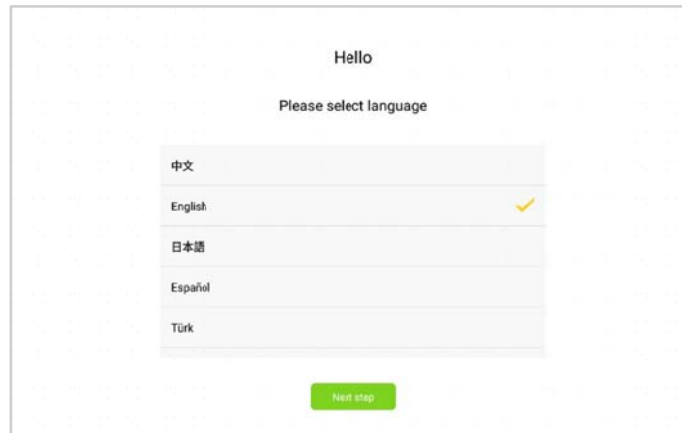


Figure 3.7.29 Language selection

### 7.3.9 Wi-Fi Camera (Optional)

Two Wi-Fi cameras can be connected via hotspot. The operation is as follows:

1. For the first use, please turn on the Wi-Fi camera in the settings.
2. Turn on the hotspot mode before binding, and scan the code via camera to identify and bind the camera. Up to two cameras can be bound via scanning the code. The scanned camera is displayed on the right side. Click "OK" to enter the camera view page.
3. The current video stream can be viewed on the camera list page. If it is required to bind other cameras, click "Delete" and repeat the binding steps to bind.

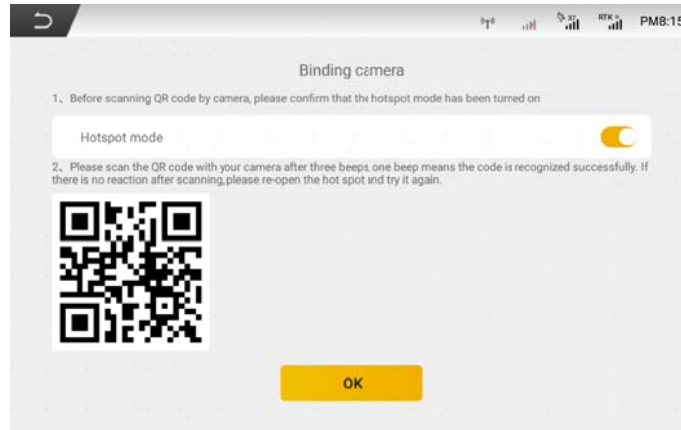


Figure 3.7.30 Wi-Fi camera configuration

4. After the binding is completed, user can click return button in the upper left corner to enter the working interface, and Click real-time video button to open the main interface display.

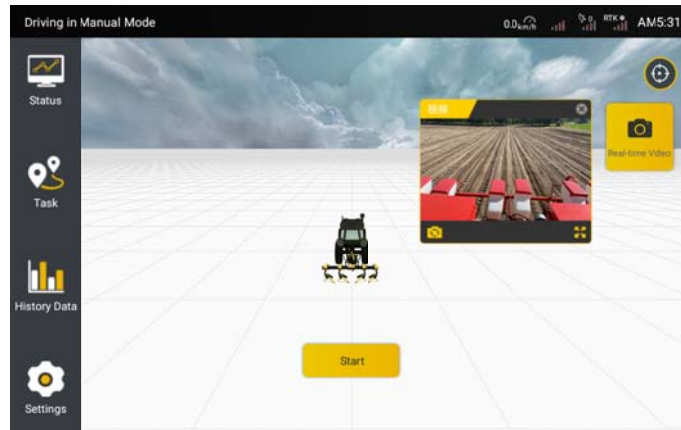


Figure 3.7.31 Real-time video

5. Click "Switch" button to switch the camera. Click "Full Screen" button to maximize the camera interface, and click again to restore. Click

“Close” to close the camera window in a real time manner.

### 7.3.10 Remote Commissioning

Turn on the remote commissioning function, which should use with the background control program to realize the remote control screen function; user should turn on the remote commissioning switch in the settings.

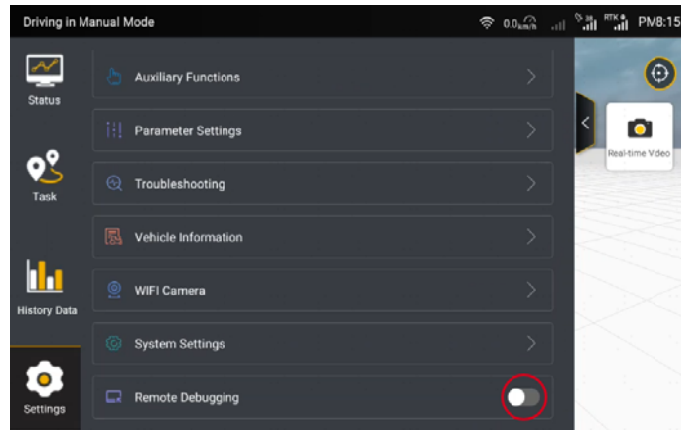


Figure 3.7.32 Remote commissioning

### 7.3.11 Changing the Password

In **Settings > User Information > Account and security**, you can perform the following steps to change the password.

1. Choose **User Information > Account and security > Change Password** and change the password.

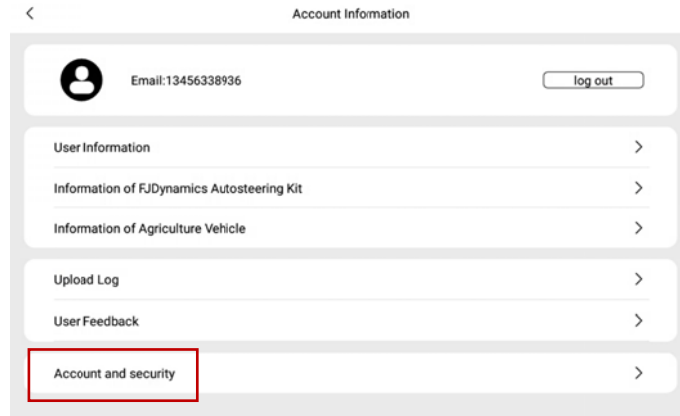


Figure 3.7.33 User information

2. You will be logged out after the password is changed. You may log in again on the login screen displayed.

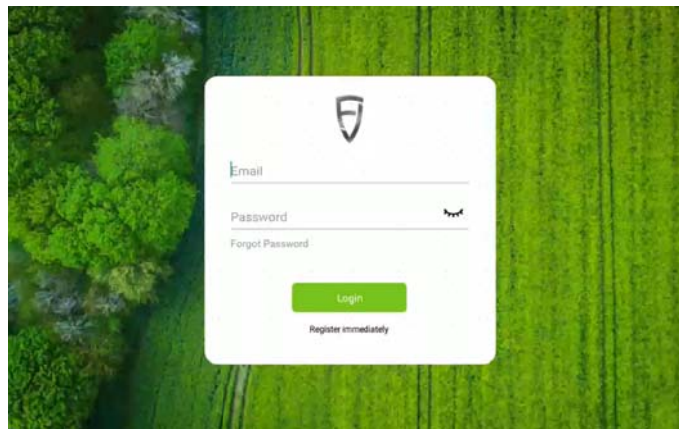


Figure 3.7.34 Login

### 7.3.12 Other Settings

In addition to Parameter Settings, Correction Source, and Troubleshooting, the Settings screen allows setting and querying other general information such as Volume, Brightness, and device information.

## Chapter IV FAQs

No	Fault	Troubleshooting
1	"S" turn in autosteering operations	Check if the rolling angle and pitching angle data changes in real time.
		Calibrate the angle sensor
		Check whether the GNSS antenna installation connector is correct.
2	Steering wheel malfunction during autosteering operations	Check the brake status.
		Test the motor
		Power off and restart the vehicle.
		Check whether the angle sensor is installed correctly.
		Check whether the GNSS antenna installation connector is correct.
3	No 4G signal	Check if the SIM card is inserted.
		Check if the 4G antenna is connected properly.
4	No RTK signal	When the mobile base station is connected, please check whether the base station is powered/used normally.
		When the Internet RTK is connected, please verify that 4G signals are normal.
		When the Internet RTK is connected, please verify that the Ntrip account is available.
5	Inconsistent line spacing in multi-line mode	Please verify that the vehicle parameters are entered correctly.
		Please verify that vehicle calibration in Settings is completed.
		Please re-calibrate the accessories.

## Chapter V Main Hardware and its Specifications

No.	Assembly	Components	Specifications
1	Control Terminal	Control Terminal	Size: 300×190×43mm; 10.1-inch capacitive touch screen, LED backlight, 1280*800 pixels, 700cd/m <sup>2</sup> LCD; Dual speaker; 2G RAM, 8G ROM; Various digital and analog output interfaces, etc. ; Power supply: 9-36V; RF signal, Positioning satellite and 4G signal etc.; Operating temperature: -20°C~+70°C; Storage temperature: -40°C~+85°C; IP rating: IP65; Relative Humidity: 0% to 95%, @40°C (non-condensation); WI-FI specification: 2.4GHz frequency band, frequency range: 2.4GHz-2.5GHz, output power:20.02dBm
2	Antenna Assembly	GNSS Antenna	Frequency range: GPS L1/L2, GLONASS L1/L2, BDS B1/B2/B3;Galileo E1/E5b; Operating voltage: 3.3~12VDC; Operating current: ≤45mA; Size: 152*63mm

3		4G Antenna	Suction cup antenna: Frequency range: B2/B4/B5/B5/B7/B12/B13/B25/B26/B38/B41 VSWR: $\leq 2.0$ ; Gain (dBi): 5.29; Impedance ( $\Omega$ ): 50; Polarization: Linear, Vertical; Antenna size: $\Phi 370 \times 82 \text{mm}$ ; Operating temperature: $-20^\circ\text{C} \sim +60^\circ\text{C}$
4		Radio Antenna	Suction cup antenna: Frequency range: 433/470MHz; VSWR: $\leq 2.0$ ; Gain(dBi): $1 \pm 0.5$ ; Impedance ( $\Omega$ ): 50; Polarization: Linear, Vertical; Antenna size: $\Phi 490 \times 82 \text{mm}$ ; Operating temperature: $-20^\circ\text{C} \sim +60^\circ\text{C}$
5	IMU	IMU	Power supply: 5V; Acceleration accuracy: 0.5mg; Gyro accuracy: $0.1^\circ/\text{s}$ ; Roll, pitch angle: $0.2^\circ$ Protection level: IP67 Operating temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$ Size: $(95 \times 100 \times 40) \text{mm}$
6		Steering Wheel	Power supply: 12V/24V; Peak torque: 20Nm (12V); 30Nm (24V); IP rating: IP65
7	Electric Steering Wheel	Steering Motor (12V /24V)	Power supply: 12V/24V; Peak torque: 20Nm (12V); 30Nm (24V); IP rating: IP65
8		Splined Sleeve	Power supply: 12V/24V; Peak torque: 20Nm (12V); 30Nm (24V); IP rating: IP65



**FCC Compliance Notice**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC Radiation Exposure Statement**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

this equipment should be installed and operated with minimum distance of 20cm from your body.