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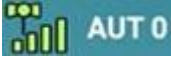
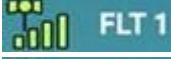
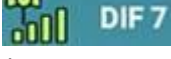

1 Software

1.1 Overview

The main software interface is as follows:



Solution status

-  : no satellite signal.
-  : single solution.
-  : float solution.
-  : SBAS status (the wide-area differential augmentation system (satellite- based augmentation system)).
-  : fixed solution. The number after **RTK** refers to delay.

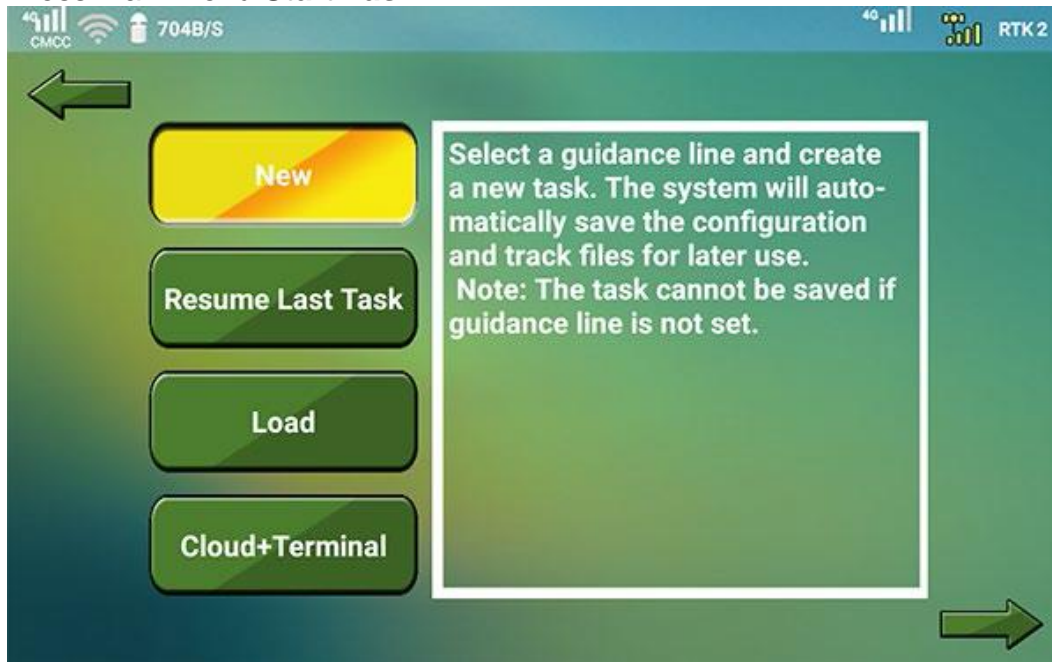
Main menu

- Start Task: see Start a Task for details.
- Configure Implement: see Configure the Implement for details.
- Calibrate Vehicle: see Calibrate the Vehicle for details.
- Communication Mode: see Set Communication Mode for details.
- Diagnose: see Diagnose for details.
- Settings: see Settings for details.

1.2 Start a Task

To start a task, do one of the following:

1. Press main menu **Start Task**:



2. Do one of the following:
 - Create a new task.
 - Resume the last task.
 - Load a task.
 - Get a task from the server platform.

1.2.1 Create a New Task

It is used to select a guidance line to guide your work and create a new task.

See Set Guidance Lines for details.

To create a new task, do the following:

1. Press **New** and . The interface of selecting a working mode shows:



2. Select one of the following guidance lines:

- ☐ AB line mode
- ☐ A+ line mode
- ☐ Pivot mode
- ☐ Grid mode
- ☐ Contour mode
- ☐ Land measurement mode
- ☐ Transplanting mode

1.2.2 Resume the Last Task

It is used to automatically load and continue the latest job without configuring it.

To resume the last task, press **Resume Last Task** and . The system automatically loads the latest job.

1.2.3 Load a Task

It is used to load a task saved in the system or a flash disk, delete tasks, and export local tasks to a TF card or flash disk with TXT format or JBASE format.

Before loading a task, make sure the following:

- If you need to load an external task or export a local task, make sure a TF card or a flash disk has been inserted.
- If you need to export a local task or delete a task, make sure the job has been closed if the job you would like to export or delete is in use.

To load a task, do the following:

1. Press **Load** and :



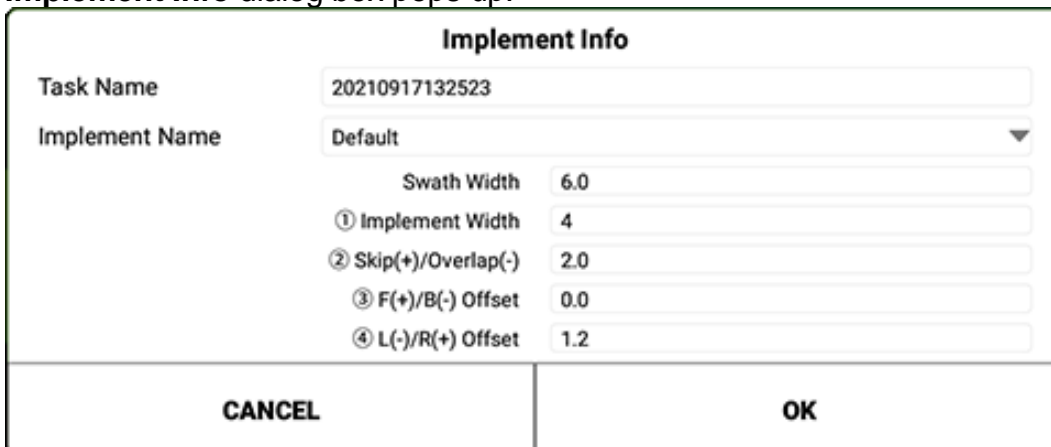
Task Name	Start Time	Update Time	Task Mode	dth/Offset(L/R)	Operation Area
20210915154502	2021/09/15 15:45:02	2021/09/17 13:26:12	A+ Line	6.0/1.2m	0.0000Ha
20210915154116	2021/09/15 15:41:16	2021/09/15 15:41:16	Transplanting	3.0/1.8m	
20210915151013	2021/09/15 15:10:13	2021/09/15 15:40:27	AB Line	6.0/1.2m	0.0000Ha
20210906105059	2021/09/06 10:50:59	2021/09/06 10:50:59	Grid	6.0/1.2m	
20210901152602	2021/09/01 15:26:02	2021/09/01 15:26:02	Grid	6.0/1.2m	
20210901134909	2021/09/01 13:49:09	2021/09/01 13:49:09	Grid	7.0/0.0m	
20210901134845	2021/09/01 13:48:45	2021/09/01 13:48:45	Grid	7.0/0.0m	
20210831164022	2021/08/31 16:40:22	2021/08/31 16:40:22	Grid	5.0/0.0m	
20210831163816	2021/08/31 16:38:16	2021/08/31 16:38:16	Grid	5.0/0.0m	
20210830105433	2021/08/30 10:54:33	2021/08/30 10:54:33	Grid	5.0/0.0m	

2. Do one of the following:
 - To load a local task, switch to **Local Task** page.
 - To load an external task, switch to **External Task** page.
3. **Optional:** To delete a local task or an external task, do the following:



CAUTION: This operation is irreversible. Please be careful.

- a. Do one of the following:
 - Press the target task in **Local Task** page, and press **Delete**.
 - Long press the task list, and check the target tasks, and press **Delete**.
 - b. Press **YES** for confirmation.
4. Press the target task, and press **Load** to load a local task or an external task. **Implement Info** dialog box pops up:



Implement Info	
Task Name	20210917132523
Implement Name	Default
Swath Width	6.0
① Implement Width	4
② Skip(+)/Overlap(-)	2.0
③ F(+)/B(-) Offset	0.0
④ L(-)/R(+) Offset	1.2
<div>CANCEL OK</div>	

5. Press dropdown box of **Implement Name**, and select the target implement.
6. Select a style for reloading task:
 - Resume task: to keep the previous task track and resume the task.
 - Start from head: to clear the previous task track and start a new task.

7. **Optional:** To export local tasks, do the following:

a. Switch to **Export Task** page:



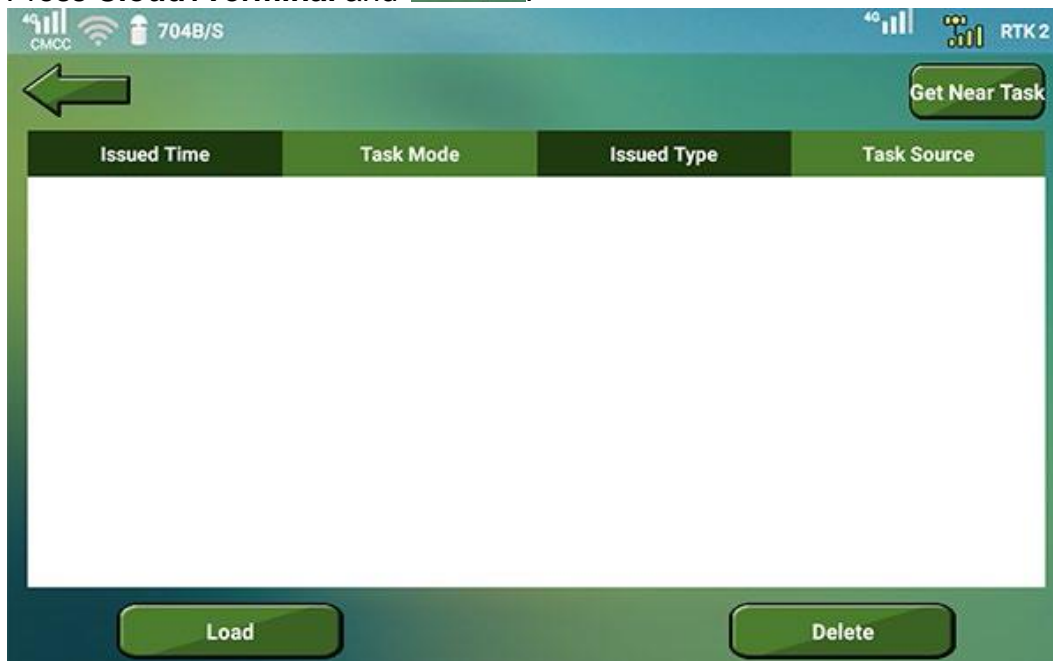
b. Press the target task, and press **Export**. The target job is automatically exported to the root directory of the inserted TF card or flash disk.

1.2.4 Get a Task from the Server Platform

It is used to get a task from EAG server platform for remote control.

To get a task from the server platform, do the following:

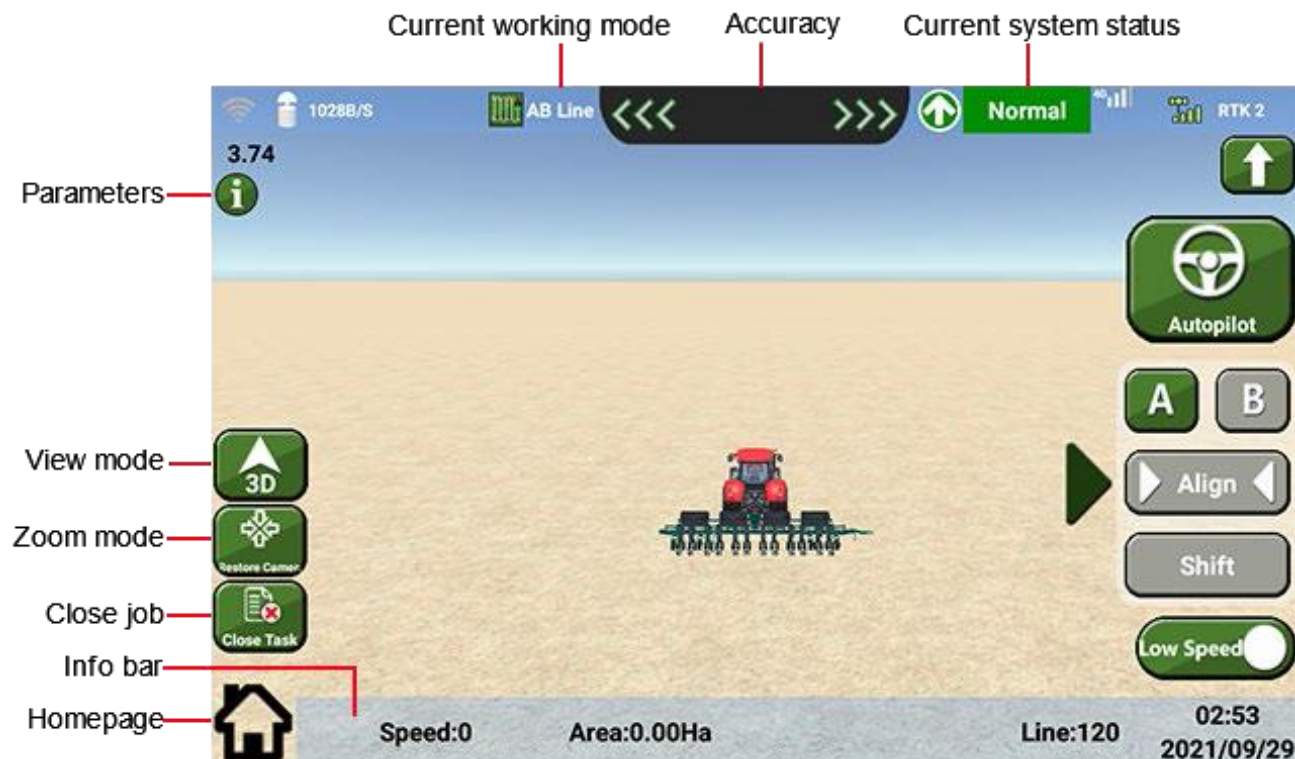
1. Press **Cloud+Terminal** and :






2. To load the target task, press the target task, and press **Load**.
3. **Optional:** To get a near task, press **Get Near Task**.
4. **Optional:** To delete the target task, select the target task, and press **Delete**.

1.3 Set Guidance Lines


The main interface of guidance line is as following:



View mode

- : the 3D view of the current working mode. In this mode, the vehicle will not move while the map will move.
- : in this mode, the vehicle will move while the map will not move. The upper of the MC5 is the north.
- : in this mode, the vehicle will not move while the map will move. The upper of the MC5 is the driving direction.

Zoom mode: you can zoom in or out the view with two fingers, and restore the default

view by pressing .

Info bar

- Speed: the driving speed of the vehicle.
- Area: the area that has been finished.
- Direction: the direction of the vehicle.
- Line: when the target line is created, there will be a group of guidelines. 0 indicates the target line, a negative value indicates the guideline in the left of the line, and a positive value indicates the guideline in the right of the line.
- Time and date: the current time and date of the system.

Homepage: to return to the main software interface.




CAUTION: With this way, the main menu **Start Job** changes to **Resume Job**.

1.3.1 Use AB Line Mode

In this mode, the working track is a line and you can shift the guidance line if it is not the desired one instead of creating a new one.

To use AB line mode, do the following:

1. In the interface of selecting a working mode, press **AB Line** and , and select the target implement name in **Implement Info** dialog box:



2. To set the current position as point A, press **A**.

3. To set point B, drive a certain distance, and press **B**. The system automatically generates AB guidance lines according to the swath width as follows:



4. **Optional:** If the AB guidance line is not the desired one, do one of the following:
 - To automatically shift the AB guidance line, drive the vehicle to the target position, and press **Align**. The system automatically shifts the AB guidance line.
 - To manually shift the AB guidance line, press **Shift**, and input a value. The AB guidance line shifts the set value.

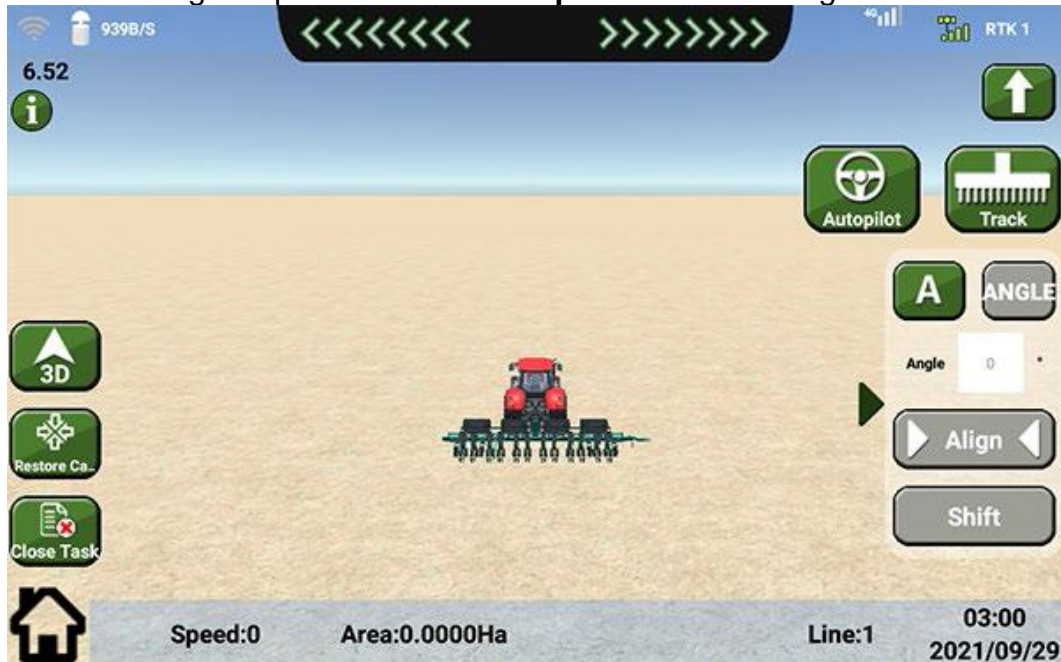


5. Press **Autopilot** to engage automatic driving, and stop the vehicle when it reaches the plot tail.
6. Turn the vehicle around, engage automatic driving to enter any of AB guidance lines, and start your work.

1.3.2 Use A+ Line Mode

To use A+ line mode, do the following:

1. In the interface of selecting a working mode, press **Straight A+** and , and select the target implement name in **Implement Info** dialog box:




2. To set the current position as point A, press **A**.
3. To set an angle for A+ guide line, do one of the following:
 - Turn the steering wheel, and press **Angle**.
 - Input a value in input box of **Angle**.

The system automatically generates A+ guidance lines according to the swath width as follows:




4. **Optional:** If the A+ guidance line is not the desired one, shift the line.




5. **Optional:** To check the working track, press . The area in green indicates that this area has been finished.

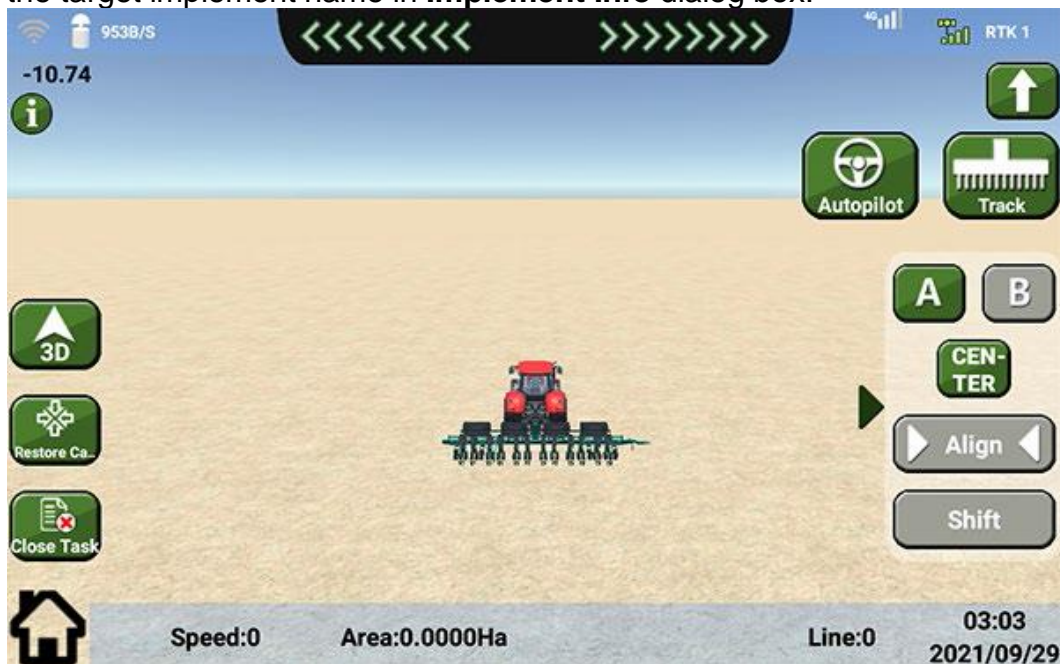


6. Press  to engage automatic driving, and stop the vehicle when it reaches the plot tail.
7. Turn the vehicle around, engage automatic driving to enter any of A+ guidance lines, and start your work.

1.3.3 Use Pivot Mode

To use pivot mode, do the following:

1. In the interface of selecting a working mode, press **Pivot** and , and select the target implement name in **Implement Info** dialog box:




2. To set a guidance circle, do one of the following:
 - To create a fitting circle, press **A** to set the current position as point A, drive the vehicle in a curve, and press **B**. The system automatically creates a fitting circle according to curve AB.
 - To draw a circle, press **CENTER** to set the current point as the circle center, and drive the vehicle for a certain distance. The system automatically draws a circle with the distance as the radius.




3. **Optional:** If the guideline circle is not the desired one, shift the line.



4. **Optional:** To check the working track, press . The area in green indicates that this area has been finished.



5. Press  to engage automatic driving, and stop the vehicle when it reaches the plot tail.
6. Turn the vehicle around, engage automatic driving to enter any of guidance circles, and start your work.

1.3.4 Use Grid Mode

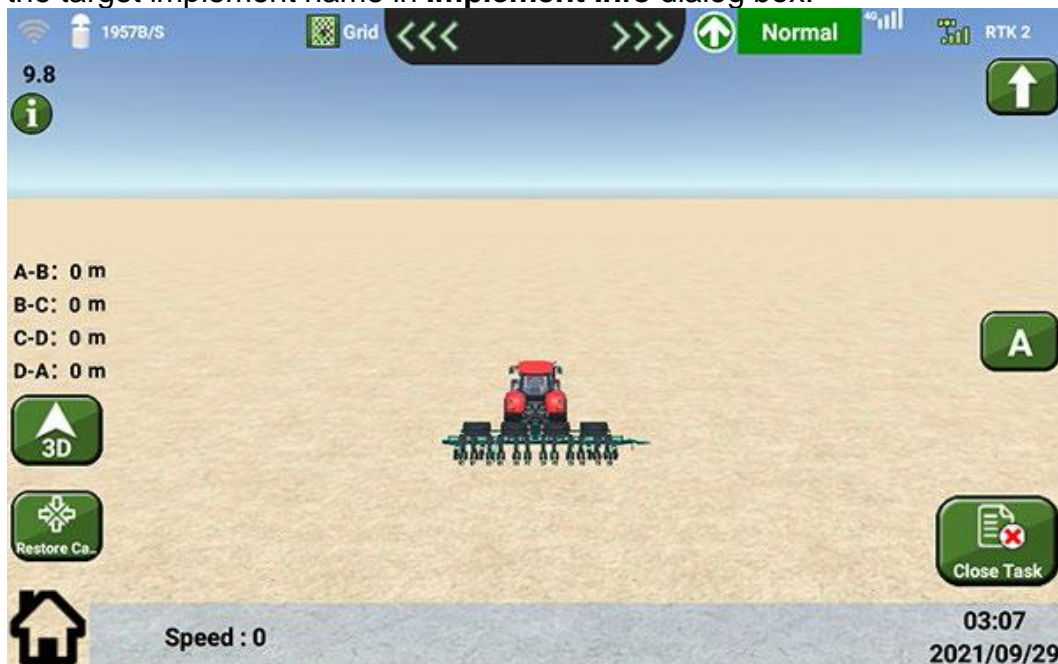
In the planned route, the route at the long side is a slower curve, and the other side is a pear-shaped curve. You need to appropriately slow down to 10 km/h below for the slower curve and 8 km/h below for the pear-shaped curve when driving the vehicle in curve.

It is suggested to do the following before using grid mode:

- Press main menu **Calibrate Vehicle**, and do the following:
 - a. Press **Vehicle**, and modify the value of parameter **Min Turning Radius** to **10**.
If you are not satisfied with the turn result, please increase it to **13**.
 - b. Press **Control Para**, modify the grid value of line to **10**, and curve to **3** in **Line Acquisition** page, and modify the value of **P1** to **4** and **I1** to **5** in **PID** page.
- To increase the overlapped area, set the width of implement to a value less than the actual width.
e.g. The actual width of implement is 7.3 m, it is suggested to set it to 6.8 m to increase the overlapped area.
- Drive the vehicle to the edge of the plot and turn the steering wheel 45° before setting points.

To use grid mode, do the following:

1. In the interface of selecting a working mode, press **Grid** and , and select the target implement name in **Implement Info** dialog box:



2. To set point A, drive the vehicle to one corner of the plot, and press **A**.
3. To set point B, drive the vehicle to the second corner of the plot, and press **B**.
4. To set point C, drive the vehicle to the third corner of the plot, and press **C**.

5. To set point D, drive the vehicle to the fourth corner of the plot, and press **D**:

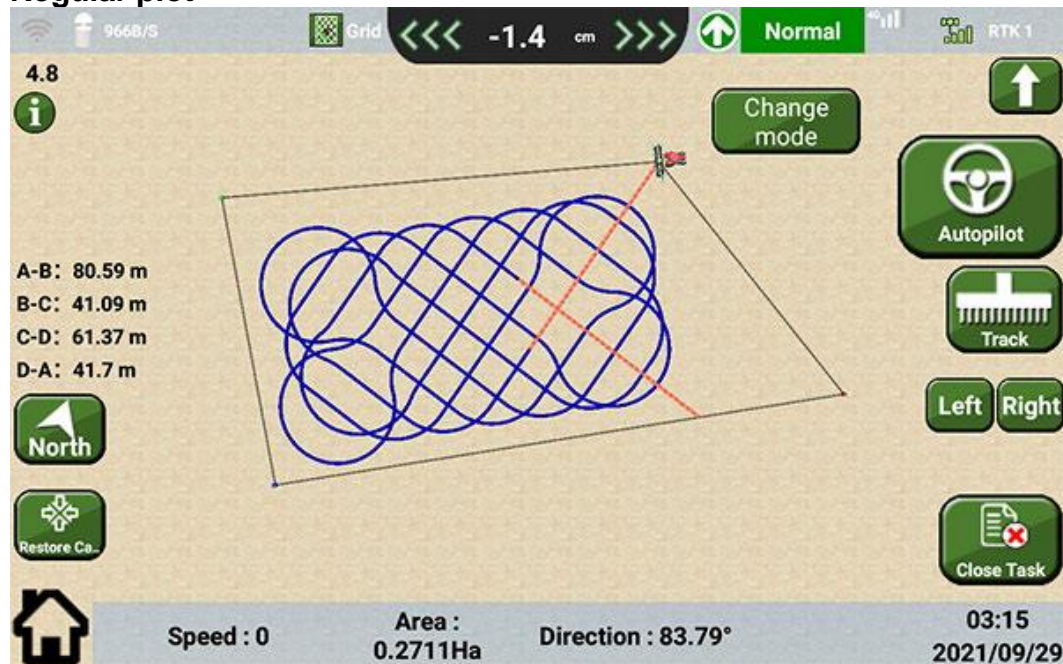


6. **Optional:** If the planned route at both ends of the ground is not fully covered, disengage automatic driving and drive the vehicle around the curve, drive the vehicle back to the red line when finished and follow the direction of the arrow to continue automatic driving.
7. Select a plot planning mode:
 - Irregular plot
 - Regular plot
8. Press **Start**. The system automatically generates grid guidance lines:

Irregular plot



Regular plot



9. **Optional:** If you are not satisfied with the result, press **Left** / **Right** to adjust the number of lines.

In general, for a 1000 m plot, the number of lines is 6 ~9.



10. **Optional:** To check the working track, press **Track**.
The area in green indicates that this area has been finished.



1. Press **Autopilot** to engage automatic driving, and stop the vehicle when it reaches the plot tail.
2. Turn the vehicle around, engage automatic driving to enter any of grid guidance lines, and start your work.

1.3.5 Use Contour Mode

Contour mode includes the following types and you can switch them conveniently:

- Equidistance curve (recommended): it guarantees the swath of the task with a slight deformation of the curve.
- AB curve: it guarantees the deformation of the curve unchanged without guaranteeing the swath of the task.
- Free curve: it is applicable to curves with large curvature.

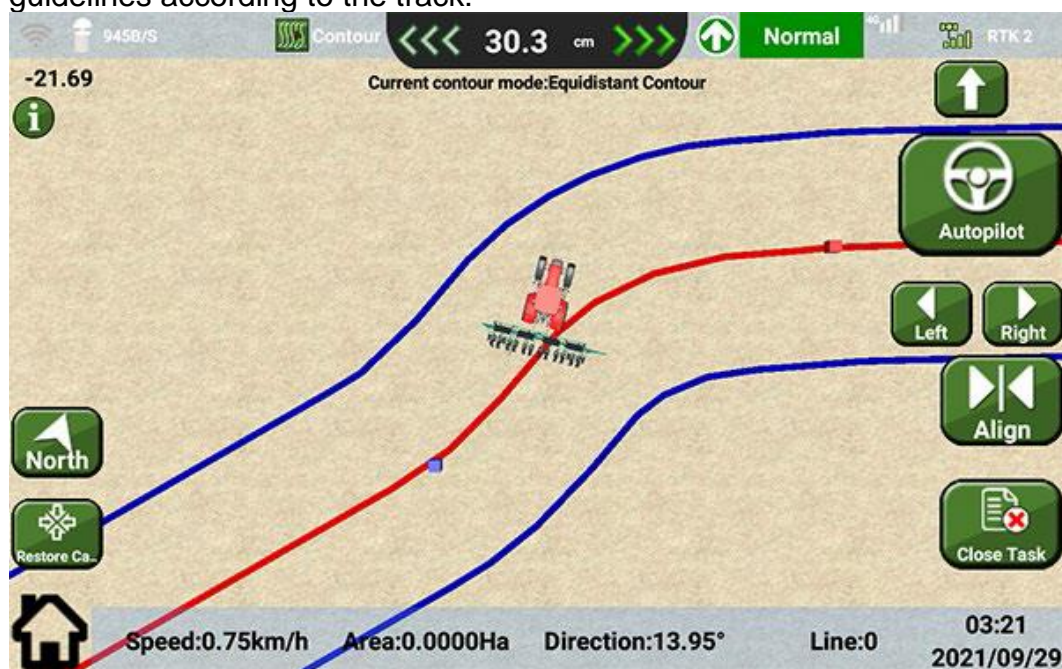
To use contour mode, do the following:

1. In the interface of selecting a working mode, press **Contour** and , and select the target implement name in **Implement Info** dialog box.

2. Select a type of contour mode:



3. To set the current point as point A, press **A**.
4. Drive the vehicle in an arc, and press **B**. The system automatically generates guidelines according to the track:



5. **Optional:** To adjust the arc position, press **Left / Right**.



6. Press **Autopilot** to engage automatic driving, and stop the vehicle when it reaches the plot tail.
7. Turn the vehicle around, engage automatic driving to enter any of contour guidance line, and start your work.

1.3.6 Land Measurement Mode

To use land measurement mode, do the following:


1. In the interface of selecting a working mode, press **Land Measurement** and



2. Select a way to define the plot edge:
 - **Middle**: the centerline of the vehicle.
 - **Left**: the leftmost of the implement.
 - **Right**: the rightmost of the implement.
3. Press **Start**.
4. Drive the vehicle around the plot and press **End** when the whole edge of the plot has been finished.

1.3.7 Use Transplanting Mode

To use transplanting mode, do the following:

1. In the interface of selecting a working mode, press **Transplanting** and , and select the target implement name in **Implement Info** dialog box.
2. Press **Start**.

3. Drive the vehicle around the plot again:

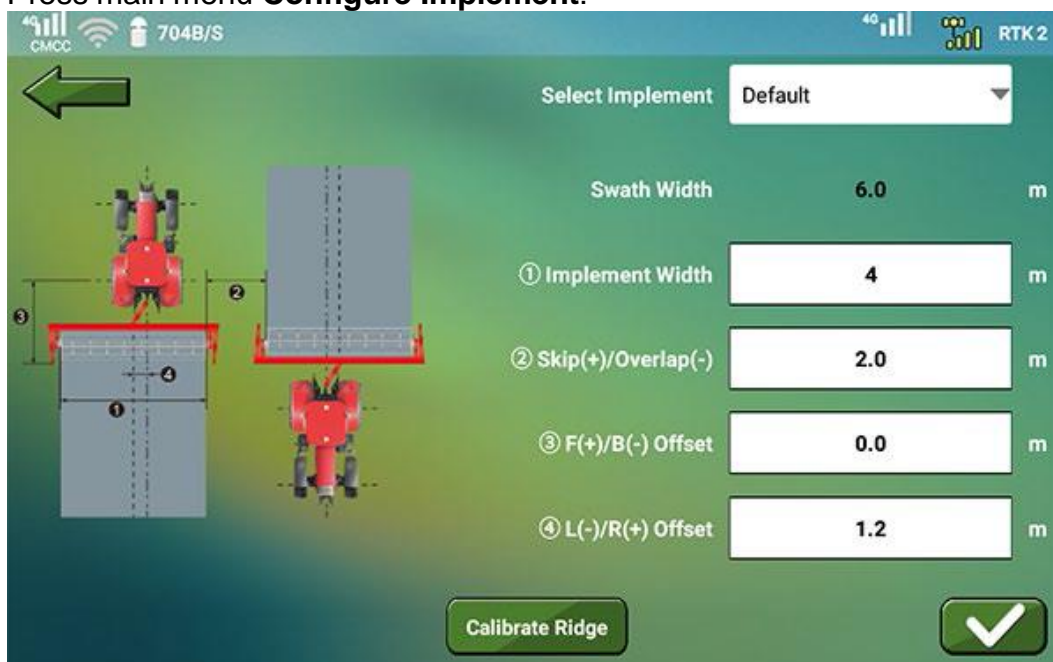


4. **Optional:** If you would like to modify the route, press **Restart** and drive the vehicle around the plot.
5. Return to the start point and press **Complete**.

1.4 Configure the Implement

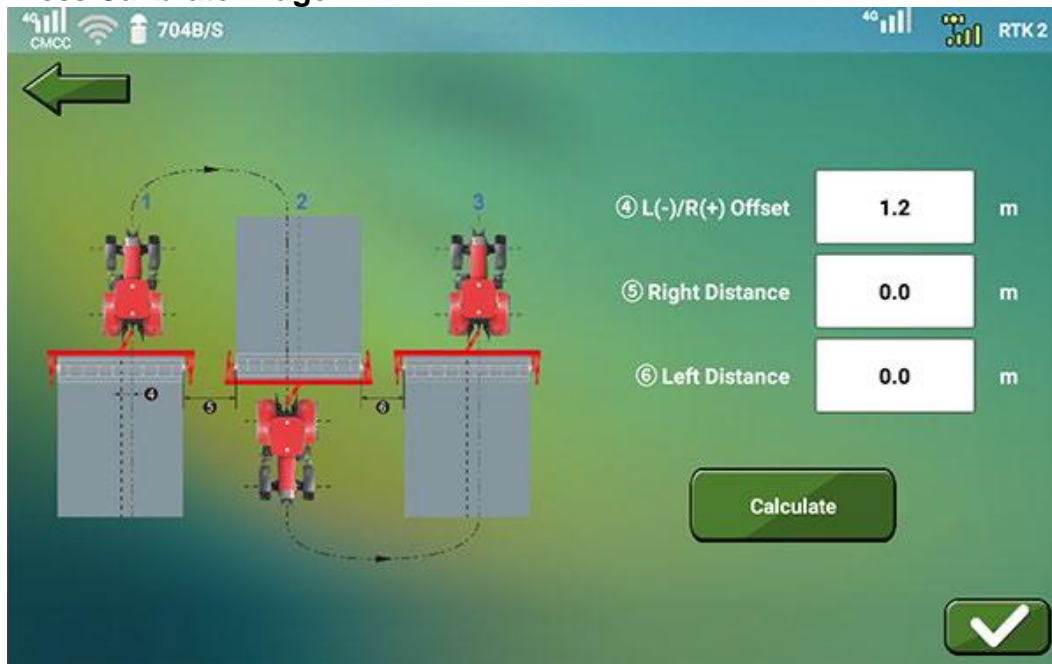
To configure the implement, do the following:


1. Press main menu **Configure Implement**:



2. **Optional:** To create an implement, do the following:
 - a. Press the dropdown box of **Select Implement**.
 - b. Press **New**, and enter a name for the new implement.

3. Set the following implement parameters:
 - **Implement Width:** the width of the implement.
 - **Skip(+)/Overlap(-):** a positive value means the skipped distance while a negative value means the overlapped distance.
 - **F(+)/B(-) Offset:** the vertical distance between the rear axle shaft of the vehicle and the back of the implement. A positive value means the implement is installed in the front of the vehicle while a negative value means it is installed in the back of the vehicle.
 - **L(-)/R(+) Offset:** the distance between the vehicle centerline and the implement center. A positive value means the implement center is on the right of the vehicle centerline while a negative value means it is on the left of the vehicle centerline.
4. Press **Calibrate Ridge**:



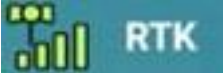
5. Press **Calculate**. The system automatically calculates the result and fills it into the input boxes.
6. Press  for confirmation.

1.5 Calibrate the Vehicle

Correct vehicle calibration is the premise that the vehicle can achieve high-precision automatic driving. And it is required after assembling the whole system and before establishing a job.

The main interface of vehicle calibration is as follows:

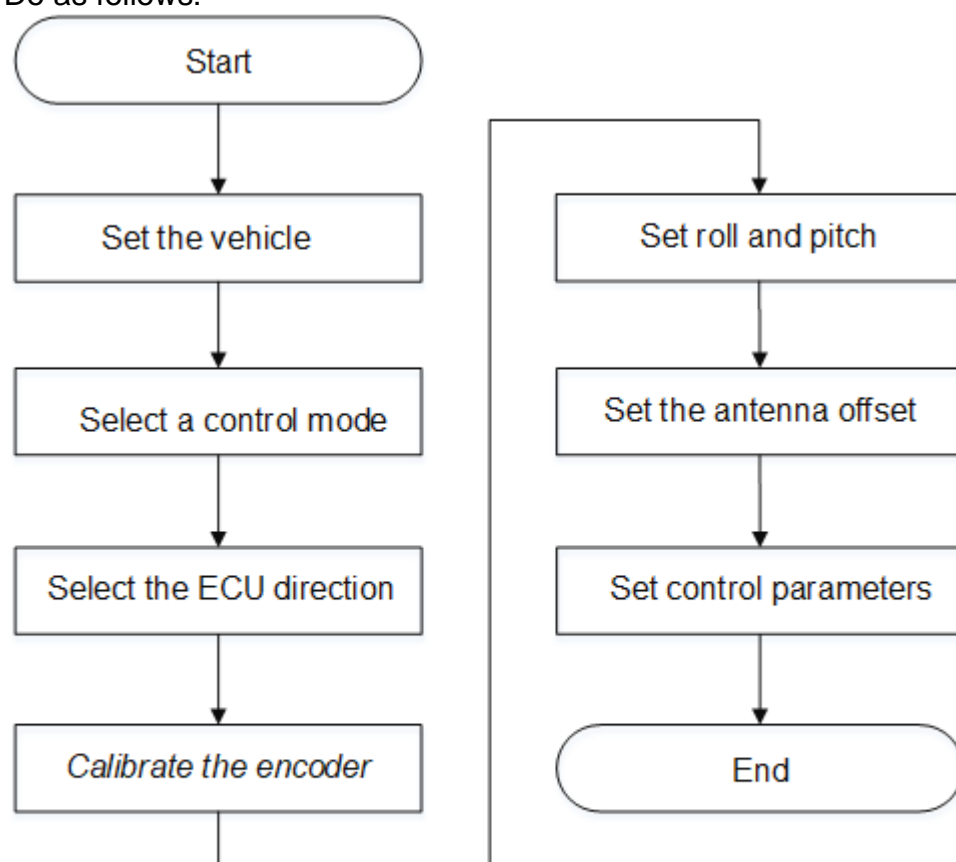


Before doing vehicle calibration, make sure the symbol of satellite status in the upper right is  , and the value after **RTK** (delay) is within 1 - 3.

To calibrate the vehicle, do the following:

1. Press main menu **Calibrate Vehicle**, and input the password.
2. Select a vehicle type:
 - Standard tractor
 - Combine
 - Transplanter

3. Do as follows:



CAUTION: Calibrating the encoder is required only when the Control mode is set to **EWheel Steering with Encoder**.

1.5.1 Set the Vehicle

When setting the vehicle, please make sure all values are set accurately, which is the prerequisite for the accurate automatic driving.

To set the vehicle, do the following:



1. To enter **Vehicle** interface, press **1. Vehicle Setup** :



2. In **Parameters** page, set the following parameters:



CAUTION: All antenna related parameters are parameters related to the positioning antenna in the MC5 (hereinafter referred to as positioning antenna).

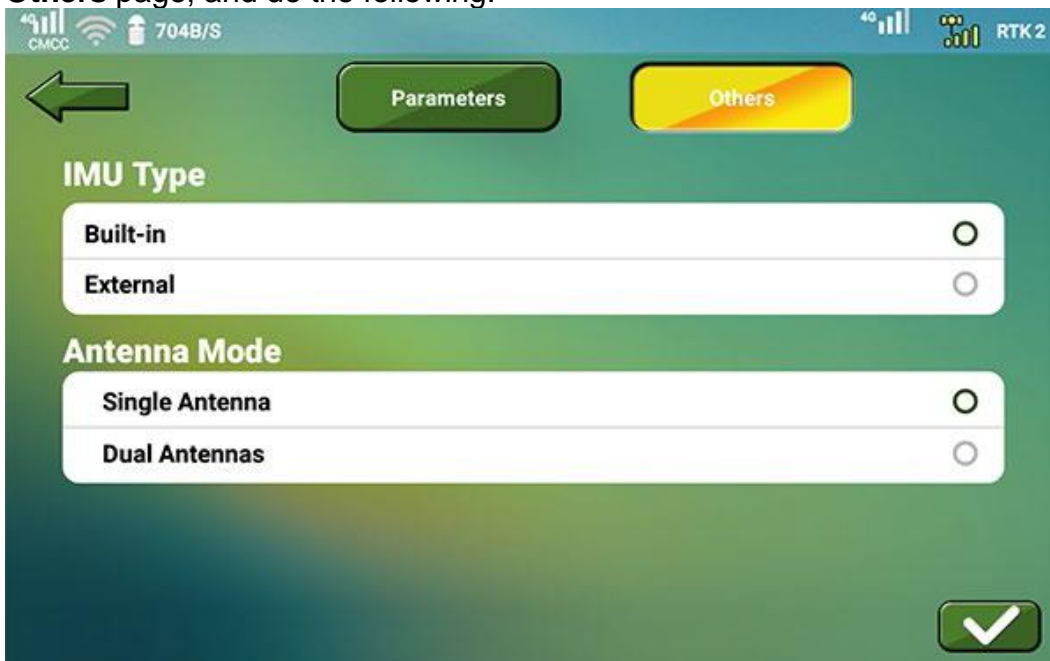
- **Antenna Height:** the distance between the positioning antenna and the bottom of the back wheel.
- **Antenna F (+) / B (-) Offset:** the distance between the center of the positioning antenna and the center of the back wheel:
 - If the positioning antenna is in the front of the center of the back wheel, please input a positive value.
 - If it is behind the center of the back wheel, please input a negative value.
- **Antenna L (-) / R (+) Offset:** the distance between the center of the positioning antenna and the central axis of the vehicle:
 - If the positioning antenna is in the right of the central axis, please input a positive value.
 - If it is in the left of the central axis, please input a negative value.
- **Wheelbase:** the distance between the center of the front wheel and the center of the back wheel. Please check the vehicle manual for this value.

- **Antenna Orientation:** the angle between the line connecting MC5 smart antenna and the UA35 GNSS antenna and the central axis of the vehicle.
 - If the positioning antenna is at the rear of the vehicle roof, the line is parallel to the central axis. Please use the default value **0°**.
 - If the positioning antenna is on the left of the vehicle roof, the line is vertical to the central axis. Please input **90°**.
 - If the positioning antenna is on the right of the vehicle roof, the line is vertical to the central axis. Please input **270°**.



CAUTION: 180° is not allowed. And it is suggested to set it to 0°.

- **Min Turning Radius:** it is the larger value between the left turning radius, calculated by turning the wheel to the left to the full extent at low speed, and the right turning radius, calculated by turning the wheel to the right to the full extent. Please check the vehicle manual for this value.
3. **Optional:** To set the IMU state and UA35 GNSS antenna, press **Others** to enter **Others** page, and do the following:



IMU type

- **Built-in:** an external IMU is not installed on the cab.
- **External:** an external IMU is installed on the cab.

GNSS Mode

- **Single antenna:** a UA35 GNSS antenna is not used.
- **Dual antennas:** a UA35 GNSS antenna is used.

4. To save settings, press .


1.5.2 Select a Control Mode



CAUTION: Please restart the system each time you modify the control mode.

To select a control mode, do the following:



1. To enter **Control Mode** interface, press .
2. Select one of the following control modes:
 - Hydraulic steering with Gyro-WAS
 - E-wheel steering with Gyro-WAS
 - E-wheel steering with encoder
3. To save settings, press .

1.5.3 Select the ECU Direction

It is used to select the correct cable direction (the direction of the bus connector on the MC5 (ECU-MAIN-CABLE)).

The top orientation of the MC5 is fixed to **UP** the direction of the logo on the MC5.

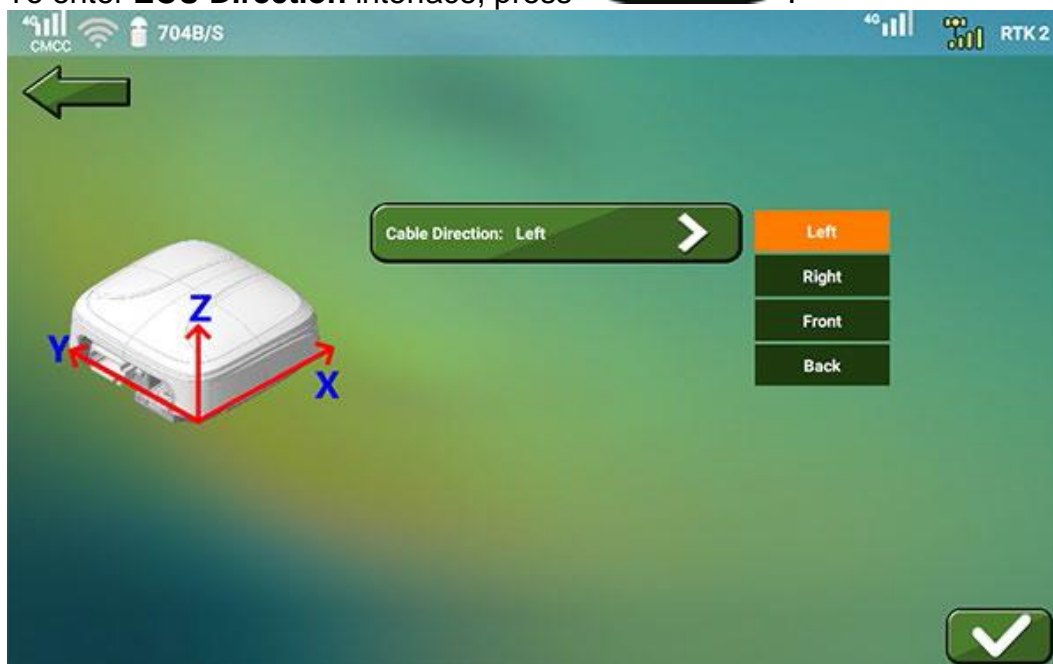


CAUTION: Please restart the system each time you modify the ECU direction.

To select the ECU direction, do the following:



1. To enter **ECU Direction** interface, press



2. Select one of the following cable direction according to the actual condition:
 - **Left:** the bus connector is in the left of the EUC.
 - **Right:** the bus connector is in the right of the ECU.
 - **Front:** the bus connector is in the front of the ECU.
 - **Back:** the bus connector is in the back of the ECU.

3. To save settings, press .

After selecting the ECU direction, restart the MC5 without restarting the display.

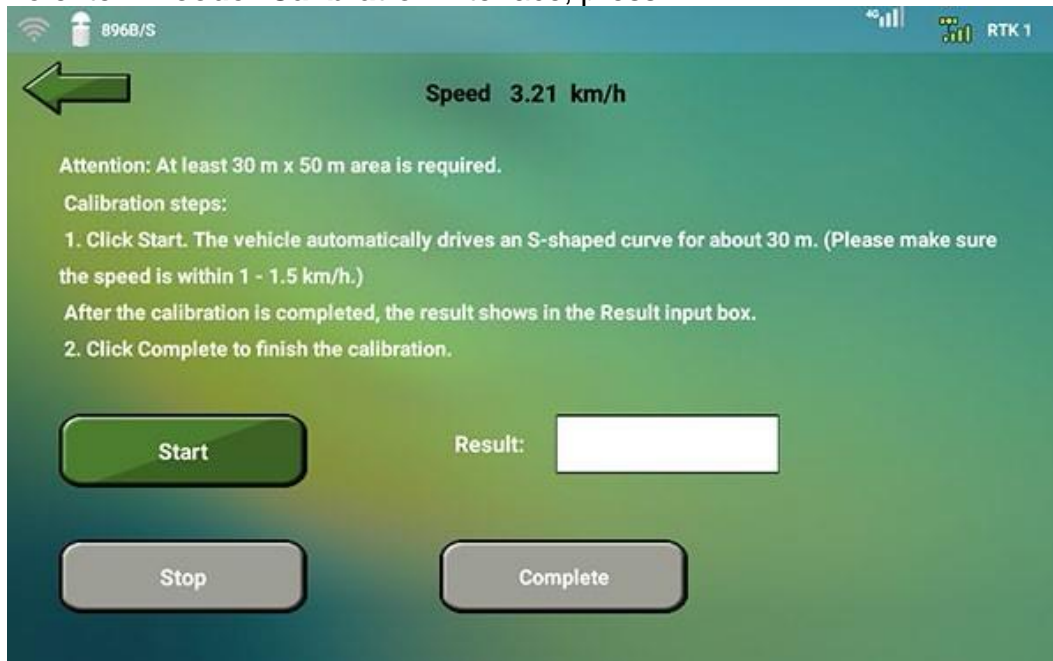
1.5.4 Calibrate the Sensor

During calibrating the sensor, please control the speed within 1 - 1.5 km/h.

To calibrate the sensor, do the following:

1. Drive the vehicle to an area of at least 30 m * 50 m.

2. To enter **Encoder Calibration** interface, press



3. Click **Start**. The system automatically controls the vehicle to drive an S-shaped curve for about 30 m, and the result automatically fills in **Result** input box after finishing.
4. Press **Complete** to exit setting.

1.5.5 Set Roll and Pitch

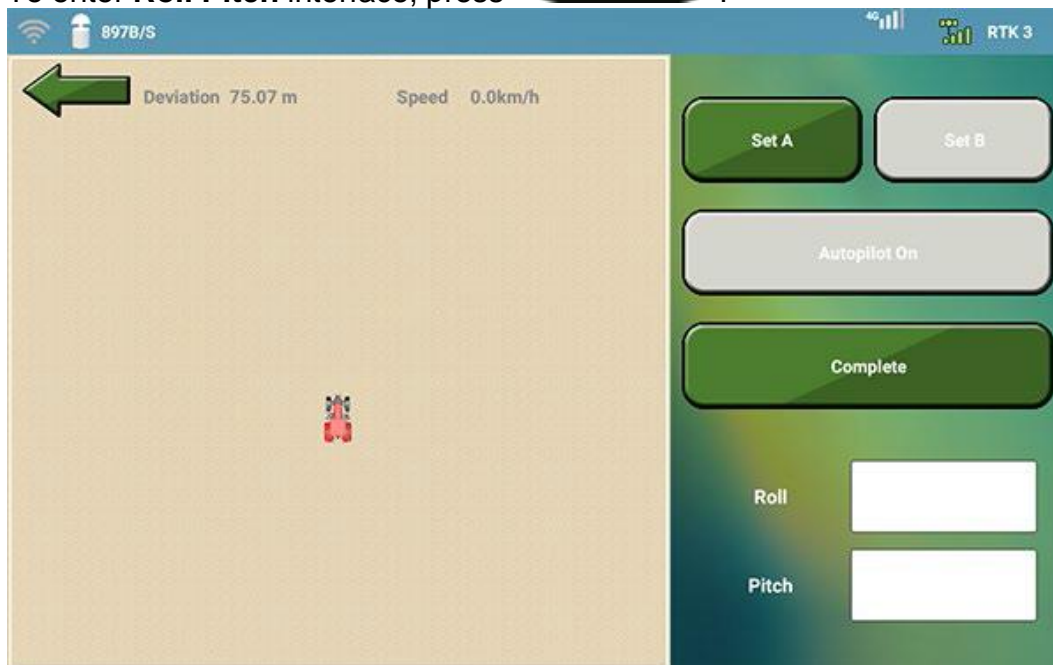
It should be done in a flat and open area. Otherwise, the value of **Deviation** may exceed the allowable range (± 2.5 cm) during automatic driving.

During setting roll and pitch, please keep the vehicle speed within 3 km/h ~ 5 km/h and make sure your own safety.

To set roll and pitch, do the following:



1. To enter **Roll Pitch** interface, press :



2. To set the current point as point A, press **Set A**.
3. To set point B, drive the vehicle at least 50 m, and press **Set B**.
4. Drive the vehicle a long distance, turn the vehicle around, drive the vehicle in the extended line of AB, and make sure the value of **Deviation** is within 5 cm before the vehicle reaches point B.
Deviation: the distance between the vehicle and line AB.
5. Press **Autopilot On** to engage automatic driving from point B to point A, and press **Autopilot Off** to disengage automatic driving when the vehicle reaches point A.
6. Drive the vehicle a long distance, turn the vehicle around, drive the vehicle in the extended line of AB, and make sure the value of **Deviation** is within 5 cm before the vehicle reaches point A.
7. Press **Autopilot On** to engage automatic driving from point A to point B, and press **Autopilot Off** to disengage automatic driving when the vehicle reaches point B.
8. Press **Complete**. The system automatically fills in input boxes of **Roll** and **Pitch**.
9. Press **Complete** to exit setting.

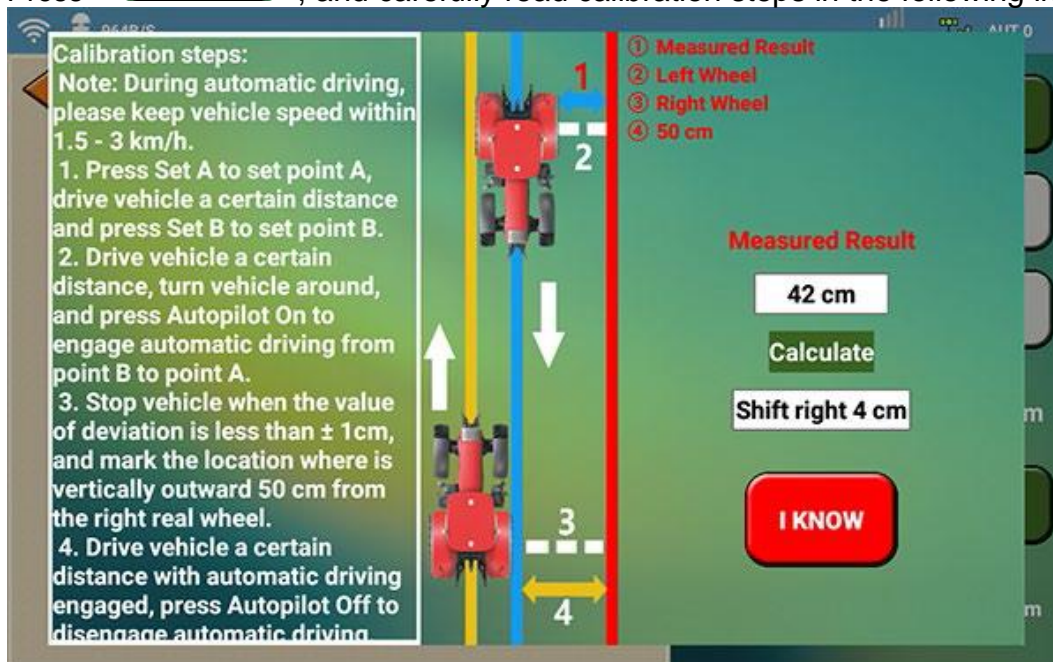
1.5.6 Set the Antenna Offset

During automatic driving, the speed should be controlled within 1.5 - 3 km/h.

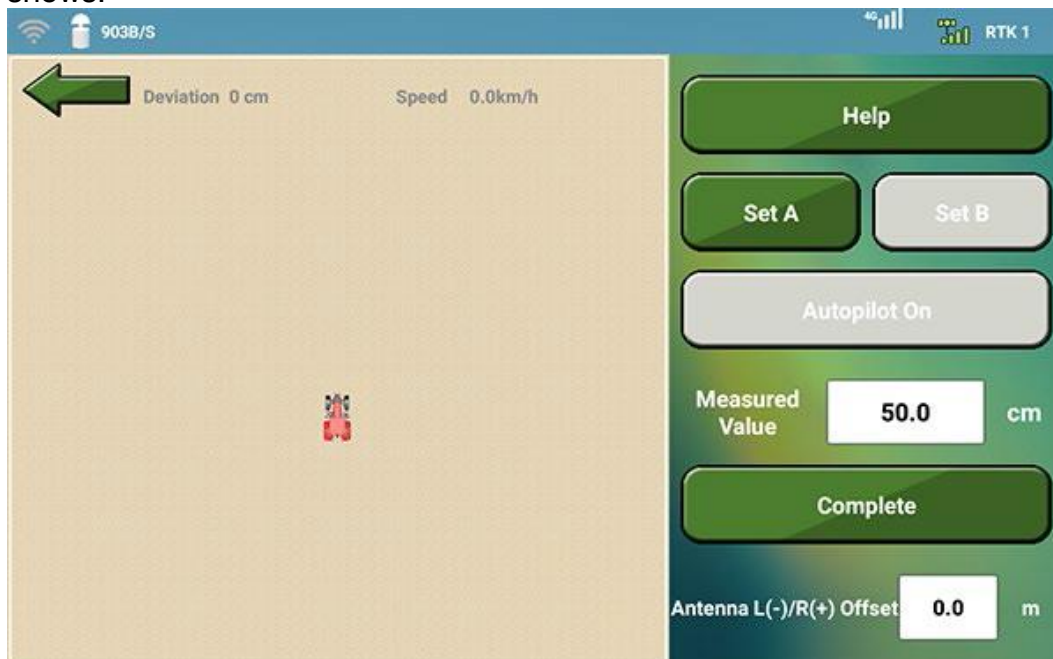
To set the antenna offset, do the following:



1. Press **6. Antenna Offset**, and carefully read calibration steps in the following interface:



2. To enter **Antenna Offset** interface, press **I KNOW**. **Antenna Offset** interface shows:



If you are not sure about calibration steps during setting the turn back line, please press **Help**.

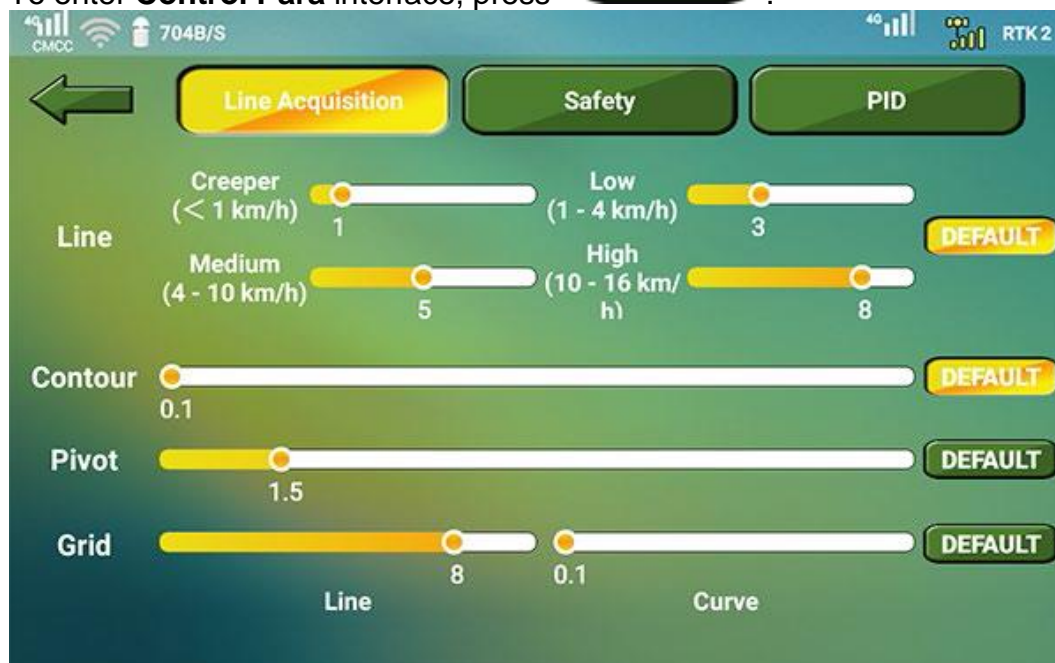
3. To set point A and B, do the following:
 - a. To set the current point as point A, press **Set A**.
 - b. To set point B, drive the vehicle a certain distance, and press **Set B**.
4. Drive the vehicle a certain distance, turn the vehicle around, and press **Autopilot On** to engage automatic driving from point B to point A,
5. Stop the vehicle when the value of **Deviation** is less than ± 1 cm, and mark the location where is vertically outward 50 cm from the right real wheel.
6. Drive vehicle a certain distance with automatic driving engaged, press **Autopilot Off** to disengage automatic driving, and turn the vehicle around.
7. Press **Autopilot On** again to engage automatic driving, and do one of the following according to the value of **Deviation**:
 - If it is less than ± 1 cm at the marked location, stop the vehicle, and press **Autopilot Off** to disengage automatic driving.
 - If it is not less than ± 1 cm at the marked location, reverse the vehicle, and drive the vehicle to the marked location again.
If it is still not less than ± 1 cm, repeat the operation or start from step 1 in another open area.
8. Measure the distance between the marked location and the left rear wheel, and input the result in input box of **Measured Value**. The system automatically fills in the input box of **Antenna L(-)/R(+)** Offset.
9. Press **Complete** to exit setting.

1.5.7 Set Control Parameters

It is used to set line acquisition, safety parameters and PID parameters. It is suggested to use default control parameters.

To set control parameters, do the following:

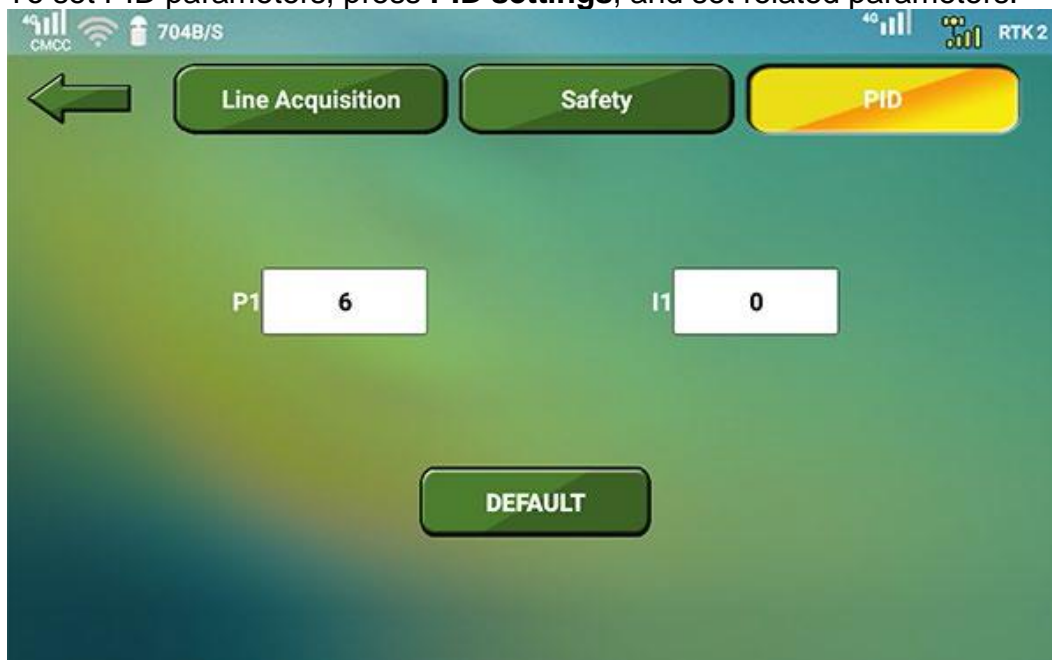
1. To enter **Control Para** interface, press



2. Set related parameters about line acquisition.
Range: 1 - 10.
The smaller the value is, the higher frequency of steering wheel direction is.
3. To set safety parameters, press **Safety** to switch to **Safety** page, and set related parameters:



4. To set PID parameters, press **PID settings**, and set related parameters:



1.5.8 Reset the ECU

It is used to restore settings of vehicle calibration to factory settings.



Warning: This operation is irreversible. All data of vehicle calibration and sensor calibration will be cleared. Please be careful.

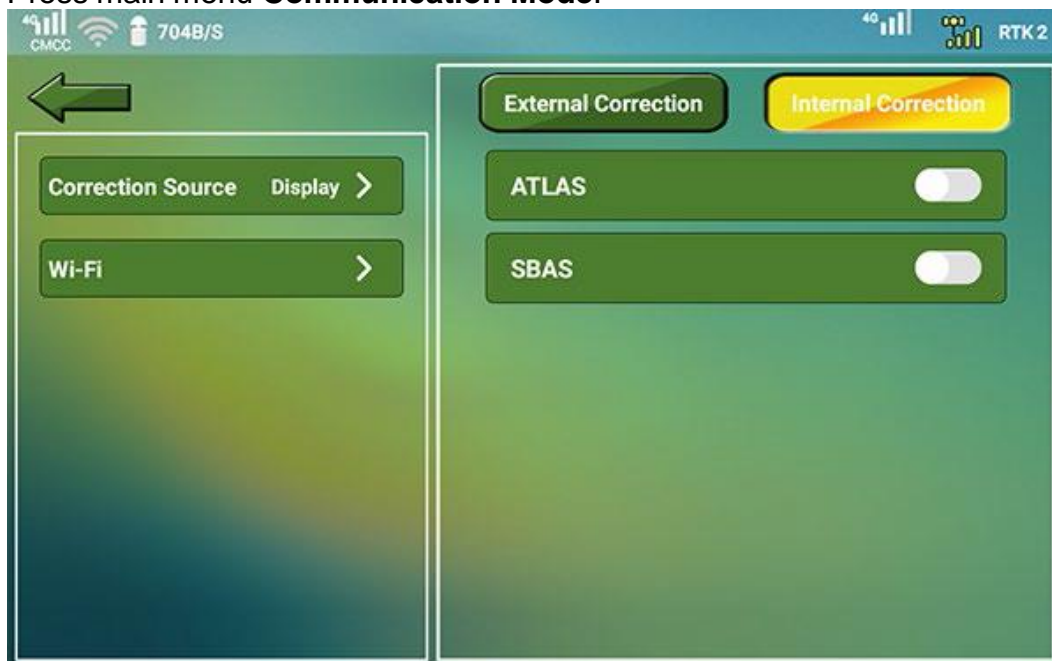


To reset the ECU, press

1.6 Set Communication Mode

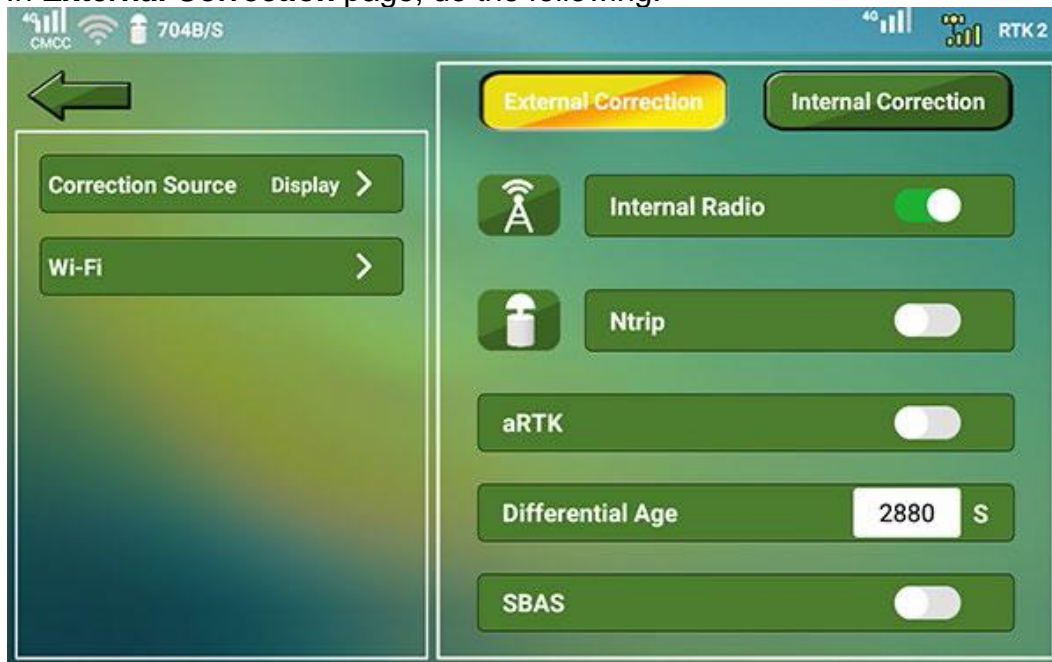
To set communication mode, do the following:

1. Press main menu **Communication Mode**:



2. To select a correction source, press **Correction Source**, and select one of the following:
 - **Display**
 - **MC5**
3. To connect Wi-Fi, press **Wi-Fi**, and select the target Wi-Fi.

4. In **External Correction** page, do the following:



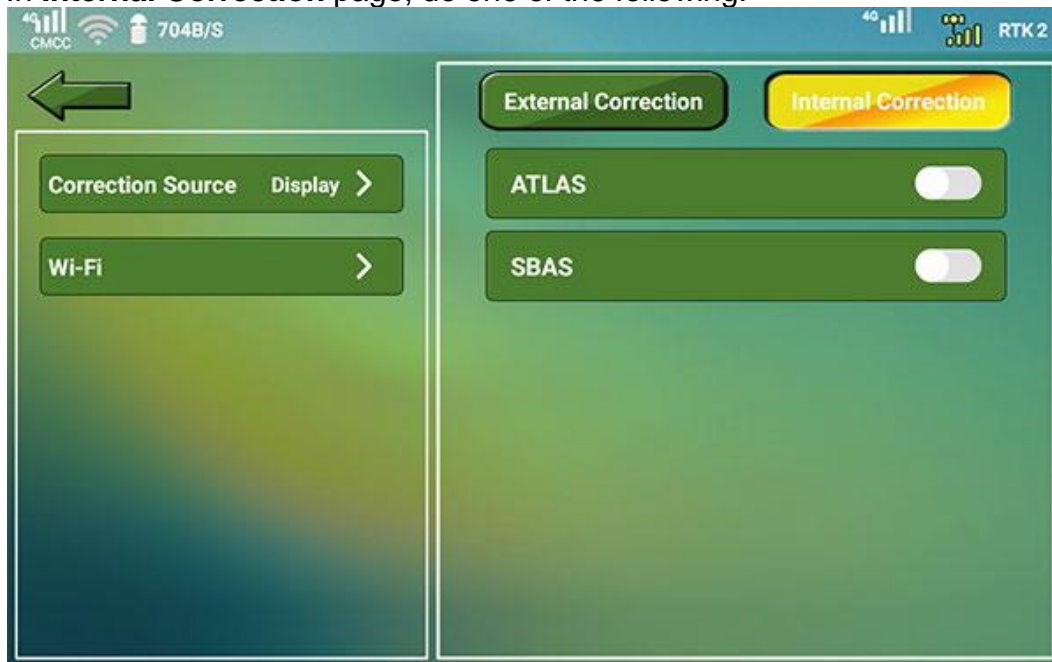
- a. Do one of the following:
 - Select whether to enable **Internal Radio**.
 - Select whether to enable **Ntrip**.



CAUTION: With Ntrip enabled and bad network signal, please turn on hotspot of your mobile phone, and connect the ST6 display terminal to the hotspot.

- b. Select whether to enable **aRTK**.
With it enabled, the receiver is able to generate RTK positions even if the RTK correction source becomes unavailable within the set aRTK age limit.
- c. Set differential age.
- d. Select whether to enable **SBAS**.
SBAS: the wide-area differential augmentation system (satellite-based augmentation system).

5. In **Internal Correction** page, do one of the following:



- Select whether to enable **ATLAS**.
With it enabled, please select a channel from one of the following:
 - Auto
 - 1545.855 MHz (Asia)
 - 1545.915 MHz (US)
 - 1545.905 MHz (EU)
- Select whether to enable **SBAS**.

1.7 Diagnose

To start diagnosing the system, do the following:

1. Press main menu **Diagnose**.
2. Do the following:
 - Check satellite status.
 - Check system parameters.
 - Check system status.
 - Check network status.
 - Use remote assistance.

1.7.1 Check Satellite Status

To check satellite settings, press **Satellite Status** to switch to **Satellite Status** page, and check the following:



UTC Time	Latitude	Longitude	Altitude
2021/09/17 05:19:18	N31.08443512	E121.53039019	61.768m
Solution Status	Speed	Direction	Accuracy
AUT,NONE,0	0.0km/h	0.0°	1.075
Distance to Base	GNSS SN	Display SN	Wheel Angle
0.0km	21409626	ST629010000fd46d27f	0.0
GNSS Signal			
L1,L2,G1,G2,B1,B2,B3,B2B,E1B,ESA,ESB,9,0,4,0,9,0,0,0,5,0,0,C,A,D,D,C,B,D,B,C,D,A			
Subscription			
GPS,L1,B3			

- **UTC time**
- **Latitude, longitude and altitude:** the coordinates of the current position.
- **Solution Status:** the current solution status.
- **Speed:** the current speed of the vehicle.
- **Direction:** the angle difference of the MC5 and the north direction.
- **Accuracy:** unit: m
- **Distance to Base:** the distance between the current position and the base station.
- **GNSS SN:** used for registration and authorization.
- **Display SN:** the display SN.
- **Wheel Angle:** the current angle of the wheel.
- **GNSS Signal:** the tracking GNSS and signal intensity.
- **Subscription:** GNSS authorization, Atlas accuracy, and expired time.

1.7.2 Check System Parameters

It is used to check the values of wheelbase, swath width, smooth, antenna height, antenna F(+)/B(-) offset, antenna L(-)/R(+) offset, antenna orientation, roll, pitch, WAS left, WAS

center, WAS right, radio frequency, GYRO, TB (X, Y and Z), implement F(+)/B(-) offset, implement L(-)/R(+) offset, control mode and encoder result.

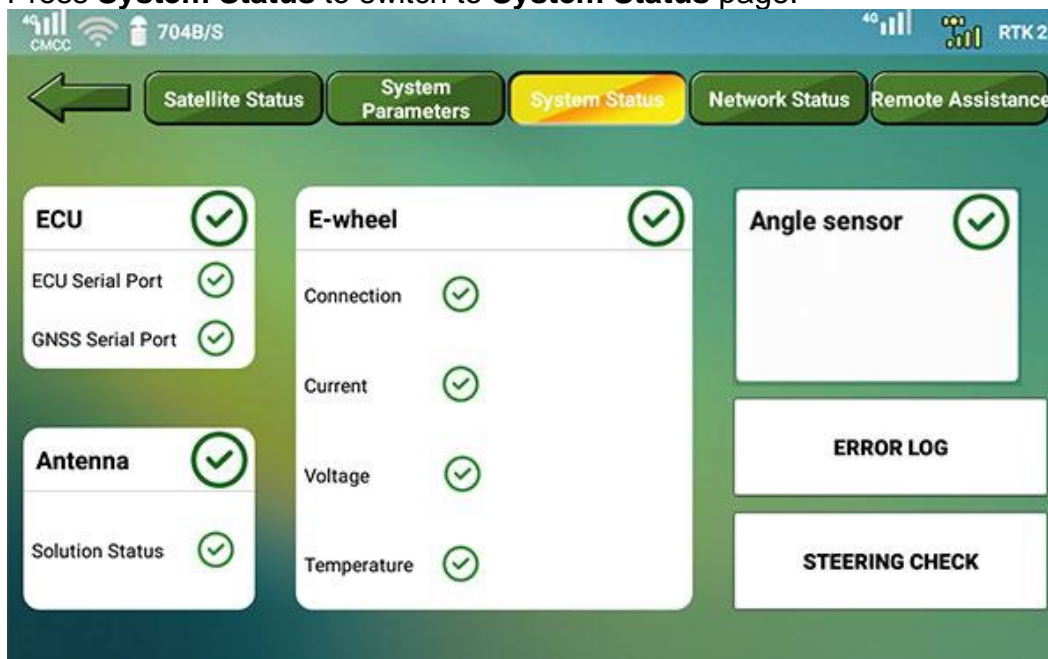
To check system parameters, press **System Parameters** to switch to **System Parameters** page, and check related parameters:

Wheelbase	Swath Width	Smooth	Antenna Height
2.33	3.0	3.0	2.78
Antenna F(+)/B(-) Offset	Antenna L(-)/R(+) Offset	Antenna Orientation	Roll
-0.15	0.0	0.0	0.21
Pitch	WAS Left	WAS Center	WAS Right
1.49	-20.0°, 2800.0	2125.0	20.0°, 1500.0
Radio Frequency	GYRO, TB, X	GYRO, TB, Y	GYRO, TB, Z
460.0125	0.000139, 0.001867	0.000043, -0.005647	0.000357, -0.011059
Implement Offset F(+)/B(-)	Implement Offset L(-)/R(+)	Control Mode	Encoder Result
0.0	1.8	4	23.3, 18.686

1.7.3 Check System Status

To check system status, do the following:

1. Press **System Status** to switch to **System Status** page:



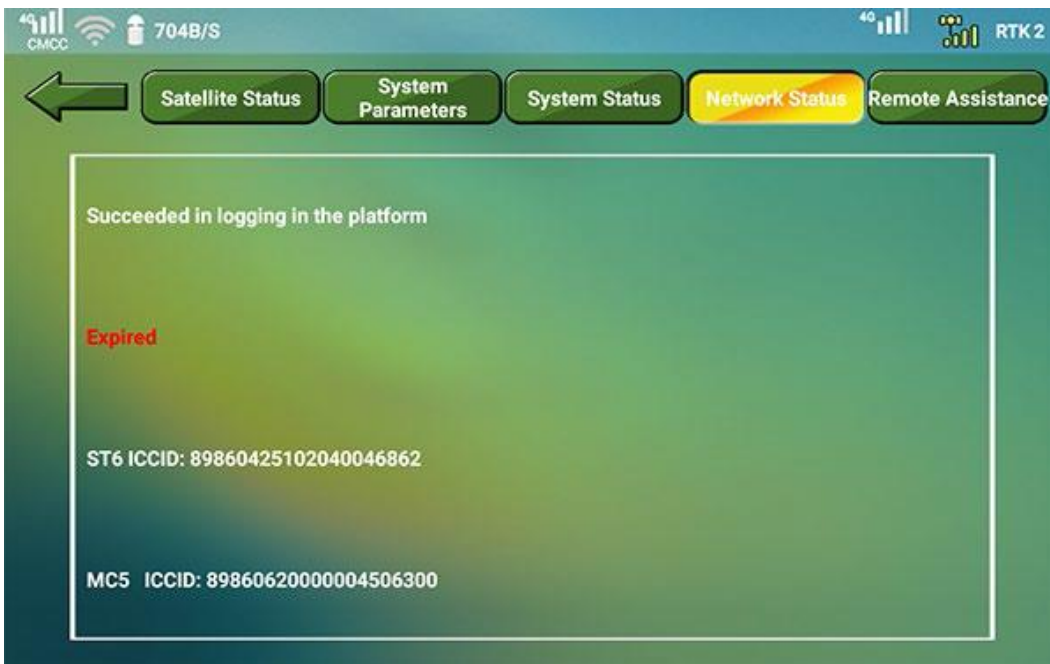
2. Check the following status:
 - **ECU**: including ECU serial port and GNSS serial port.
 - **Antenna**: including solution status and HDT course.
 - **Motor**: including connection, current, voltage and temperature.

- **E-wheel**: including the connection of the electrical steering wheel, current, voltage and temperature.
- 3. To check error logs for troubleshooting, press **ERROR LOG**.
- 4. To check the steering, press **STEERING CHECK**, and press < or > to adjust the wheel angle:



1.7.4 Check Network Status

To check network status, press **Network Status** to switch to **Network Status** page, and check the following:



- Connection status of the platform
- Status of the CORS account
- Connection status of the CORS
- Download speed
- Upload speed

1.7.5 Use Remote Assistance

To use remote assistance, press **Remote Assistance** to switch to **Remote Assistance** page.



CAUTION: Before using it, please contact us.

1.8 Settings

To set system settings, do the following:

1. Press main menu **Settings**:



2. Set the basic settings.
3. Authorize the system.
4. Check the system version.

1.8.1 Set Basic Settings

To set basic settings, set one of the following based on your need:

- Select the unit of speed: including km/h and mph.
- Select the unit of area: including Mu and Ha.
- Select a language.
- Select the working mode: including day and night.
- Adjust brightness.
- Adjust voice volume.

1.8.2 Authorize the System

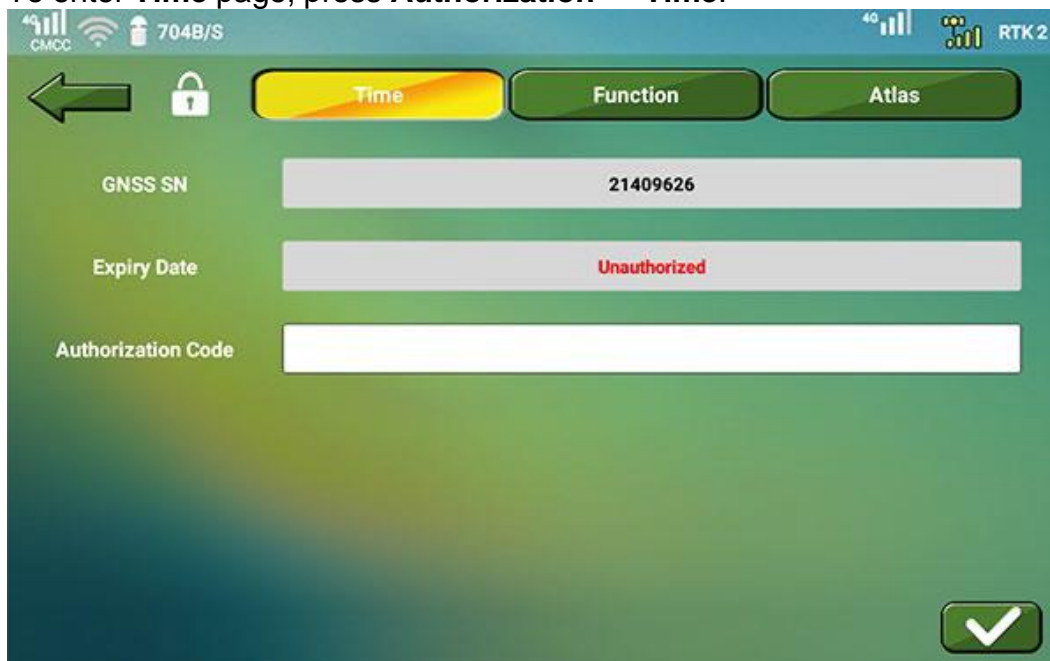
It includes the following:


- Time authorization: to get the expiry date.
- Function authorization: to unlock functions including low speed, grid guidance mode and contour guidance mode.
- Atlas authorization: to get the expiry date of Atlas.

1.8.2.1 Do Time Authorization

To do time authorization, do the following:

1. To enter **Time** page, press **Authorization** → **Time**:



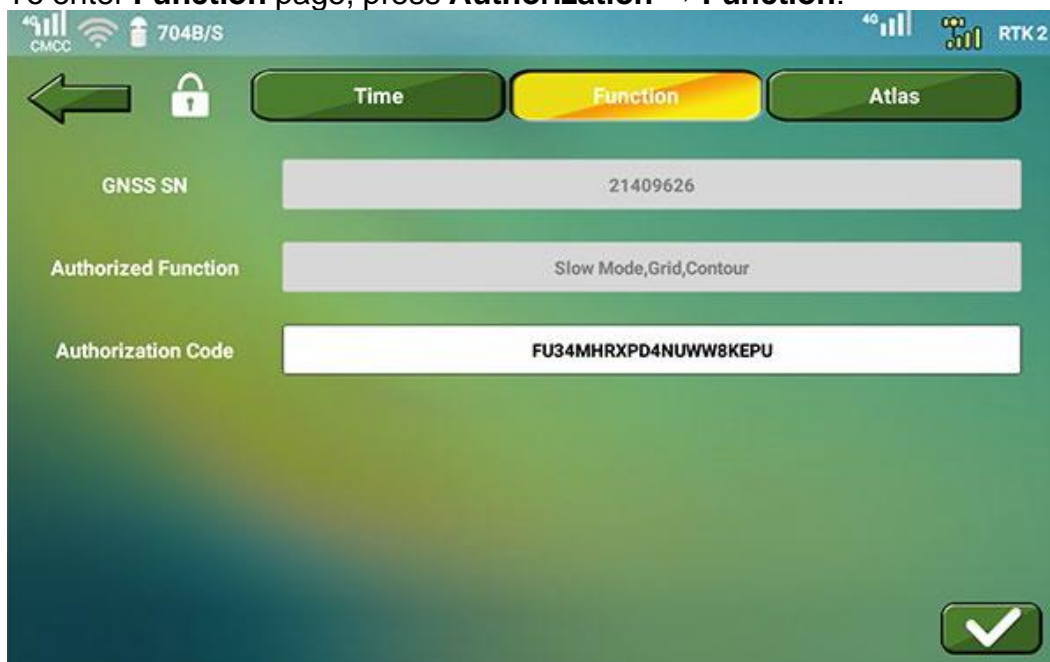
2. Press input box of **Authorization Code**, and input the authorization code.
3. Press . Expiry data show automatically in input box of **Expiry Date**.

1.8.2.2 Do Function Authorization


To do function authorization, do the following:

It is used to unlock function of slow speed work, grid mode and contour mode.

1. To enter **Function** page, press **Authorization** → **Function**:



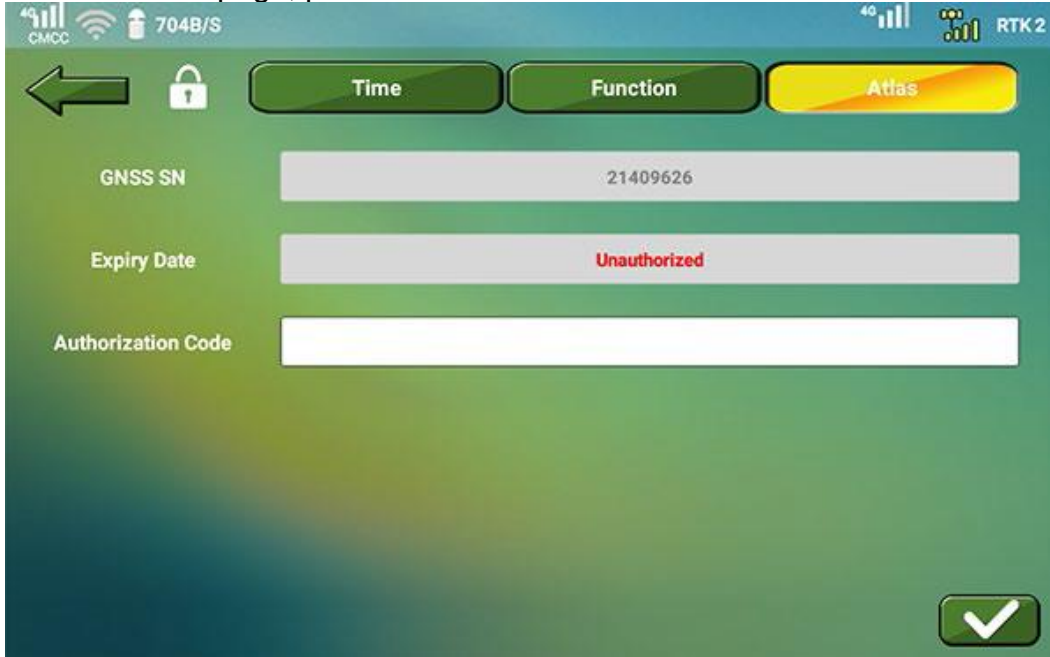
2. Press input box of **Authorization Code**, and input the authorization code.


3. Press . Authorized function shows automatically in input box of **Authorized Function**.

1.8.2.3 Do Atlas Authorization

To do Atlas authorization, do the following:

1. To enter **Atlas** page, press **Authorization** → **Atlas**:



2. Press input box of **Authorization Code**, and input the authorization code.
3. Press . Expiry data show automatically in input box of **Expiry Date**.

1.8.3 Check the System Version

It includes check the software version and firmware version, and update them through the system or USB if they are not the latest version.

If you need to update the software version and firmware version through the USB, before checking the system version, insert a USB with the latest versions, and make sure the firmware files are put in directory **Root directory/devfrm** of the USB and firmware names are as follows:

- ECU: AUP_MC5RC.psr
- E-wheel: EES_E2910.bin
- GNSS board: V28_BRD_FRM.bin
- IMM1: IMM1_FRM.bin

To check the system version, do the following:

1. Press **Version**:



2. **Optional:** Check information of the current software version, firmware and GNSS board.
3. To check the software version, press **Check Software Version / Update Software by USB**. The system automatically checks if the current software version is the latest one. The system automatically upgrades the software if it is not the latest one.

4. To check the firmware version, do the following:
 - a. Press **Check Firmware Version / Update Firmware by USB**. The system automatically checks if the current firmware version is the latest one and starts to download firmware and the following interface shows if not:



- b. Check the target item to update (including ECU, E-wheel, GNSS board and IMM1).
 - c. Press **Start**. Updating starts.



Caution: During updating, please do not power off ECU and display, restart or remove USB.

Alternatively, to update the firmware through Web UI on your PC, see Web UI for details.