

JY100 Precision AG Software

User Manual

SMAJAYU(SHENZHEN) CO.,LTD



Web: www.smajayu.com

Address: Room 213-214, Building 1, Mingliang Science Park, No. 88, Zhuguang North Road, Taoyuan Street, Nanshan District, Shenzhen, China, 518055.
Eml: support@smajayu.com & tech@smajayu.com

Table of Contents

1. Introduction.....	3
2. Components.....	3
3. Equipment Assembly.....	5
3.1 Power Supply Cable Connect to Main Harness.....	6
3.2 Tablet Installation.....	6
3.3 Antenna Installation.....	7
4. System Operation.....	8
4.1 Important steps before using the software:.....	8
4.2 Main interface introduction.....	12
4.3 Implement.....	14
4.4、 Set AB Line.....	15
4.4.1 Set AB Straight Line.....	15
4.4.2 Set AB Set AB curve.....	16
5. Function Introduction.....	17
5.1 Language Selection.....	17
5.2 Software Upgrade.....	17
5.3 Time Selection.....	18
5.4 Unit Selection.....	18
5.5 Day and Night Mode Switching.....	19

1. Introduction




This manual will introduce how to install and how to use JY100 equipment.

2. Components

JY100 mainly parts include T100 tablet and GNSS antenna.

Components show as table (Table 1) :

Table 1 JY100 Components

No.	Name	Quantity	Figure	Note
1	T100 Tablet	1		
2	GNSS Antenna	1		
3	Main Harnest	1		

4	Power Supply Cable (with Switch)	1		
5	GNSS Antenna Cable	1		5M
6	RAM Bracket	1		
7	Antenna Bracket	1		
8	Accessories	1		

3. Equipment Assembly

Equipment assembly show as figure (Figure 1):

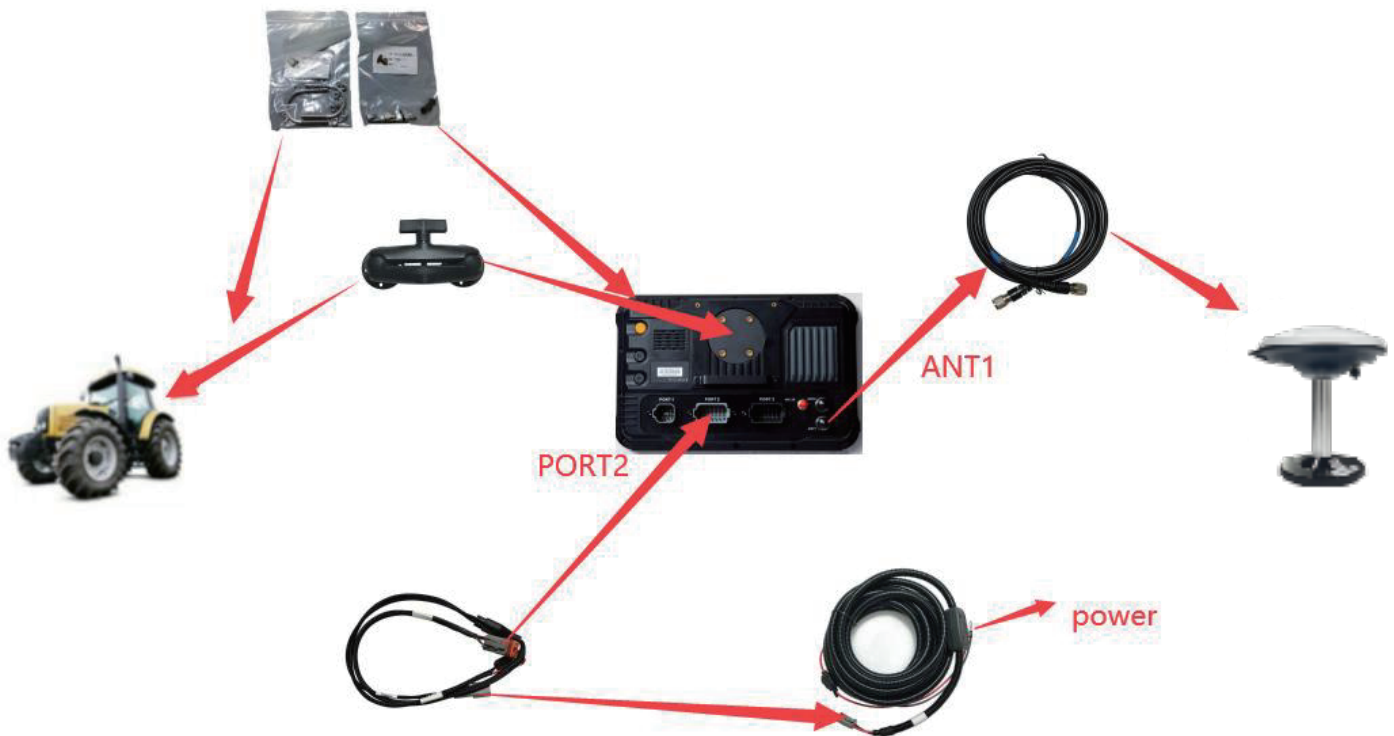


Figure 1 JY100 Assembly

Note:

1. T100 tablet will install in the driver cab via RAM bracket.
2. Power supply cable connect to the vehicle battery. (Support both 12V and 24V)
3. GNSS antenna install on the vehicle roof or hood via bracket.(The antenna must be connected to the ANT1 port)

3.1 Power Supply Cable Connect to Main Harness



Figure 2 Power supply cable - main harness

Note:

Power supply cable connect to the “Power” label plug on the Main Harness.

3.2 Tablet Installation



Figure 3 RAM Intall



Figure 4 Tablet Install

3.3 Antenna Installation

The antenna must be installed on the central axis of the tractor, otherwise it may cause errors



Figure 5 Antenna install 1



Figure 6 Antenna install 2

4、 System Operation

This chapter mainly introduces the use of software debugging.

Downloading link:

<https://www.dropbox.com/sh/30evauax0hnfb3v/AADv8UvSmf1bpeIAIUHU3nYia?dl=0>



Advantages of the new software:

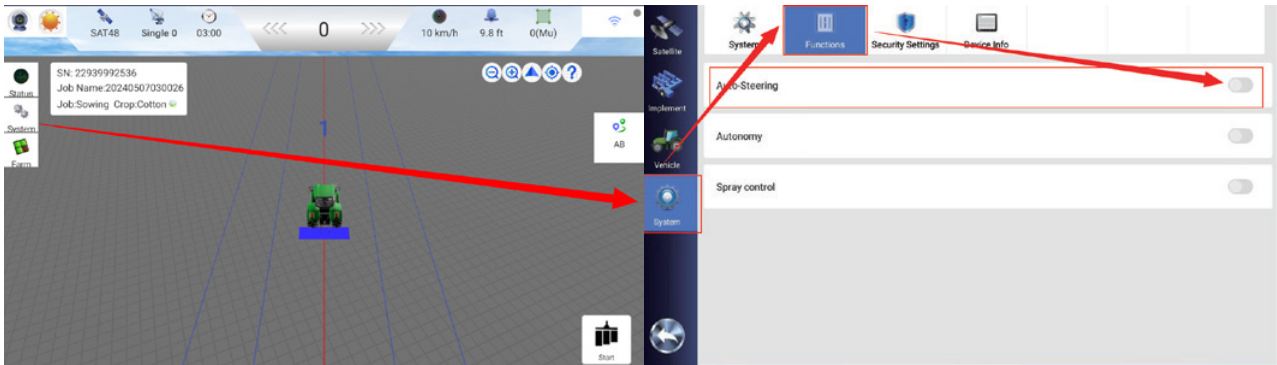
1. Support length units of feet and inches.
2. Support import file formats: ini, shp, kml, dat
3. Support more display languages

Tips:

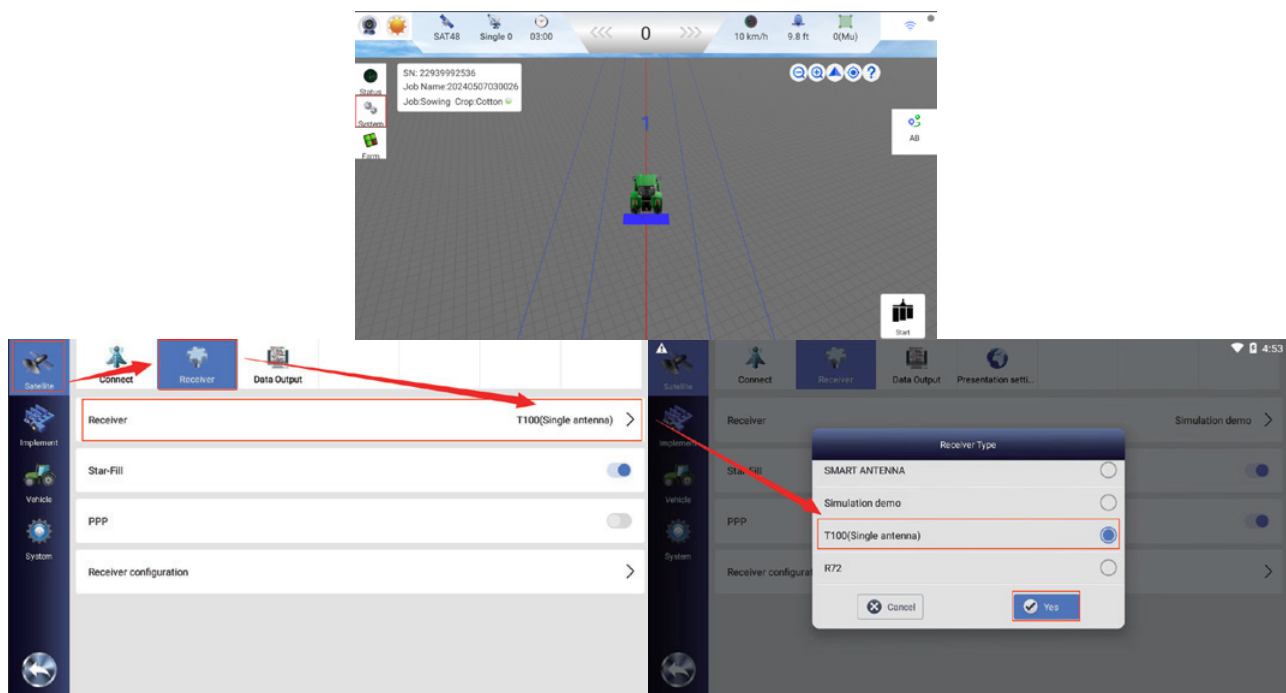
1. Please wait patiently for 1-2 minutes after entering the software, it will take some time for the software to acquire satellites.
2. We recommend to avoid working under trees as much as possible, which may affect the satellite search of the antenna.
3. If the data is not updated in time or the search star is abnormal, you can try to close the background program and run the software again.

4.1 Important steps before using the software:

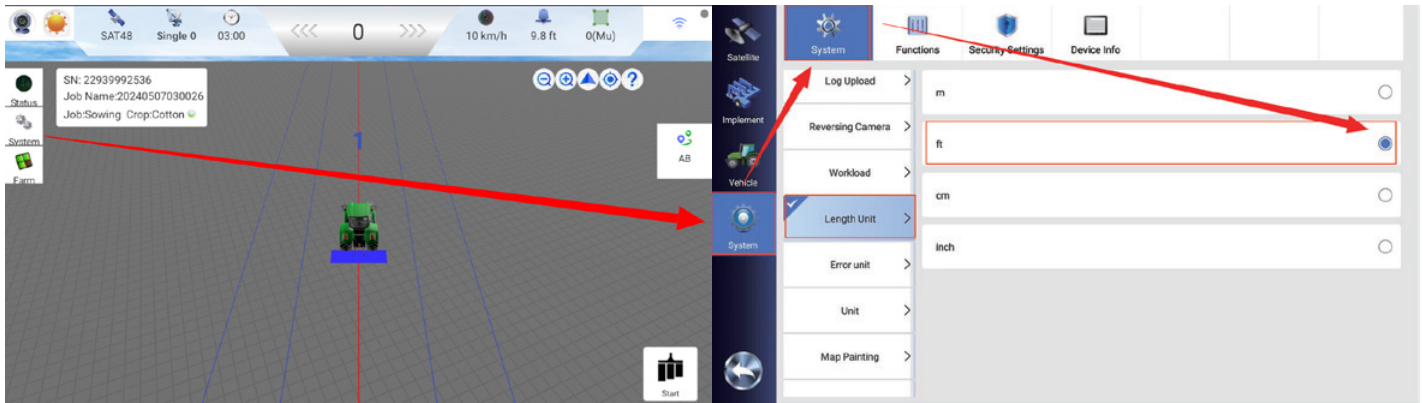
- 1) Be sure to turn off autosteering function on "Precision AG", setting steps as: System-->System-->Functions-->close Auto-Steering



- 2) Be sure select correct antenna, setting steps as:
System-->Satellite-->Receiver-->T100(Single antenna)

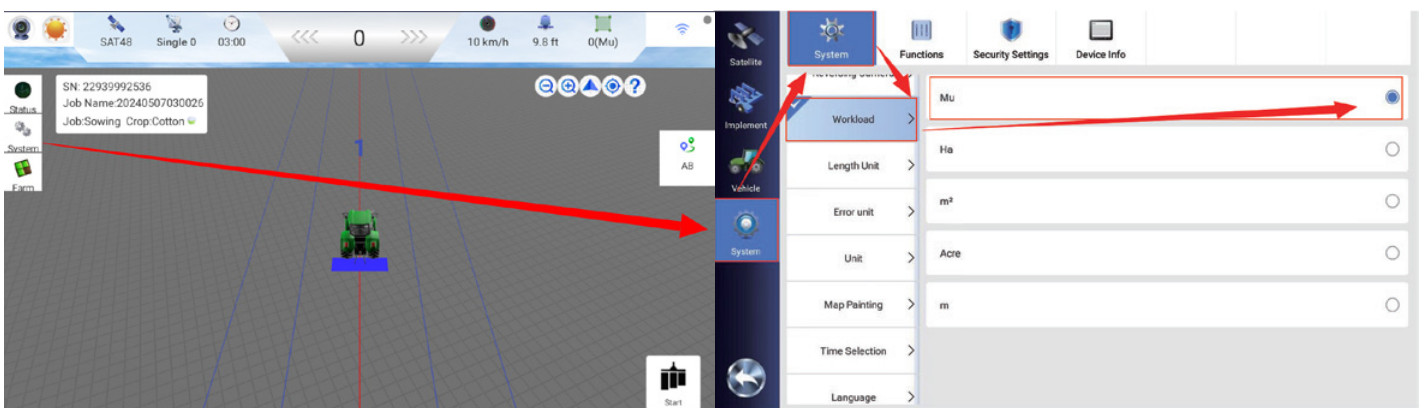


- 3) Convert length unit to feet as your preference, setting steps as:
System-->System-->System-->Length Unit

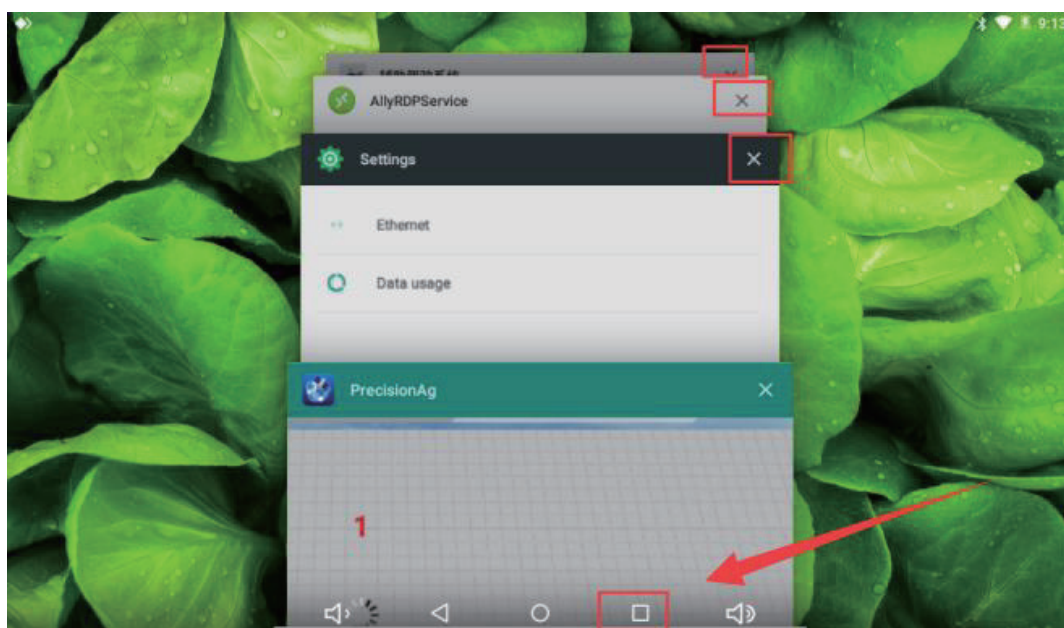


4) Convert the units of the work area, setting steps as:

System-->System-->System-->Workload



6) Only open/run one app, close all other apps in the background

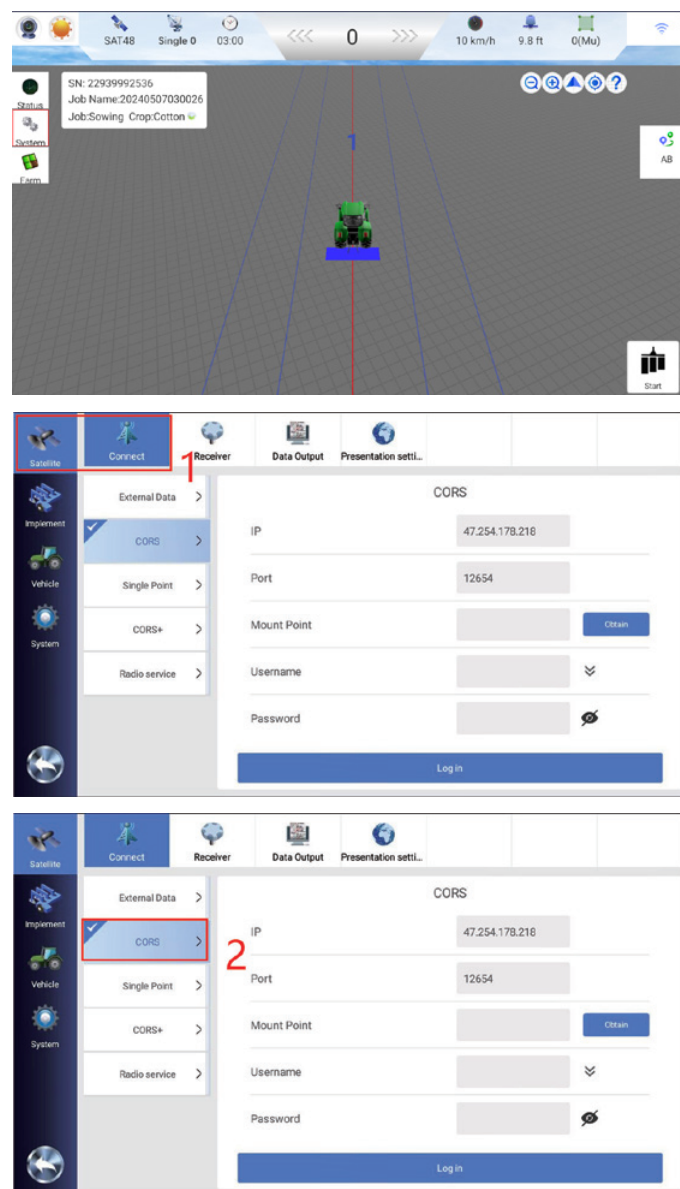


7) CORS

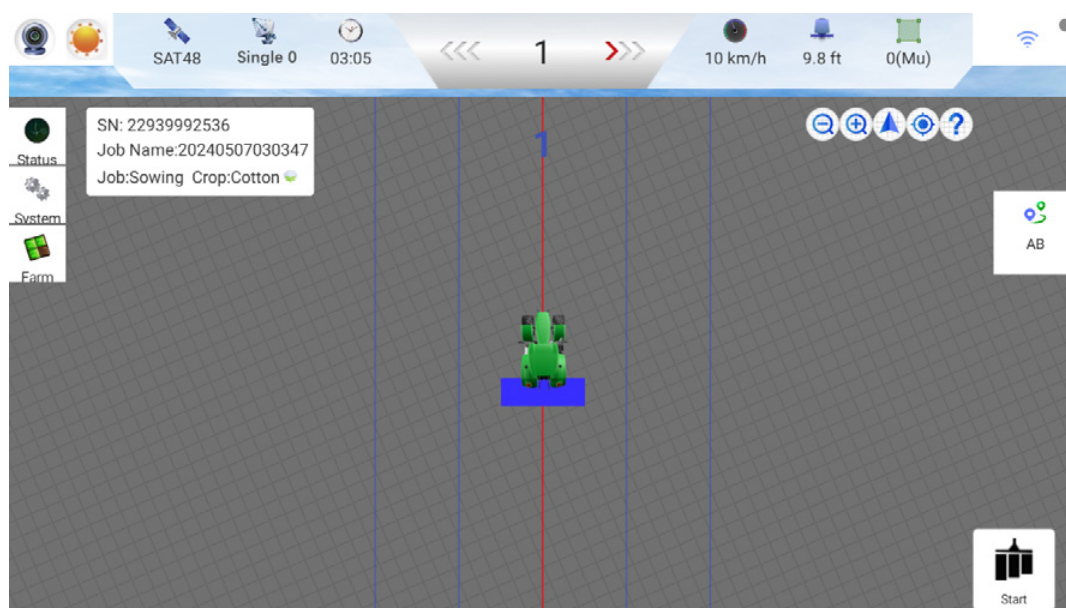
The way to connect to the network base station through an account.

NOTE:

1. CORS can improve the working accuracy of JY100.
2. When using a CORS account, the tablet needs to use a 4G sim card to communicate.
3. You can use your own CORS account. If do not have CORS account, you need to contact the seller to buy RTK.



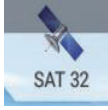
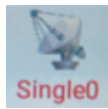




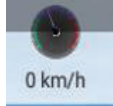

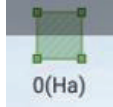




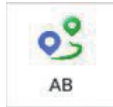

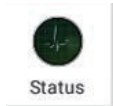


4.2 Main interface introduction



Pic.4.1

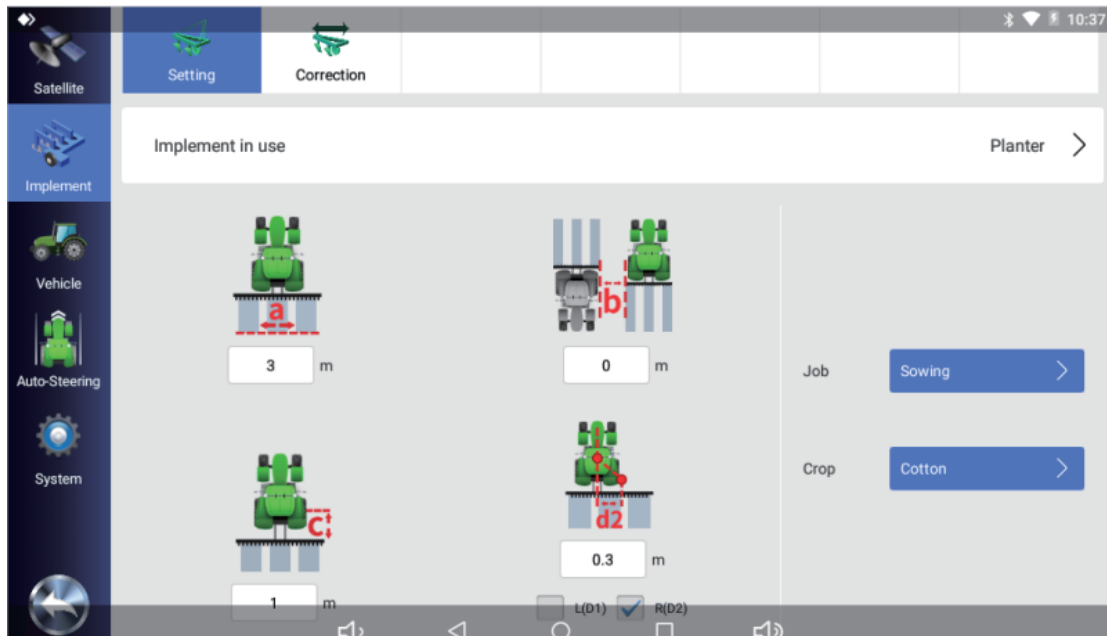
Main interface icon introduction:

NO.	Description	Icon
1	Camera switch button	
2	Main interface mode switch	
3	Satellite status display	
4	Signal status display: Tip: Single 0 is correct and works fine, with an accuracy of 30~40cm.	

5	time display	
6	Error display	
7	Device real-time speed	
8	Job width display	
9	Work area display	
10	Signal status display	
11	Zoom in / out button on the main interface	
12	Main interface 2D and 3D view switching button	
13	Return to current position button	
14	AB line setting and editing button	
15	Start or stop painting the driving trajectory	
16	Equipment status and self-test button	
17	System settings	
18	Farm management	

4.3 Implement

here, and the width and joint of the farm implement here should be filled in according to the actual measurement



- a:** Implement width (the distance between the two most seed rows)
- b:** Joint width (distance between two adjacent seed rows)
- c:** Distance from implement to rear wheel
- d2:** Implement offset distance (left or right)

In general, d2 is set to 0

Note:

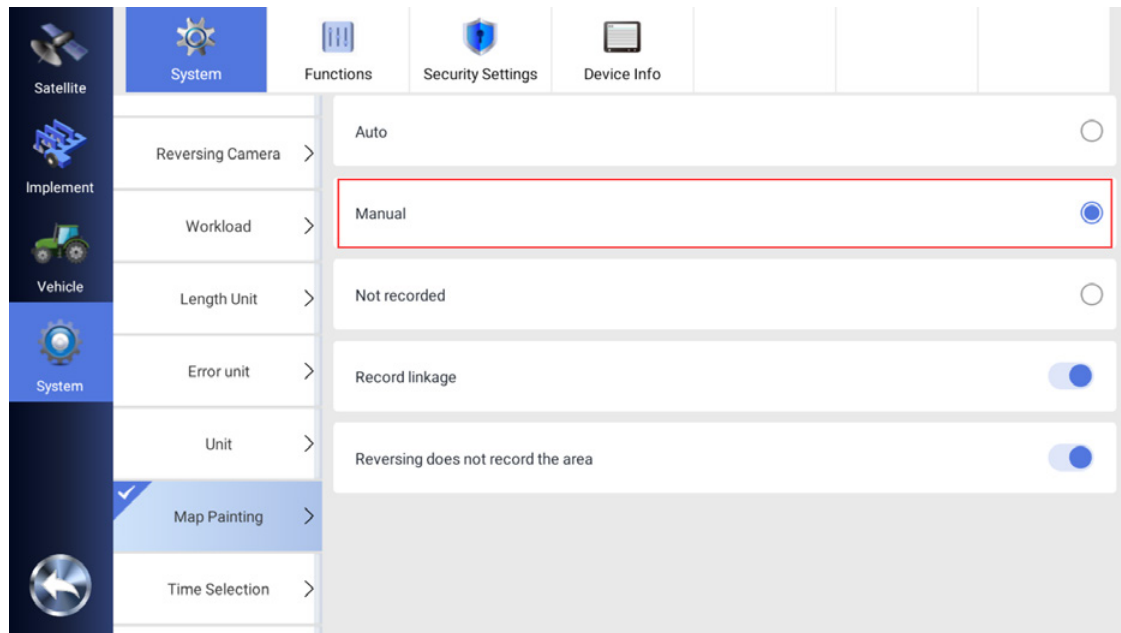
Please fill in all the above data according to the actual measurement results, otherwise it may cause large errors

4.4 Set the AB line



In the main interface, you can set the trajectory planned when the tractor drives automatically (we call it the AB line).

Note: When setting the AB line, the tractor must not work and must run empty.

First enable manual Map painting: System --> System --> Map Painting
--> select Manual

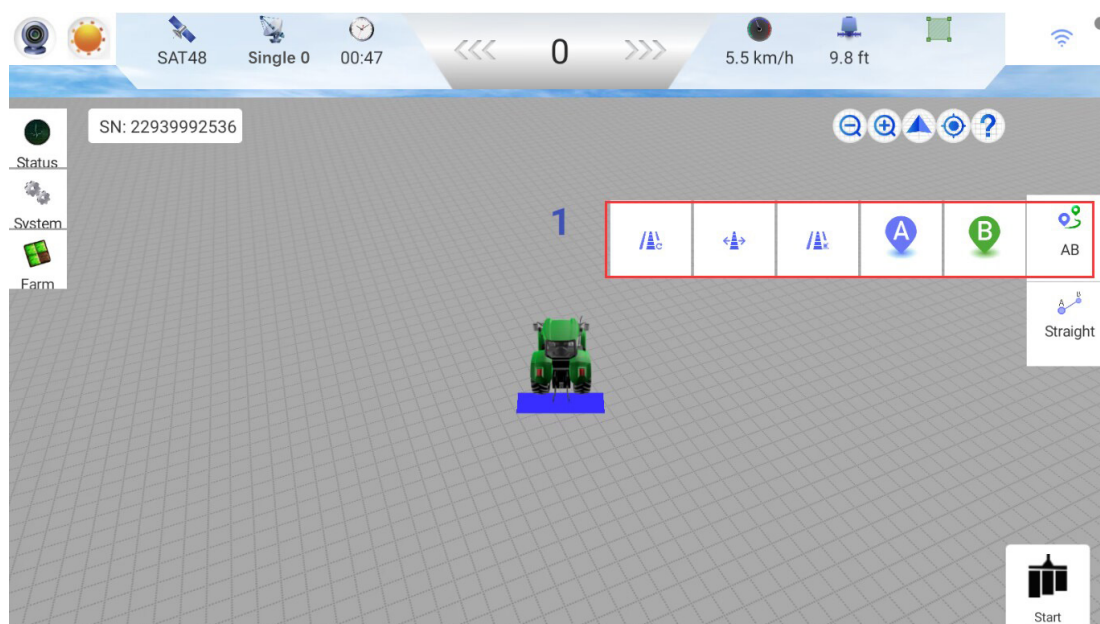


4.4.1 Set AB straight line

Park the tractor on this side of the land, point the front of the tractor towards the direction of work, click the "A" button on the screen, and set the  point. Drive the tractor along the direction of the front of the vehicle to the other end of the land and stop, click the "B" button on the screen to set the  point. At this time, enter the name of this line (the default is the current time), it is recommended to enter a name that is easy to distinguish

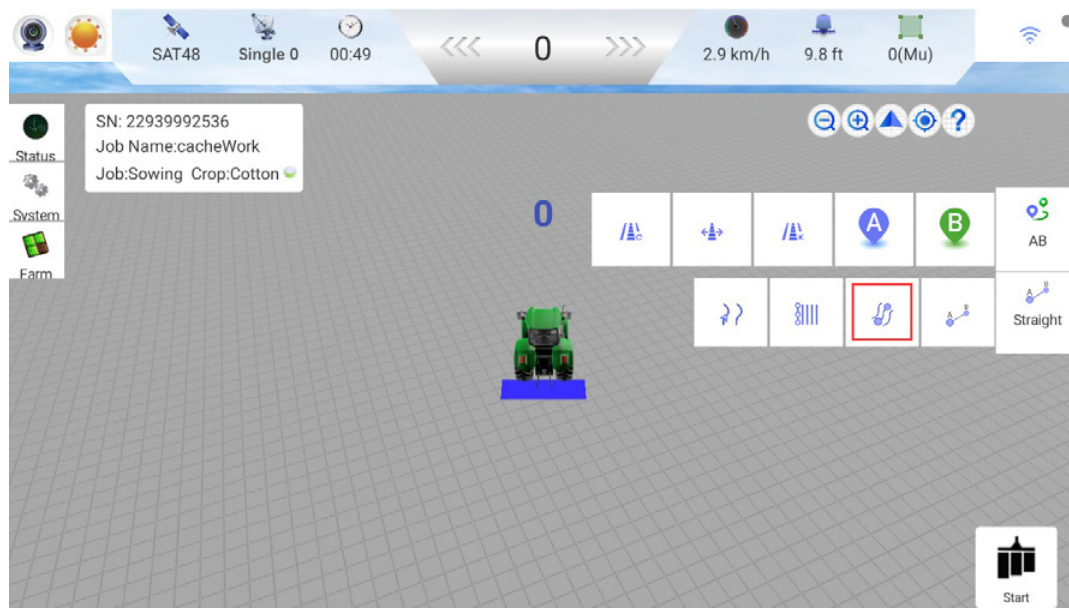
After creating the guide line, click the  button to start recording the driving track.
Start

Note: Whenever the tractor arrives at a new site that has not been worked, it is necessary to reset the AB line. When setting the line, pay attention to whether the AB line is in a straight line mode. The AB line continues to work.



4.4.2 Set AB Curve

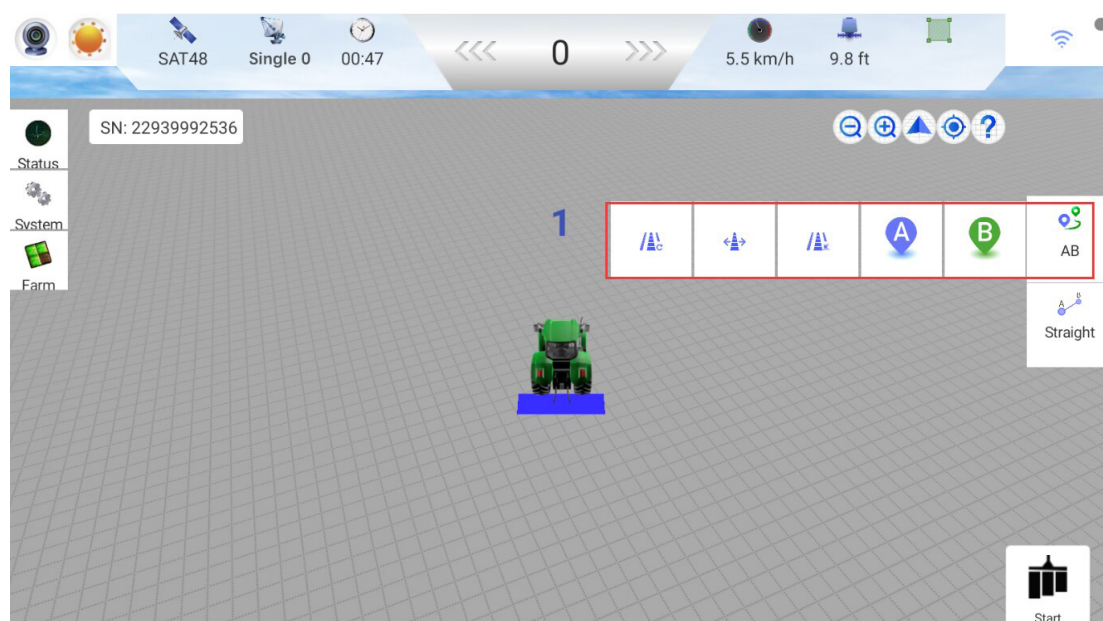
select the curve working mode first





Park the tractor, point the front of the tractor in the direction of work, click the "A" button on the screen, and set the point. Drive the tractor along the curve path you need to set to the other end of the land and stop (note that the curve must be smooth and cannot be folded), click the "B" button on the screen to set the point. At this time, enter the name of the row (the default is the current time), and it is recommended to enter a name that is easy to distinguish. Curved guide lines will be generated. Then click the steering wheel icon to start guided driving.

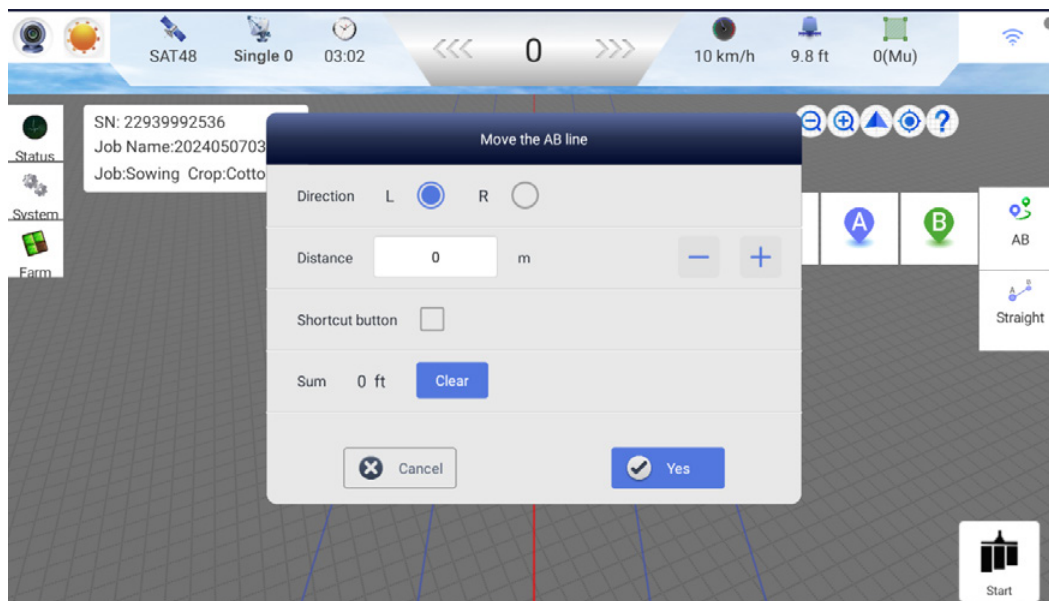
4.4.3. Operation AB line setting


Operation AB line setting, which can set straight line, curve. The functions include reset line, translation line and import line.

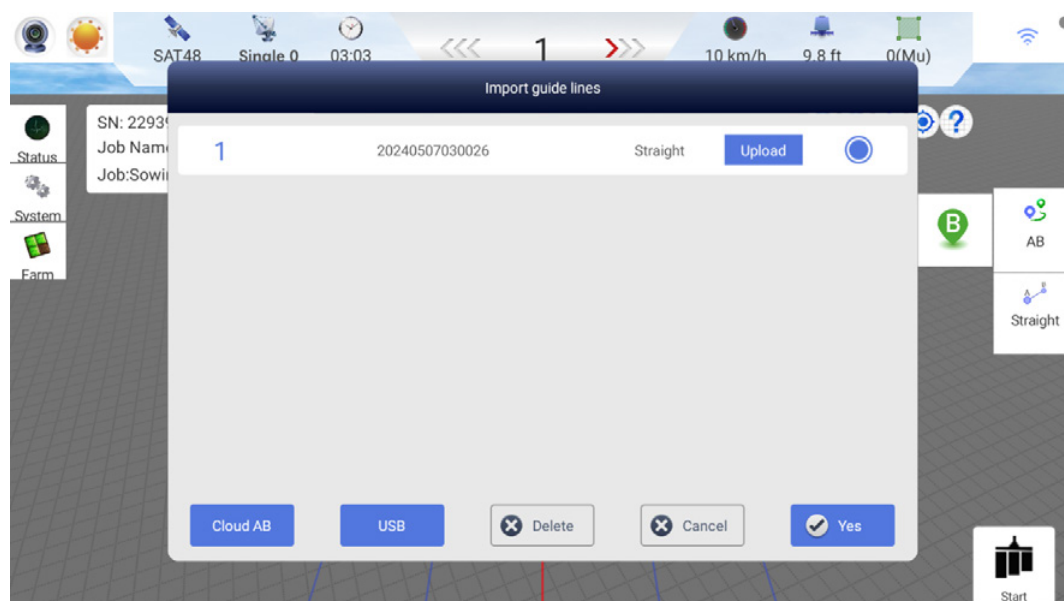


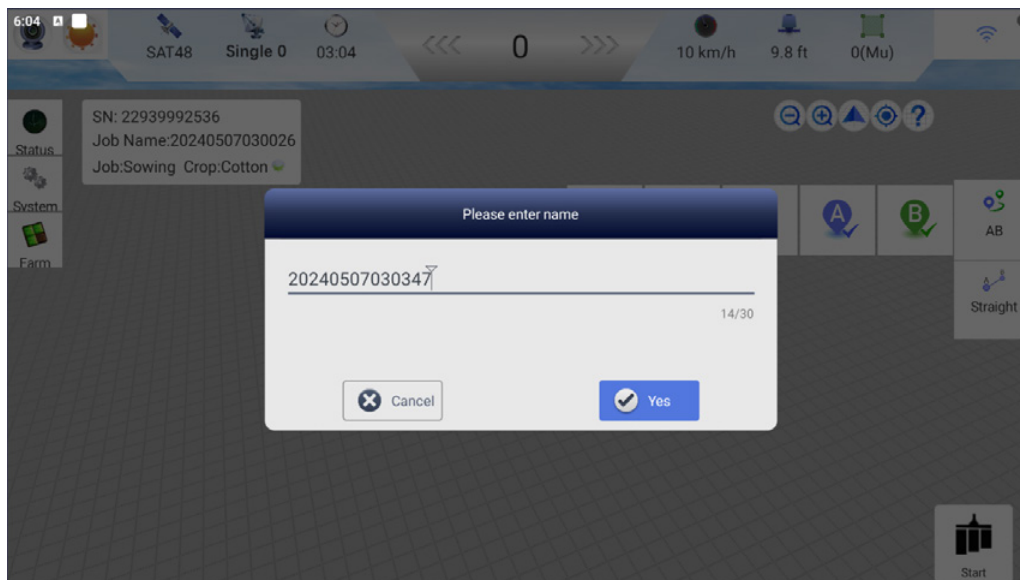
 **Reset the AB line:** you can quickly reset the AB line centered on the tractor position

 **Translation line:** translate the current AB line to the left and right.
Shortcut button: check the display. If it is not checked, it will not be displayed. Set the translation distance. Click the left and right arrows in the operation interface to translate the corresponding distance according to the set value.



 **Import AB line:** upload AB line and import the previous ab line or delete AB line (AB line currently used cannot be deleted), network AB line (uploaded AB line), USB flash disk can import / export AB line (select the required AB line during operation). For self-typed AB line and uploaded, you can edit the name of AB line, Just click the name of AB to modify the name you want.

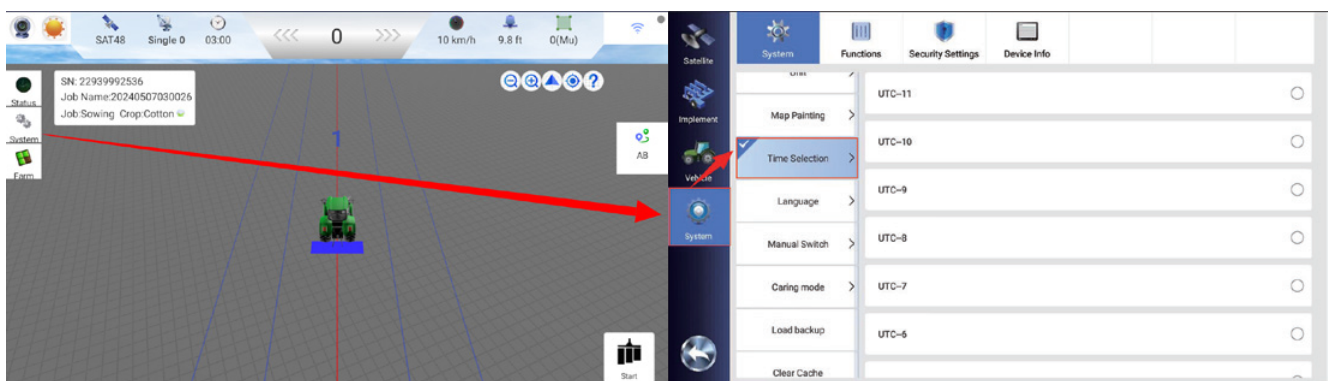




Remarks: When purchasing equipment, the software can be continuously upgraded for free, but before upgrading, be sure to ask the company's technicians if they can upgrade to avoid unnecessary errors.

5.3、Time Selection

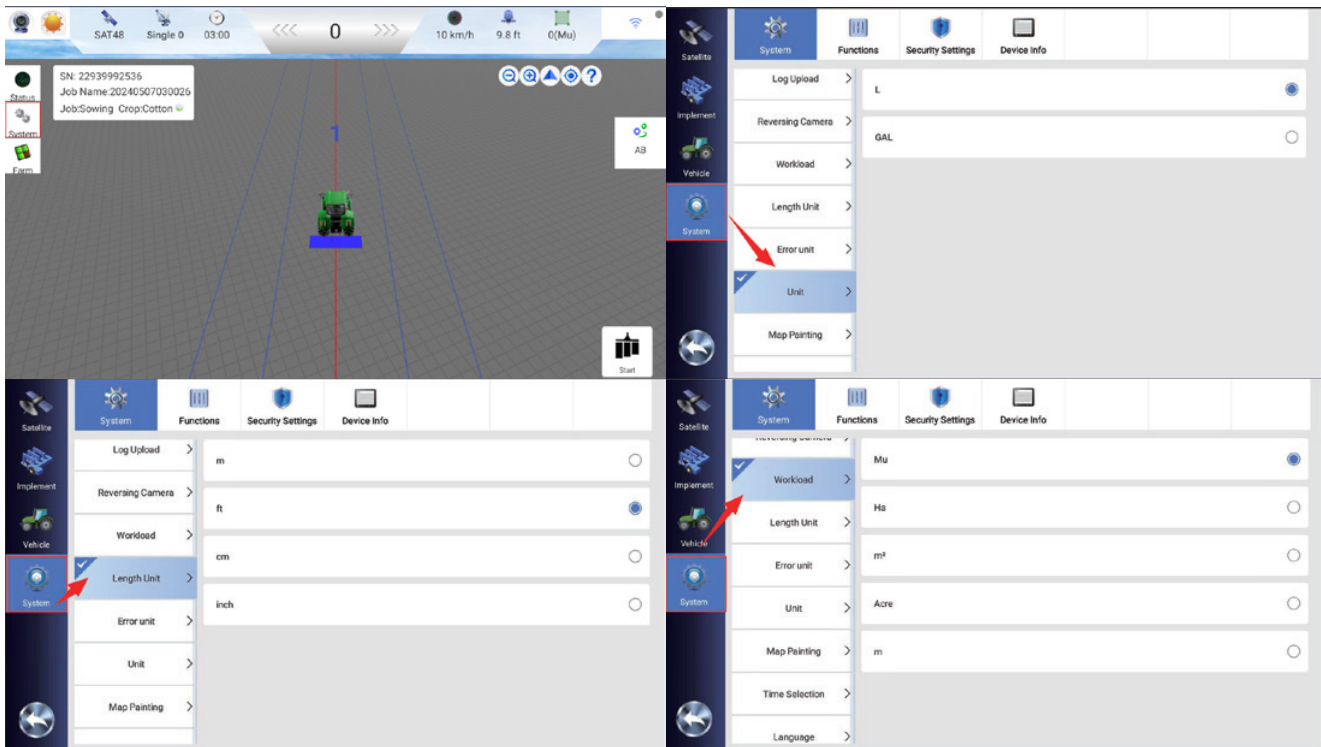
The software defaults to UTC+8, and customers can select the corresponding time display according to the specific time zone of the location.



Pic.5-3

5.4、Unit Selection

System settings include job record unit, length unit display, capacity unit, etc. Customers can choose the appropriate unit to operate and work according to their needs.



Pic.5-4

If the software crashes it cannot function properly:

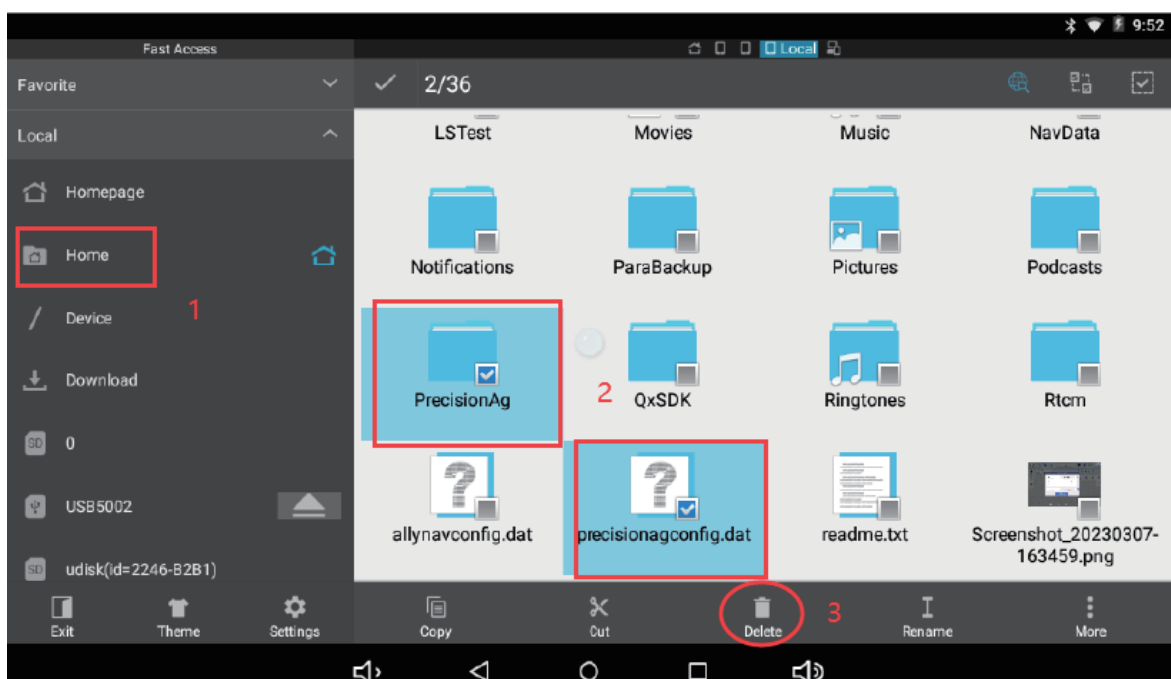
Please uninstall the software and enter 'ES File Explorer--->Home' or "File Manager" Find the 'PrecisionAG' folder and 'precisionagconfig.dat' file and delete them.

Then download the latest software to install.



Download link:

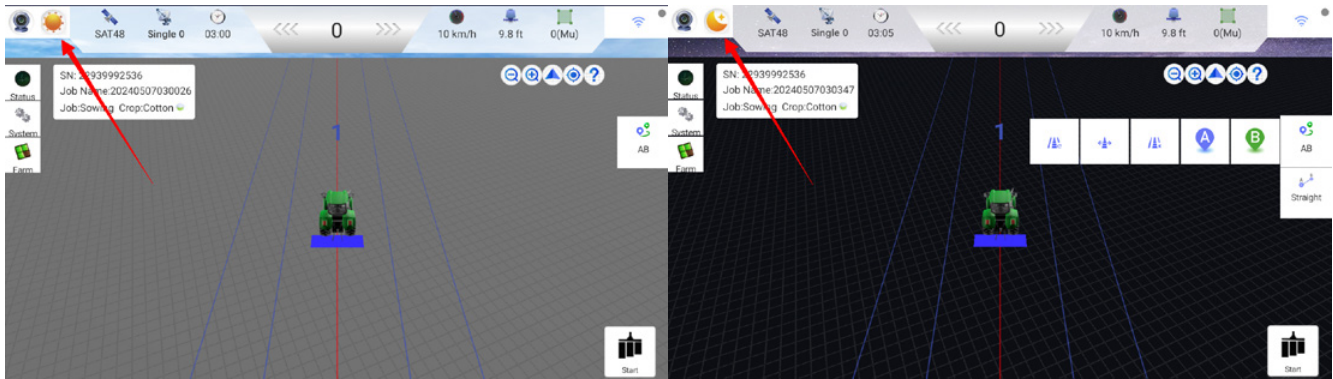
<https://www.dropbox.com/sh/30evauax0hnfb3v/AADv8UvSmf1bpeIAIUHU3nYia?dl=0>



Pic.5-7

5.5、 Day and Night Mode Switching

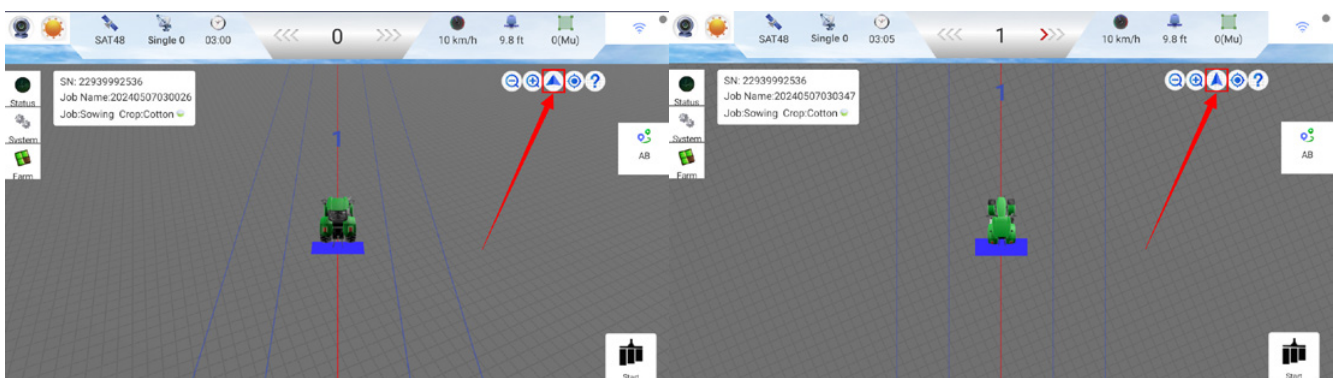
The mode switch button on the main interface can switch the display mode of the main interface, and you can select the appropriate interface according to different time operations.



Pic.5-5

5.6、 Dimension Switching

The software can switch the dimension display (3D and 2D) of the main interface according to the customer's preference, and the software defaults to the 3D model display.



Pic.5-6

About Us

SMAJAYU was built in 2009, 10years+ experienced the technology changes from traditional devices to smart equipments. Intelligent agriculture empowered SMAJAYU new mission to support Agriculture development.

High-precision and affordable RTK GNSS system boosts the farming technology adoption across all-size farms. Integrated with GPS accuracy technology, SMAJAYU agriculture guidance and auto-steer ensure centimeters precision farming.

The main goals of SMAJAYU intelligent agriculture is optimizing farmer's work, reducing input costs and increasing farm income, promoting farm environment, increasing farm production.

✉ Eml: support@smajayu.com & tech@smajayu.com

☎ +86-13823325452

