

JY100 Guidance System

User Manual

SMAJAYU (SHENZHEN) CO. , LTD

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*****When you need to enter the registration code, an interface will pop up with the machine code on it. Please enter the corresponding registration code according to the machine code.**

Please click the link to check the registration code:

https://drive.google.com/drive/folders/1hoZ0AU8wWquh_YHr8y_I6hujdSRlwawu?usp=sharing

The latest Guidance system software download link:

https://drive.google.com/drive/folders/15zfUn5QpI4r1Bbe0gfGSqmkkuTzj0A-Y?usp=share_link

1. Introduction




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

2. Components

JY100 mainly parts include T101 tablet and A10 GNSS antenna.

Components show as table (Table 1) :

Table 1 JY100 Components

No.	Name	Quantity	Figure	Note
1	T100 Tablet	1		
2	A10 GNSS Antenna	1		5M
3	Main Harnest	1		

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

3. Equipment Assembly

Equipment assembly show as figure (Figure 1):

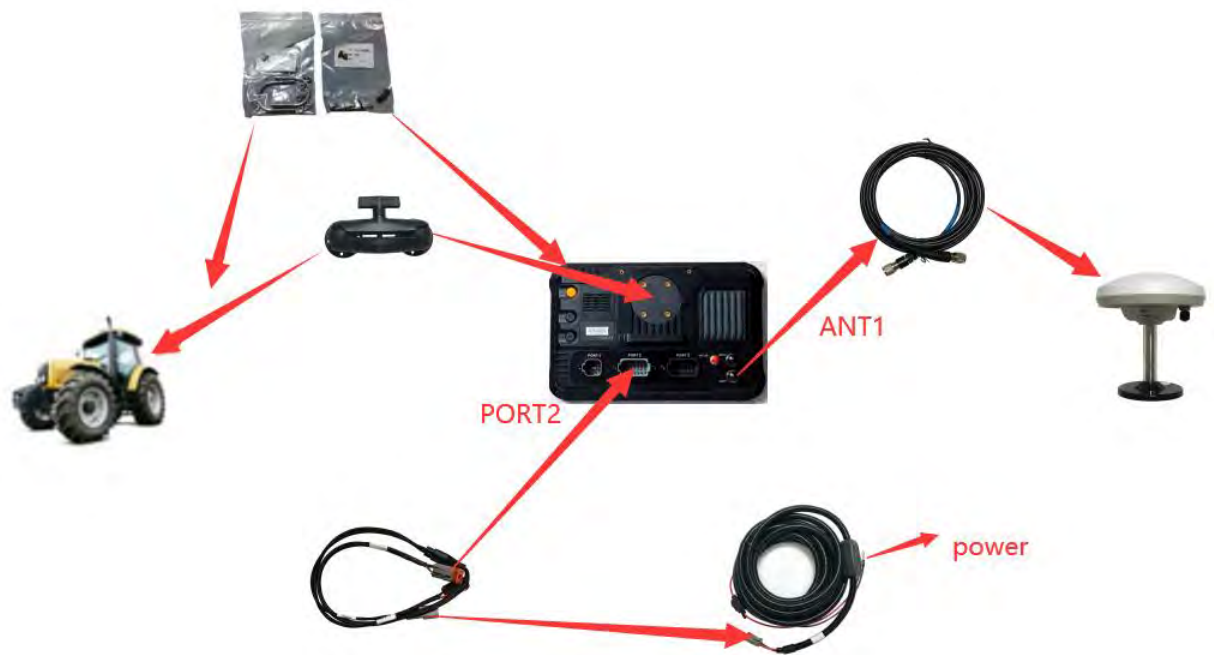


Figure 1 JY100 Assembly

Note:

1. T101 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

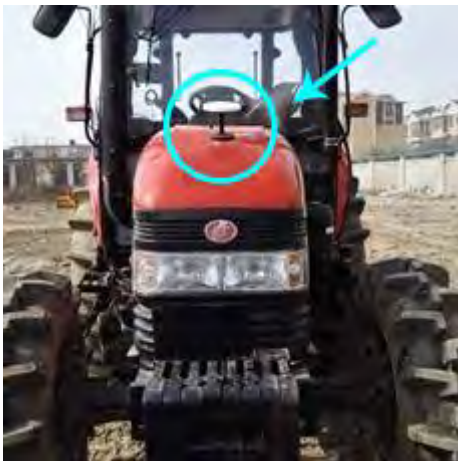


Figure 5 Antenna install 1



Figure 6 Antenna install 2

4. System Operation

This chapter will introduce how to operation JY100 system.

Before getting started, please read the following tips carefully

Tips:

1. After entering the software, please wait a few seconds and then click "Start Job", otherwise it will prompt you to need a registration code
2. Please wait patiently for 1-2 minutes after entering the software, it will take some time for the software to acquire satellites
3. We recommend to avoid working under trees as much as possible, which may affect the satellite search of the antenna

4.1 Main interface

There are 3 operate on main interface.

1. Working interface - Start Job
2. Job history interface - Job List
3. System setting interface - Setup

4.2 System Setting Interface - Setup

System Setting show as figure. (Figure 8)



Figure 8 System Setting

(1) Width

Could add or delete equipment width and Joint width for this part.



Figure 9 Width

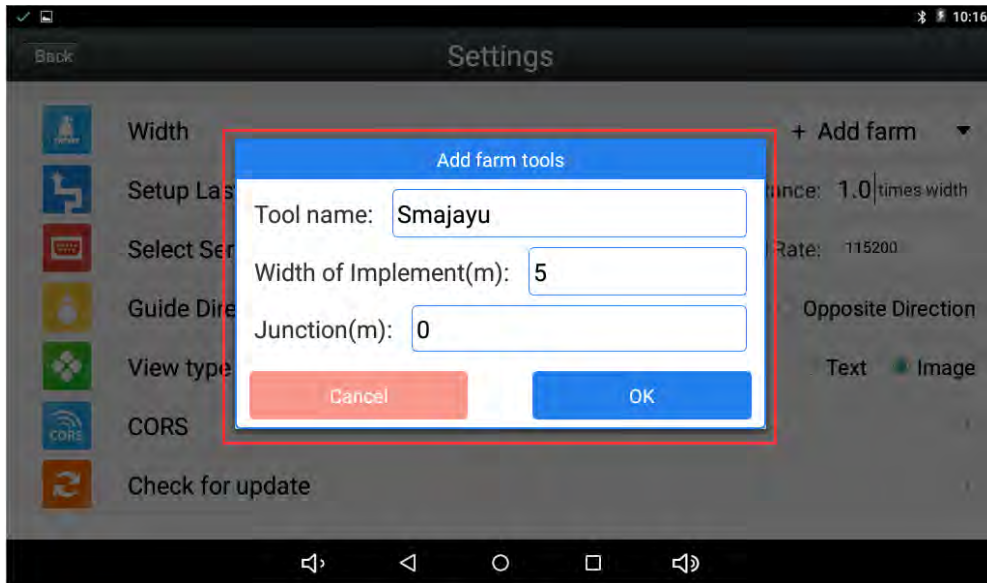
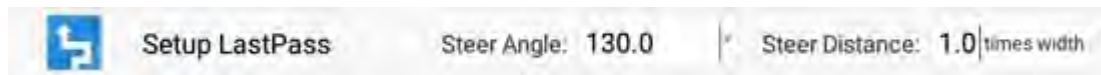


Figure 10 Equipment Width Setting

(2) Setup LastPass

Used to set the parameters of “LastPass” redirection, the default is fine.



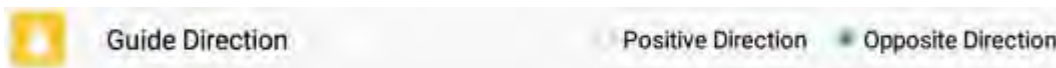
(3) Select Serial Port

Used to set the port and baud rate for the software to obtain data, the default is fine.



(4) Guide Direction

Used to set the direction of the guide arrow in the JY100 interface.



① **Positive Direction:** Set the direction the arrow points to the guideline

② **Opposite Direction:** Set the arrow to the offset direction (the direction the vehicle moves while driving)

(5) View type

Two display modes of the JY100 interface: text and picture.



(6) CORS

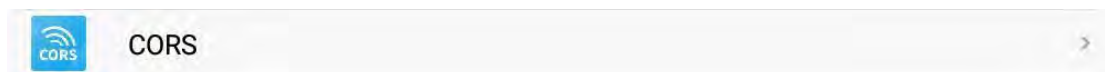
NOTE:

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.

Contact :

sales@smajayu.com

Used to log in to CORS to achieve RTK positioning。



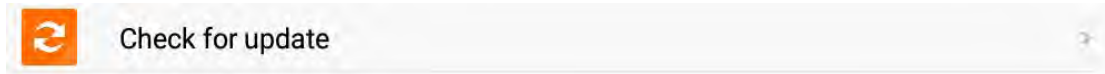
The CORS interface has two options: Connect CORS and SMAJAYU NET. SMAJAYU NET can only be used by Chinese customers.

The screenshot displays a mobile application interface for connecting to CORS. At the top, there is a dark header with a 'Back' button on the left and the title 'Connect CORS' in the center. Below the header, there are two tabs: 'Connect CORS' (which is selected and highlighted in blue) and 'Smajayu Net'. The main content area contains five input fields, each with a label on the left and a text box on the right. The labels are 'IP', 'Port', 'Mount', 'User', and 'Password'. The text boxes contain placeholder text: 'Please input CORS IP', 'Please input CORS Port', 'Please input user account', and 'Please input password'. The 'Mount' field is a dropdown menu with a 'Mount list' button to its right. At the bottom of the form is a large blue button labeled 'Connect'. Below the form is a black navigation bar with standard Android icons: a speaker, a back arrow, a home circle, a square, and a speaker.

Figure 11 CORS Account

(7) Check for update

The new version of the software can be updated online when a new version is released.



4.3、 Working Interface-Start Job

JY100 interface show as figure. (Figure12)



Figure 12 JY100 Interface

(1) Upper Interface



: Number of satellites



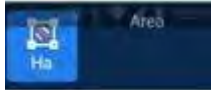
: Differential Status (SBAS or RTK during normal operation)



: The job name on the left, the job width on the right, and the job deviation in the middle.

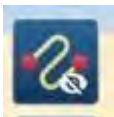


: Tractor Speed.



: Job Area

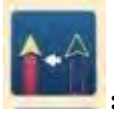
(2) Left Interface



: Hide Painting.



: Delete Painting.



: Reset the AB line at the current tractor location.

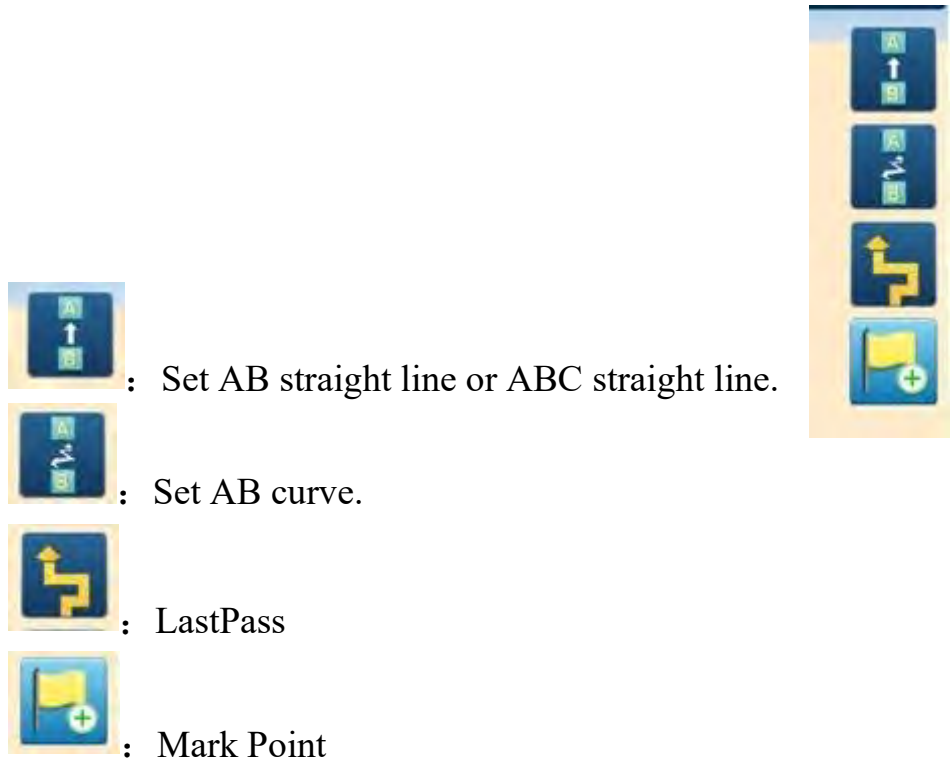


: Back to the main interface.



: Zoom in and zoom out the JY100 interface.

(3) Right Interface



4.3.1 Guidance Line Setting

There are 4 types of guidance line: AB straight, ABC straight, AB curve, LastPass。

(1) AB Straight

Select AB straight line - Set job name – Set guidance point A and B
- Generate guidance line.



Figure 13 AB guidance line

(4) LastPass

Generate the AB line for the next trip according to the trajectory of the previous trip.

4.4、 Job History-Job List

All job information saved in Job List.



Figure 14 ABC guidance Line

(3) AB Curve

Generate the guidance line between the A and B point according to the trajectory of the first trip.

Figure 15 AB curve



(4) LastPass

Generate the AB line for the next trip according to the trajectory of the previous trip.

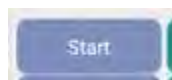
4.4、 Job History-Job List

All job information saved in Job List.

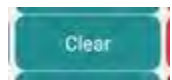


Job Name	Guide Type	Area	Length of	Start	Clear	Delete
190514203025	Curve Guide	0.115	0.009	Start	Clear	Delete
190514203014	Straight Guide	0.123	0.01	Start	Clear	Delete
190514202731	Straight Guide	0.235	0.011	Start	Clear	Delete
190514202720	Straight Guide	0.144	0.012	Start	Clear	Delete
190514202633	Straight Guide	0.705	0.04	Start	Clear	Delete
190514202622	Curve Guide	0.116	0.011	Start	Clear	Delete
190514203216	Straight Guide	3.836	0.015	Start	Clear	Delete
190514203341	Straight Guide	16.912	0.039	Start	Clear	Delete
190514202855	Curve Guide	3.238	0.047	Start	Clear	Delete

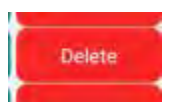
Figure 16 Job List



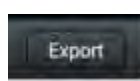
: Restart the job.



: Clear area statistics.



: Delete guidance line record.



: Export all job records.

Note: All exported records are stored in the ADExcel folder. (Figure17)



Figure 17 Export record

The list of exported jobs show as figure (Figure 18):

2019-05-14-20-28 Work List				
	Work name	Navigation type	Work area(m ²)	Guide line length(km)
3	190514202731	Straight Guide	156.666	0.011
4	190514202720	Straight Guide	96	0.012
5	190514202633	Straight Guide	470	0.04
6	190514202622	Curve Guide	77.333	0.011
7	190514203216	Straight Guide	2557.333	0.015
8	190514203341	Straight Guide	11274.666	0.039
9	190514202855	Curve Guide	2158.666	0.047
10	Ceshi	Straight Guide	459.333	0.035
11	Cese	Straight Guide	202.666	0.024

5. Set Imple and Joint width

5.1 Abstract

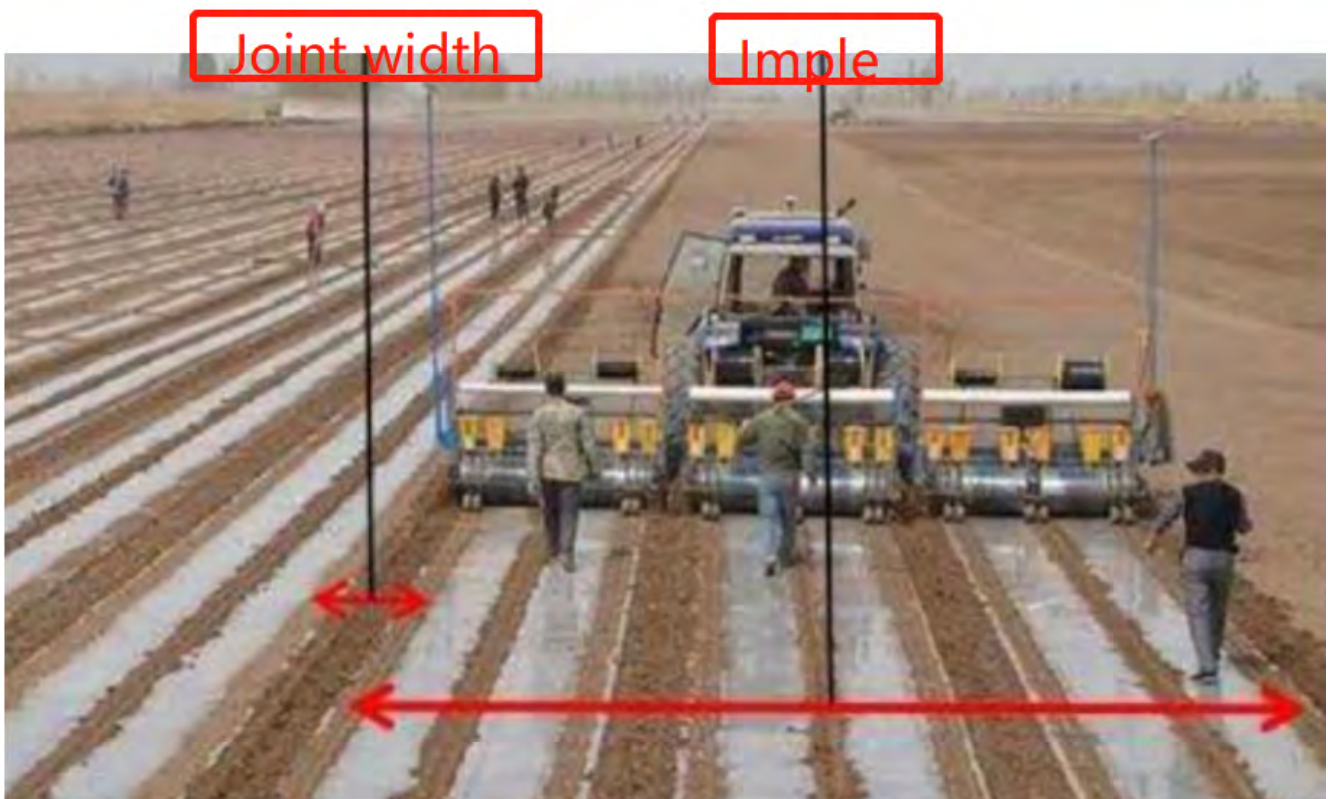
This paper mainly introduces how to set the specific operation of farm tool distance and handover line distance, and how to correctly set these two values in different operation scenarios.

5.2 Specific operation process

5.2.1 Before setting these two values, we first need to understand their specific meaning. As shown below:

Imple (implement width, the distance between the two most seed rows)

Joint width (distance between two adjacent seed rows)

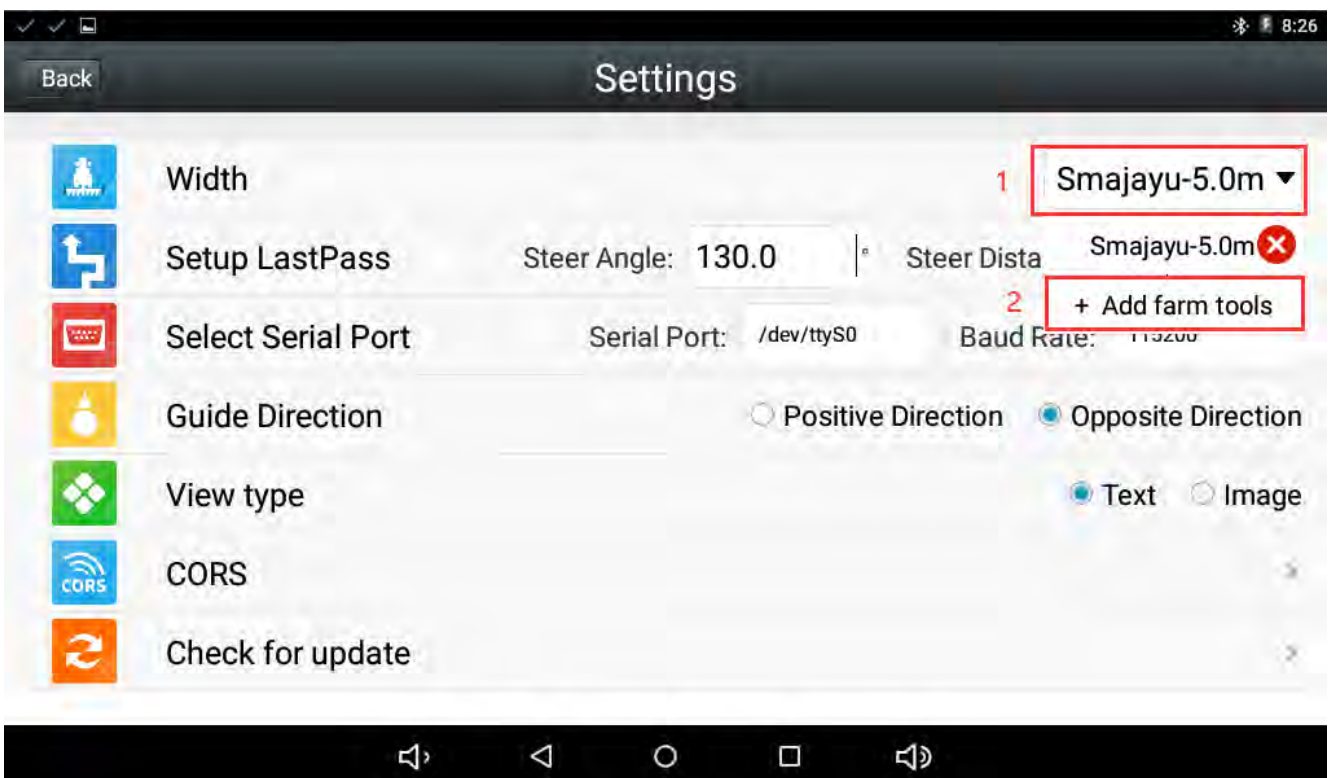


5.2.2 There are three possible situations when setting these two data.

- (1) When working in the field, it is necessary to measure and set the width and joint distance.
- (2) When working in the field, the width needs to be measured and set, but the joint distance is 0.
- (3) If the width distance to be input is less than the measured distance of agricultural tools, the input width shall be measured according to the actual situation

5.2.3. After determining the width and joint data to be input, we can input these data on the software. The specific operations are as follows:

- (1) Click the button as shown in the figure.



(2) Enter the Imple and Joint width data in the places shown in the figure, and then click OK to operate normally.

