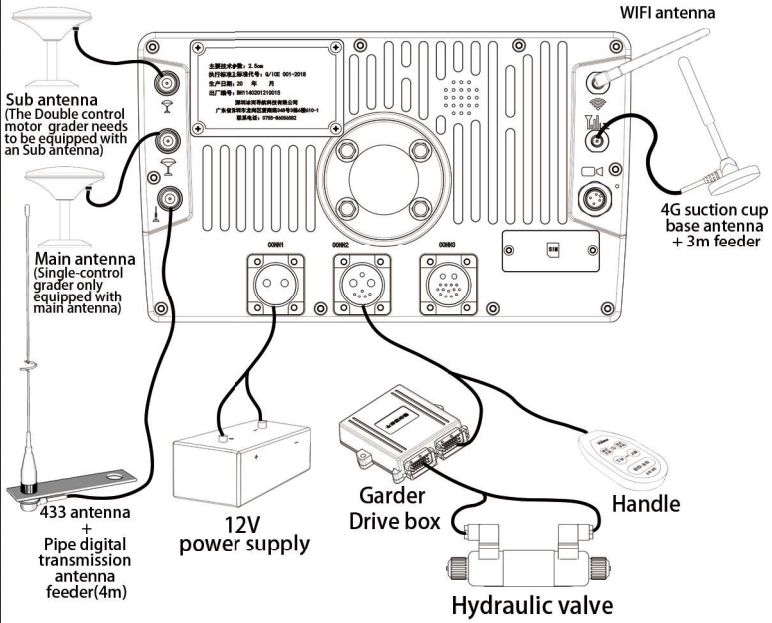
12PW-300 ICEGPS Beidou satellite leveler
Easy installation instructions

Thank you for purchasing the Beidou satellite leveler produced by ICEGPS,Please read this manual carefully before working so that you can use this product quickly, correctly and safely.

Parts List	
NAME	QTY
Base station	1
Base station support rod	1
Spacer	1
Base station power cord	1
433 antenna	2
Pipe digital transmission antenna feeder(4m)	1
Pipe digital transmission antenna feeder(0.6m)	1
Antenna beam	2
WIFI antenna	1
High-precision satellite antenna	1
Satellite antenna column	1
Satellite antenna feeder(10m)	1
4G suction cup base antenna + 3m feeder	1
On-board computer	1
Power cable	1
One to two adapter cable	1
One to four adapter cable	1
On-board computer bracket	1
Garder drive box	1
Hydraulic valve line	1
Fuse(7.5A)	2
Garder drive control line	1
Handle	1



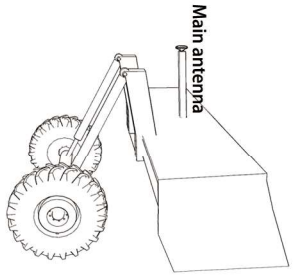
(Connection diagram)

NOTE:

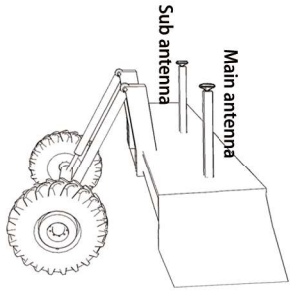
1. The single-control grader only needs one high-precision satellite antenna, and the dual-control grader must equipped with two antennas.
2. The output end of the leveling driver is connected to the leveling hydraulic valve through the hydraulic valve line to control the lifting of the leveler.

Installation introduction

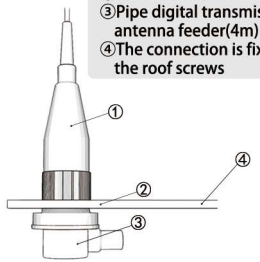
1.Main antenna & Sub antenna & Data transmission antenna



Single control motor grader
(The high-precision satellite antenna is installed in the center of the shovel)



Double control motor grader
(The Main and Sub antennas are installed at both ends)



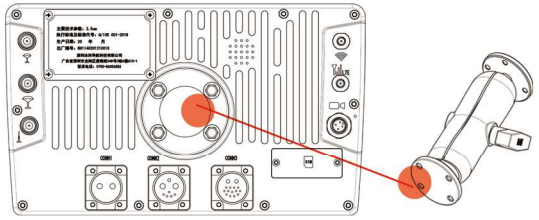
①433 antenna
②Antenna beam
③Pipe digital transmission antenna feeder(4m)
④The connection is fixed to the roof screws

Data transmission receiving antenna connection diagram
(Ignorable in CORS mode)

2.On-board computer and Garder control box



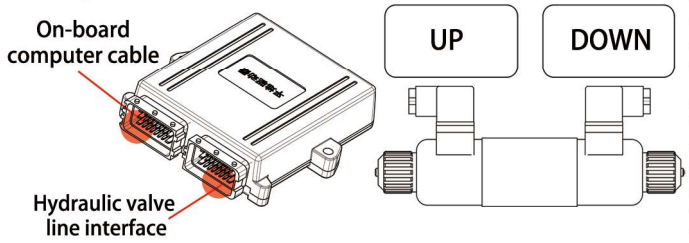
On-board computer



(On-board computer bracket)

Use the on-board computer bracket to fix the on-board computer in a convenient location in the cab. After the driver is connected, it can be placed in a suitable position in the cab without special requirements.

3.Hydraulic valve connection installation



①Connect the hydraulic valve line to the Garder control box.
②Take the single-control flat ground as an example, connect the two valve heads of the hydraulic valve line to the proportional hydraulic valve.
③After connecting, press the "up" and "down" buttons of the handle to check whether the valve head is connected correctly.
④If you find that the buttons correspond to different actions, you can install the two valve heads in reverse.

4.Portable base station setup (Ignorable in CORS mode)

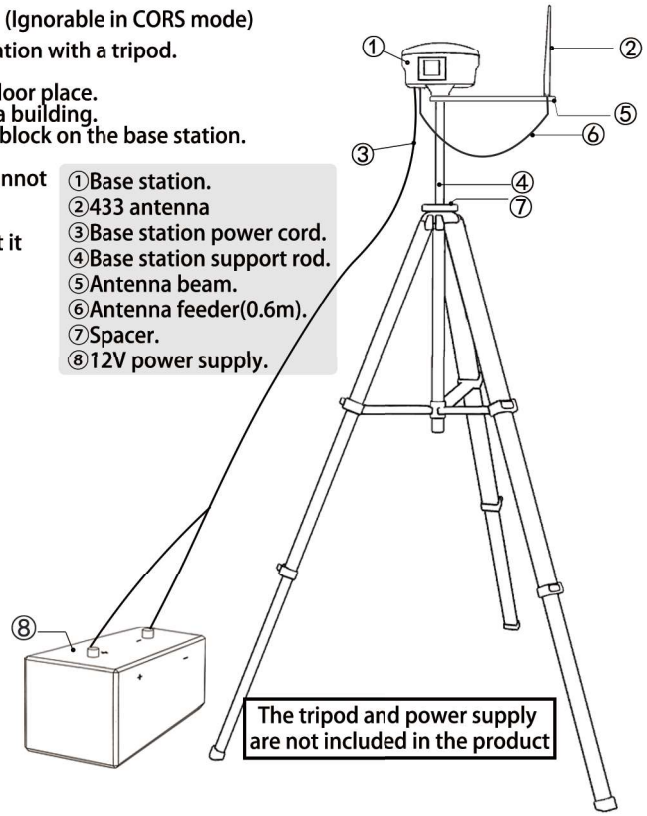
As shown on the right, connect the base station with a tripod.

●The base station should be set up at outdoor place. It cannot be placed under a tree or next to a building. There must be no obstacles or buildings to block on the base station.

●The Base station transmitting antenna cannot be bent when the base station is working.

●The base station must be stable. Don't let it sway in the wind.

①Base station.
②433 antenna
③Base station power cord.
④Base station support rod.
⑤Antenna beam.
⑥Antenna feeder(0.6m).
⑦Spacer.
⑧12V power supply.



The tripod and power supply are not included in the product

NOTE:

1.When wiring, the wiring harness should avoid contact with moving parts and high-temperature parts on the vehicle. Use cable ties to fix the place where there is a possibility of large shaking. Avoid damage to the wire or connector due to shaking.

2.All wiring harnesses cannot be tightly stressed, cannot be folded, or subjected to heavy pressure.

3.After the above steps are completed, please check whether the device is firmly fixed and whether the cable is connected correctly.

4.The power supply voltage of all equipment in this product is 12V power supply, 24V power supply is prohibited.

System settings

After the equipment is installed and connected. Turn on the onboard computer and enter the setting interface.

1. Terminal connection



Enter the terminal connection interface



Click to connect

2. RTK



Enter the "RTK" interface



Select LORA

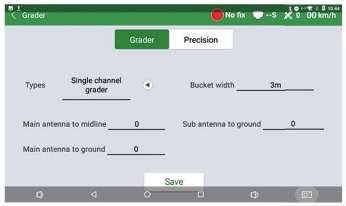


Enter the Frequency band and ID , and then click "USE"

3.Choose the type of motor grader



Enter the "Garder" interface



Enter data in sequence according to the real situation
(Except for bucket height, other data can be 0)



Setting accuracy
(The minimum value that can be selected for a single-control grader is 1cm
(The minimum value that can be selected for the dual-control motor grader is 2cm)

After completing the above three settings, you can return to the main interface to select a work.

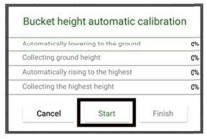
Function explanation

This product has four operation functions: Flat , X-Y Double bevel , Mirror bevel , and Football field.
Topographic surveys are required before the start of the four operations,
and the process is as follows:

①Start the tractor



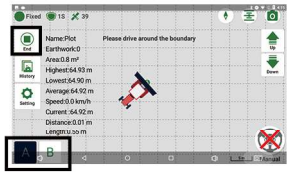
②click "Plot"



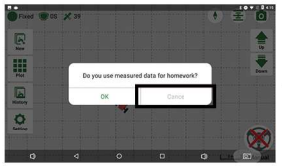
③Click "Start" ,
After waiting for the automatic calibration of the bucket,
Click "Finish"

After the auto-calibration is completed, the system enters the topographic measurement interface. Then collecting data by driving the tractor around the field through the following explanation, you can choose different operation methods to start the operation.

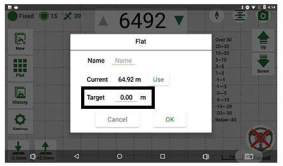
1.Plot



①After the bucket height is automatically calibrated.
Drive the tractor around the field. Press "A" at the beginning, and press "B" at the end. Click "End" when finished.
(Do not manually adjust the height of the bucket during this process)

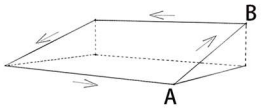


②A pop-up window asks whether to use the measurement data job.
Click "Cancel".

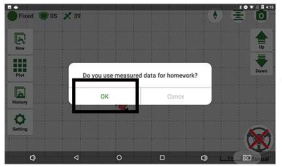


③Back to main interface.
Click "New"-"Plot".
Enter the target height.
Click OK to start the job

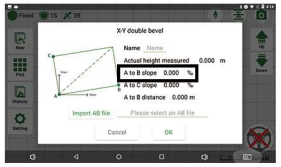
2.Slope



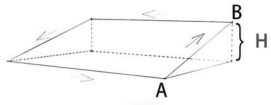
①After the bucket height is automatically calibrated.
As shown in the picture. Place "A" at the slope foot. Then drive to the target height of the slope and click "B" .
Finally, drive the tractor back to point A in a circle. Click Finish.



②A pop-up window asks whether to use the measurement data job.
Click "OK".

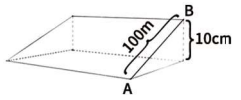


③Enter the "Slope AB" .
Click "OK" to start work



$$\text{SlopeAB}=\frac{H}{AB}\times 1000‰$$

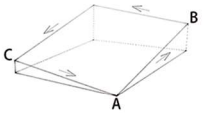
(Slope calculation formula)



eg: If you have run 100m, and you want the ground to be higher 10cm, then the formula is:

$$\frac{10}{10000}\times 1000‰=1‰$$

(The units of length need to be uniform.)



This is also single oblique plane, but it has two slopes.
The slope A to B and A to C are both need to use the formula.

The positon A is the lowest edge of the ground, the positon B is the highest edge.

Use WeChat scan code to follow.
Get more information.