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TOKNAV



Precision Agriculture

TAG88

Automated GNSS Land Leveling System

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Automated GNSS Land Leveling System

TAG88 Automated GNSS Land Leveling System is a satellite positioning-based, fully automated control system for high-precision land leveling with agricultural machinery. It features 24-hour operation, a 30-kilometer coverage radius, and eliminates the need for frequent base station relocation. The system supports simultaneous operation of multiple units. Through real-time display of fill and cut volumes and automatic adjustment of the land leveler's position and attitude, it enables construction without prior staking, ensuring rapid and accurate task completion even in complex terrains, thereby enhancing efficiency, reducing rework, and increasing economic benefits.

CHARACTERISTIC

Full Network Signal Coverage

The system integrates Beidou satellite, compatible with GPS, BDS, GALILEO, and GLONASS signals. The base station covers a maximum radius of 30 km, reducing the hassle of base station relocation and enabling simultaneous operation of multiple devices.

Intelligent Display Screen

10.1-inch high-definition display with instant multi-touch response. Protection against contamination and dust, as well as resistance to shock, magnetism, and electromagnetic interference, ensuring stable performance.

Multitasking: Adaptable to Various Grading Tools

The system includes tractor navigation, compatible with telescopic, ripper, paddy leveling blades, scrapers, and graders for tasks like ridging, slope scraping, and farmland leveling.

24-Hour Continuous Operation

The system supports 24-hour continuous operation, capable of working in various adverse weather conditions, including daytime, nighttime, strong winds, sandstorms, and smog.

Real-time Map Visualization

Users can monitor operation trajectories and terrain elevations via the software, design operation routes, and achieve an intuitive understanding of the work process.

Automatic Terrain Recognition and Adjustment

The system automatically identifies terrain variations and adjusts the plot datum, achieving an operation accuracy of ±2.5 cm. It can level both flat and sloped surfaces, increasing operation efficiency by 20%.

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System composition



Intelligent Display Screen



Electronic Control Unit

The system automatically identifies terrain variations and adjusts the plot datum.

Achieving an operation accuracy of ±2.5 cm.

24-Hour Continuous Operation.

SPECIFICATION

SATELLITE SYSTEM

BDS	B1I, B2I, B3I, B1C, B2a, B2b*
GPS	L1, L2, L5
GLONASS	L1, L2, L3
GALILEO	E1, E5a, E5b, E6
QZSS	L1, L2, L5, L6
IRNSS	L5
L-Band	

WORKING ENVIRONMENT

Environment	Operating Temperature: -40°C ~ +85°C Storage Temperature: -55°C ~ +85°C
Vibration Standards	Complies with national standards GBT-3871, GBT-2423, and GBT-28046 for vehicle vibration standards

VEHICLE MOUNTED COMPUTER

Display Screen	10.1-inch, Support 5-point capacitive touth
Brightness	750cd/m2
Resolution	1024*600px
I/O	RS232*2 RS485*1 CAN*1/2
Communication	4G WiFi 2.4G BT 4.2, BLE USB 2.0*1
Operating Temperature	-30°C ~ +70°C
Storage Temperature	-40°C ~ +85°C
Protection Level	IP65
Work Humidity	Humidity 95%, non-condensing
Vibration standard (Operational)	MIL-STD-810
Impact standard (Operational)	ISO16750
Power	5-36V DC Input ACC, State detection for ignition

ECU CONTROLLER

Dimensions(L*W*H)	16cm* 10.8cm*4.5cm
Input Voltage	9-36V
Hydraulic Output Voltage	12V
Description	A highly integrated leveling control unit and radio communication unit. The leveling control unit is equipped with an on-board ARM processor and industrial-grade communication chip, ensuring stable performance and robust anti-interference capability. The radio communication unit incorporates mainstream measurement-grade communication modules, compatible with domestic and international standard measurement base stations.

ACCESSORIES

Tablet	1 Unit
ECU	1 PCS
Gnss antenna	1 PCS
Hydraulic control valve	1 PCS
Tablet Holder	1 PCS
Power cable	1 PCS
Hydraulic valve cable	1 PCS
Gnss antenna cable	1 PCS

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Manufacturers may update parameters at any time, please refer to the latest product information.

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