Installation & User Manual for Ice River Navigation Intelligent Spraying System

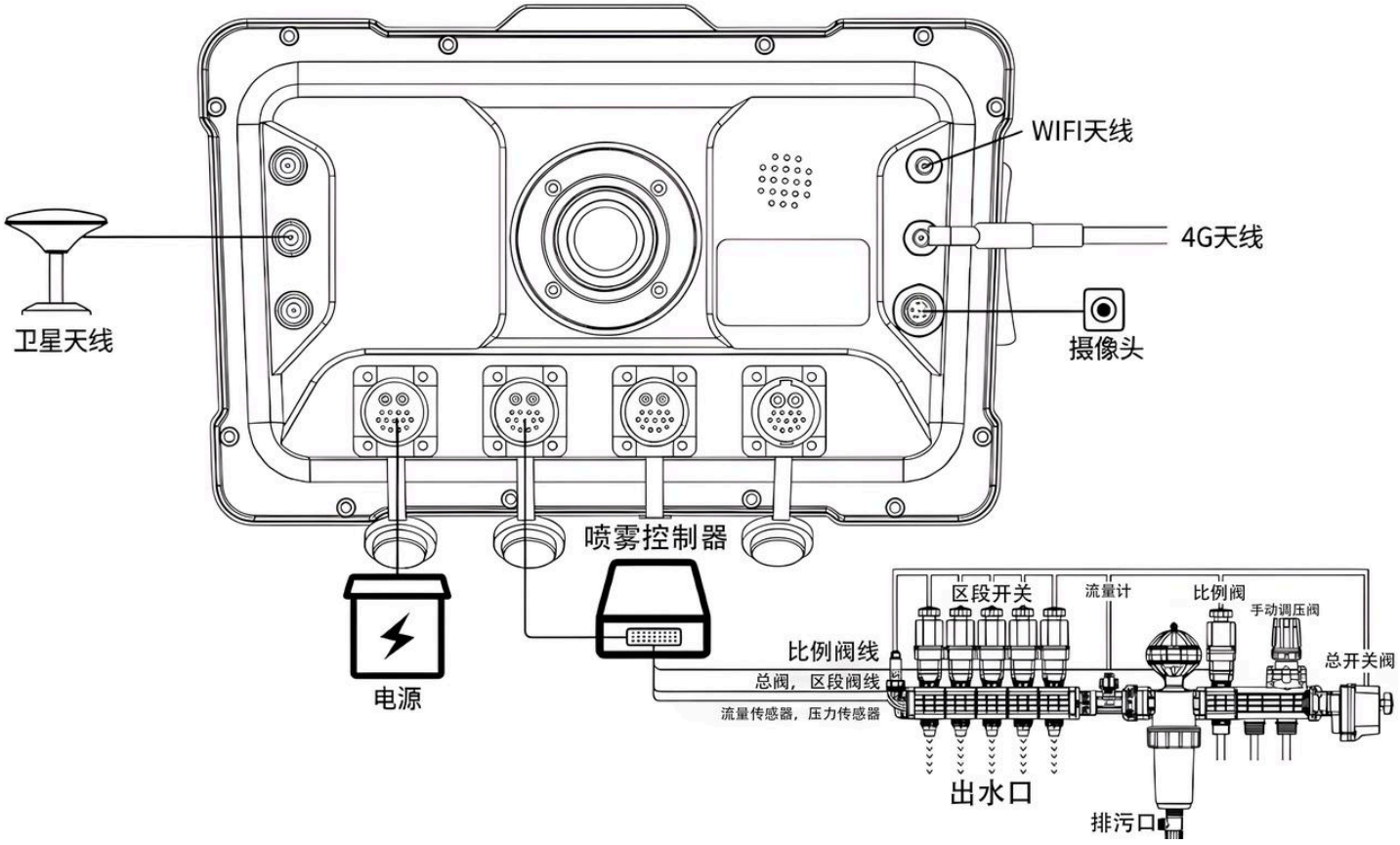
1. Product Use

The intelligent spraying system uses RTK to obtain the driving speed, precisely control the spraying time and range, provide timely and appropriate amounts of water or chemicals for crops to improve crop growth efficiency, and is suitable for various types of spraying vehicles such as boom sprayers.

2. System Composition

1. On-board computer
2. Car computer holder
3. WIFI Antenna
4. 4G Antenna
5. Spray Controller
6. Spray Valve Group
7. Car infotainment power cord
8. satellite antenna
9. Satellite Antenna Column
10. Satellite Antenna Feeder
11. Controller connection cable
12. Control Handle (Optional)





3. Installation Instructions

1. Install according to the system connection diagram

- Install the bracket to secure the in-vehicle computer, and connect and secure the spray controller.
- Install and secure the valve body assembly, connect the pipelines. The return water of the main on-off valve and proportional valve shall be respectively connected to the chemical tank, and the water outlets shall be respectively connected to each spray boom section. Connect the spray controller to the spray valve group, connect the section valve wires, flow pressure sensors, and cable wires, and connect the power supply to the vehicle battery, with a standard 12V supply.

- Install the satellite antenna and secure it with the antenna mast.

2. Installation Precautions

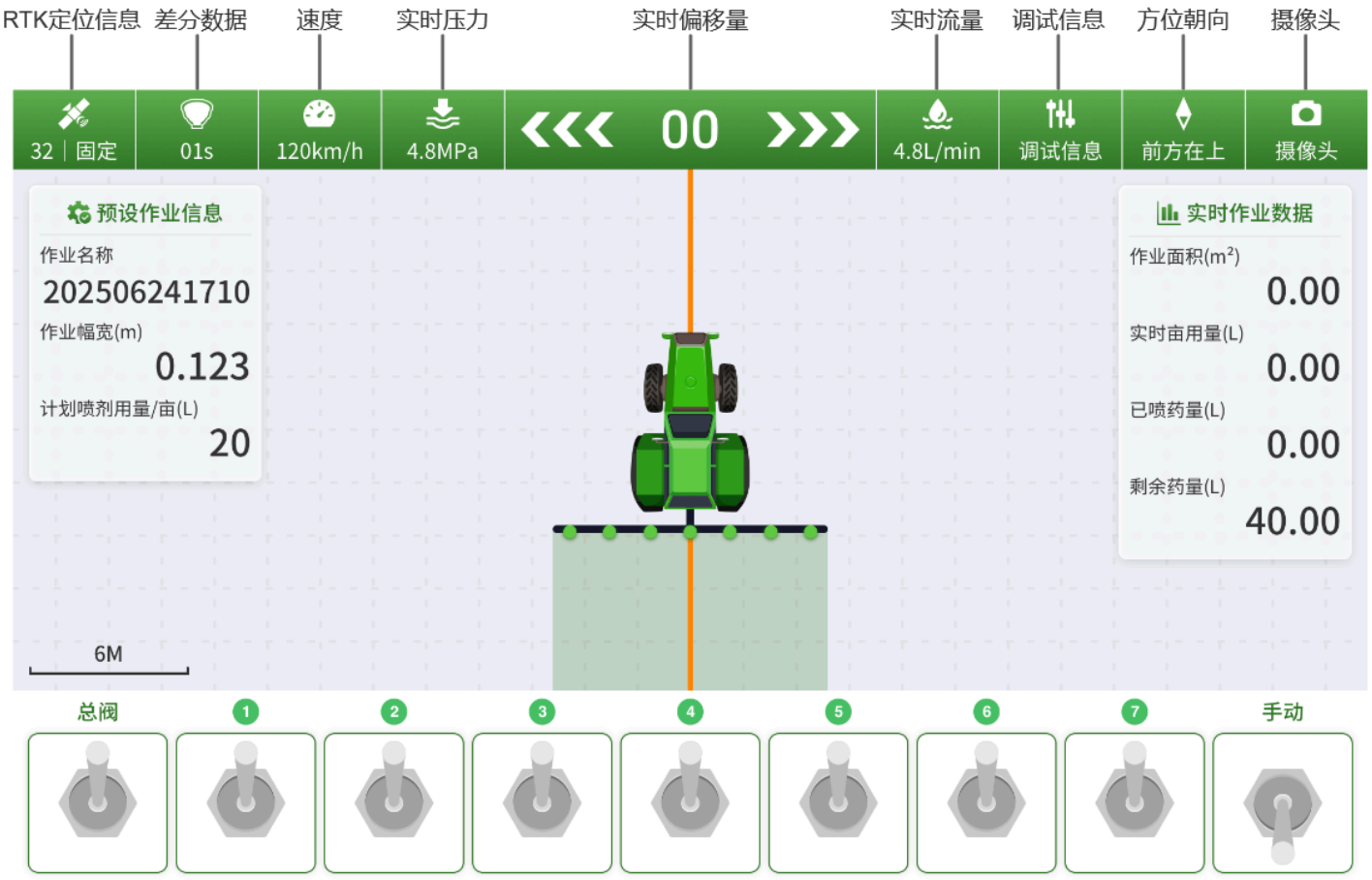
- When installing this system, do not modify other structural components on the sprayer to prevent affecting the functionality and mechanical strength of the transmission components.
- When determining the installation location of the system, ensure that the system is not subject to squeezing, collision, etc., while the sprayer is in a stationary state, neither in transport nor in operation, to prevent damage to the system or cracking and leakage of the housing.
- The cable should be fixed to the structural components of the sprayer using cable ties to prevent it from being entangled and pulled by transmission or moving parts.

4. Instructions for Use

- Working Interface:

From left to right at the top are: RTK positioning information, differential data information, speed information, real-time pressure, offset information, real-time flow, debugging information, orientation, and camera;

At the bottom, there are control valve switches corresponding to each section, with the leftmost being the main valve switch and the rightmost being the manual/automatic driving switch.



- Settings Function: Includes language settings, unit of measurement, RTK differential settings, sprayer settings, flow data acquisition, device information, debugging information, and flow meter calibration function.

Measurement Unit:



Select Differential Mode:



Sprayer Settings:



Number of Switching Sections:



Traffic Data Acquisition:



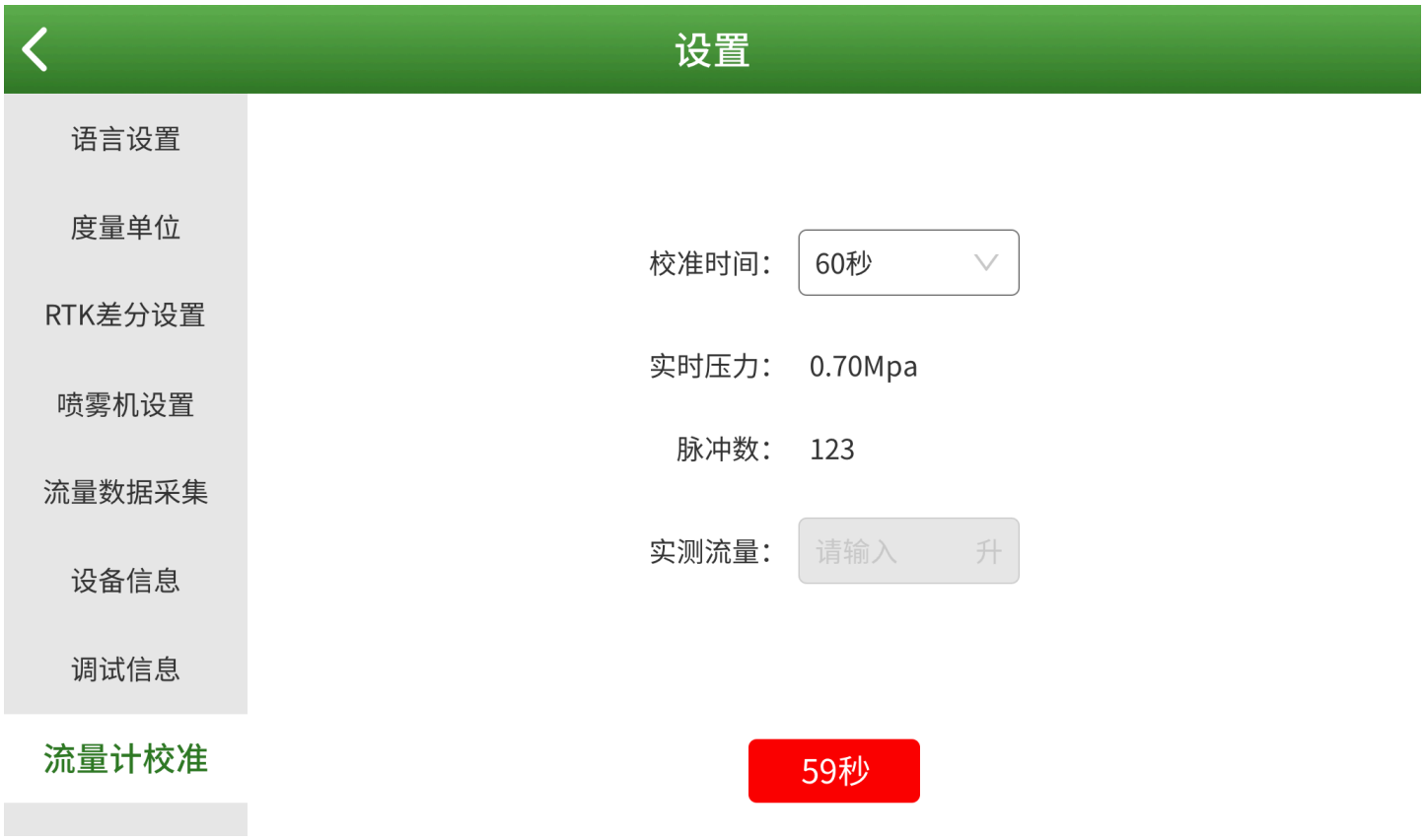
Debug Information:



- Calibration: Settings -> Flow Meter Calibration, select the calibration time and then click Start.



Wait for the countdown to end. Do not click other buttons before the countdown ends.



After the countdown ends, weigh and enter the actual flow rate, click Save, and complete the calibration.



5. Maintenance

1. Precautions

1. Do not use cotton materials that easily shed lint or clog to wipe the inner cavity of the waterway.

2. Before clearing blockages in filters and pipes, the pressure must be reduced to 0 or the engine must be shut down.

3. Regularly check the filter and remove impurities (such as sediment and dregs) to ensure smooth water flow.

2. Cleaning and Maintenance

1. After the operation is completed, the pipeline should be promptly emptied and rinsed clean with water, as residual pesticides can cause harm to humans, children, and pets. Additionally, pesticides may accumulate inside the valve body, flow sensor, and pressure sensor, resulting in poor pipeline flow or inaccurate sensor data.

2. Clean the inner cavities of each valve body with clean water, neutral detergent, and nylon brush. The electronic equipment section is strictly prohibited from being disassembled or cleaned.

3. Storage and Maintenance

1. Store the intelligent spray control system and sprayer in a closed, dry, and well-ventilated warehouse.

2. Do not spray any solution on plastic or rubber parts to prevent swelling or deformation.

3. When storing for a long time, apply anti-rust oil to metal parts. When storing in winter, drain the liquid from the intelligent spray control system to prevent the housing from freezing and being damaged.