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Preface:
Thank you for purchasing FJDynamics product. This manual provides detailed hardware installation guide. If you have any questions, contact the local dealer.

Purpose and Intended Users:
This manual introduces the physical characteristics, installation procedures, and technical specifications of the product as well as the specifications and use of the wiring harnesses and connectors. Based on the assumption that the users are familiar with the terms and concepts related to this product, this manual is intended for users who have read the preceding content and have experience in hardware installation and maintenance.

Technical Support:
FJDynamics' official website: www.fjdynamics.com

1 Product Introduction

1.1 Main Components

1 Control terminal
Serves as the human-machine interface, and vehicle control and communication terminal.

2 GNSS receiver
Receives satellite signals to obtain the vehicle location.

1.2 Control Terminal Ports

FJDynamics AutoSteer Kit is a hydraulic autosteering system that is supplied by FJDynamics for agricultural vehicles to assist the driver. The system consists of the control terminal, GNSS receiver, hydraulic valve, angle sensor, pressure sensor, and wiring harnesses. The control terminal runs the software developed by FJDynamics.

2 Installation and Operation Instructions

2.1 Workflow Overview

This chapter describes the main operation processes and related functions of FJDynamics AutoSteer Kit. Before starting the work for the first time, you need to complete the installation, commissioning, and preparations to start the autosteering operation successfully.

2.2 Installation and Commissioning

For hardware installation, please refer to [FJDynamics AutoSteer Kit Hardware Installation Guide](#) for details. For software using, please refer to [FJDynamics AutoSteer System Software User Manual](#) for details use the workflow to install and commission the system for the first time.

2.3 Selecting a language

On the heading "Set the vehicle parameters" - Calibrate the angle sensor - Calibrate the vehicle - "Done" the vehicle stopped for a while, and the heading is obtained automatically if not, choose MENU - SYSTEM - Heading calibration.

2.4 Sign-up/Login

The sign-up/login screen is displayed in the language you selected.

Sign up: For the first time you need to sign up. Tap the "Sign up" button on the screen, enter your email address, verification code, and password, and then tap "Next" to complete the sign-up process.

Log in: If you have an account already, you can log in directly by entering your username (email address) and password.

Forgot password: If you forgot your password, tap "Forgot password" and enter your email address, verification code, and new password, and then tap "Login" to enter the home screen.

Select country/region: When internet and satellite position are available, the system automatically selects the country or region based on your location, or you can tap "Select" in the lower left corner and select the country or region. The corresponding time zone will follow the change.

2.5 Setting Vehicle Parameters

To add, delete, modify, or check, tap "Sync" and then "Sync vehicle" on the summary tab, and then "Sync vehicle" on the vehicle information tab, choose MENU - DEVICE SETTINGS - vehicle library.

2.6 Parameter Settings

To enter the vehicle settings screen, tap "New" or "Edit". Enter the vehicle information, choose "Sync vehicle", and then "Sync vehicle" on the Parameters tab, and then "Sync vehicle" on the vehicle information tab, and then "Sync vehicle" on the top bar.

2.7 Calibration

Top Calibration, Angle Sensor Calibration and Vehicle Calibration are displayed on the screen. Refer to Software user manual section 2.7 "Top Calibration" and section 2.8 "Angle Sensor Calibration" and section 2.8 "Calibrating the vehicle" for details.

2.8 Setting Implement Parameters

To add, delete, modify, check, upload, synchronize, and collect the implement information, choose MENU - DEVICE SETTINGS - implement library.

3.1 Components

3.2 Installation

3.3 Wiring Harness

4.1 Site Requirements

1. Ensure that the vehicle is in good condition and all joints work properly.
2. Ensure that there are no tall trees, buildings, or other obstacles around the site to protect the operation from signal interference.
3. Ensure that there are no high-voltage power lines within 50 m around the site.
4. The site ground should be level and no smaller than 50 m x 10 m.
5. It is recommended to use a 10 m x 10 m site.
6. Commissioning should be carried out on non-public roads. Ensure that no irrelevant personnel stay around the vehicle during commissioning to prevent accidents.

4.2 Power-on

4.2.1 Inspection Before Power-on

1. Check whether the power indicator of the control terminal is lit.
2. Check whether the supply voltage is satisfactory.

4.2.2 Inspection After Power-on

1. Check whether the power indicator of the control terminal is lit.
2. Turn on the vehicle terminal, and check whether the system program starts normally.

5 Appendix

5.1 Specifications

No.	Component	Specification
1	Control terminal	Size: 279*180*42 mm Basic configuration: 10.1" capacitive touch screen, LED backlight, 1280*800 pixels, 700 nit LCD, speaker, 20 RAM, 80 ROM, Volume control, Power supply: DC 12V Power supply: DC 12V Signal receiver: radio, satellite, and 4G Relay output: 10A, 120VAC (maximum 20VA) Operating temperature: -20°C to 80°C Storage temperature: -40°C to 80°C
2	GNSS receiver	Size: 155 mm*145*45 mm Operating voltage: 9~16V Operating current: < 300 mA IMU accelerometer accuracy: 0.5 mg IMU gyroscope accuracy: 0.015°/s Roll/pitch: 0.2° Operating temperature: -20°C to 70°C Storage temperature: -40°C to 80°C
3	Pressure sensor	Pressure range: 3000 psi Output: 0~5V Interface: 0~10V Interface grade: 0.1% external thread
4	Proportional Valve	1) 300/min open center valve 2) 600/min open center valve 3) 1200/min open center valve 4) 300/min compatible valve Power supply: DC 12V
5	Radio antenna	Voltage: 9~16V Impedance: 50Ω Power: 1W Size: 82mm*490 mm or 82mm*301 mm Operating temperature: -20°C to 80°C
6	Attitude sensor	Supply voltage: 9~16V Output frequency: max. 200 Hz Resolution: 0.5° Operating temperature: -20°C to 80°C

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