



FJ DYNAMICS **FJD ISOBUS Function Introduction**

2022 . 08

An unified communication protocol

ISOBUS, also known as ISO 11783, is an international communication protocol developed based on CAN 2.0B by the ISO organization Agricultural Industry Electronics Foundation (AEF) for agricultural and forestry devices. ISOBUS defines equal protocols for all manufacturers to guarantee full compatibility between tractors and implements of all brands and models.

UT/VT (has released)	AUX O / AUX N (in planning)	TECU (in planning)
Universal Terminal: using any terminal to operate the ISOBUS device & to operate many different devices using a single terminal.	Auxiliary Control: an additional control elements that facilitate the operation of complex equipment, such as a joystick.	Gain relevant data from tractor's ECU such as engine oil temperature, vehicle speed, etc.
TC- SC (in planning)	TC- GEO (in planning)	TC- BAS (in planning)
Section Control: Automatically switch the section on and off based on the overlaps between GPS position and the required operation position.	To achieve variable rate control based on positioning information. For instance, implements can execute various operation parameters in different working zones by importing prescription.	Task Controller Basic: be able to record data and generate tasks, which includes parameters of implements and relevant data in the working process. Standardized format: ISOXML

Benefits of ISOBUS

- **Uniform standard.**

Enables the FJD autosteering kit to easily connect to implements, tractors, and terminals of different brands.

- **Simplified device.**

Connects to tractors and implements with one FJD autosteering kit, and displays information and performs operations efficiently with no additional monitoring devices and cables.

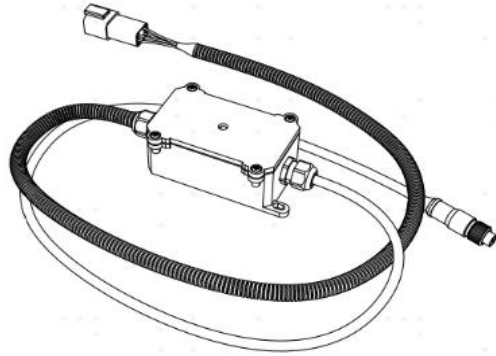
- **Reduced cost and improved effect.**

Automatically executes the operation control policies of the implements as planned for the tasks, reducing labor cost and material waste, and improving work efficiency and quality.

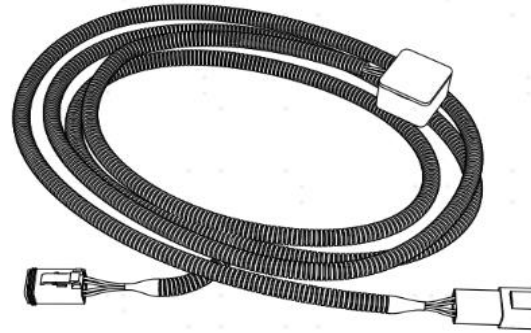
- **Precise agriculture.**

Creates favorable conditions for crop growth at all stages according to the growth model, and provides system diagnosis, optimized formula, and scientific management.

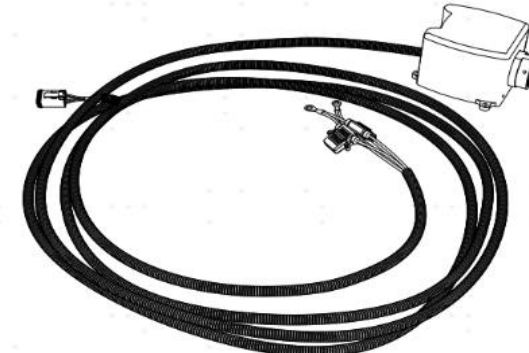
Main Components



CAN Box



TBC Box



ISOBUS Box

NO.	Name	Description
1	CAN Box	Converts signals, with one end connected to the serial port of the control terminal of the FJD autosteering kit and another end connected to the TBC Box.
2	TBC Box	Biases and terminates the bus when the implement ECU is disconnected and connects the CAN Box and the ISOBUS Box.
3	ISOBUS Box	Communicates with and powers the implement ECU through an international standard 9-pin connector.

Interface Description



NO.	Description
A	12-pin aviation connector (male), which is a data transfer port of the FJD autosteering kit for communication with implements.
①	12-pin aviation connector (female) to connect to port A of the FJD autosteering kit.
②	CAN Box connector (male) to connect to ③ TBC Box connector (male).
③	TBC Box connector (female) to connect to ② CAN Box connector (male).
④	ISOBUS Box connector (female) to connect to ④ TBC Box connector (male).
⑤	ISOBUS Box connector (female) to connect to ④ TBC Box connector (male).
⑥	Power port to connect to the battery of the machinery to power the ISOBUS cable harnesses.
⑦	Implement bus quick-change socket, which complies with the ISO11783, to connect to implements.

VT/UT Introduction of FJD Autosteering Kit (released)

- Providing an interface between the operator and the implement;
- Showing the current operating status of the ISOBUS implement and to operate the implement.



Connect different brands of ISOBUS implement to the control terminal of FJD Autosteering Kit.

Display the real-time working status of ISOBUS implements.

Real-time turning on/ off the broadcast port of ISOBUS implement.

Note: please make sure the software version of FJD Autosteering Kit is not lower than V215

Installation Guide



ISOBUS Box

Standard 9Pin Port







CAN Box

TBC Box

* FJZNCZF JNBD-2.5RD112842 *

Recommended Implement List

Brand & Series	Picture
<p>CASE IH PLANTER CASE IH 500T Planting & Seeding</p>	
<p>Horsch Pronto 3dc seeding</p>	
<p>Kverneland Exacta-CL EW Spreader</p>	
<p>Kverneland Exacta TL/TLX Geospread</p>	

Note: The list will be updated continuously.

Parameter	Value
Operating voltage	(9-36) V
Operating current	25mA, 3A max
Transfer protocol	CAN
Operating temperature	-30°C~ 70°C
Operating humidity	5%~95%
Storage temperature	-45°C~85°C
IP rating	IP66
Data transfer rate of the 422 interface	1.5Mbps
Data transfer rate of the CAN interface	250Kbps



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THANKS

