MÜLLER ELEKTRONIK
A TRIMBLE COMPANY

Installation and operating instructions

S-Box

Version: V7.20191001

30322616-02-EN

Read and follow these instructions. Keep these instructions in a safe place for later reference. Please note that there might be a more recent version of these instructions on the homepage.

Company details

Document

Installation and operating instructions
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1 Product description

The S-Box is a section switching box with mechanical switches for the control of sections and the main switch of an ISOBUS sprayer.

The S-Box can be also operated in addition to the ISOBUS joystick or separately for the control of sprayer sections.

Versions exist for 9, 13, and 18 sections.

1.1 System requirements

Depending on the number of sections that you operate with the S-Box, a specific software version must be installed on your ISOBUS job computer.

Sections	SPRAYER-Controller MIDI and MAXI 2.0	SPRAYER-Controller MIDI and MAXI 3.0
9, 13	5.2xx	7.0
18	6.4i	7.0

1.2 Controls

1	Function switch
2	Section main switch
3	Section switches

Standard functions of the switches

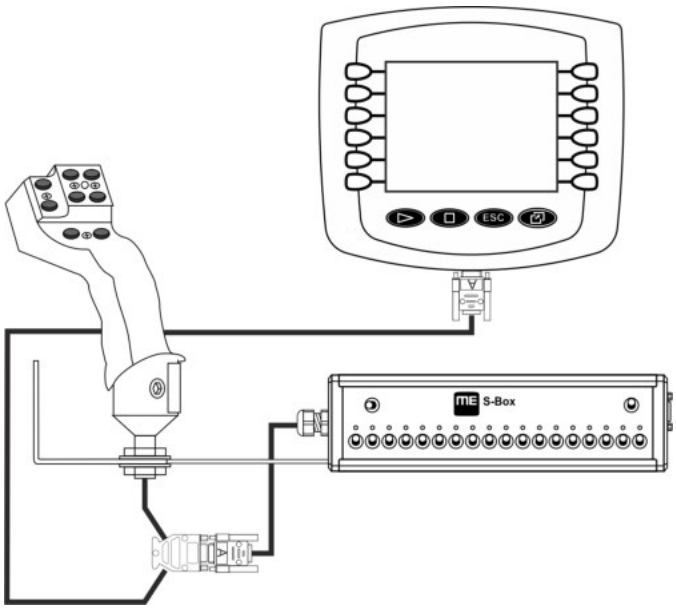
Switch	Position	Meaning
Function switch	MFG	The S-Box has no function. The sections can be operated via the joystick depending on the selected mode.
	S-Box	The S-Box is active. The S-Box symbol is visible on the work screen of the sprayer. The job computer evaluates the current switch positions of the section main switch and the section switches.
Section main switch	Activated	All sections activated via the section switches are in the active state.
	Deactivated	All sections activated via the section switches are in the preselected state.
Section switches	Activated	The selected section is active or preselected depending on the position of the section main switch.
	Deactivated	The selected section is not active.

2 Mounting and cabling

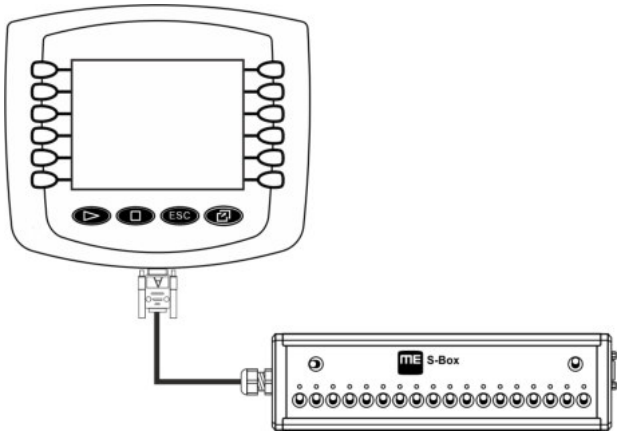
There are three different ways you can install the S-Box:

- Connect the S-Box to a joystick connected to the terminal via a Sub-D connector.
- Connect the S-Box to a terminal via a Sub-D connector.
- Connect the S-Box to the ISOBUS In-Cab-Connector via a CPC connector.

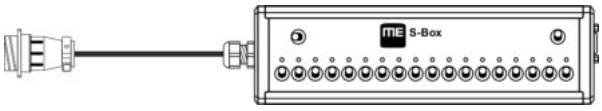
2.1 S-Box with Sub-D connector with joystick



2.2 S-Box with Sub-D connector without joystick



2.3 S-Box with CPC connector



3 Operation

3.1 AUX protocol configuration

When configuring the S-Box, you must select whether you want to use the Auxiliary 2 protocol. If you are using this protocol, you can assign different functions to the S-Box.

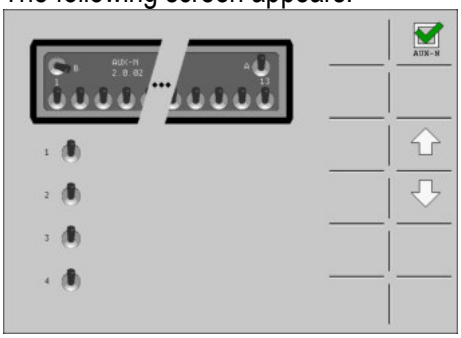
Procedure

To select the AUX protocol:

☑ The S-Box is correctly installed.

☑ The terminal is switched off.

1. Start the terminal.
2.

- Open the S-Box application.
   ⇨ The following screen appears:

3.

/

- Activate or deactivate the AUX2 protocol.

⇨ You can now work with the selected AUX protocol.

3.2 Assigning functions

You assign ISOBUS job computer functions using the terminal. You can read how to do this in the operating instructions for the terminal.

3.3 Viewing functions

Procedure

To view the functions that are assigned to the S-Box:

☑ You have selected the AUX2 protocol when configuring the S-Box.

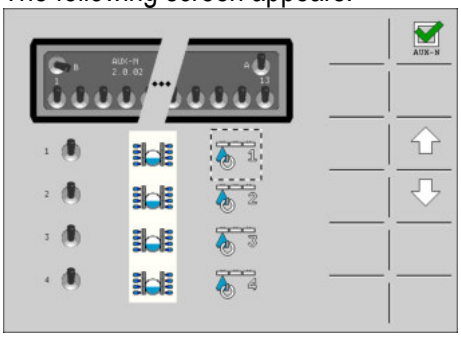
☑ Your ISOBUS job computer is connected to the vehicle's ISOBUS in-cab-connector.

☑ You have assigned functions to the S-Box.

1. Start the terminal.
2.

- Open the S-Box application.

⇨ The following screen appears:



⇨ You can see which switch of the S-Box has been assigned to an ISOBUS job computer function. With the / keys, you can view the assignment of the other switches.

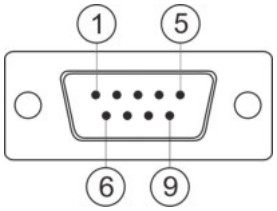
4 Technical specifications

4.1 Technical data for the S-Box

Parameter	Value
Power supply	10.5 V - 16 V
Current consumption	Max. 0.7 A
Temperature	-20 °C – +70 °C
Housing	Aluminium continuous casting with plastic end caps
Protection rating	IP42

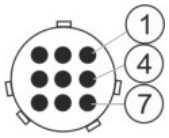
4.2 Connector pin assignment

4.2.1 9-pin Sub-D connector



Pin	Signal	Pin	Signal
1	CAN_L_Out	6	0 VE
2	CAN_L_In	7	CAN_H_In
3	CAN_0 V	8	CAN_EN_Out
4	CAN_H_Out	9	12 VE
5	CAN_EN_In		

4.2.2 9-pin CPC connector



Pin	Signal	Pin	Signal
1		6	CAN_E
2	CAN_L_In	7	12 VE
3	CAN_L_Out	8	CAN_0 V
4	CAN_H_In	9	0 VE
5	CAN_H_Out		

4.3 Software update

You can update the S-Box using the Downloadmanager 2.

Before you perform an update, ensure that the function switch is in the “MFG” position.

4.4 Disposal

When it has reached the end of its service life, please dispose of this product as electronic scrap in accordance with all applicable waste management laws.

5 EU declaration of conformity

Herewith we declare that the design and construction of this product and its identical variants, as well as the form brought onto the market by us, is in accordance with the relevant safety and health requirements of the EU Directive of Electromagnetic Compatibility 2014/30/EU. If alterations are made to the product without prior consultations with us, this declaration becomes invalid.

Harmonised standards applied:	EN ISO 14982:2009
	(EMC Directive 2014/30/EU)

6 Item overview

Item number	Designation
30322608	S-Box, 9 sections, with 9-pin Sub-D connector
30322616	S-Box, 13 sections, with 9-pin Sub-D connector
30322618	S-Box, 18 sections, with 9-pin Sub-D connector
30322638	S-Box, 9 sections, with 9-pin CPC connector for third-party terminals
30322646	S-Box, 13 sections, with 9-pin CPC connector for third-party terminals
30322647	S-Box, 18 sections, with 9-pin CPC connector for third-party terminals