

INSTALLATION MANUAL

Massey 8S-xxx JD Bridge



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Release Notice:

This is the July 2022 release of the Installation Manual for the Massey 8S-xxx JD Bridge.

Product Name:

The Massey 8S-xxx JD Bridge will also be referred to simply as ‘Bridge’ in this manual.

It is assumed that users of the products described herein have either system integration or technical experience, as well as an understanding of the fundamentals of agricultural machinery.

Disclaimer

While every effort has been made to ensure the accuracy of this document, Agra-GPS Ltd assumes no responsibility for omissions and errors. Nor is any liability assumed for damages resulting from the use of information contained herein. Agra-GPS Ltd shall not be responsible or liable for incidental or consequential damages or a loss of anticipated benefits or profits, work stoppage or loss, or impairment of data arising out of the use, or inability to use, this system or any of its components.

DO NOT USE THE MASSEY 8S-XXX JD BRIDGE IF YOU DISAGREE WITH THE DISCLAIMER.

Important Safety Information

Read this manual and the machine operation & safety instructions carefully before installing the Bridge.

- Follow all safety information presented within this manual.
- If you require assistance with any portion of the installation or service of your equipment, contact Agra-GPS for support.
- Follow all safety labels affixed to the system components. Be sure to keep safety labels in good condition and replace any missing or damaged labels. To obtain replacements for missing or damaged safety labels, contact Agra-GPS.

When operating the machine after installing the Bridge, observe the following safety measures:

- Be alert and aware of surroundings.
- Do not operate the Bridge system while impaired.
- Always remain in the operator's position in the machine when the Bridge system is engaged.
- Determine and maintain a safe working distance away from other individuals. The operator is responsible for disabling the Bridge system when a safe working distance has been diminished.
- Ensure the Bridge is disabled prior to starting any maintenance work on the machine or parts of the Bridge system.
- Follow all safety instructions from the Massey 8S machine as well as the John Deere system.
- The Bridge must only be used in the field, never on public roads.

Electrical Safety

- Always verify that the power leads are connected to the correct polarity as marked. Reversing the power leads could cause severe damage to the equipment.
- Verify that all cables and connectors are not in contact with sharp edges or anything that could cause chafing, as this could result in power shorts and/or other malfunctions.
- Power is supplied to the Bridge even when the key is off. Power can be removed in 3 different ways: 1) Remove the connector from the Bridge, 2) Remove the fuse supplying circuit power, or 3) Remove a battery lead while the machine is off.

Introduction

Congratulations on your purchase of the Massey 8S-xxx JD Bridge! The Bridge is designed to bridge the communication between a Massey Ferguson 8S tractor and a John Deere (JD) GPS receiver (Starfire) & monitor display (1800, 2600, 2630, 4240, or 4640).

This allows a JD display to create maps in the John Deere format, and also provides autosteer functionality. The operator uses the JD display to create AB-lines or field documentation, or to handle any other GPS system input.

The Bridge contains a full steering controller capable of steering a Massey 8S tractor. All conditions for autosteer such as minimum speed, steering enabled, etc., must be met by the Massey 8S tractor before the autosteer engage option can be activated.

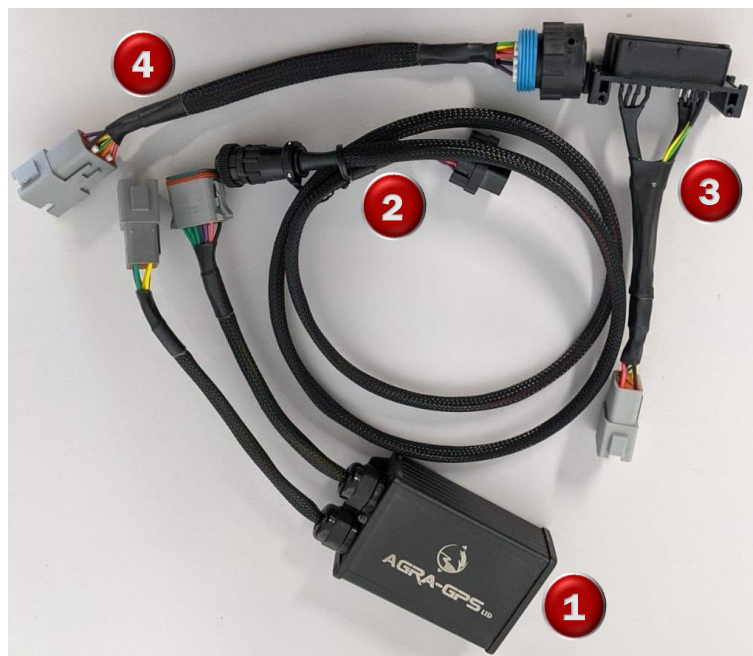
NOTICE

This manual is not intended to replace the manuals for the Massey 8S tractor nor the John Deere GPS system. The operator must read and understand the manuals and instructions of these systems, before using the Bridge.

Components

The Massey 8S-xxx JD Bridge kit contains the following items:

1. Bridge
2. Harness to connect the John Deere display to the ISO in-cab connector of the Massey 8S tractor.
3. Adapter harness from the Bridge to the VD-04 connector (within the upper fuse panel)
4. Adapter harness from John Deere receiver (Starfire) to the circular GPS roof connector



Step 1: Install the Receiver

Install Receiver Mount

The JD receiver will require a suitable mount. The Massey 8S tractor may come pre-equipped with a non-JD receiver as shown, which must be removed.

A simple bracket such as shown below could be used for the receiver mount. This bracket is not supplied but is available from John Deere.



Install the JD Receiver

After securing the JD Receiver to the mount, connect the receiver cable to the adapter harness supplied, and the other end of the adapter harness to the circular connector at the front of the cab roof.

Step 2: Install the Bridge

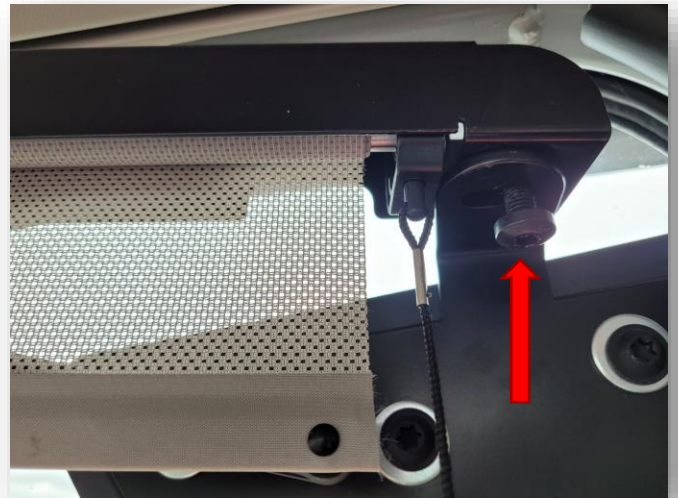
Locate & Remove VD-04 Module

The Bridge will be installed in the upper fuse panel where the VD-04 is located, in the upper right part of the cab.

First, remove the plastic fuse panel cover as shown.



To remove the VD-04, it will also be necessary to move the side window blind. This can be done by removing 1 bolt on the right-hand side of the blind, which will allow it to swing down.



The VD-04 module is indicated:
Remove the two mounting bolts.



Remove the large rectangular connector (X975) from the VD-04 module by pulling the red tab to the side as shown, while pulling the connector out at the same time.



Also unscrew the antenna cable from the back of the module.

Install the Bridge

The Bridge can now be installed in the cavity where the VD-04 was located. Connect the X975 rectangular connector to the adapter harness, and connect the other end of the adapter harness to the Bridge. The other Bridge connector will remain unconnected.

The Bridge can be secured with bolts to the former module mount, or simply placed in the cavity with soft material to prevent vibration. After securing the Bridge, replace the fuse panel cover and window blind.



Step 3: Mount the JD Display

The mounts for the JD display are NOT part of the Bridge kit, but can easily be manufactured in the average shop or ordered from John Deere or RAM (further notes next page).

The JD display adapter cable will be plugged into the 9-pin ISO socket found above the lower fuse panel, in the lower forward corner of the cab (plug location is indicated).



The other end of the display cable is plugged into the back of the JD display. Supported models include the 1800, 2600, 2630, 4240, and 4640.



The JD display may be mounted in many ways. You may use the standard JD mounts or a RAM mount. A display mount is not provided in the Bridge kit and must be purchased separately.

For example: RAM-270U + 2 * 1.5" balls (RAM-202U) + 4" double socket arm (RAM-201U)
<http://www.rammount.com/part/RAM-270U>

Shown: JD 2600 in a Fendt 714



Step 4: Setup ISObus Apps

The Bridge comes with an ISObus VT application (ISO app) that will be loaded onto the John Deere monitor. The app will automatically install itself into the monitor after the first few minutes of the initial start-up. On subsequent runs the app will load from monitor memory much more quickly. The Bridge app includes:

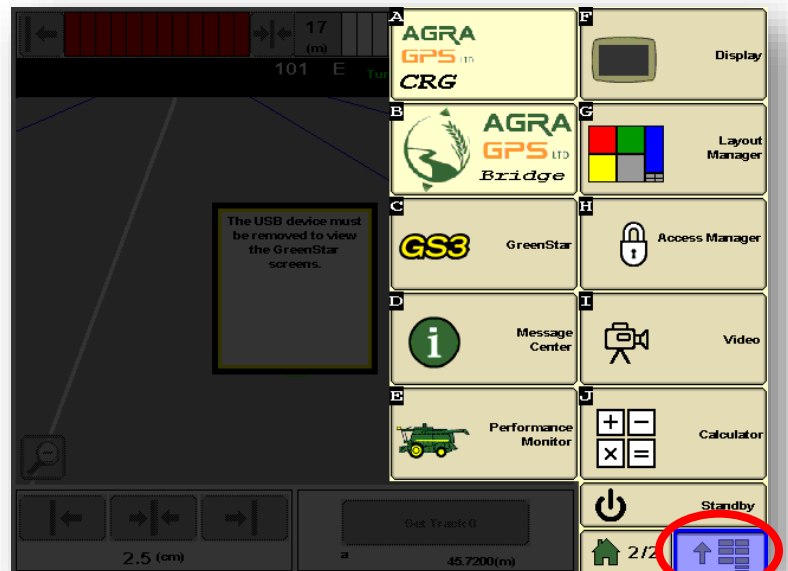
- Bridge/steering configurations
- Option to change work recording mode

Depending on the model of JD monitor, the Bridge ISO app may be found in different locations.

On a John Deere Gen 4 display (4240 or 4640) the application will be loaded in the ISObus VT section on the main page of the display.



On John Deere 1800, 2600, or 2630 the application will be shown in the side menu of the John Deere display. The side menu (shown below) is opened by pressing the button on the bottom right.



NOTE: John Deere 1800 and 2600 monitors do not show a loading bar for ISO applications, while 2630 and Gen 4 monitors do.

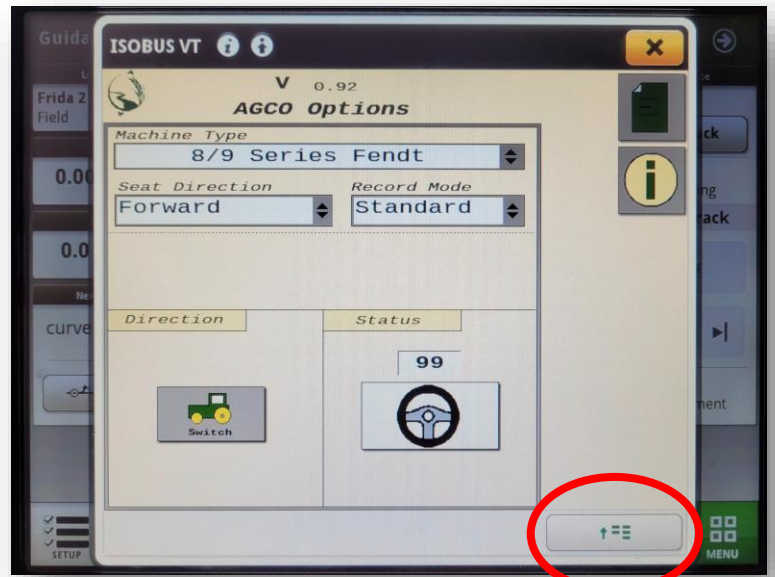
If the ISO application does not load:

- Try clearing the monitor's memory. On 2630 monitors this can be done in the Message Center in the side menu. Go to the Cleanup tab, check controllers, then Begin Cleanup. On Gen 4 displays this can be done in the info page of the ISObus VT. Navigate to the ISObus VT window and press the info (i) button at the top of the page, then press Clean Up ISObus VT.
- Do a hard reset of the John Deere monitor (Unplug it, then plug it back in).
- Do a full restart of the machine. Remember, the app may take a few minutes to load.

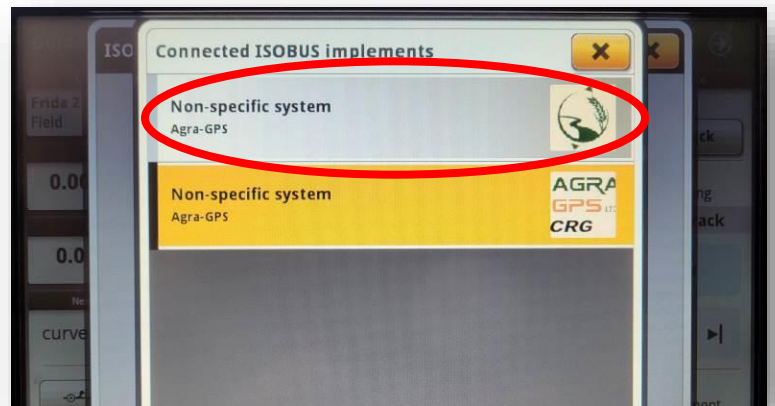
Switching Between ISO Apps

On JD Gen 4 displays (4240 or 4640), when accessing ISObus VT, the first page viewed may be some other ISO app, depending on what implement or feature is being used by the tractor.

If necessary, you may have to switch to the Bridge ISO app. To do this, press the button circled to bring up the ISO app menu.



The ISO app menu may appear something like this. Select the item as shown to select the Bridge ISO app.



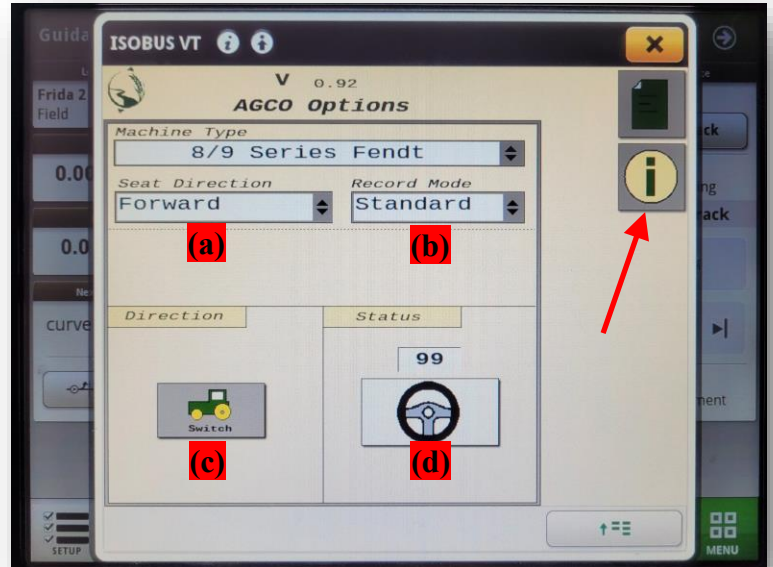
Configure Bridge ISO App




Before adjusting auto-steer performance, the proper settings must be entered into the Bridge ISO app.

The Bridge options home page is shown.

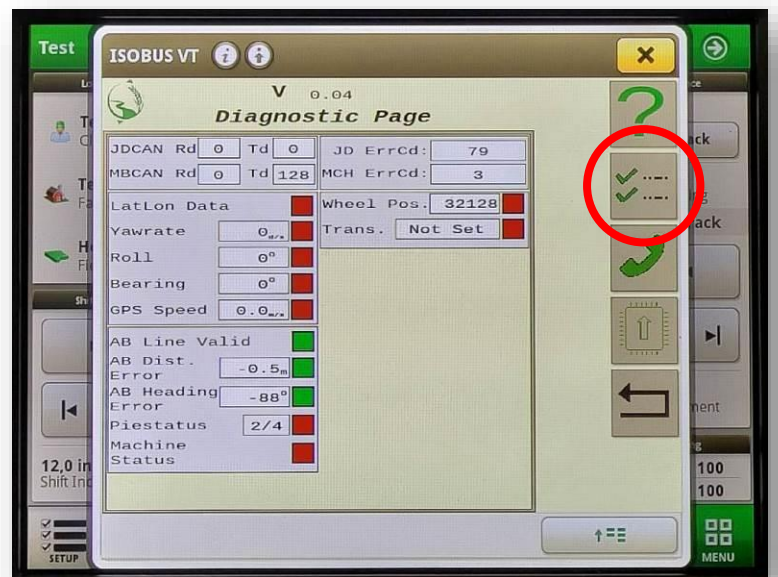
Press the button indicated by arrow to access other information pages.

- Ensure the Machine Type and Seat Direction are appropriate for your machine.
- Record Mode refers to the recording of the work area of the field completed by the implement. Record Mode selects between “Standard” and “On Resume”, where “On Resume” can be triggered by hydraulics (for example, it only records work area when the implement in the ground and not when raised).
- While driving, if the direction of the machine is detected incorrectly, you can force it to change it here.
- You can see how the Bridge detects the steering wheel angle from here



Other information pages include Help , Contact , and Firmware Update  (refer to the Bridge Firmware Update Manual)

The button for accessing the Diagnostic page is circled.



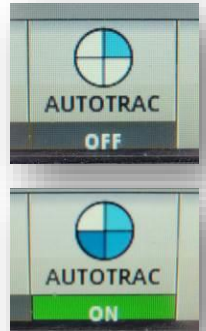
Auto-Steer Operation

Refer to the Pie indicator on the JD monitor screen. With the Bridge installed, you should see at least 1 quarter of the Pie (Installed). If only 1 quarter is shown, press the Pie indicator on screen to move it to two quarters (Configured).

Press the Pie again (on screen) to obtain 3 quarters (Enabled).

To engage Auto-Steer: You will also need to create an AB-line, and the tractor must satisfy all guidance requirements, which includes being close to the AB-line. The tractor must also be in "autosteer ready" mode, which means you must have a field gear selected, drive at a minimum speed and have moved your steering wheel at least once after engine start in order to engage auto-steer.

Press the Engage button (indicated) to activate Auto-Steering. You can press the Engage button again to disengage, or simply turn the steering wheel.



Auto-Steer Optimization

Using the JD display you may adjust your steering performance. Most machines will perform optimally with all JD settings centred. If a change is required, find an open area where you can travel at target speed and adjust one parameter at a time until you are satisfied with the steering performance.

