

# INSTALLATION MANUAL

## Agra-GPS Versatile-JD Bridge (row crop tractor)



Version 1.0  
Revision A  
December 2017



Contact information  
Agra-GPS Ltd.  
Box 2585  
Stony Plain, AB  
T7Z 1X9  
CANADA  
001 780 990 4052 Phone  
[www.agra-gps.com](http://www.agra-gps.com)

#### Release Notice

This is the December 2017 release (Revision A) of the Versatile-JD Bridge Installation Manual.

### **Disclaimer**

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**DO NOT USE THE Versatile-JD Bridge IF YOU DISAGREE WITH THE DISCLAIMER.**

## **Important Safety Information**

Read this manual and the operation and safety instructions carefully before installing the Versatile-JD 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 your 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 Versatile-JD Bridge, observe the following safety measures:

- Be alert and away of surroundings.
- Do not operate the Versatile-JD Bridge system while under the influence of alcohol or an illegal substance.
- Remain in the operator's position in the machine at all times Versatile-JD Bridge system is engaged.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling the Versatile-JD Bridge system when a safe working distance has been diminished.
- Ensure the Versatile-JD Bridge is disabled prior to starting any maintenance work on the machine or parts of the Versatile-JD Bridge system.
- Follow all safety instructions from the Versatile system as well as the JD system!
- The Versatile-JD Bridge must only be used in the field, never on the street!

## **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 going over sharp edges and are not pinned, as this could cause power shortages and/or malfunctions.

## Introduction

Congratulations on your purchase of the Versatile-JD Bridge. The Versatile-JD Bridge is designed to bridge the communication between a Versatile tractor (autosteer ready) and a John Deere display (1800, 2600, 2630, or 4640). This allows a JD display to create maps in the John Deere format and provides straight AB-Line autosteer.

The operator used the JD display to create AB-lines. The current position is determined by a John Deere receiver and all this information is used by the Versatile-JD Bridge to create steering instructions for the tractor. All conditions for autosteer such as minimum speed, steering enabled etc. Must be met by the Versatile system before the autosteer engage option in the tractor can be activated.

### NOTICE

This manual is not intended to replace the manuals for the tractor or the John Deere system. The operator must read and understand the manuals and instructions of these systems, before using the Versatile-JD Bridge.

## Parts Overview

1. Versatile-JD Bridge
2. Cable for outside cab connections
3. Cable for inside cab connections
4. Cable to JD components



## Installation of the Versatile JD Bridge

### Step 1: Outside the Cab

Locate the existing Sauer Danfoss valve, the wheel angle sensor plug and the transducer plug.

The valve is behind the right back wheel towards the front of the cab.

The wheel angle sensor is behind the front axle on the right side of the tractor.

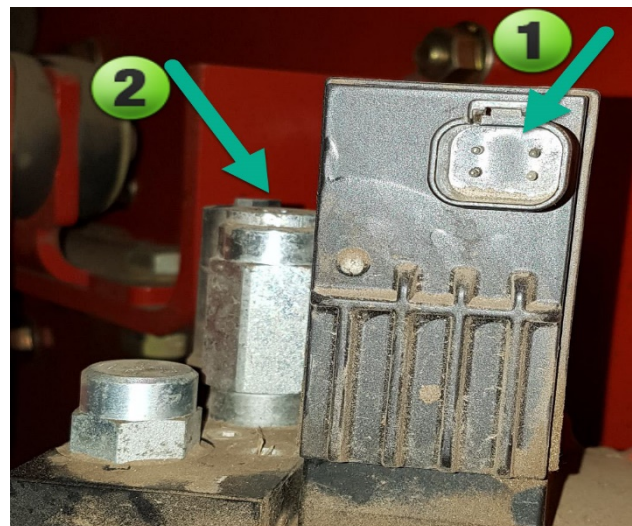
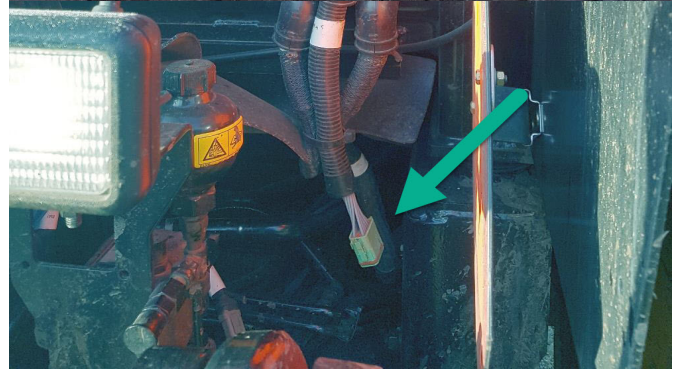
Carefully run the wheel sensor cable along the side and under cab. Secure the cable.

The valve and transducer are located under the cab. It can be reached from the right side in front of the rear wheels.

The valve has a 4-pin deutsch connector (1). The transducer has a 3-pin deutsch (2) pointing up.

After you connected the wheel angle sensor, the valve and the transducer, find the green 12-pin deutsch connector at the back of the tractor. It is a pass-through connector and you find the other end inside the cab underneath that big cover behind the seat.

Connect the 12-pin end of the outside harness to this 12-pin green deutsch connector.

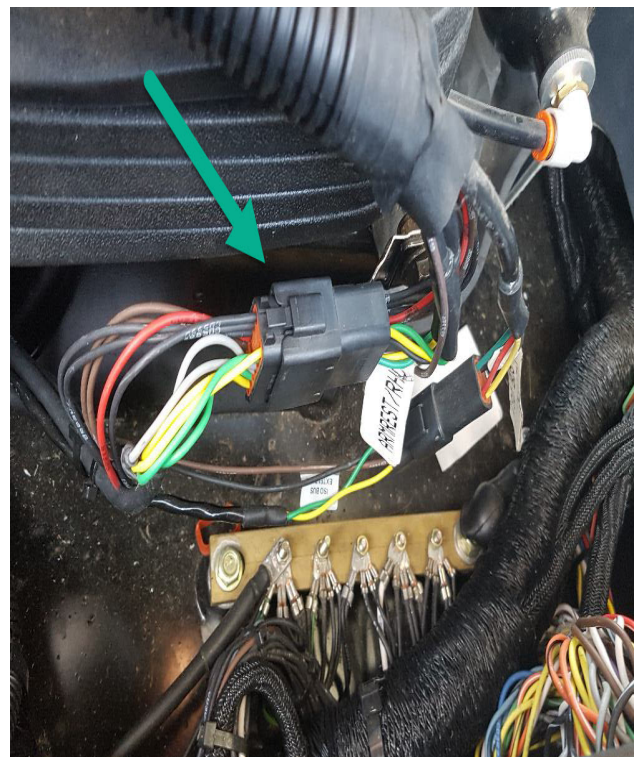
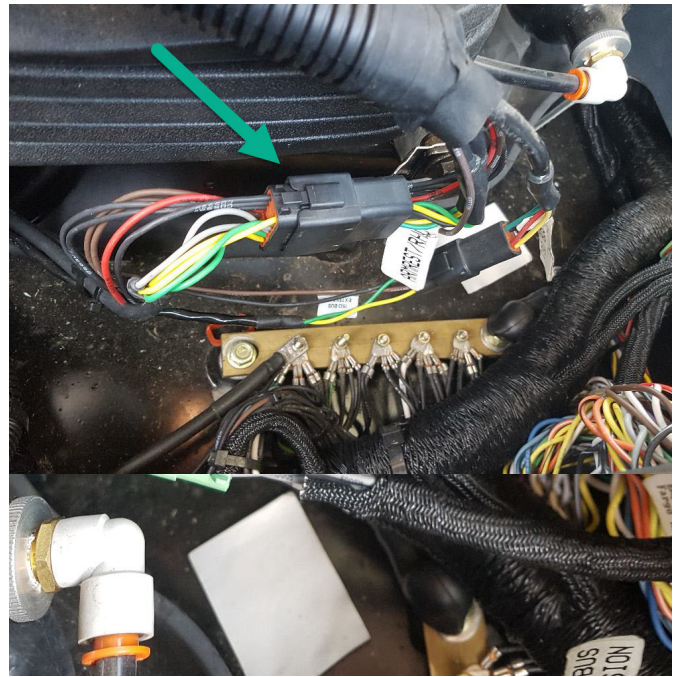


## Step 2: Inside the cab

Find the green 12-pin deutsch connector inside the cab. It is located behind the seat under the plastic cover.

Check in the very right rear corner of the cab.

Connect the "cable for inside cab connections" here.



Also connect it to the "Armrest" 12-pin black deutsch connector by opening that connection and

inserting the male/female part of the adaptor.

The other 12-pin gray connector must be connected to the Versatile-JD Bridge module.

Find a secure location and mount the Bridge.

### Step 3: Mounting the JD Display

The mounts for the JD display are NOT part of the Versatile-JD Bridge, however they can either be ordered as an optional item from Agra-GPS or directly from RAM.

The JD-display may be mounted many different ways. You may use the standard JD mounts or a RAM mount. RAM-270U + 2 \* 1.5" balls (RAM-202U) + 4" double socket arm (RAM-201U). It fits JD displays 2600 and 2630.

<http://www.rammount.com/part/RAM-270U>



Use the "cable to JD components" cable to connect JD display and JD GPS receiver.

### Versatile-JD Bridge Autosteer Engage/Disengage

Your Versatile tractor has a RESUME button (1) in the armrest. It activates the autosteer.

Note: Autosteer can only be activated when the hydraulic is enabled (2)!

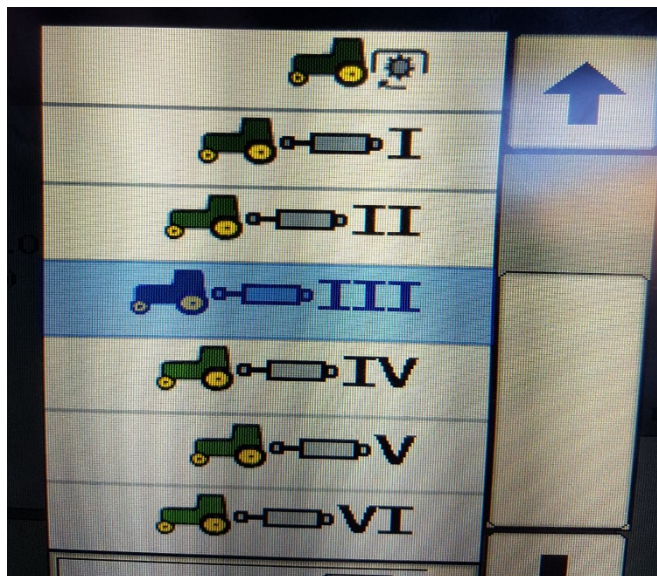
Also your John Deere display must be in „Steer ON“ mode.

If you have your signal lights ON, autosteer does not work as it is assumed you are on the road.

Autosteer must only be used in the field!

The Versatile-JD Bridge also supports several recording sources on the John Deere display.

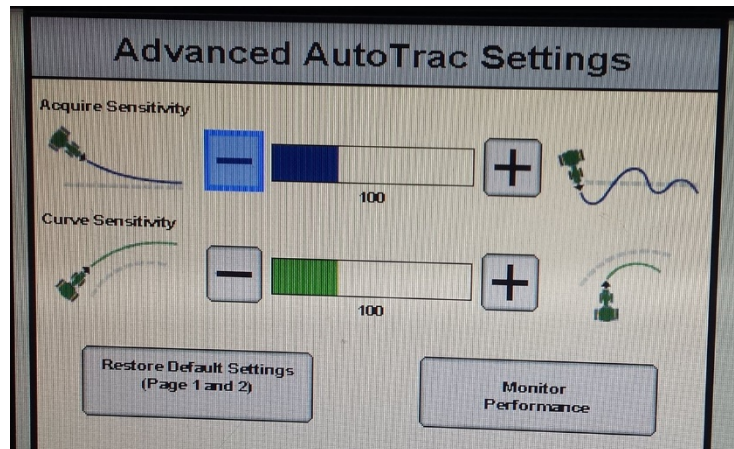
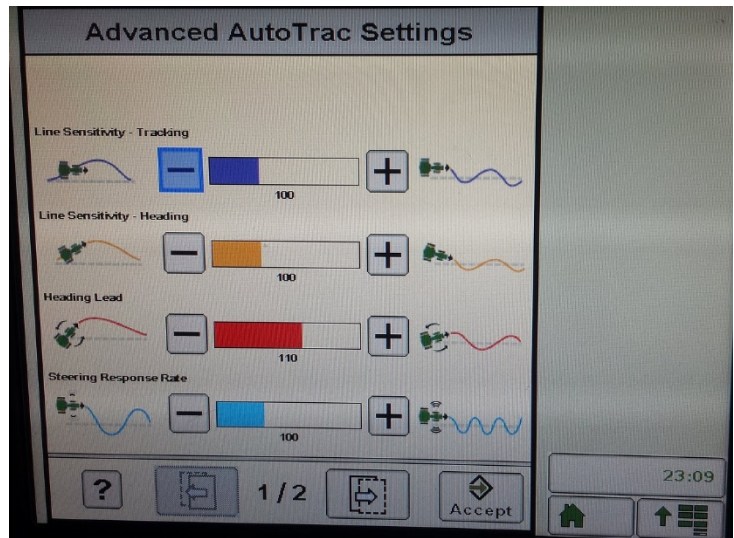
When selected in the equipment menu these recording options trigger coverage on and off.





## Step 4: Adjusting steering

Using the JD display you may adjust your steering performance. Most machines will perform optimally with all JD settings at 100. 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.



## Step 5: ISO Application

The Versatile bridge comes with an ISO application that will be loaded onto the John Deere monitor. The app should automatically store itself on the monitor after the first few minutes of the initial startup. On subsequent runs the app will load itself from memory as soon as possible. The Versatile app includes:

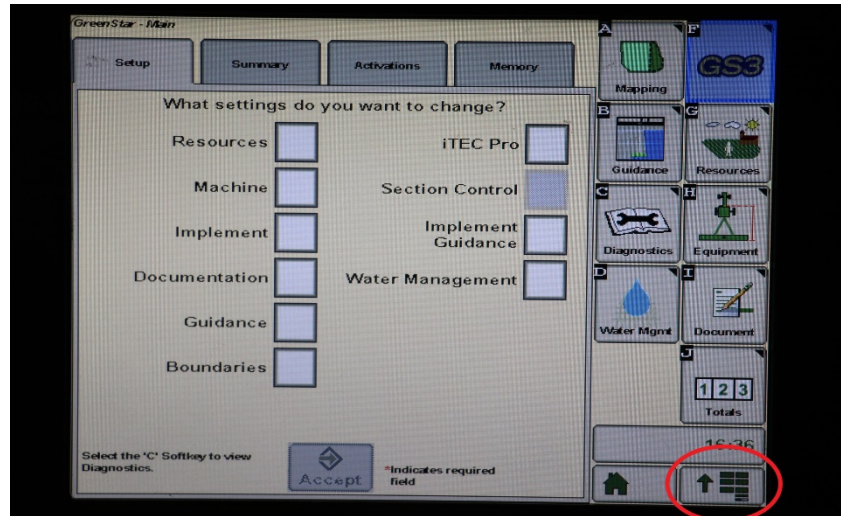
- Calibration
- Option to change work recording mode
- Option to change the machine type
- Help page

Where to find the Versatile ISO application on the John Deere monitor:

- On a John Deere 4640 the application will be loaded in the ISOBus VT section on the main page of the display.



- On John Deere 1800, 2600, 2630 the application will be shown in the side menu of the John Deere display. The side menu is opened by clicking the button on the bottom right of the display.



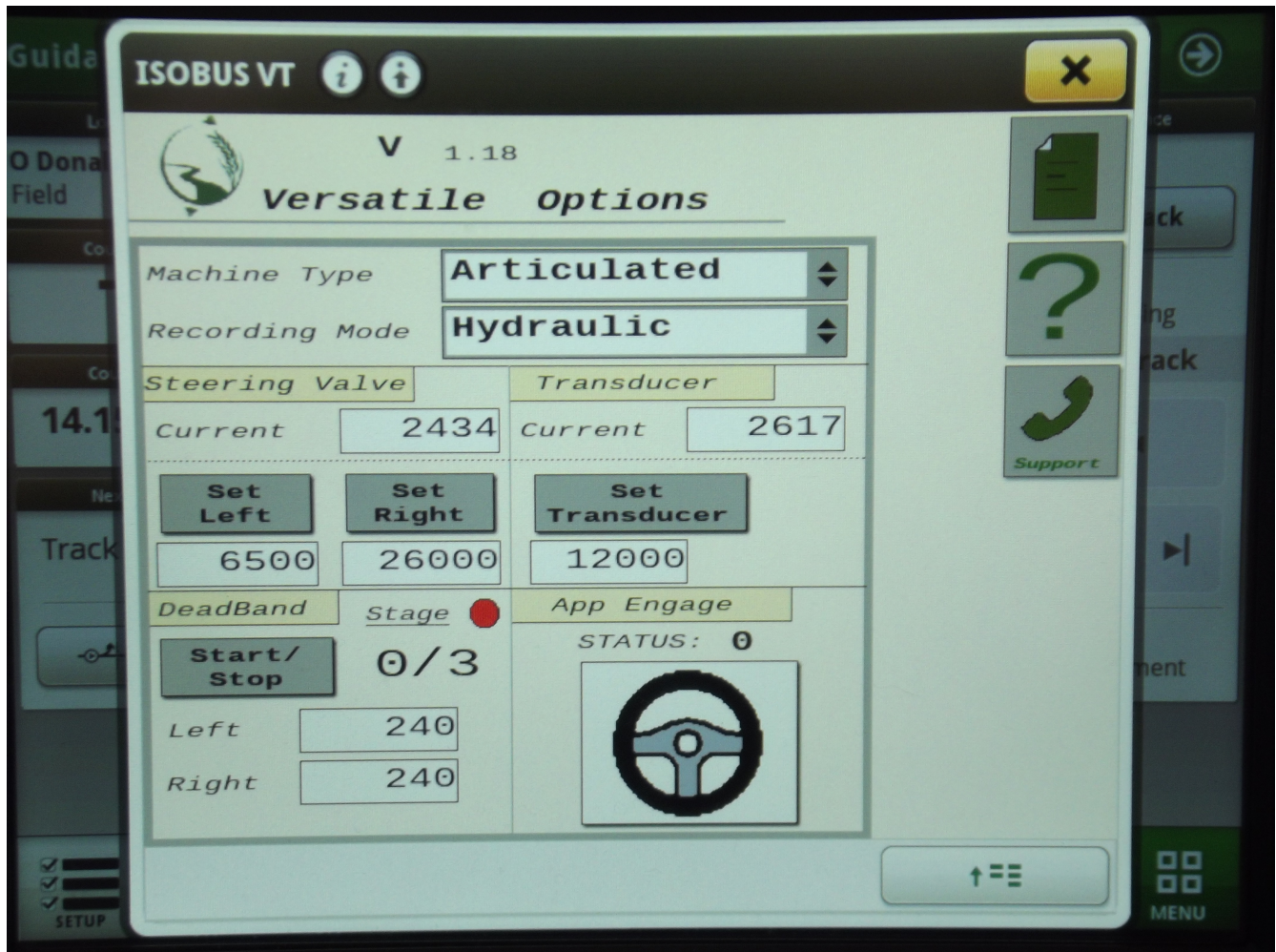
- **NOTE:** John Deere 1800 and 2600 monitors do not show a loading bar for ISO applications, while 2630 and 4640 monitors do.



If the ISO application is not loaded:

- 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 4640 monitors this can be done in the info page of the ISOBus VT. Navigate to the ISOBus VT window and click the info button at the top of the page, then press Clean Up ISO Bus 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.

## Calibration of the Versatile JD Bridge | ISOApp



**Section – Steering Valve:** Allows the user to set the left and right max of the Versatile machine. To calibrate, steer as far left as possible and press, “Set Left”. Then, steer as far right as possible and press, “Set Right”.

**Section – Transducer:** Allows the user to set the steering wheel movement detection. While the machine is running, ensure the wheel angle is straight and the machine is in park. Then, press, “Set Transducer”.

**Section – Deadband:** Allows the user to calibrate the deadband of the valves. Ensure the perimeter around the machine is clear and the machine is in park, then press the Start/Stop button to begin. An indicator will blink yellow while calibration is in progress and will take approximately five minutes.