

INSTALLATION MANUAL



Agra-GPS Claas-JD Bridge for Claas-Lexion combines

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Revision B
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Release Notice

This is the January 2015 release (Revision A) of the Claas-JD Bridge Installation Manual.

Disclaimer

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

Important Safety Information

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

- Be alert and away of surroundings.
- Do not operate the Claas-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 Claas-JD Bridge system is engaged.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling the Claas-JD Bridge system when a safe working distance has been diminished.
- Ensure the Claas-JD Bridge is disabled prior to starting any maintenance work on the machine or parts of the Claas-JD Bridge system.
- Follow all safety instructions from the Claas Lexion system as well as the JD system!

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 Claas-JD Bridge. The Claas-JD Bridge is designed to bridge the communication between a Claas Lexion combine and a John Deere display (1800, 2600, 2630, or 4640). This allows a JD display to create yield and moisture maps in the John Deere format and also provides straight AB-Line autosteer for the Lexion combine.

The operator uses the Lexion Cebis monitor for yield and moisture calibrations. Its data is then sent to the Claas-JD Bridge and translated into a format which is understood by the John Deere display.

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

Information such as speed, header working position and header width are also communicated from the Claas Cebis system to the JD system.

Croptypes, cropname, cropweight and storage moisture are important information for accurate yield data. This information is NOT transferred between the systems and must be entered manually!

NOTICE

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

Installation of the Claas JD Bridge

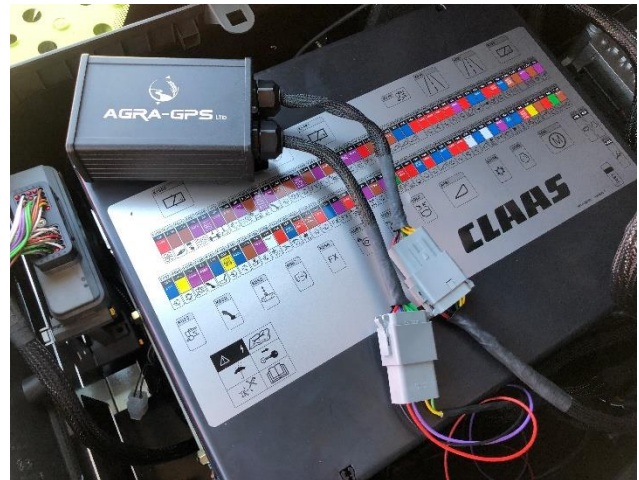
Step 1: Mounting the Claas-JD Bridge

The Bridge KIT includes
The bridge itself and a
Harness to connect JD
Receiver and display
And a adapter to connect
to the machine.

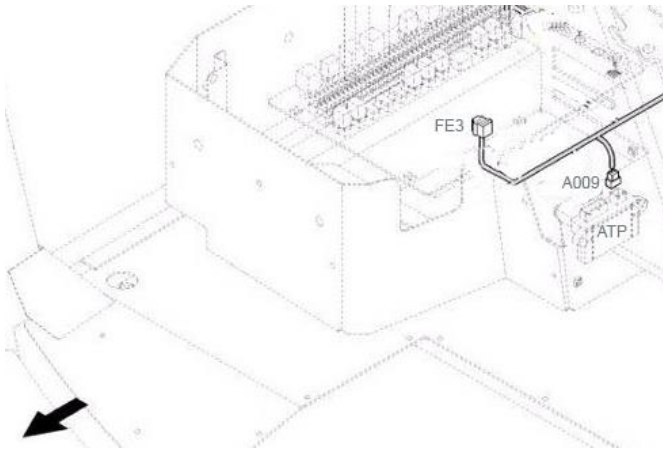


The Claas-JD Bridge is installed on the right side
of the driver seat in the fuse box.

First remove the plastic cover.
Then place the bridge and connect the adapter.

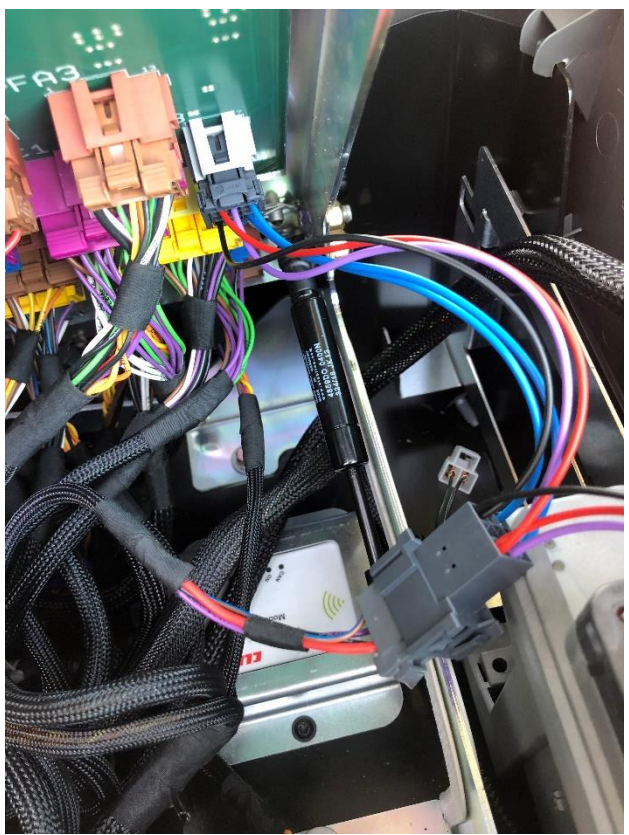
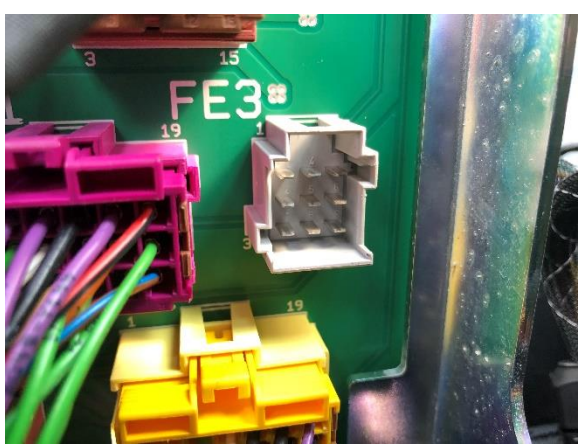


Connect the 6Pin ends of the adapter with the ATP Module which is located on the right side next to the driver seat.
Disconnect the plug and connect the 6Pin ends between,



Now connect the grey 9Pin connectors of the adapter.
Lift the fuse board and find connection "FE3"

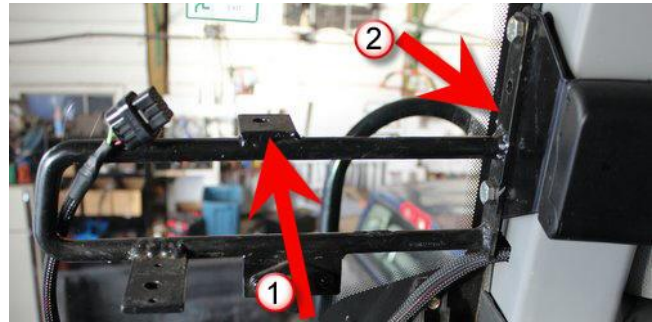
Disconnect the plug and connect the 9Pin ends between,



Step 2: Mounting the JD Display

The mounts for the JD display are NOT part of the Claas-JD Bridge, but can easily be manufactured/ordered in the average farm shop. Shown below are 2 examples of JD-display mounts.

The JD-display may be mounted many different ways. The picture to the left shows a farmer made mount using the bolts on the cupholder (2) and a welded on plate (1) for a standard JD-display mount.



Finished installation of a JD 2630 display using the mount above and the standard JD display mount.



Another option is using two RAM mount 1.5" ball (RAM-202U) and a 4" double socket arm (RAM-201U).

The unit in the picture has a home build metal plate, however RAM also offers the RAM-270U which was designed for the JD displays. (<http://www.rammount.com/part/RAM-270U>)



The picture shows a JD 2630 display mounted using a RAM mount hardware and the standard Claas Lexion "rail".

The new 2015 rail setup (not shown) is stringer and already has a mount for a 1.5" ram mount ball, so the Claas side is prepared.



Step 3: Mounting the JD Receiver

The Claas-JD Bridge does NOT include a standard JD-receiver bracket.

We recommend the use of a standard GPS Combo Bracket to mount the JD receiver.



Use 2 bolts to mount the bracket to the Claas Lexion GPS platform on the roof.



Optional base plate for Claas Lexion roofs. It is mounted onto existing screws in the roof and does not require drilling into the roof!



Step 4: Running the cables

A more temporary installation may simply run the cable to the JD-receiver out through the right door to the roof.

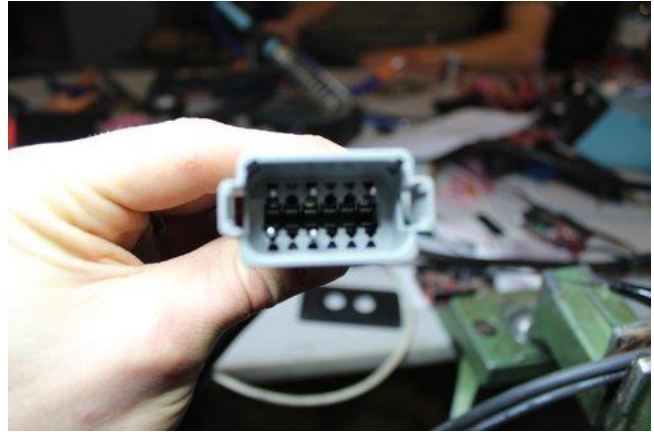
Remove the plastic cover behind the right door by unbolting the cupholder and the cloth hanger.



Remove the screws holding the row of switches on the top right of the cab. It provides access to a cable canal, going from the cab to the front of the cab.



Remove the wedge in the 12-pin deutsch connector and carefully pull the cables backwards out of the connector. You will need a small flat screw driver to release the plastic clamps inside the connector. **MAKE A NOTE OF THE PIN/CABLE LAYOUT BEFORE YOU REMOVE THE CABLES!** Disconnecting the deutsch connector allows you to run the cable behind the plastic and through the cable canal. May put some isolation tape around it to protect the pins!



NOTE: DISCONNECT THE CABLE FROM THE BRIDGE MODULE!

Protected with isolation tape ready to go through the cable canal.

- Pin layout from 12-pin deutsch connector.
- Pin 4 = Yellow – can
 - Pin 6 = Purple (12V switched power)
 - Pin 7 = Black Ground
 - Pin 9 = Green - can
 - Pin 12 = Red (12V power)

Also remove the cables from black display connector. For that you have to push the white plastic to unlock the pins.



- Pin layout from display connector.
- Pin 1 = Purple (12V switched power)
 - Pin 2 = Red (12V power)
 - Pin 14 = Black Ground
 - Pin 18 = Yellow – can
 - Pin 19 = Green - can

Remove the middle front cover and the metal plate. Drill a hole matching the size of the cable.

Run the cable out at the bottom part of the front roof panel.

If necessary seal the drilled hole.



After the cable is out of the roof and the plastic covers are mounted again reassemble the 12-pin deutsch connector.



Now drill a hole for the cable which goes to the display. Run the cable out of the cover. Then reassemble the covers again.

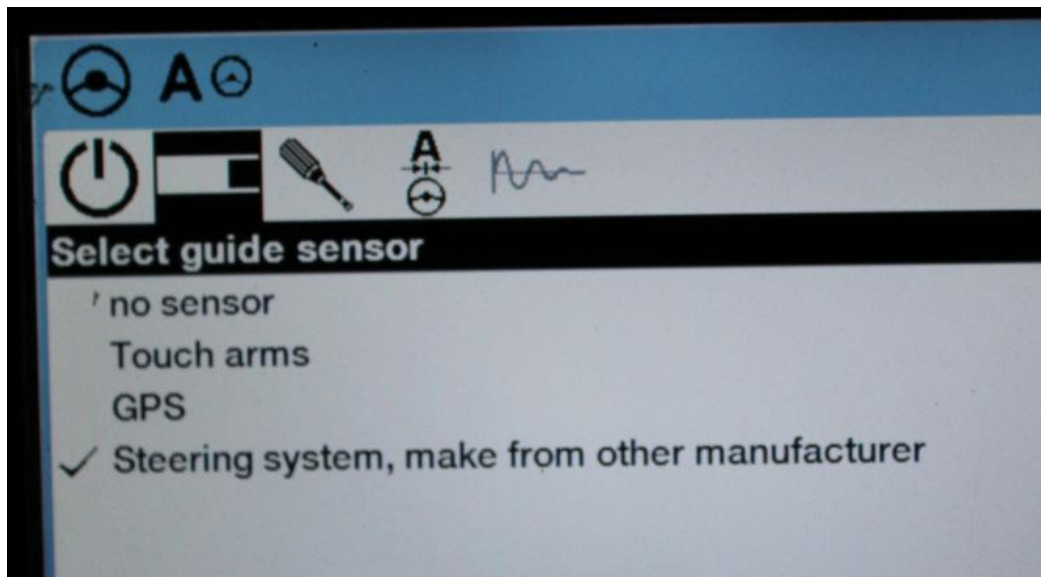
Also reassemble the display connector again.



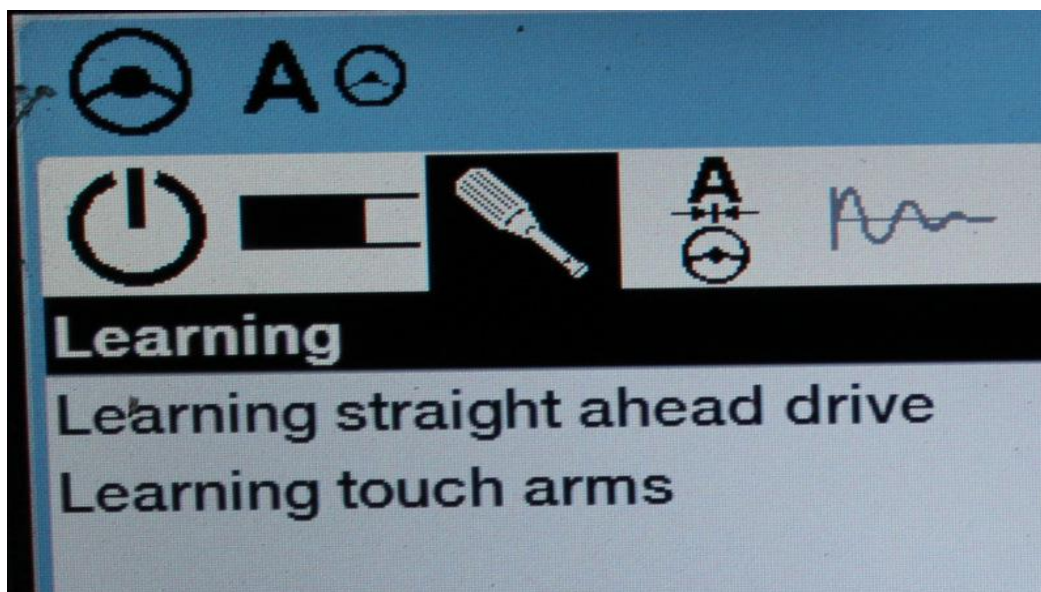
Once all cables are connected you may power up the system by simply turning the ignition key. The Claas-JD Bridge should show a blinking green LED after a few seconds and your JD display should be booting up.

When the JD display shows an autosteer warning message, your Claas-JD Bridge module works and communication has been established.

In the CEBIS you must select the "Steering system, make from...". Depending on your software version, it may also show as "ISO Steering" or "Open Steering Interface":



For good autosteer performance, the Lexion must learn "Straight driving". Use the Cebis monitor to "learn".

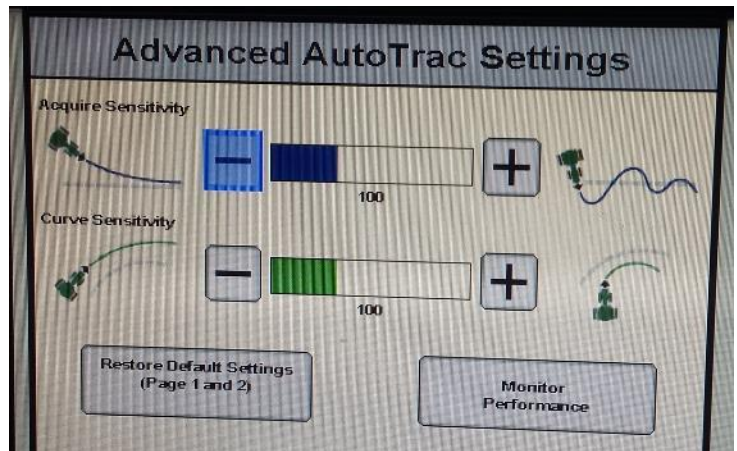
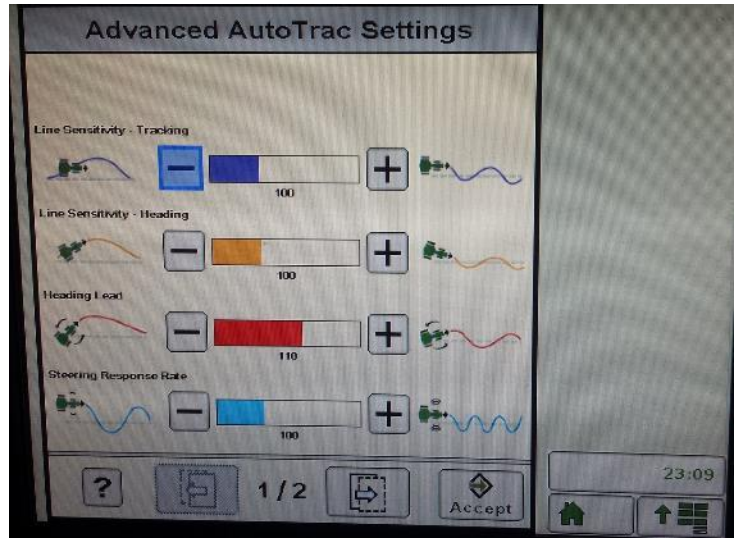


A good test to verify complete communication with both the Claas and John Deere systems is to change header size on the Cebis monitor.

It should take only a few seconds until the header size is changed on the JD side.

Step 5: 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 6: ISO Application

The Claas 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 Claas app includes:

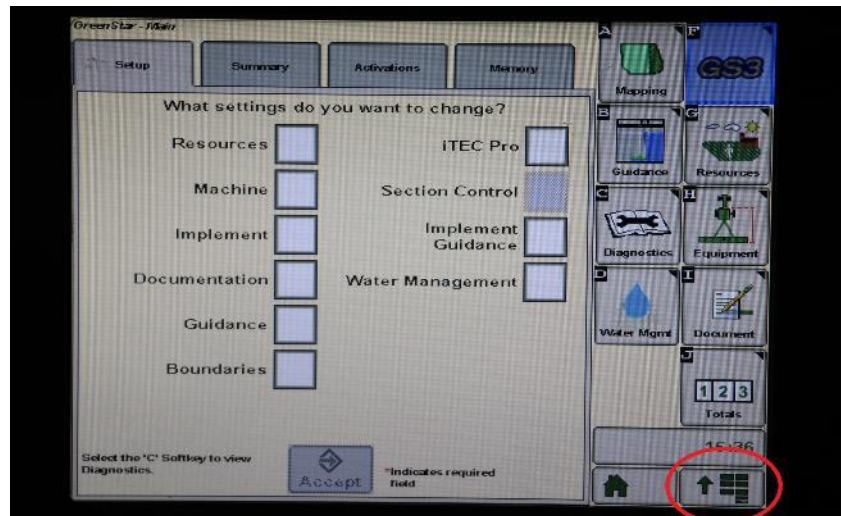
- Option to change JD crop list
- Option to change the machine type
- Yield and moisture info
- Help page

Where to find the Claas 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.

Appendix A

Connectors:

12-pin deutsch connector male to JD receiver

- pin 4 = yellow = can-high
- pin 6 = purple = 12V switched power
- pin 7 = black = ground
- pin 9 = green = can-low
- pin 12 = red = 12V constant power

26-pin JD-display connector

- pin 1 = purple = 12V switched power
- pin 8 = red = 12V constant power
- pin 14 = black = ground
- pin 18 = yellow = can-high
- pin 19 = green = can-low