

INSTALLATION MANUAL

Agra-GPS Bridge for 2006-2010 Rowcrop Tractors (Analog Steer)



MAKE: Case IH or New Holland
MODEL: Magnum or T8
YEAR: 2006-2010

Version 1.4

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Release Notice

This is the April 2026 release (version 1.4) of the CNH-JD-R-09 Bridge for CNH row crop tractors (2006-2010) installation manual.

Disclaimer

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

Important Safety Information

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

- Be alert and aware of surroundings.
- Do not operate the CNH-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 while the CNH-JD Bridge system is engaged.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling the CNH-JD Bridge system when a safe working distance has been diminished.
- Ensure the CNH-JD Bridge is disabled prior-to starting any maintenance work on the machine or parts of the CNH-JD Bridge system.
- Follow all safety instructions from the CNH system as well as the JD system!
- The CNH-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 CNH-JD Bridge. The CNH-JD Bridge is designed to bridge the communication between a Case Magnum or New Holland T8 rowcrop tractor (2008-2011) (autosteer ready) and a John Deere display (1800, 2600, 2630, 4240, 4640, and G5). This allows a JD display to create maps in the John Deere format and also provides JD autosteer.

The operator uses 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 CNH-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 CNH 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 AgraGPS CNH-JD Bridge.

The CNH-JD-R-09 kit consists of:

A) The AgraGPS JD-Bridge

B) Wiring Harness 1 (Step 1-2)

(Part# SKUCNHJDRO940PinBS2)

- (P-BRIDGE-B) to bridge (black 4-pin male end)
- (P-VALVE) to steering (grey 2-pin male end)
- (R-40 PIN) to existing GPS (black 40-pin male end)

C) Wiring Harness 2 (Steps 3+4)

(Part# SKUCNHJDRO9MABS2)

- (P-Bridge-A) to bridge (grey 4-pin male)
- to JD-12 (grey 12-pin female)
- (R-Serial) to implement display (grey 3-pin male)
- (P-Primary) to machine/primary CANbus (black 4-pin female)
- (P-ISO) to main power CANbus (grey 14-pin female)

D) Wiring Harness 3 (Steps 4+5-6)

(Part# JD-12)

- (P-100) to Wiring Harness 2 (grey 12-pin male)
- (P-Display) to Display (black 26-pin male)
- (R-GPS) to receiver (grey 12-pin male)



Preliminary

Park the machine where the ground is level, dry and clean. Leave the machine OFF during the installation. Follow safety practices and read the instructions carefully as you proceed through the install process.

Step 1: Remove Existing Nav Controller

Depending on the cab model, your nav controller connections may be on the outside below the cab rear window (top photo, under the plastic panel), or inside the cab under a black metal plate (bottom photo) behind the operator seat.

1.1 At the back of the cab, remove the cover so you can access the wiring behind.

1.2 Locate the 40-pin deutsch and 24-pin deutsch which may be connected to a nav controller (if equipped). Disconnect both from the nav controller.

Note: The nav controller is not required and can be removed if it is installed.



Nav controller mounted outside cab

-- OR --



Nav controller behind interior plate

(With the nav controller exposed: to be removed)



1.3 Move a wire from the 24-pin connector to the 40-pin on the same cable.

FROM: pin 3 of the 24-pin

TO: pin 7 of the 40-pin

This is typically done using a red deutsch removal tool (shown).

1.4 (Using Wiring Harness 1) Connect the black 40-pin deutsch from the Agra-GPS harness to the 40-pin from the machine that was modified in the last step

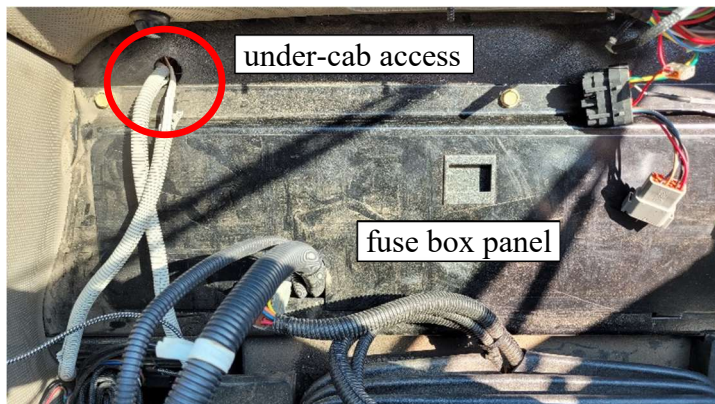
NOTE: Once step 1.4 is completed the 24-pin connector is unused by the Agra-GPS Bridge system



Step 2: Connect Hydraulic Valve

2.1 Run the 2-pin deutsch under the cab to the front left side of the tractor. It may be possible to use an access hole next to the fuse box panel.

The valve sits right in the front of the cab. Lift the tractor hood to allow for better access.



2.2 Remove the existing 2-pin connector from the valve block and connect the 2-pin from the Agra-GPS harness. Secure the cable away from any heat source and moving parts. Use plastic cable ties.

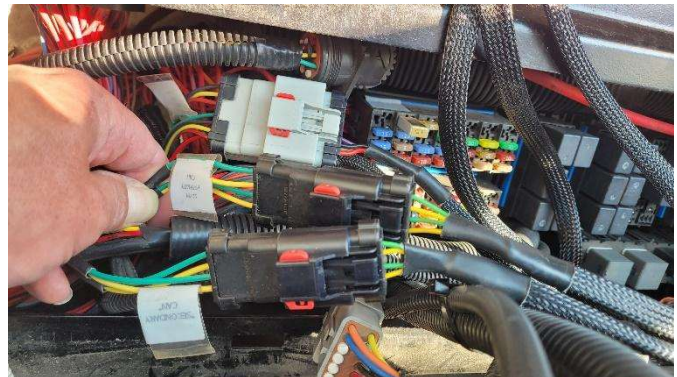


Step 3: Install Connectors in Fuse Box

3.1 (Using wiring harness 2) Remove the fuse box access panel and locate 2 connectors:

- A) the black primary CAN, (Not the “Secondary black CAN.)
- B) the grey 14-pin implement extension connector.

3.2 Remove and stow the factory CAN loopback connectors.



3.3 (Optional) If an implement controller requires a GPS signal, this can be supplied by connecting R-Serial 3-pin, which would supply NMEA serial from the receiver.

Step 4: Install Bridge

4.1 Install the Agra-GPS Bridge into the space formerly occupied by the Nav Controller, and replace the access panel.

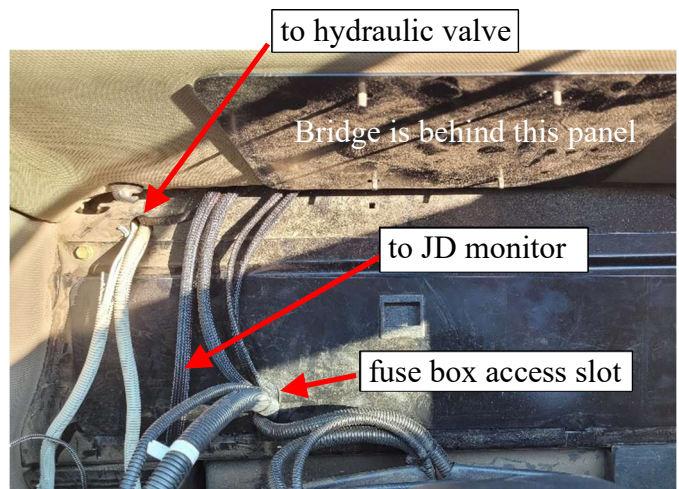
Note that the harness leads run underneath the interior wall panel.

4.2 (Using wiring harness 3) Connect the P-100 male end to the existing AgraGPS Wiring Harness 2 female.

4.3 (P-Display) black male plug run-through and connect to existing monitor (AgraGPS Vision or JD)

4.4 (R-GPS) grey male plug need to now be run to the roof to connect to the receiver (AgraGPS CRG or JD)

4.5 Replace the fuse box access panel. The final harness placement should be as shown



Step 5: Install Monitor

5.1 Route the display adapter from the bridge to the John Deere display (here a 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 kit and must be purchased separately - or in our bundled package.

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



Re-install covers on the tractor and secure all loose cables away from moving parts and heat sources.

Step 6: Connect GPS Receiver

Tractors may also require mounting adapters to accommodate the Starfire mount. The CNH-OVAL and D-JD-MB must be ordered separately.



Now take the rooftop adapter and connect from the machine to an Agra-GPS CRG receiver or a John Deere Starfire receiver. The receiver must be mounted at the front of the roof.

(See our other manual to install the AgraGPS CRG)



The rest of the bridge set-up will take place internally on your monitor at this point, please start your monitor and ensure power is connected successfully to the AgraGPS Bridge - Then complete the following steps.

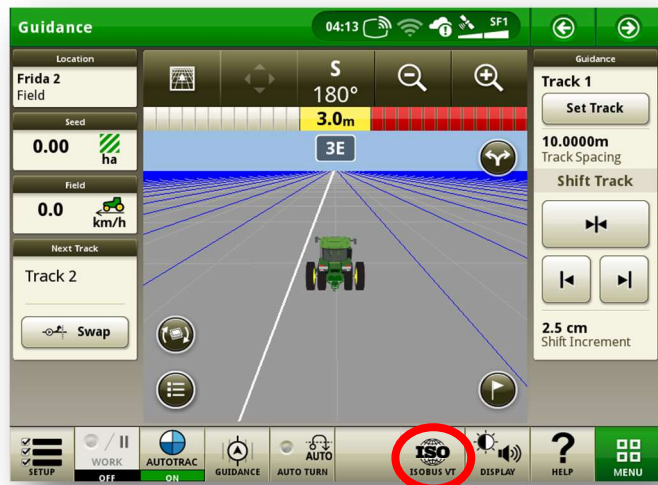
Step 7: ISO Application

The CNH 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 CNH app includes:

- Calibration
- Option to change work recording mode
- Option to change the machine type
- Optional autosteer engage button & status
- Help and Support page
- Diagnostic Page
- Advanced testing page
- Firmware update page

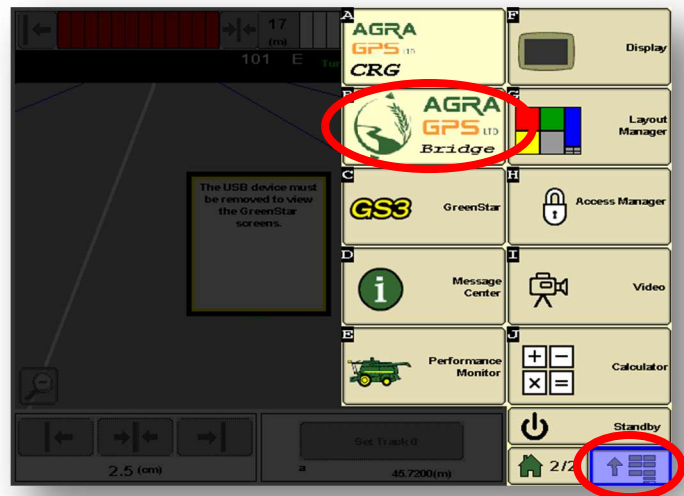
Depending on the model of JD monitor, the Bridge ISO app may be found in different locations.

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.

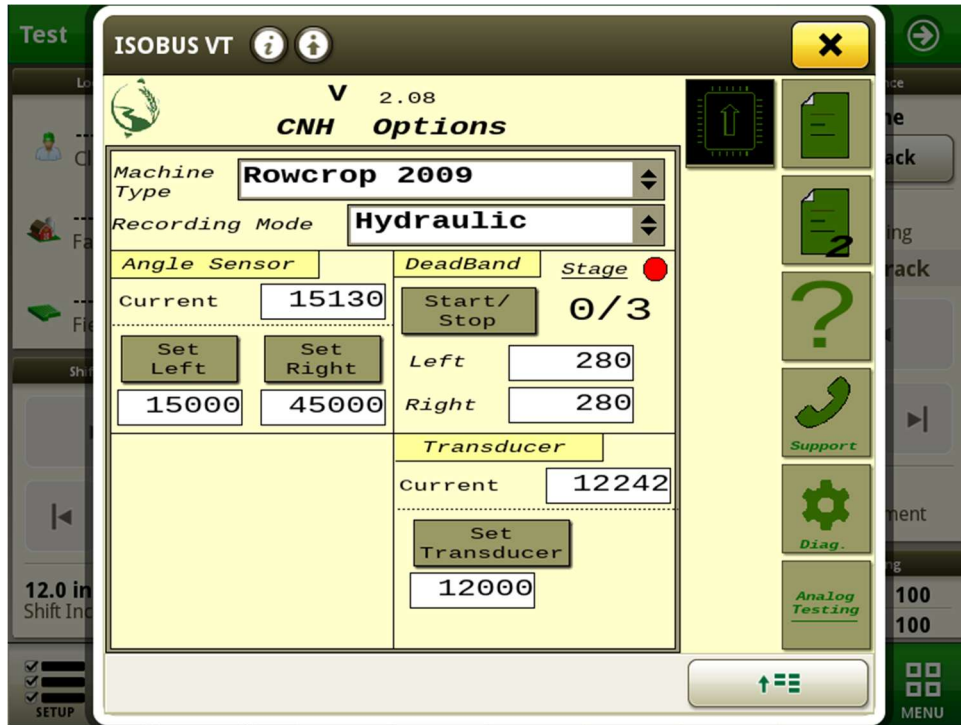
NOTE: John Deere 1800 and 2600 monitors do not show a loading bar for ISO applications, while 2630 and Gen 4 monitors do.



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.

Step 8: Calibration – ISO App



Note: Newer versions of the AgraGPS ISO app may have slight differences in layout and functionality.

Step 1 – Angle Sensor: Allows the user to set the left and right max of the CNH machine. To calibrate, steer as far left as possible and press, “Set Left”. Then, steer as far right as possible and press, “Set Right”. Ensure that the recorded "Right" value is higher than the "Left" value, and that the two values are in the thousands (note: this is opposite from Bridge versions prior to v2.00, where the Left value is higher than the right). If the values are reversed, the setting "Wheel Angle Reversal" must be toggled (see next page), and this step repeated.

Step 2 – 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”. (Technical note: the threshold for tripping movement detection is +/- 25% from the setpoint)

Step 3 – Deadband: Allows the user to calibrate the deadband of the valves. Ensure the perimeter around the machine is clear and press the Start/Stop button to begin. Steering wheels will move in response to the calibration routine. An indicator will blink yellow while calibration is in progress and will take approximately five minutes. As a rule of thumb, smaller deadband values cause the steering to change more quickly than larger values.

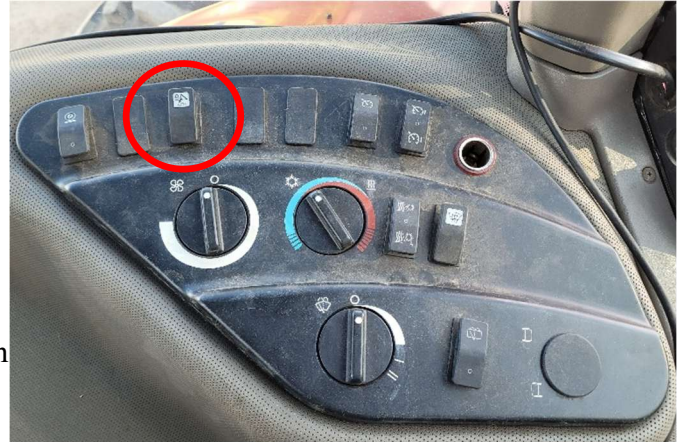


Showing "Wheel Angle Reversal" and "Valve Reversal" options. If these options are changed, calibration must be repeated.

Operation

Important – The steer enable switch, located on the side panel, must be active in order to begin autosteering. To make this switch active, move the switch to the downwards position (so the switch is NOT lit up). If previously in the upwards position, this must be done only AFTER the machine has already been started.

Enabling this switch provides power to the isolation valve.



Once the Bridge is properly calibrated, autosteer can be engaged using the button on the armrest console.

Steering performance can be tuned using settings on the JD Autotrac Guidance monitor page (tap on the title bar for advanced settings).

Map recording on the JD monitor can be controlled by autosteer resume action; or by hydraulic, 3-point-hitch, or PTO triggers.

Autopath is supported.

Troubleshooting

If the autosteer button doesn't work, try the following:

- Attempt to use the "steering wheel" button in the ISO app
- The autosteer button may be faulty and could be replaced
- If no autosteer button exists, a momentary on-off button can be custom installed as a new autosteer resume switch. On the Bridge, add a wire to the grey connector, pin 4. Attach this wire to the momentary switch, and the other side of the switch to ground.

