

INSTALLATION MANUAL

Agra-GPS CNH-JD Bridge for Patriot Sprayer



Version 1.2
June 2026

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Release Notice

This is the June 2026 release of the CNH-JD Bridge for 2016 CNH Patriot Sprayers.

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 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 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 CNH Patriot Sprayer and John Deere or Vision displays. This allows a JD display to create maps in the John Deere format and also provides straight AB-Line 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 sprayer. 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 sprayer can be activated.

NOTICE

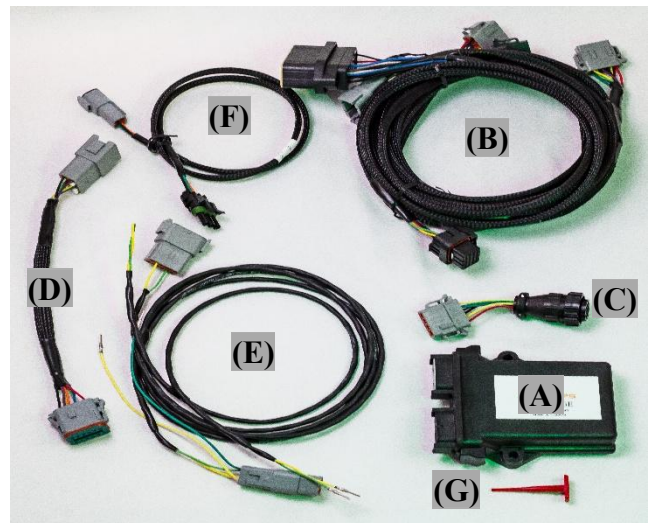
This manual is not intended to replace the manuals for the sprayer or the John Deere system. The operator must read and understand the manuals and instructions of these systems, before using the AgraGPS CNH-JD Bridge.

What's In The Box

The CNH-JD-PT kit consists of the following items:

- a. CNH-JD-PT Bridge
(SKU:ANALOGBS2)
- b. CNH-JD-PT Machine Adapter
(SKU:CNHJDPT2017MA40PINBS2)
- c. CNH-JD-PT Corner-post Adapter
(SKU:CNHJDPT2017ALTBS2)
- d. CNH-JD-PT Roof Adapter
(SKU:CNHJDPT2017RABS2)
- e. CNH-JD-PT Alternate Roof Connections
(SKU:CNHJDPT2017ALTCANBS2)
- f. CNH-JD-PT Wheel Angle Adapter
(SKU:CNHJDPT2017WABS2)
- g. Red Removal Tool
(SKU: 0411-240-2005)
- h. Wheel Angle Sensor
(SKU: PTWAMK)

NOTE: If you are missing any of these items or they appear to be damaged please contact +1 (825) 247-2477 or support@agragps.com



Step 1: Mounting the CNH-JD Bridge

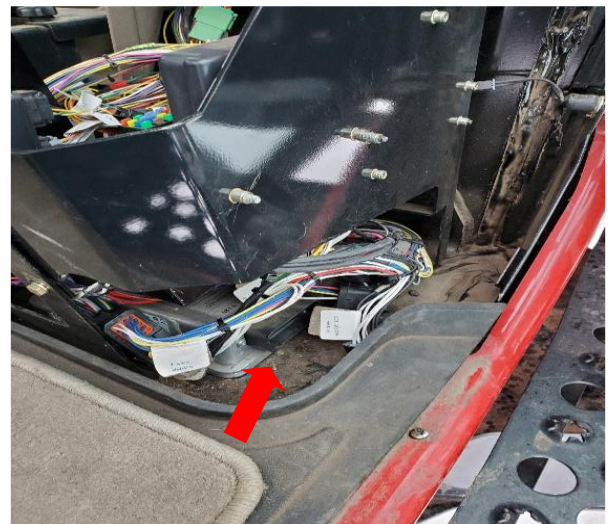
Remove the buddy seat



Remove the plastic cover that was under the buddy seat. There are bolts under the rubber floor mat that must be removed.



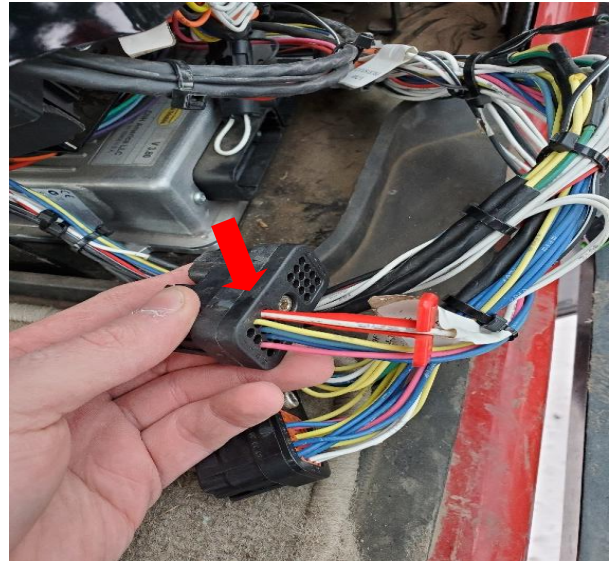
At the bottom, underneath the fuse panel, there will likely be a large silver CNH navigation controller. Remove both the 40 and 24 pin connectors from the control unit.



Using the included removal tool, remove the wire in pin 3 of the 24-pin connector. Once removed, push the pin into pin 7 of the 40-pin connector.

The 40-pin connector now has all connections required to run steering operations.

Connect the 40-pin connector of the Agra-GPS adapter.



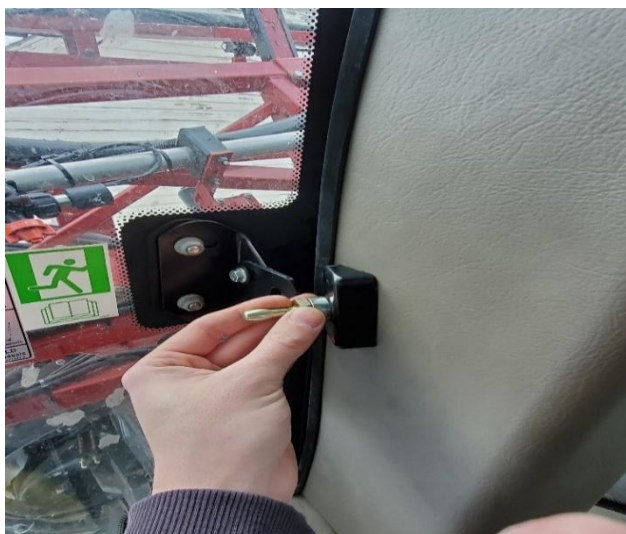
Next, you will require access to the cabling behind the right rear corner post.



Remove the bolts holding the crossbar to the corner post.



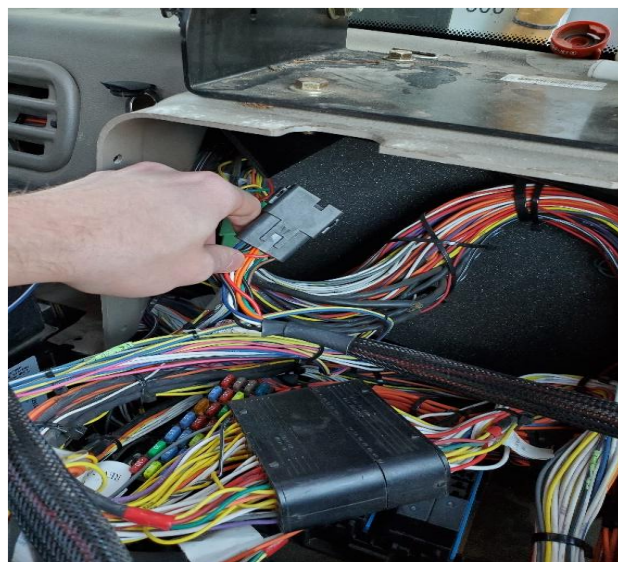
Remove the side door latch.



Remove the plastic cover revealing the post cabling.



The adapter from the fuse panel section can be fed through behind the plastic behind the seat, through to the right corner post.



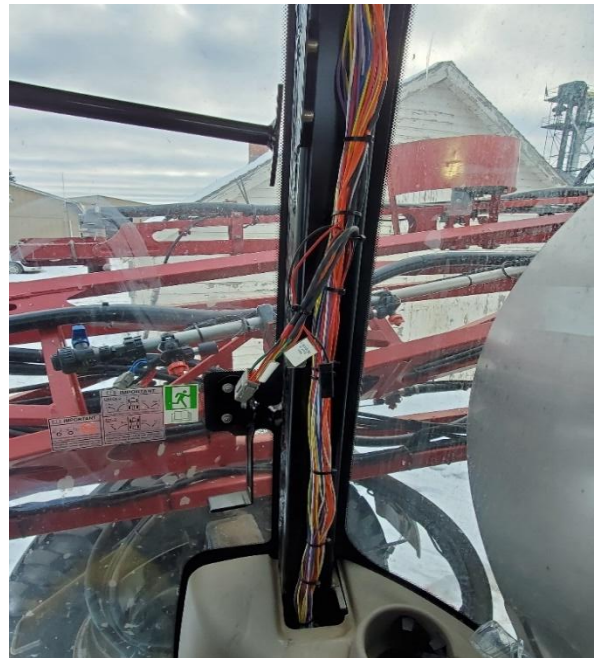
The “vent” behind the seat can be removed to assist in feeding the cable through to the corner post.



Find the connector labelled C602 behind the panel. Open it and insert the 12-pin DTM connectors of the provided AgraGPS harness.

If there is a round connector, you must use the provided corner post adapter to complete the connection.

Note: It is sometimes also called the display connector! If you do not have a display, you may only see one open connector. If a display cable exists, open the connection and insert the AgraGPS connectors.



Then connect the 12-pin black mini Deutsch and the 12 pin grey mini Deutsch plugs to the bridge. The bridge can be left behind the plastic cover below the pillar post cover. It can be easily accessed while the side door is open.



Finally, the monitor cable can be routed from where the bridge is placed to where the JD monitor is mounted.



Then connect the harness to the monitor.



Step 2: Mounting the JD receiver

The mounts for the JD display and receiver are NOT part of the CNH-JD Bridge.

The JD mount can easily be bolted to the metal bracket provided on the roof of the CNH Patriot.



Using the short 12-pin adapter cable, the JD receiver is connected to the 12-pin Deutsch in the CNH Patriot roof.

DO NOT CONNECT the John Deere GPS receiver without the adapter cable to the CNH roof outlet.



Step 3: Wheel angle sensor installation

The machine requires the installation of a wheel angle sensor.

The sensor kit includes these components:



The sensor is installed on the hydraulic cylinder of the front right wheel.



Use supplied bolts to install L bracket on outside end of the right-side steering cylinder. Place the L bracket on the front.



Place the clamp on the steering cylinder tube, then install the sensor housing bracket on the back side.



Install threaded rod with ball joints to connect both brackets.

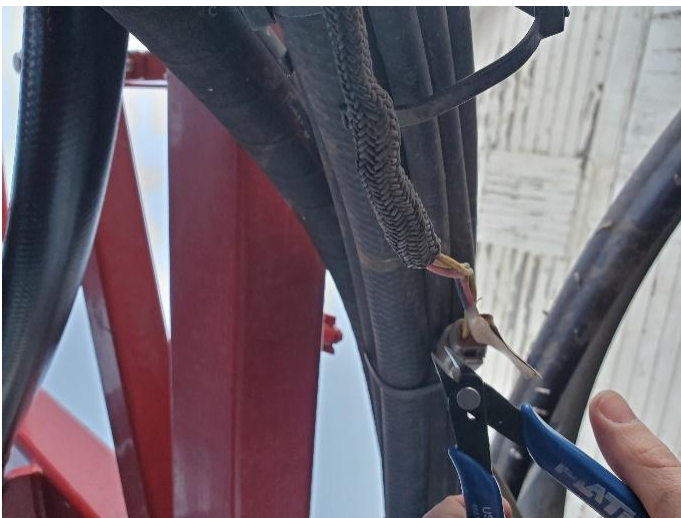
For best accuracy: Have wheels pointing straight, and adjust the threaded rod to have sensor arm pointing straight forward.



Locate the 4-pin DTM plug, which connects to the CNH steering sensor. Disconnect the plug.



Cut the zip ties in order to bring the female plug closer to the chassis of the machine.



Bring the plug closer to the chassis of the machine and replace the cut zip ties.

Then connect the wheel angle sensor connector to the 4-pin DTM female.

The other end of the adapter will connect directly to the sensor.



Step 4: Once the receiver is installed, move on to the Bridge User Manual for instructions on how to access the ISO app

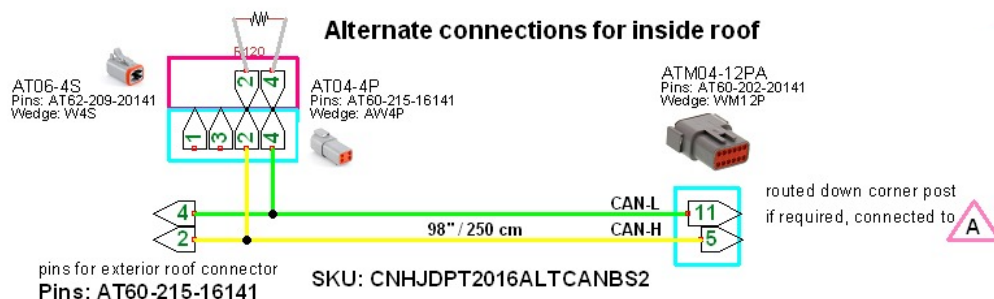
NOTE: If you do not have the Bridge User Manual, it can be found at <https://www.agragps.com/bridge-user-manual-english/>

Step 5: Alternate Connections For Inside Roof (optional)

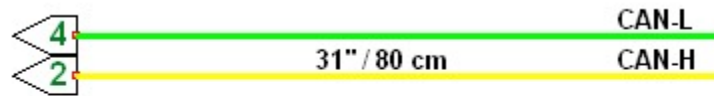
If you have completed the installation and the monitor is not displaying the ISO app, additional connections need to be made within the cab roof.

Some Patriots are missing the ISOcanbus connections on the roof. Depending on the machine, there are a couple of ways of correcting this issue; however, all require you to lift the roof in order to gain access to the wiring.

The first solution is to take the loose wires of the Alternate Roof Adapter and insert them into the 2 and 4 positions of the 12-pin Deutsch in the roof. The other side of the Adapter will then be routed down into the cab.



If you have a round connector in the roof, take the loose wires and pin them into the 7 and 8 positions of the round connector. The other side of the loose wires will pin into the 12-pin Deutsch in the roof.



loose canbus wire, with DT pins
they go to X-015M1 pins 7 (CAN-H) and pin 8 (CAN-L)
this is a round plug and wires must be T-into the harness!

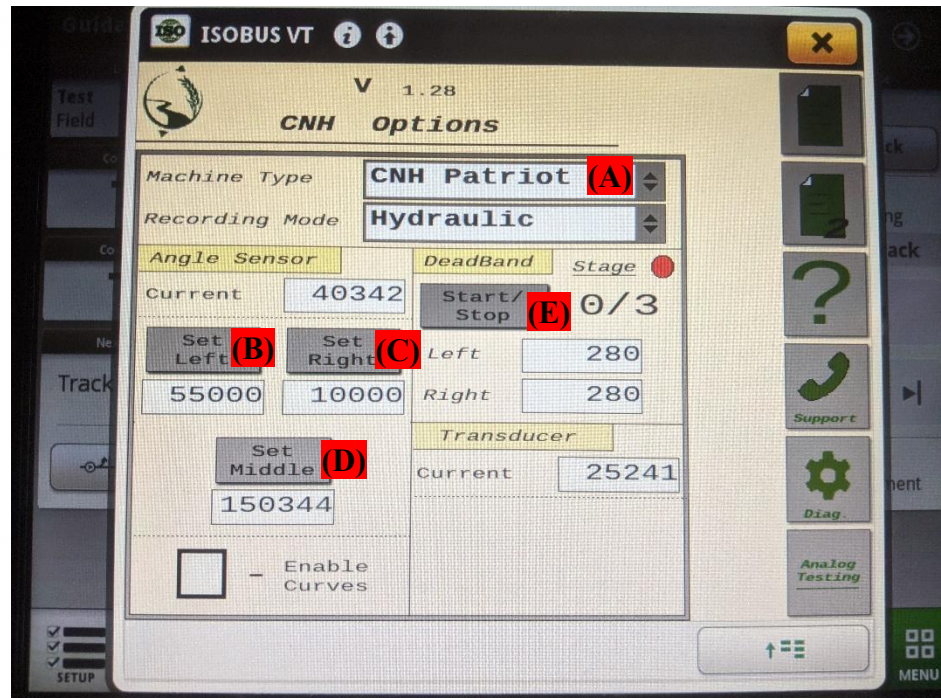
Step 6: Calibration

Once completed you can see the range of the wheel angle sensor in the AgraGPS ISO app in the JD display.

(A) Select "CNH Patriot" in the Machine Type section.

You must calibrate the left and right values, as well as the center.

The maximum value to the left should be 65535, and the minimum to the right will be zero. The sensor should not display either the maximum or minimum if mounted correctly.



(B) To calibrate, turn the wheels all the way to the left and press "Set Left"; it will save the value in the box next to the button.

(C) Turn the wheels all the way to the right, and press "Set Right".

(D) Then center the wheels and press "Set Middle".

Next the dead band of the valve must be set.

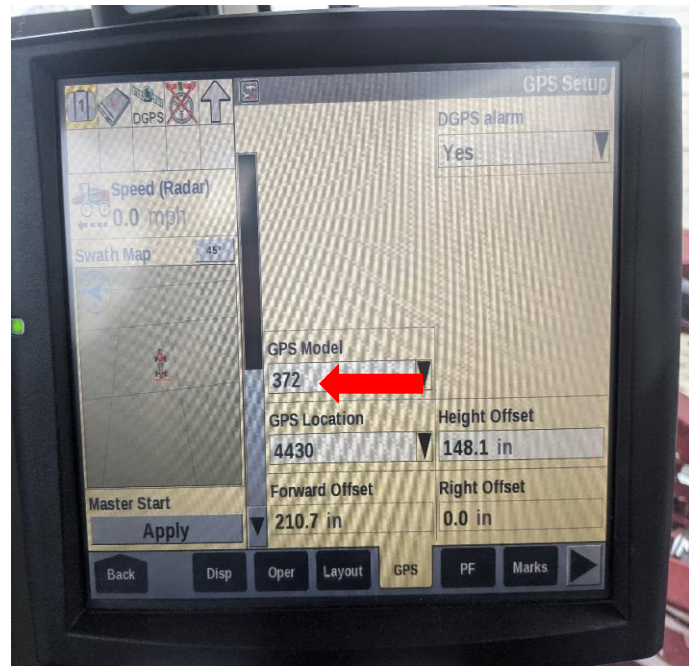
(E) To automatically calibrate, center the wheels and press "Start". The automatic calibration procedure can take up to 10 minutes.

For safety, ensure nobody and no objects are near the wheels, as they may move during the calibration process.

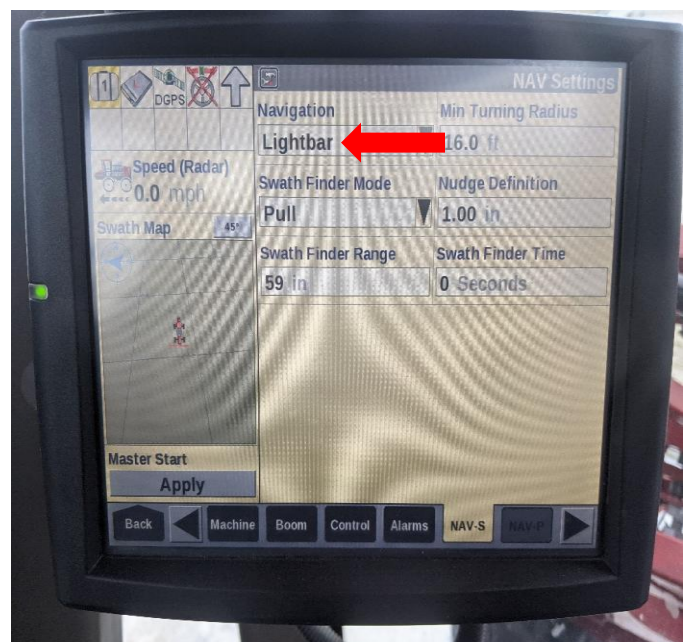
Step 7: Pro 600/700 GPS

To allow the Pro 600/700 display to receive GPS information from the bridge, ensure the following settings are applied in the monitor.

Set GPS model to “372”



Set Navigation to “Lightbar”



Set connection type to “CAN-A”

