INSTALLATION MANUAL

Agra-GPS CNH-JD Analog Bridge for 2014-2017 Row Crop Tractors (Analog Steer)

MAKE: Case IH or New Holland or Steyr
MODEL: Puma, T7, Steyr CVT
YEAR: 2014-2017

Version 1.3
Feb 2026

Feb 2026

AGRA-GPS LTD

Contact information
Agra-GPS Ltd.
Box 2585
Stony Plain, AB
T7Z 1X9
CANADA
+1 (825) 247-2477
support@agragps.com
www.agra-gps.com

Release Notice

This is the February 2026 release (version 1.3) of the installation manual for the CNH-JD Bridge for row crop tractors (2014-2017).

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 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 away 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 Puma or New Holland T7 row crop tractor (2014-2017) (autosteer ready) and a John Deere display (1800, 2600, 2630, 4240, 4640, or 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

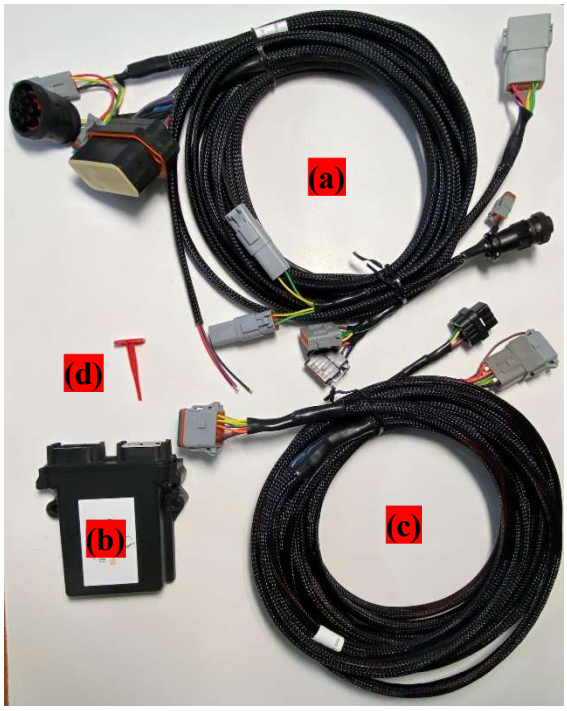
This manual is not intended to replace the manuals for the tractor or the John Deere system. The operator must read and understand the manuals and instructions of these systems, before using the AgraGPS CNH-JD Bridge.

What's In The Box

In your order you should receive the following items:

a. CNH-JD-RA Harness Kit
b. CNH-JD-RA Bridge
c. JD12 Harness for connection to receiver and monitor
d. Pin Removal Tool (Red)

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



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: Installation

Open the Nav controller cover

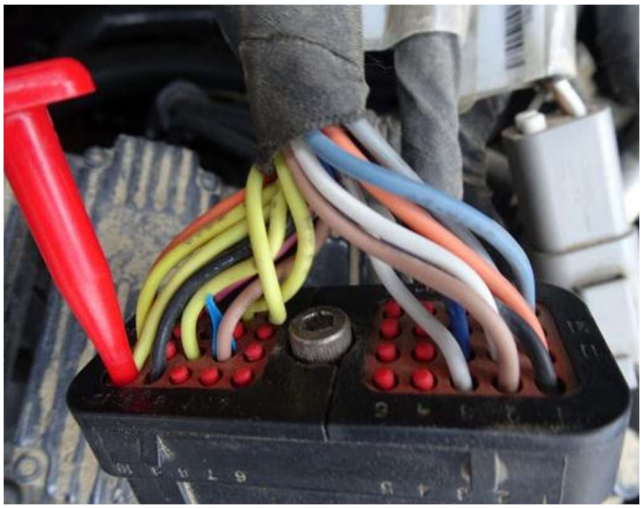
Remove the control cover on the left side behind the buddy seat.

The cover is connected with three Phillips screws.

Remove the Nav controller

Locate the 40-pin and 24-pin black connectors 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.



Move Wires

Move 2 wires from the 24-pin connector and re-pin them to the 40-pin on the same cable.

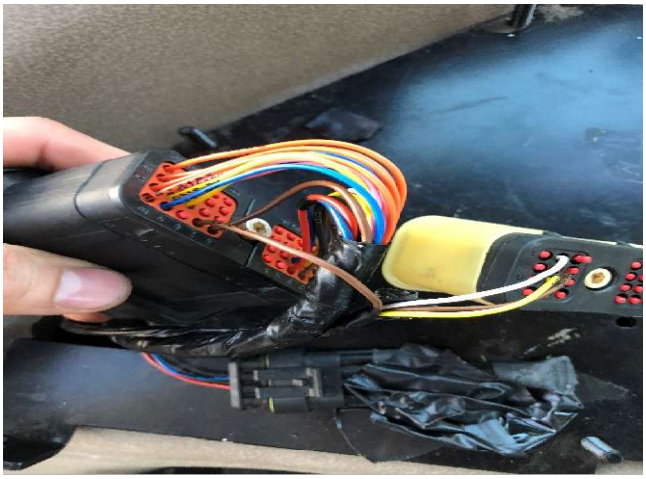
FROM: pin 3 of the 24-pin
TO: pin 7 of the 40-pin

FROM: pin 4 of the 24-pin
TO: pin 16 of the 40-pin

This is typically done using a red pin-removal tool (supplied in the kit).

NOTE: the 24-pin connector is unused by the Agra-GPS Bridge system.

Connect the black 40-pin adapter to the 40-pin connector from the machine that was modified in the last step.



Run the 2-pin Deutsch under the floor in the inside cab to the front where the clutch is located. There you can find an outlet with a rubber pad.

Cut the rubber pad and run the cable to the outside under the hood.

The valve sits outside in the front of the cab and may be difficult to reach. Lift the tractor hood to allow for better access.

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

Next locate the ISO and diagnostic connectors (both are circular and black).

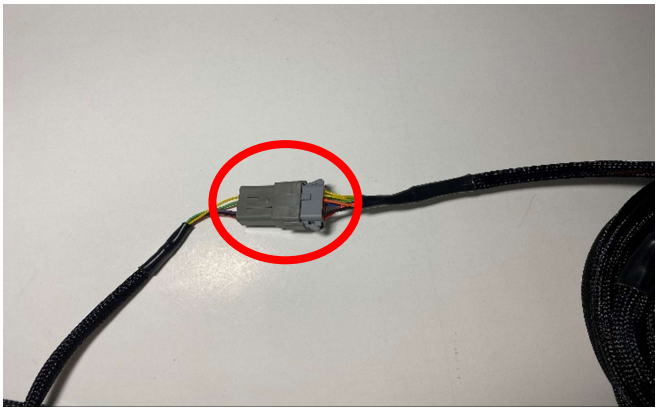
Connect both connectors. The diagnostic connector has to be connected to the top diagnostic port.

The ISO has to be connected to the in-cab ISO socket.

Note:
Some Steyr models have it behind a cover behind of the cab.

Note:
Some tractors don´t supply battery power at the ISO in-cab socket. In this case the JD display won´t shut down correctly and doesn´t save the data after turning off the tractor.
Run a wire from the grey 12 Pin Deutsch (Pin 6) to a constant 12V power source to solve the problem.

Next connect the final 12-pin Deutsch male to the JD-12 harness

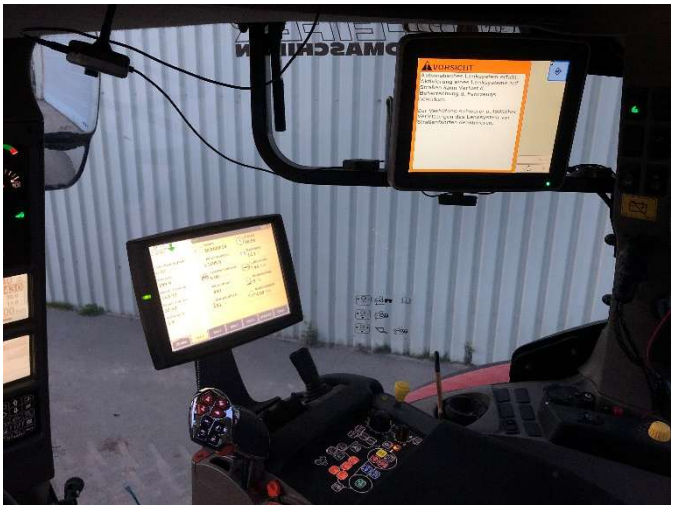


Then connect the two 12-pin Deutsch mini plugs to the bridge and mount the bridge in a suitable area away from any heat sources.

Now run the 12-pin Deutsch male of the JD-12 to the outside of the cab to the JD receiver mount.

Mount the JD receiver and connect it to the JD-12.

Run the black connector of the JD-12 harness to the John Deere display and connect it.



(here a 2630)

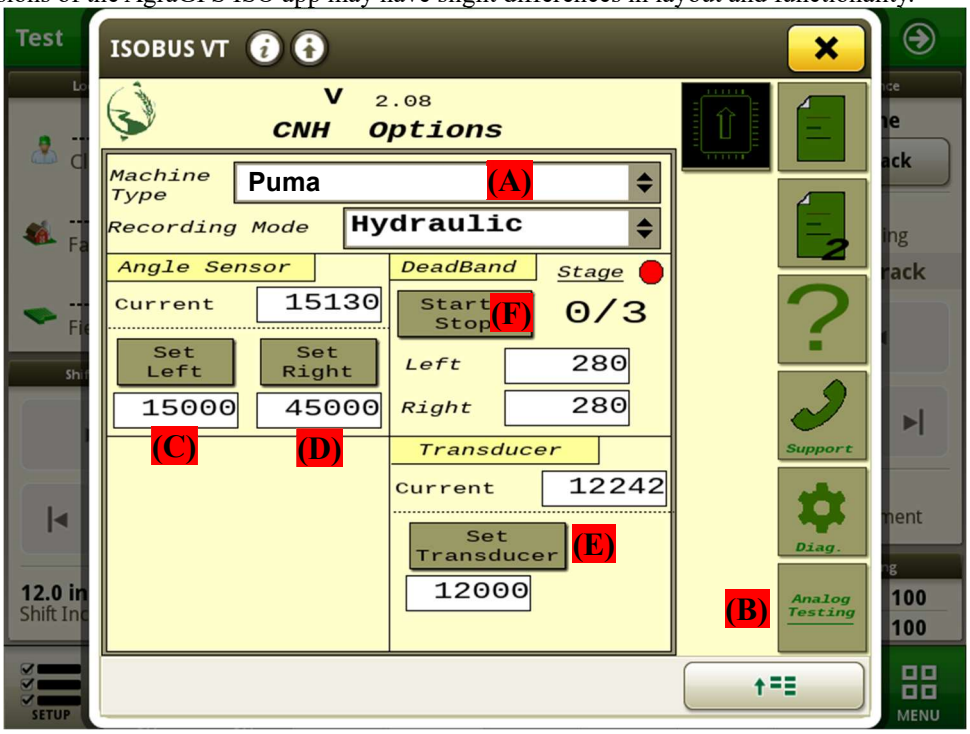
Reinstall covers on the tractor and secure all loose cables away from moving parts and heat sources to complete the installation.

Important – The steer enable switch must be active in order to begin autosteering. To make this switch active, move the switch to the downwards position from the upwards position (so the switch is not lit up), AFTER the machine has already been started. If the switch is lit, the machine is considered to be in "road mode" and will not autosteer.

Step 2: Calibration

Refer to the Bridge User Manual for basic steps to access the Virtual Terminal on the JD monitor, where the Bridge ISO app can be found. **NOTE:** If you do not have the Bridge User Manual it can be found at agragps.com.

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



****CAUTION**** For safety, ensure nobody and no object is near the front wheels, as the wheels will move during this process.

(A) Main page: ensure "Puma" is selected in the Machine Type drop-down

(B) First verify that the valve can be driven to steer the front wheels in the correct direction. For this, there is an "Analog Testing" page. At the bottom, select the "Activate" checkbox. Then press-and-hold the arrow buttons to confirm the front wheels steer correctly. If they do not move, ensure Field mode is enabled (not Road mode). If still no movement, there is likely a wiring problem. If they move but are left-right backwards, then select the "Reverse Steering Valve" checkbox on the main page.

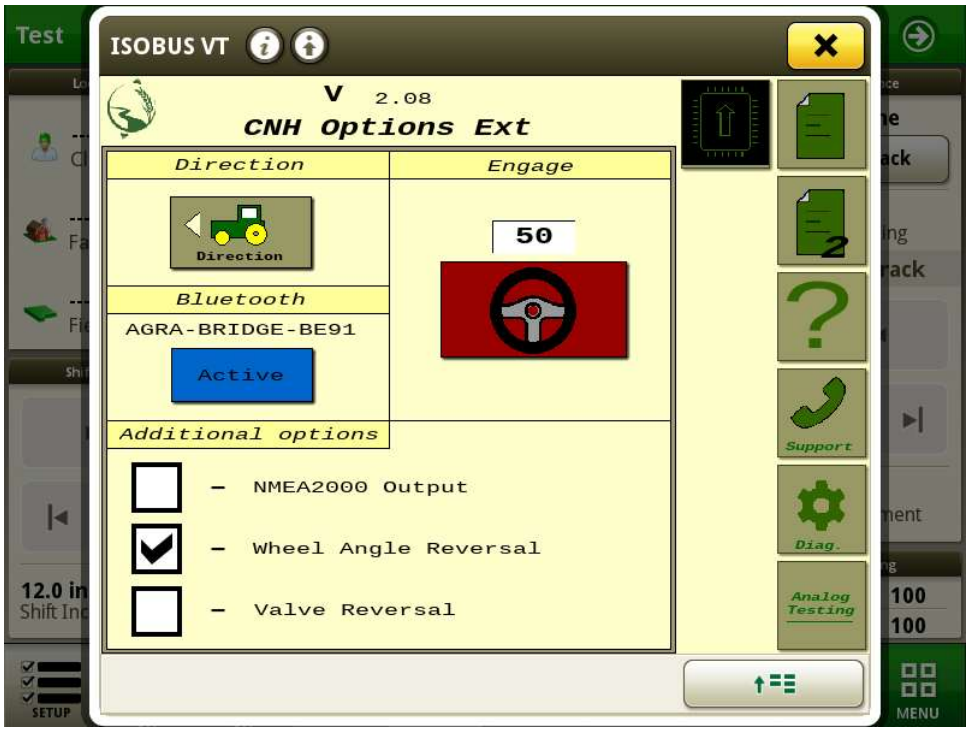
The wheel angle sensor value is shown as “Current”. The minimum possible value is 0 (to the left), and the maximum is 65535 (to the right). It should not display either the maximum or minimum if the sensor is connected correctly. If the left value is higher than the right, then you must select the “reverse wheel angle” checkbox on the main page.

(C) On the Analog Calibration page, 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.

(D) Turn the wheels all the way to the right, and press “Set Right”

(E) 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)

(F) 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, larger deadband values cause the steering to change more quickly than smaller values. These values can also be adjusted manually.



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