

INSTALLATION MANUAL

Agra-GPS MACDON-JD Bridge for M1 and M2 Series Windrower



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Release Notice

This is the July 2026 release of the Macdon-JD Bridge Installation Manual.

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 MACDON-JD Bridge IF YOU DISAGREE WITH THE DISCLAIMER.

Important Safety Information

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

- Be alert and aware of surroundings.
- Do not operate the MACDON-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 MACDON-JD Bridge system is engaged.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling the MACDON-JD Bridge system when a safe working distance has been diminished.
- Ensure the MACDON-JD Bridge is disabled prior to starting any maintenance work on the machine or parts of the MACDON-JD Bridge system.
- Follow all safety instructions from the MACDON system as well as the JD system!
- The MACDON-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 MACDON-JD Bridge! The MACDON -JD Bridge is designed to bridge the communication between MACDON M1 and M2 Series Windrower and a John Deere display (1800, 2600, 2630, 4240, 4640 and 5Gen). This allows a JD display to create maps in the John Deere format and provides straight AB-Line autosteer.

New for 2025 is the support for CRG-Vision displays!! The install is identical regardless of whether the display is a John Deere display or the Agra-GPS CRG-Vision display and receiver.

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

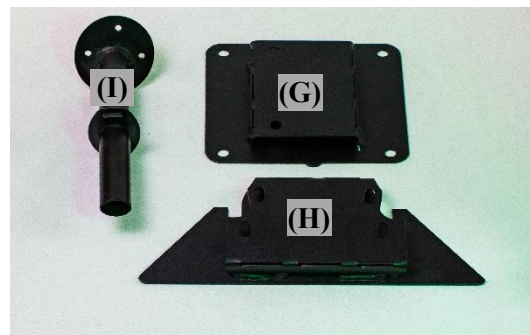
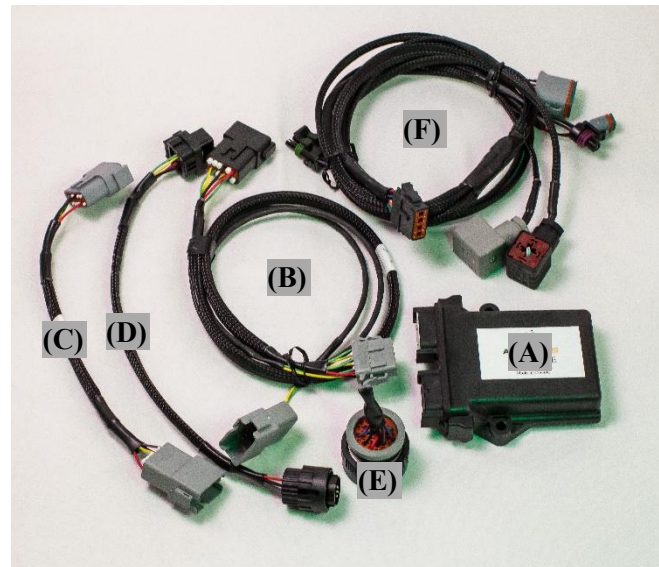
NOTICE

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

What's In The Box

The Macdon-JD kit consists of the following items:

- A. Macdon-JD Bridge
- B. Macdon-JD Machine Adapter
(SKU: MACDONJDMA)
- C. Macdon-JD Roof Adapter
(SKU: MACDONJDRA)
- D. Macdon-JD Display Adapter
(SKU:MACDONJDDA)
- E. Macdon-JD Passthrough Connector
(SKU: MACDONJDPTC)
- F. Macdon-JD Valve Adapter
(SKU:MACDONJDVA)
- G. Square Bridge Mount
- H. Triangle Roof Mount
- I. Display Mount



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 Bridge

Ensure MACDON-JD Bridge is installed firmly into the bridge case and that the case is installed onto the included bridge case mount as pictured.



Locate installation location of MACDON-JD Bridge Mount under the front-right of cab as shown in the picture.



Install MACDON-JD Bridge Mount with plugs facing towards center of machine

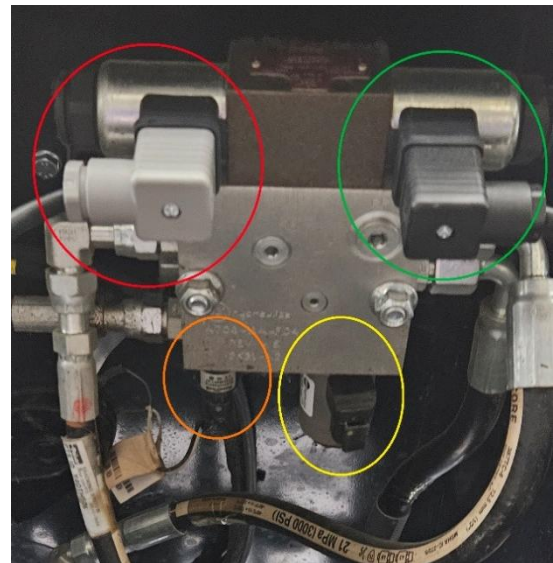


Step 2: Installing the Valve Adapter

Locate the Hydraulic Steering Block under the front-left of the cab.



Note the 4 individual installation plug locations on the hydraulic block as circled in the picture, and the corresponding connectors on the Valve Adapter as shown in the picture below.



Red – Right Valve Control

Green – Left Valve Control

Yellow – Main Valve Control

Orange – Steering Wheel Kickout Sensor



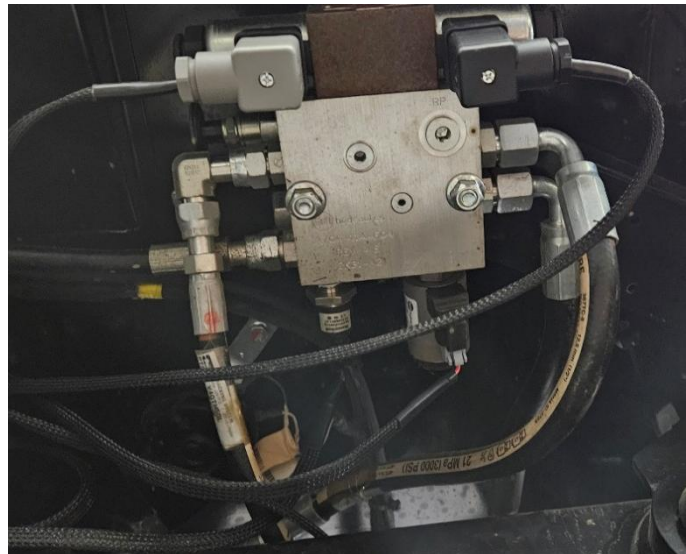
NOTE: The screw threads on the Valve Control Plug may be fragile and prone to breaking with excessive force. Avoid pulling on connector or applying weight onto either connector.

If existing connectors are installed on the Right and Left Valve control plugs, remove them via the screw on the bottom of the connector. The connector seals may also be transferred onto the Valve Adapter to prevent dirt and moisture contamination, as pictured.



Install the Right and Left Valve Control Plugs as shown above, with wires facing outward, and tighten the screw on the bottom of the connector to secure in place. Ensure that minimal weight is applied to the connector to prevent damage to the plug.

Install the Steering Wheel Sensor Connector and the Valve Main Control Connector in the back of the hydraulic block as shown above. Ensure that both connectors 'click' into place and are firmly locked into the plugs.



Next, retract the main stairs of the machine by using the lever as highlighted.



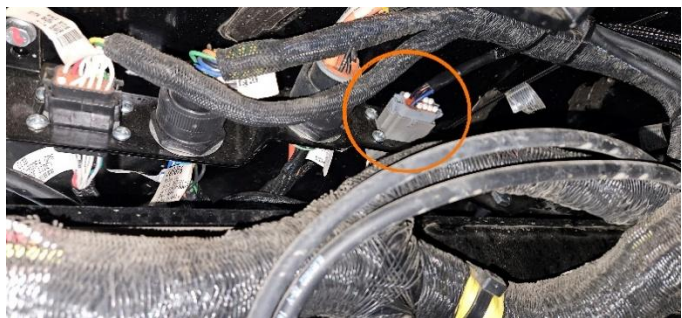
Then, locate the Secondary machine plug assembly behind the stairs as shown.



Locate the Grey C14C plug mounted on or near the Secondary machine plug assembly, as pictured. Some machine configurations may come with a Green C18A plug mounted to the assembly, which should be swapped with the loose Grey C14C plug using the 4 screws on the mount.



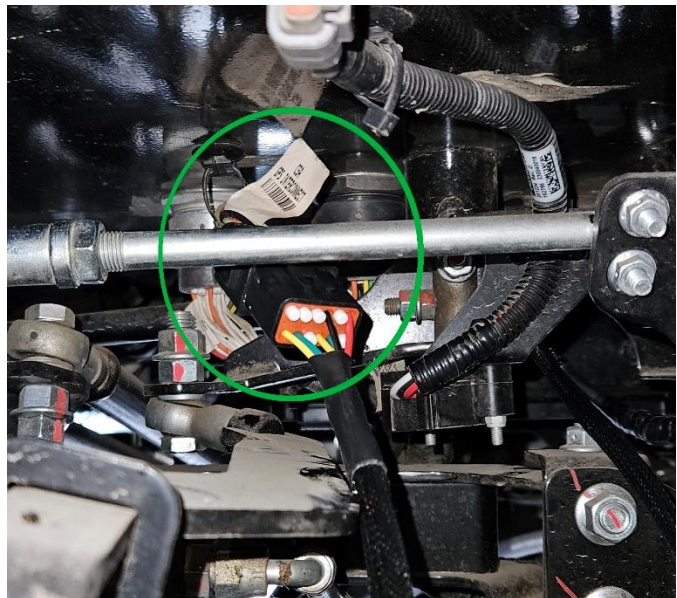
Install the Grey 12-pin plug of the Valve Adapter, into the Grey C14C plug as shown. Ensure the connector is fully installed and clicked into place and the cabling is secured in place or away from moving components of the machine that could cause pinching or bending.



Locate Primary Machine Connector Plug C5A behind the bridge mount location near the front-right of the machine beneath the cab as shown in the picture.



Plug the black 12-pin of the valve adapter into the black C5A plug as shown in the picture. Ensure the connector is fully installed and clicked into place and the cabling is secured in place or away from moving components of the machine that could cause pinching or bending.



Locate the Wheel Angle Sensor beneath the center of the cab near the front of the machine.



Plug the Wheel Angle Sensor Connector of the Valve Adapter into the wheel angle sensor plug as shown. Ensure the connector is fully installed and clicked into place and the cabling is secured in place or away from moving components of the machine that could cause pinching or bending.

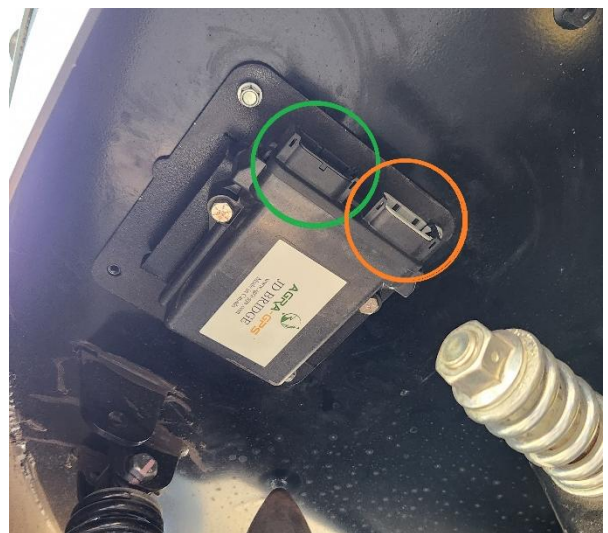


This step only applies to M2 machines. If you are installing on an M1, please disregard this step; this connection does not need to be made.

Connect the grey 12 pin connector of the Valve Adapter to C6A; this connector is located further back from the front of the machine relative to connector C5A.



The final two mini 12-pin adapters of the Valve Adapter need to be installed into the bridge. Ensure that both sides of each connector click firmly into place.



Step 3: Installing the Monitor Adapter and Passthrough Connector

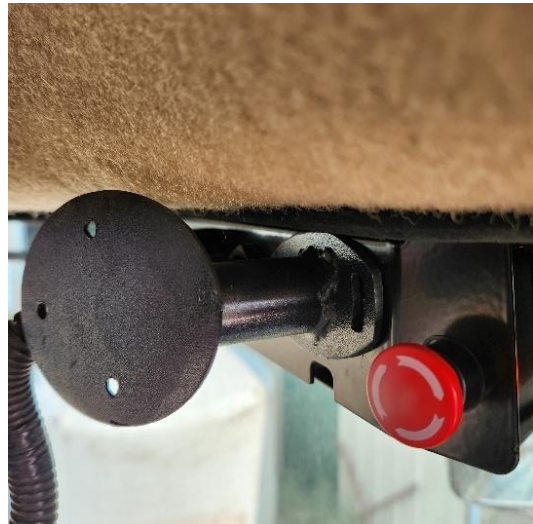
Locate the Display Adapter and Passthrough Connector



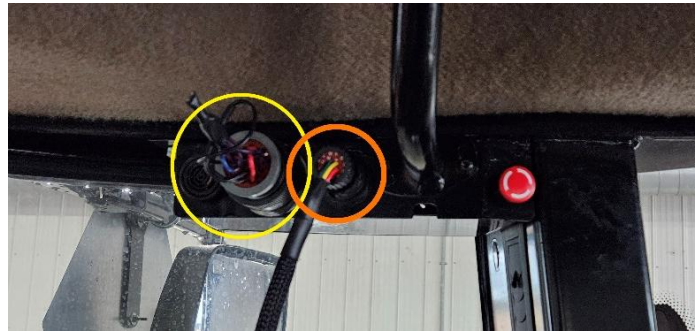
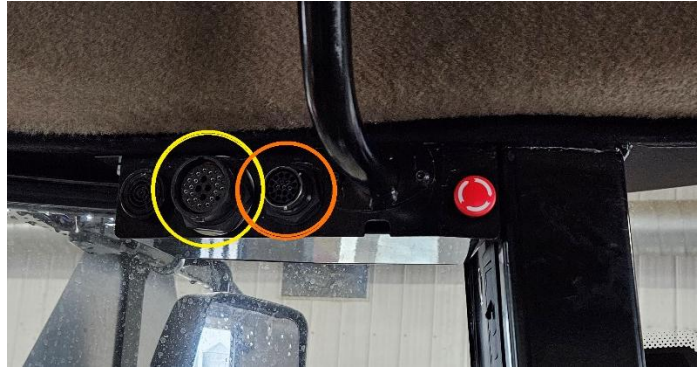
Locate the Display Mount



If an existing monitor mount is not installed into the machine, install the replacement in the designated slot beside the “Road Mode” switch as shown.



Install both the Display Adapter and Passthrough Connector into the plugs next to the monitor mount as shown. Ensure both connectors are firmly locked into place. Mount the monitor and plug the other end of the Display Adapter into the Display.



Step 4: Installing the Roof Adapter

Locate and install the Triangle Roof Mount onto the front roof of the machine, as shown.



Locate and install the Primary GPS Receiver Mounting Bracket onto the Base Mount



Once the mounts are securely in place, the GPS receiver can be attached to the bracket.



Depending on the configuration of the machine, the GPS receiver connector may already be available below the GPS receiver mount as highlighted in the picture.

If a connector is already available outside the cab, skip to the final step.

If your machine was delivered “Trimble ready,” it may have the 12 pin DTM Trimble connection on the outside. You can use the adapter delivered with the kit to connect a JD Starfire or use the next step to get the JD connection from inside the roof.

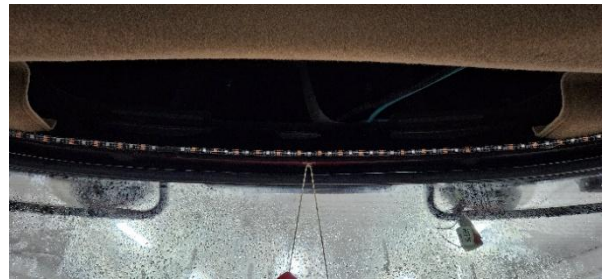


If no GPS receiver connector is present outside of the cab of the machine, one must be pushed through the rubber grommet from within the cab.

To access the connectors, first remove the front shade by removing the two bolts on either side, as shown.



After removal of the front shade, the front ceiling panel can be removed to access the front ceiling compartment.



Machines may come installed with one or two different GPS receiver connectors and should be easily accessible within the ceiling compartment.

Connector C666A is shown in the picture and works natively with all compatible GPS receiver units. An alternative smaller 12-pin connector may also be available and is usable via the Macdon Roof Adapter.



Either connector may be used with the Macdon-JD system. Find one of the connectors and pass it through the rubber grommet within the ceiling compartment.

Connect the GPS Receiver to the available connector coming from the rubber grommet. If the connector available is not the native GPS receiver connector, use the provided adapter cable.

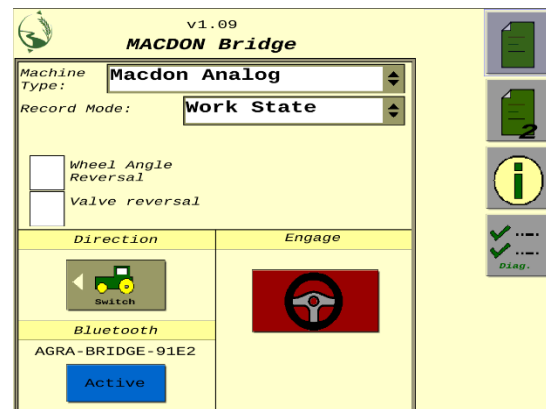
Step 5: Once the receiver is installed, move on to the Bridge User Manual for instructions on how to access the ISO app

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

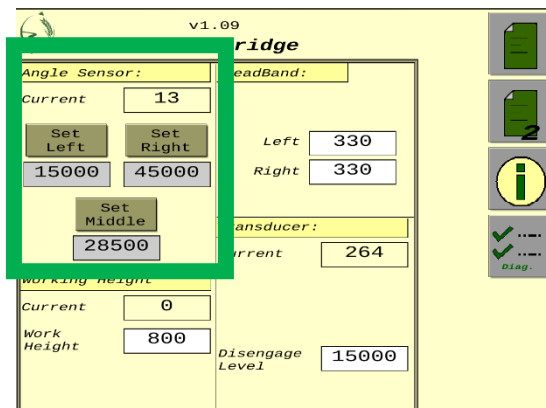
Part 6: Calibration of Machine via Agra-GPS ISO APP

Once installation of the Agra-GPS ISO App is completed, it must be used to calibrate the sensors of the machine before steering to optimize performance.

Take note of the main calibration page from within the app, and ensure that setting “Machine Type” is set to “Macdon Analog”.



The left side of the calibration page contains information about the wheel angle sensor, including the current value in addition to the values corresponding to maximum left and maximum right. These values will be calibrated in the next step.



Warning: Make sure the area around the machine is clear, as the machine will be moving and turning during the calibration steps.

With the machine running and after ensuring the area around the machine is clear, move the machine forward slowly followed by turning the steering wheel all the way to the left, then press “Set Left” to save the value.

Repeat the same procedure with turning the steering wheel all the way to the right, then press “Set Right” to save the value.

Bring the machine to rest, return the steering wheel to the center position, and verify that the current wheel angle value is approximately half-way between the left and right max values set. If not, repeat this calibration step.

The right side of the calibration page contains information about the DeadBand settings of the machine, which control the minimum power required to steer the machine left and right.

These values can be modified to adjust steering behavior. If the machine is hanging consistently to one side, increase the opposite deadband value in increments of 10 until the machine tracks centered.

For example, if the machine is consistently tracking 3 inches to the left, increase the right deadband value.

The Transducer section is for adjusting the required effort to disengage the steering system by moving the steering wheel while engaged.

Decreasing the value will make it easier to disengage; however, if the value is set too low, the system may disengage on fast maneuvers.

MACDON Bridge v1.09

Angle Sensor: Current 13

Set Left 15000 Set Right 45000

DeadBand: Left 330 Right 330

Set Middle 28500

Working Height: Current 0 Work Height 800

Transducer: Current 264 Disengage Level 15000

Diag.