

# GETTING STARTED GUIDE

## ISOBUS for the Trimble® TMX-2050™ Display

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## Agriculture Business Area

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Responsible Party:  
Trimble Navigation  
935 Stewart Drive  
Sunnyvale CA 94085  
Telephone: 1-408 481 8000

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# Introduction

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With this guide, you can set up Task Controller and Virtual Terminal.

## About this guide

ISOBUS is a set of software and hardware standards that makes possible the communication between equipment made by different manufacturers.

With ISOBUS, you can use the Trimble® TMX-2050™ display to control an ISO-certified implement without an additional display. An ISO-certified implement has small computers called electronic control units (ECUs) which send signals to the TMX-2050 display. An ISO-certified tractor has a tractor ECU (TECU) installed on it. ECUs on implements enable you to control the operation:

- With the TMX-2050 display, using Task Controller (an optional feature)
- With Virtual Terminal, an on-screen window that opens on the TMX-2050 display to access directly the functions provided by the ECUs

This manual describes how to install and configure the ISOBUS Virtual Terminal and Task Controller on the TMX-2050 display.

## Additional Trimble resources

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- **Product manuals and other publications** - Access various publications (including product manuals, release notes and quick reference guides) about Trimble products at [http://www.trimble.com/Support/Support\\_AZ.aspx](http://www.trimble.com/Support/Support_AZ.aspx).
- **Trimble training courses** - Consider a training course to help you use the TMX-2050 display to its fullest potential. For more information, go to [http://www.trimble.com/Support/Index\\_Training.aspx](http://www.trimble.com/Support/Index_Training.aspx).

## Technical assistance

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2. Select the type of support applicable to you.

If you need to contact Trimble technical support:

1. Go to <http://www.trimble.com/global-services/support.aspx>.
2. Click [Request Technical Support](#) and login to complete a support request.

# Installation

## In this chapter:

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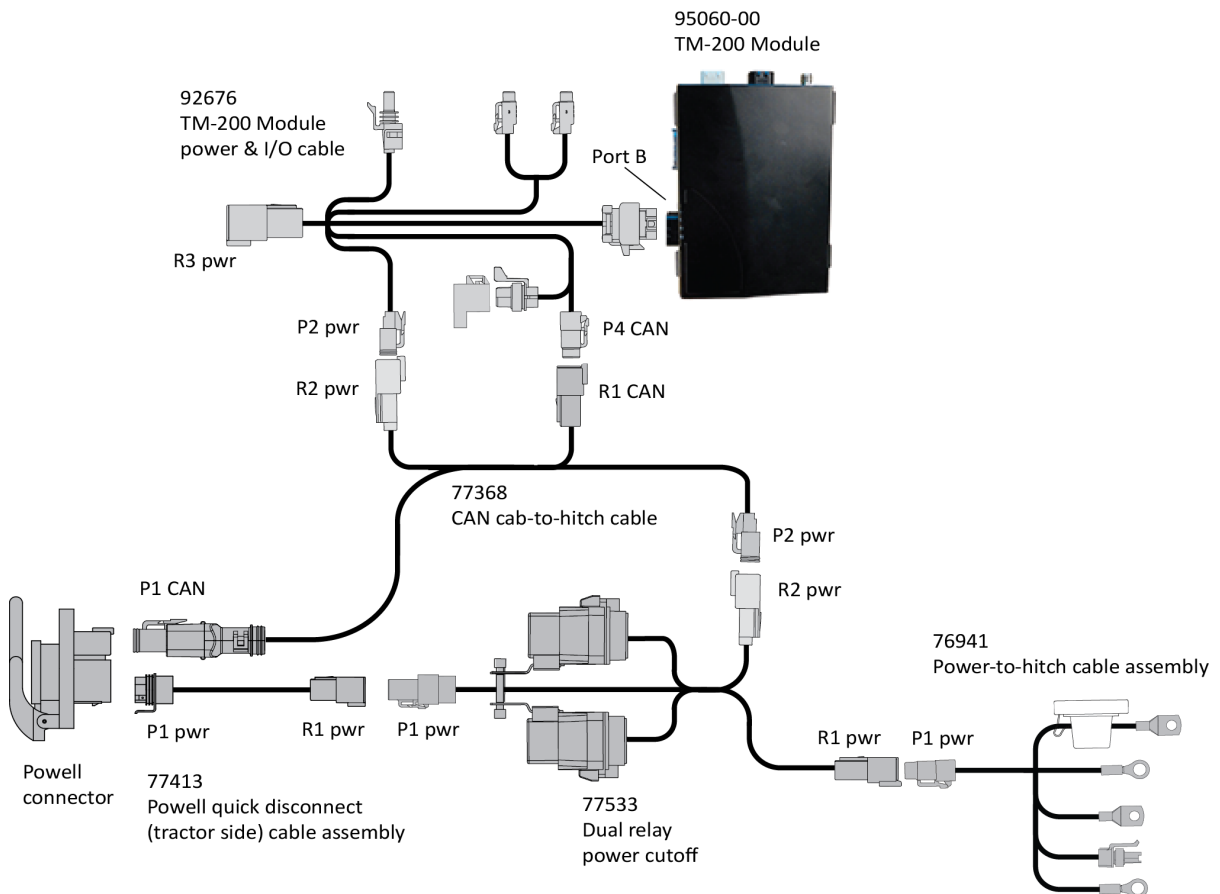
Cabling configurations require ISO-specific cables.

## Full harness

The following cables are included in ISOBUS harness kit P/N 89285-00:

- 77368, CAN cab-to-hitch cable
- 77413, IBRC-to-DTP adapter (Powell) cable
- 76941, Power-to-hitch cable
- 75834 (not shown in diagram), can be used to connect ISOBUS full harness to Port A on TM-200 Module

Recommended but not included in 89285-00: 77533, Dual replay power cutoff: Optional. Recommended for cutting power to implement when display is off and to cycle power when restarting display).

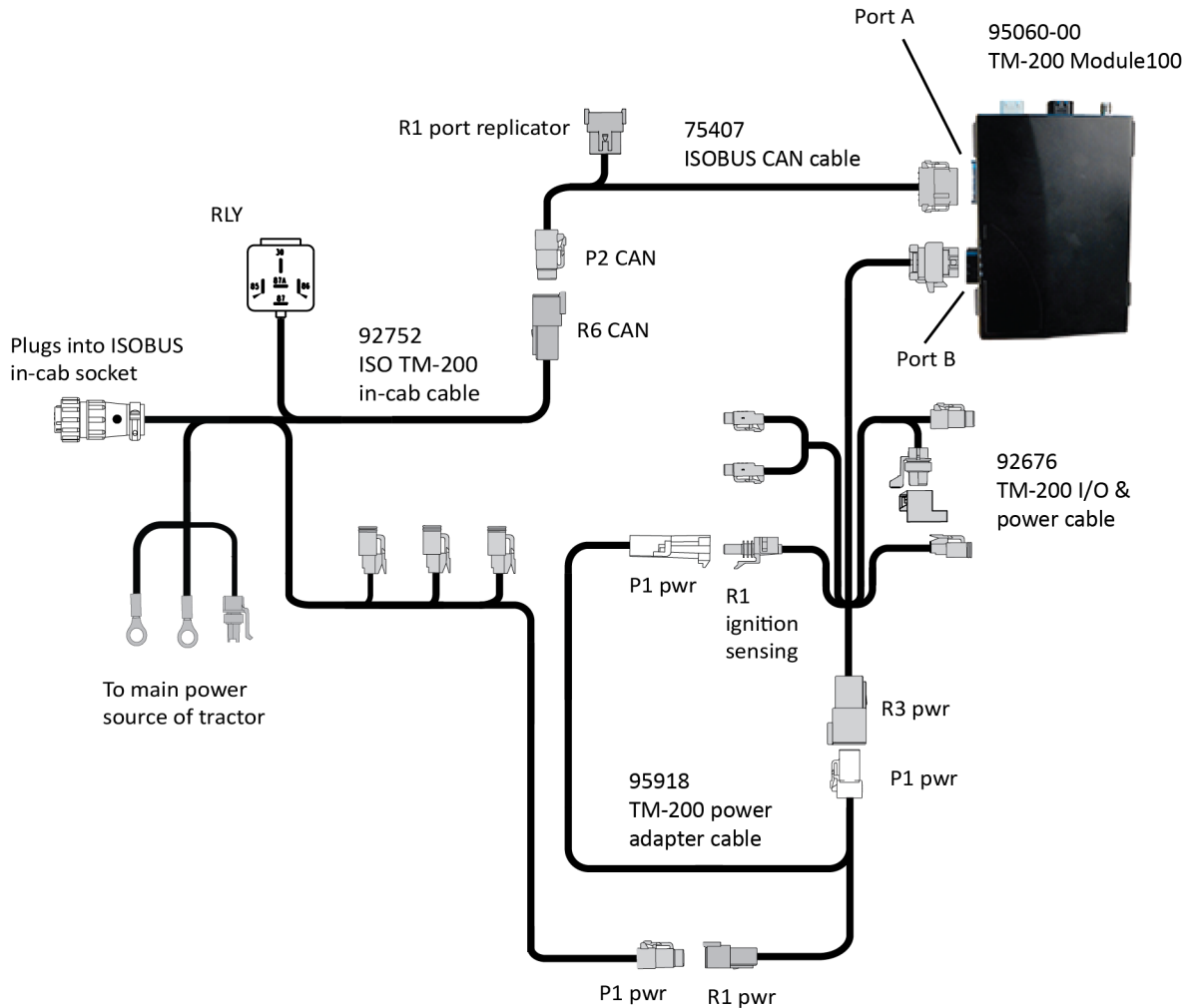




## In cab

The following cables are included in ISOBUS harness kit P/N 89285-02:

- 75407, TM-200 to ISOBUS in-cab cable
- 92752, ISO in-cab cable
- 95918, Power adapter cable (This cable is not included in the ISOBUS harness kit, but is recommended. This enables you to power on the TM-200 when bus is energized.)





# Setup

## In this chapter:

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Task Controller is an optional feature that requires an unlock. Both Task Controller and Virtual Terminal must be turned on in Settings before they can be set up.



## ISOBUS settings

Before you can use Task Controller or Virtual Terminal, you must turn on these features in the TMX-2050 display settings.

To access the ISOBUS settings:

1. Tap .
2. Tap .
3. Tap **ISOBUS Settings**.



## Task Controller

To use Task Controller when using ISO-certified equipment, tap   to activate this feature.

**Note** – *This feature is optional and requires an unlock.*

For information on:	See:
Task Controller setup	<a href="#">Task Controller setup, 21</a>
Setting up equipment for task controller	<a href="#">Equipment setup, 23</a>
Using Task Controller	<a href="#">Task Controller operation, 50</a>

## Virtual Terminal

To use Virtual Terminal when using ISO-certified equipment, tap   to activate this feature.

**Note** – *Virtual Terminal must also be turned on for you to configure the equipment for Task Controller.*

For information on:	See:
Using Virtual Terminal	<a href="#">Virtual Terminal operation, 52</a>

## Task Controller setup

To set up Task Controller:


1. Unlock the Task Controller feature. See the *TMX-2050 Display User Guide*.
2. Turn on the Virtual Terminal and Task Controller features in the display settings. See [ISOBUS settings, 20](#).
3. Set up the implement to use Task Controller. See the *TMX-2050 Display User Guide*.
4. If you have not already done so, complete the setup for GNSS, including sending CAN messages to the implement. See [CAN message settings, 22](#).
5. Set up the ISO-certified equipment to use Task Controller. See [Equipment setup, 23](#).

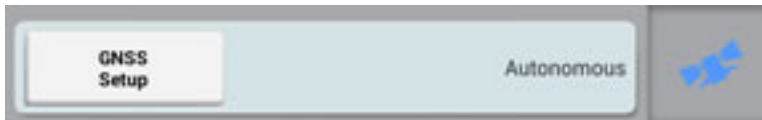
To operate the Task Controller, see [Task Controller operation, 50](#).

## CAN message settings

If you are using an ISO-certified implement, use this setting to send information to the implement (such as speed). If you wish to send messages from the GNSS receiver in the TM-200 Module, you can set up what messages will be sent from CAN port A or B.

The J1939 messages for Vehicle Direction/Speed (the message most commonly needed) is defaulted to 1 Hz. In most cases, no change to this will be needed.

1. At the **Home** screen, tap .
2. Tap **GNSS Setup**.




The GNSS setup panel displays.

3. Tap the Messaging tab.
4. Tap the CAN port where the ISO implement is connected. Choose the messages for the GNSS receiver in the TM-200 Module to send to ISO-certified equipment.



The list that displays for each CAN port shows the messages and their parameter group number (PGN). For each message, you can choose how often the message is sent:

- Off (never sent)
- 10 Hz, 5 Hz or 1 Hz, or 5, 10, 30 or 60 seconds. 5 Hz is recommended for ISOBUS.

5. Tap  to save your settings.

## Equipment setup

As part of getting the implement ready to be controlled by Task Controller, you use Virtual Terminal to set the configuration for the implement.

1. Make sure the ISO-certified implement is connected and Virtual Terminal is turned on in Settings. See [ISOBUS settings, 20](#).
2. At any screen access the main menu by tapping . The main menu displays.
3. Tap . The Virtual Terminal displays.
4. Follow the instructions for the equipment you are using to set the implement for using Task Controller. See the *TMX-2050 Display User Guide*.

## Equipment list

Manufacturer / Type	Model	Manufacturer Firmware Version	See...
Hardi Sprayer <b>Note</b> – <i>New machines must be ordered from Hardi as “Trimble ISOBUS-ready”. Contact the Hardi reseller for existing equipment to be retrofitted.</i>	Alpha Evo	ISO JobCom 2.55,	<a href="#">Hardi self-propelled sprayer setup, 26</a>
	Presidio	ISO Bridge 2.03R0031	
	Saritor	or	
	Pull-type sprayers	ISO JobCom 4.00, ISO Bridge 3.03R0035	
Horsch Planter	Maestro (all models)	9.65	<a href="#">Horsch Maestro planter and Pronto or Sprinter seed drill setup, 28</a>
	Maistro (all models)		
Horsch Seed Drill	Pronto (all models)	9.64	
	Sprinter (all models)		

Manufacturer / Type	Model	Manufacturer Firmware Version	See...
John Deere Air Seeder <b>Note</b> – Does not support rate control using Task Controller or prescription maps.	1990	9.00	<a href="#">John Deere 1900 seeder setup, 31</a>
John Deere Planter <b>Note</b> – Must use John Deere tractor to receive speed from TECU.	1700 series	18.00	<a href="#">John Deere planter 1700 series setup, 29</a>
Kinze Planter <b>Note</b> – Supports rate control only for a single material (seed).	3110, 3140, 3200, 3500, 3600, 3660, 3700, 3800	2.0	<a href="#">Kinze planter 3000 series setup, 32</a>
	4900	1.7	<a href="#">Kinze planter 4900 setup, 35</a>
Kuhn Seed Drill <b>Note</b> – The VT protocol must be running before starting Task Controller. Known issue of incorrect rate control when one section is off. GPS speed unavailable.	Moduliner (HR 6004 ML)	2012-08-31	<a href="#">Kuhn seed drill Moduliner HR 6004 ML setup, 36</a>
Kuhn Spreader	AXIS-H-EMC (30.1, 40.1 and 50.1) <b>Note</b> – The VT protocol must be running before starting Task Controller. Occasionally the Border Activation key disappears on the VT until the Task Controller button is toggled.	2.06	<a href="#">Rauch and Kuhn AXIS-H-EMC spreader setup, 43</a>
	AXIS-W (40.1 and 50.1) <b>Note</b> – GPS speed unavailable.	2.01	<a href="#">Rauch and Kuhn AXIS-W spreader setup, 46</a>





Manufacturer / Type	Model	Manufacturer Firmware Version	See...
Kverneland Spreader	Exacta TL GEOSpread <i>Note – If Working Set is deleted, the ECU must be turned off and then on to resend the updated data.</i>	1.07	<a href="#">Kverneland Accord Optima, Exacta TL GEOSpread disc spreader and Vicon RO-EDW Geospread setup, 40</a>
Kverneland Drill	Accord Optima Precision Drill	1.06	<a href="#">Kverneland Monopill SE and Accord Optima Precision drills, 38</a>
	Monopill SE	1.06	
Rauch Spreader	AXIS-H-EMC (30.1, 40.1 and 50.1 with red ECU) <i>Note – The VT protocol must be running before starting Task Controller. Occasionally the Border Activation key disappears on the VT until the Task Controller button is toggled.</i>	2.06	<a href="#">Rauch and Kuhn AXIS-H-EMC spreader setup, 43</a>
	AXIS-W (40.1 and 50.1) <i>Note – The VT protocol must be running before starting Task Controller. GPS speed unavailable.</i>	2.01	<a href="#">Kverneland and Vicon Exacta TL GEOSpread disc spreader setup, 1</a>
Vicon Spreader	RO-EDW GEOSpread <i>Note – If Working Set is deleted, the ECU must be turned off and then on to resend the updated data.</i>	1.07	<a href="#">Rauch and Kuhn AXIS-H-EMC spreader setup, 1</a>

## Hardi self-propelled sprayer setup

These instructions apply to models:




- Saritor
- Presidio
- Alpha Evo

**Note** – Only Hardi cabling can be used to connect the display for ISOBUS application. For new equipment, request the ISOBUS-ready configuration. For existing equipment, contact a Hardi reseller for a retrofit.

1. At the TMX-2050 display:
  - a. At the **Run** or **Home** screen, tap  to display the main menu.
  - b. Tap . The display now shows the Virtual Terminal for the Hardi sprayer.
2. At the Virtual Terminal:
  - a. Tap **Setup**.
  - b. Tap **VRA/Remote Control (2.3.2)**. Set the VRA /Remote control to enable. A blue satellite icon will display in the top left corner of the Virtual Terminal.

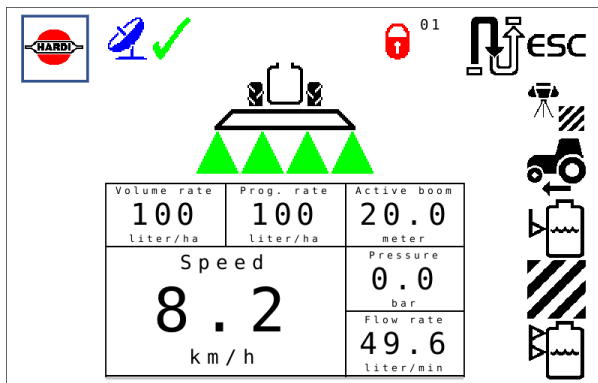
**Note** – The vehicle's speed is automatically detected.

3. After the equipment setup is complete, at the TMX-2050 display tap:

Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

## Pre-Operation

1. Before applying material, verify there is a green checkmark next to the satellite icon.



2. Press the On/Off button on the joystick to allow Task Controller to be in control of applying the material.

## Horsch Maestro planter and Pronto or Sprinter seed drill setup

**Note** – *There is a known issue on the ECU: Sometimes coverage will not properly be logged in the Virtual Terminal mode.*

These instructions apply to:

- Pronto, all models with red ECUs
- Sprinter, all models with red ECUs

**Note** – *The vehicle's speed is automatically detected and the Task Controller defaulted to on.*

No special setup is required.



## John Deere planter 1700 series setup

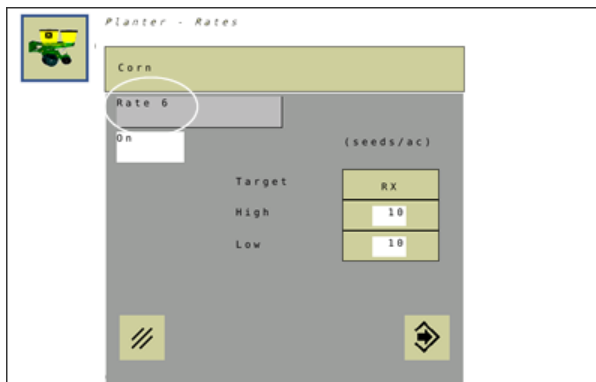
The John Deere 1700 Series planter does not accept GPS speed according to ISO 11783. For this reason, you must have a TECU (ISOBUS compatible tractor).

**Note** – Operation has only been verified with a John Deere R-Series tractor using the ISOBUS In-Cab cable (P/N 89285-02).

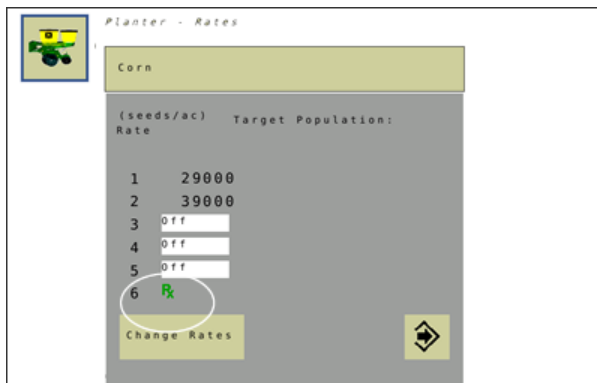
**Note** – With John Deere implements, you can only use one Virtual Terminal. You can either turn off Virtual Terminal in the TMX-2050 display settings or you can turn off the Virtual Terminal on the tractor display.

**Note** – For section control, you must have John Deere Row Command.

1. At the TMX-2050 display **Home** or **Run** screen:
  - a. Tap  to display the main menu.
  - b. Tap . The display now shows the Virtual Terminal for the John Deere planter.
2. At the Virtual Terminal:
  - a. To allow for rate control, enable and setup Rate 6. (By using Task Controller, Rate 6 shows as a prescription rate.)






- b. Select the Rx option for the target rate.



**Note** – If Rx does not display, verify you have turned on Task Controller in settings. See [ISOBUS settings, 20](#).

3. After the equipment setup is complete, at the TMX-2050 display tap:

Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

## John Deere 1900 seeder setup

**Note** – With John Deere implements, when you use the TMX-2050 display for Task Controller, you must 1) turn off the Virtual Terminal option in the display settings and 2) use the Virtual Terminal on the tractor display.

**Note** – This seeder only supports section control. Tests using a prescription map on the display were inconclusive and therefore unsupported.

If you are using:

- The full ISOBUS harness without an ISOBUS tractor:
  - Configure the speed settings in the display. In the *GPS Messaging* screen:
    - Select the port with the ISOBUS cable.
    - Set the signal rate for both the Wheel Speed and Radar/Ground Speed to 5 Hz.
- An ISO-certified tractor containing a tractor ECU (TECU) with the In-Cab cable (P/N 89285-02): If using the TECU, do not set the wheel speed of Radar/Ground Speed at the *GPS Messaging* screen. See [CAN message settings, 22](#).



**Note** – Occasionally when going between the Virtual Terminal and regular display screens, the speed signal is lost and this triggers an alarm. This is intermittent and no fix is known.

## Kinze planter 3000 series setup

These instructions apply to Kinze planters


- 3110
- 3140
- 3200
- 3500
- 3600
- 3660
- 3700
- 3800

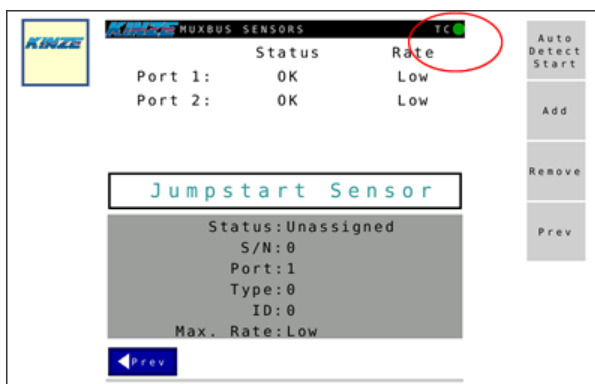
1. At the TMX-2050 display:

- a. From the **Home** or **Run** screen, tap  to display the main menu.
- b. Tap . The display now shows the Virtual Terminal for the Kinze planter.

**Note** – Sometimes the Virtual Terminal will not load unless the ECU and the display are powered on at the same time. Refer to the cabling diagram for recommended cabling to initiate power to both systems at the same time.

2. At the Virtual Terminal:

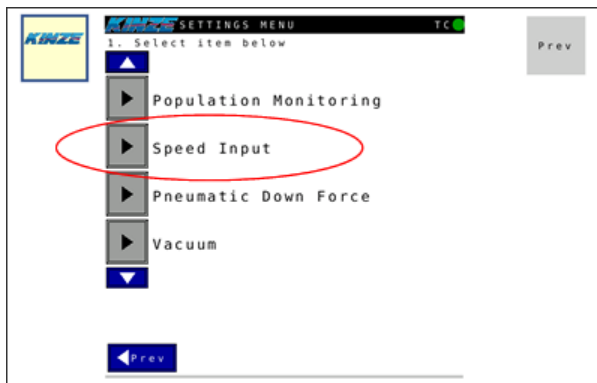
- a. Check to see if the green TC icon  displays in the top right-hand corner, indicating the Task Controller is recognized.



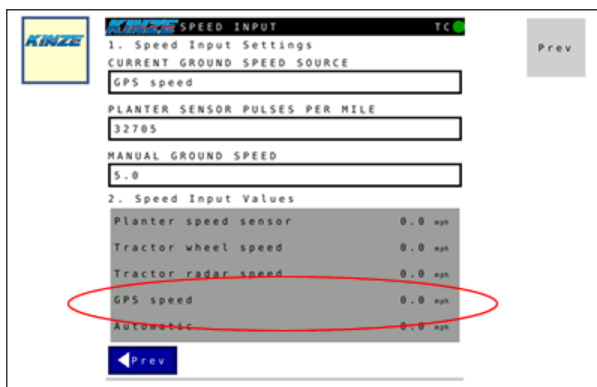
- b. Tap **Prev** to access the *Settings Menu* screen.



c. Select **Speed Input**.

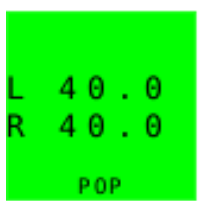


d. At **CURRENT GROUND SPEED SOURCE**, select **GPS Speed**.



e. To return to the main screen, tap **Prev** twice.

f. At the top right-hand side of the screen, tap the button showing rates and the word POP.








g. Tap **PRESCRIPTION**.



**Note** – The vehicle's speed is automatically detected.

3. After the equipment setup is complete, at the TMX-2050 display tap:



Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

## Kinze planter 4900 setup

**Note** – The alternator on the Kinze planter must be running to allow Task Controller.

**Note** – If multiple materials are being used, the Task Controller will only control the rate for the seed application. Section control will turn off both materials together and coverage will be mapped based on this control.

1. At the TMX-2050 display:




- a. From the **Home** or **Run** screen, tap  to display the main menu.
- b. Tap . The display now shows the Virtual Terminal for the Kinze planter.

**Note** – Sometimes the Virtual Terminal will not load unless the ECU and the display are powered on at the same time. Refer to the cabling diagram for recommended cabling to initiate power to both systems at the same time.



2. At the Virtual Terminal:

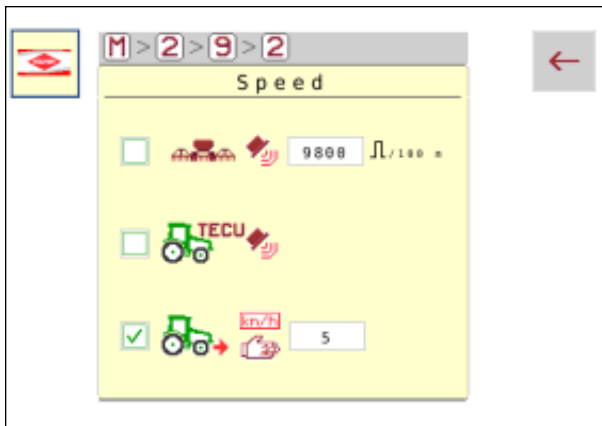
- a. Go to System Settings > Speed.
- b. At the *Speed Input* screen, select **Automatic Speed Selection** as the Ground Speed Source.
- c. Tap **Population**.
- d. At the *Population* screen, select **Rx** for the Population Option. (Task Controller is run as a prescription.)
- e. Go to System Settings > Task Controller and verify the Task Controller Client is Enabled. This is detected automatically and should not need to be changed.

3. After the equipment setup is complete, at the TMX-2050 display tap:

Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

## Kuhn seed drill Moduliner HR 6004 ML setup

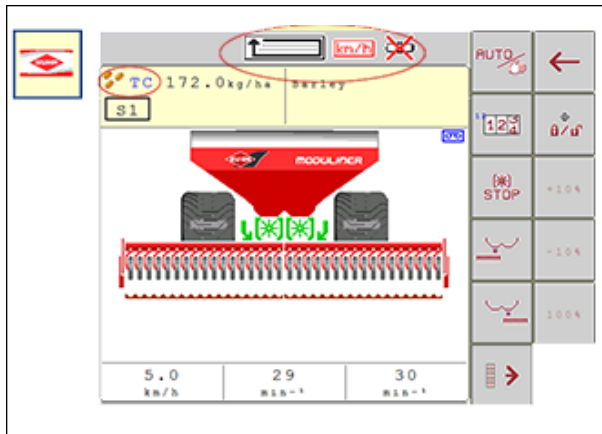
1. At the TMX-2050 display:
  - a. From the **Home** or **Run** screen, tap  to display the main menu.
  - b. Tap . The display now shows the Virtual Terminal for the seed drill.
2. At the Virtual Terminal:
  - a. Tap the wrench icon to access the *Adjustments* menu.
  - b. Select the *Other Adjustments* menu.
  - c. Select the *Speed* menu that shows GPS speed.
  - d. Tap the checkbox for manual speed and enter the speed that you will drive or select your preferred speed source.






**Note** – Kuhn Moduliner (HR 6004 ML) seed drills do not read GPS speed through the ISOBUS connection. It is important that you set your manual speed and then drive to that speed.

- e. Tap the back arrow to return to the main Virtual Terminal screen.

- f. Check to see if the TC icon displays before the rate, and an icon displays near the top of the VT.



3. After the equipment setup is complete, at the TMX-2050 display tap:

Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

## Pre-Operation

1. When you are ready to start planting go to the TMX-2050 display *Run* screen. When using Virtual Terminal, initially the minimized version displays on the **Run** screen.





2. Maximize the Virtual Terminal window by tapping the upper right corner.
3. At the Virtual Terminal, tap the **AUTO** button.

## Kverneland Monopill SE and Accord Optima Precision drills

These instructions apply to Kverneland:

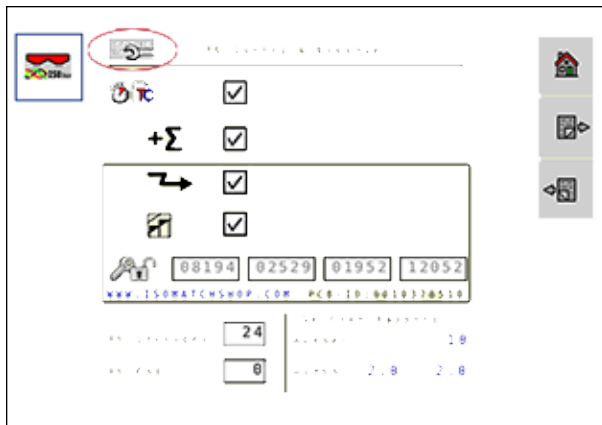
- Accord Optima Precision Drill
- Monopill SE

**Note** – Only metric units calculate correctly. **Do not** select English/Imperial units during equipment setup with Virtual Terminal.

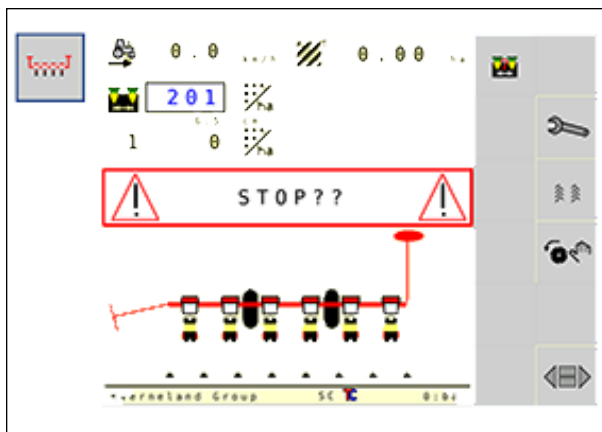
1. At the TMX-2050 display:
  - a. From the **Home** or **Run** screen, tap  to display the main menu.
  - b. Tap . The display now shows the Virtual Terminal for the drill.
2. At the Virtual Terminal:
  - a. Tap the wrench icon to access the *Settings* menu.
  - b. Tap the next page icon until the page showing the GPS speed displays.






- c. For speed, select GPS J1939.  
If you do not get speed, you can change this to "ISO11783 wheel" and then change the CAN message in the display (GNSS setup) to "Wheel based speed message simulate", 5 Hz.
- d. Tap the ISOBUS wrench icon. Then tap the next page icon until the TC Config & License page displays.



- e. Select the checkboxes next to the icons for:  
Task Controller, Memory Cache, External Rate and Section Control
- f. Set the TC Fnl value to zero.
- g. Tap the drill icon to return to the main screen.
- h. Make sure the Task Controller is recognized. If it is, a TC icon displays near the bottom of the screen.



3. After the equipment setup is complete, at the TMX-2050 display tap:



Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

## Kverneland Accord Optima, Exacta TL GEOSpread disc spreader and Vicon RO-EDW Geospread setup

These instructions apply to:

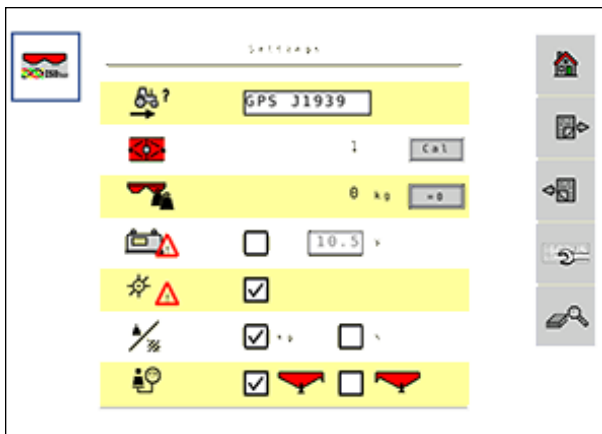
- Kverneland Accord Optima
- Kverneland Exacta TL GEOSpread
- Vicon RO-EDW GEOSpread

1. At the TMX-2050 display on any screen:

- From the **Home** or **Run** screen, tap  to display the main menu.
- Tap . The display now shows the Virtual Terminal for the disc spreader.

2. At the Virtual Terminal:

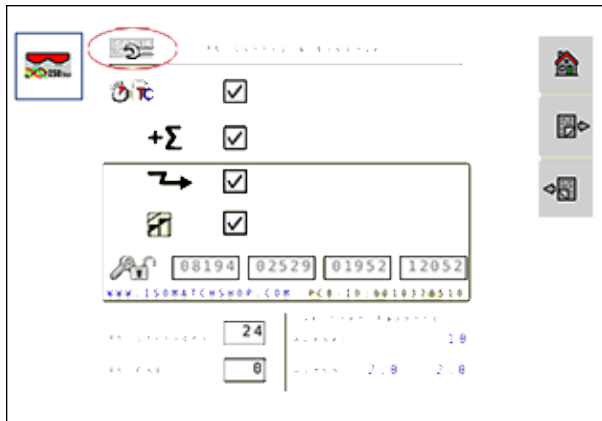
- Tap the wrench icon to access the *Settings* menu.
- Tap the next page button until the *Settings* screen displays that shows GPS speed. For speed, select GPS J1939.



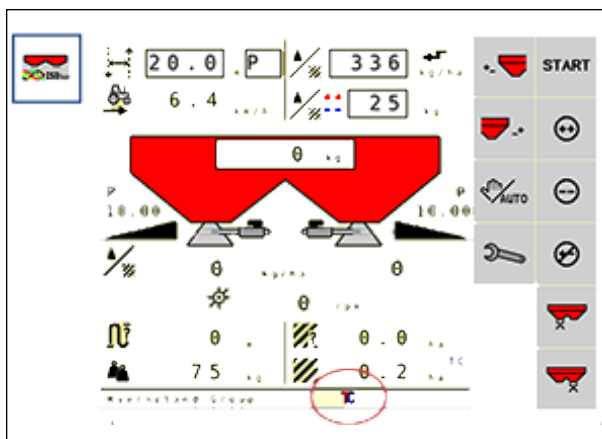
- Tap the ISOBUS wrench button.



- d. Tap the next page button until the *TC Config & License* screen displays.



- e. Tap the checkboxes next to the icons for:  
Task Controller, Memory Cache, External Rate and Section Control
- f. Set the TC Fnl value to 0.
- g. Tap the Home button to return to the main VT screen.
- h. Check to see if the TC icon appears near the bottom of the display, indicating the Task Controller is recognized.



- i. If you are ready to begin spreading, tap **Start**.

Button on Display Bar	To...
-----------------------	-------



Return to the previous screen.



Go to the **Home** screen.

3.

**Button on Display Bar To...**

View your most recent views and go to the one of your choice.

## Pre-Operation

1. When you are ready to start spreading go to the TMX-2050 display *Run* screen. When using Virtual Terminal, initially the minimized version displays on the *Run* screen.





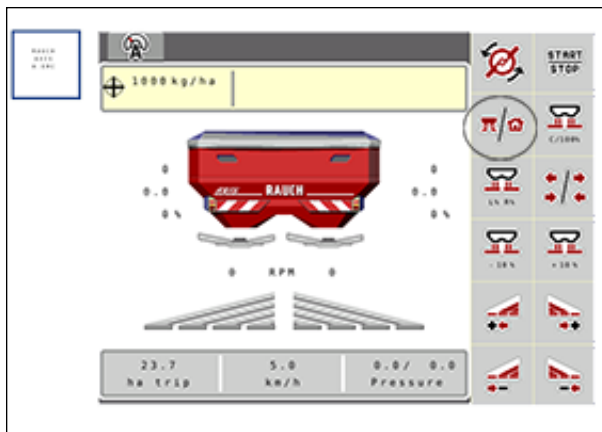
2. Maximize the Virtual Terminal window by tapping the upper right corner.
3. At the Virtual Terminal main screen, tap **Start**.

## Rauch and Kuhn AXIS-H-EMC spreader setup

These instructions apply to AXIS-H-EMC:

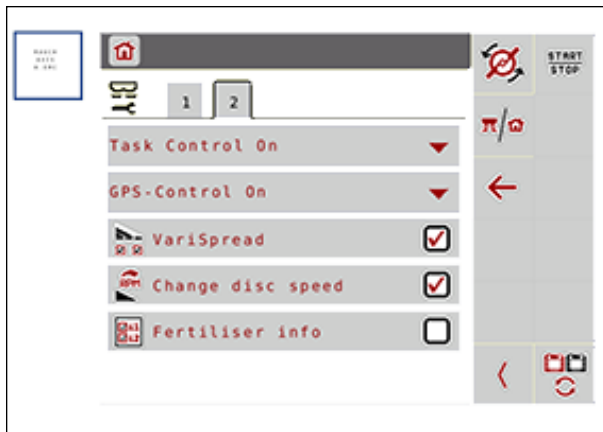
- 3.01
- 4.01
- 5.01

1. At the TMX-2050 display on any screen, tap  to display the main menu.
2. Tap . The display now shows the Virtual Terminal for the spreader.
3. At the Virtual Terminal:
  - a. Tap the main menu button.






- b. Tap **2** to navigate to the second page of the main menu.
- c. Complete the settings:

Setting	Set to...
Task	On
GPS Control	On
VariSpread	Selected
Change Disc Speed	Selected



- d. Tap the main menu button to return to the operating screen.
4. After the equipment setup is complete, at the TMX-2050 display tap:

Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

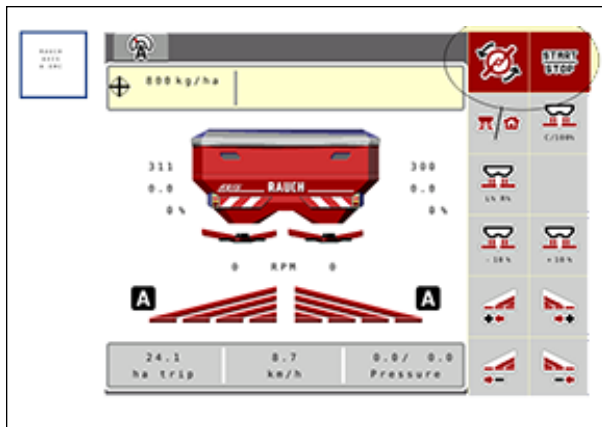
## Pre-Operation

**Note** – *Virtual Terminal must be active before you can start Task Controller.*

1. When you are ready to start spreading go to the TMX-2050 display *Run* screen.
2. Tap **Task Controller** on the ISOBUS widget.
3. When using Virtual Terminal, initially the minimized version displays on the **Run** screen. Maximize the Virtual Terminal window by tapping the upper right corner.





4. At the Virtual Terminal main screen:
  - a. Tap the disc button to activate the disks.
  - b. Tap the **Start/Stop** button to allow the TMX-2050 display have Task Controller to perform section control. The sections turn red and the letter A appears on the display.

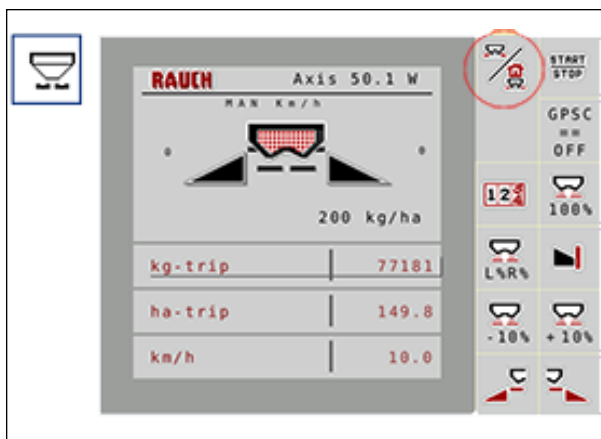


## Rauch and Kuhn AXIS-W spreader setup

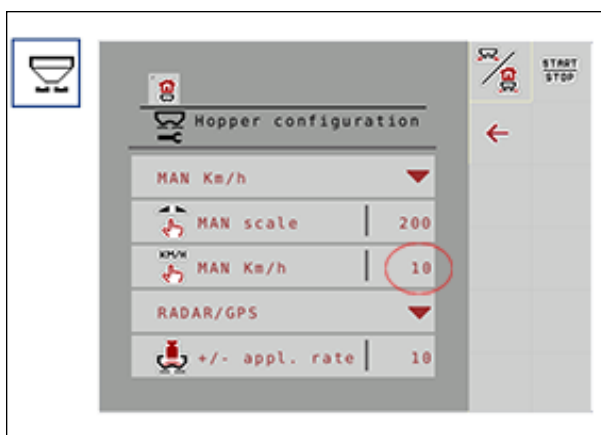
These instructions apply to AXIS-W:

- 30.1
- 40.1
- 50.1

1. At the TMX-2050 display on the **Home** or **Run** screen, tap  to display the main menu.
2. Tap . The display now shows the Virtual Terminal for the spreader.
3. At the Virtual Terminal:
  - a. Tap the main menu button.

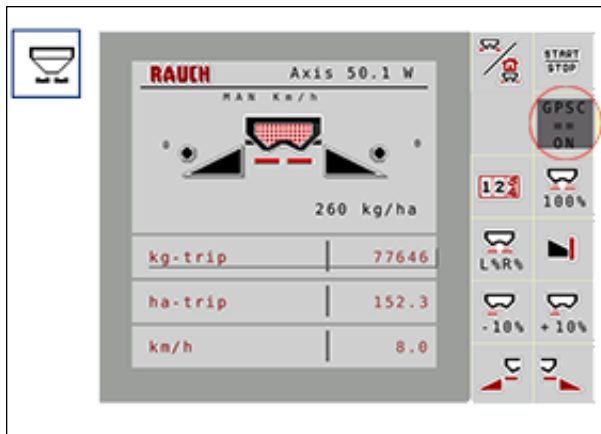


- b. Select Hopper Configuration.
- c. Enter the speed that you will drive, or select your preferred speed source.






**Note** – Rauch/Kuhn AXIS-W models do not read GPS speed through the ISOBUS connection. You must set your manual speed and then drive to that speed.

- d. Tap the GPSC button until it shows GPSC ==ON. This allows the display to act as the Task Controller. The black dots and red lines indicate that task controller is ready.



4. After the equipment setup is complete, at the TMX-2050 display tap:

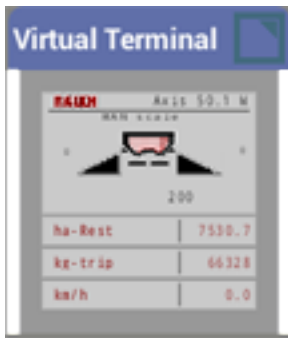
Button on Display Bar	To...
	Return to the previous screen.
	Go to the <b>Home</b> screen.
	View your most recent views and go to the one of your choice.

**Note** – On Rauch and Kuhn AXIS-W spreaders, manually adjusting percent rates in the Virtual Terminal will not change the target rate on the Run screen. Also, if you adjust the target rate on the **Run** screen, the total rate will be updated in the Virtual Terminal, but the spreader will still use any manual percent rate adjustments. For example, if on the Virtual Terminal you set +10% and you then set a target rate of 100 kg/ha on the Task Controller, the applied rate will be 110 kg/ha.

## Pre-Operation

**Note** – Virtual Terminal must be active before you can start Task Controller.

1. When you are ready to start spreading go to the TMX-2050 display **Run** screen. When using Virtual Terminal, initially the minimized version displays on the **Run** screen.



2. Maximize the Virtual Terminal window by tapping the upper right corner.
3. Tap the main menu button to return to the operating screen.
4. At the Virtual Terminal main screen, tap the **Start/Stop** button to engage the discs.
5. Close Virtual Terminal and return to the TMX-2050 display **Run** screen.



# Operations

## In this chapter:

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<b>ISOBUS operations .....</b>	<b>50</b>
<b>Task Controller operation .....</b>	<b>50</b>

You can use either Virtual Terminal or Task Controller for applying material.

## ISOBUS operations

To control ISO-certified implements, you can use:

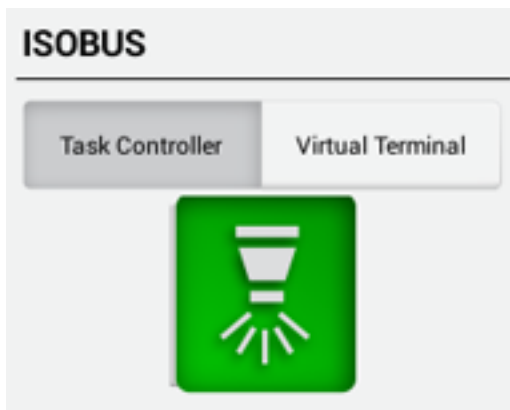
- Task Controller: An optional feature that enables the TMX-2050 display to control the implement and log data using the TMX-2050 display Rate and Section Control. See [Task Controller operation, 50](#).
- Virtual Terminal: A means of manually controlling the implement through the Virtual Terminal. See [Virtual Terminal operation, 52](#).

## Task Controller operation


**Note** – To use Task Controller, you must have unlocked the feature with a valid password, turned on the feature in the display settings, and be connected to an ISO-certified implement that is set up and selected.

At the **Run** screen, the ISOBUS widget displays when the following steps are completed:

1. Task Controller is turned on in the display settings. See [ISOBUS settings, 20](#).
2. The ISO-certified implement is connected and you have set it up with an application channel that is controlled by Task Controller. See the *TMX-2050 Display User Guide*.





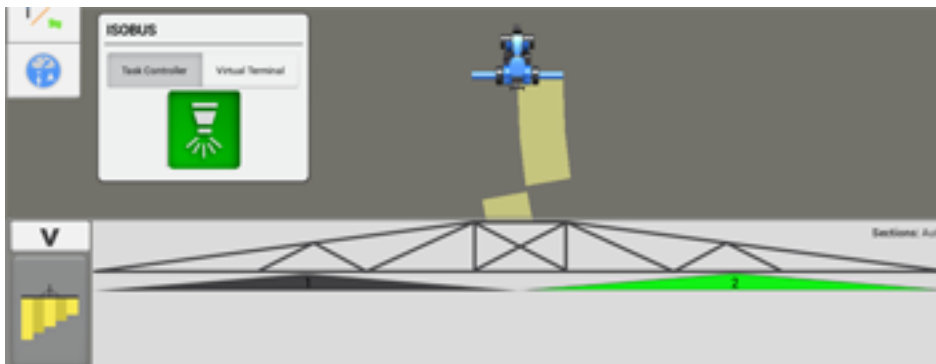
You can use the ISOBUS widget to switch between using Task Controller and Virtual Terminal.



- When you tap **Task Controller**:
  - The TMX-2050 display can send rate and section control commands to the implement's ECU. This enables you to control the implement's operation with the TMX-2050 display.
  - You can use the Rate Control and Section Control feature on the TMX-2050 display.
  -  acts as a toggle button to toggle Task Controller on or off.



- When you tap **Virtual Terminal**, rate and section control messages are not sent from the TMX-2050 display to the implement's ECU. To access Virtual Terminal, access the Virtual Terminal window. See [Virtual Terminal operation, 52](#).

## On-screen Task Controller switch

To begin operation with Task Controller, tap  (yellow). The button changes to  (green), indicating the TMX-2050 display is controlling the application.



Button status	Explanation
 (Gray)	<p>The TMX-2050 display is not able to start application control with the Task Controller because of an issue with the setup. You cannot tap this button. It is a status indicator only.</p> <p>To troubleshoot, verify:</p> <ul style="list-style-type: none"> <li>• Task Controller is set to on in the display settings.</li> <li>• The implement setup includes the correct ECU which has been assigned to the channel.</li> <li>• The implement is selected.</li> <li>• Task Controller is selected in the ISOBUS widget.</li> </ul>
 (Red)	<p>The TMX-2050 display is not able to begin operation with the Task Controller. You cannot tap this button. It is a status indicator only. To troubleshoot:</p> <ul style="list-style-type: none"> <li>• Check the physical connections from the implement to the display.</li> <li>• Check that all settings are correct in the Virtual Terminal of the implement, including an "on" or "stand by command."</li> </ul> <p><b>Note</b> – If you have a master switch box or joystick and its master switch is off, no application will occur. To use Task Controller with one of these, make sure the physical master switch or stand by command is on.</p>

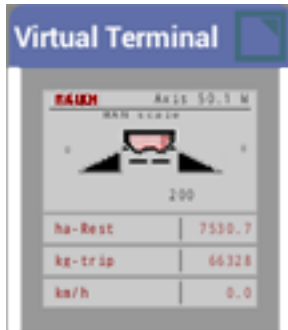
Button status	Explanation
 (Yellow)	<p>The connection is secure and the TMX-2050 display can receive information for Task Controller.</p> <p>Tap the button to use the Task Controller and have the TMX-2050 display control the application.</p>
 (Green)	<p>Indicates the TMX-2050 display is currently controlling the application.</p> <p>Tap to stop using the Task Controller and stop the TMX-2050 display from controlling the application.</p> <p>Task data will be recorded.</p>

## Virtual Terminal operation

To use Virtual Terminal:

1. Make sure an ISO-certified implement is connected and that you have turned on the Virtual Terminal feature in settings (see [ISOBUS settings, 20](#)).

At the **Run** screen on the ISOBUS widget, tap **VT**. The widget displays in a smaller version which only shows data and does not allow you to control the implement.



2. To increase the size of the minimized Virtual Terminal widget, touch the upper right corner of the widget and hold. Arrows display on all sides of the widget. Touch and drag an arrow to increase the widget's size.
3. Tap the upper right corner of the Virtual Terminal widget to maximize it. The Virtual Terminal expands to full screen.





# Diagnostics

## In this chapter:

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**ISOBUS diagnostics** ..... 56

You can view diagnostic information about Task Controller and Virtual Terminal.

## ISOBUS diagnostics

At the Diagnostics panel, tap **Task Controller/Virtual Terminal** under ISOBUS.

### Device tab


Display Information	Explanation
Device Name	Name of device
Device S/N	Device's serial number
Software Version	Version of ISO firmware
CAN Connection	Status of CAN connection
Pool Loaded	Yes or No. Indicates data from ECU is loaded.
ISO-TC	Task Controller data is available.
ISO-VT	Virtual Terminal data is available.

**Note** – If ECU data does not auto-populate, it may be necessary to cycle power to the ECU.

**Note** – If the implement's ECU is power cycled while still in the Run screen, it is necessary to exit and re-enter the Run screen before being able to resume Task Controller.

### Recording and saving CAN logs

For troubleshooting, it may be necessary to capture traffic on the CAN bus.

1. At the Diagnostics panel under System, tap **Logging/CAN Logs**.
2. For the appropriate port, tap to begin the recording.
3. Tap again to stop recording.
4. Insert a USB drive into a USB socket of the TMX-2050 display.
5. Tap  to transfer the logs to the USB drive.

### Delete previous data

Data loaded from previously used ECUs will take up storage space. To remove this data from the TMX-2050 display:

1. At the maximized Virtual Terminal, tap in the upper right-hand corner.
2. Tap **Delete**.
3. All previous data is removed.