20|20

Gen 3 20|20 Operator's Guide
2024.1.x Software

Precision Planting®

9551039_4

Contents

20|20 Monitor Overiew

Note: *This guide is intended for use with limited release software **2024.1.0** and its variants. Due to the nature of the limited release software update process, screenshots and descriptions provided in this guide may differ from the current available software version. Updates will be made to this guide as often as possible.*

The Precision Planting 20|20 display is a high-definition, easy-to-use monitoring and control system for planting, seeding, harvesting, and liquid application. Its high definition mapping features and metrics on single and dual displays allows the user to see exactly what is going on in their fields. Navigate the easy-to-use touch screen for implement and system setup, health checks, diagnostics, and other helpful information. The 20|20 display provides complete monitoring, control, and diagnostics for all of Precision Planting's SRM-based control products for seed and liquid application, down force control, and in-field sensing in addition to basic implement monitoring.

The 20|20 has complete control, monitoring, and diagnostics for: vDrive, DeltaForce, SpeedTube, SmartFirmer, vDrive Insecticide, vApplyHD, FlowSense, vSet Select, mSet, FurrowForce, Clarity, SeederForce, Smart Connector, SymphonyNozzle, and YieldSense.

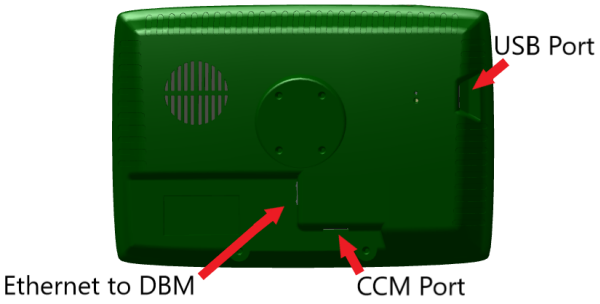
Software Updates

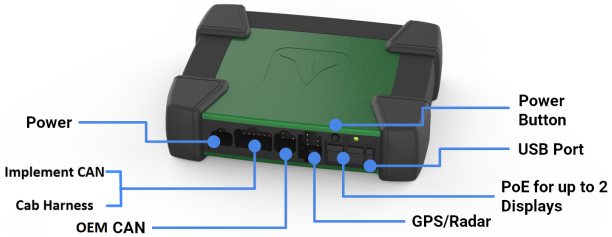
Precision Planting will continue to update and improve the 20|20. Software updates are free of charge and may be downloaded from www.2020.ag and installed on the display with a USB drive. See *Software Update* in this guide for more details.

20|20 Hardware Overview

Up to two displays may be connected to the Display Base Module [DBM] at any time. One of these two displays may be an iPad running the Climate Corporation FieldView Cab app. Displays may be mounted in any location within the cab.

Display Base Module [DBM]





The Power over Ethernet [PoE] ports require a Shielded Twisted Pair [STP] Ethernet Cable to connect to a display. If only one display is being used, use either port. Both ports will be used if connecting to two displays or one display and a FieldView Module [FVM]. The display(s) or FVM may be plugged in to either port.

Indicator Light Overview

Use the following table to determine the status indicated by the LED on the corresponding device.

Color	Display Base Module	Display	FieldView Module
Green	Good Connectivity	Good Connectivity	Good Connectivity
White	Initializing	N/A	Downloading Software
Blinking White	Firmware Update in Process	N/A	N/A
Yellow	No Connection between Display and DBM	Initializing	Initializing
Blinking Yellow	Software Update in Process	Software Update in Process	Software Update In Progress
Blue	N/A	N/A	Nothing Connected
Purple	Need to Power Cycle System	N/A	FieldView Not Connected
Red	N/A	Powering On	Powering Up
Blinking Red	Failure - Call Precision Support	N/A	N/A

Cab Control Module [CCM]

All implement control products being run through the 20|20 require a CCM to be installed below the display. If two displays are connected to the DBM, only one display of the user's choice may have a CCM installed.

The CCM will be auto-detected when connected properly.

The switch on the left hand side is the Master Plant switch. For all control products to function the Master Plant switch must be in the up position. If it is in the down position, all control products will immediately be disabled.

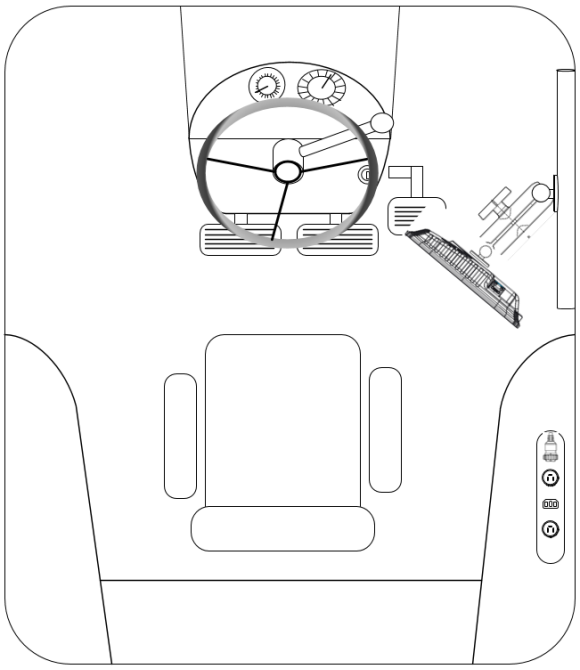
The three switches in the middle are swath section switches. Toggle these to the down position to swath off a rate section. If a switch is in the down position, the rows assigned to that switch will be shut off. The rows assigned to each switch may be configured by navigating to Setup > Systems and pressing Cab Control Module. When using a multi-rank implement, different sets of rows may be assigned the swath switches for each set of ranks. See *Cab Control Module* in the *Systems* section of this guide for more details.

The left and right swath section switches are also used to auto load any systems with an auto load function enabled. Raise both switches up for one second to load systems. Systems with autoload enabled will dispense product. This allows product to immediately be dispensed when beginning a planting/application pass.

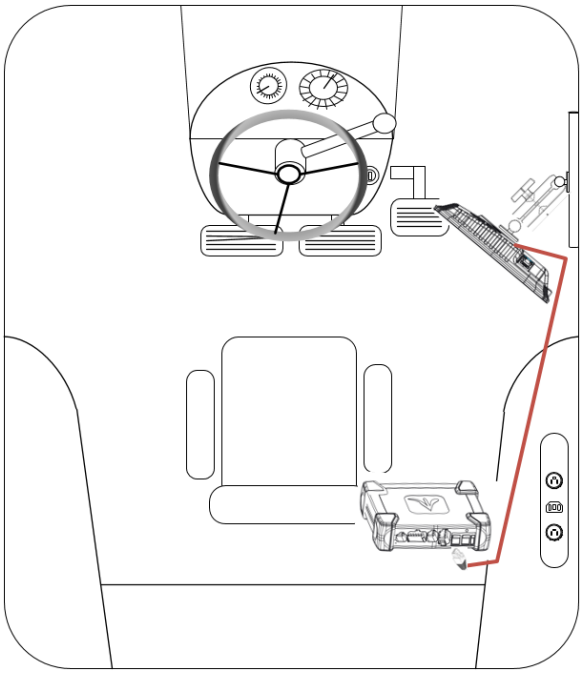
To continue autoloading, lift and hold both switches. Product will continue to dispense as long as the switches are held up.

Cab Installation

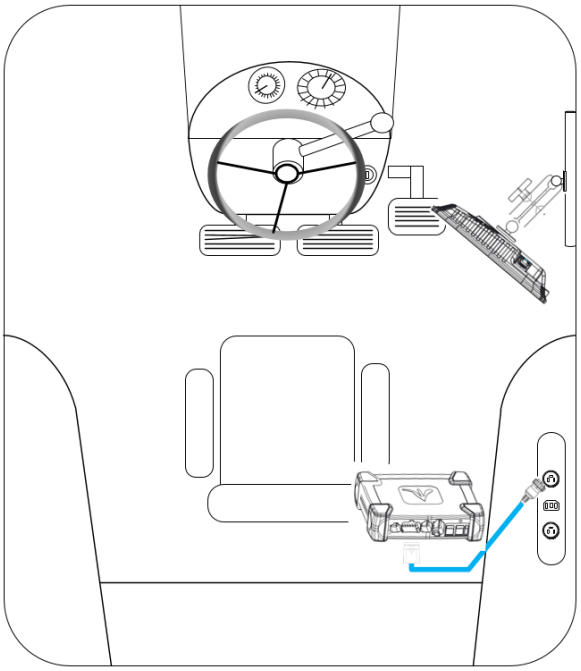
Mounting locations will vary from tractor to tractor. Mount the display(s) for optimal visibility and interaction. There are several mounting options offered by Precision Planting available for the display. The following diagram depicts the RAM mount option.



The DBM may be located in any convenient area of the cab. Ensure the DBM will remain stationary when operating the tractor. Connect one end of the provided Ethernet cable into either port on the DBM and the other end into the display port. If using two displays, connect the second display with the provided Ethernet cable to the other open port on the DBM.

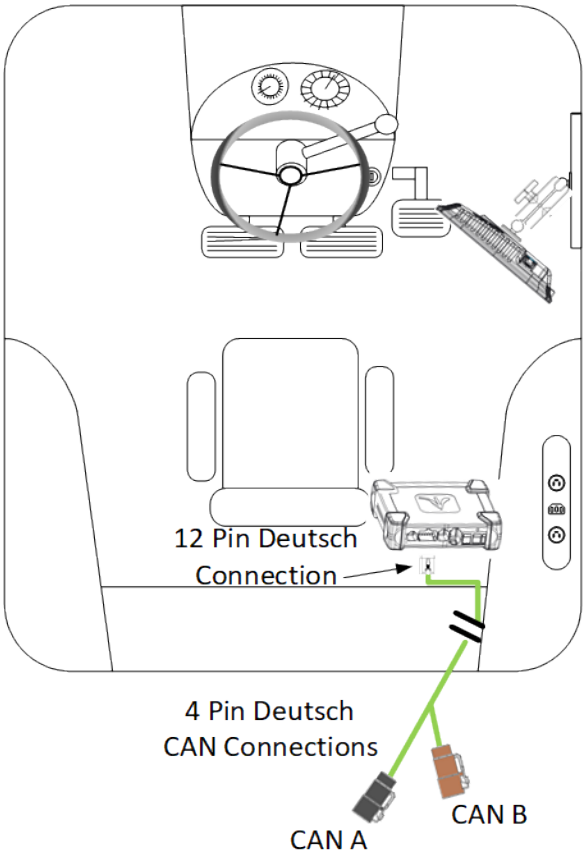


Connect the 725150 Power Harness into the 4-pin Deutsch Connector on the DBM and then to the power source in the tractor cab. A three pin round convenience port connector is provided to plug directly into a standard convenience port. Various adapters are available to connect to different power sources.



Connect an Implement CAN Harness into the 12-pin Deutsch Connector on the DBM. Route the remaining length of the cable through the cab harness port in the back window. There will be two CAN connections on the harness, CAN A (black connector) and CAN B (brown connector). If a PDM is installed on the implement, CAN A must be used and routed to the PDM.

Note: *The 725935 Single CAN Sensing harness contains only a CAN B connecion. If using the 725935 harness, only CAN B will be used when setting up implement harnessing. See* Harnessing *in the* Systems *section of this guide for more details.*



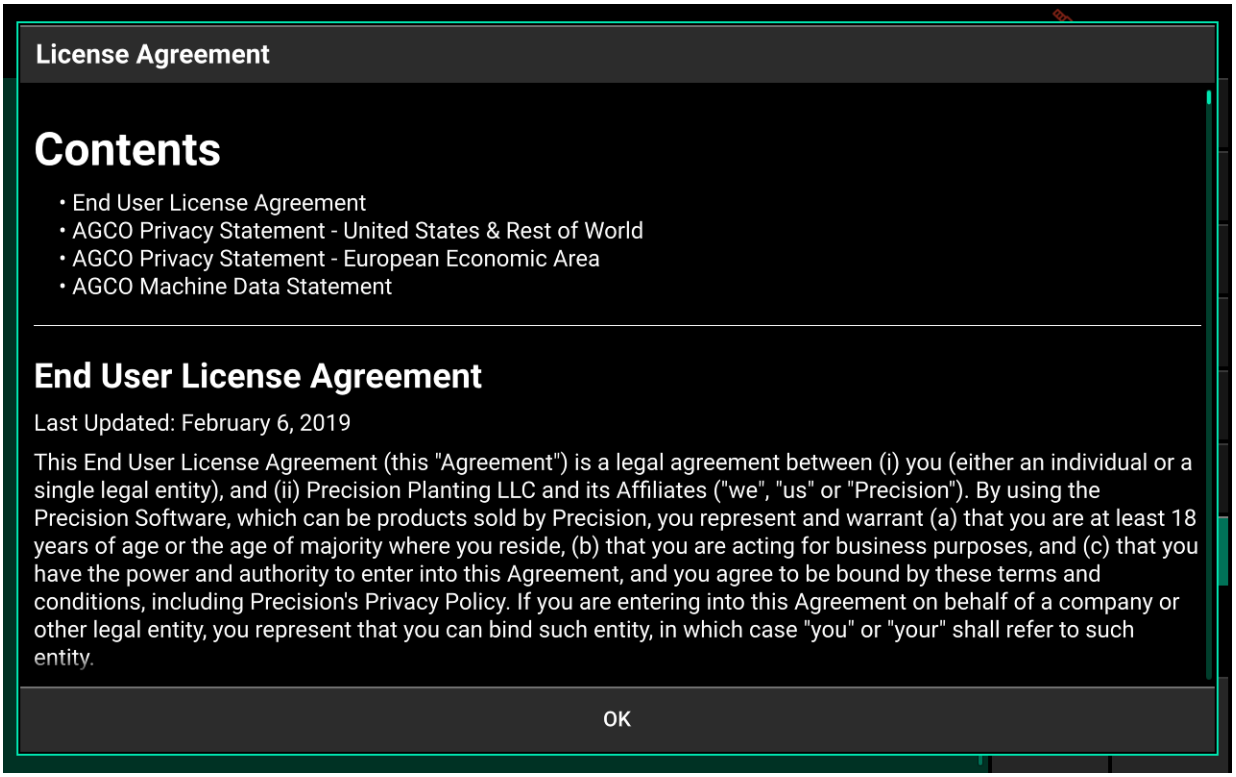
Powering the 20|20 On and Off

The 20|20 requires 12 volts of key switched and constant power. Connect the display to the DBM, then connect the DBM to the power supply. If connected to a tractor or cab, turn the key to the on or run position. Press the DBM power button to the on position.

To power the system off, press the DBM power button to the off position or key the tractor/cab off.

User License Agreement

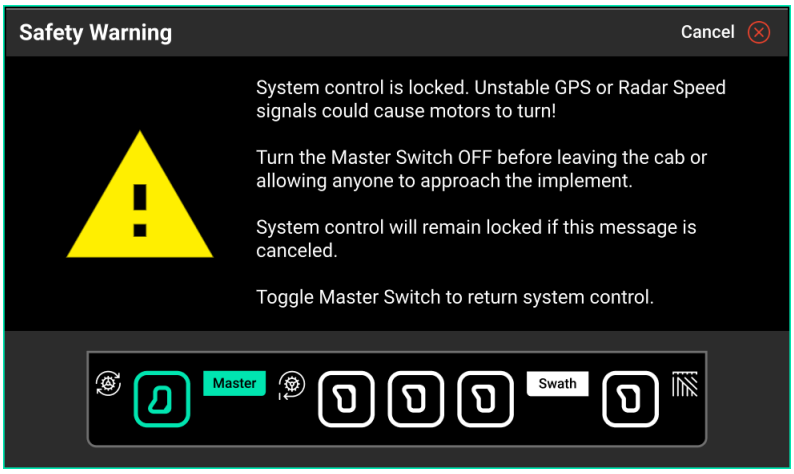
Once the 20|20 software has booted up, read and agree to the User License Agreement to use the 20|20. Agreement is required on first boot up, after a Delete All is performed, or when major software updates are completed.



Note: *If this system is being set up for a third party, reset the agreement to appear on next startup so the end user agrees to the document. Navigate to Setup > Settings > About and press Reset EULA.*

Safety Warning

If any control product is configured on the 20|20 display, the system will require a Cab Control Module (CCM) and will prompt the user to toggle the Master Plant switch on the CCM before any control products may be used. This warning is triggered any time the system is booted up, and when the system has traveled for more than half a mile.

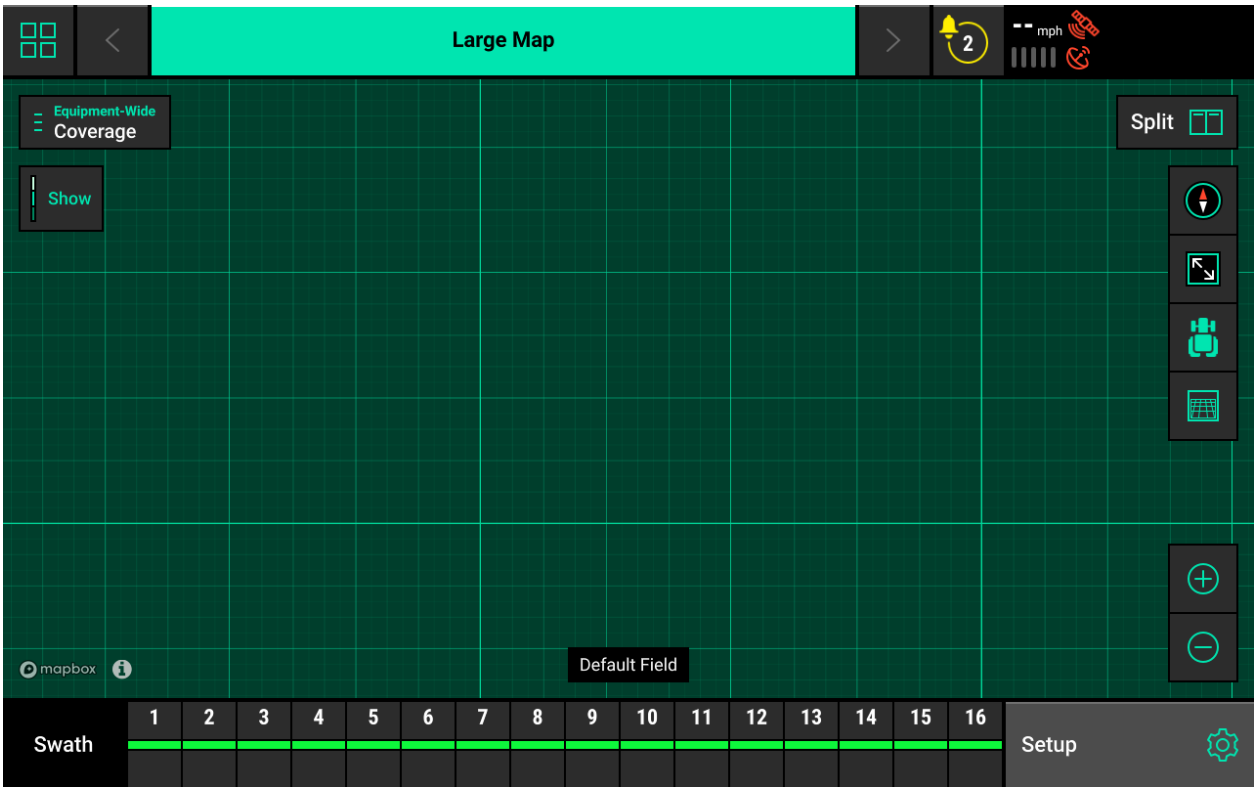


If a CCM is not installed, press cancel to bypass this warning. No control systems will operate until the Master Plant switch is toggled. The Master Icon:

will be present in the top right if the Safety Warning was bypassed pressing cancel.

Home Screen Overview

The Home Screen displays seeding and application data in an easy to read and navigate format. This information is presented as both metrics and high definition maps. Additional screen configurations may be added and customized with different metrics, widgets, map sizes, controls, and minicharts. Screen configurations may be toggled between by pressing the arrows at the top of the screen. See *Customizing the Home Screen* in this section for more details.



The 20|20 displays high definition maps while operating. Different map layers may be selected and viewed during the planting process.

Screenshots

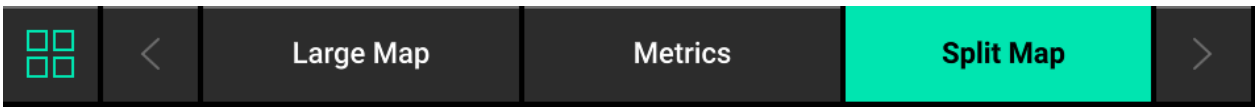
To take a screenshot, press and hold in the upper right corner of the screen until the screen flashes white. This action may be performed at any time and in any menu of the 20|20. See *Data* in the *Settings* section of this guide for details on exporting 20|20 screenshots to an external USB drive.

Home Screen Tabs

Tabs are located at the top of the screen that may be configured to quickly change the layout of the Home Screen. The only default layout is Large Map.

Up to eight total layouts may be configured and named. To configure new layouts, Press the Four Squares, then press Layout +.

Once new layouts have been added, pressing on a tab will change the layout of the home screen. Use the arrows or swipe left/right on the tabs to change which tabs are available to select.



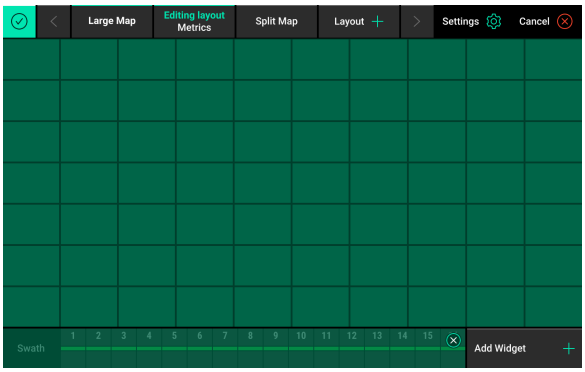
Any layout may be customized with different maps, controls, and metrics. See *Customizing the Home Screen* in this section for more details.

Customizing the Home Screen

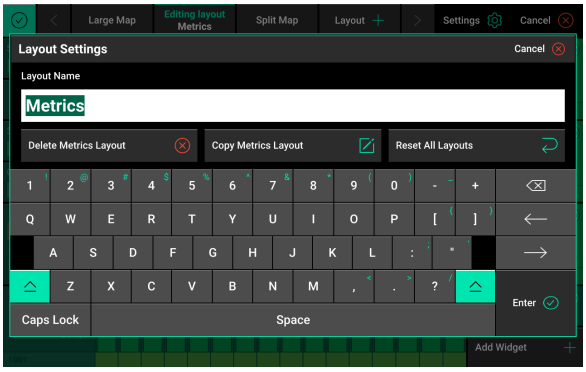
Press the Four Squares in the top left corner of the screen to enter Edit mode.

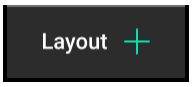
Note: *Only the active layout may be edited using this feature. To edit a different layout, press the Checkmark (while in Edit mode) to save current layout changes in the top left, then select a different layout. Press the Four Squares after selecting the desired layout to enter edit mode again.*

After pressing this button, the home screen will be dimmed and overlaid with a grid which different metric and control widgets may be placed onto.

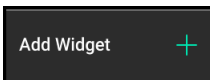


Press Settings in the top of the screen to rename the active layout, copy the active layout, or reset all screen layouts back to the factory default.





Up to eight layouts may be added by pressing Layout + at the top of the screen. Layout order may be changed while in Edit mode by pressing and dragging a layout to the desired position.



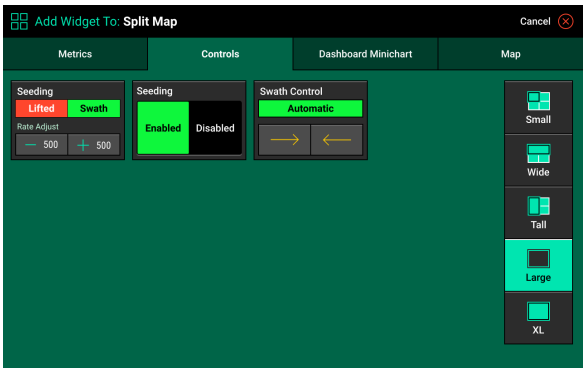
Press Add Widget at the bottom of the screen to select the widgets that are displayed on the active layout.

There are four different types of widgets that may be added to the home screen:

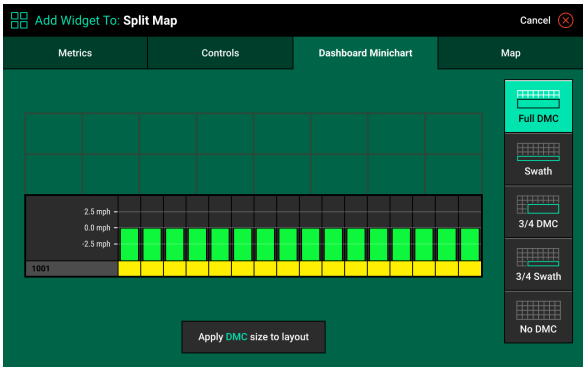
Metrics: All widgets that display implement information on the home screen. Metrics may be displayed in five different sizes depending on configured control systems: Small (1x1), Wide (1x2), Tall (2x1), Large (2x2), and Extra Large (3x3). Press the size buttons on the right hand side of the screen to view the metrics available in each size. Not all metrics are available in every widget size. See *Appendix A* for more details on basic metrics.

Controls: All widgets used to control the different systems that may be installed on the implement. Control widgets may be displayed in five different sizes: Small (1x1), Wide (2x1), Tall (1x2), and Large (2x2), and XL (3x3). Controls must be added manually to a home screen layout.

Note: *Large control widgets also display quick adjustment features for the control system. When using smaller control widgets, these features are accessed by pressing and holding on the widget.*

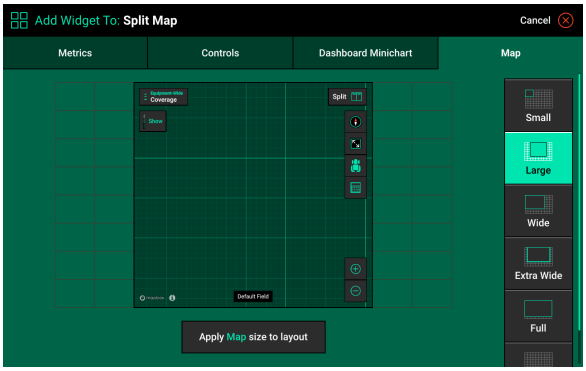


Dashboard Minichart: Allows the user to add either a Dashboard Minichart (DMC) or Swath Control bar to the active layout. Both options are available in full or ¾. Full will stretch across the entire bottom of the display, while ¾ will leave a space on the left side where additional widgets may be added. The Dashboard Minichart may be removed by selecting No DMC. Press Apply DMC Size to Layout to display the active selection on the active layout.



Map: Allows the user to select how the map is displayed on the active layout. There are six options available: Small (3x3), Large (8x6), Wide (8x7), Extra Wide (8x8), Full (8x10), or No Map. Press Apply Map size to layout to display the active selection on the active layout.

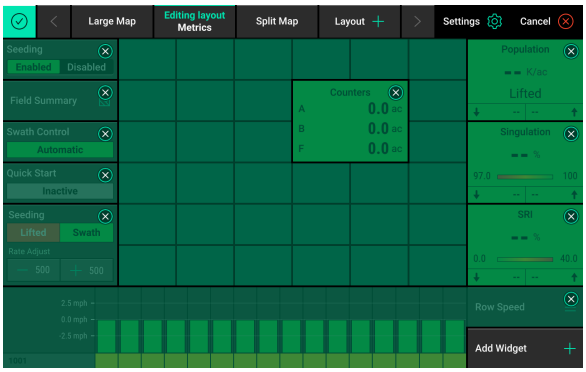
Note: *When using a DMC, all map sizes other than small will shorten height to fit.*



Placing a Widget on the Home Screen

After a widget has been selected from any of the four categories, it will be superimposed over the center of the screen. The widget may then be placed anywhere on the home screen. Every widget takes up a certain amount of grid spaces (e.g. a 2 x 2 metric takes up four grid spaces). To move the widget press and hold on it, then drag to the desired area of the screen. Release when the widget is positioned in the desired location. Pressing the X at the top right corner of a widget will remove it.

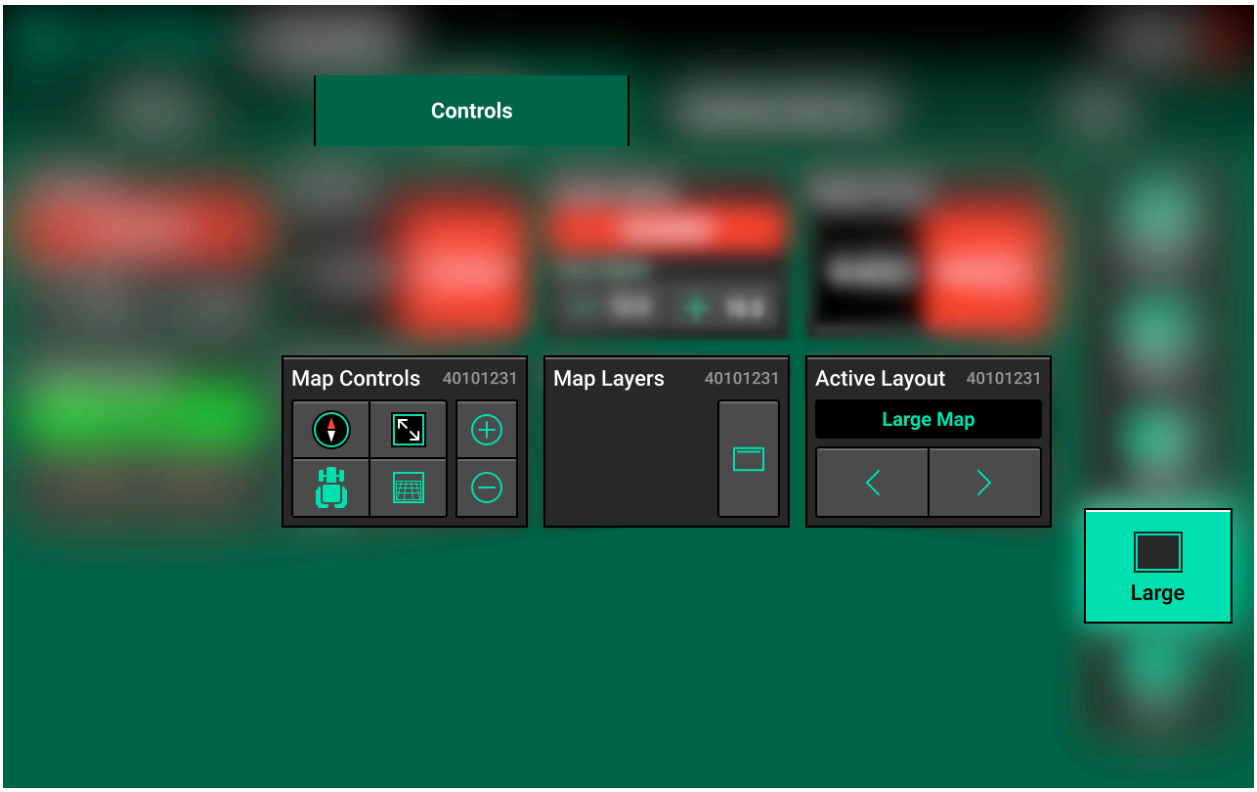
Note: *If a new widget is placed over any part of an existing widget (e.g. the map), the entire existing widget will be removed and any empty space will be displayed as a grid.*



After a widget has been set, press Add Widget again to continue customizing the home screen. After customization is complete, press the Checkmark in the top left to save the current layout.

Controlling a Second Display

Three large control widgets are available that may be used to control map and layout features of a second connected display. This feature is useful when one display is dedicated to a large map layout, or when one display is mounted in a hard-to-reach area of the cab.



Select one of the above widgets, then place it onto the layout using the process described earlier in this section. The number in the top right of each widget indicates the serial number of the display whose map the widget will control.

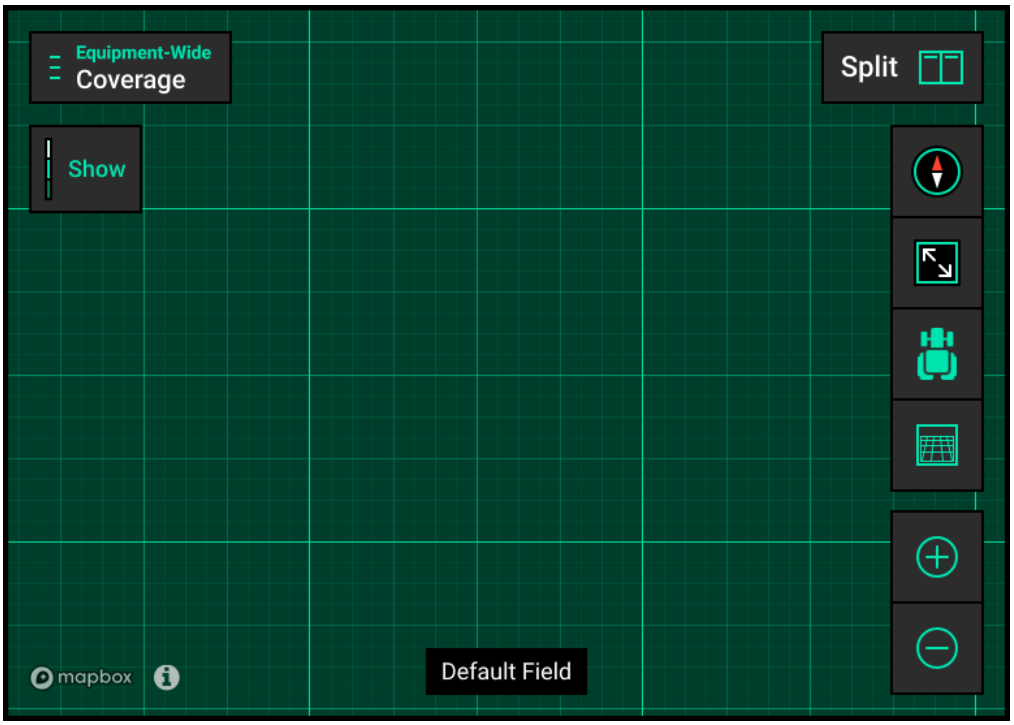
Map Controls — Sets map zoom and orientation. See *Controlling the Map* in this section for more details.

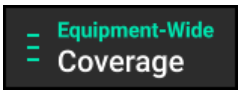
Map Layers — Selects which layer the map will display. See *Controlling the Map* in this section for more details.

Active Layout — Toggles between all saved home screen layout tabs. See *Home Screen Tabs* in this section for more details.

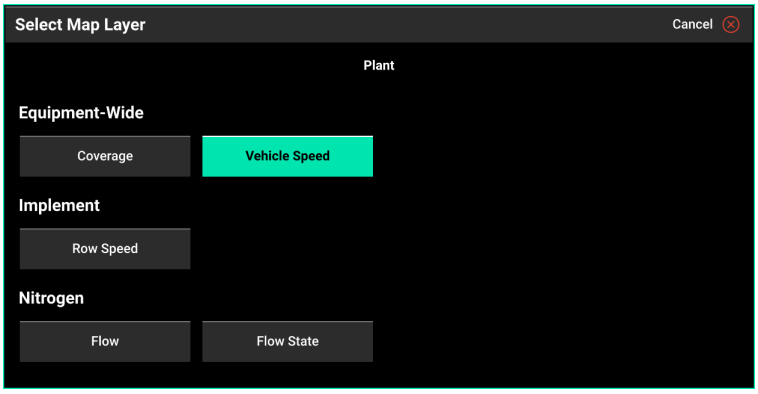
Controlling the Map

The map will default to displaying the tractor/implement in the center of the screen at a preset zoom level. Control buttons are located on the map to adjust settings.





Press the map layer name (e.g. Coverage) displayed in the top left of the map to open the Map Layer Selection pop-up.



All available layers are listed on the selection pop-up. Configured control and monitoring systems will determine which layers are available, and ome layers may not be displayed until data is created. Layers are categorized by Plant, Harvest, Sidedress, and Spray. Press the desired layer to display that layer on the home screen map.

To split the map viewing area into two maps, press Split in the top right of the map. When viewing two maps simultaneously, any adjustments done to one map (other than adjusting the legend) are also applied to the other map. For example, zooming in on one map will apply the same zoom to the other map.

To exit the split map view, press Full on either map to change the view to only that map.

The red arrow indicates north. Change the map orientation by pressing the compass. There are three orientation modes:

- North Facing – The top of the map is always pointed north. The tractor icon will change directions on the screen. This is the default orientation mode.
- Implement Facing – The implement icon is always pointed towards the top of the screen and the map rotates around the implement.
- Custom — place two fingers on the map and rotate it. This will lock the map into the selected orientation. Press the compass to return to north facing mode.

Press the Zoom button to access a view where the entire field is displayed.

Press the Tractor to keep the tractor/planter icon centered in the screen. Additionally, the zoom level will be reset and centered on the tractor icon.

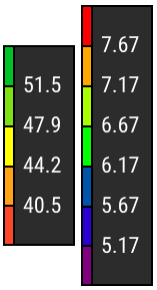
Press the Perspective View button to toggle the map view angle between 0, 65, and 75 degrees.

Zoom level may be adjusted by two methods.

1. Press the Zoom In (+) and Out (-) buttons to change the zoom level of the map.
2. Use a pinch-in or pinch-out gesture on the screen with two fingers to zoom in or out, respectively.

Press Show to toggle the legend for each map on.

Press Hide to toggle the legend for each map off.

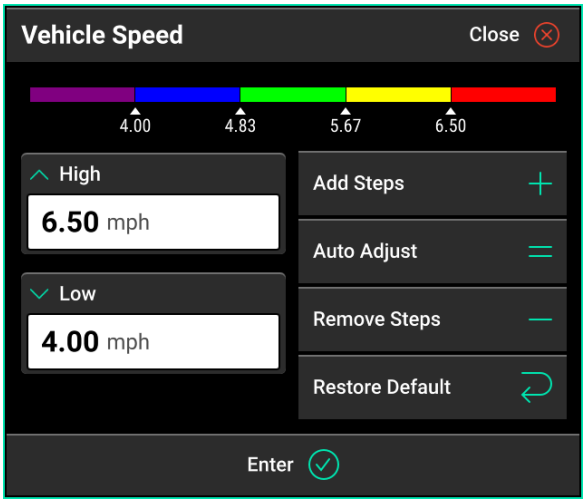


The map legend will display differently depending on the current map layer.

Most map legends may be edited. There are two ways to edit legends:

1. Press and hold on the legend and drag up or down to adjust the high and low ends of the legend.

2. Tap on the legend to open a pop-up that allows for adjustment of High & Low values, number of steps, or an auto adjust feature. Press Enter to save changes and return to the Home screen.



Note: *If a small map has been added to the home screen, none of the control buttons described above will be available.*

General Mapping Principles

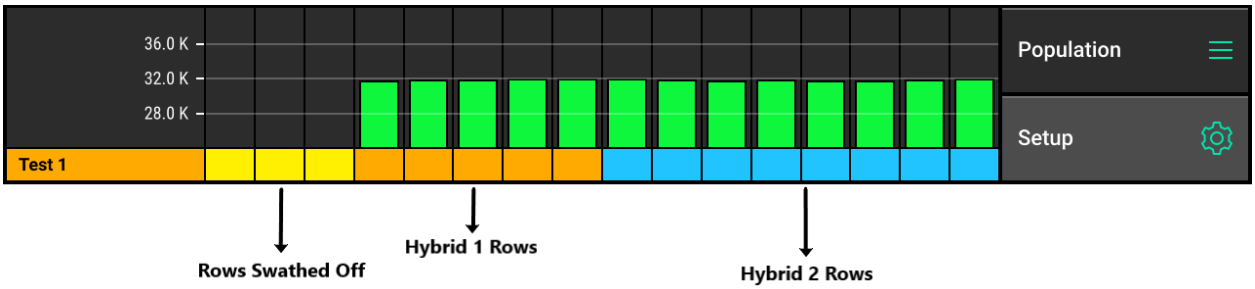
- All maps except for SRI (2 Hz) are mapped at 5Hz, meaning there are 5 data points mapped for each second of time.
- Mapping is drawn on a row by row basis.
- A dark line will be mapped on either side of the implement to distinguish passes.
- If an implement appears to be mapping incorrectly, ensure that the implement setup is correct.
- Rows which are inactive or are not collecting information on a row will not map (e.g. a row does not have load cell installed will not map down force).
- Active map layers may be changed at any time by selecting a different layer.
- Some map layers require specific Precision Planting products to be installed on the implement to generate the information necessary to create a that layer.
- If the map has moved away from the tractor/implement location, a white arrow will appear on the edge of the map pointing in the direction of the tractor/implement.

Dashboard Mini Chart

The Dashboard Mini Chart [DMC] is located at the bottom of a layout when added. The DMC displays a bar chart for one of the measurements taken by the 20|20 for each row. Rows that exceed alarm values will turn yellow while rows that exceed failure values will turn red.

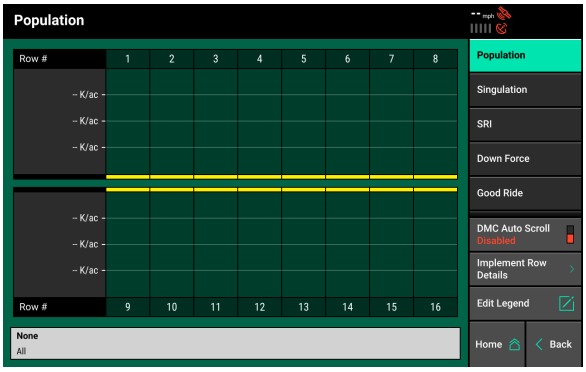
Note: *System specific alert values may be set in the Alerts menu by navigating to Setup > Alerts. See* Alerts *in this guide for more details.*

Below the bar chart, active hybrids are displayed. If multiple hybrids are active, the hybrid name and associated color will alternate among the active hybrids every five seconds. Any row marked along the bottom line only in yellow instead of a hybrid color indicates that row is currently swathed off.



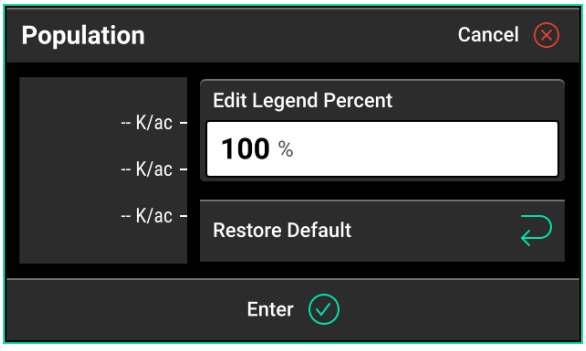
The metric type being displayed on the DMC is displayed above Setup. The default metric displayed is Row Speed. To change the metric, press the active metric to open the Metric screen.

The Metric screen displays a large row by row chart. Use the navigation menu on the right of the screen to select which metric is displayed. Additional metrics are available by scrolling down on the navigation menu. Select the desired metric, then press Home.

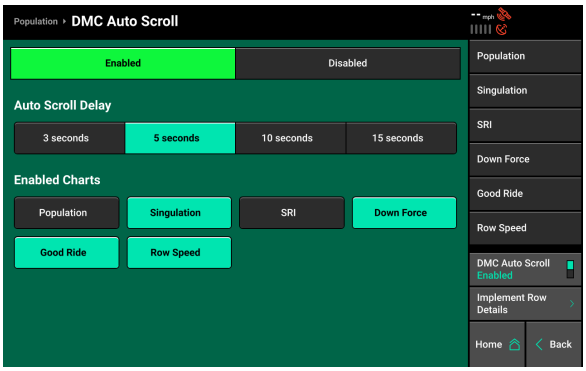


Note: *The Metric Selection screen may also be accessed by pressing any widgets for that metric on the home screen, or pressing the DMC directly.*

Press Edit Legend to bring up a menu that will adjust the range on the metric that is currently displayed.

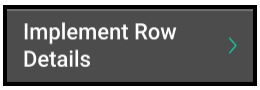


On the Metric screen, press DMC Auto Scroll to access the DMC Auto Scroll settings screen. When enabled, the DMC will automatically change between all metrics highlighted under Enabled Charts at the speed highlighted under Auto Scroll Delay.

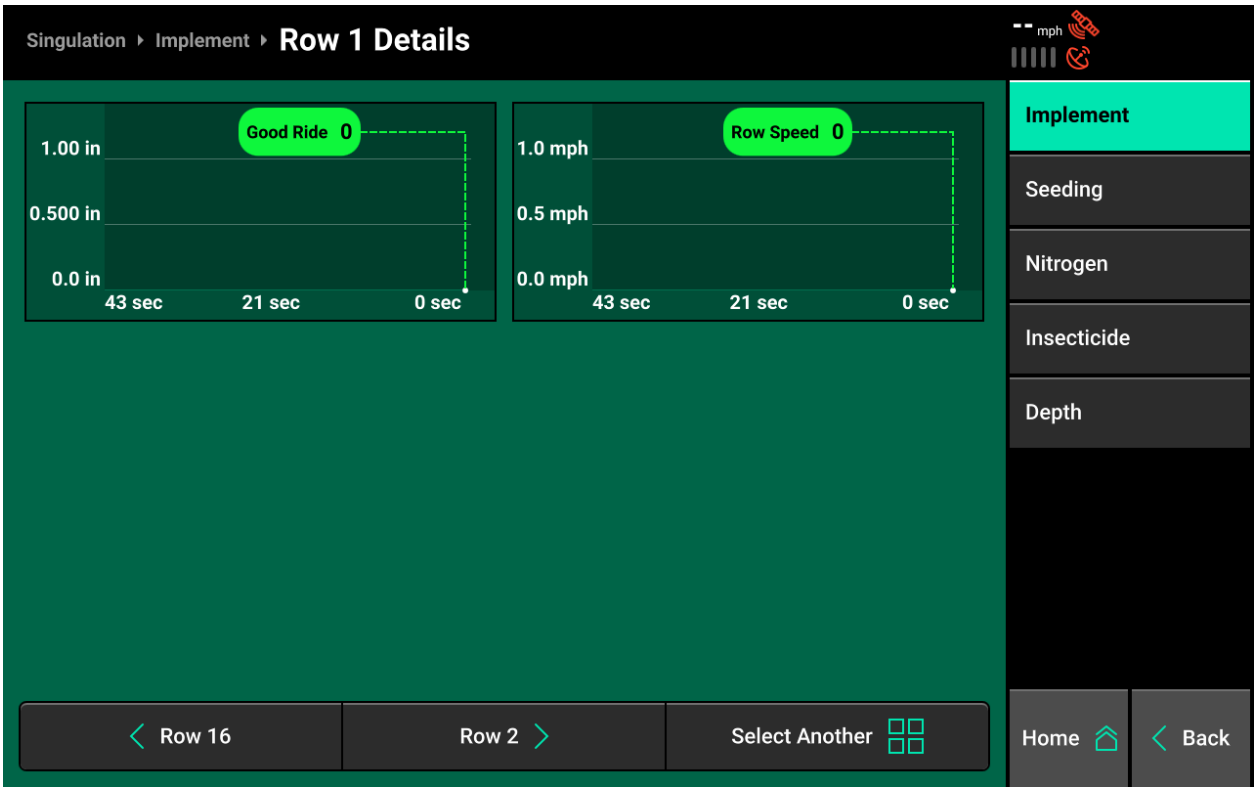


Note: *As of software version **2024.1.1**, there is a visual bug when accessing the Row Details screen by using the Implement Row Details button on the DMC Auto Scroll screen. Use the Implement Row Details button on the Metric screen instead to access the Row Details Screen.*

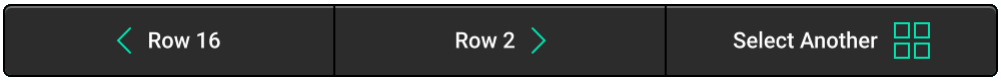
Implement Row Details



Press Implement Row Details on the Metric Selection screen to access the Row Details Screen.



The Row Details screen allows the user to view all available information for the selected row in order to maximize implement performance. Select a different system using the navigation menu on the right side of the screen. Different options will be available based on configured systems.



Press the numbered arrows at the bottom of the screen to scroll to the next row, or press Select Another to choose a specific row.

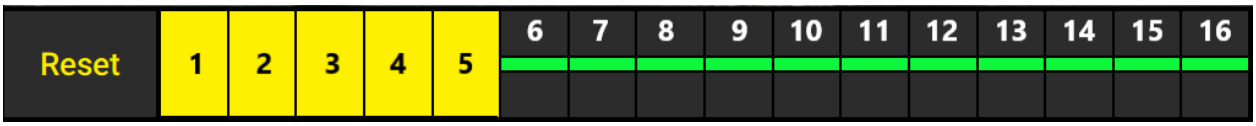
Manual Swath Control

If seeding is being controlled by the 20|20, rows may be manually swathed on/off. When using manual swath control, all control products on rows that are swathed off will no longer output.

Note: *The swath control switch on the Cab Control Module must be in the up position to enable manual swath control.*

Option 1:

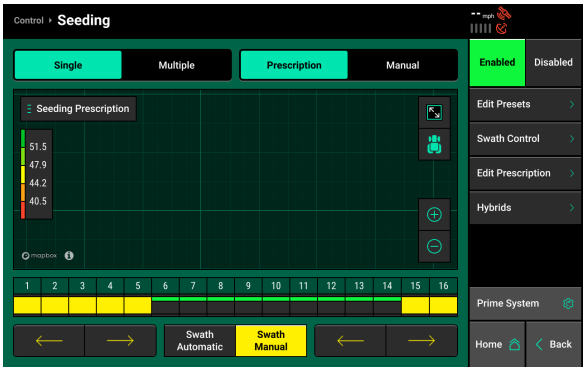
A Swath Control Bar may be added to the home screen in place of the DMC.



The Swath Control Bar allows the user to manually swath off implement rows from the home screen. Each box on the bar displays a number to identify its location on the implement. Press and hold the box representing the desired row. When the box turns yellow, that row is swathed off. Multiple rows may be swathed off by pressing and dragging across multiple rows after the first row has turned yellow. Swathing off rows using this function will engage manual mode, and rows will no longer swath off to boundaries or coverage. To switch back to automatic mode press Reset on the left side of the Swath Control bar. When in automatic mode Reset will instead read Swath.

Option 2:

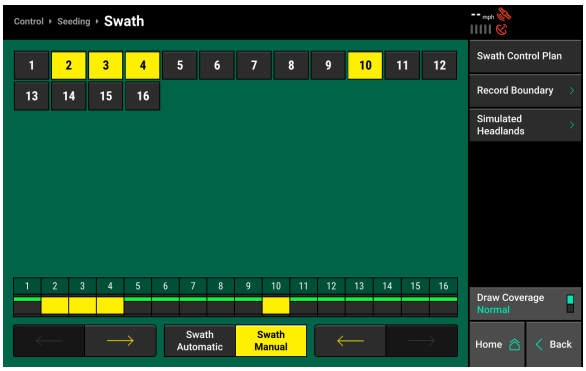
Press the control widget for the configured seeding system to open the Seeding Control screen. The Swath Control Bar will be displayed below the map. Use the methods described in option 1 use the bar. To swath rows off from Right to Left or Left to Right, press the arrows located below the bar. To switch back to automatic swath control, press Swath Automatic. For more information on setting up widgets, see *Customizing the Home Screen* earlier in this section.



Option 3:

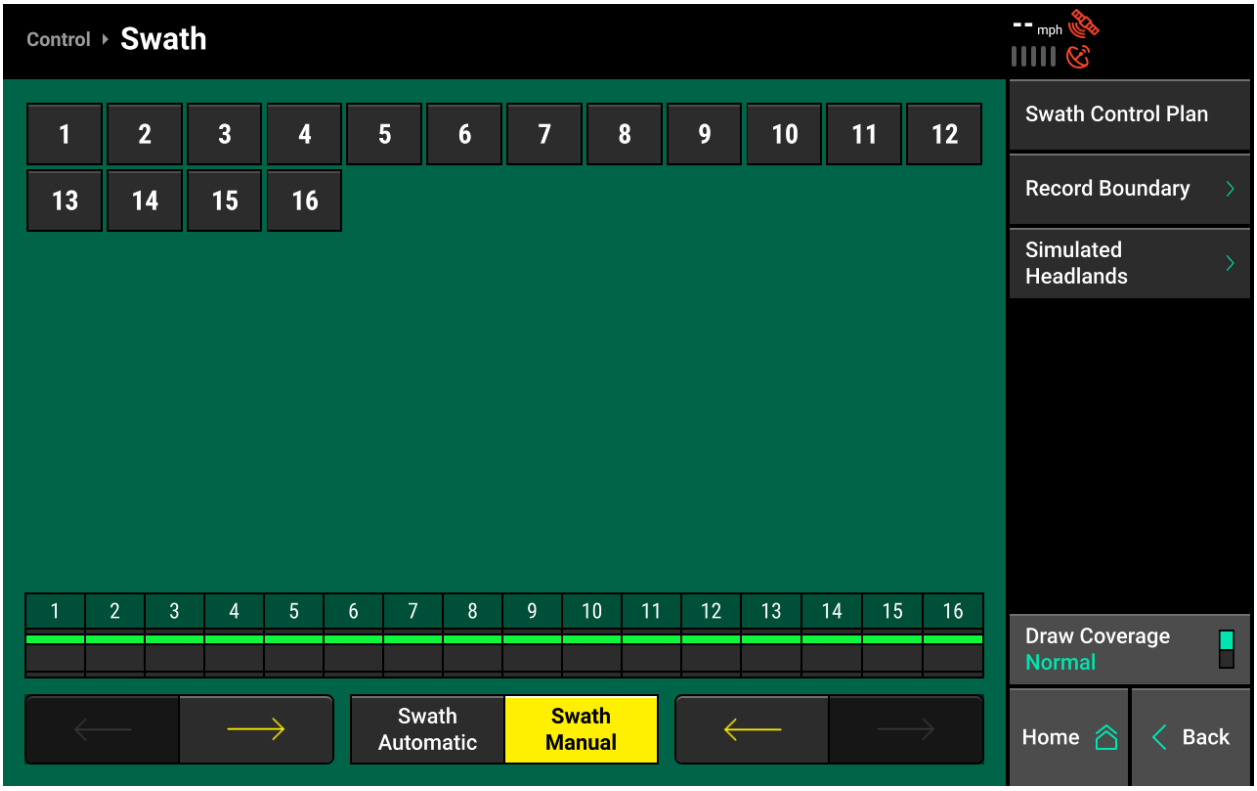
Press Swath Control on the Seeding Control screen to open the Swath screen, or add the Swath Control widget to the current Home screen layout and press it. For more information on setting up widgets, see *Customizing the Home Screen* earlier in this section.

The swath screen will display a table of all rows. Press each row to swath it on or off. Rows that are swathed off will be displayed in yellow. The Swath Control Bar will be displayed below the table. Use the methods described in options 1 and 2 to use the bar. Continue in this section for more information on using the other functions of the Swath screen.



Swath Screen

The Swath screen allows the user to manually swath rows on and off, configure a swath control plan, record a boundary file, simulate headlands, or set the implement to always draw coverage.

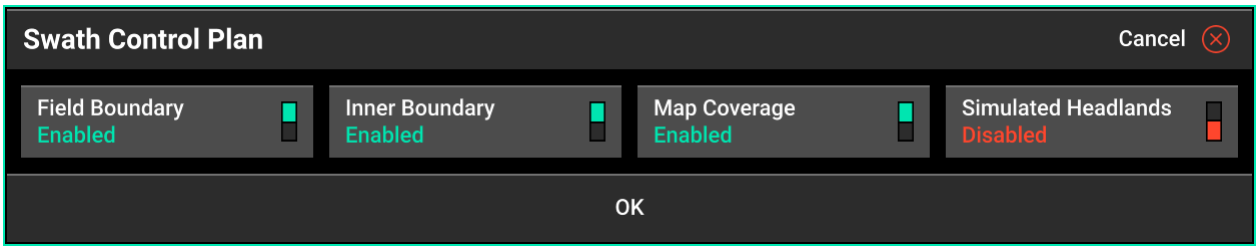


Manual Swath Control

The row table and Swath Control Bar on this screen may be used to manually swath rows on and off. See *Manual Swath Control* earlier in this section for more details on controlling swath manually.

Swath Control Plan

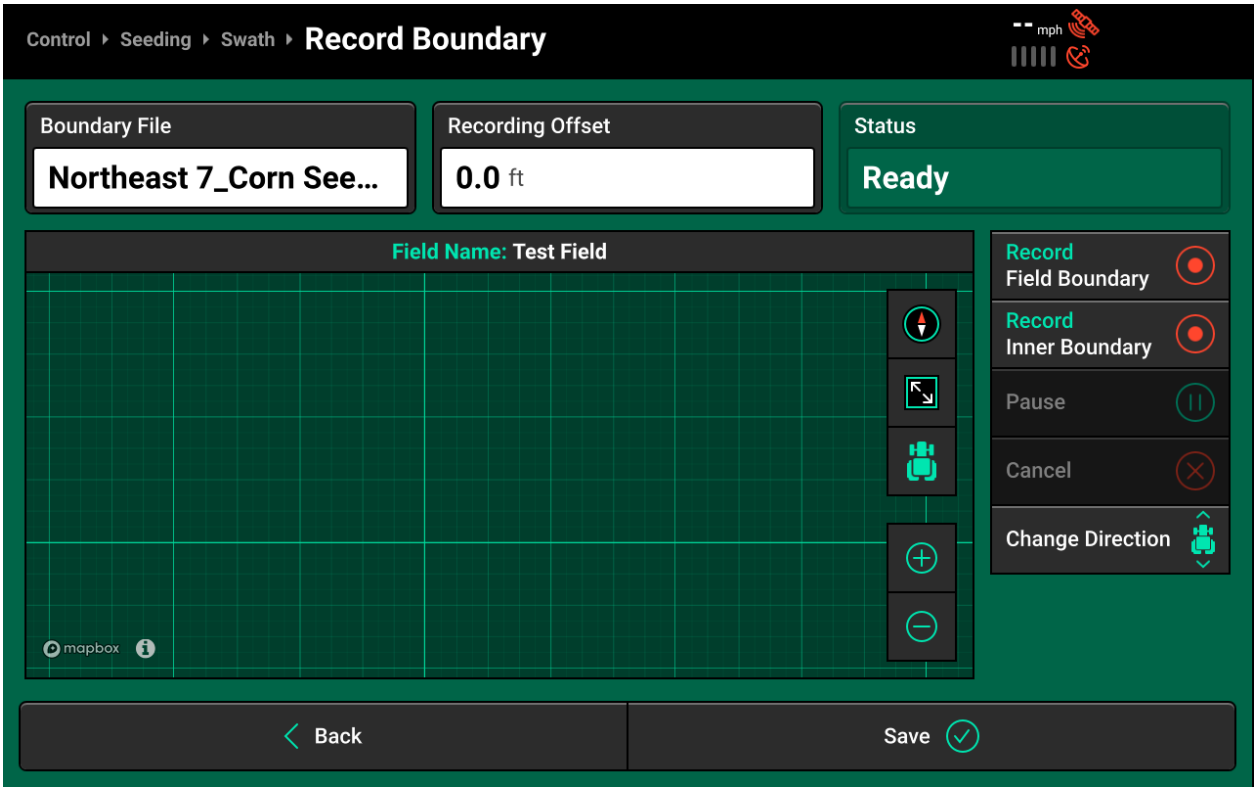
Press Swath Control Plan to open a pop-up that allows the user to select which swath events the 20|20 will use to turn swath on/off.



Press each option to set it on or off.

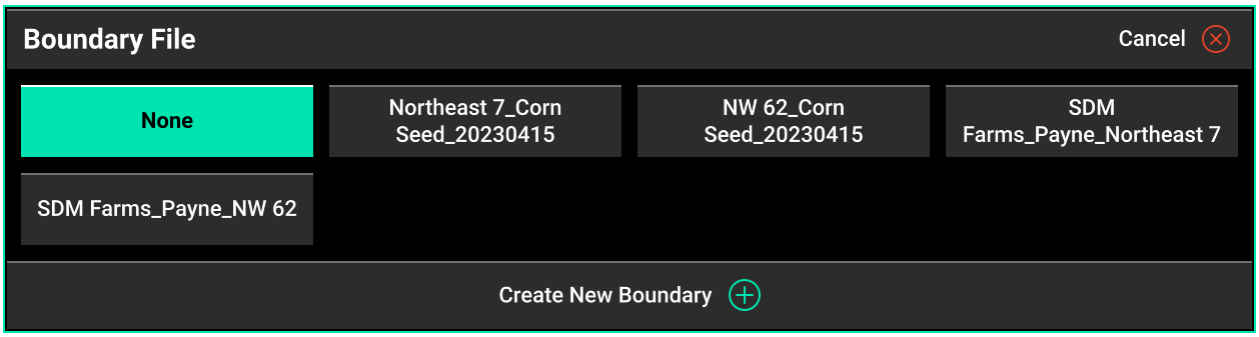
Recording Boundaries

Press Record Boundaries on the Swath screen to open the Record Boundary screen. This screen allows the user to draw a boundary. Press Back to return to the Swath screen.

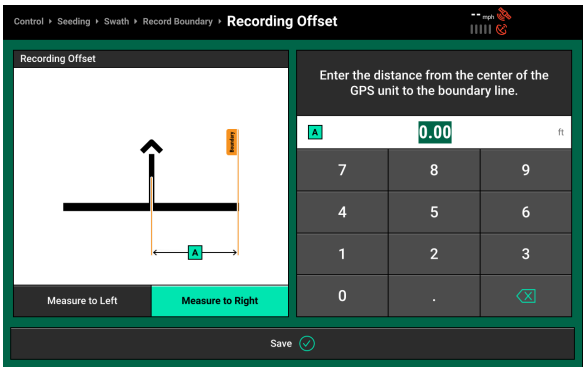


Press Boundary File to select the file name for the new boundary, or press Create New Boundary on the pop-up to enter the desired boundary name.

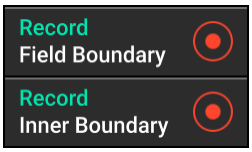
Note: *Selecting an existing file name will overwrite the current boundary dimensions of that file.*



Press Recording Offset to enter the distance from the GPS receiver to the boundary line. Press Save to return Record Boundary screen.



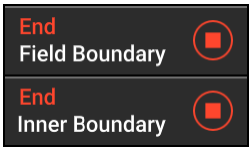
Recording Process



Press Record Field Boundary or Record Inner Boundary to begin recording. Commence driving along the outer or inner boundary of the field.

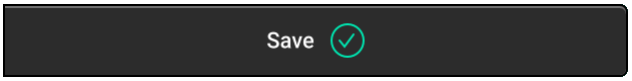
Press Pause to pause recording while repositioning equipment.
To achieve maximum accuracy around outer field corners, it may be necessary to pause recording after reaching an outer corner. Complete the turn and then back the tractor fully into the corner. Press Resume to resume recording once the tractor is properly repositioned.

Press Cancel to discard the current recording.



Press End Field Boundary or End Inner Boundary to stop recording.

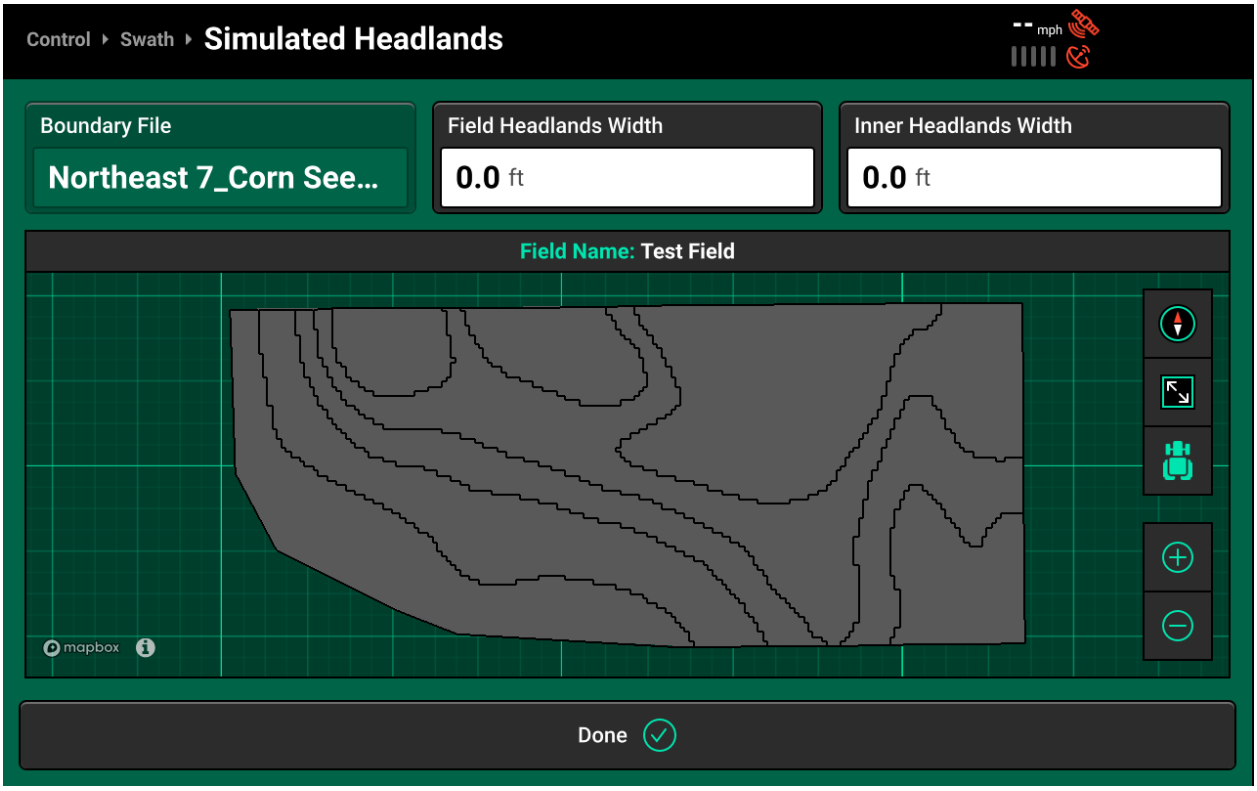
Press Change Direction in the event that the tractor appears to be facing the wrong way.



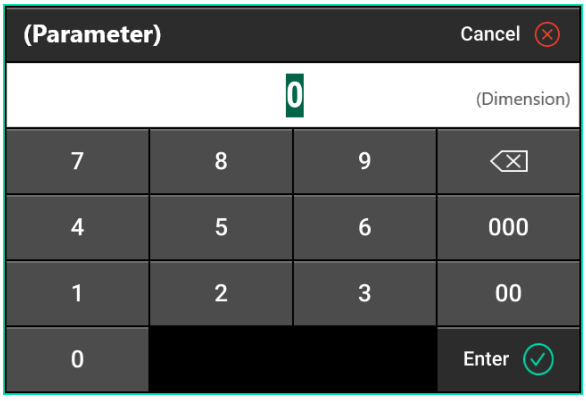
Press Save to keep the current recording.

Simulated Headlands

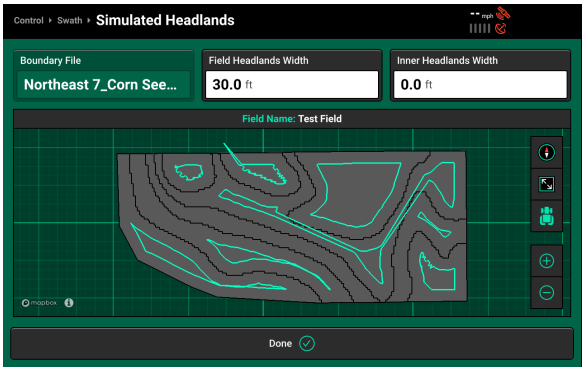
Press Simulated Headlands on the Swath screen to open the Simulated Headlands screen. A graphical representation of the boundary file that is assigned to the active field will be displayed.



Press Field or Inner Headlands Width and enter the desired value for the selected headland type using the pop-up.

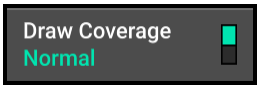


Press Done to draw simulated headland coverage on the boundary file using the specified dimensions and return to the Swath screen.



Draw Coverage

Press Draw Coverage on the Swath screen to change coverage drawing mode. There are two coverage drawing modes.

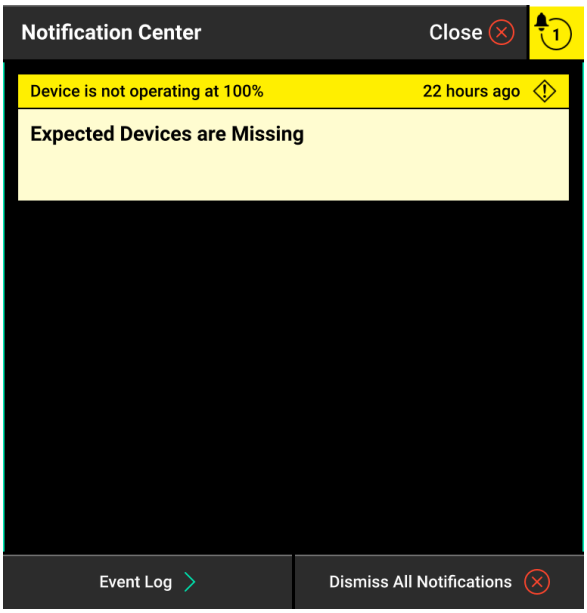


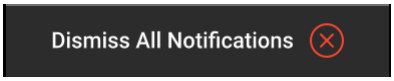
Normal — The 20|20 will map coverage whenever it sees seed drop. This is the default setting.

Always — The 20|20 will map coverage regardless of seed data.

Notification Center

The Notification icon will display a number representing the all events logged by the 20|20 since last reset. Press the Notification icon to open the Notification Center. The Notification Center displays a list of all event codes and a summary of the issue.

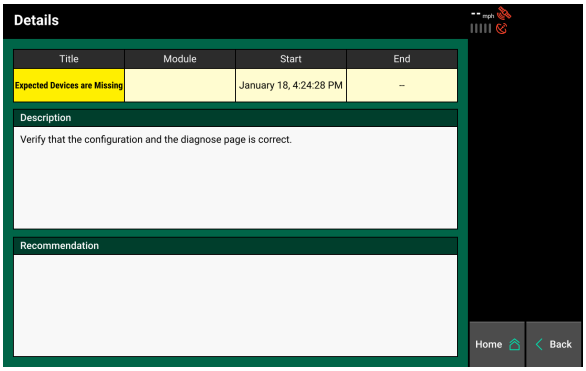




Press Dismiss All Notifications to clear all events from the Notification Center. Cleared events will be stored in the Event Log, and may be exported to an external USB drive. See *Data* in this guide for more information on exporting data from the 20|20.

Press Event Log to display a list of all notifications from the entire system, from newest to oldest. See *Event Log* in the *Diagnose* section of this guide for more details.

Press any event in the Notification Center to open the Details screen, which provides additional information about that event and troubleshooting recommendations.

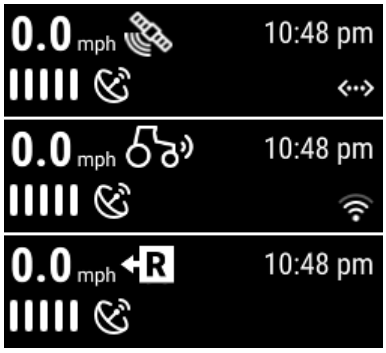


Speed & GPS

Speed

The top right hand corner of the home screen displays the current speed of the tractor. The bars displayed beside the receiver dish indicate signal strength. The receiver icon will be white if the speed source state is good. It will turn yellow if communication is lost momentarily, there are errors in the signal, or GPS communication is lost. The icon will turn red if the speed source becomes unusable.

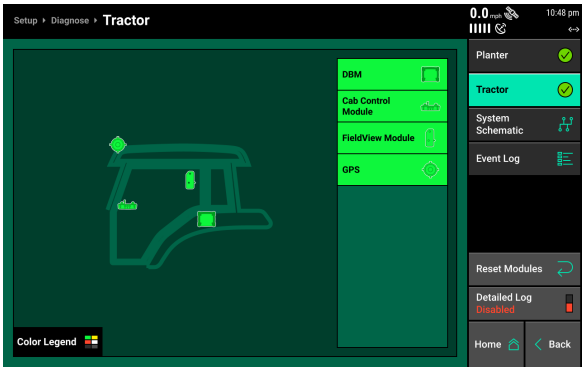
Three different icons may be displayed above signal strength.



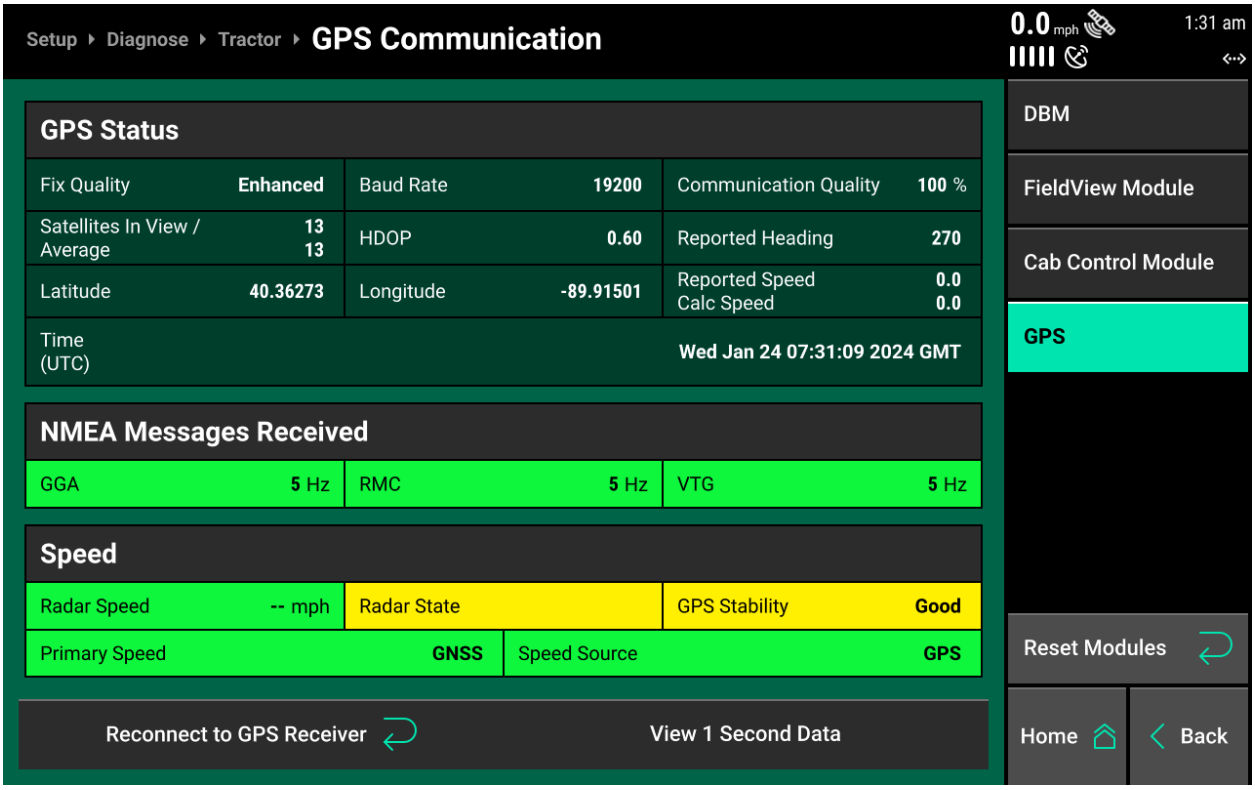
1. Satellite icon: Indicates the speed source is coming from the GPS system.
2. Tractor/Radar icon: Indicates the speed source is coming from the Radar system.
3. ←R: Indicates the tractor is moving in Reverse.

Internet connection status is displayed below time of day, <▪▪▪> indicates a hard-wired internet connection and the wifi symbol indicates a wireless connection/wireless connection strength. If neither icon is present, the 20|20 is not connected to the internet.

Press the top right area of the screen where these metrics are displayed to open the Tractor section of the Diagnose page. Press GPS in the center of the screen to open the GPS Communication page.



GPS Communications



This page displays information about the GPS signal that the 20|20 is receiving.

Set the third-party GPS receiver to output:

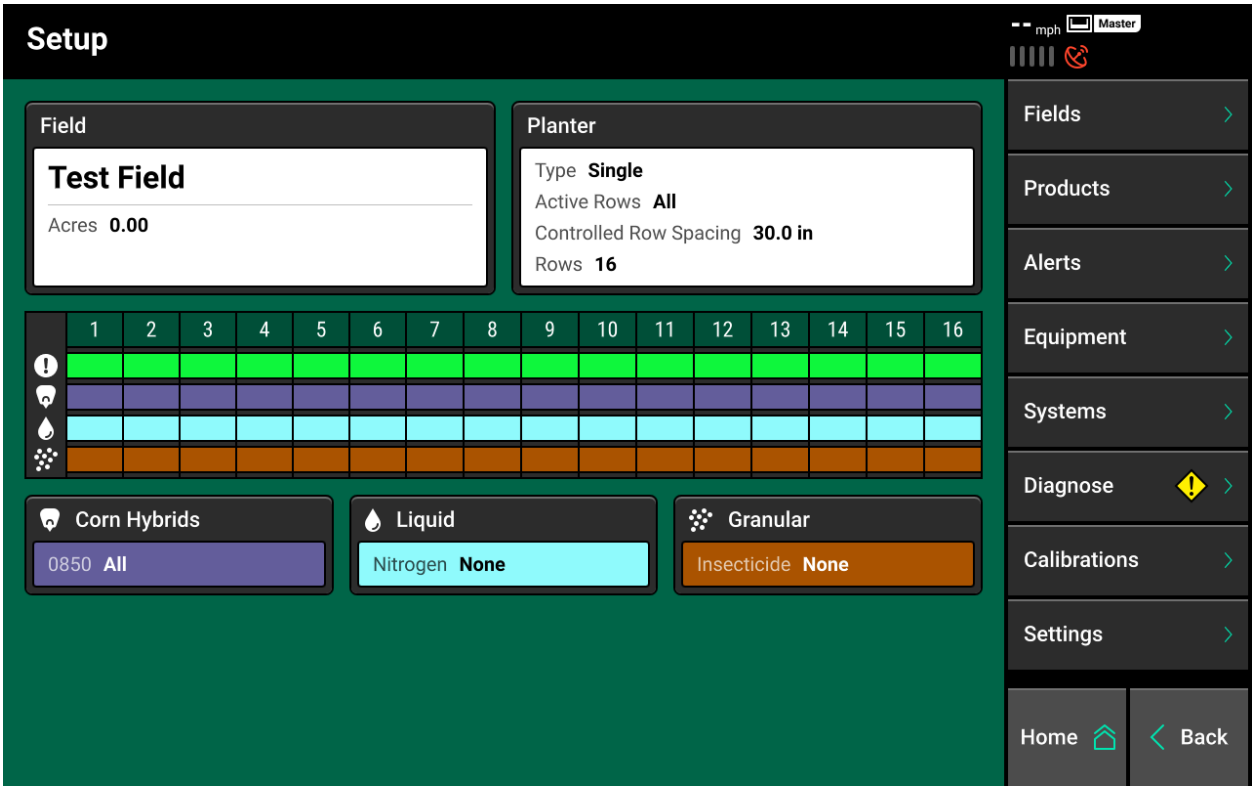
- A Baud Rate of 19200 or 38400.
- NMEA messages GGA, RMC (or ZDA), and VTG at 5 Hz. Leaving other NMEA messages active may degrade the GPS signal due to information overload.

For best results, GPS communication Quality should be as close to 100% as possible, at least three satellites should be within view, and the HDOP should be between 0 – 2. RTK quality signal is recommended for any swath control or variable rate systems.

Press Reconnect to GPS Receiver to command the system to reacquire GPS signal. Press View 1 Second Data to refresh the GPS information displayed on the screen. See *Tractor* in the *Diagnose* section of this guide for more details on GPS communications.

Setup

Press Setup on the home screen to access the Setup screen. The Setup screen allows the user to access diagnostics, equipment setup, product details, and display settings, and also provides at-a-glance information about the implement systems and field acres.

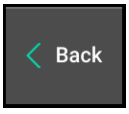


Field — Displays active field name and total season acres planted for that field. See the *Fields* section of this guide for more details.

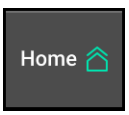
Implement — Displays basic information about the implement.

Row by Row Legend— Displays basic system and module status information. The top row displays row status indicated by color. See the *Diagnose* section of this guide for more details on system diagnostics. All other rows display a basic legend of systems.

The navigation menu is displayed on the right side of the Setup screen. The navigation menu is used to access all other screens. The navigation menu will display different options after navigating to a different screen.



When navigating the 20|20, press Back to return to the previously viewed page.



Press Home to navigate to the Home screen.

Navigation Menu Overview

Fields: Change the active field name, assign prescription/boundary to a field, and create or edit Client, Farm, & Field names.

Products: Assign active crop and set up other application products.

Alerts: Configure limits, alarms, and settings for the implement and all other systems.

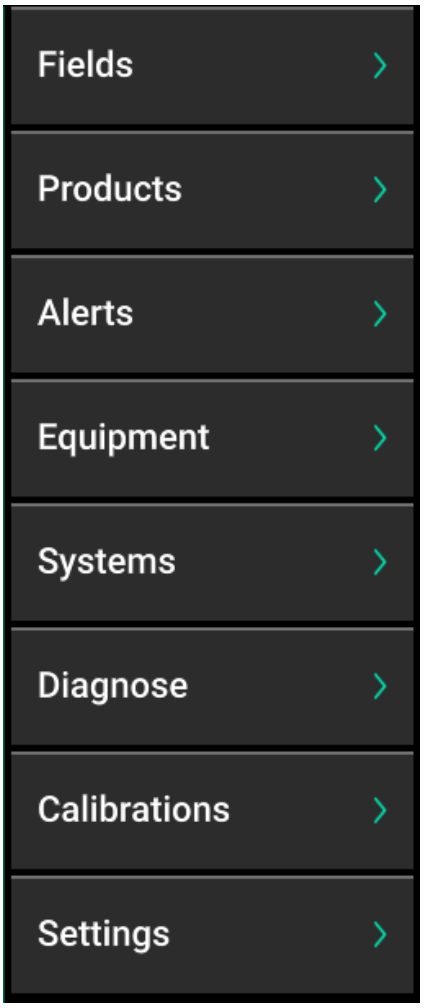
Equipment: Configure the implement profile, implement measurements, and tractor measurements.

Systems: Set up and configure all products installed on the implement.

Diagnose: Access diagnostic information related the display and all products being controlled/ monitored on the implement.

Calibrations: Run all calibrations for the implement and other systems.

Settings: Access data for management, perform software updates, and change user preferences associated with the monitor.



If a button on the Navigation Menu displays the warning icon, an issue with setup or configuration has been detected and must be addressed.

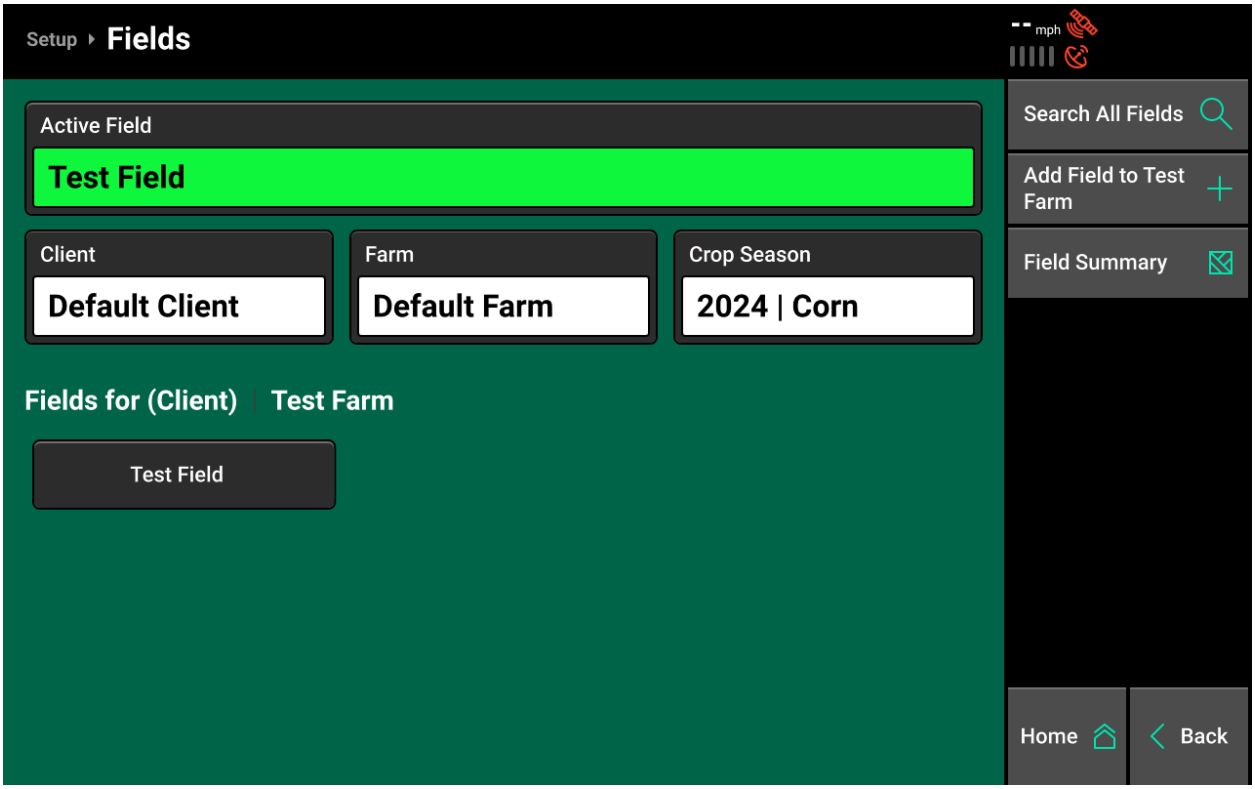
While navigating the 20|20, there will be a system pathway displayed in the top left of the screen showing the button presses used to access the current screen.

When setting up various implements and modules in the 20|20, a list of steps names/numbers will be displayed at the top of the screen, with the current step highlighted.

Fields

The Fields screen allows the user to create and edit Clients, Farms, and Fields, to set the active crop for each field, and to select the season start year.

Precision Planting uses a three tiered naming structure for field names: Client > Farm > Field. Each tier of the naming structure becomes more specific. At all times there will be an active field. The active field is the field in which all data and mapping is currently being created for and stored under.

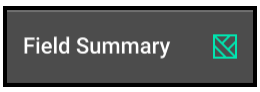


The Fields screen will display the active field name in green, with the client and farm names in addition to the active crop and season start year displayed below.

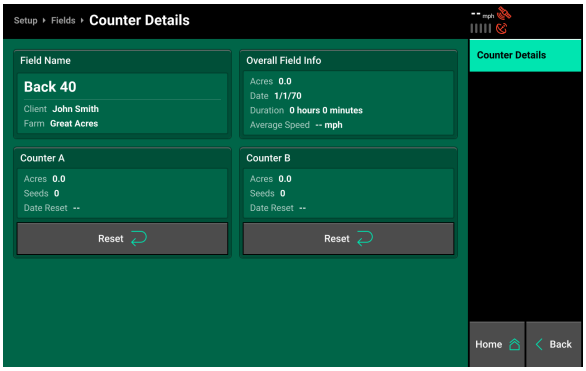
All fields under the current client/farm will be displayed in the table under Fields for (Client). To access the Field Setup screen for the active field, press the field name displayed in green. To access the Field Setup screen for a different field or to make a different field active, press the desired field name from the table under Fields for (Client). Press and drag on the screen to scroll down on the table, or press Search All Fields.

Use the pop-up keyboard to enter the desired field name, which filters results by that name.

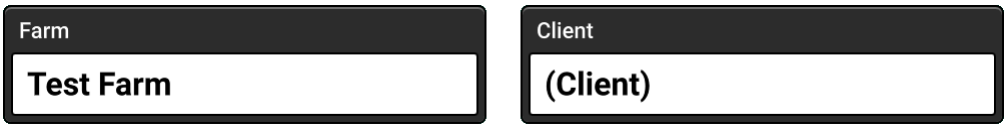
Fields may be added under the same Client and Farm name by pressing Add Field to (current farm name). Use the pop-up keyboard to enter a new Field name. Press Enter to save the new field.



Press Field Summary to access the Counter Details screen. This contains field specific information and reset buttons for the acre counter widget. Press reset to set the acres for each counter to 0. The last reset date will be displayed under each counter.

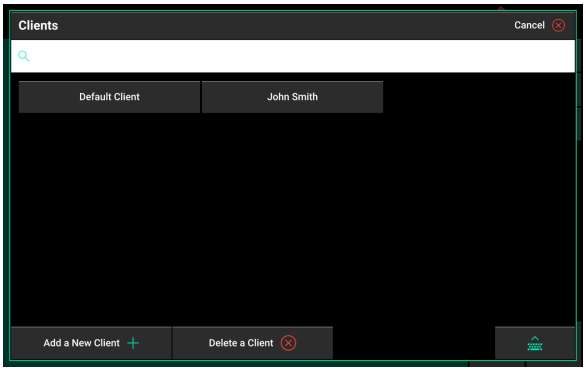


Changing Client/Farm



To view fields for another client/farm, press either client or farm to open a list of all entries for the selected option.

After pressing client, a list of all client names is displayed. To add a client, press Add a New Client at the bottom of the screen. To delete a client, press Delete a Client. To search all client names, press the keyboard icon and enter the desired name to filter results.

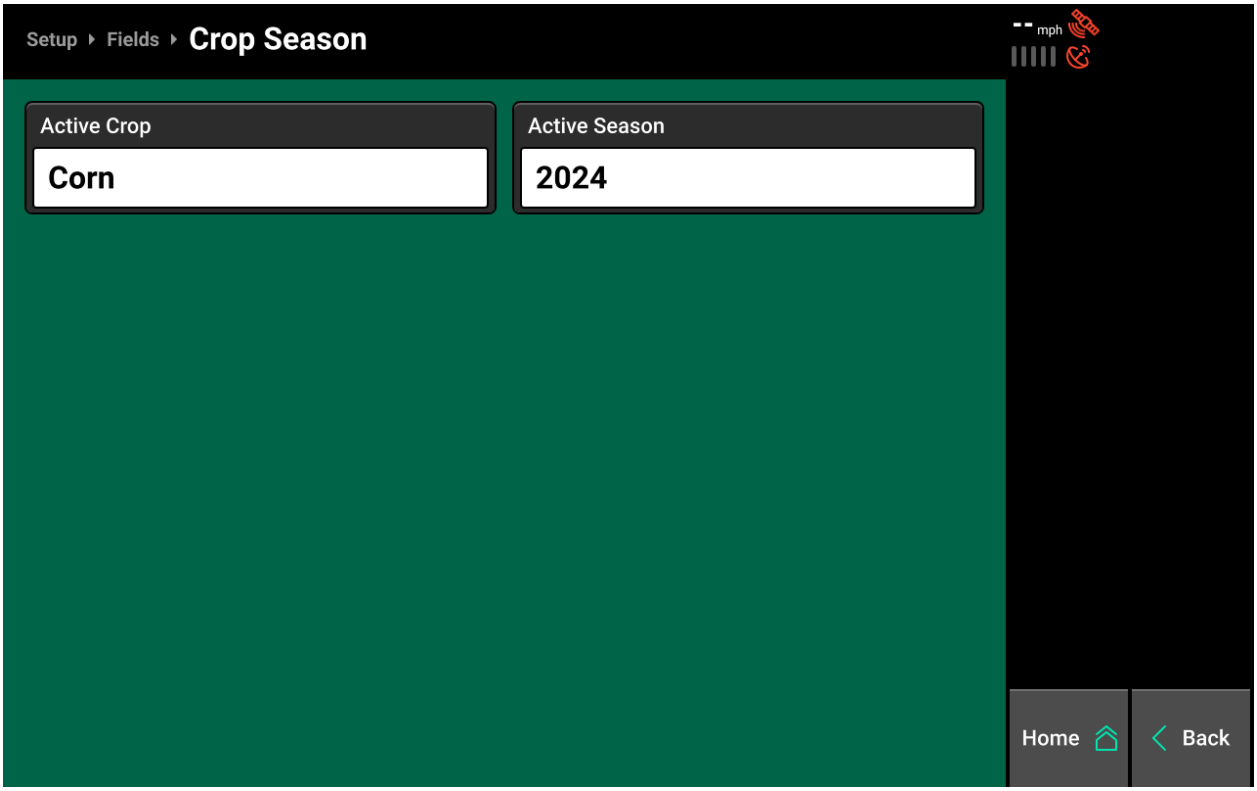


Once a client is selected, the farm selection screen will be displayed. All farms under the selected client will be displayed. Farm names may be created, deleted, or searched using the same process described for clients. Press Back to Clients to select a different client.

Once a farm is selected, the field selection screen will be displayed. All fields under the selected farm will be displayed. Field names may be created, deleted, or searched using the same process described for clients and farms. Press Back to Farms to select a different farm.

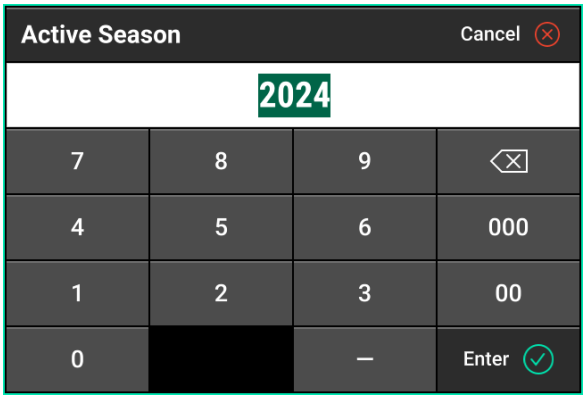
Changing Crop and Season

Press Crop Season to open the Crop Season screen. This screen allows the user to change the active crop and crop season. All data for the field will be recorded under the selected crop/year.



Press the name under Crop to open a pop-up which allows the user to select a crop from a premade database, or to enter the name of a custom crop.

Press the year under Season to open a pop-up keyboard that allows the user to enter the current year.

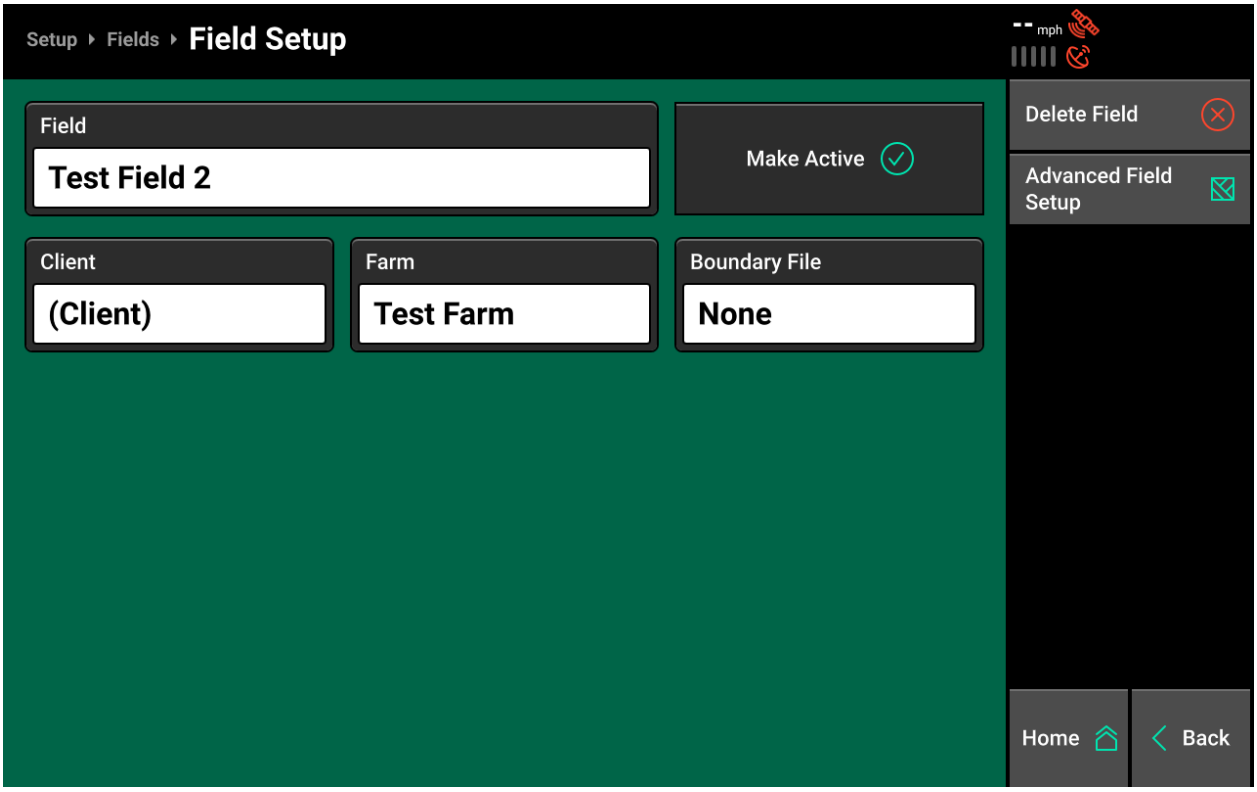


Note: *The selection for active crop/season will not reset when changing fields. When changing fields, the user must ensure that crop/season for that field is correct.*

Field Setup

Navigate to the Field Setup screen either by pressing on the active field name, pressing any field name displayed below Fields for (Client), or searching for a field name and pressing the resulting name. Press Make Active to set the selected field active. Data and maps will now be stored under the selected field name.

Note: *If Make Active reads Done instead, the selected field is already the active field.*



Press Delete Field to erase the selected field name. Map coverage data will not be erased.

If coverage already exists for a field, products such as vDrive will remain swathed off. Press Delete Coverage to clear all coverage from the selected field and allow products to swath on.

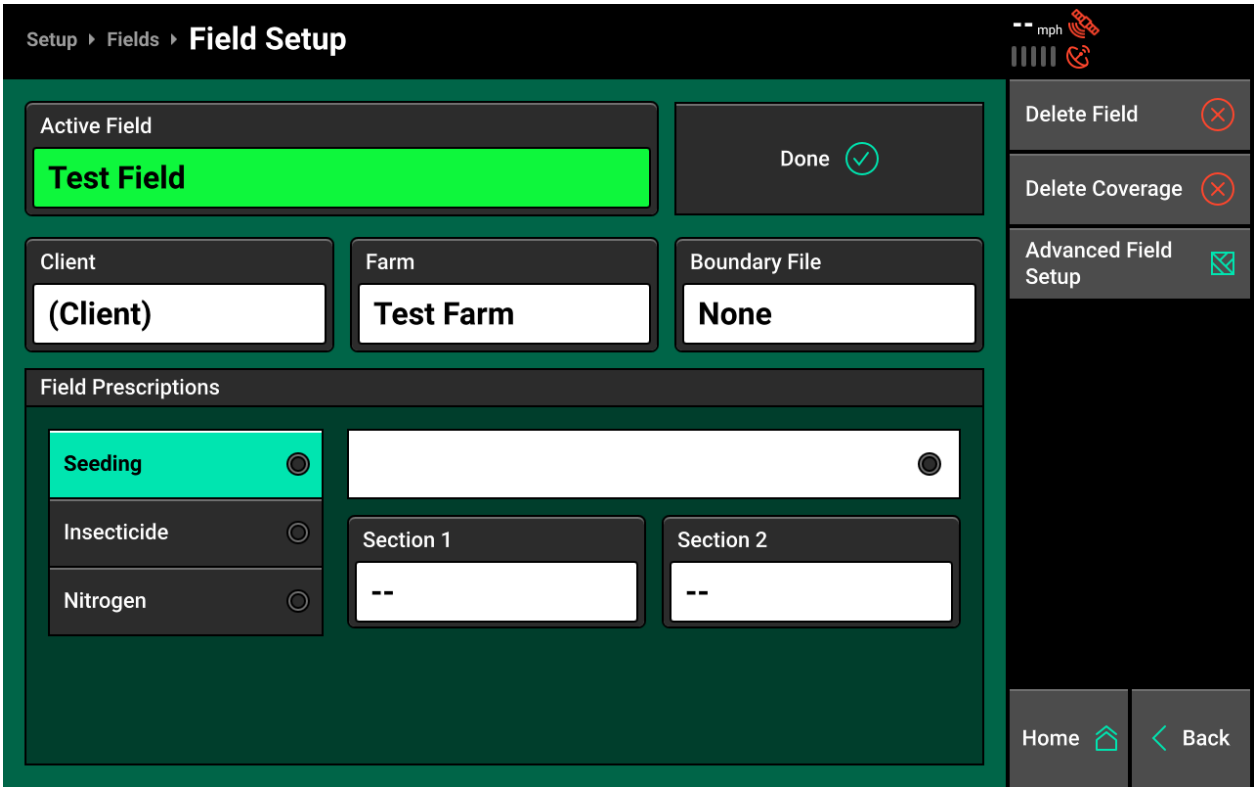
Note: *This option will not be available unless the selected field is set to active.*

Press Advanced Field Setup to manually enter expected field acres.

Prescriptions And Boundaries

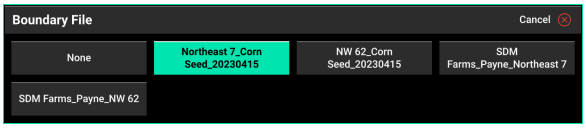
Boundary and Prescription files may be assigned on the Field Setup screen. Boundary and Prescription files must be in a Shape File format and include the .dbf, .shx, and .shp file extensions. Prescriptions may be imported by navigating to Setup > Settings > Data > Import. See *Data* in the *Settings* section of this guide for more details.

Note: *The Field Prescriptions box and selection menu will only be displayed after an appropriate control system has been configured in System setup. E.g. Liquid prescriptions will not be available until a liquid system has been set up. Configure the appropriate system, then return to Field Setup. Refer to the appropriate system operator's guides for more details on configuring systems.*

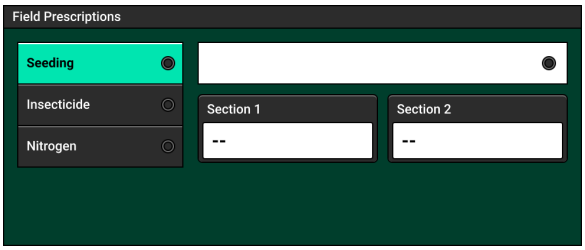


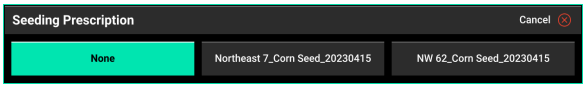
Assigning Boundaries

Press Boundary File to open a pop-up which displays all saved boundary files. Select the appropriate boundary file for the active field.



Assigning Prescriptions





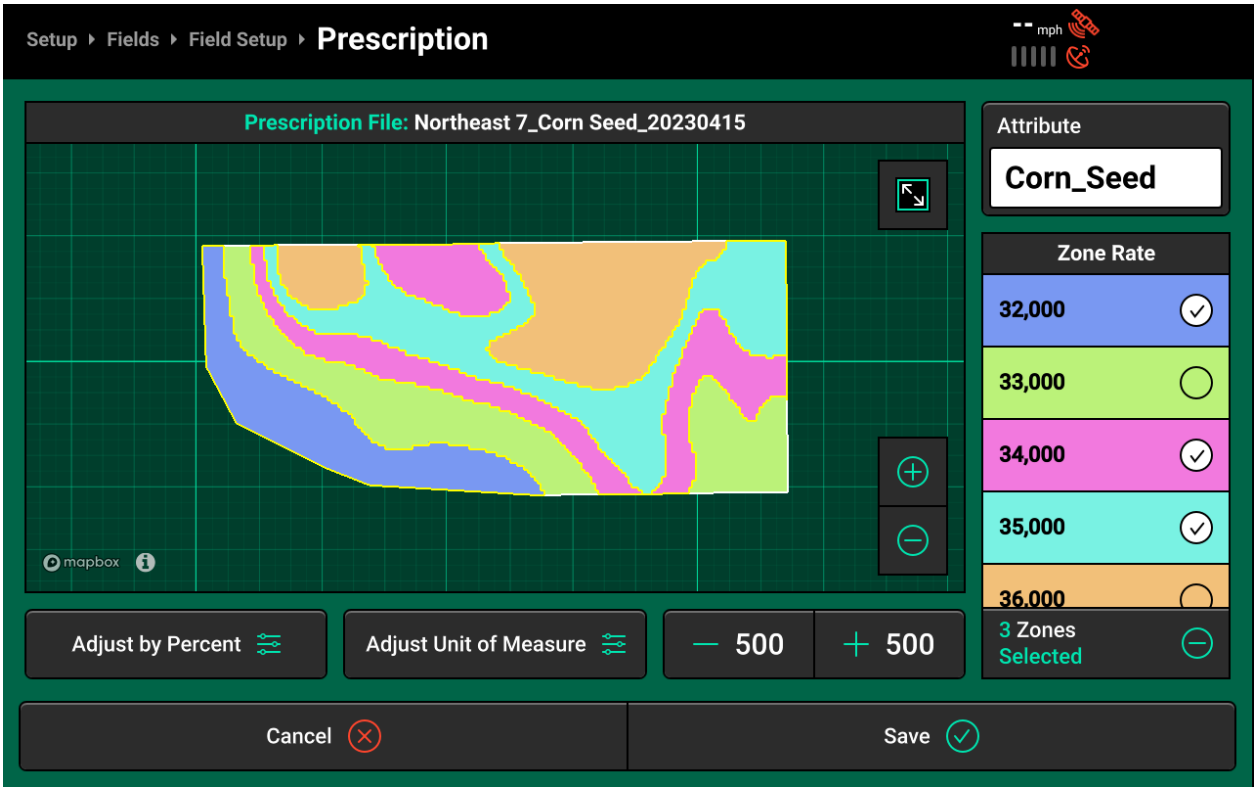
The 20|20 may use prescription files for Seeding, Liquid application, Insecticide, and more. Import all prescription files into the 20|20. See *Data* in the *Settings* section of this guide for more information on importing prescriptions and boundaries.

Press the desired prescription type displayed below Field Prescriptions, then press the white box to the right to open a pop-up which displays all prescription files. Select the desired prescription to assign it to the field. Assigning a prescription will open the Prescription Edit screen.

Note: *All prescriptions must be assigned manually to the desired field.*

Prescription Edit

The Prescription Edit screen allows the user to edit certain prescription parameters. A graphic representation of the prescription is displayed on-screen.



If the prescription file contains multiple attributes, press Attribute in the top right to open a pop-up which allows the user to select the desired attribute.

Select a rate in the Zone Rate table, or press Select All to select all rates. Use the quick adjust buttons to change the selected rate(s) by a preset amount. Use Adjust by Percent to adjust rate(s) by a custom amount. Press Adjust Unit of Measure to toggle between seeds/acre and seeds/hectare. Press Save when all adjustments are completed.

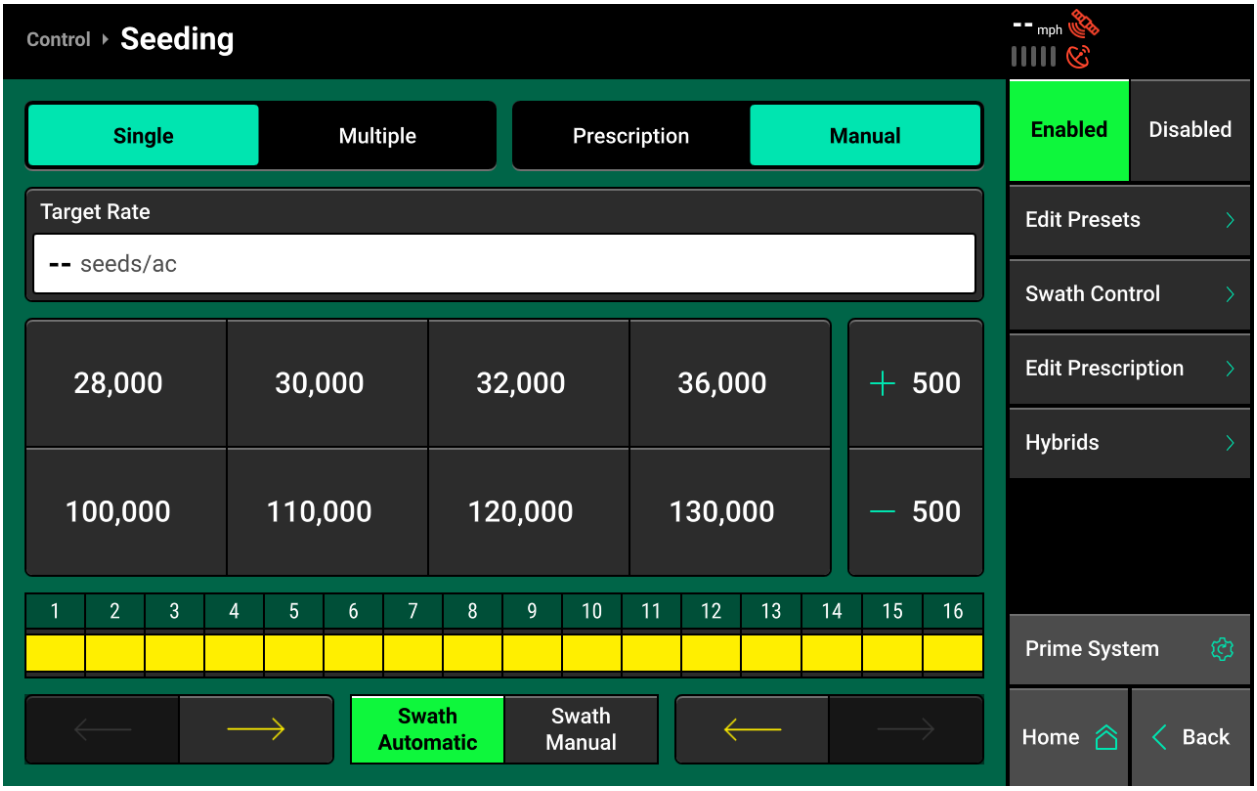
After pressing Save on the Prescription Edit screen, a pop-up will open which requires the user to select an attribute to apply to the rate section(s) of the implement. Press the desired attribute to assign it the indicated rate section.

Note: *The Prescription Edit screen may also be accessed from the control widget of system that is utilizing the prescription. Continue reading this section for more information on controlling to prescriptions.*

Controlling to Prescription Files

Many Precision Planting systems, such as vDrive, vApply, SmartDepth, and more may be set to control based on assigned prescriptions. Use the following process to switch to prescription control.

On the Home screen, press the control widget for the desired system to open the control screen.



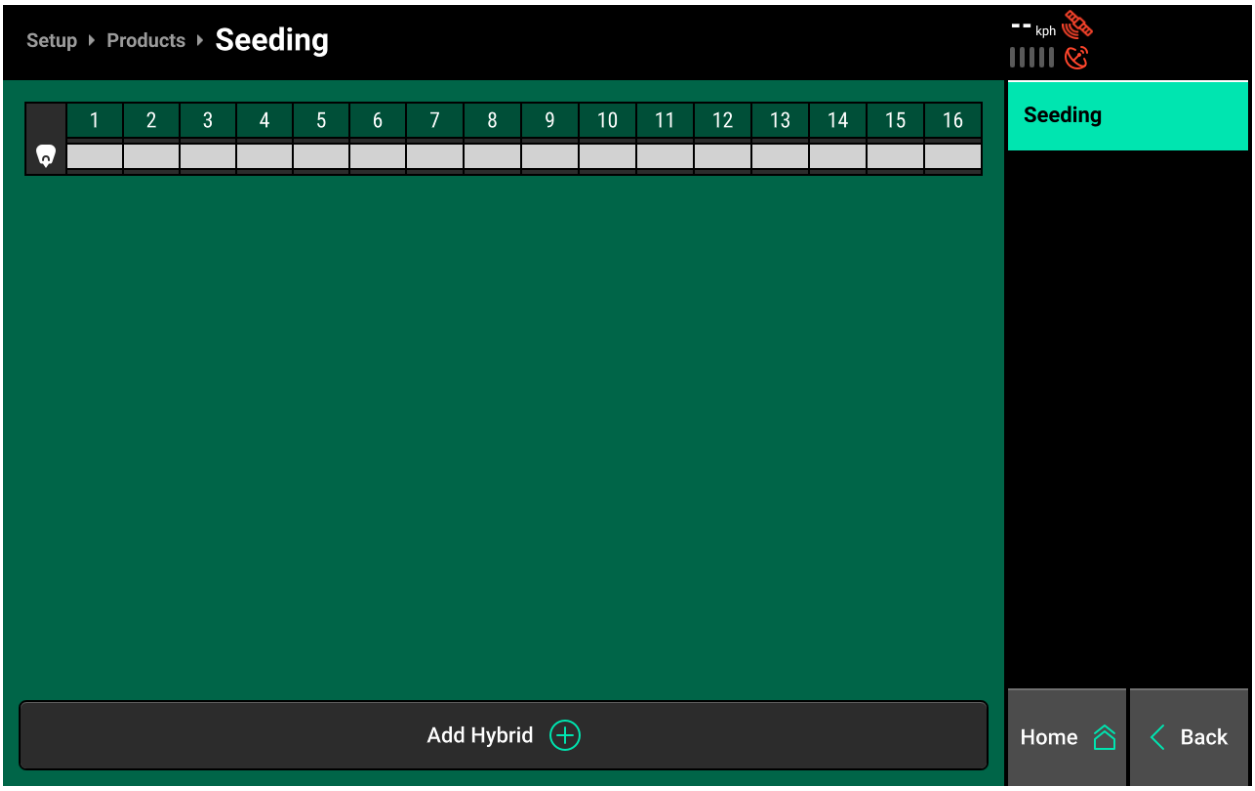
Press Prescription at the top of the control screen to switch from manual to prescription control. The system will now control to the assigned prescription file.

Press Edit Prescription to modify prescription parameters if desired.

Products

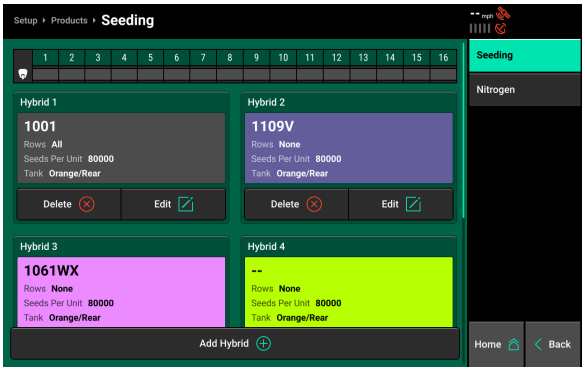
The Products screen is used to set up all hybrids, liquid products, or granular products that are being applied. The Products screen will not be accessible until a Seeding, Liquid, or Granular system has been configured.

Note: *In software versions **2024.1.1** and onward, active crop is selected on the Fields screen instead of the Products screen. See the Fields section of this guide for more details.*

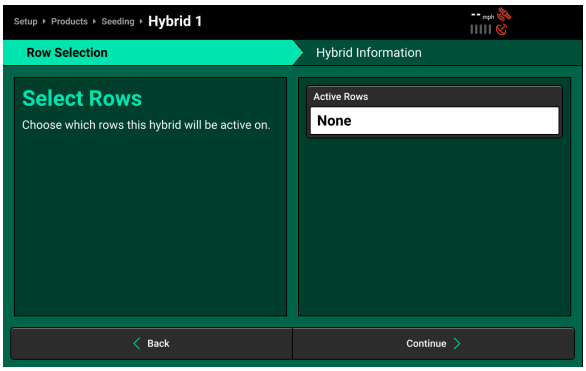


Hybrid Setup

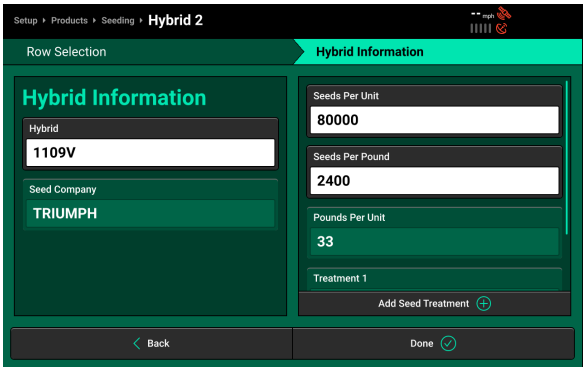
Select the [Seeding system name] Product and press Add Hybrid. After one or more hybrids have been added, press Edit under the desired hybrid to configure that product. Press Delete under any existing hybrid to erase it.



Press Active Rows to configure which rows are applying the hybrid. Select from a list of preset configurations or press Custom to manually configure active rows, then press Continue.

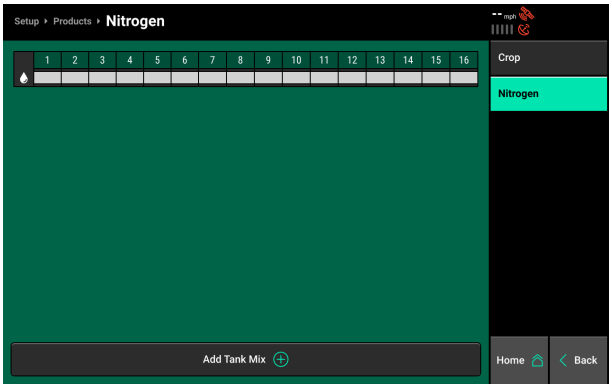


Press Hybrid to change the name of the selected hybrid. Modify Seeds Per Unit and Seeds Per Pound by pressing the number displayed under either heading and entering a new number. Press Add Seed Treatment to configure seed treatment(s). Seed treatments may be selected from a database, or custom treatments may be entered. Select Edit on an active treatment to change the treatment name.

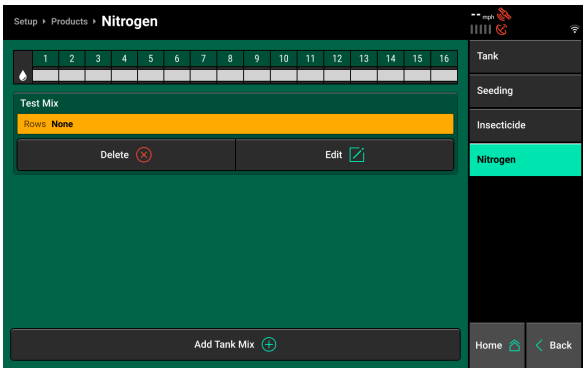


Tank Mix Setup

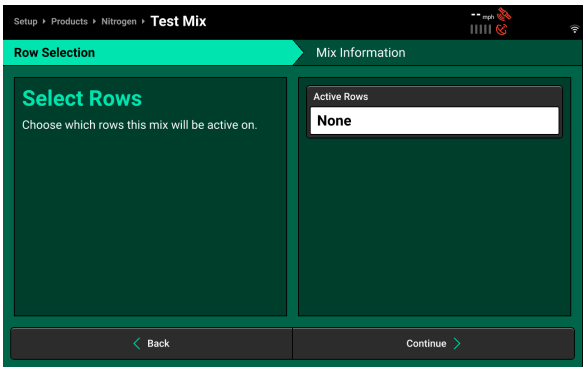
Select the [Granular/Liquid system name] Product and press Add Tank Mix. Use the pop-up keyboard to enter the desired name, then press Enter.



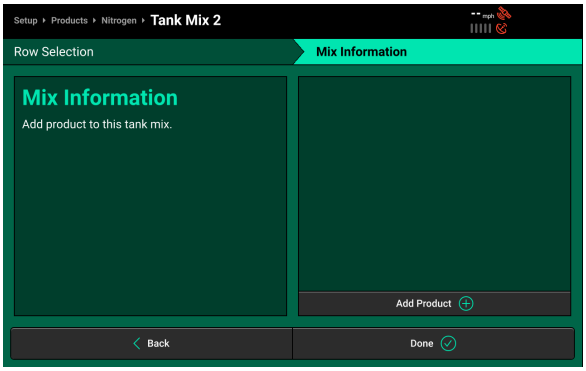
Once a new tank mix has been added, press Edit under the desired tank mix to configure that product. Press Delete under any tank mix to erase it.

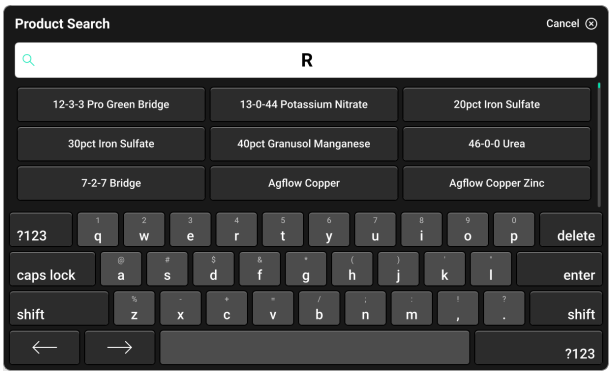


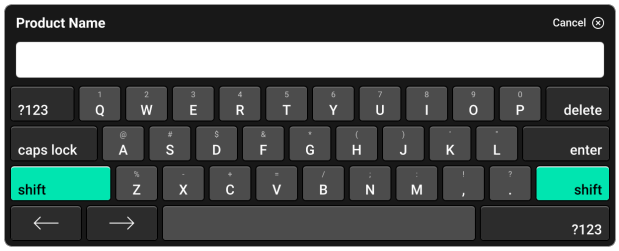
Press Active Rows to configure which rows are applying the product. Select from a list of preset configurations or press Custom to manually configure active rows, then press Continue.



Press Add Product to select a product to add to the tank mix. Select Liquid or Granular, then select Add from database or Add custom. Begin typing to filter the database and select the desired entry, or use the keyboard to type a custom name, then press enter.

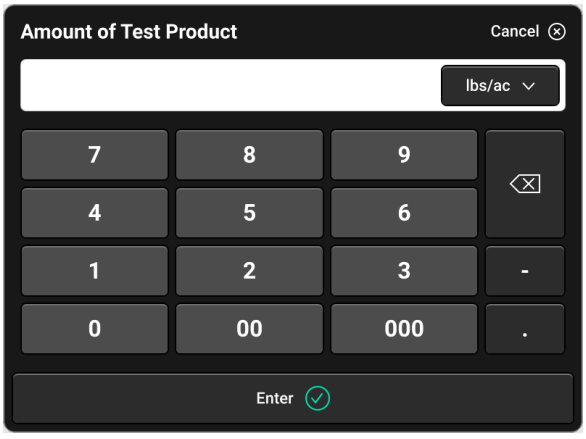




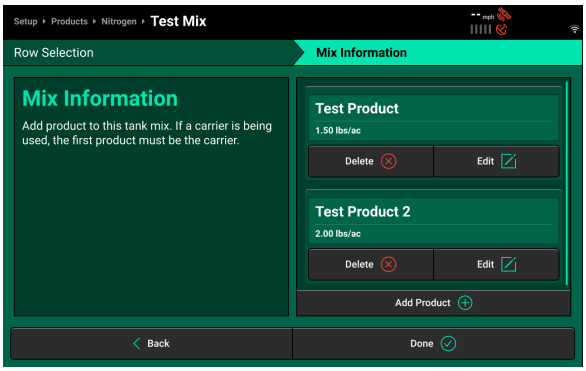


Granular Tank Mixes

After selecting a Granular product in the previous step, enter the desired rate using the pop-up keyboard. Use the dropdown box to toggle between lbs. and oz. per acre.



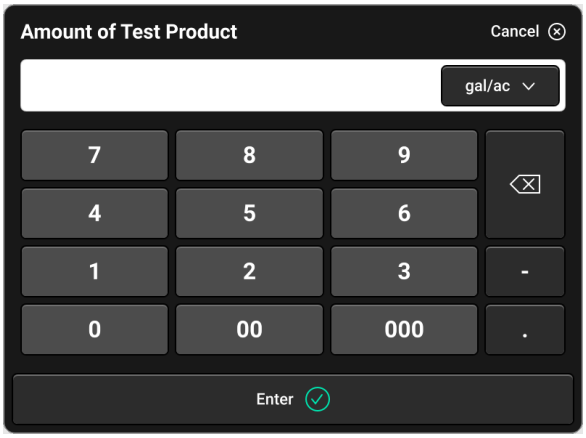
Press Add Product again to add a second granular product to the mix if desired. Once all products have been added, press Done to return to the Products screen.



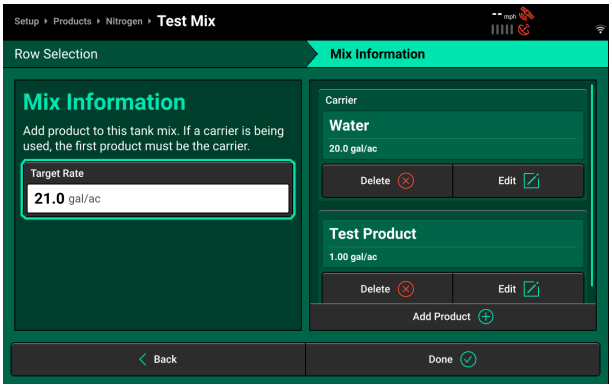
Liquid Tank Mixes

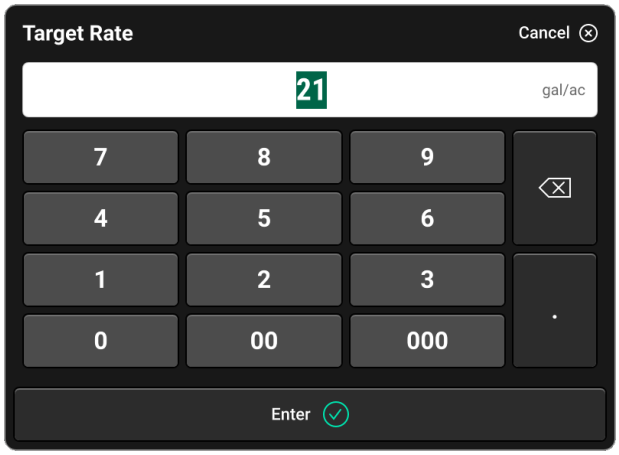
After selecting a Liquid Product in the previous step, enter the desired rate using the pop-up keyboard. Use the dropdown box to toggle between gal. and oz. per acre.

Note: *If a carrier product is being used, it must be the first liquid product to be entered. If the carrier is water, it must be added as a custom product.*



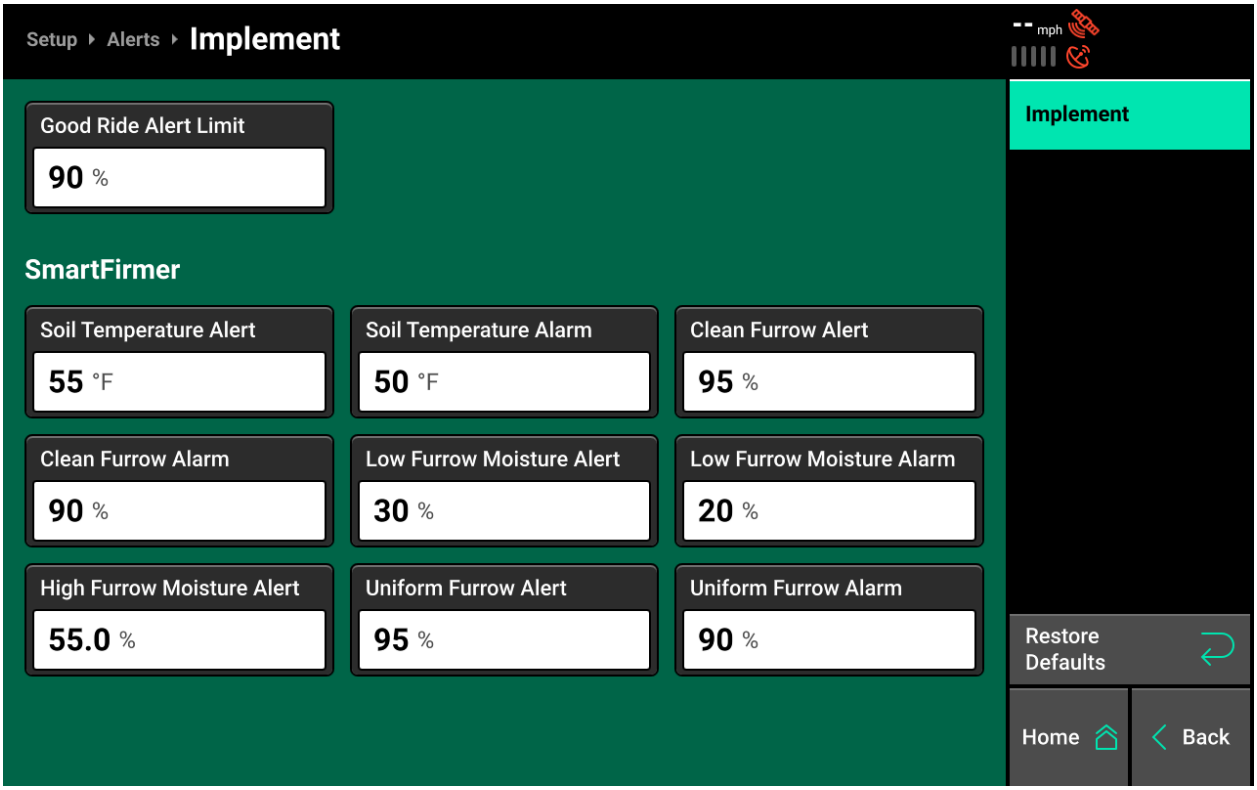
Press Add Product again to add a second liquid or granular product to the mix if desired. After a second product has been added to the mix, a box labeled Target Rate will be displayed below Mix Information. Press this box to open a pop up which allows the user to quickly change *only* the amount of carrier in the mix. Once all products have been added, press Done to return to the Products screen.



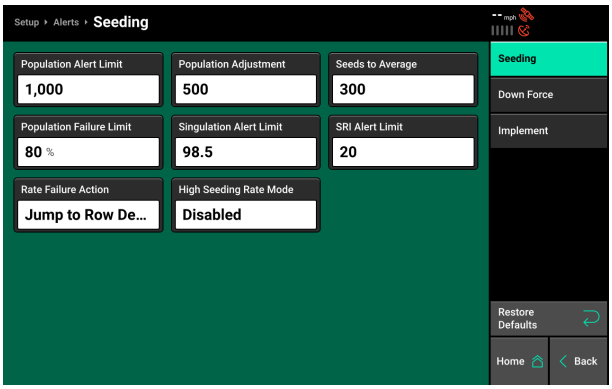


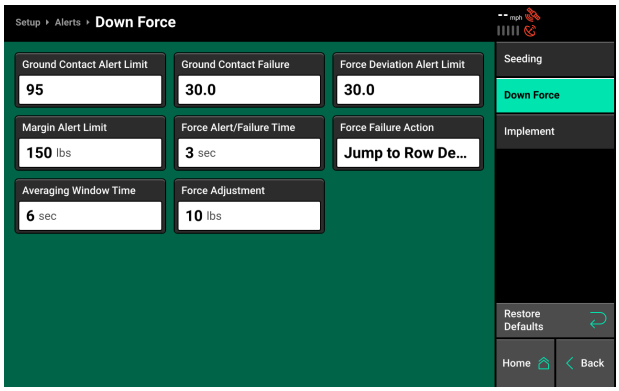
Alerts

The Alerts screen is used to configure product and system specific alerts and alarms. Press any box to open a pop-up which allows the user to adjust the parameters at which the 20|20 will deliver an alert or alarm. The only option in the navigation menu available by default is Implement when in Planter/Sidedress/Strip-Till mode, or Air Seeder/Sprayer when in Air Seeder or Sprayer mode. Other options will be displayed when the appropriate control system has been configured in the monitor.



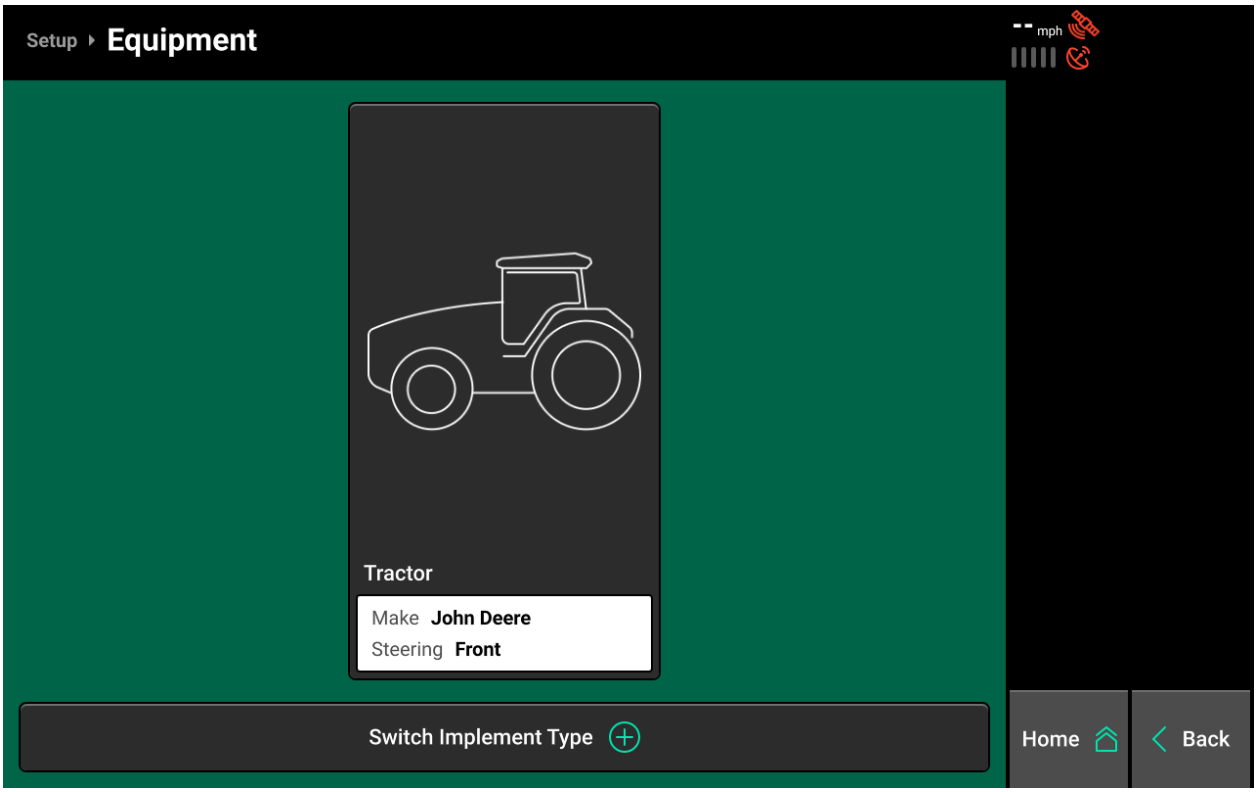
Typical options available when in Planter mode will include options such as Seeding or Down Force *(pictured below)*. Refer to system specific operator's guides for more information on configuring different system alerts.



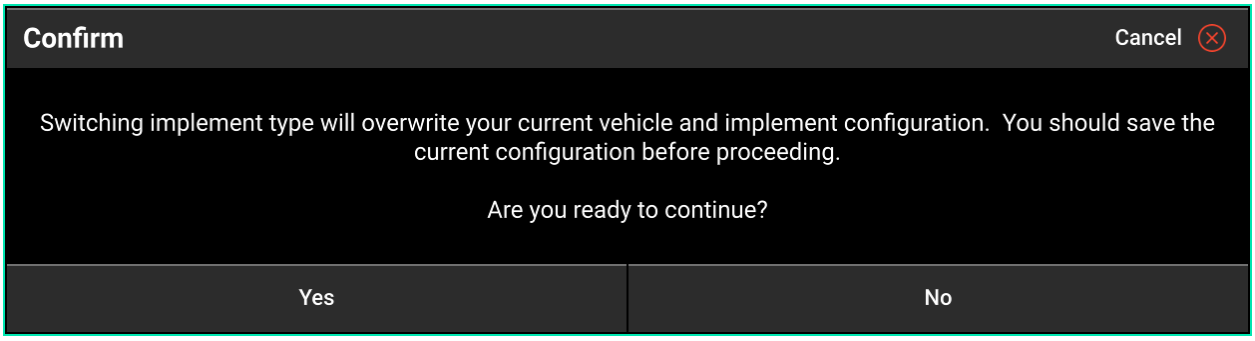


Equipment

The Equipment screen is used to set up Tractor and Implement profiles. When navigating to the Equipment menu on a new 20|20, or after performing a Delete All Data, the only equipment icon available by default will be Tractor.

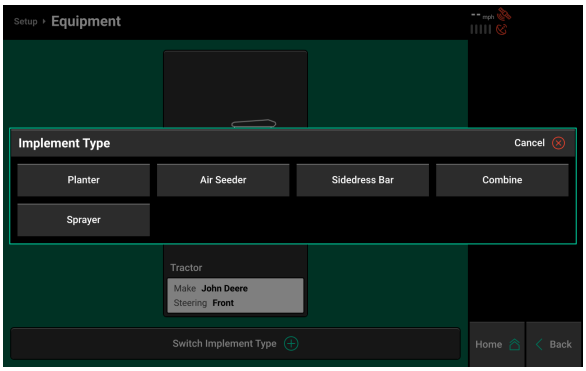


Press Switch Implement Type to change between equipment modes. This will open a pop-up that prompts the user to save the active tractor and implement if desired.



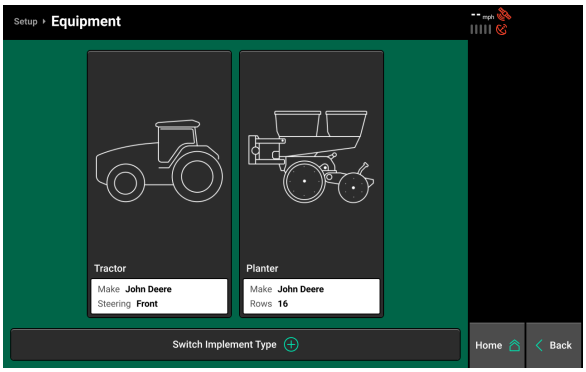
If this is a first time setup, press Yes. If there are any unsaved tractor or implement profiles active, press No, then navigate to any active equipment profile pages and save the active configurations. For more information on saving/loading configurations, see *Save/Load* in this section.

Press the desired implement type, then choose the appropriate subtype if necessary. Available type/subtype combinations are detailed below.



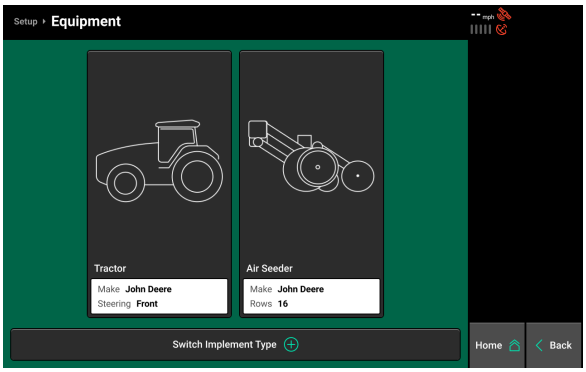
Planter

Tractor/planter combination.



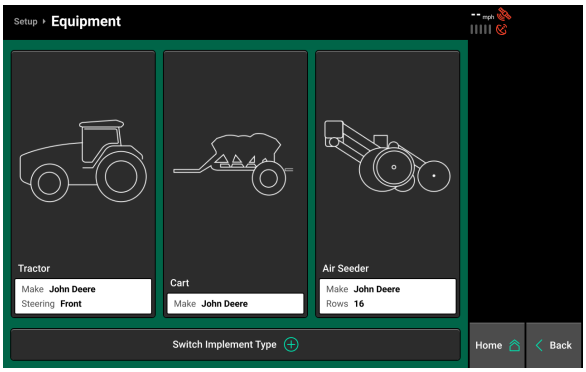
Air Seeder/Seeding Ranks Only or Seeding And Fertilizer Ranks

Tractor/seeder combination with no cart.



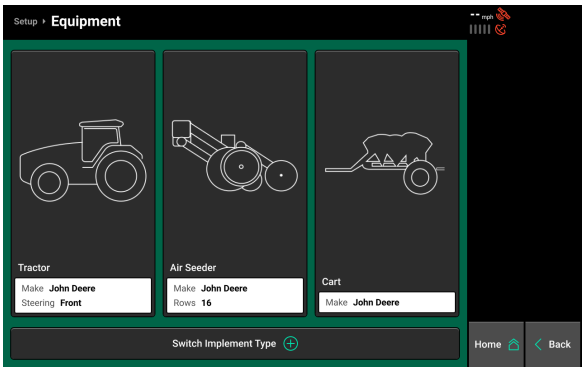
Air Seeder/Seeding Ranks Only or Seeding And Fertilizer Ranks/Tow-Between Cart

Tractor/seeder combination with a cart between the tractor and seeder.



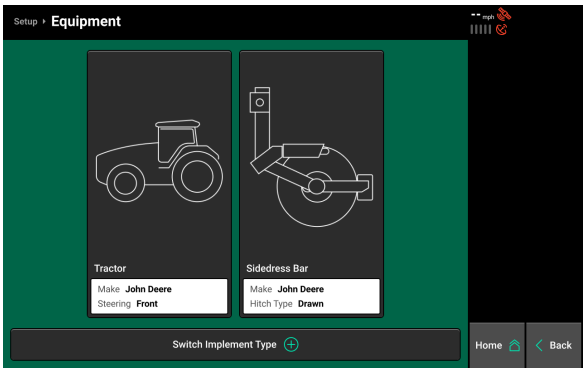
Air Seeder/Seeding Ranks Only or Seeding And Fertilizer Ranks/Tow-Behind Cart

Tractor/seeder combination with a cart behind the seeder.



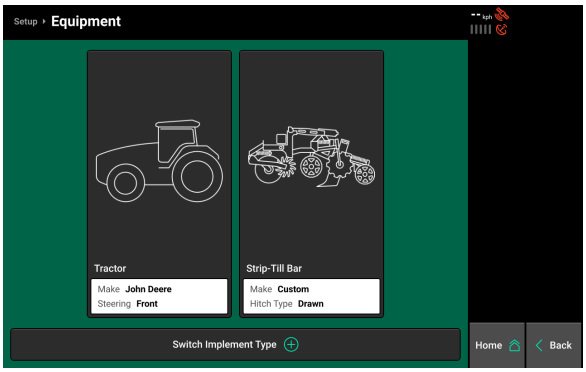
Sidedress Bar

Tractor/liquid application bar combination.



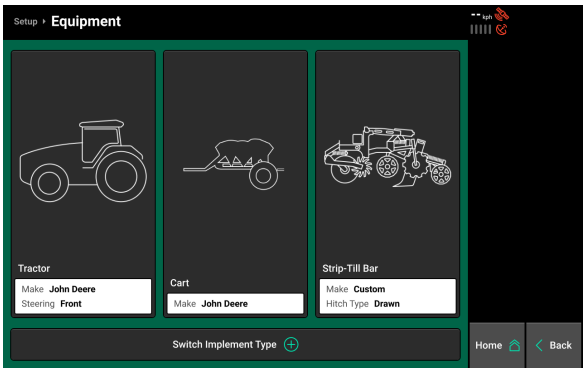
Strip Till Bar/No cart

Tractor/strip-till bar combination with no cart.



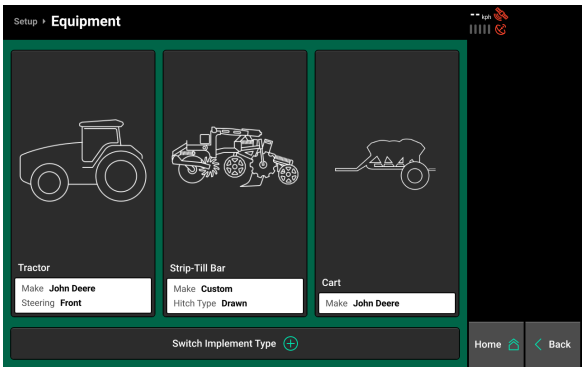
Strip-Till Bar/Tow-Between Cart

Tractor/strip-till bar combination with a cart between the tractor and strip-till bar.



Strip-Till Bar/Tow-Behind Cart

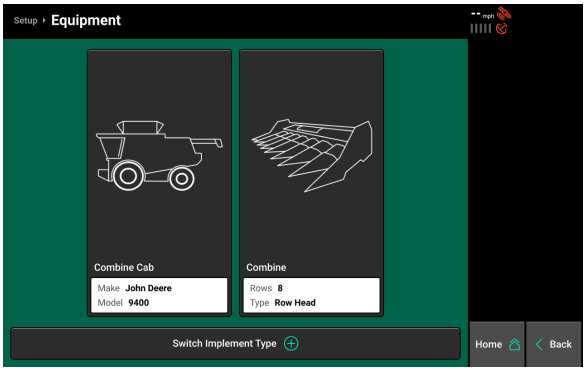
Tractor/strip-till bar combination with a cart behind the strip-till bar.



Combine

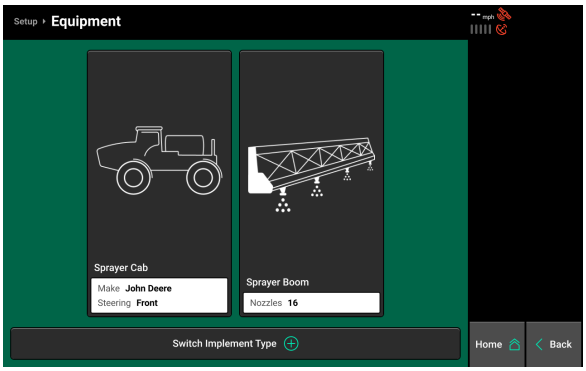
Combine cab/head combination.

Note: *The default combine head is Corn. Use the Combine Details page to change heads. See* Combine Details *in this section for more details.*



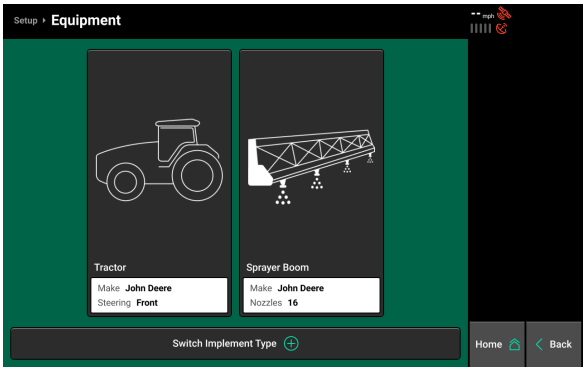
Self Propelled Sprayer

Sprayer cab/boom combination.



Pull Behind Sprayer

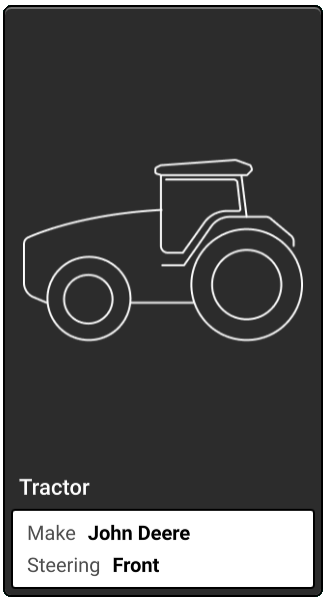
Tractor/sprayer boom combination.



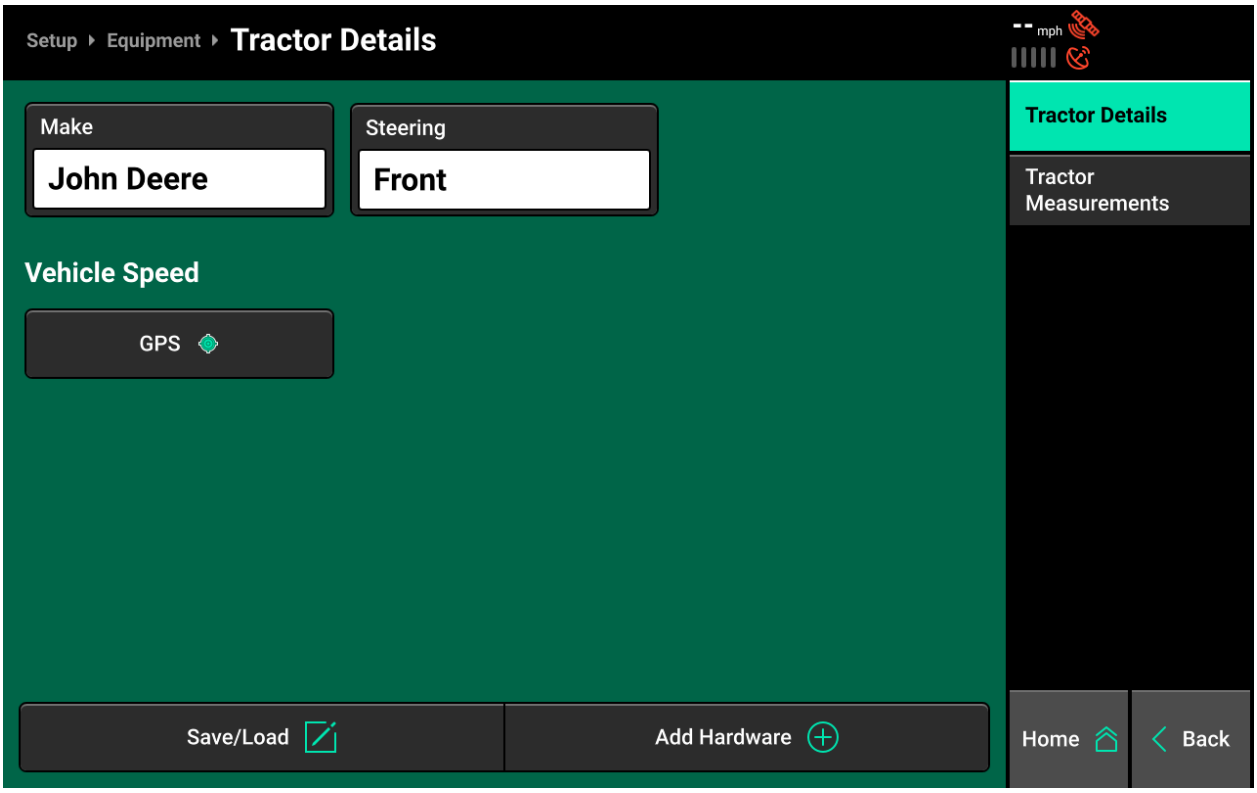
Implement Details

After selecting the desired implement, navigate to an equipment details screen by pressing on the desired implement icon.

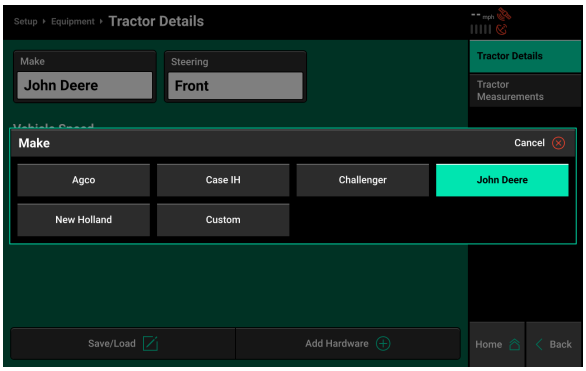
Tractor Details



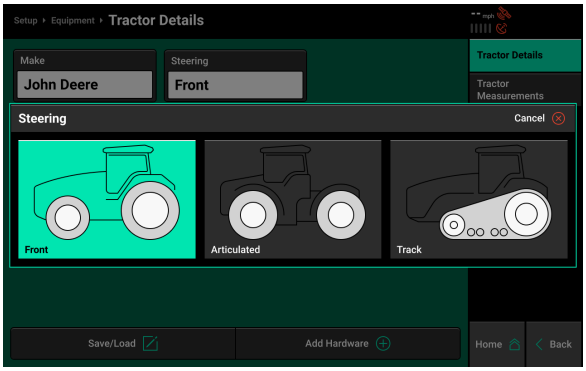
The Tractor Details screen allows for configuration, saving, and loading of different tractor profiles.

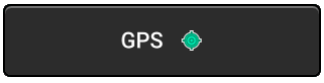


Press the brand name under Make to select a preset or enter a custom make.



Press the body style under Steering to select the tractor body.

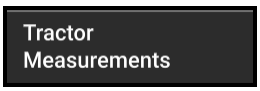




Press GPS to access the GPS Settings page. GPS Nudge and Corrections are located on this page. See *GPS Settings* in this section for more details.

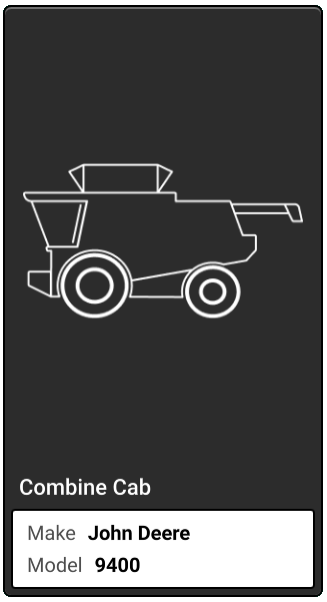
Press Add Hardware to configure a radar module or add GPS to the implement. See *Radar* and *GPS Settings* in this section for more details.

Press Save/Load to access the Save/Load Tractor page. See *Save/Load* in this section for more details.

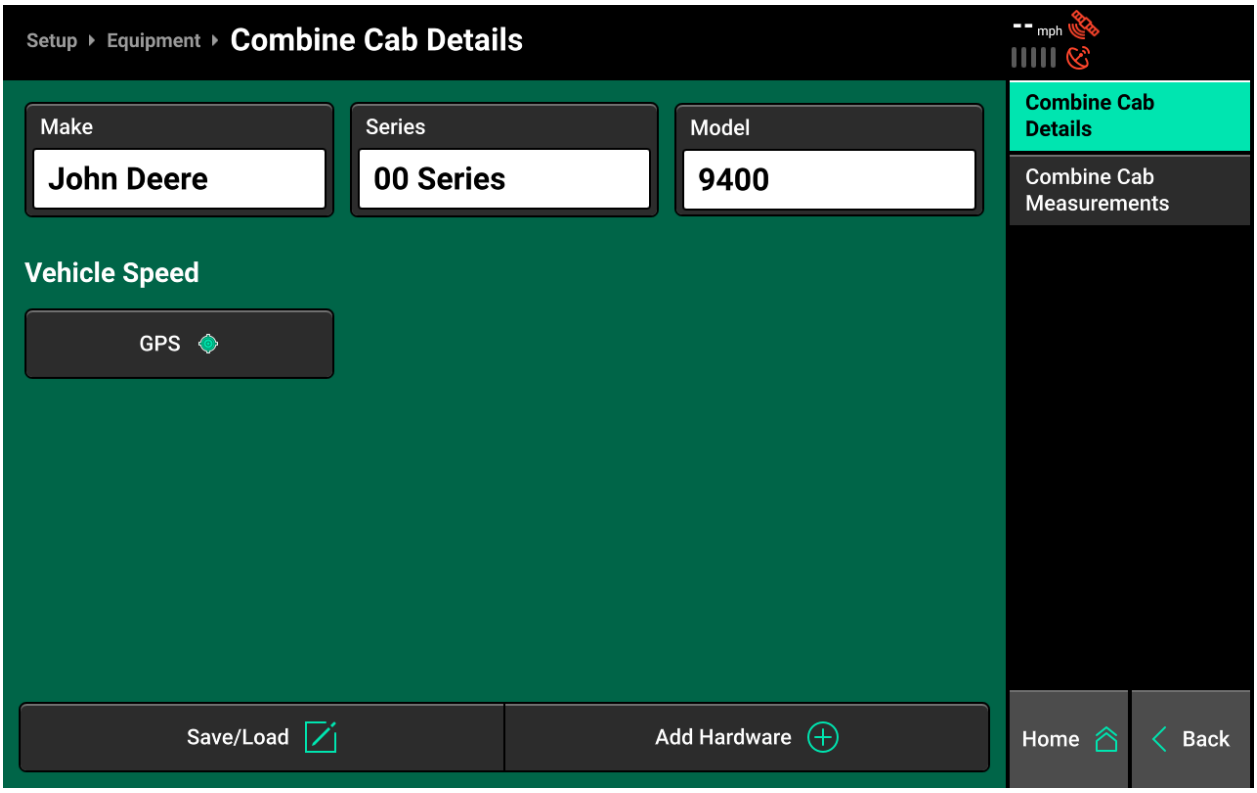


Press Tractor Measurements to access the Tractor Measurements screen. See *Measurements* in this section for more details.

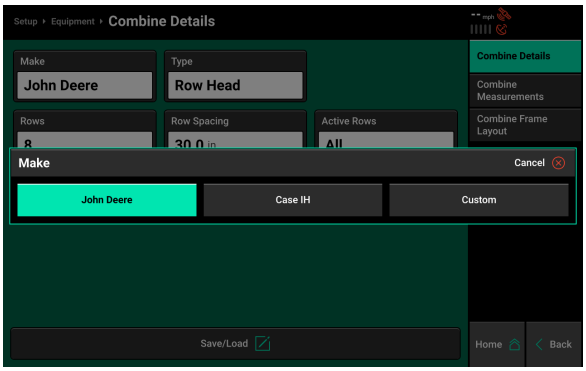
Combine Cab Details



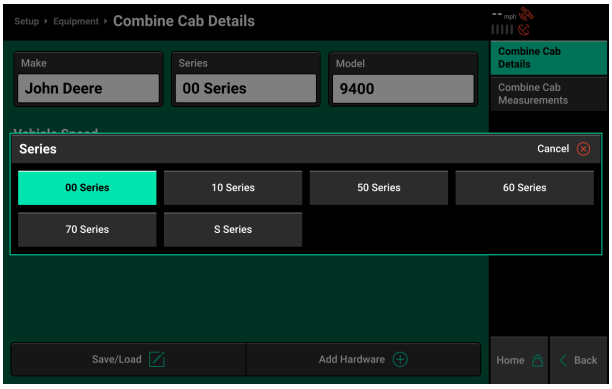
The Combine Cab Details screen allows for configuration, saving, and loading of different Combine Cab profiles.

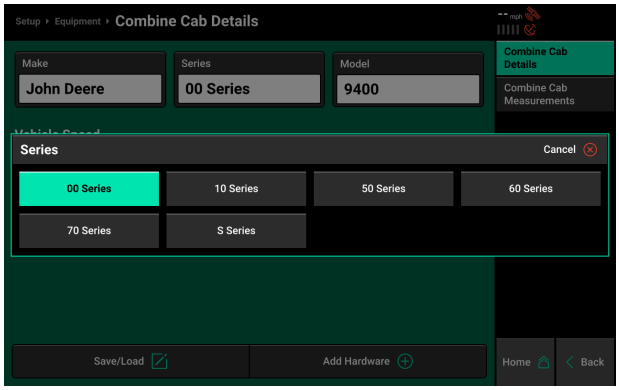


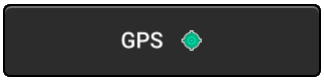
Press the brand name under Make to select a preset or to enter a custom make.



Press the number under Series or Model to select the combine cab series or model.

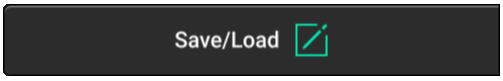




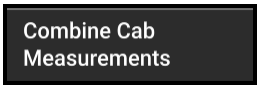


Press GPS to access the GPS Settings page. GPS Nudge and Corrections are located on this page. See *GPS Settings* in this section for more details.

Press Add Hardware to configure a radar module or add GPS to the implement. See *Radar* and *GPS Settings* in this section for more details.

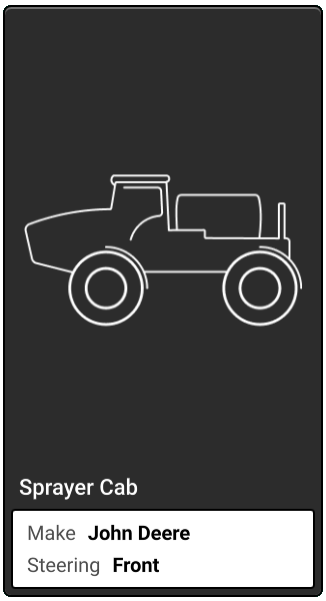


Press Save/Load to access the Save/Load page. See *Save/Load* in this section for more details.

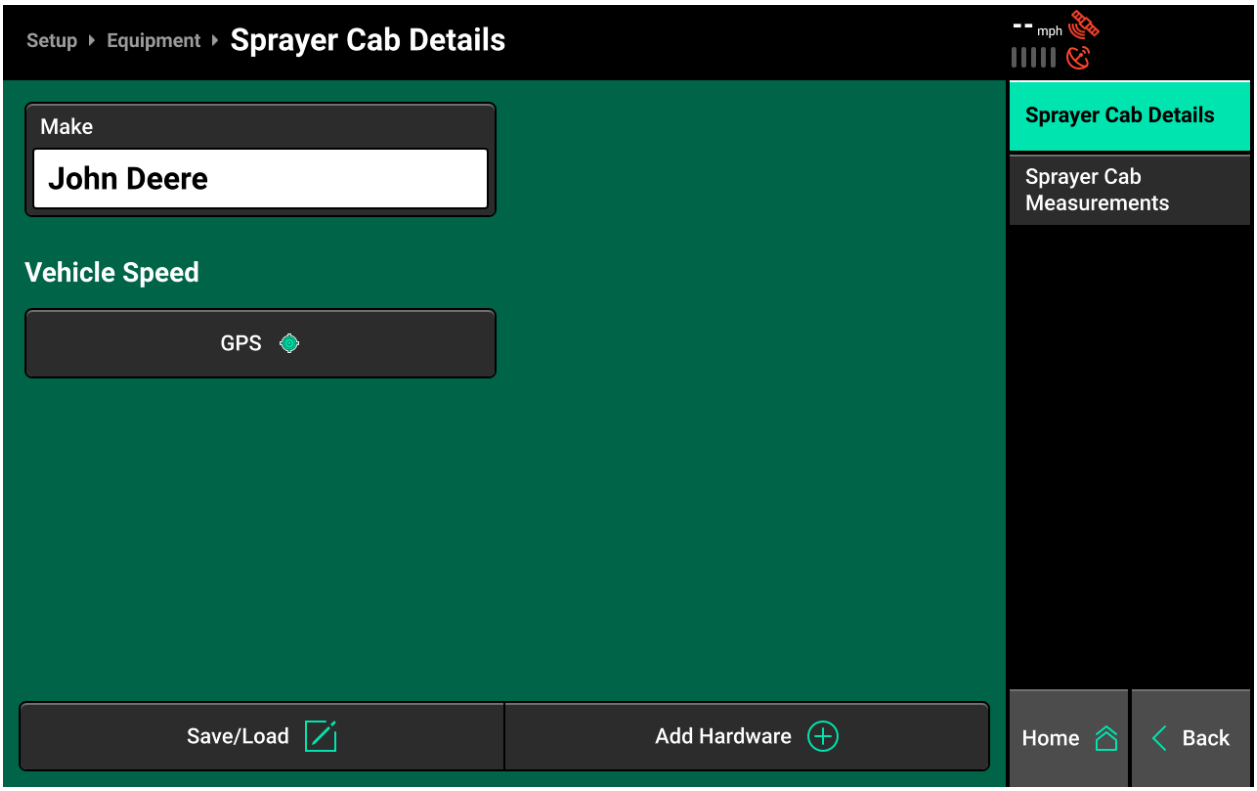


Press Combine Cab Measurements to access the Measurements screen. See *Measurements* in this section for more details.

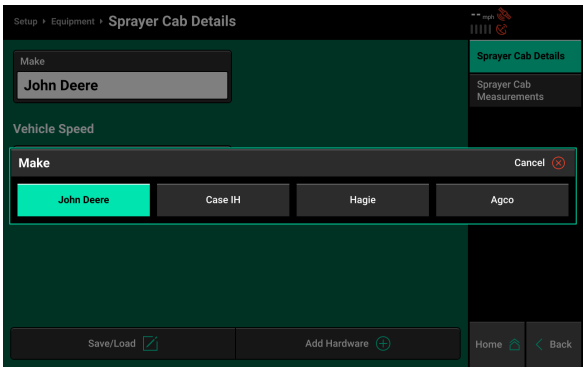
Sprayer Cab Details

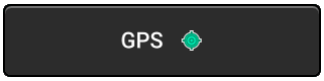


The Sprayer Cab Details screen allows for configuration, saving, and loading of different cab profiles.



Press the brand name under Make to select a preset or enter a custom make.

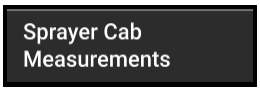




Press GPS to access the GPS Settings page. GPS Nudge and Corrections are located on this page. See *GPS Settings* in this section for more details.

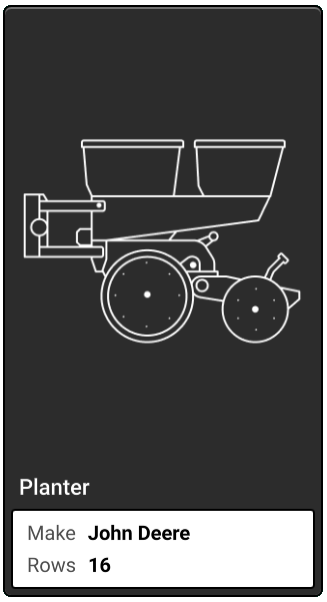
Press Add Hardware to configure a radar module or add GPS to the implement. See *Radar* and *GPS Settings* in this section for more details.

Press Save/Load to access the Save/Load page. See *Save/Load* in this section for more details.

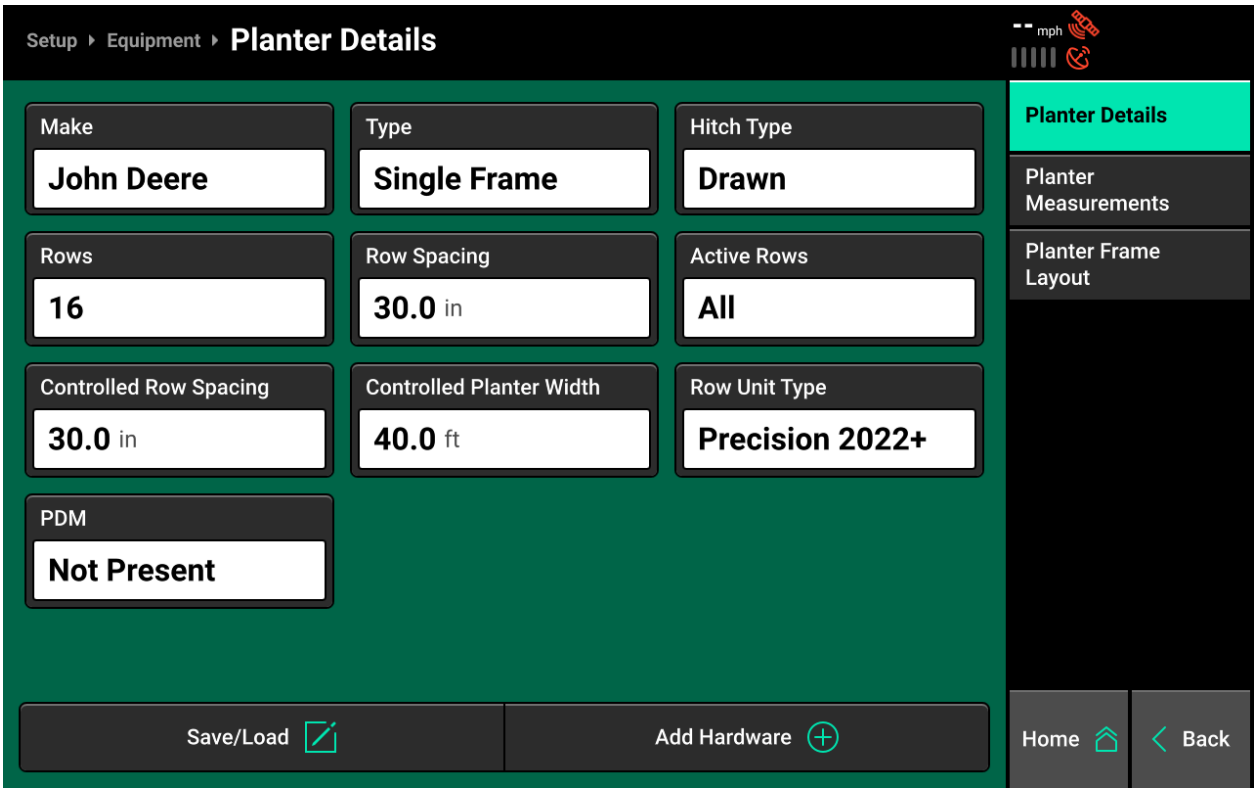


Press Sprayer Cab Measurements to access the Measurements screen. See *Measurements* in this section for more details.

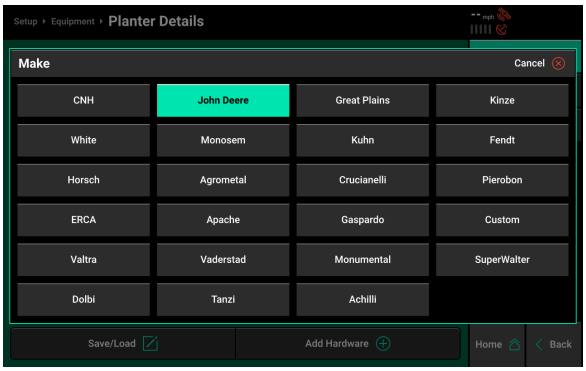
Planter Details



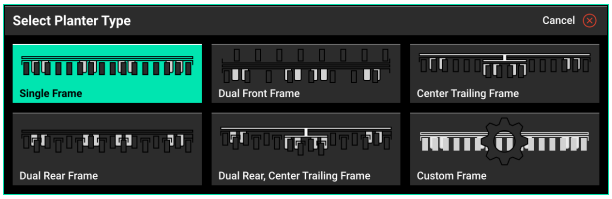
The Planter Details screen allows for configuration, saving, and loading of different planter profiles.

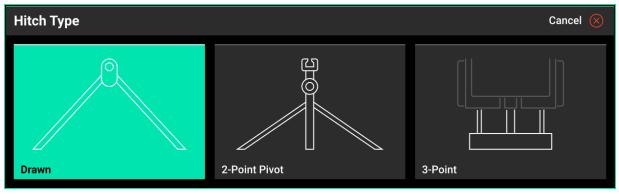


Press the brand name under Make to select a preset or enter a custom make.

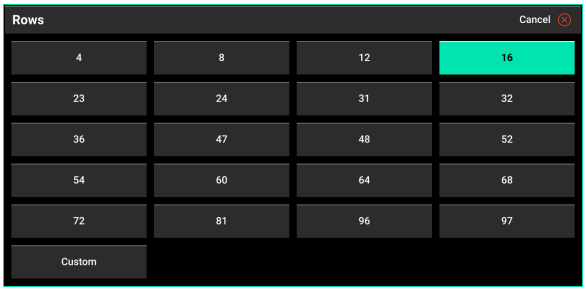


Press the option displayed under Type or Hitch Type to select the frame or hitch style.





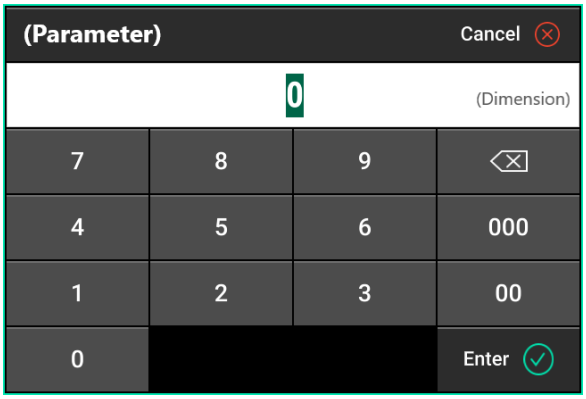
Press the number under Rows to select a preset number of rows, or to enter a custom number.



Press the number under Row Spacing to select a preset spacing, or to enter a custom number. Row Spacing refers to the physical spacing between all rows on the implement.

Press the section displayed under Active Rows to set a preset section to active, or to enter a custom section.

Press the numbers displayed under Controlled Row Spacing and Controlled Planter Width to modify either dimension. Controlled Row Spacing refers to the distance between rows of the current active rows.



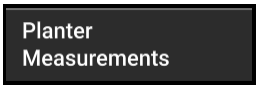
Note: *Pressing certain parameters will open a pop-up that allows for number entry. Any specific dimension for that parameter will be shown to the right of the number. Pressing any number button will overwrite the previous number completely.*

Press the row unit name displayed under Row Unit Type to select the row units installed on the implement bar. Different options will be available depending on the selected Make.

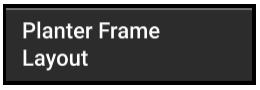
Press the status displayed under PDM to configure the PDM as Present or Not Present. The default selection is Not Present. Most control products require a PDM.

Press Add Hardware to add GPS to the implement. See *GPS Settings* in this section for more details.

Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.

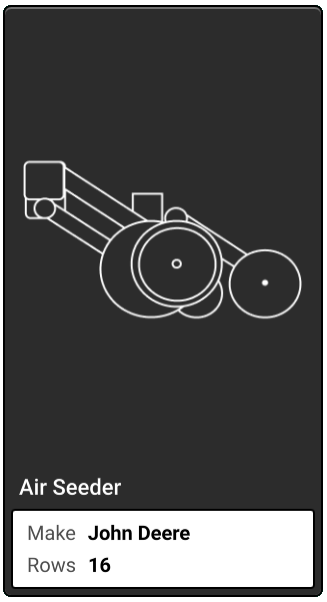


Press Planter Measurements to access the Planter Measurements Screen. See *Measurements* in this section for more details.

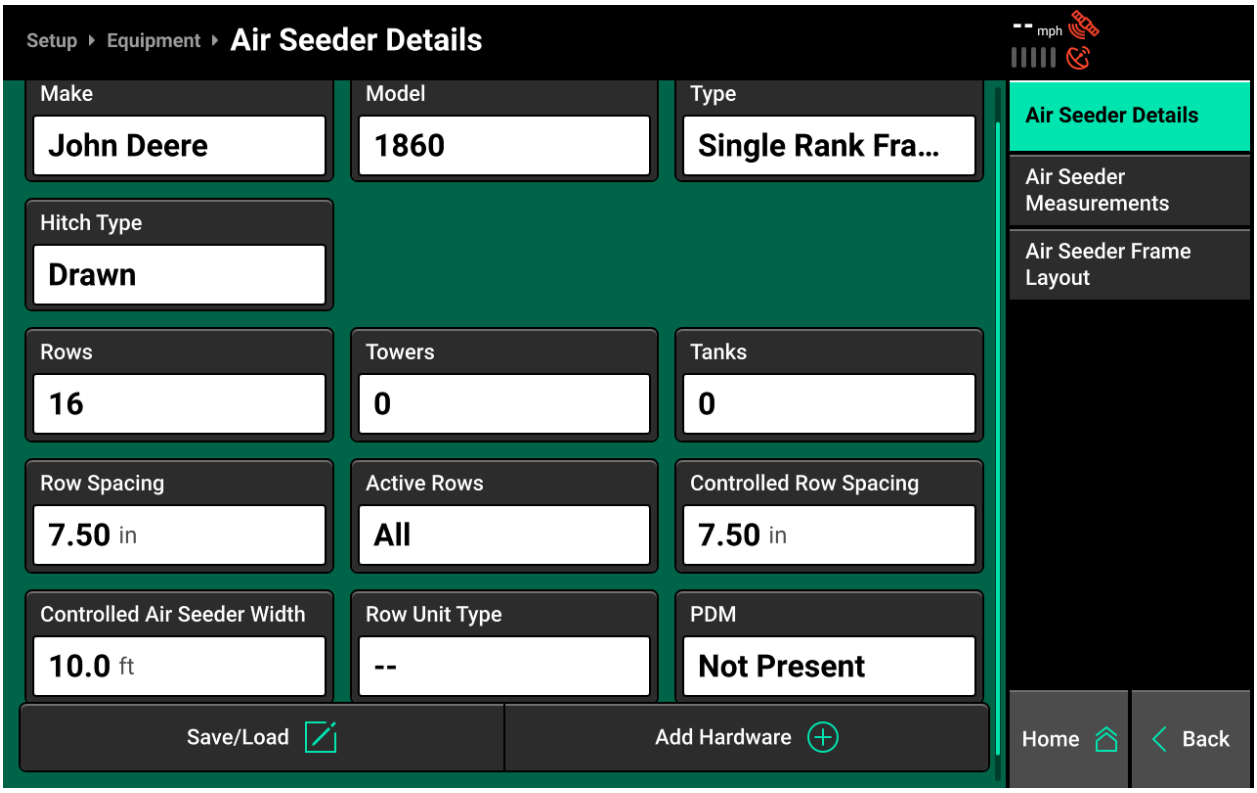


Press Planter Frame Layout to view a on-screen representation of the physical planter layout. See *Layout* in this section for more details.

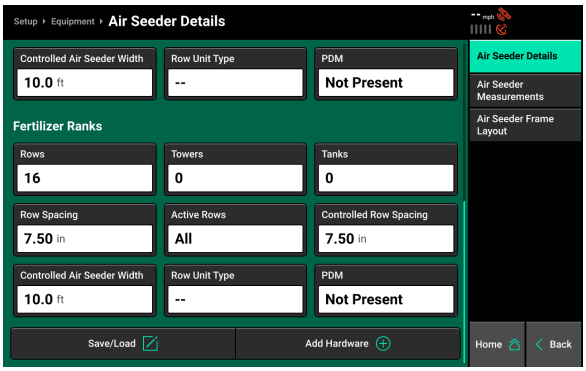
Air Seeder Details



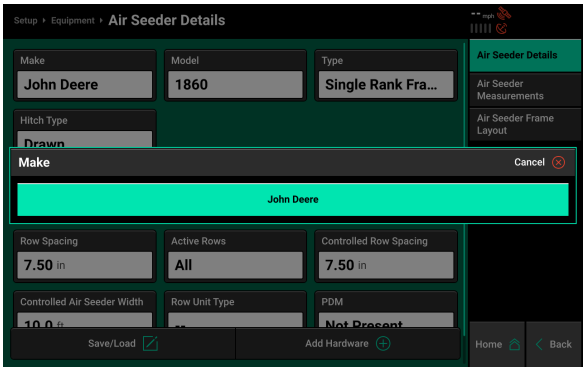
The Air Seeder Details screen allows for configuration, saving, and loading of different Air Seeder profiles.



Note: *When configuring an Air Seeder with seeding and fertilizer ranks, both sets of ranks must be configured. Scroll past the seeding ranks to view and configure fertilizer ranks.*

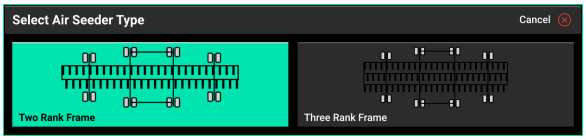


Press the brand name displayed under Make to select a preset make. John Deere is the only option currently available. Performance on other makes will not be affected.

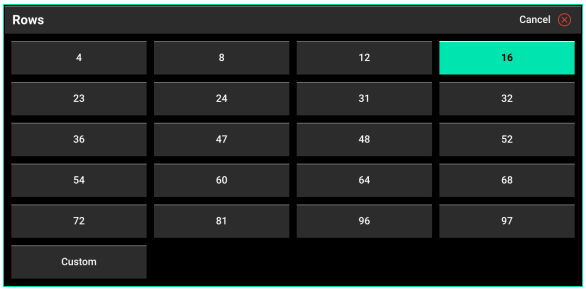


Press the name displayed under Model to select a preset model.

Press the frame type under Type to select Two or Three Rank Frame.

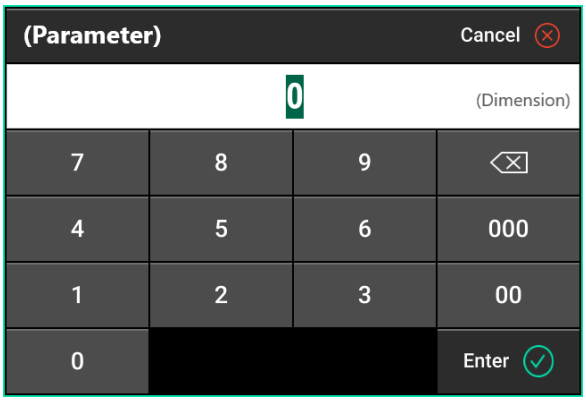


Press on the number under Rows to select a preset number of rows, or to enter a custom number.



Press on the number under Row Spacing to select a preset spacing, or to enter a custom number. Row Spacing refers to the physical spacing between all rows on the implement.

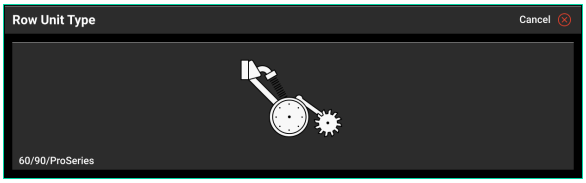
Press on the number under Towers, Tanks, Controlled Row Spacing, or Controlled Air Seeder Width to modify the selected parameter. Controlled Row Spacing refers to the spacing between the rows of the current active selection.



Note: *Pressing certain parameters will open a pop-up that allows for number entry. Any specific dimension for that parameter will be shown to the right of the number. Pressing any number button will overwrite the previous number completely.*

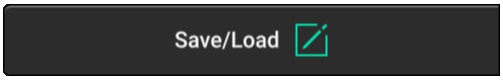
Press on the section displayed under Active Rows to set a preset section to active, or to enter a custom section.

Press the row unit name displayed under Row Unit Type to select the row units installed on the implement bar. The only option available is 60/90/ProSeries. No selection is necessary if SeederForce is not installed on the implement. Making a selection when SeederForce is not installed will not affect performance.

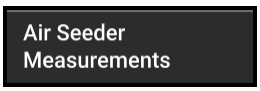


Press on the status displayed under PDM to configure the PDM as Present or Not Present. The default selection is Not Present.

Press Add Hardware to add GPS to the implement. See *GPS Settings* in this section for more details.



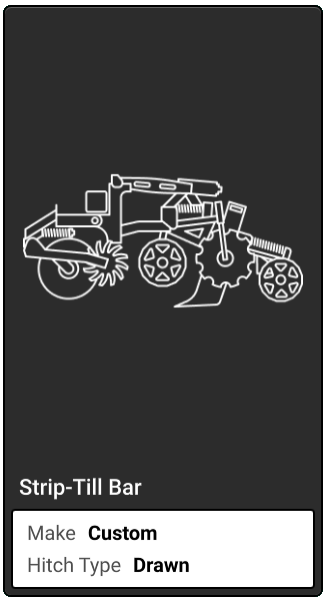
Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.



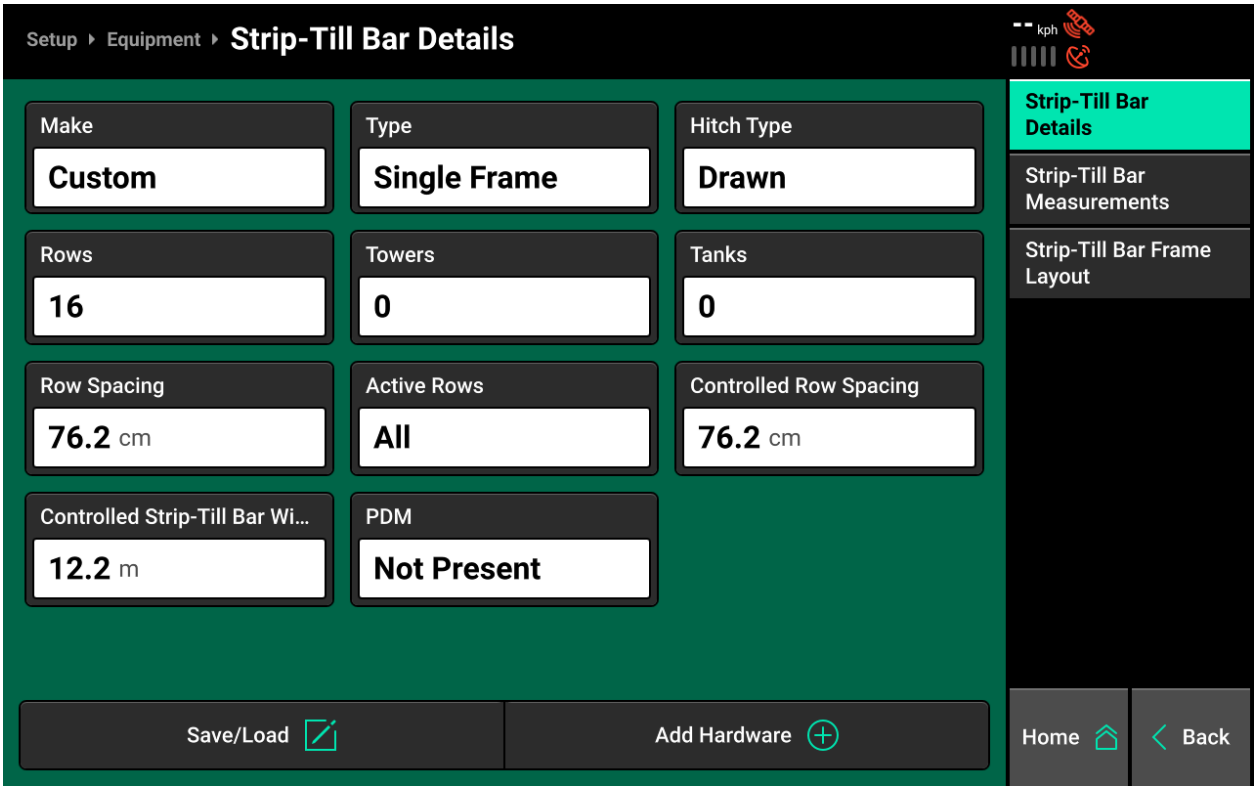
Press Air Seeder Measurements to access the Air Seeder Measurements Screen. See *Measurements* in this section for more details.

Press Air Seeder Frame Layout to view a on-screen representation of the physical implement layout. See *Layout* in this section for more details.

Strip-Till Bar Details

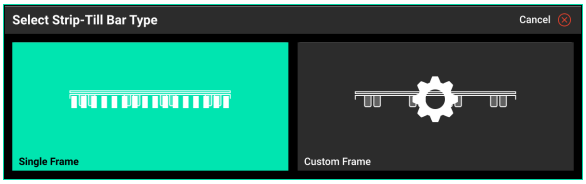


The Strip-Till Bar Details screen allows for configuration, saving, and loading of different strip-till bar profiles.

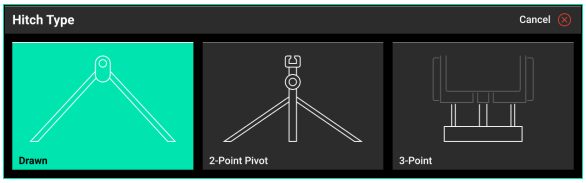


Press the brand name under Make to select a preset or enter a custom make.

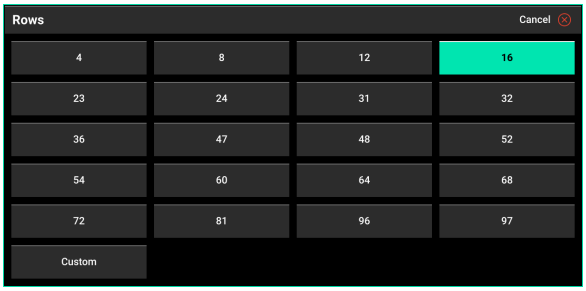
Press the frame type under Type to select the frame style.



Press the name under Hitch Type to select the hitch style.



Press the number under Rows to select a preset number of rows, or to enter a custom number.

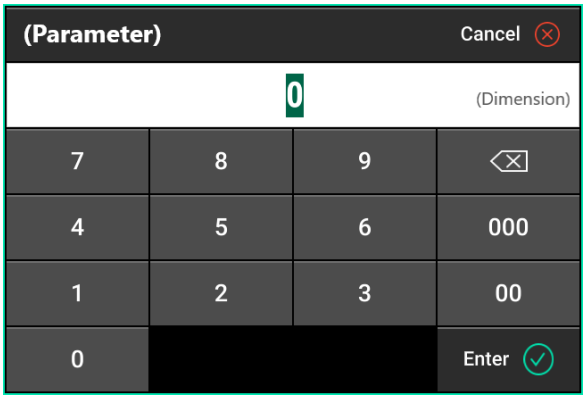


Press the number under Row Spacing to select a preset spacing, or to enter a custom number. Row Spacing refers to the physical spacing between all rows on the implement.

Press the section displayed under Active Rows to set a preset section to active, or to enter a custom section.

Press the numbers displayed under Towers, Tanks, Controlled Row Spacing or Controlled Strip-Till Bar Width to modify the selected dimension. Controlled Row Spacing refers to the distance between rows of the current active rows.

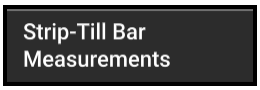
Note: *Pressing certain parameters will open a pop-up that allows for number entry. Any specific dimension for that parameter will be shown to the right of the number. Pressing any number button will overwrite the previous number completely.*



Press the status displayed under PDM to configure the PDM as Present or Not Present. The default selection is Not Present. Most control products require a PDM.

Press Add Hardware to add GPS to the implement. See *GPS Settings* in this section for more details.

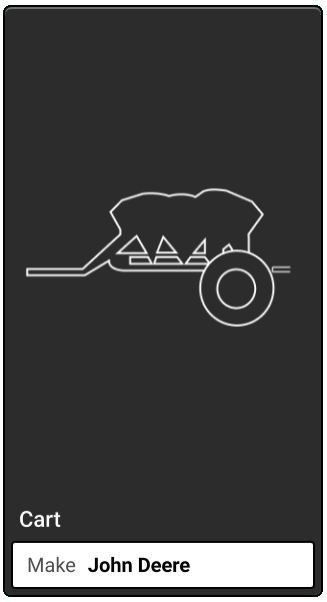
Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.



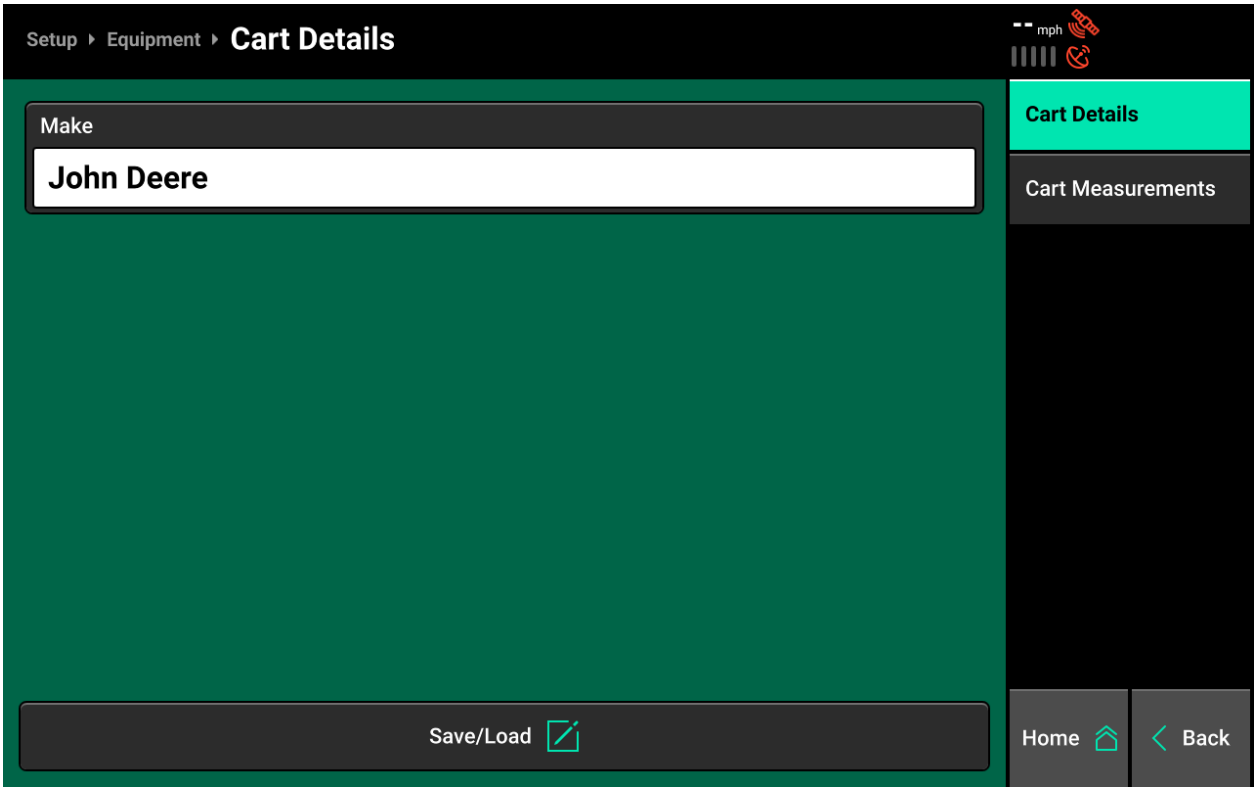
Press Strip-Till Bar Measurements to access the Strip-Till Bar Measurements Screen. See *Measurements* in this section for more details.

Press Strip-Till Bar Frame Layout to view a on-screen representation of the physical implement layout. See *Layout* in this section for more details.

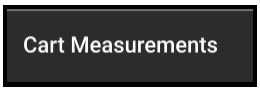
Cart Details



The Cart Details screen allows for configuration, saving, and loading of different Cart profiles. John Deere is the only option currently available for Make. Performance on other makes will not be affected.

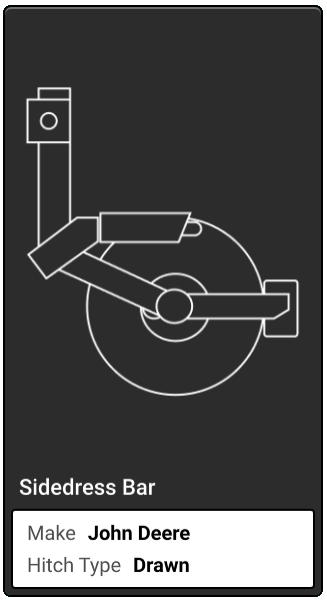


Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.

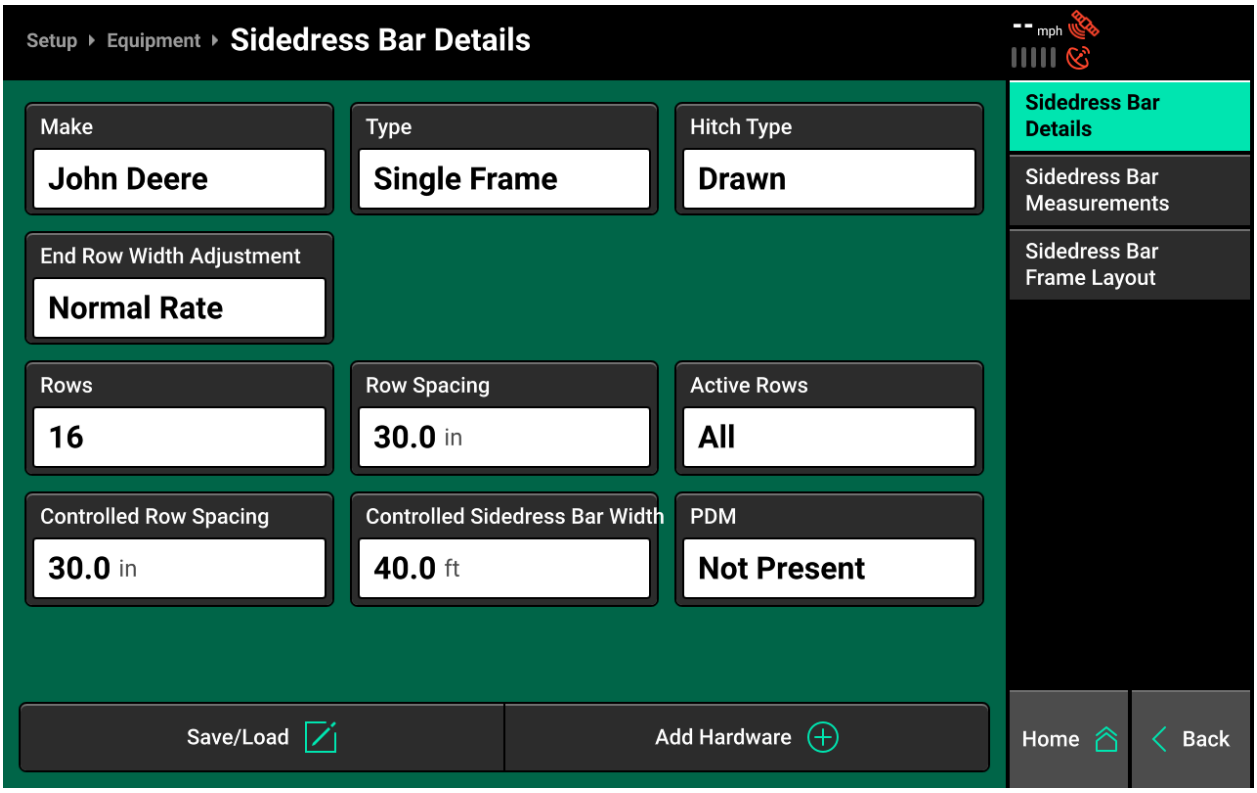


Press Cart Measurements to access the Cart Measurements Screen. See *Measurements* in this section for more details.

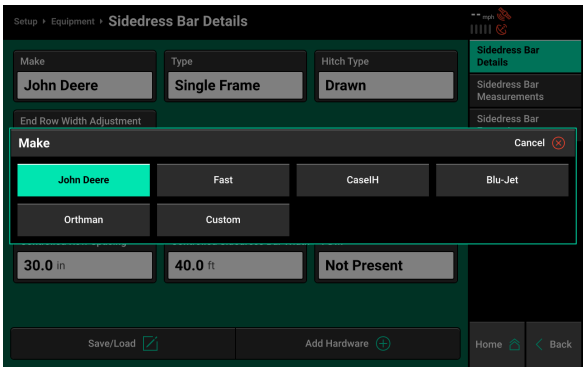
Sidedress Bar Details



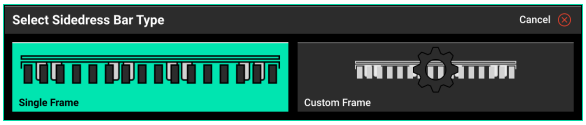
The Sidedress Bar Details screen allows for configuration, saving, and loading of different Sidedress Bar profiles.



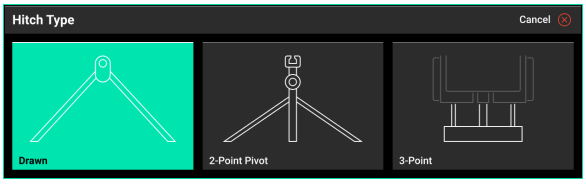
Press the brand name under Make to select a preset or to enter a custom make.



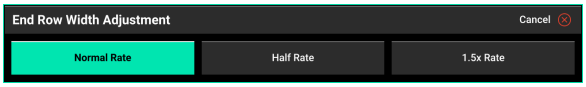
Press the frame type under Type to select the frame style.



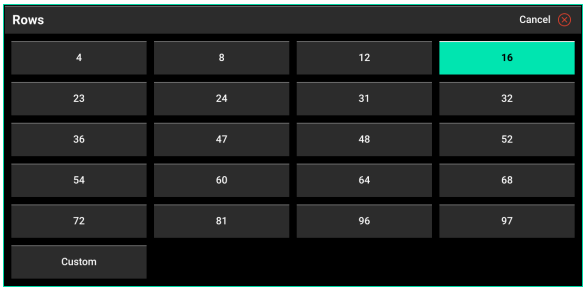
Press the style under Hitch Type to select the hitch style.



Press the control style displayed under End Row Width Adjustment to select an end row application adjustment.



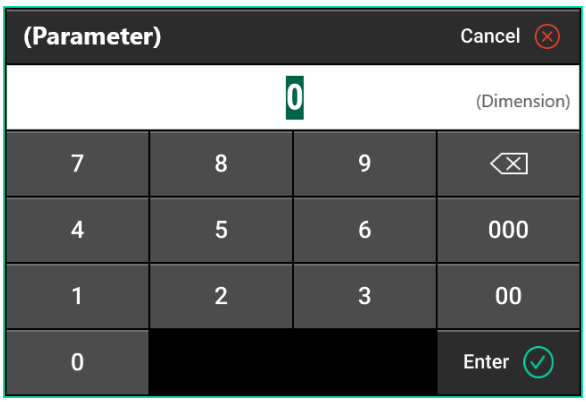
Press the number under Rows to select a preset number of rows, or to enter a custom number.



Press the number under Row Spacing to select a preset spacing, or to enter a custom number. Row pacing refers to the physical spacing between all rows on the implement.

Press the section displayed under Active Rows to set a preset section to active, or to enter a custom section.

Press the numbers displayed under Controlled Row Spacing and Controlled Sidedress Bar Width to modify either dimension. Controlled row spacing refers to the spacing between rows of the current active selection.

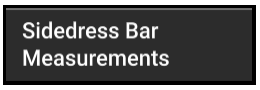


Note: *Pressing certain parameters will open a pop-up that allows for number entry. Any specific dimension for that parameter will be shown to the right of the number. Pressing any number button will overwrite the previous number completely.*

Press the status displayed under PDM to configure the PDM as Present or Not Present. The default selection is Not Present. Most control products require a PDM.

Press Add Hardware to add GPS to the implement. See *GPS Settings* in this section for more details.

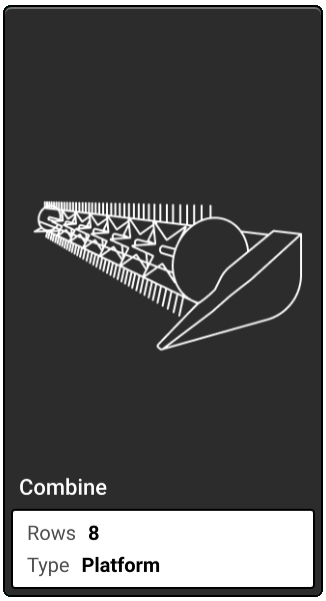
Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.

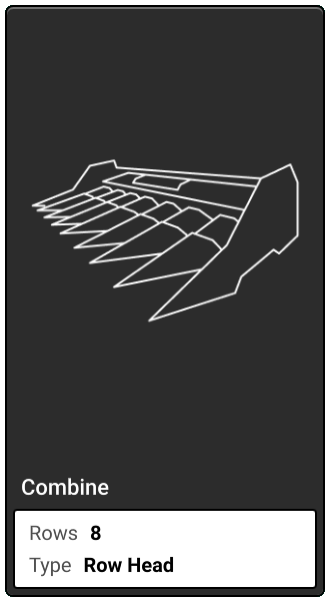


Press Sidedress Bar Measurements to access the Sidedress Bar Measurements Screen. See *Measurements* in this section for more details.

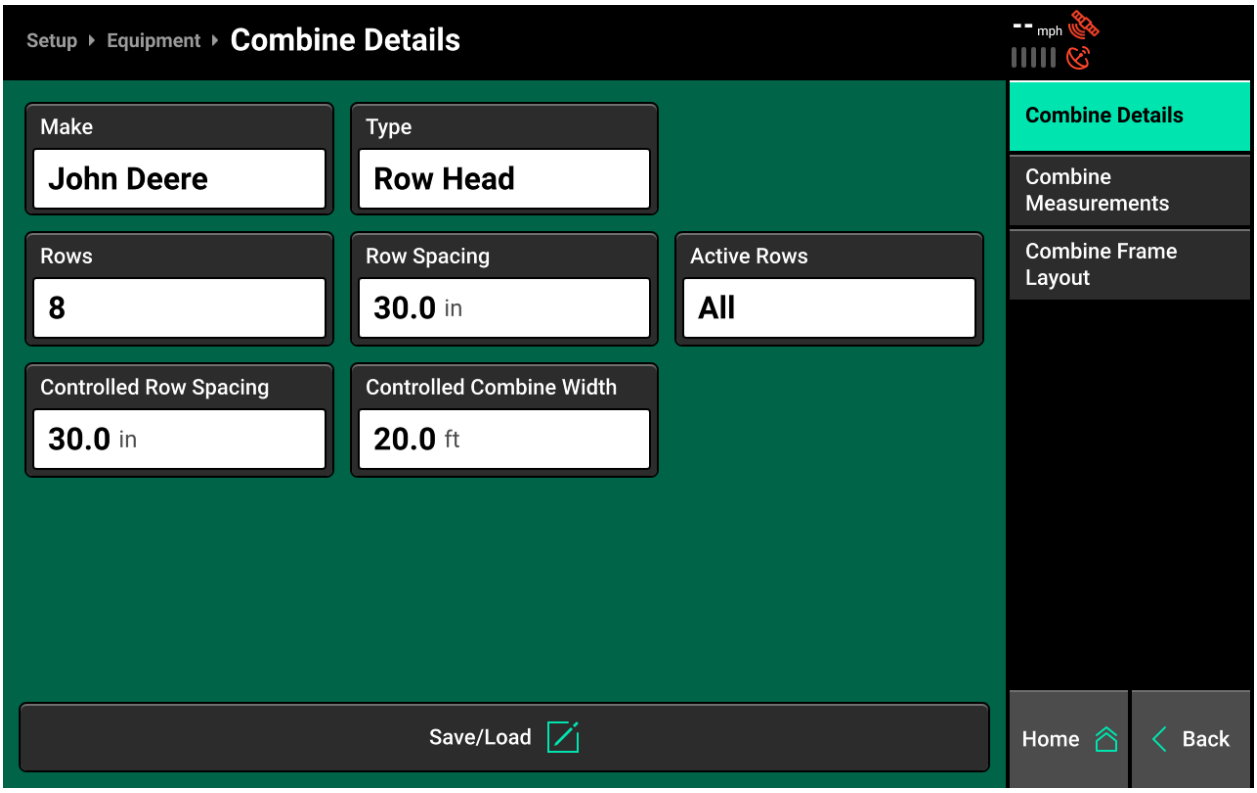
Press Sidedress Bar Frame Layout to view a on-screen representation of the physical implement layout. See *Layout* in this section for more details.

Combine Details

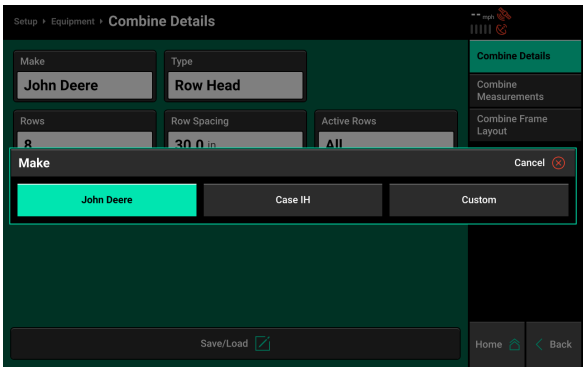




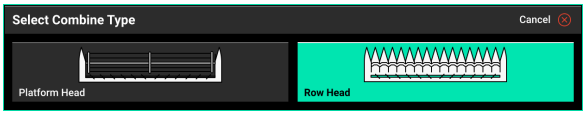
The Combine Details screen allows for configuration, saving, and loading of different combine head profiles.



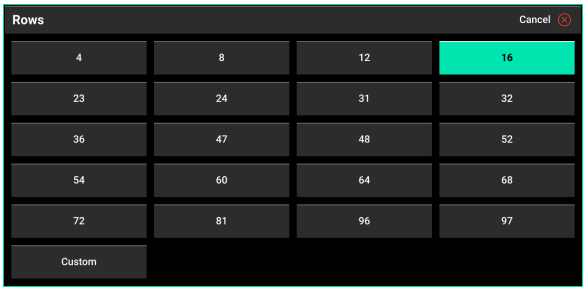
Press the brand name under Make to select a preset or to enter a custom make.



Press the head type displayed under Type to select Row Head or Platform Head.



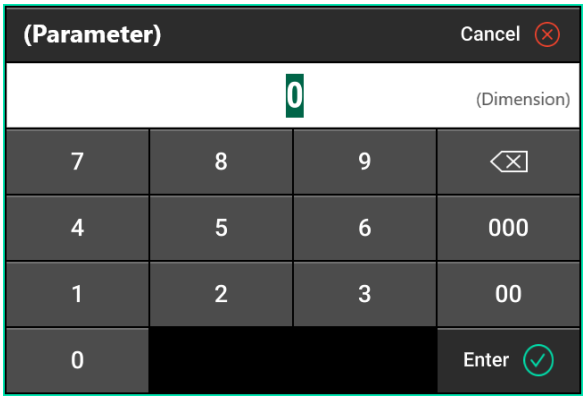
Press the number under Rows to select a preset number of rows, or to enter a custom number.



Press the number under Row Spacing to select a preset spacing, or to enter a custom number. Row Spacing refers to the physical spacing between all rows on the implement.

Press the section displayed under Active Rows to set a preset section to active, or to enter a custom section.

Press the numbers displayed under Controlled Row Spacing and Controlled Combine Width to modify either dimension. Controlled Row Spacing refers to the spacing between rows of the current active selection.



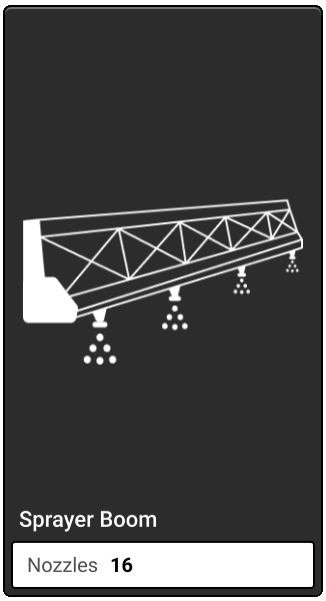
Note: *Pressing certain parameters will open a pop-up that allows for number entry. Any specific dimension for that parameter will be shown to the right of the number. Pressing any number button will overwrite the previous number completely.*

Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.

Press Combine Measurements to access the Measurements Screen. See *Measurements* in this section for more details.

Press Combine Frame Layout to view a on-screen representation of the physical head layout. See *Layout* in this section for more details.

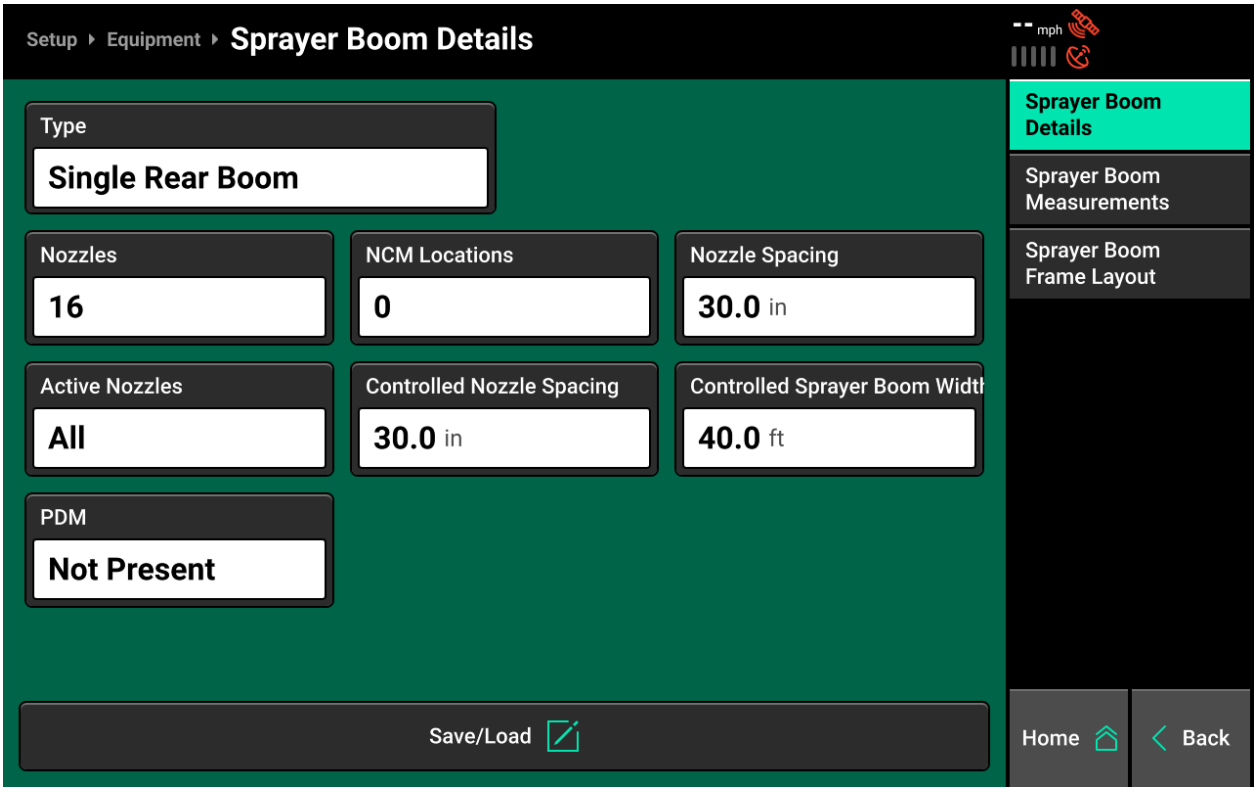
Sprayer Boom Details



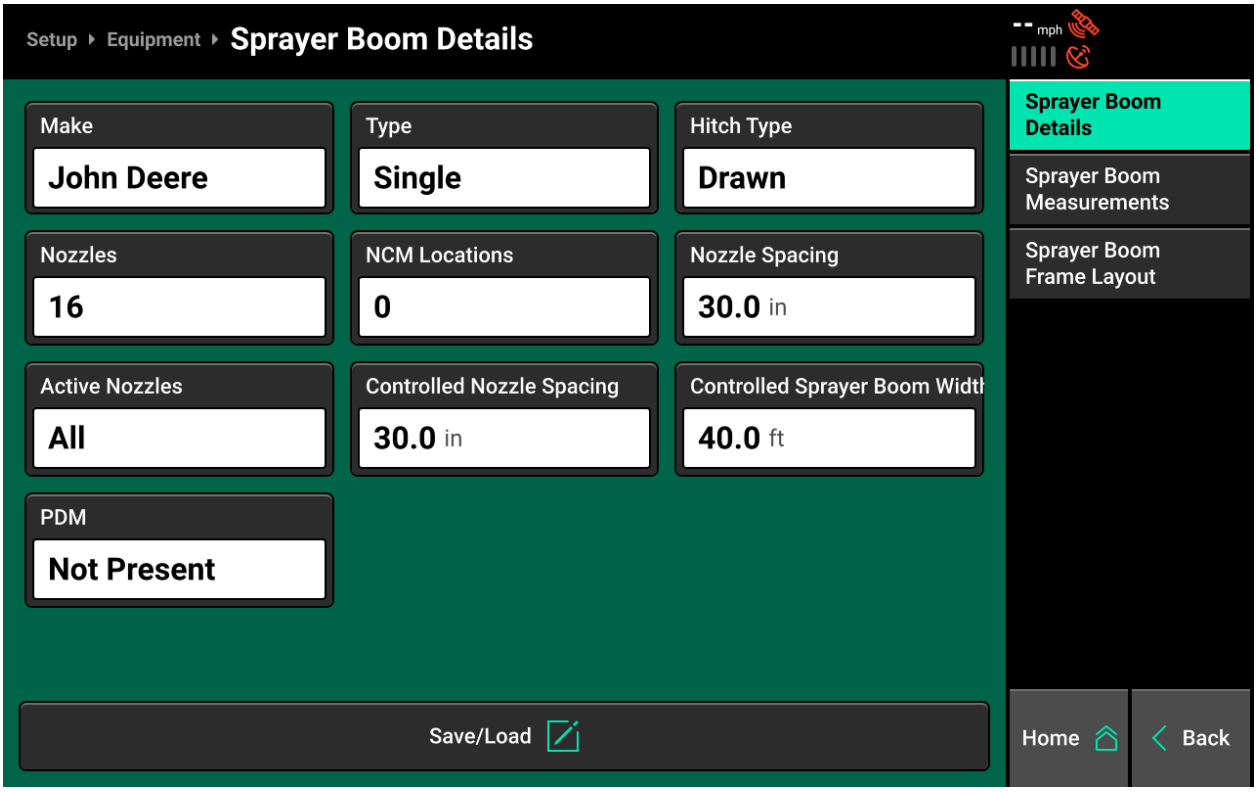
The Sprayer Boom Details screen allows for configuration, saving, and loading of different boom profiles.

Note: *Available configuration options on the Sprayer Boom Details screen will vary between Self-Propelled and Pull-Behind Sprayers. All options across both screens are detailed in this section.*

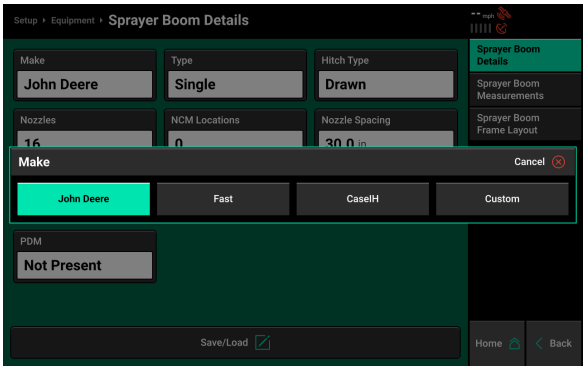
Self-Propelled Boom



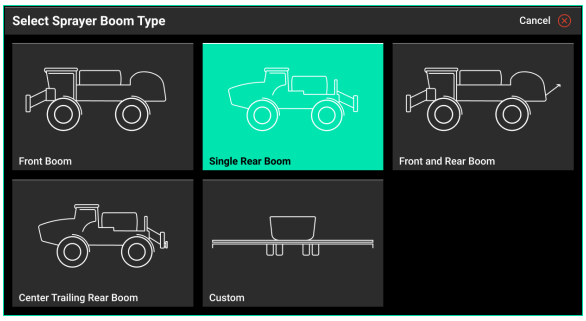
Pull-Behind Boom



Make (Pull-Behind Only) — Press the brand name under Make to select a preset or to enter a custom make.

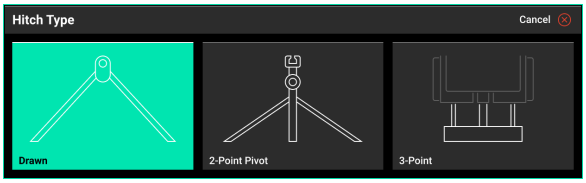


Type (Self-Propelled)— Press the style under Type to select boom type.

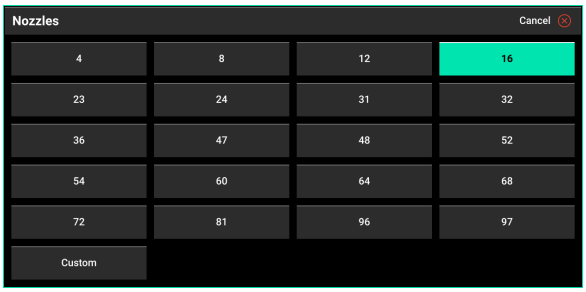


Type (Pull-Behind) — The only available option is Single

Hitch (Pull-Behind Only)— Press the name under Hitch Type to select hitch style.

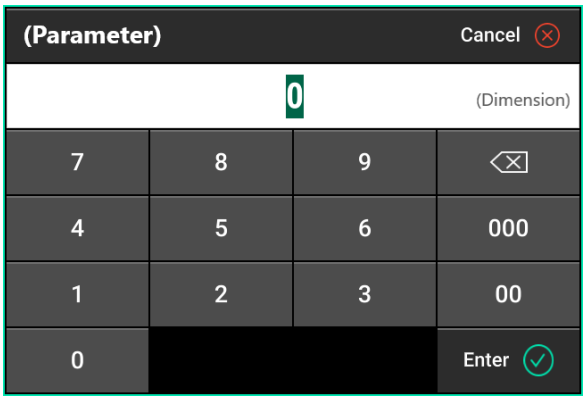


Press the number under Nozzles to select a preset number of nozzles, or to enter a custom number.



Press the number under Nozzle Spacing to select a preset spacing, or to enter a custom number. Nozzle spacing refers to the physical spacing between nozzles on the implement.

Press the number under NCM Locations, Controlled Nozzle Spacing, or Controlled Sprayer Boom Width to modify the selected parameter. Controlled Nozzle Spacing refers to the spacing between the current active nozzle selection.

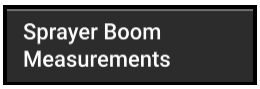


Note: *Pressing certain parameters will open a pop-up that allows for number entry. Any specific dimension for that parameter will be shown to the right of the number. Pressing any number button will overwrite the previous number completely.*

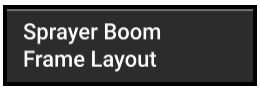
Press the selection displayed under Active Nozzles to set a preset selection to active, or to enter a custom selection.

Press the status displayed under PDM to configure the PDM as Present or Not Present. The default selection is Not Present.

Press Save/Load to access the Save/Load Screen. See *Save/Load* in this section for more details.



Press Sprayer Boom Measurements to access the Measurements Screen. See *Measurements* in this section for more details.

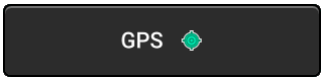


Press Sprayer Boom Layout to view a on-screen representation of the physical head layout. See *Layout* in this section for more details.

GPS Settings

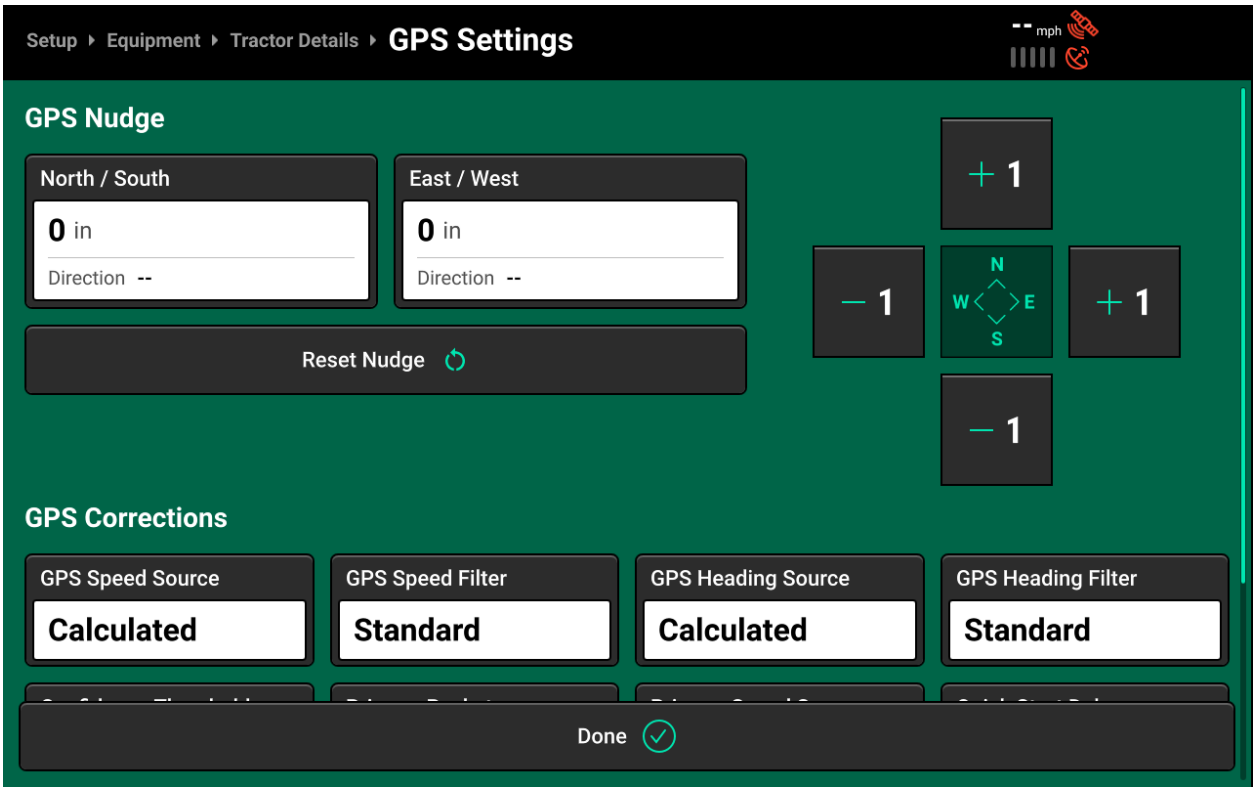
GPS may be configured on the Tractor, Combine Cab, Sprayer Cab, Planter, Air Seeder, Sidedress Bar, and Strip-Till Bar Details screens. It is configured on the Tractor, Combine Cab, or Sprayer Cab Details screens by default. To configure GPS on a compatible implement, press Add Hardware and select GPS.

Note: *There may only be one GPS system active on any implement combination. Adding GPS to an implement will remove any existing GPS system from the implement it was previously configured on.*



Once GPS is configured on an Implement Details screen, a button reading GPS will be displayed on that screen. Press GPS to acces the GPS Settings page.

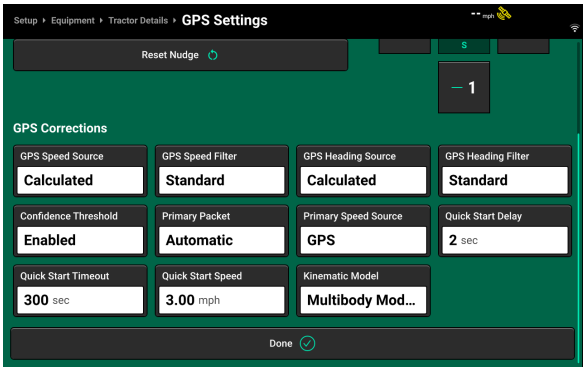
GPS Nudge



Use the +1/-1 buttons nudge GPS when experiencing signal drift on lower accuracy systems. Use the +1 buttons to nudge GPS North or East 1 inch, and the -1 buttons to nudge GPS South or West 1 inch Use the Reset Nudge button to erase all nudge settings. Press the dimensions below North/South and East/West to manually enter a value using the pop-up keyboard.

GPS Corrections

GPS Corrections options may help when experiencing GPS signal issues on lower accuracy systems. These options are intended as troubleshooting features — most systems should use the default GPS Corrections settings.

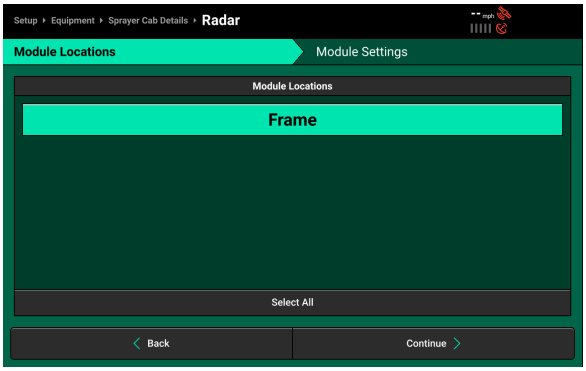


- GPS Speed Source — Changing this setting to GPS will use speed from the GPS receiver instead of allowing the 20|20 to calculate speed.
- GPS Speed Filtering — This setting will change the rate at which the 20|20 filters input data from the speed source in order to transition smoothly between speed changes.
- GPS Heading Source — Changing this setting to GPS will use the heading reported by the GPS receiver instead of allowing the 20|20 to calculate heading.
- GPS Heading Filter — This setting will change the rate at which the 20|20 filters input data from the heading source in order to transition smoothly between speed changes.
- Confidence Threshold — Enabling this setting allows the 20|20 to filter jumps and irregularities in data from the GPS receiver.
- Primary Packet — Selects which NMEA strings the 20|20 will use as primary.
  - Automatic — The 20|20 will determine the best option.
  - RMC — The 20|20 will always use RMC strings for the primary packet
  - Legacy — The 20|20 will always use GGA strings for the primary packet.
- Primary Speed Source — Sets the 20|20 to use GPS or radar to calculate speed.
- Quick Start Delay — Determines the delay from the time that the Quick Start button is pressed to the time that the control systems begin applying product(s).
- Quick Start Timeout — Determines the length of time that the 20|20 will allow the Quick Start feature to run.
- Quick Start Speed — Determines the speed that the 20|20 will simulate when running the Quick Start feature.
- Kinematic Model — Toggles between newer and classical styles of GPS modeling.

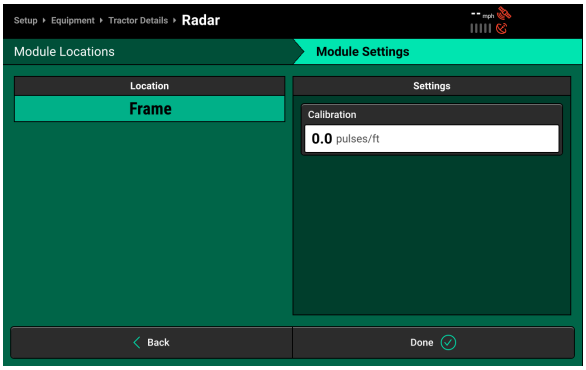
Radar

When configuring the Tractor, Combine Cab, or Sprayer Cab Details page, press Add Hardware and select Radar to configure a radar module.

Select Frame as the Module Location and press continue.

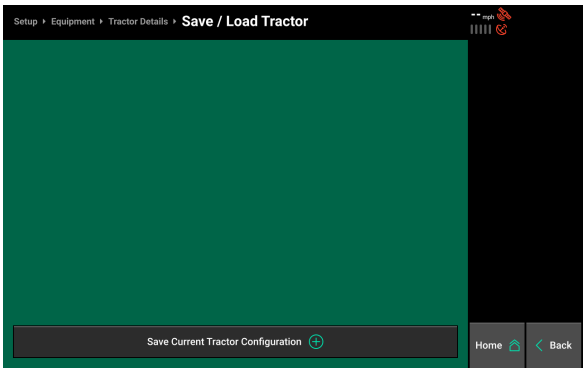


View the Radar Calibration value. This value will change after performing a radar calibration. See *Tractor* in the *Calibrations* section of this guide for more information on calibrating radar. Press Done.

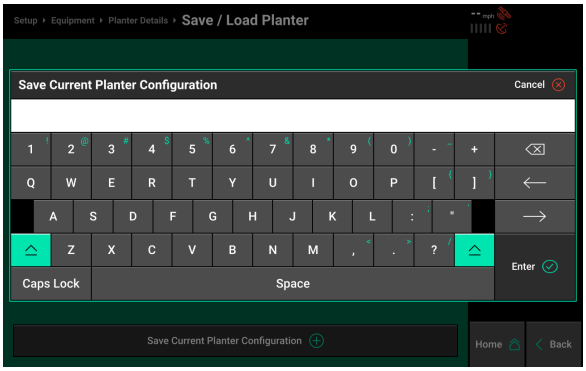


Save/Load

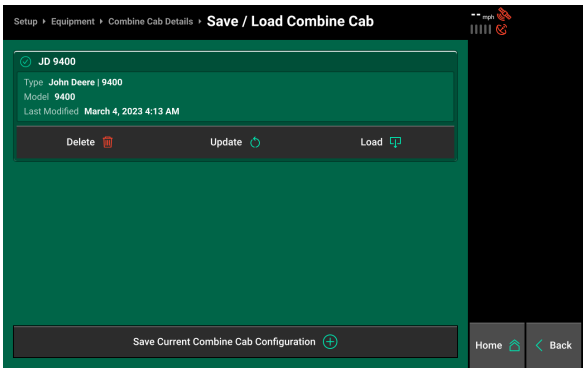
Press Save/Load (Implement) on any Implement Details screen to access the Save/Load screen. This screen allows for saving/loading of different implement profiles.



Press Save Current (Implement) Configuration to save the current implement profile. Enter the desired implement name using the pop-up keyboard and press Enter.



Implement configurations will be displayed on the Save/Load screen after saving. Press Delete to delete the selected configuration. Press Update to save any active implement settings to the selected configuration. Press Load to load the selected implement configuration.

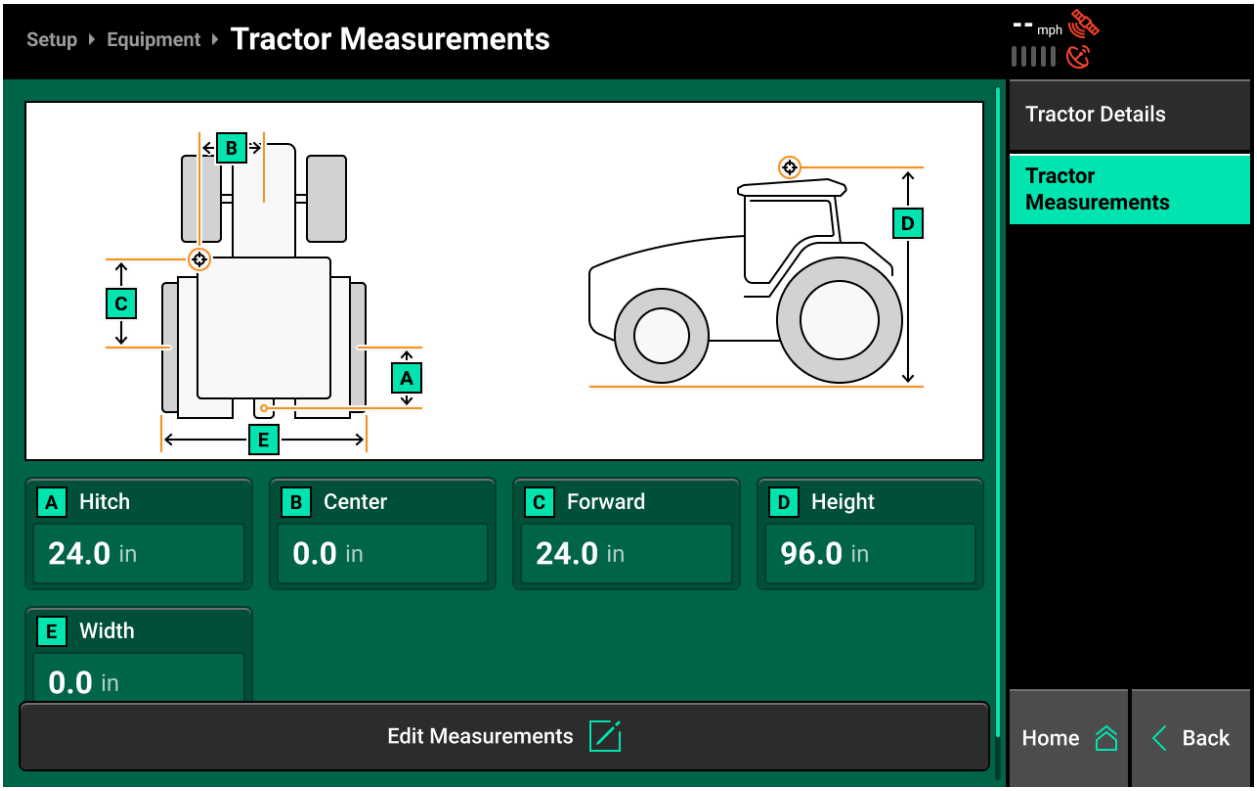


Note: *Changes to implement configurations are not automatically saved. Save all changes to the active configuration before loading a new configuration.*

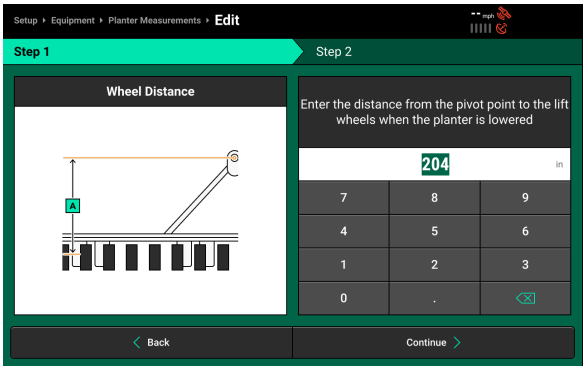
Measurements

Press (Implement) Measurements on any Implement Details screen to access the Measurements screen. The Measurements screen allows for configuration of all relevant implement dimensions and displays the measurements of the active implement configuration.

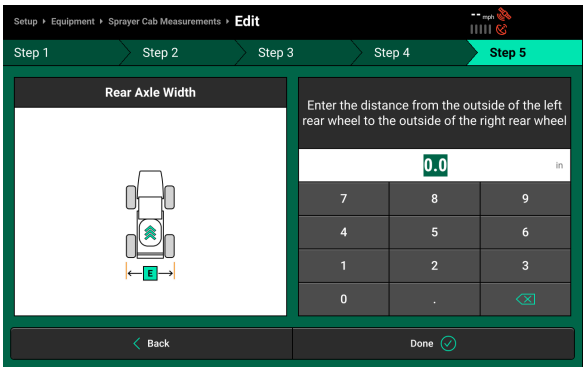
Note: *There will be different measurement names and number of measurements required for different implement types.*



Press Edit Measurements to open the Measurement Edit wizard.



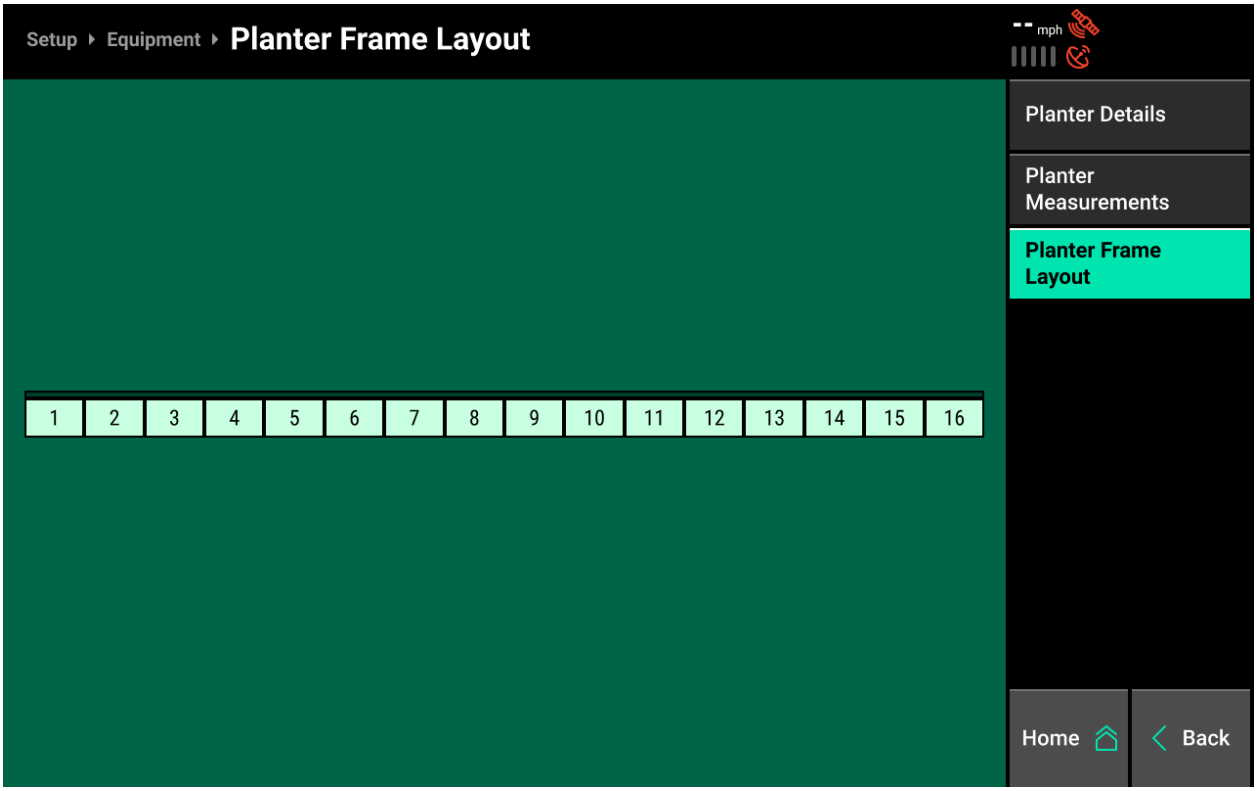
Follow the on screen instructions to physically measure the indicated dimension of the implement, and input the measurements step-by-step into the 20|20. Press Done after all measurements are input.



Frame Layout

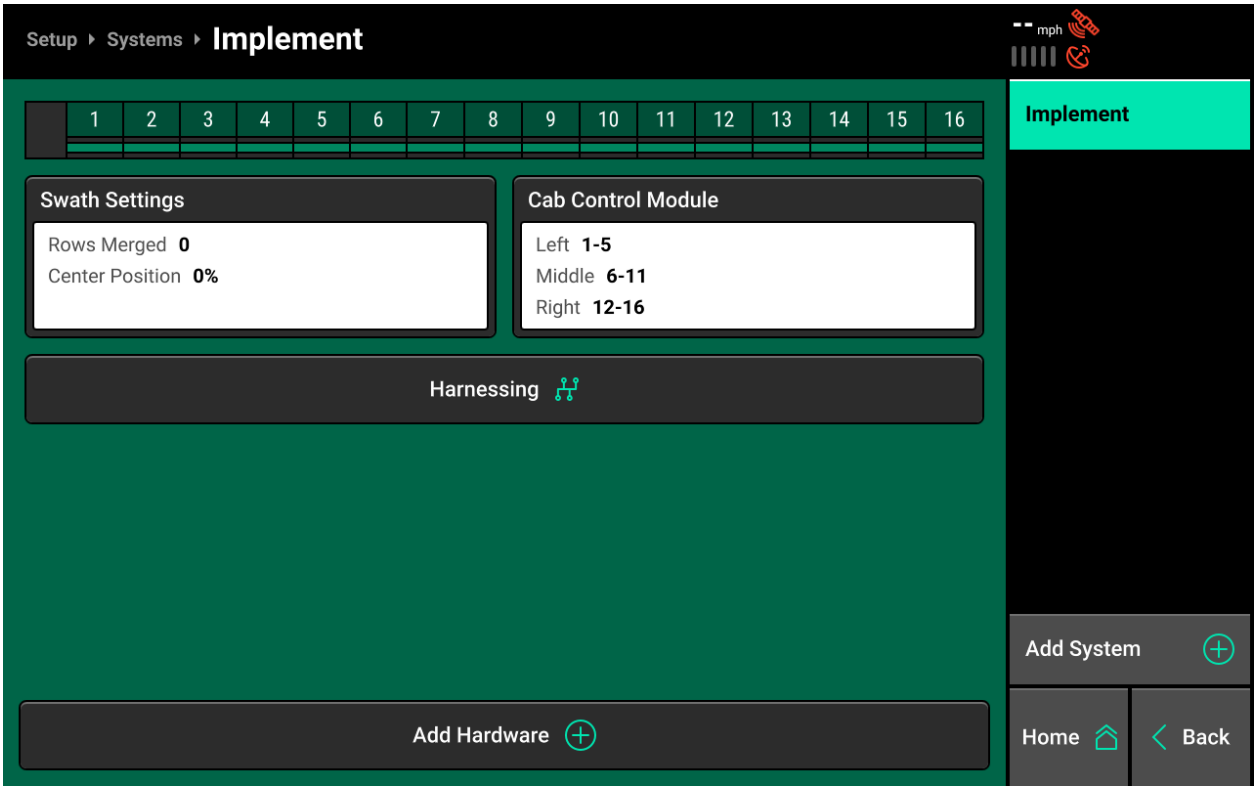
Press Implement Frame Layout on any Implement Details Screen to access the Implement Frame Layout screen.

The image on the Frame Layout should match the physical layout of the implement. This image reflects how the 20|20 will place each row when controlling, monitoring, and mapping. If this image is not correct, adjust the implement measurements and/or details accordingly.



Systems

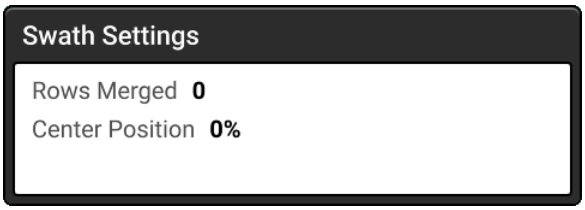
The Systems screen is used to add and configure all implement harnessing, control products, and swath settings. The only default System present will share its name with the application implement that is configured in Equipment (e.g. Sprayer, Combine, Air Seeder...), except for Planter, Sidedress Bar, or Strip-Till Bar, where the default system is named Implement. See the *Equipment* section of this guide for more information on configuring different types of implements.



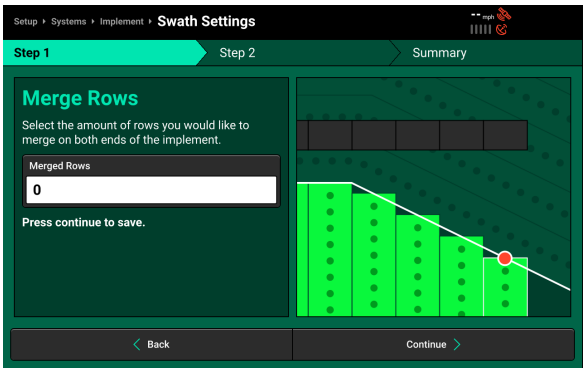
System-specific Hardware, Control Sections, Coverage Patterns, Start/Stop Offsets, and other parameters may be configured once their respective systems have been added to the implement. Refer to all applicable control product operator's guides for more information on system-specific setup, parameters and settings.

Swath Settings

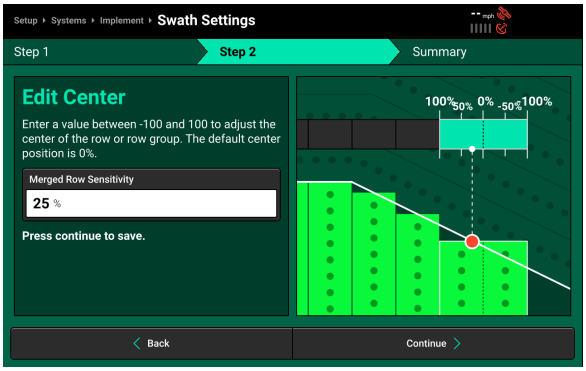
Press Swath Settings to open the swath settings wizard.



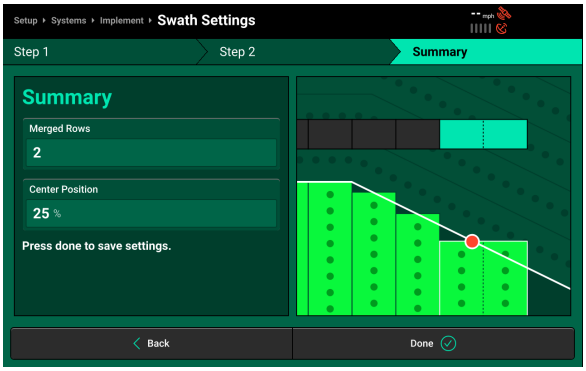
Press the number under Merged Rows to select the number of rows to tie together when swathing on/off. Press Continue.



Press the percentage under Merged Row Sensitivity to adjust the location that the 20|20 will consider to be the center of a merged section. Press Continue.

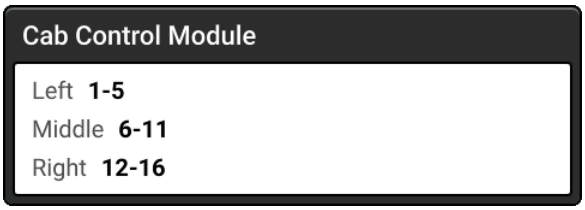


Review the summary page to confirm swath settings selections, then press Done.

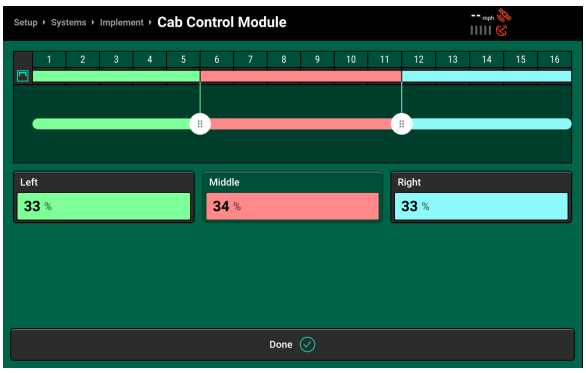


Cab Control Module

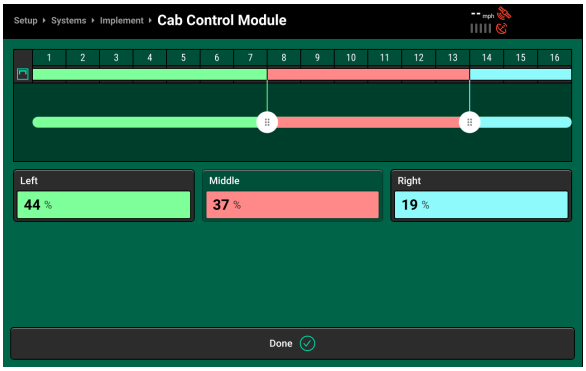
Press Cab Control Module Control to open the Cab Control Module screen.

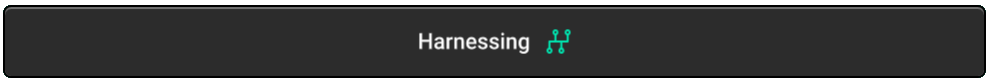


By default, approximately one third of the implement rows/nozzles will be assigned to each swath switch on the physical Cab Control Module.



Use the white sliders to adjust the sections that are assigned to each swath switch.

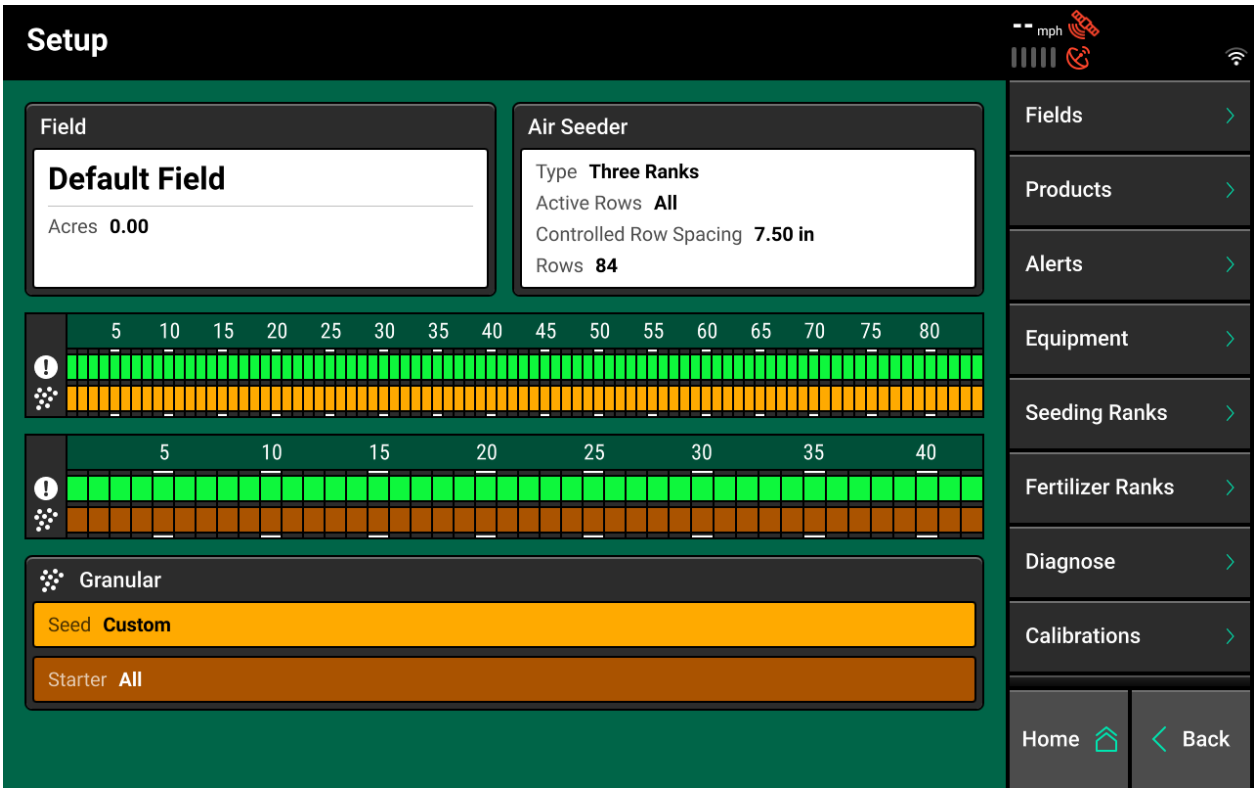




Press Harnessing to configure CAN networks and bus device locations/assignments. See *Harnessing* in this section for more information.

Press Add Hardware to configure any implement modules. See *Implement Hardware* in this section for more information.

Seeding/Fertilizer Ranks Systems Setup



When in Air Seeder mode with Seeding and Fertilizer ranks selected in Equipment, Systems will be replaced by two options that read Seeding Ranks and Fertilizer Ranks. Use the following guidelines when configuring systems and harnessing for seeding and fertilizer ranks.

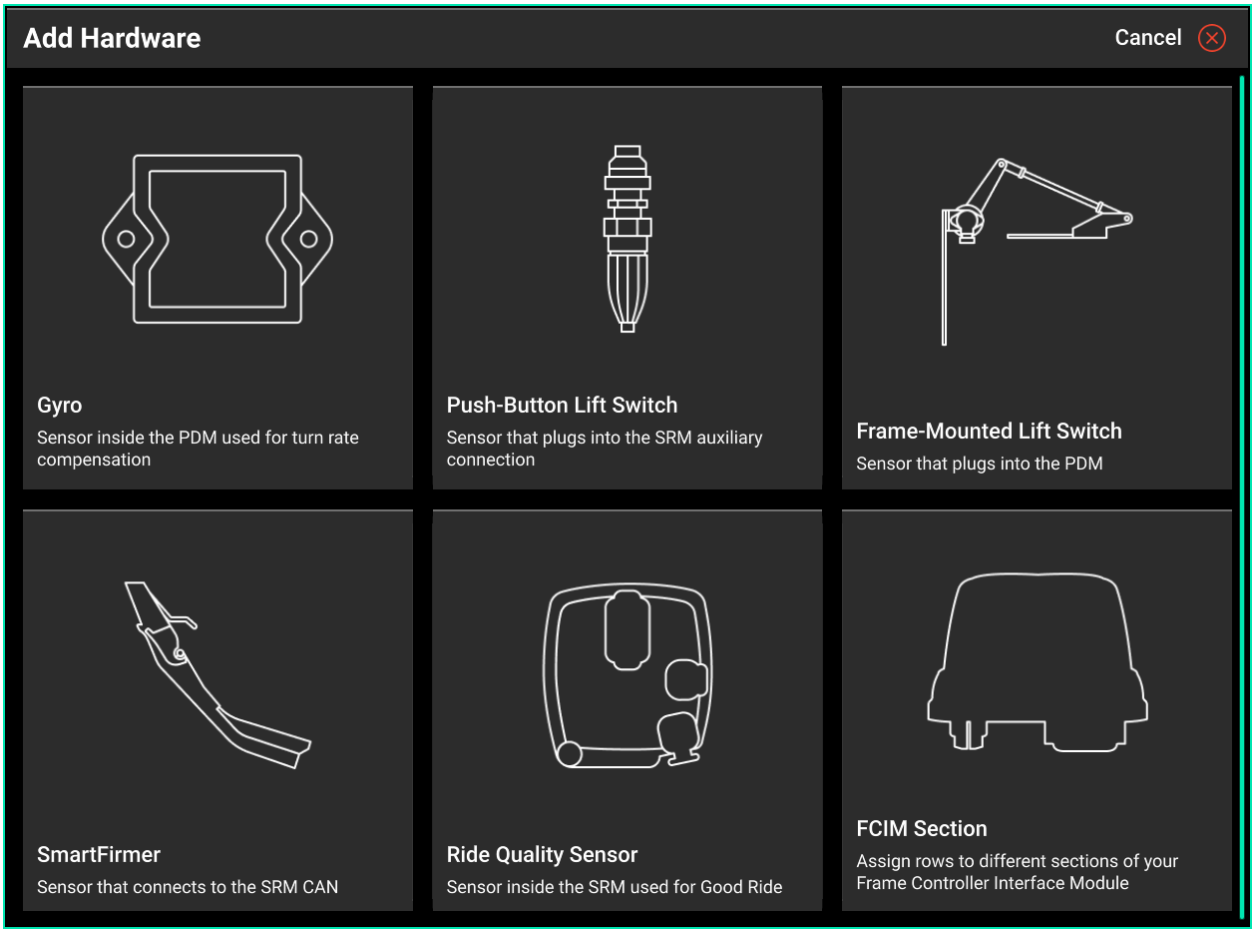
- Different row groupings may be assigned to the CCM swath switches for each set of ranks. Press Seeding or Fertilizer ranks, then press Cab Control Module and follow the instructions listed in the *Systems* section of this guide to assign the desired rows. Press Back, then select the other set of ranks to customize CCM setup for those ranks.
- During harnessing setup, CAN networks must be kept separate across sets of ranks (E.g. CAN A may not have bus devices from both seeding ranks and fertilizer ranks assigned to it).
- All CAN network assignments are viewable in harnessing setup for each set of ranks (E.g. If CAN A was used for seeding ranks, then CAN A will still be viewable when assigning harnessing for fertilizer ranks).
- Module locations available correspond with the parameters for each set of ranks that were configured in Equipment setup. (E.g. if 48 seeding rows and 36 fertilizer rows were configured on the Air Seeder Details screen, there will be 48 rows available when assigning harnessing for seeding ranks, and 36 when assigning harnessing for fertilizer ranks).

See *Harnessing* in this section for more details on setting up Bus devices and CAN networks.

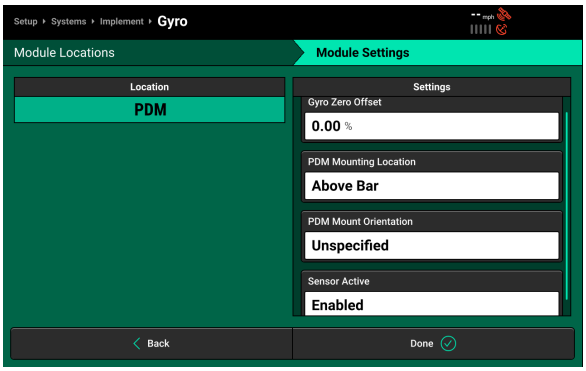
Implement Hardware

This section will detail the standard implement modules common to Planters, Air Seeders, Sidedress Bars, and Strip-Till Bars. For information on system specific implement modules available when using YieldSense or SymphonyNozzle, see the respective operator's guides for those products.

Press Add Hardware to open the Add Hardware wizard. Available modules will vary based on active implement and PDM presence. Press the desired module to begin module setup.

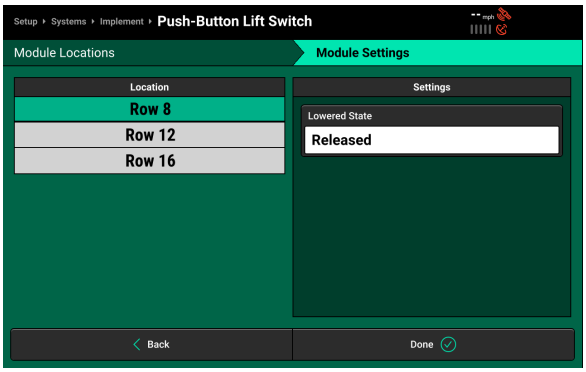


Gyro (PDM systems only) — Configures the gyroscopic sensor. Assign the gyro location to the PDM, then use the Module Settings screen to view the Gyro Zero Offset, change PDM mount location/orientation, or to disable the Gyro.



Note: *Gyro Zero Offset will display the value that is measured in the Gyro Calibration. See the* Calibrations *section of this guide for more details. It is not recommended to manually enter an offset.*

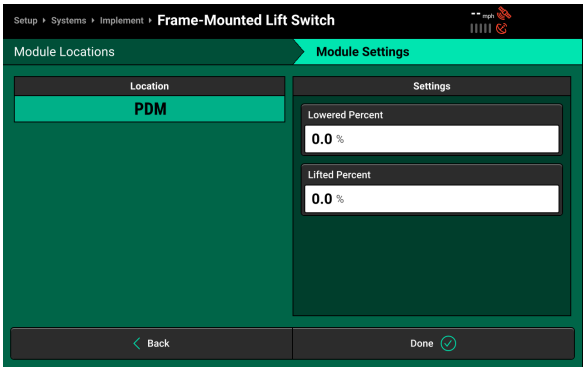
Push-Button Lift Switch — Configures one or multiple push button lift switches. After selecting all module row locations, use the Module Settings screen to view/change the button state that indicates implement lift/lowered status.



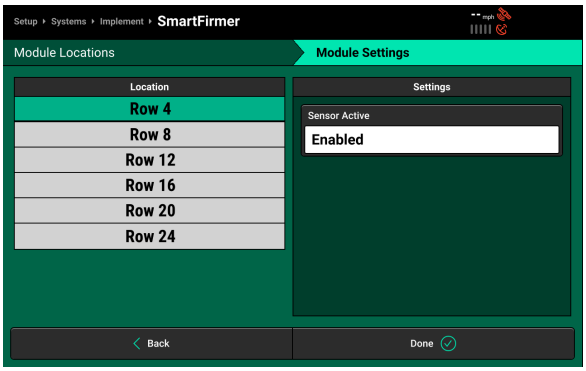
Press the state under Lowered State to toggle between Depressed and Released.

Note: *Selecting a state will open a pop-up which will allow the user to apply the selection to multiple modules. See* Group Module Changes *in this section for more details.*

Frame-Mounted Lift Switch — Configures a frame-mounted lift switch. Assign location to the PDM, then use the Module Settings screen to view or manually adjust lifted and lowered percent. Lifted/Lowered values will be displayed after performing a lift switch calibration. See the *Calibrations* for more details.



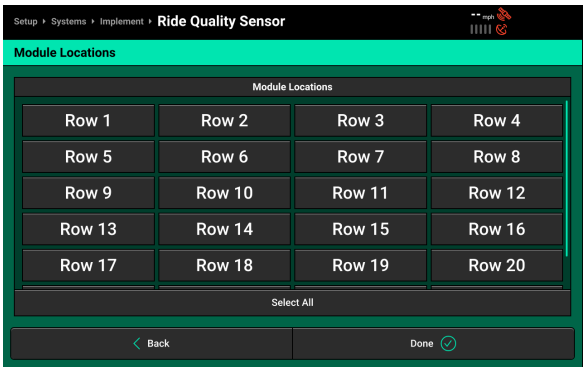
SmartFirmer — Configures one or multiple SmartFirmers on the implement. After selecting all module row locations, use the Module Settings screen to view/change active sensors. See the SmartFirmer Operator's Guide for more details on using SmartFirmers.



Press the state under Sensor Active to toggle between Enabled and Disabled.

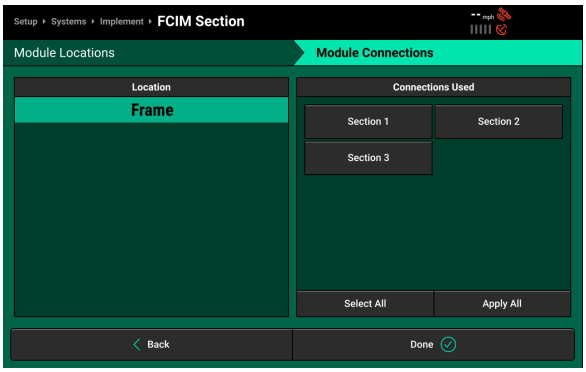
Note: *Selecting a state will open a pop-up which will allow the user to apply the selection to multiple modules. See* Group Module Changes *in this section for more details.*

Ride Quality Sensor — Allows the user to configure which SRMs are equipped with ride quality sensors (accelerometers). Press on each row to assign a ride quality sensor to that row, or press Select All for all rows, then press Done.

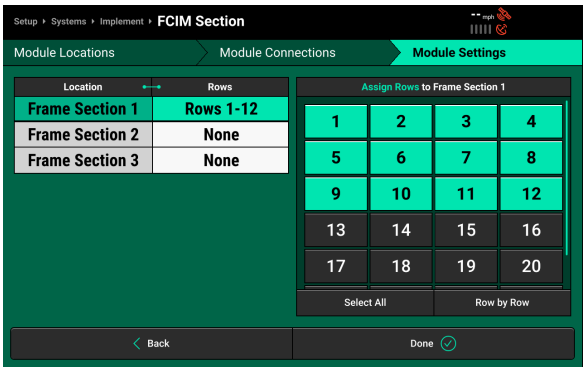


Note: *All SRMs that are equipped with ride quality sensors display a red light on the physical module. SRMs without a sensor display a yellow light.*

FCIM (Fendt Momentum Planters Only) — Configures a Frame Control Interface Module to assist with planter frame movement. After selecting module location, use the Module Connections screen to select which connections on the module are in use, then press Continue.



After selecting active connections, use the Module Settings screen to assign the rows that are controlled by each connection. Press on each Frame Section under Location to select it, then manually select which rows are controlled by that connection from the Assign Rows table.

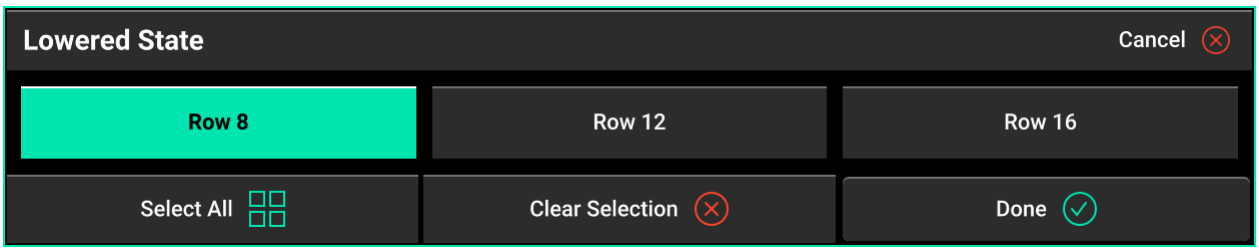


Group Module Changes

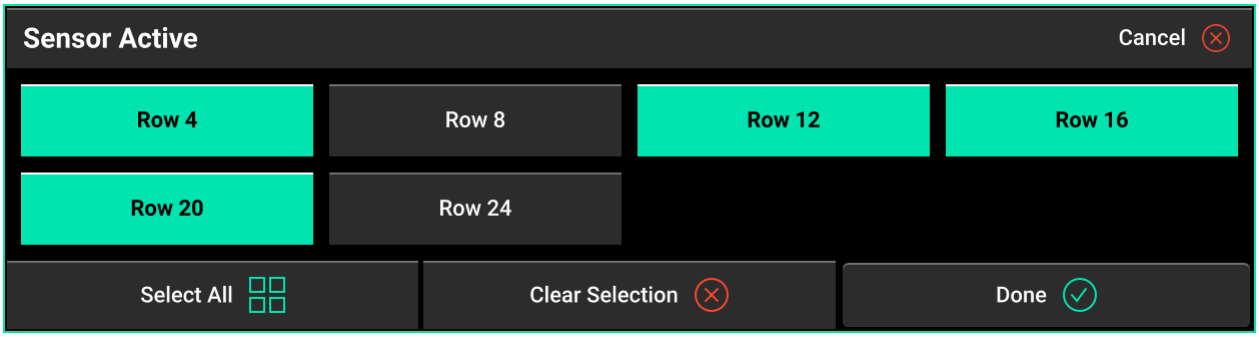
When making changes to various module settings in the 20|20, selecting an option that could apply to multiple modules of the same type will open a pop-up which allows the user to apply that selection to some or all of those modules simultaneously. This principle is demonstrated here using Lowered State (for push button lift switches) and Sensor Active (for SmartFirmer).

Press the desired module setting to open the Group Module Change pop-up. Press on all modules that the selection will apply to, or press Select All to apply the selection to all modules. Press Done to return to the previous screen.

Push-Button Lift Switch — Lowered State

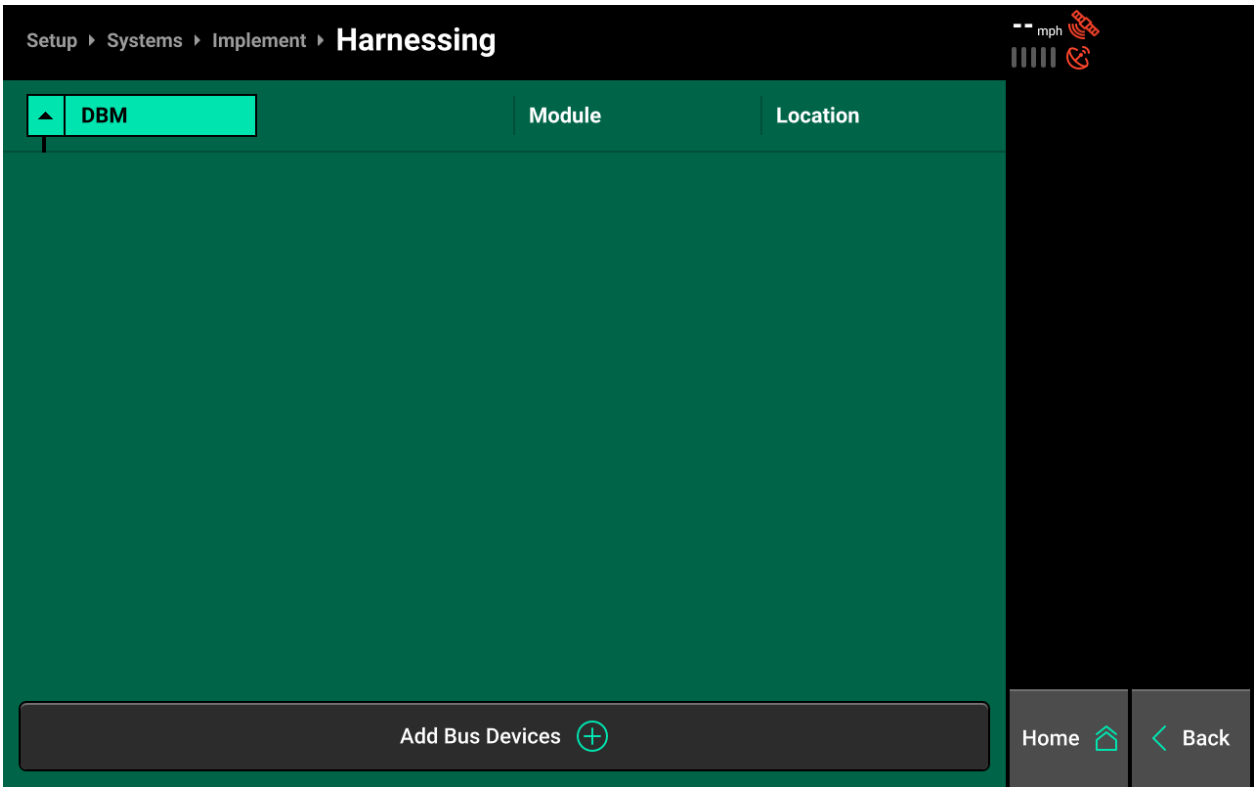


SmartFirmer — Sensor Active

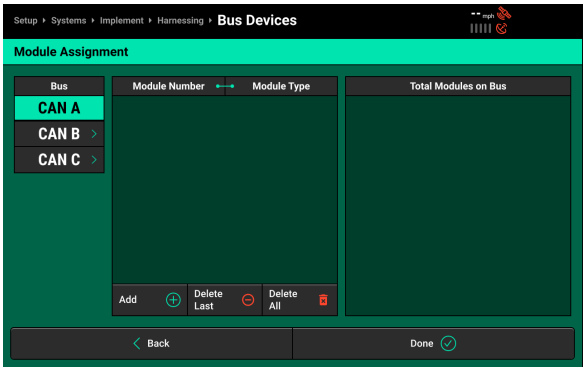


Harnessing

Press Harnessing to open the Harnessing screen, which displays a schematic of all CAN networks and bus devices. The only default bus device is the DBM.



Press Add Bus Devices to open the Bus Devices screen. This screen allows the user to set up all other bus devices and CAN networks. No systems will function until bus devices and CAN networks have been set up on the 20|20 in the same configuration that those devices and networks are laid out physically on the implement.

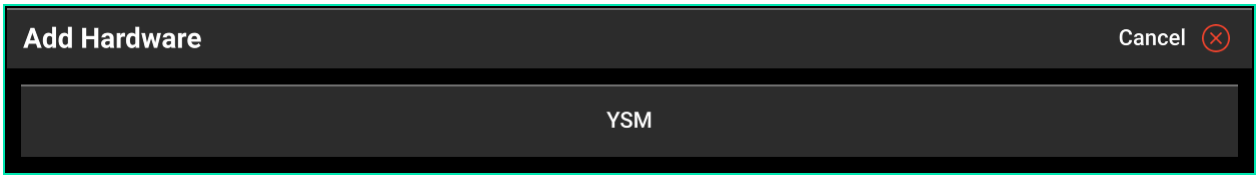


Select the desired CAN network from the Bus list on the left side of the screen, then press Add + to add bus devices. Different bus devices will be available depending on equipment setup.

Bus Devices

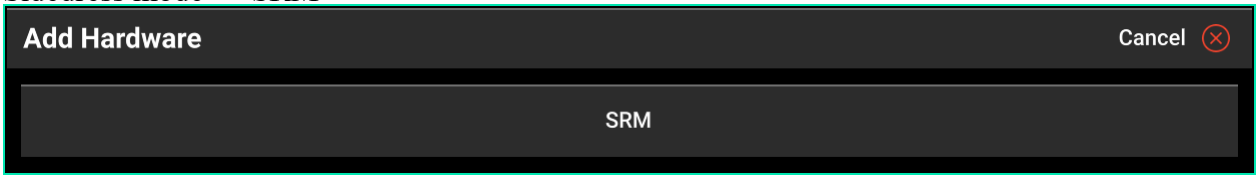
Planter mode — SRM, SC [SmartConnector], FCIM (Fendt Momentum planters only), BXM

Combine mode — YSM [YieldSense Module]



Air Seeder/Strip-Till Bar mode — SRM, BXM

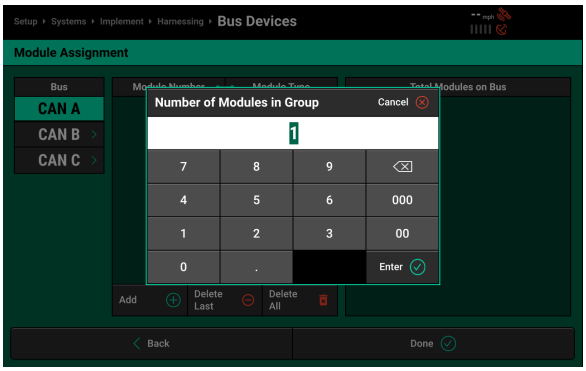
Sidedress mode — SRM



Note: *BXM is not available in sidedress mode. If applying/monitoring a granular product with a sidedress implement, use Strip-Till Mode.*

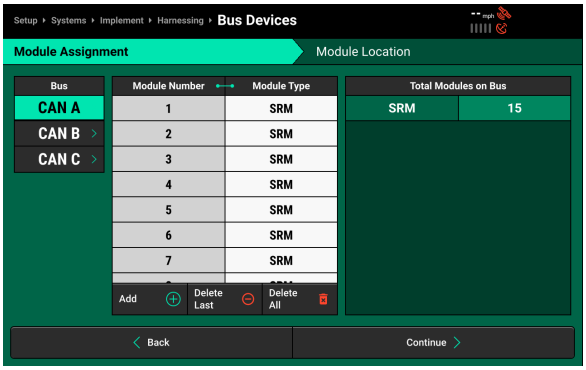
Sprayer mode — NCM [Nozzle Control Module], SCM [Sprayer Control Module]

Press the desired bus device to open the Modules in Group pop-up. Use the pop-up to enter the number of selected bus devices that are installed *in sequence* on the selected CAN network. If another type of bus device is connected to the implement harnessing, enter a group size only up to the next type of bus device. See the *Example Setup* at the end of this section for more details.

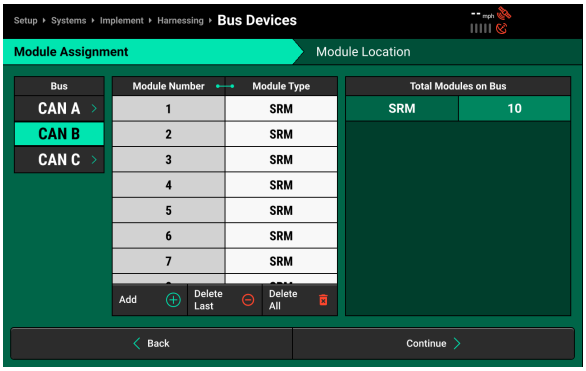


Continue adding bus devices until the appropriate number of each bus device type is displayed in the Total Modules on Bus table on the right side of the screen.

Note: *The Planter Power Distribution Module [PDM] contains an SRM. If the configured implement has a PDM set to present, add the total number of row SRMs to CAN A plus one. The Sprayer PDM contains an SCM rather than an SRM.*



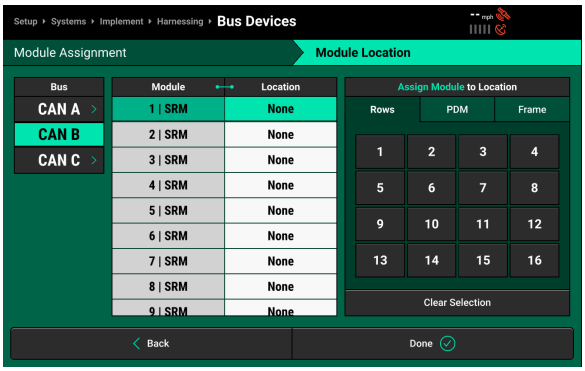
If setting up a multiple CAN system, select the next CAN network from the Bus list on the left side of the screen. Follow the process detailed in the previous steps to set up all bus devices on CAN B and/or CAN C.



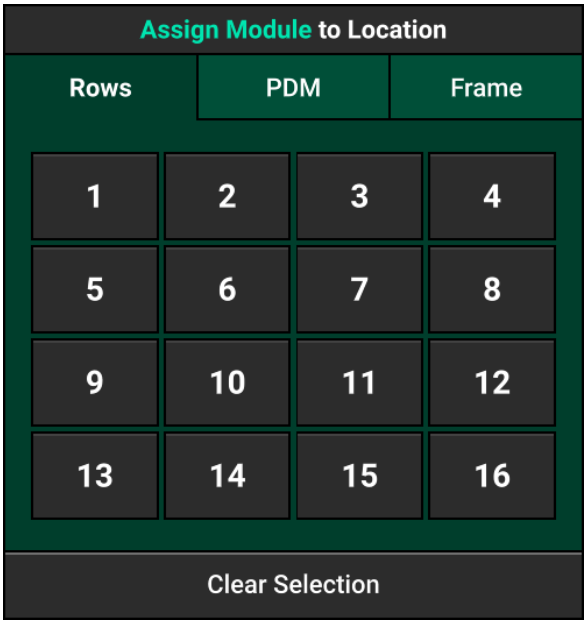
Press Delete Last to remove the last bus device in sequence from the selected CAN network. Press Delete All to remove all bus devices from the selected CAN network.

After all CAN networks have been configured, press Continue to advance to module assignment.

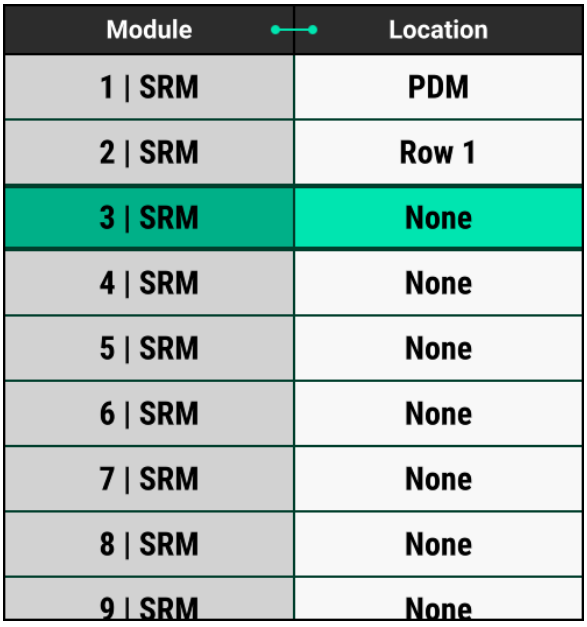
Note: *The selected CAN network will not change when progressing to module assignment. To set up CAN A first, ensure to select CAN A after pressing Continue.*



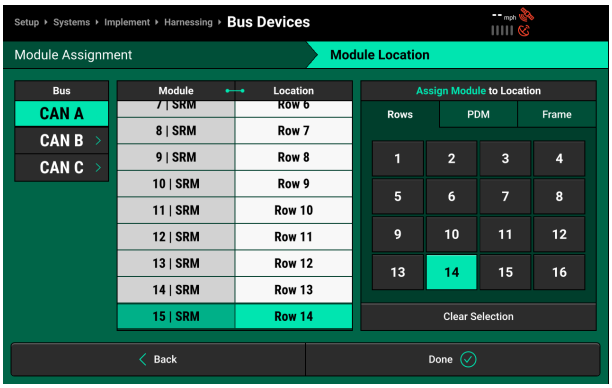
Use the table under Assign Module to Location to view all available locations that may be assigned to a module. Press PDM or Frame to assign a module to the PDM or to assign a frame-mounted module. The location selection will be applied to the highlighted module in the table displayed in the center of the screen. Press Clear Selection to clear the location selection for the highlighted module only.

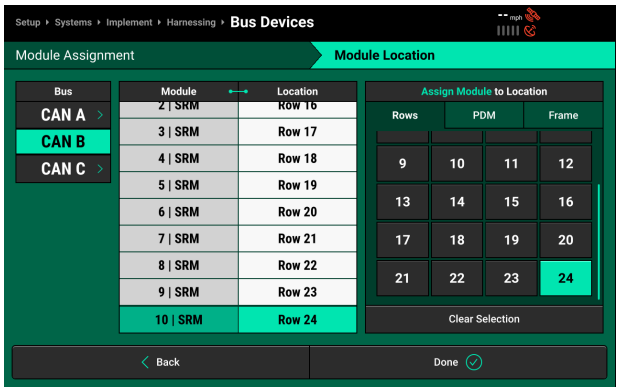


After a location selection is made, the 20|20 will automatically highlight the next module in sequence. Press any module in the center screen table to select it manually.

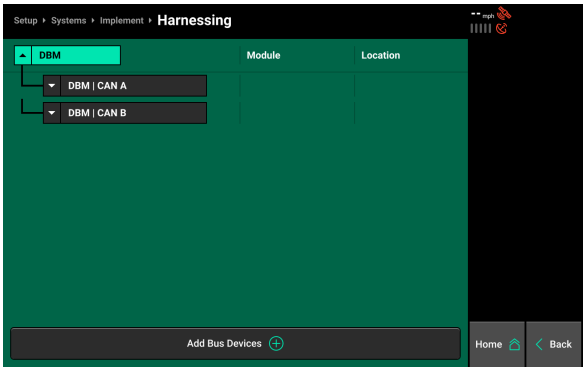


Continue until all modules on the selected CAN network are assigned to the correct location. If setting up a multiple CAN system, select the next CAN network from the Bus list, then assign locations to all modules on that network.

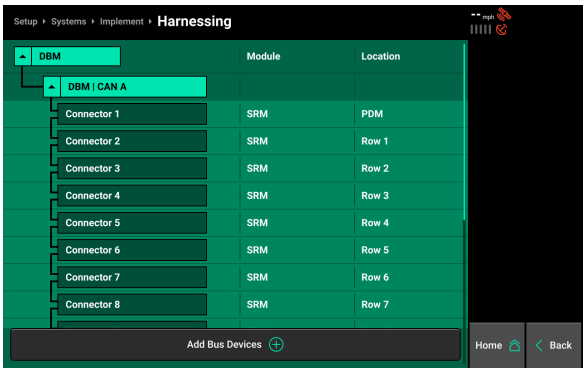




Press Done to return to the Harnessing screen. The schematic will now display all configured CAN networks.

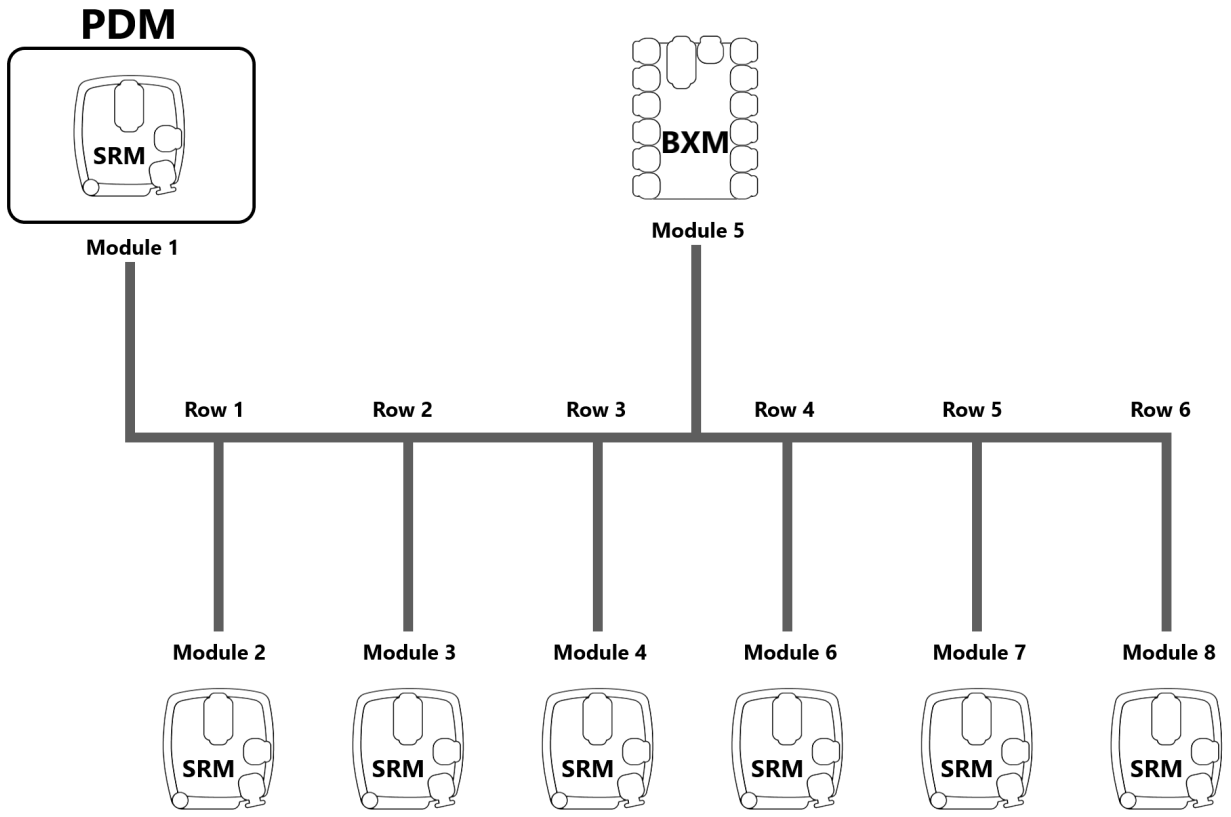


Press the dropdown arrow next to a CAN network to view the detailed schematic for that network. Scroll down on the table to view all modules or select another network.

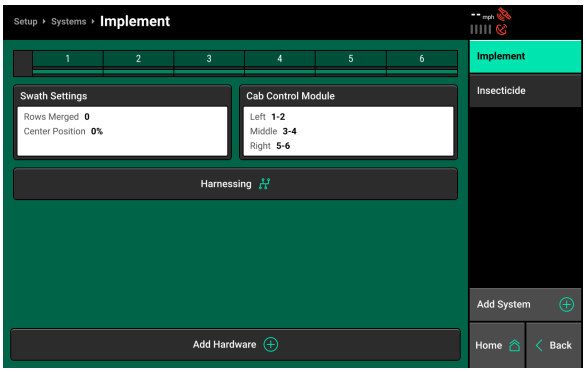


Example Setup

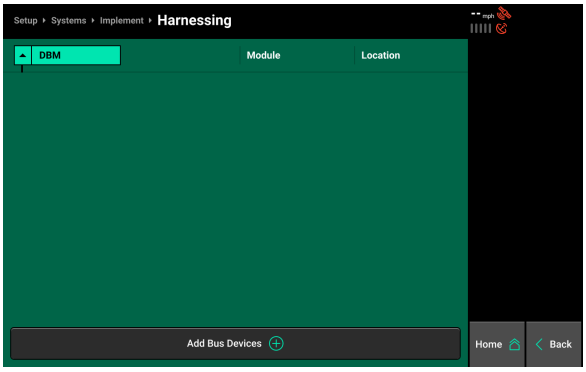
This example will detail harnessing setup and module assignment for the system displayed below. The provided example is intended for illustration purposes only.



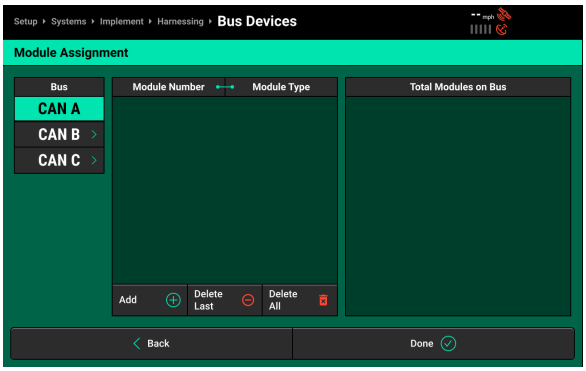
Navigate to Setup > Systems and press Harnessing.



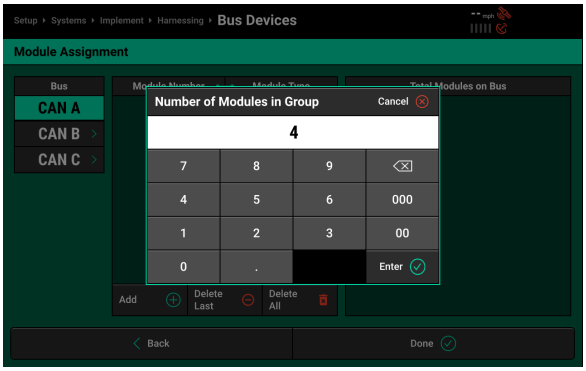
Press Add Bus Devices.



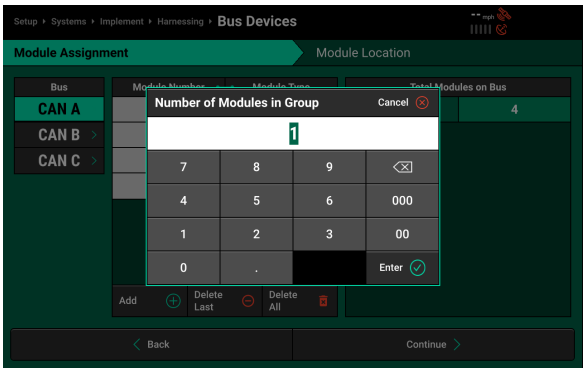
Ensure CAN A is highlighted in the Bus list. Press Add + in the center screen table.



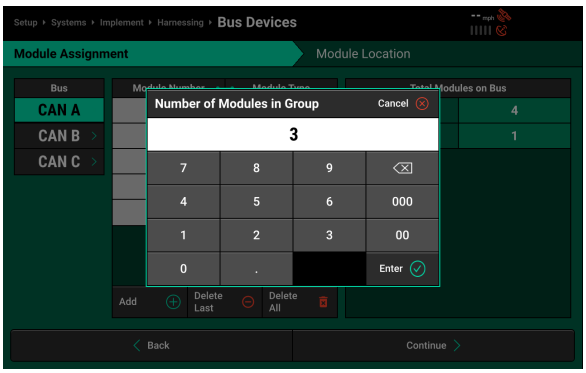
Select SRM, then enter the number 4 using the Modules in Group pop-up and press Enter.



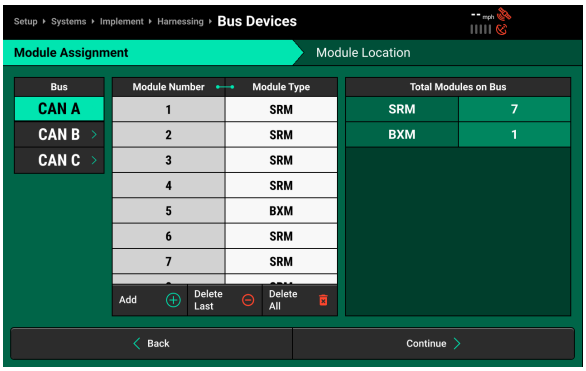
Press Add + and select BXM, then enter the number 1 using the Modules in Group pop-up and press Enter.



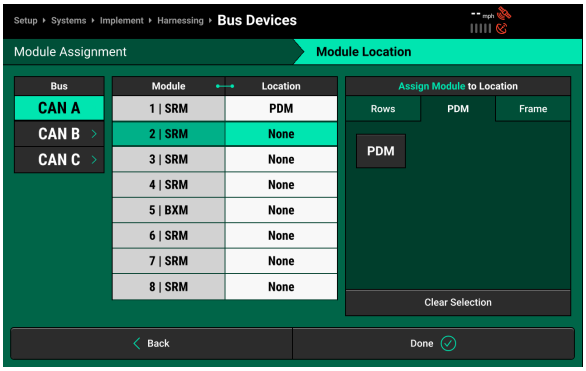
Press Add + and select SRM, then enter the number 3 using the Modules in Group pop-up and press Enter.



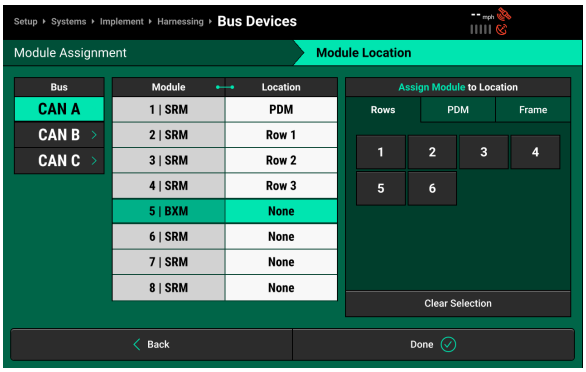
Press Continue to advance to module location assignment.



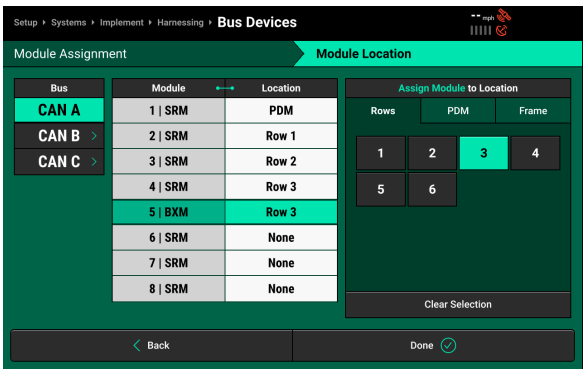
Press PDM under Assign Modules to Location, the press PDM in the table below to assign module 1 | SRM location to the PDM. the 20|20 will then automatically highlight module 2 | SRM.



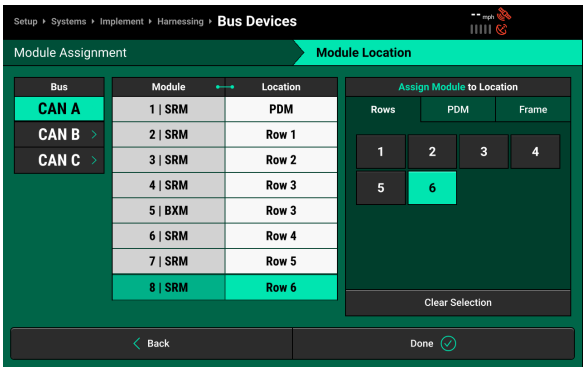
Press Rows under Assign Module to Location, then press the number 1 to assign module 2 | SRM location to Row 1. Continue assigning the correct row locations to Modules 3\4| SRM.



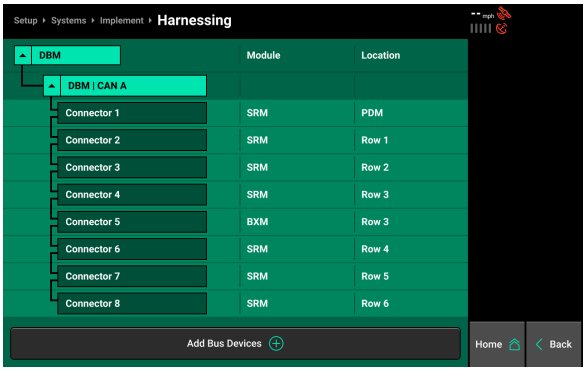
Press the number 3 or 4 to assign module 5 | BXM to either of those locations. A BXM must be assigned to a row (or tower in Air Seeder mode) even if it is physically mounted to the frame. Use the closest row or tower to the physical location of the BXM for identification purposes.



Continue assigning modules 6/7/8 | SRM to their appropriate row locations, then press Done.

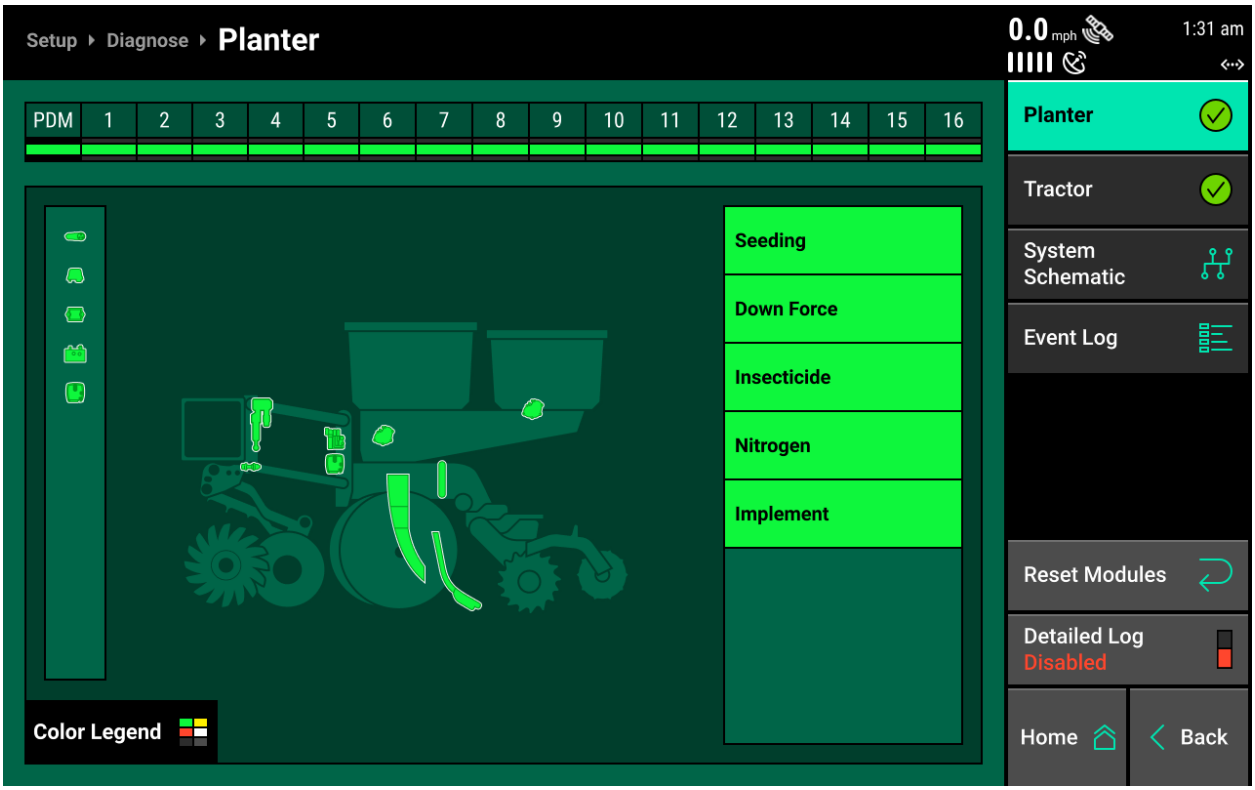


Use the system schematic to confirm proper module/CAN network assignment, then press Back to return to system setup.



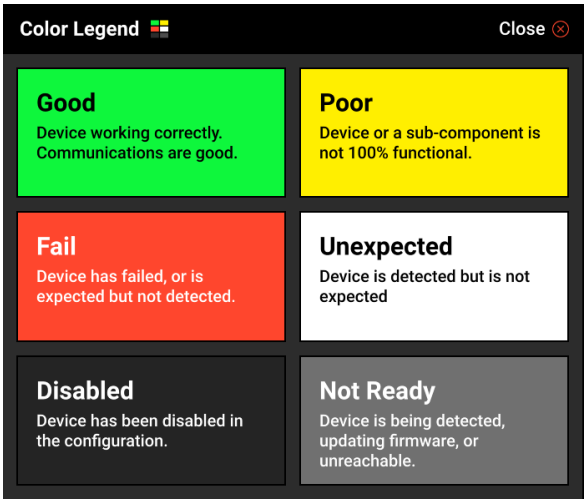
Diagnose

The Diagnose screen is the primary location for troubleshooting issues related to the operation of the 20|20 system and all products configured on the monitor. An icon for each configured system is superimposed over a graphic of the appropriate implement. Additionally, there is an implement bar at the top of the screen displaying the health of each row.



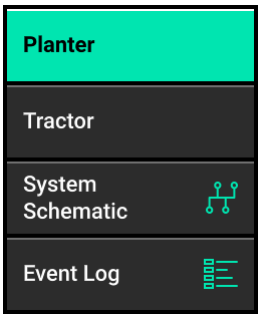
Color Legend

The modules and system names displayed on the implement graphic and bar will appear in different colors depending on module health. Press Color Legend in the lower left corner of the screen to view a description of what each color indicates.



Navigation Menu

Use the navigation menu on the right side of the screen to view the different sections of the Diagnose screen. See *Implement, Tractor, System Schematic*, and *Event Log* in this section for more details on each respective screen.



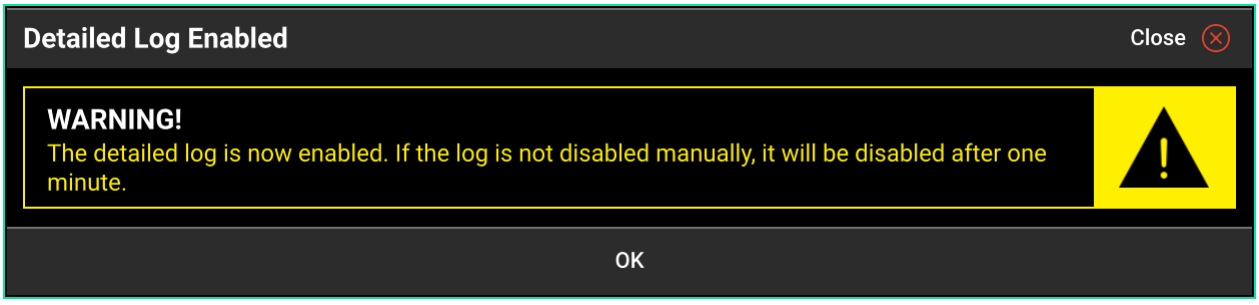
Reset Modules

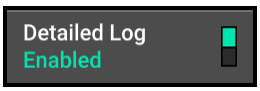
Press Reset Modules to break and reestablish all CAN communication and daisy chain identification. This function is often used as a troubleshooting tool for communication issues.

Note: *Due to software changes for sprayer and seeder compatibility, after performing a Reset Modules or power cycle in limited release software versions **2023.1.0** and onward, if a daisy chain break is present in the physical harnessing, all components after the daisy chain break will display red on the diagnose page. The break must be addressed before implement functionality is restored.*

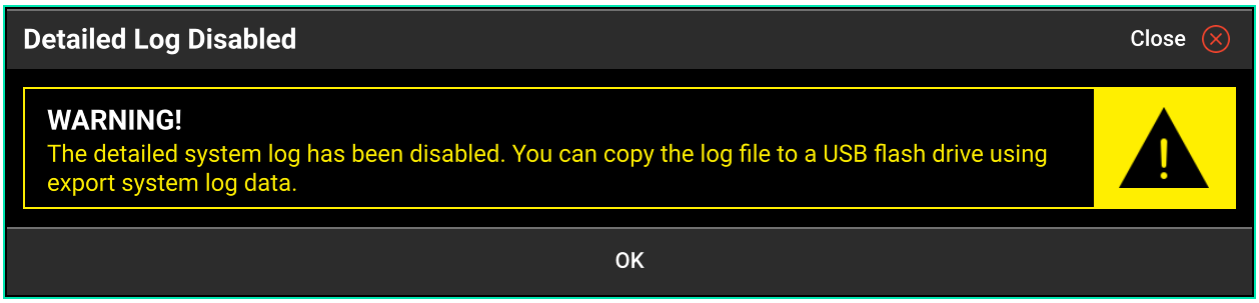
Detailed Log

During troubleshooting, detailed logs may be requested by Precision Planting Product Support. Press Detailed Log to enable recording of specific system details. Pressing this button will open a pop-up confirming that recording has been enabled.



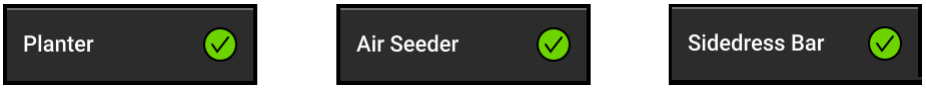


Detailed log will now show enabled. Recording will run for one minute and then be disabled automatically. A pop-up will confirm that recording has been disabled.

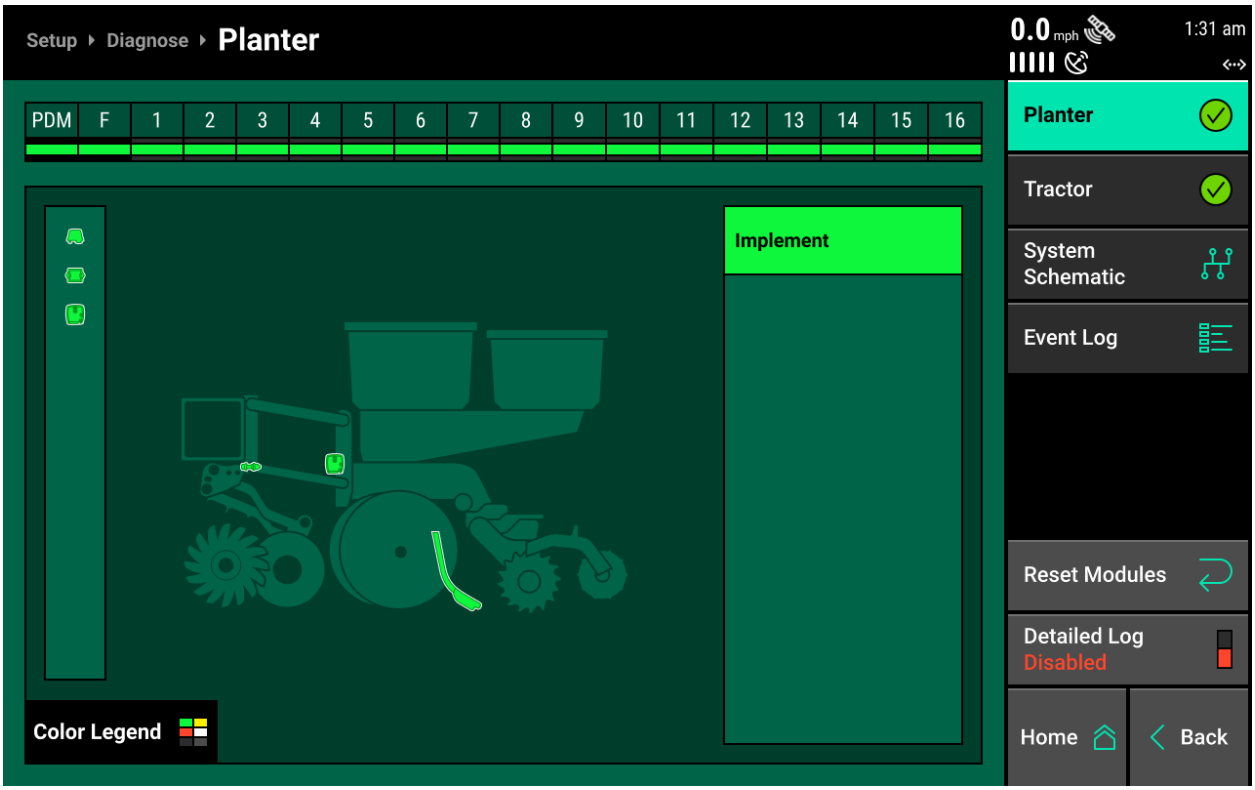


After recording is complete, navigate to Setup > Settings > Data > Export and press Export Support Data to save the detailed log to a connected USB drive. See *Data* in the *Settings* section of this guide for more details.

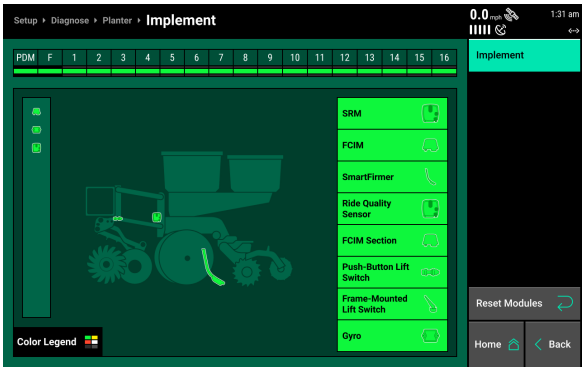
Implement



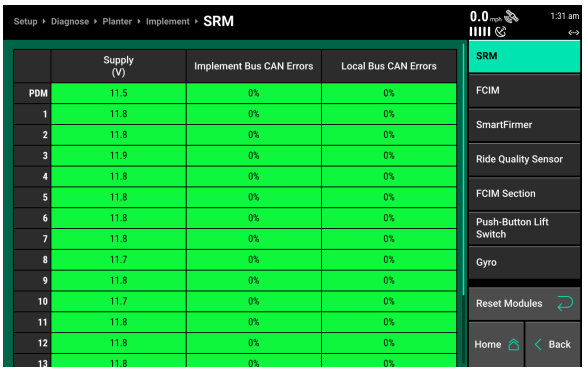
Press the implement name in the navigation menu on the Diagnose screen to display an overview of system health for the implement. To view detailed diagnostics for all system hardware, press the desired system on the center screen graphic. This guide will detail diagnostic information for all hardware of the Implement system in Planter, Air Seeder, Sidedress, and Strip-Till bar modes. Refer to system specific operator's guides for information on diagnostics for all other systems, such as DeltaForce, YieldSense, SymphonyNozzle, or other systems.



Press Implement on the center screen graphic. Press the desired module to view a chart of the diagnostic information available for that module(s).



The navigation menu will the module list from the previous screen. Press the desired module to display diagnostic information for that module(s) in the chart.



SRM

- Supply (V) — Supply voltage to each SRM.
- Implement Bus CAN Errors — CAN communication errors between the each SRM and the 20|20.
- Local Bus CAN Errors — CAN communication errors between each SRM and the hardware modules connected to it.

Ride Quality Sensor

- Good Ride — Reading from the accelerometers in each SRM.

Frame-Mounted/Push-Button Lift Switch

- Position — Displays the physical position of the switch.
- Work State — Displays the lifted/lowered state of the implement based on the settings input during hardware setup.

SmartFirmer

- Supply (V)— Supply voltage to each SmartFirmer.
- EM/CEC Valid— Displays whether the organic matter/CEC sensor is receiving a valid reading.
- Moisture Valid — Displays whether the moisture sensor is receiving a valid reading.

Gyro

- Forward Acceleration — Displays the speed reading of the PDM-mounted gyro.
- Turn Rate — Displays the degree of turn currently detected by the gyro.

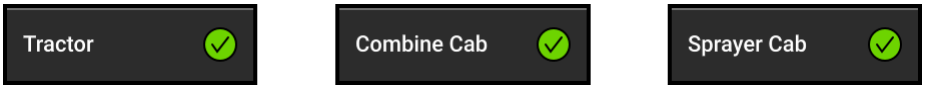
FCIM (Fendt Momentum only)

- Supply (V) — Supply voltage to the FCIM.
- Implement Bus CAN Errors — CAN communication errors between the FCIM and the 20|20.

FCIM Section (Fendt Momentum only)

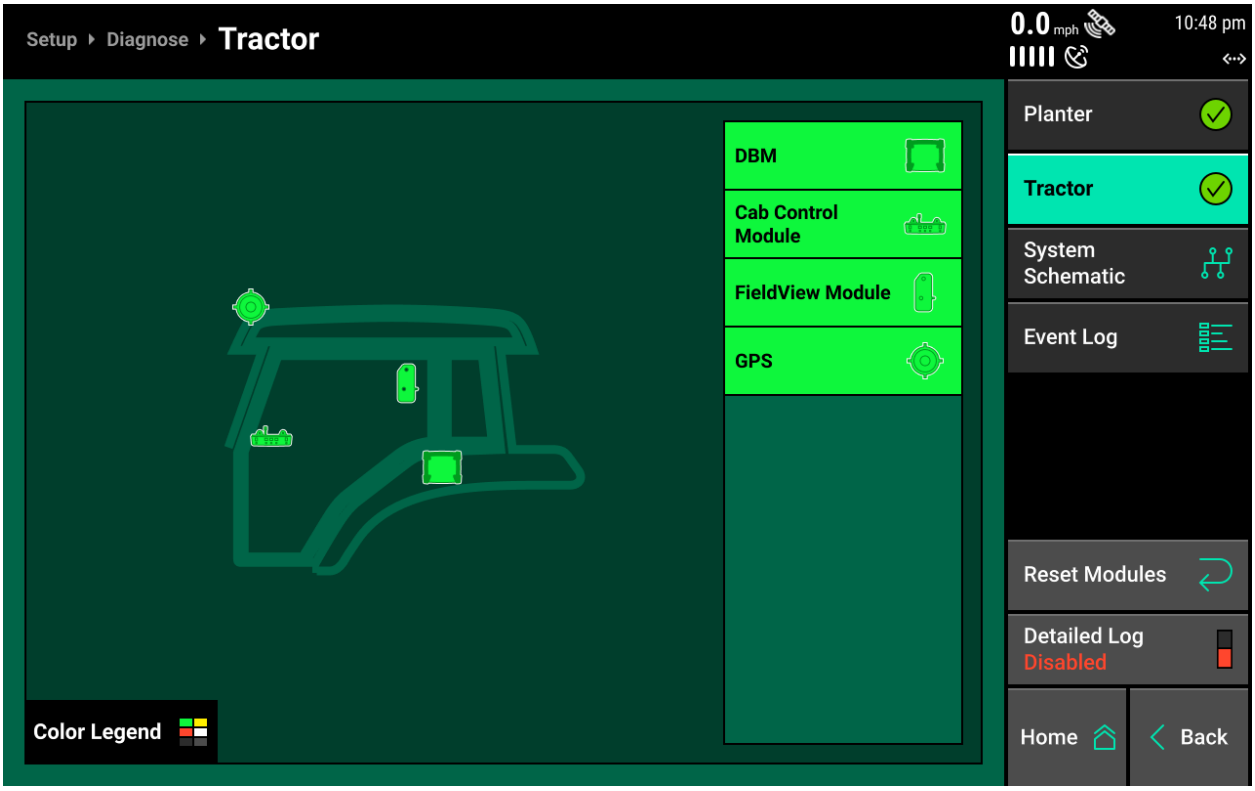
- Commanded State — Displays the commanded state for each input/frame section of the FCIM.

Tractor

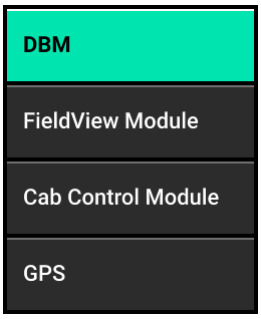


Press Tractor, Combine CAb, or Sprayer Cab in the navigation menu to view detailed diagnostics for all cab hardware by selecting the desired module on the center screen graphic.

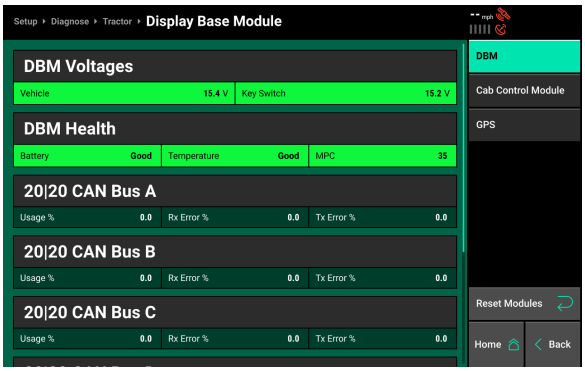
Press the desired hardware module in the center screen graphic to open a detailed diagnostic screen for that module.



Note: *After selecting a module, the navigation menu on the right side of the screen will change to display a list of all cab hardware modules, allowing the user to quickly toggle between the module diagnostics that are displayed in the center screen chart. Press Back to return to the Tractor Diagnose screen.*

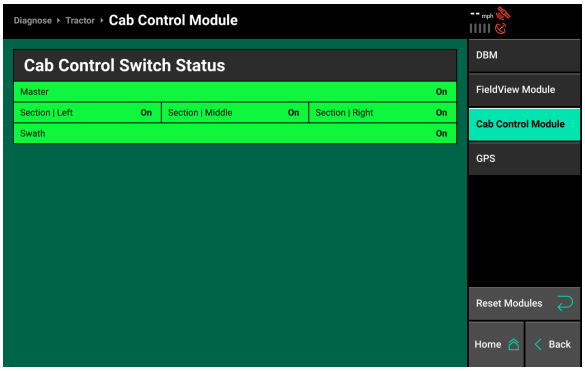


DBM — Displays diagnostic information related to the Display Base Module.

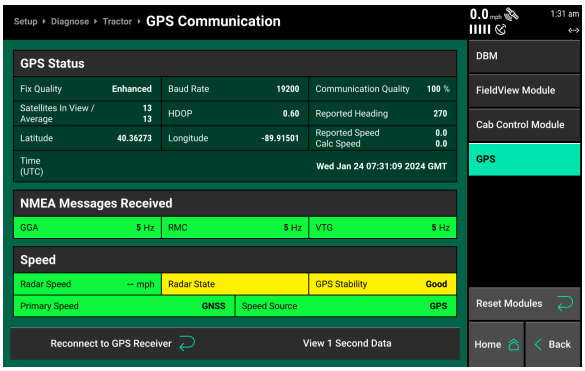


- DBM Voltages — Displays constant and key switch power supply to the DBM.
- DBM Health — Displays battery and temperature status, and Missing Packets Correlation. A rapidly increasing MPC value indicates CAN communication issues.
- 20|20 CAN Bus A/B/C/D — Indicates network usage and percentage of errors in CAN packets sent/received. If usage values exceed 80%, add another CAN network to the implement.
- OEM Bus A/B — Combine mode only. Indicates network usage and percentage of errors in CAN packets sent/received.

Cab Control Module — Displays the position of all switches on the Cab Control Module.



GPS — Displays various GPS metrics



- GPS Status
  - Baud Rate — A Baud rate of 38400 is recommended for all Precision Planting systems.
  - Satellites In View/Average — An In View value lower than the Average value may result in reduced performance.
  - HDOP — Horizontal Dilution Of Precision. Values exceeding 1 may result in lower performance.
  - Reported Heading — Degree of difference between receiver facing and implement heading. A value of 0 is optimal.
  - Reported/Calc. Speed — Displays any differences in reported and calculated speed.
  - Time — Displays current time/time zone. Inaccurate values indicate poor GPS communication.
- NMEA Messages Received — Displays the rate (per second) that the GPS receiver is sending NMEA strings to the 20|20. All Precision Planting systems require 5 Hz.
- Speed — Displays all speed metrics and their status.

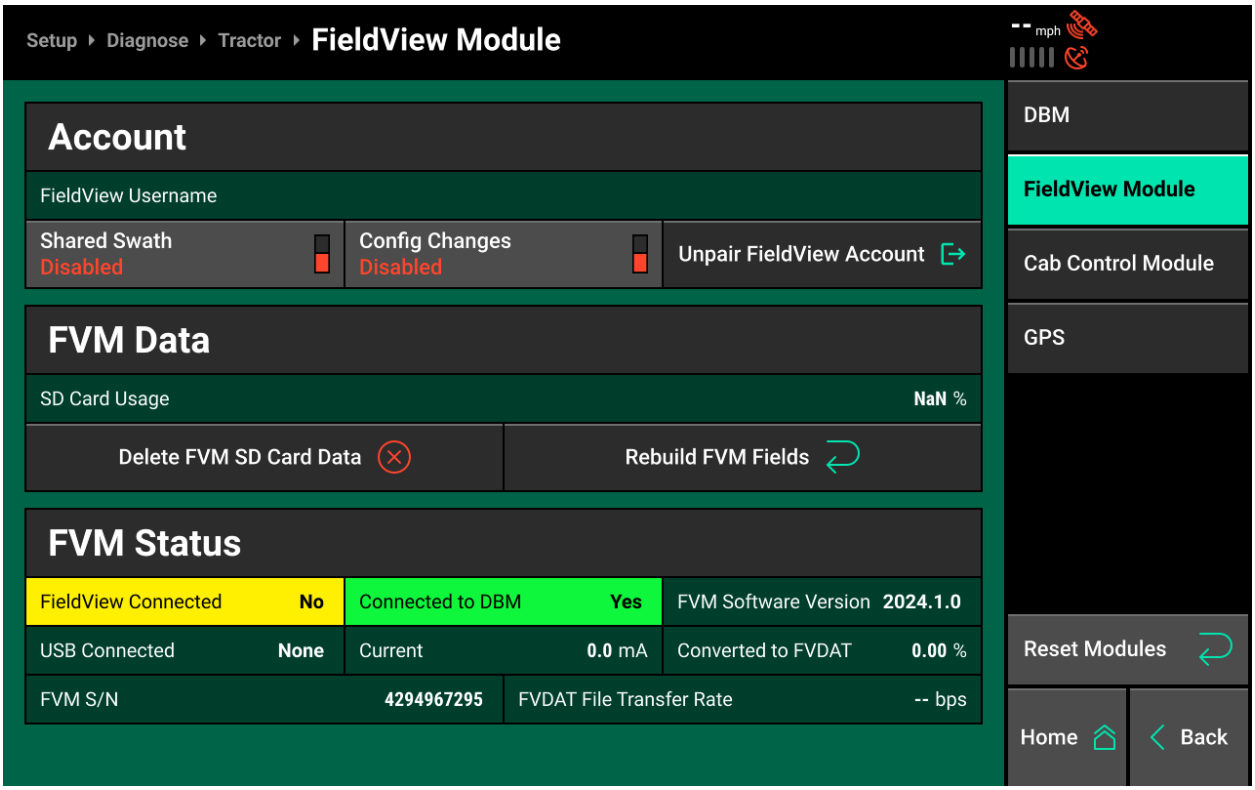
Press to break and reestablish connection to the GPS receiver.

Press to refresh the GPS information displayed on the screen.

FieldView Module

If using the Climate Corporation FieldView cab app, the 20|20 will require a FieldView Module [FVM] to connect to the iPad that cab app is running on. When a FVM is connected, FieldView Module will appear on the center screen graphic of the *Tractor* section of the *Diagnose* screen.

Press FieldView Module to open the detailed diagnostic screen.



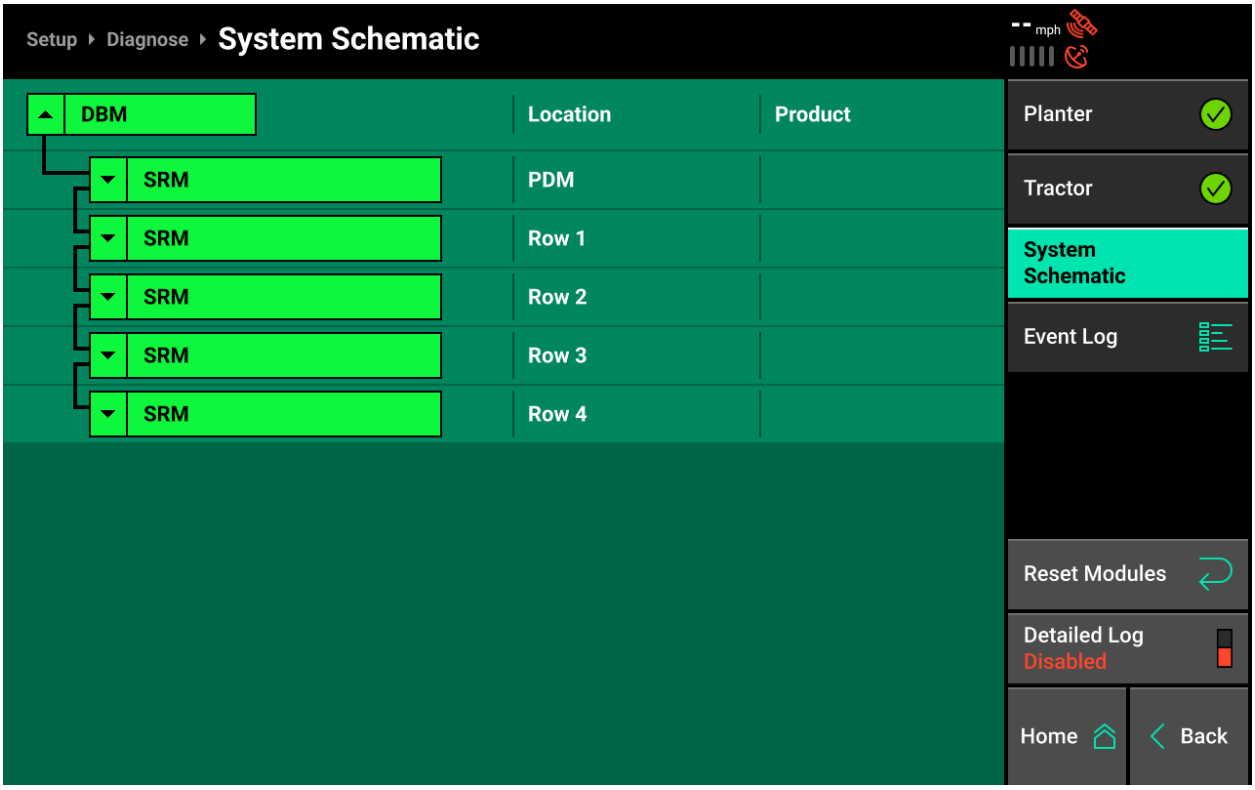
FieldView Username displays the username that the 20|20 is linked to. This is determined in the cab app when connecting to the 20|20 by selecting “Yes, this is my 20|20” when prompted.

- Shared Swath — Enables multiple implements in the same field to share swath data. This setting must be enabled on each 20|20 in the field to function.
- Config Changes — Enables configuration changes made in FieldView to be accepted by the 20|20. Includes all Client/Farm/Field and Prescriptions settings.
- Unpair FieldView Account — Allows the user to unpair a FieldView account from the 20|20.
- Delete FVM SD Card Data — Allows the user to delete all data from the SD card located in the FVM.
- Rebuild FVM Fields — Rebuilds all fields stored in the FVM using existing 20|20 data to create a .DAT file.
- FieldView Connected — Displays status of communication with the FieldView Cab app.

- Connected to DBM — Displays status of communication between the Display Base Module and FVM.
- USB Connected — Displays status of physical connection between the FVM and iPad.
- Current — Displays charging rate of the iPad in milliampere.
- Converted to FVDAT — Displays percentage of 20|20 data that has been converted to .DAT file(s) in the FVM.
- FVDAT Transfer Rate — Displays the rate of data transfer from the FVM to the cab app in bits per second.

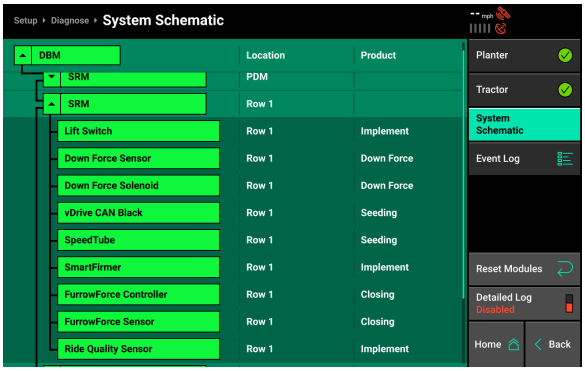
System Schematic

Press System Schematic in the navigation menu of the Diagnose screen to view a schematic overview of all bus devices connected to the 20|20 display.

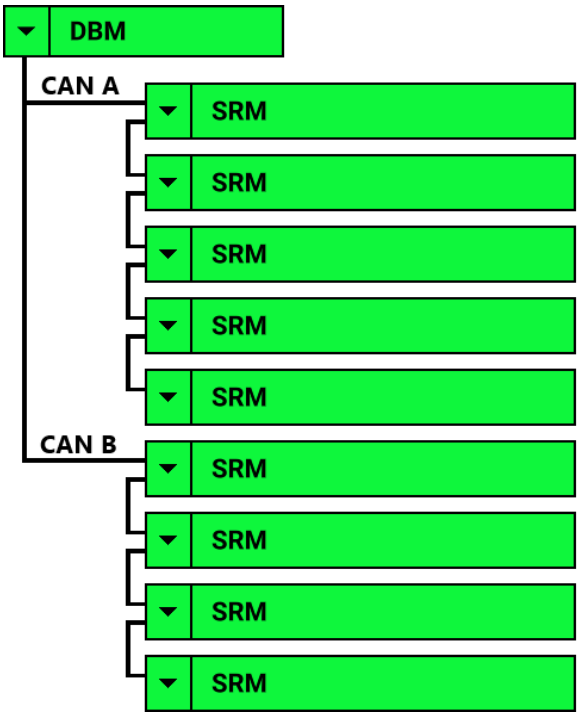


Navigating the System Schematic

Press the dropdown arrow on each bus device to view all hardware modules connected to that device.



Use the black brackets leading from the DBM to the different bus devices to verify the physical layout of CAN harnessing.



Common Troubleshooting Issues

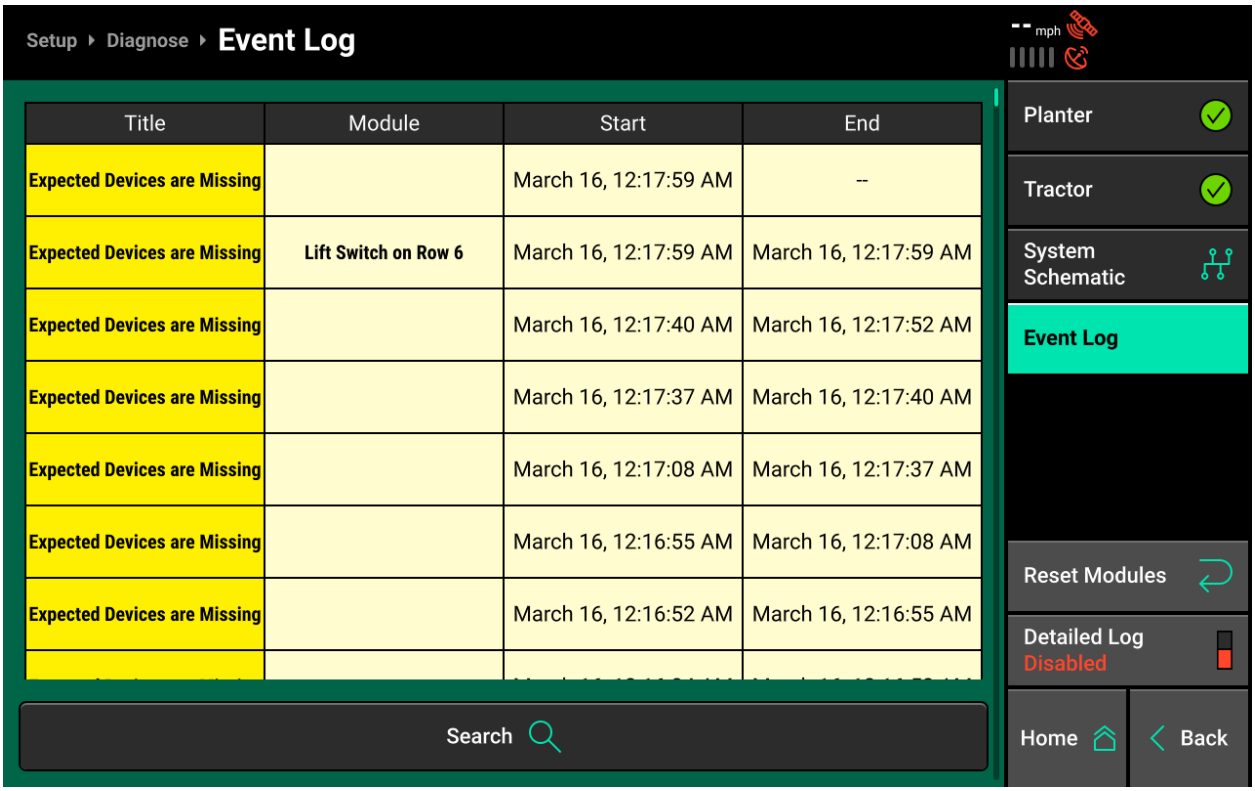
The System Schematic may be used to quickly identify system health and determine troubleshooting steps. Verify bus device/module health using the color legend provided earlier in this section. Common issues include:

- Red bus devices or modules, which may indicate damaged/disconnected modules and harnessing.
- White bus devices or modules, which may indicate incomplete system configuration.
- An incorrect number of bus devices with some devices displayed in white or red, which may indicate incorrect harnessing setup

For more troubleshooting information see the Dealer Service Manual.

Event Log

Press Event Log in the navigation menu of the Diagnose screen to view a database of all system events logged by the 20|20.

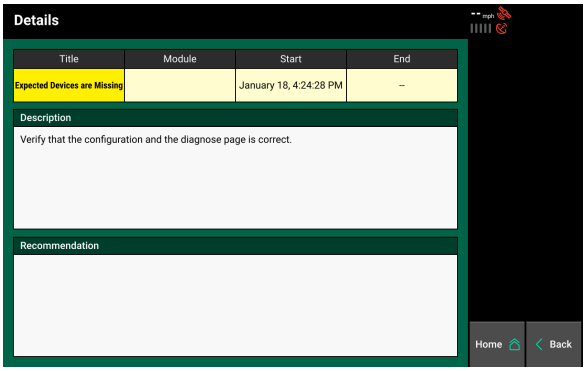


Using the Event Log

Swipe up and down on the database, or hold and drag the scroller to view newer or older events.

To search all events for a specific keyword, press Search and use the pop-up keyboard to enter a keyword. This function searches only event titles. Search will change to Cancel when a keyword is entered. Press Cancel to stop filtering events by the entered keyword.

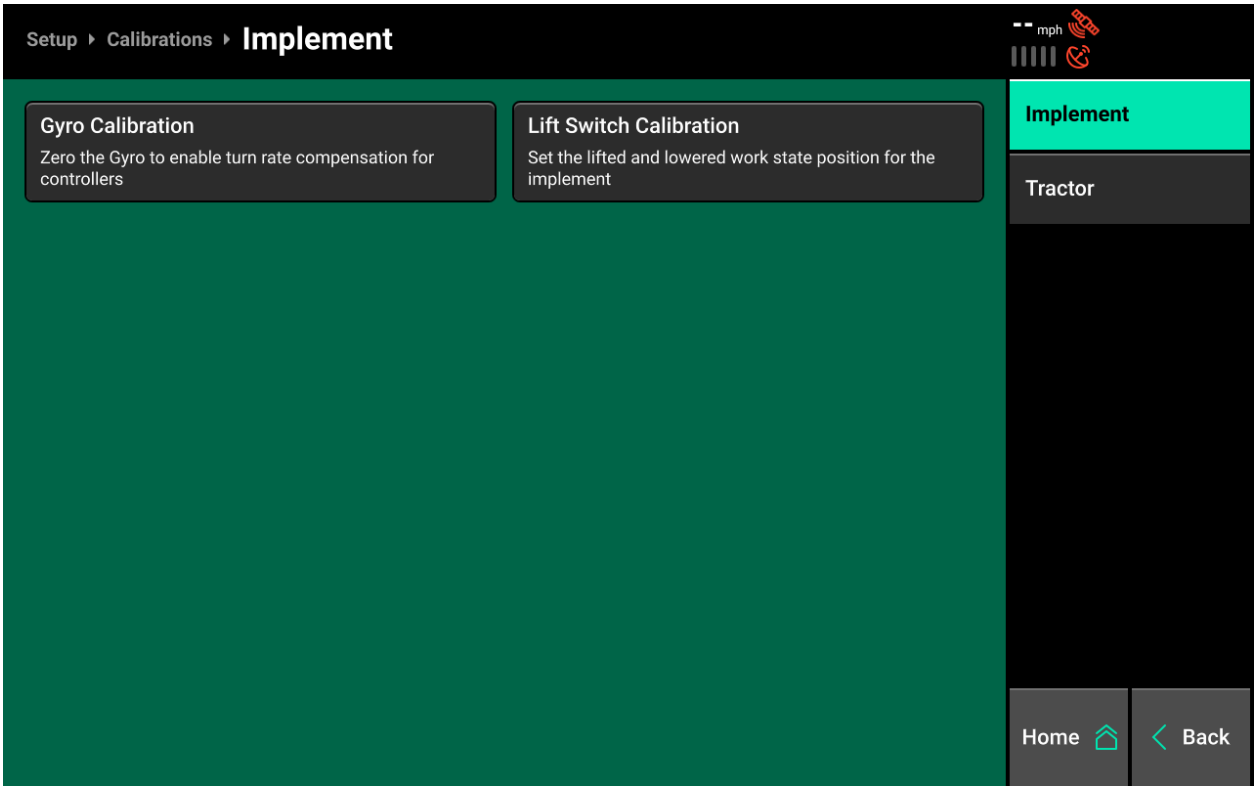
Press any event in the Event Log to open the Details screen, which provides additional information about that event and troubleshooting recommendations.



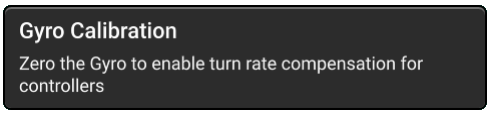
Calibrations

The Calibrations screen contains different procedures with which the user may test system health and functionality. This guide will detail Calibrations for the Implement and Tractor systems. Refer to all other system specific operator's guides for information on other system calibrations.

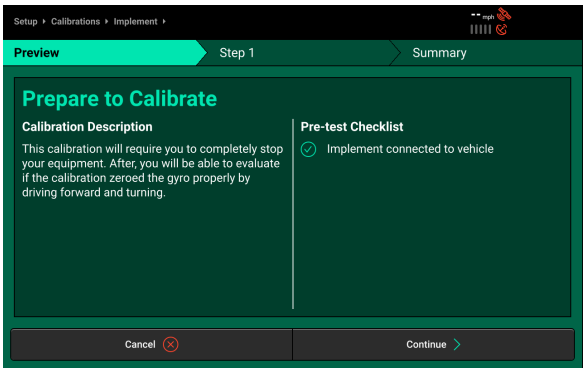
Note: *In commercial release software versions **2024.0.0** and prior, Calibrations were designated as Health Checks. Many procedures which were not considered health checks (Zero Load Cells, GPS Offset Check, etc.) are now consolidated into calibrations. To view system specific calibrations, configure the desired system and return to the Calibrations screen.*



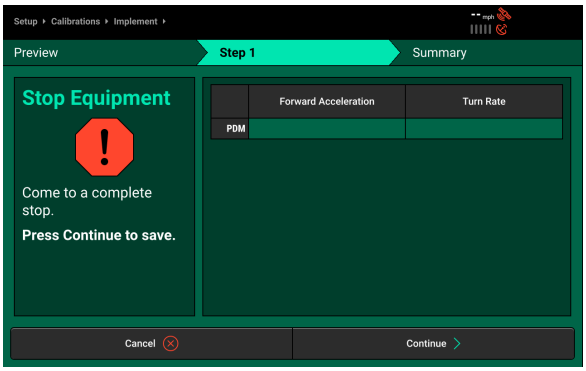
Implement Calibrations



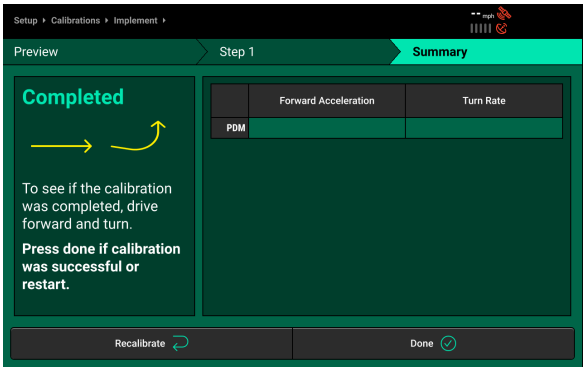
Press Gyro Calibration and follow the on-screen wizard to zero the PDM-mounted gyro.



During testing, any acceleration reading or detected turn rate will be displayed in the on-screen chart.

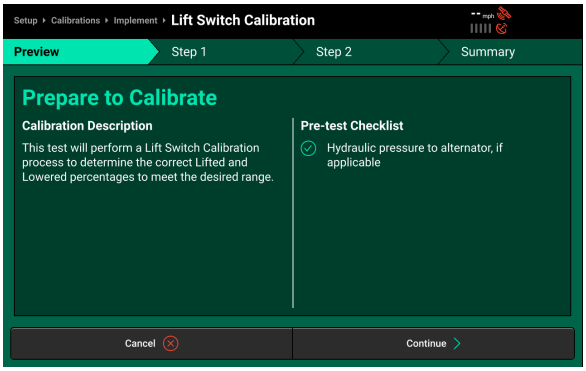


Drive forward and turn to confirm that the gyro is reading both acceleration and turn rate. Both values will be displayed in the on-screen chart.

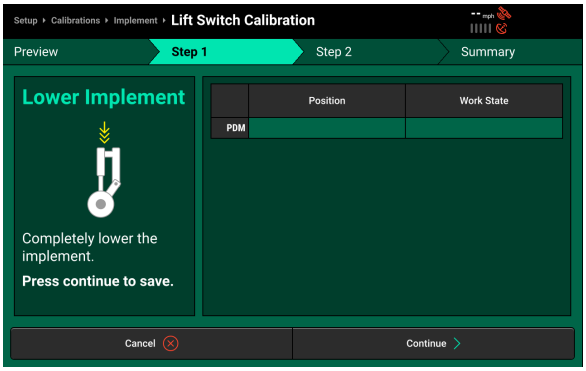


Lift Switch Calibration
Set the lifted and lowered work state position for the implement

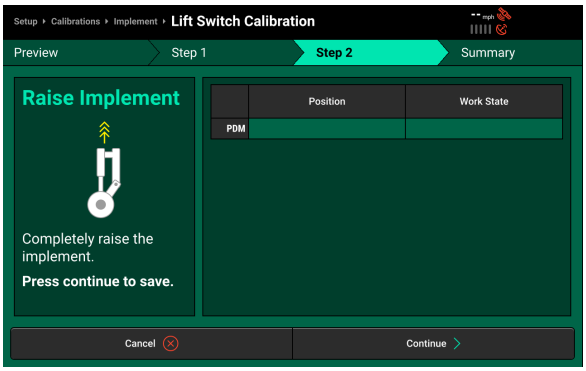
Frame-mounted lift switches only. Press Lift Switch Calibration and follow the on-screen wizard to define how the 20|20 interprets data from the lift switch. This test requires hydraulic power to lift/lower the implement.



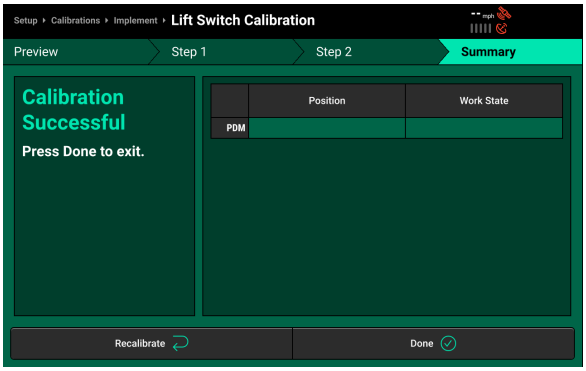
Lower the implement and note the values displayed in the on-screen chart.



Lift the implement and note the values displayed in the on-screen chart.

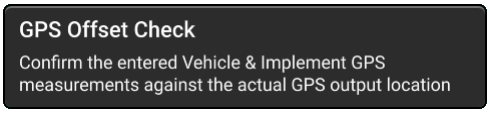


Press Done to save the calibration, or press Recalibrate to rerun calibration.

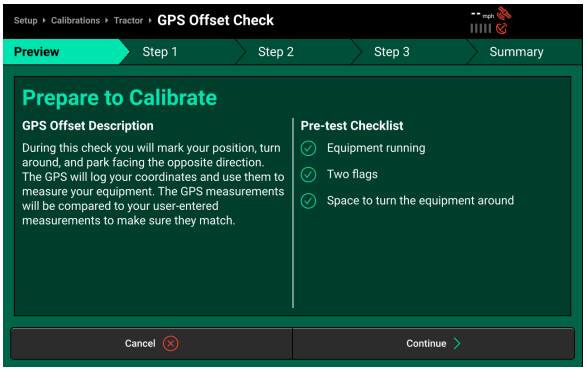


Tractor Calibrations

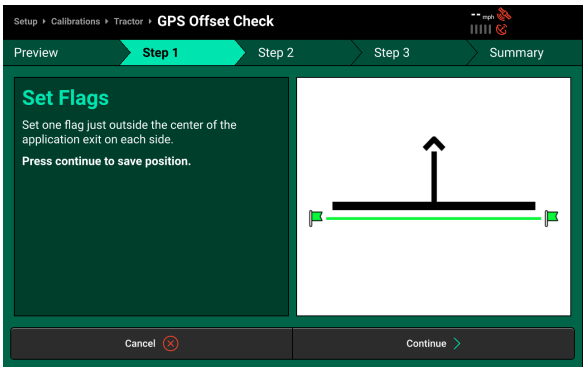
Note: *In combine mode, the Tractor system will display as Combine Cab, and the GPS Offset Check calibration will not be available. In self-propelled sprayer mode, the Tractor system will display as Sprayer Cab.*



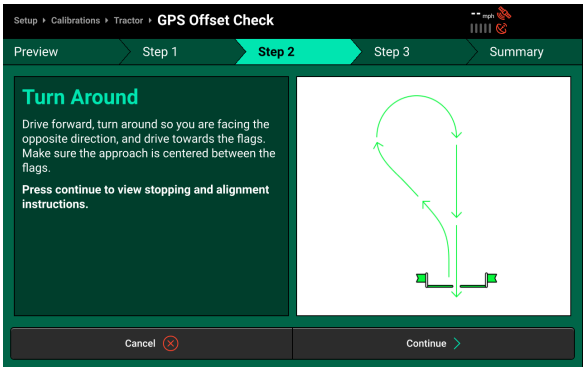
Press GPS Offset Check and follow the on-screen wizard to verfiy tractor measurements entered in Equipment setup. Two flags or other markers will be required. A spotter to assist with start/stop position is recommended.



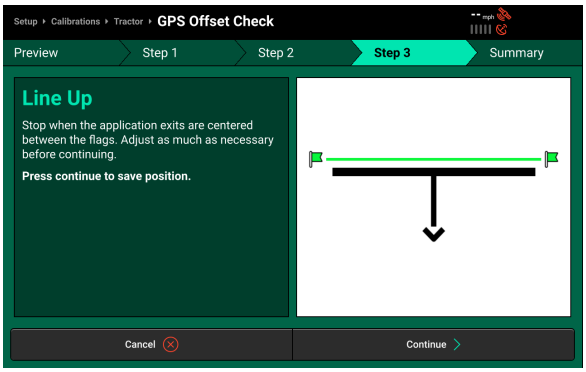
Place one flag/marker on the ground at the application point on both sides of the implement.



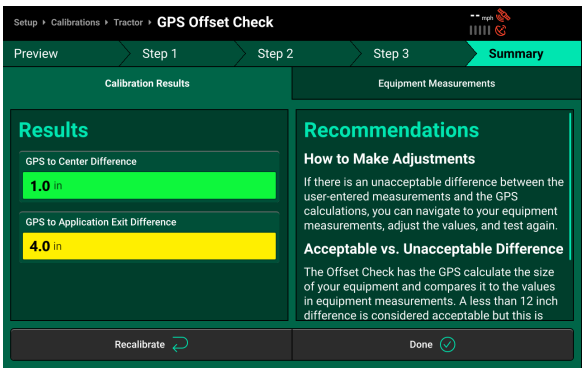
Drive forward and turn 180 degrees, centering the implement between the two flags/markers.



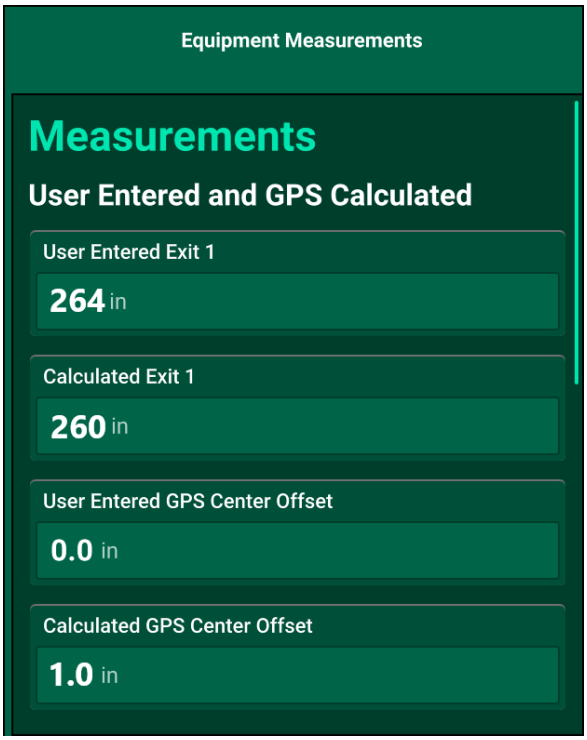
Stop when the flags/markers are aligned with the application points.



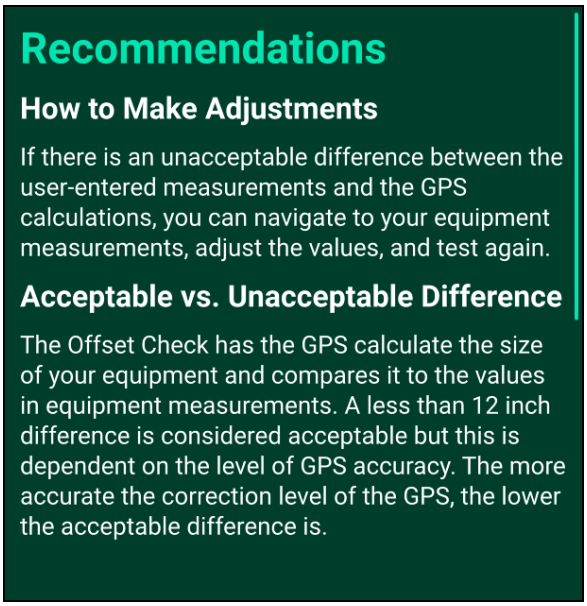
Use the Summary screen to review GPS Offset Check results.



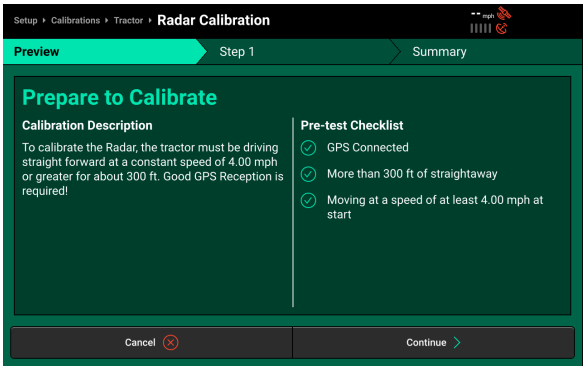
Press Equipment Measurements to view a detailed comparison of the measurements performed in Equipment setup and the measurements calculated during GPS Offset Check.



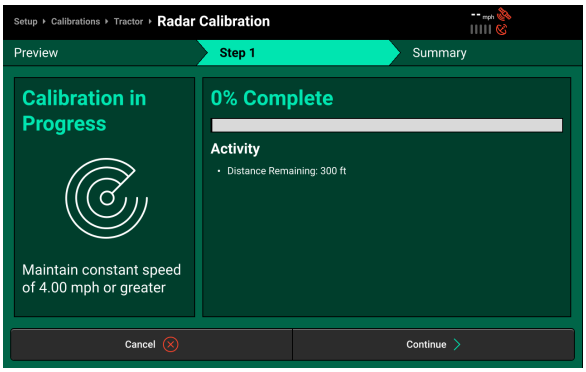
Redo measurements and/or run calibration again until the two difference values are within recommendations.



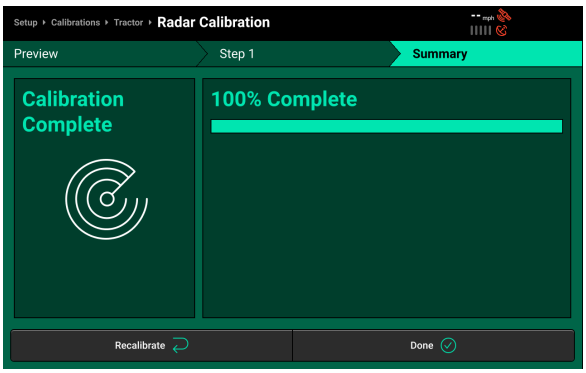
Press Radar Calibration and follow the on-screen wizard to calibrate radar speed. The 20|20 will use GPS speed to determine pulses per foot for the radar module.



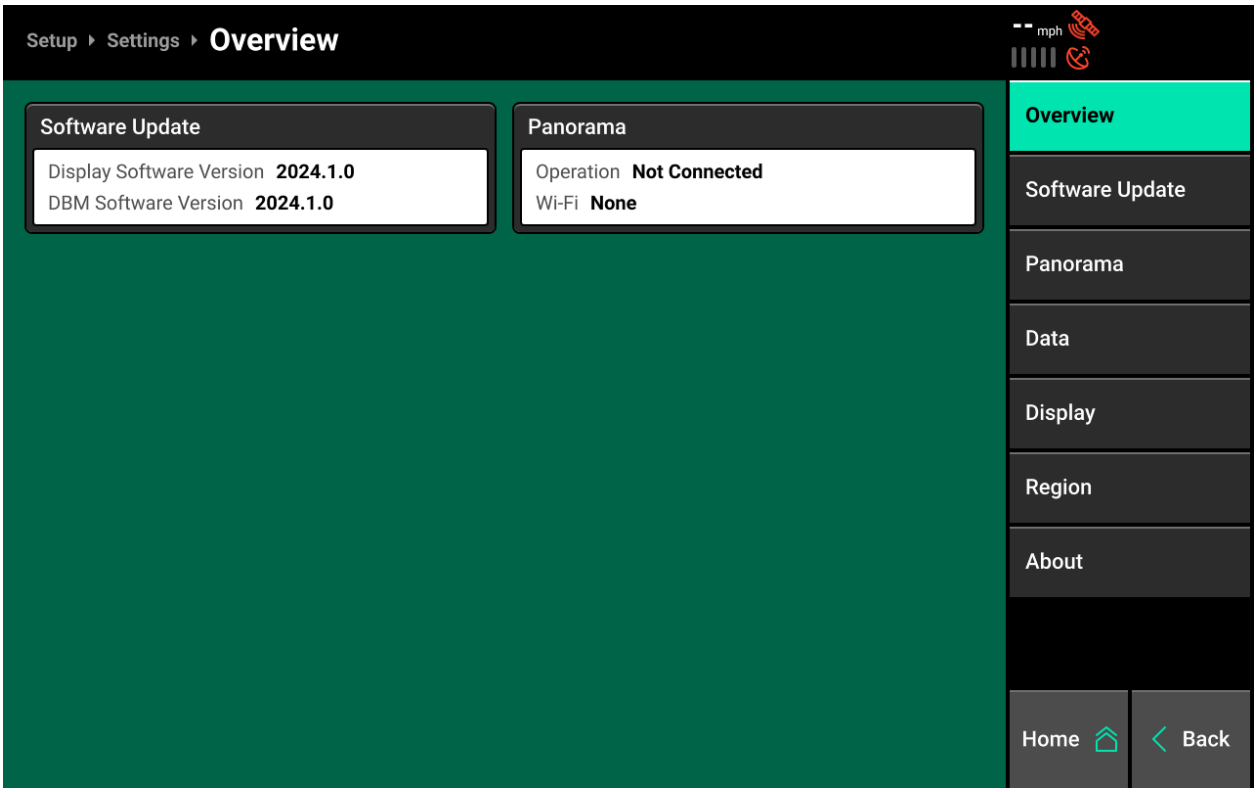
Maintain a constant speed of at least 4 miles per hour until the progress bar reaches 100%.



Press Done on the Summary screen to save results.



Settings

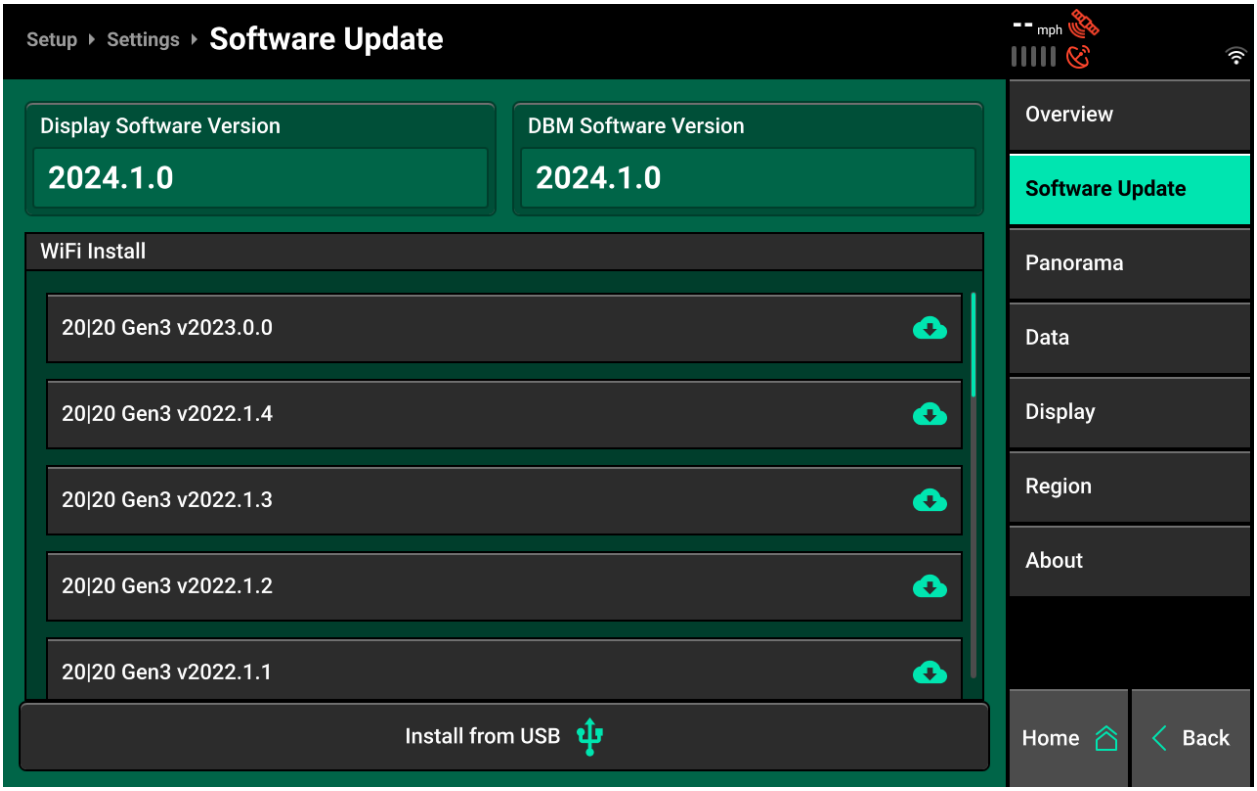


Navigate to Setup > Settings to open the Settings screen. Use the settings screen to view/change system information, connect to WiFi, and update system software. When navigating to the Settings screen, the Overview section will open by default. The Overview section displays the current version of installed software, Panorama Operation name, and WiFi network name. Press Software Update to open the Software Update section, and press Panorama to open the Panorama section. The Navigation menu may also be used to access either section.

Software Update

Press Software Update in the navigation menu to view the installed software version, or to install a new software update from WiFi or a connected USB drive.

Note: *Some configuration parameters will not be saved when updating to limited release software. Manually record all saved configuration details before updating to assist with Equipment setup.*

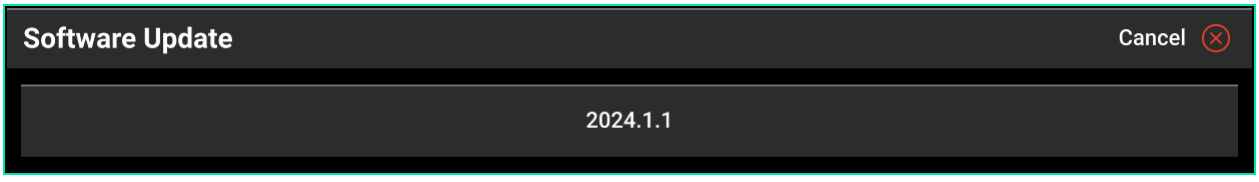


WiFi Update

When connected to WiFi, software versions hosted by Precision Planting will be displayed below WiFi Install. Press on the desired version to begin software update. The 20|20 must restart after the progress bar is completed to finalize the update.

USB Update

To install from a USB drive, visit 2020.ag and click software updates. Follow the online instructions to download the latest update, then move it to the root folder of a USB drive. Connect the USB drive to the USB port on the 20|20 display, then press Install from USB to open a pop-up which displays all software versions found on the connected USB drive.



Press the desired version to begin updating. Once the progress bar is completed, the USB drive must be disconnected and the 20|20 must restart to finalize the update.

Updating With Multiple Displays

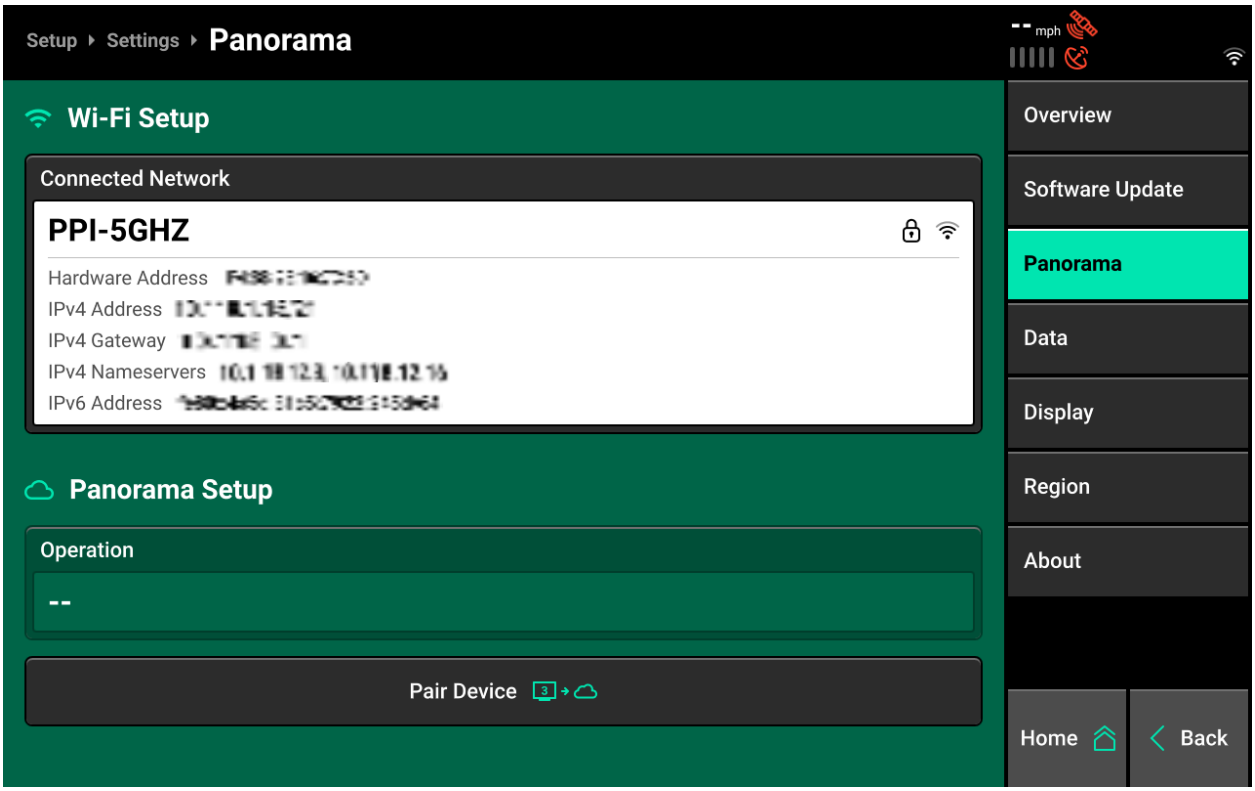
When updating with multiple displays connected to the DBM, it may be necessary to restart the 20|20 an additional time to install the update on the second display. Alternatively, connect the USB drive to the USB port on second display and follow the update process again.

Note: *For detailed instructions and basic troubleshooting when updating software, visit 2020.ag and click Help Center. For further assistance, contact Product Support at (309)-925–2020.*

Panorama

Press Panorama in the navigation menu to connect to a WiFi network or pair the 20|20 with a Panorama operation.

Note: *For data security, the 20|20 will only connect to a password protected WiFi network.*



Connecting to WiFi

Press Connected Network to open a pop-up that displays all available WiFi networks.

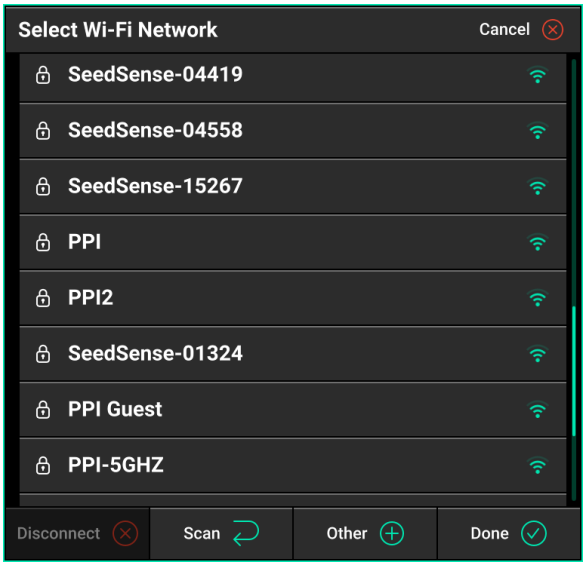
Press any available network name to open an on-screen keyboard and enter the network password.

Press Disconnect to disconnect from the current network.

Press Scan to refresh available networks.

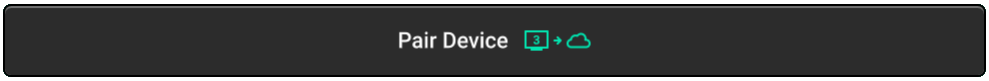
Press Other to open an on-screen keyboard and enter the network name manually.

Press Done or Cancel to close the network selection pop-up.



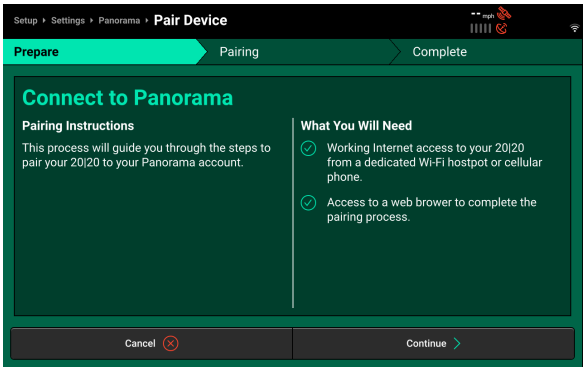
Any known WiFi networks will display an option to Forget next to the network name. Press Forget to disconnect from the selected network and erase saved password data for that network.

Connecting to Panorama

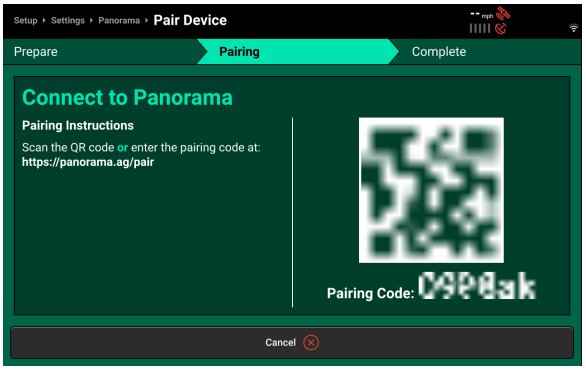


When connected to a WiFi network, press Pair Device to open a wizard that will connect the 20|20 to a Panorama operation.

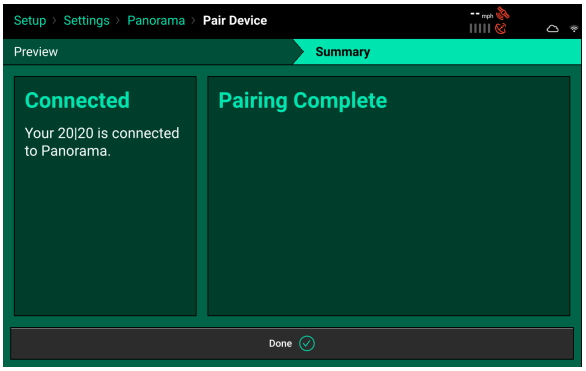
Connection will require access to a web browser on a home computer or laptop. Press continue when ready to connect.



The 20|20 will generate a QR code and a pairing code. Scan the QR code with a mobile device, or enter the pairing code at the displayed URL.

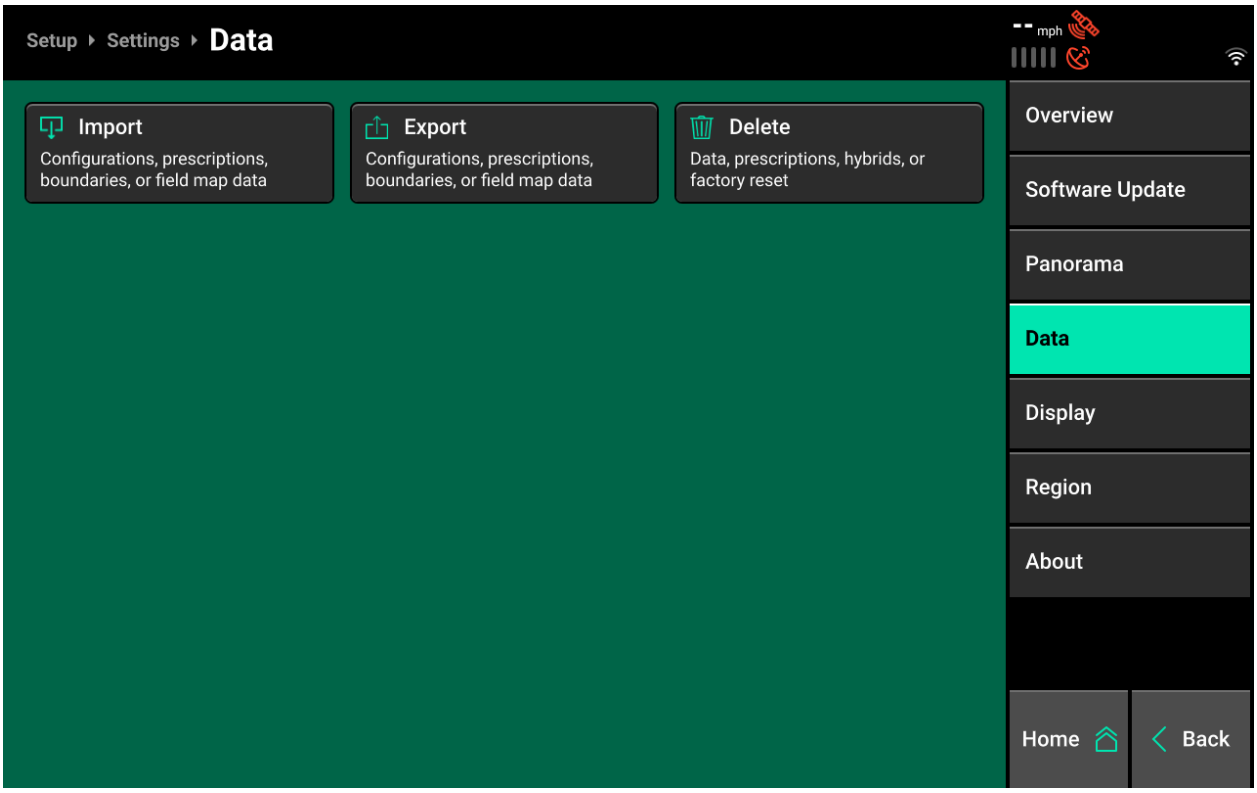


Press Done after connection is established.



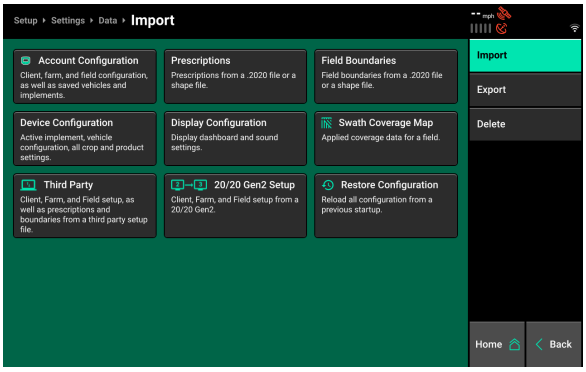
Data

Press Data in the navigation menu to import, export, or delete prescriptions, boundaries, coverage maps, account/device configurations, advanced logs, or third party data to and from the 20|20.

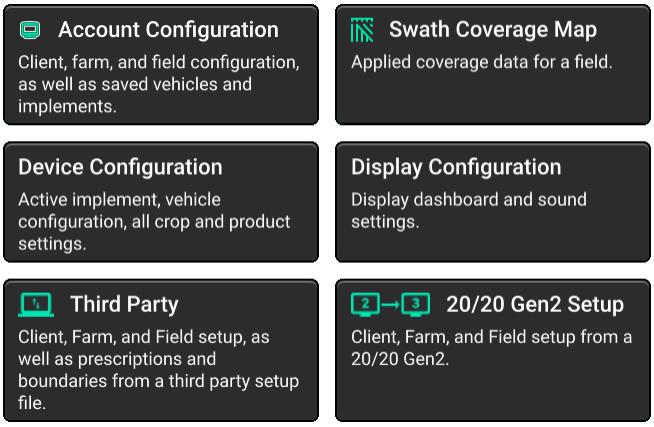


Import

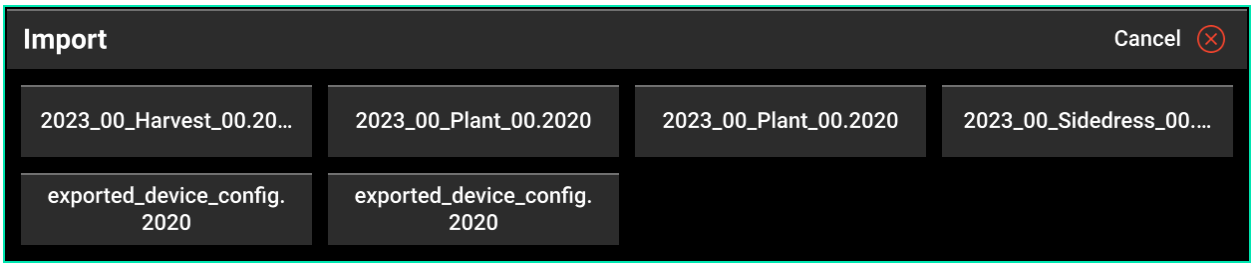
Press Import to load data into the 20|20 from an external USB drive. Connect a USB drive with the desired data in the root folder of the drive to the USB port on the display, then select the desired option.



Import Configurations, Maps, And Third-Party Data

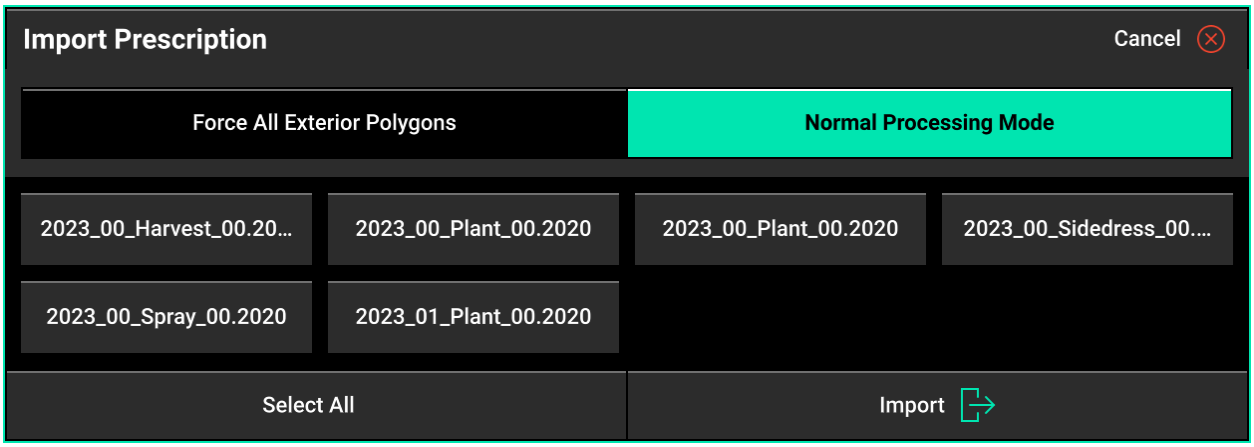


Pressing any of the above options will open a pop-up with all available files of the selected type found on the USB drive. Press the desired file to import that file to the 20|20.



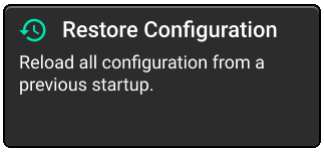
Import Prescriptions And Boundaries

Pressing either Prescriptions or Field Boundaries will open a detailed pop-up that allows for multiple files to be selected.



Select each file for import, or press Select All to designate all appropriate files for import. Use Normal Processing Mode for all prescriptions/boundaries. The Force All Exterior Polygons option is a troubleshooting measure intended for use when experiencing improper prescription/ boundary control. Delete the originally imported file before using Force All Exterior Polygons.

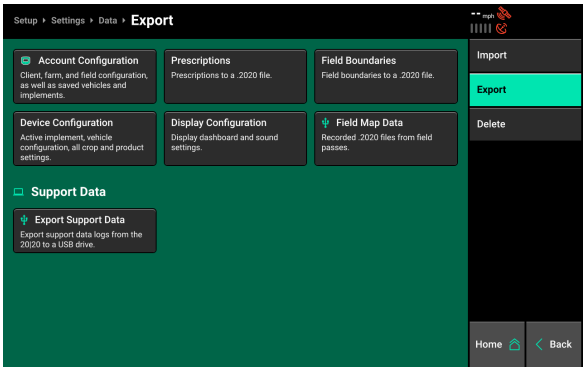
Restoring Configurations



Press Restore Configuration to open a pop-up with unsaved configurations stored in the memory cache of the 20|20. Press any of the displayed configurations to load it as the active configuration.

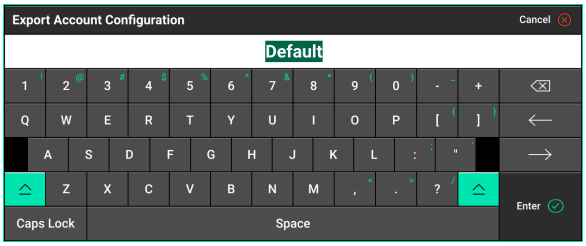
Export

Press Export to load data from the 20|20 onto an external USB drive. Connect a USB drive to the USB port on the display, then select the desired option. It is recommended to use an empty USB drive.



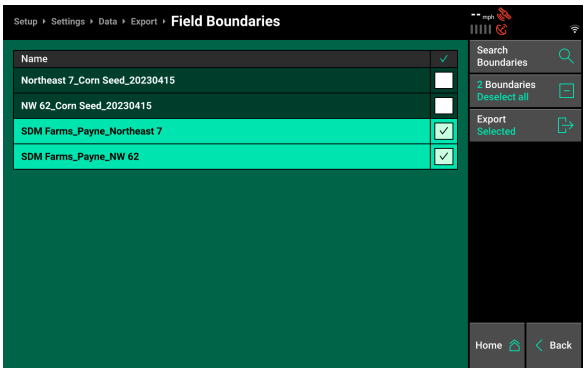
Export Configurations

Press on Account, Device, or Display Configuration to open a pop-up keyboard. Type the desired name for the configuration and press Enter to export.

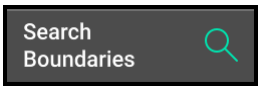


Export Prescriptions And Boundaries

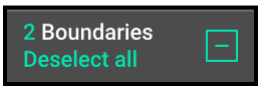
Press Prescriptions or Field Boundaries to open the Prescriptions/Boundaries export screen, which contains a database of either all prescriptions or all boundaries stored on the 20|20.



Press Search Prescription or Search Boundaries to open a pop-up keyboard. Enter the desired search term and press Enter to display all database entries containing the entered term in their name.



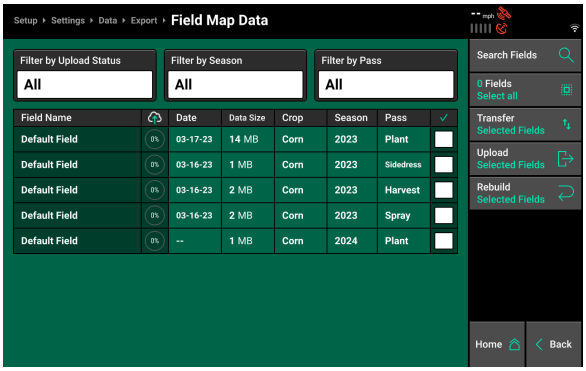
Press the empty box in the checkmark column to select any number of prescriptions or boundaries. If no entries are selected, press Select All to select all database entries. If any entries have been selected, Select All will change to Deselect All. Pressing this button will deselect all database entries.



Press Export Selected to export all selected entries to the connected USB drive.

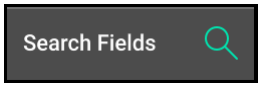
Export Field Map Data

Press Field Map Data to open the Field Map Data export screen, which contains a database of all field map data files stored in the 20|20.

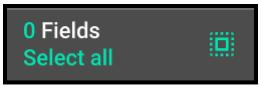


Press Filter by Upload Status, Season, or Pass to open a pop-up displaying filter options. Select the desired filter option to display all database entries that fit the selected filter. One selection for each filter option may be active simultaneously.

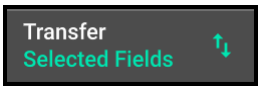
Press Search Fields to open a pop-up keyboard. Enter the desired search term and press Enter to display all database entries containing the entered term in their name.



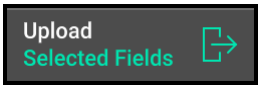
Press the empty box in the checkmark column to select any number of fields. If no fields are selected, press Select All to select all fields. If any fields have been selected, Select All will change to Deselect All. Pressing this button will deselect all fields.



Press Transfer Selected Fields to export all selected fields to a connected USB drive.



Press Upload Selected Fields when connected to WiFi or data to upload all selected fields to the Panorama operation paired with the 20|20.

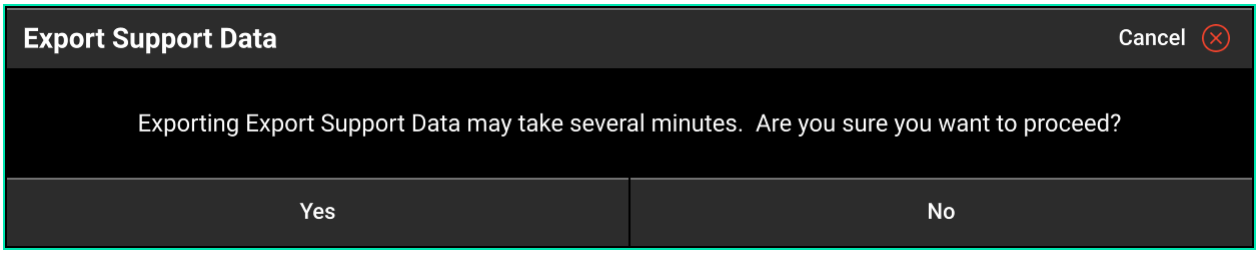


The number displayed next to Field Name in the cloud upload column indicates percent uploaded to Panorama.

Press Rebuild Fields to rebuild all maps using 20|20 data for upload to Panorama.

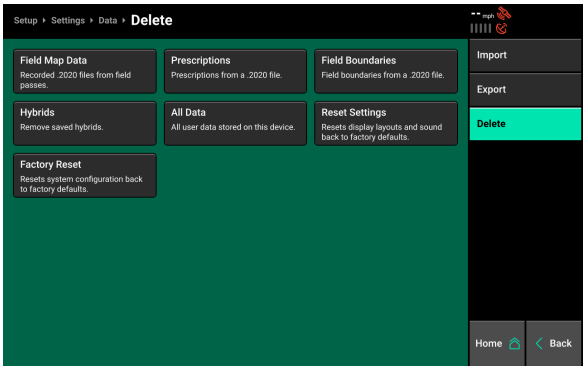
Export Support Data

Press Export Support Data to open a pop-up advising that export may take several minutes. Press Yes to export all recorded advanced logs and screenshots to the USB drive.



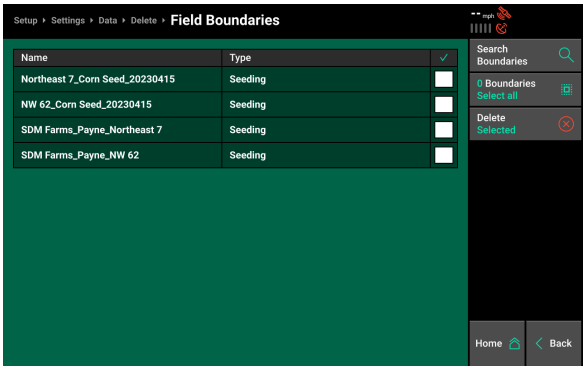
Delete

Press Delete to erase data from the 20|20.

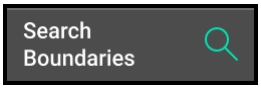


Delete Prescriptions, Boundaries, And Hybrids

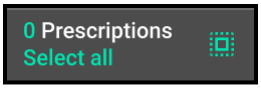
Press Prescriptions, Field Boundaries, or Hybrids open the Prescriptions/Boundaries/Hybrids delete screen, which contains a database of all prescriptions, boundaries or hybrids stored on the 20|20.

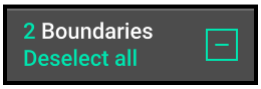


Press Search Prescription, Boundaries or Hybrids to open a pop-up keyboard. Enter the desired search term and press Enter to display all database entries containing the entered term in their name.



Press the empty box in the checkmark column to select any number of prescriptions, boundaries or hybrids. If no entries are selected, press Select All to select all database entries. If any entries have been selected, Select All will change to Deselect All. Pressing this button will deselect all database entries.

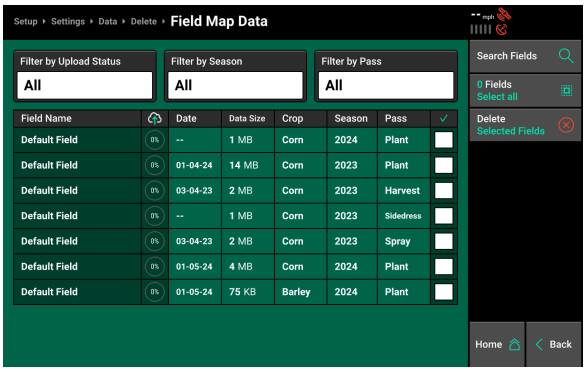




Press Delete Selected to erase all selected entries from the 20|20.

Delete Field Map Data

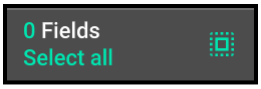
Press Field Map Data to open the Field Map Data delete screen, which contains a database of all field map data files stored in the 20|20.

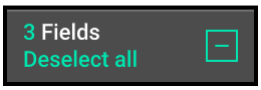


Press Filter by Upload Status, Season, or Pass to open a pop-up displaying filter options. Select the desired filter option to display all database entries that fit the selected filter. One selection for each filter option may be active simultaneously.

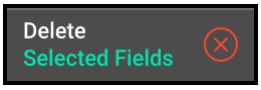
Press Search Fields to open a pop-up keyboard. Enter the desired search term and press Enter to display all database entries containing the entered term in their name.

Press the empty box in the checkmark column to select any number of fields. If no fields are selected, press Select All to select all fields. If any fields have been selected, Select All will change to Deselect All. Pressing this button will deselect all fields.

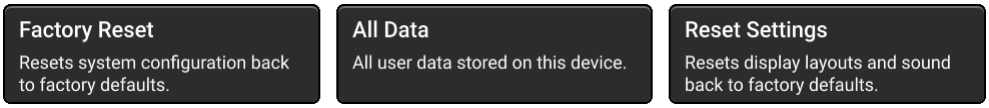




Press Delete Selected Fields to erase all selected entries from the 20|20.



Factory/Settings Reset And Delete All



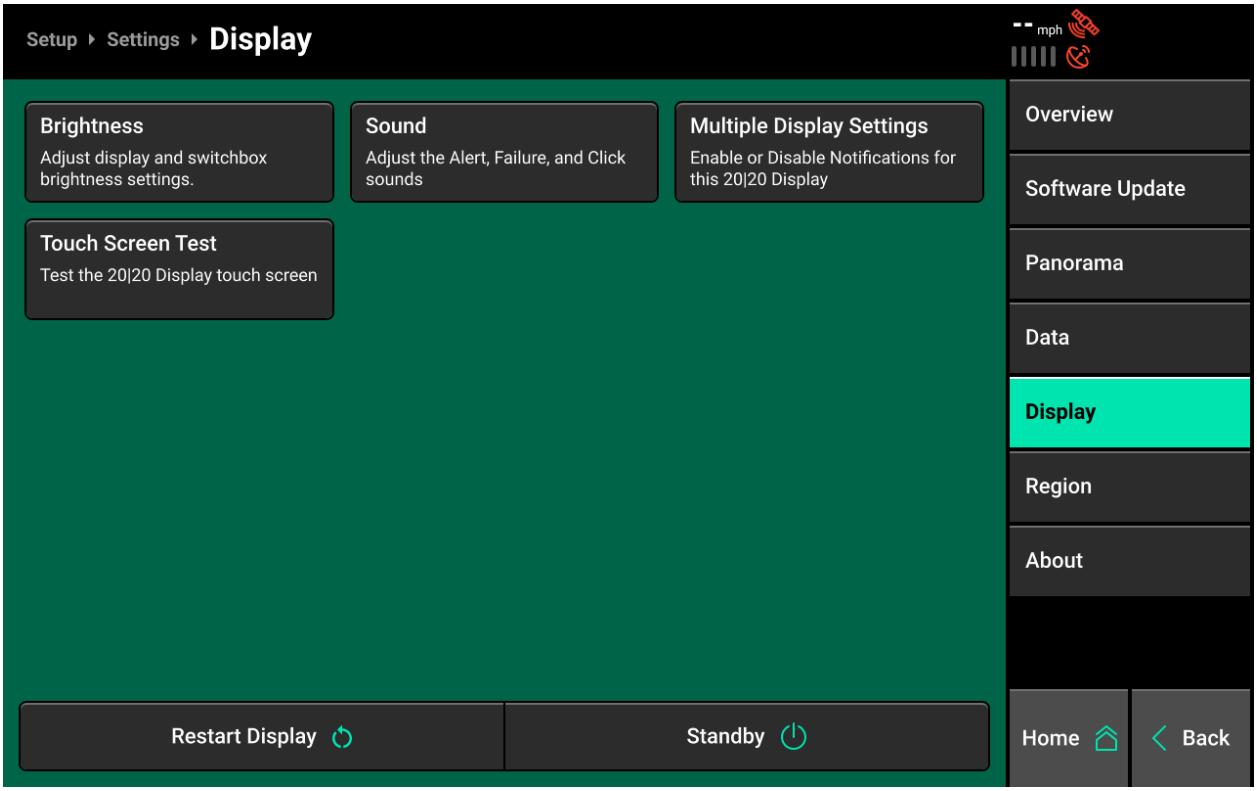
Press any of the above options to delete or reset certain system settings.

- Factory Reset — Deletes all equipment configurations stored in the 20|20.
- All Data — Deletes all client/farm/field, prescription, boundary, hybrid, and map coverage data, and all equipment configurations.
- Reset Settings — Reverts all audio and video display settings back to default.

Pressing any of the above options will open a confirmation pop-up which prompts the user to confirm deletion. Press Yes to continue.

Display

Press Display in the navigation menu to adjust brightness/sound, enable pop-ups, alerts, and alarms, or test touch screen functionality.



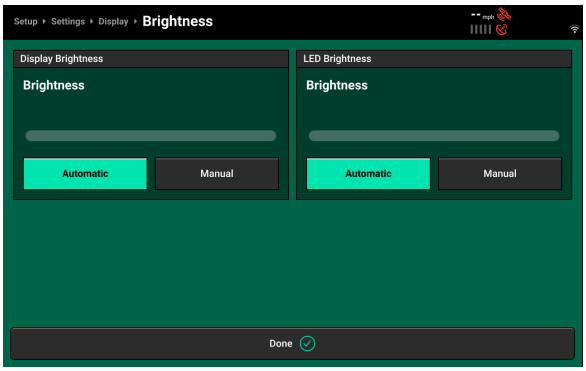
Press Restart Display to open a pop-up which prompts the user to confirm restart. Press Yes to reboot the display.

Press Standby to put the display into low power mode. When in standby, the 20|20 logo will be displayed in the bottom right of the screen. Press anywhere on the screen to exit standby.

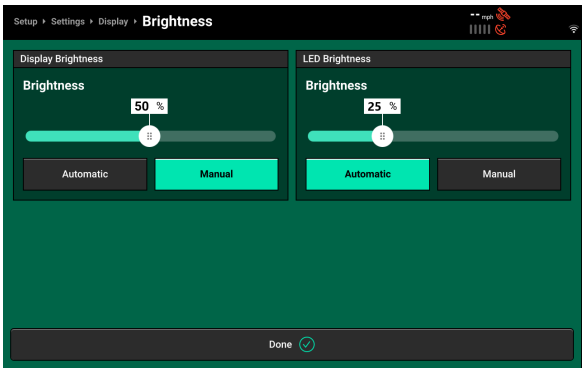
Brightness

Press Brightness to adjust the brightness level of the touch screen or display/CCM LED lights.

Press Automatic to allow the 20|20 to adjust the either setting automatically using the photosensor on the back of the display.



Press Manual, then touch and drag the slider to set a fixed value for either setting.



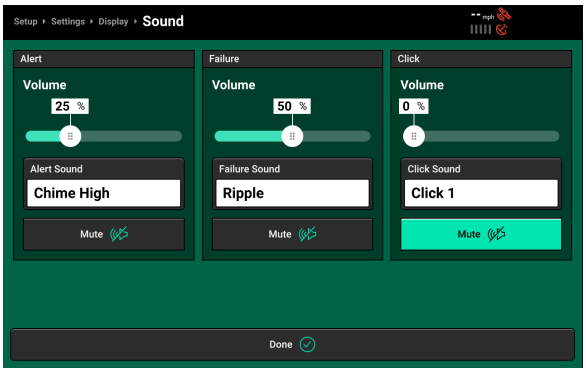
Press Done to exit.

Sound

Press Sound to adjust or mute 20|20 sounds.

- Alert — Sound played when a user-defined system alert threshold is reached or when a hardware module is functioning sub-optimally.
- Failure — Sound played when a user-defined system failure threshold is reached or when a hardware module has failed.
- Click — Sound played when a screen press is detected.

Touch and drag on the slider under a sound to adjust the volume level for that sound. Press Mute under a sound to set the volume level for that sound to 0%. Press Alert, Failure, or Click Sound to open a pop-up that allows the user to select the sound file that is played for each event. Press Done to exit.

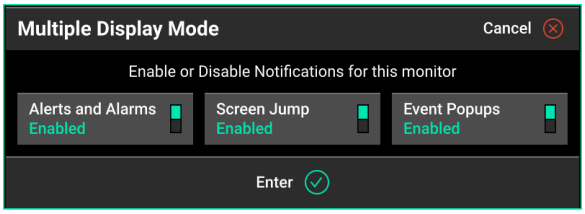


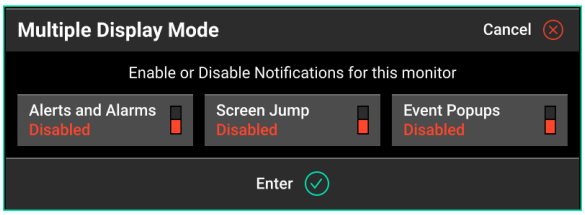
Multiple Display Settings

Press Multiple Display Settings to open a pop-up which enables the user to disable Alerts, Screen Jumps, and Pop-ups for the 20|20 display.

Note: *Disabling notifications prevents the display from notifying the user of important diagnostic information. Disable notifications only if there is a second display connected to the DBM with all alerts/alarms enabled.*

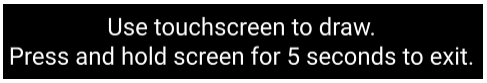
Press a notification type to disable or enable it. Press Enter when finished to save changes.





Touch Screen Test

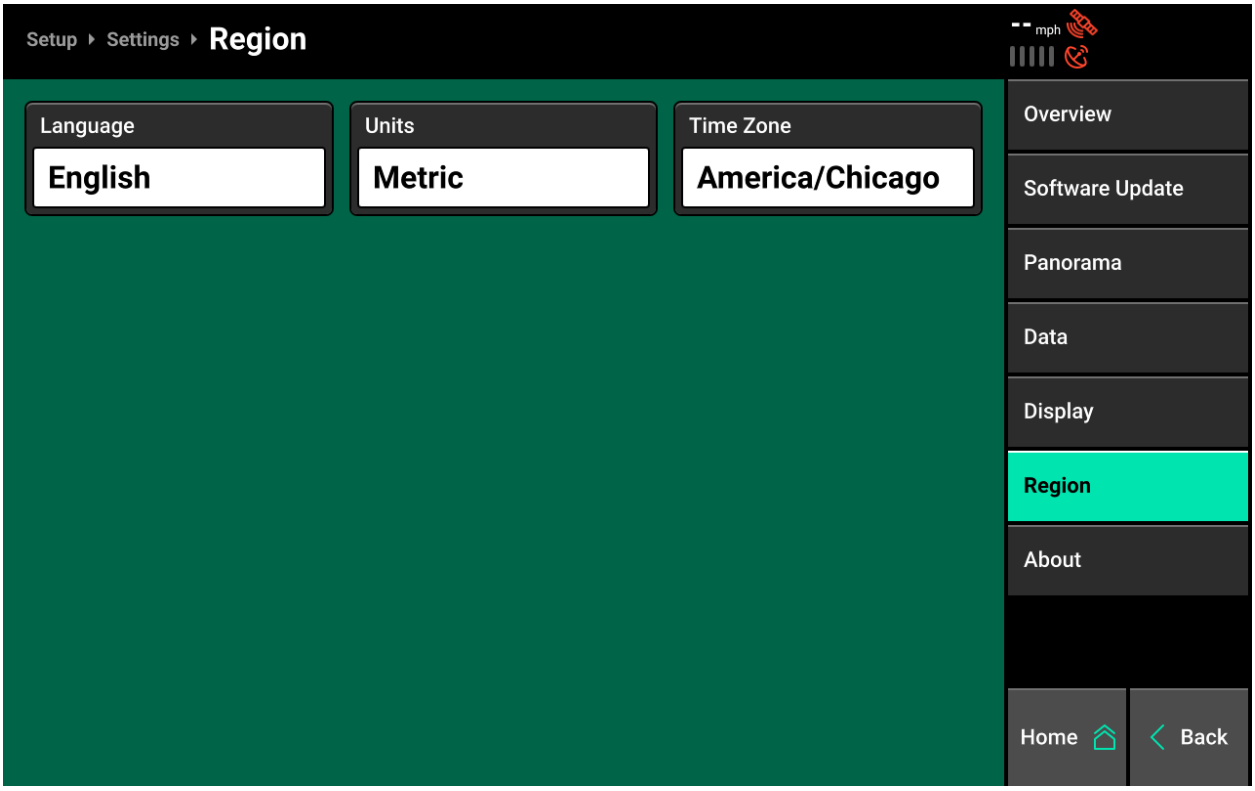
Press Touch Screen Test to verify functionality of the display touch screen. This will open a black screen with the following text displayed.



Press the screen to begin drawing. Once all areas of the screen have been tested, exit the test as instructed.

Region

Press Region in the navigation menu to select display language, units of measurement, time zone or season start month.

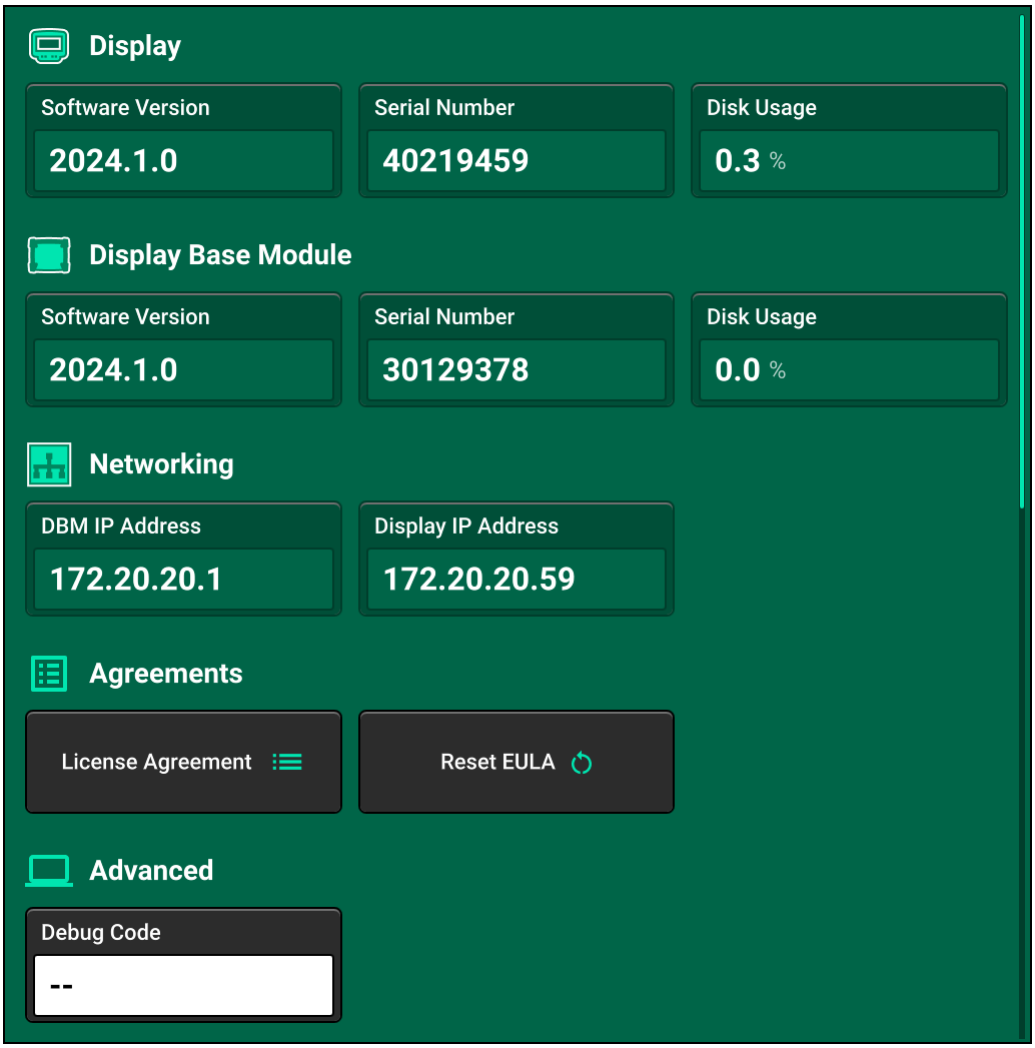


Press any option to open a pop-up with all available selections for that setting.

- Language — Set display language
- Units — Toggle between Metric and Imperial measurements.
- Time Zone — Select display time zone.

About

Press About in the navigation menu to view information about DBM/display hardware and software, to reset or view terms and conditions, or to enter a debug code. Scroll to view the entire screen.



Disk Usage refers to the total used memory on either the display or DBM.

Press License Agreement to view terms and conditions for usage of the 20|20.

Press Reset EULA to force the 20|20 to display terms and conditions as a pop-up the next time the 20|20 powers on.

Press Debug Code to open a pop-up keyboard that allows the user to enter a debug code if instructed by Product Support.