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FAQs

Search our database of Frequently Asked Questions

BR1 Mini Mobile Internet Hotspot FAQ

This article provides information about the BR1 Mini mobile internet hotspot. This will continuously be updated.

What is the BR1 Mini?

BR1 Mini is a mobile internet hotspot that runs on Verizon or GSM cell networks in North America. It's used to provide internet access to any capable device, such as InCommand displays, from remote locations (where cellular signal is available). Since the BR1 Mini is a standalone cellular modem, it can be activated and left in the cab of your machine at all times for quick and easy internet access, in the field or at home.

Which cellular networks can I use the BR1 Mini with?

Intended use is for North America and can be activated on Verizon or GSM cell networks, with appropriate SIM card.

The BR1 Mini is US Cellular capable with the appropriate SIM card. For further details contact Data Activation Center (https://dataactivationcenter.com/).

Which data speed is the BR1 Mini capable of?

Units purchased before January 2019- 4G LTE with fallback capability to 3G service.
Units purchased on/after January 2019 - 4G only.

What is the retail price of the BR1 Mini kit and when can I order?

The retail price is $795 and will be available for order in February 2018.

Standard dealer discounts and 2-year warranty apply to purchases of the BR1 Mini. The kit will include necessary power cable, SIM card, mounting hardware and cell antenna along with mounting plate. The modem is setup and configured for use with Ag Leader displays.

Does the BR1 Mini act as an NTRIP RTK client for sending RTK corrections to GPS receiver over cell?

No. Modem does not have an NTRIP client, it is for internet access only. Alternatively, the BR1 Mini can be used with the NTRIP RTK on InCommand display feature. See "NTRIP RTK on InCommand display FAQ".

What size of data plan will I need to use AgFiniti or NTRIP RTK on InCommand?

Data plan size is strictly dependent on operations, field sizes, and other connected mobile device(s) usage. Data Activation Center offers multiple data plan options and will even suspend data plan(s) during non-active months.

Who supports and services the BR1 Mini sold by Ag Leader?

For activation of the modem or cellular related troubleshooting, contact Data Activation Center (same as with CDMA RTK Relay).

• Ag Leader is continuing to partner with Data Activation Center (https://dataactivationcenter.com/) to activate the BR1-Mini cellular modem hotspot and provide data plans that fit needs of the user.
• Multiple data plans are available through Data Activation Center and data plan(s) can even be suspended during non-active months.

For hardware, cabling, or install related troubleshooting, contact Ag Leader Technology

• The standard Ag Leader 2-year warranty still applies on all BR1 Mini cellular modems purchased from Ag Leader.

How is the BR1 Mini powered on? What cabling will I need?

The BR1 Mini power cable (PN 4005136) will plug-in to current Ag Leader display cables via the “Power Activation” connection. This allows the BR1 Mini to seamlessly power on and off with your Ag Leader display, no additional user interaction required. If also using Ag Leader autosteer, the BR1 Mini power cable will still provide “Guidance Activation” power to the autosteer system.

All necessary cabling for use with Ag Leader displays, including BR1 Mini power cable (PN 4005136), are included in the BR1 Mini kit from Ag Leader. Requires InCommand auxiliary cable for NTRIP RTK.

Do I need to buy a different modem between Verizon and GSM?

No, same hardware is in all BR1 Mini modems. Suggested network to use is dependent on cellular provider coverage in your area.

Content last reviewed on: 5-13-19
Reviewed by: JMD
NTRIP RTK on InCommand Display FAQ

This article provides more information about the feature *NTRIP RTK on InCommand display*.

Jump to a question below:

- What is NTRIP RTK on InCommand display and what does it do for my operation?
- What if I already use a mobile hotspot for AgFiniti cloud services (such as DisplayCast) on my display? How does this affect me?
- Can I use this InCommand feature with SteerCommand, GeoSteer, or ParaDyme? What about other 3rd party receivers?
- When was the feature release date?
- Does the InCommand display have a built in cell modem mobile hotspot?
- Which mobile hotspot can I use?
- What is required to use NTRIP on the InCommand display?
- What additional cabling from my InCommand display AUX port to my GPS receiver will I need?
- Can I create or connect to multiple NTRIP streams?
- Does NTRIP on the InCommand display support "web links" as the NTRIP server entry?
- How do I know if NTRIP on the InCommand display will work in my fields?
- If I don't want to use NTRIP RTK on InCommand display, can I still use my cellular CDMA or GSM RTK Relay? What about my ParaDyme or GeoSteer internal cell modem?
- What if I turn my display off or lose connection to NTRIP network while using this feature? Will I have to reconfigure settings?
- Can I use NTRIP RTK on InCommand with my GPS 6500/7500 while an RTK Relay is connected?

What is NTRIP RTK on InCommand display and what does it do for my operation?

This exclusive InCommand feature will allow any InCommand display to connect to NTRIP network(s) and send RTK corrections out to a GPS receiver via AUX port. In the past, an external (or built in) modem with NTRIP capabilities was required in order to use RTK NTRIP corrections with a GPS receiver.

This also means that growers now only need one data plan to use NTRIP RTK corrections and AgFiniti (such as DisplayCast, Remote Support, and File Transfer).

There are no additional display unlocks required for NTRIP RTK on InCommand, nor is an AgFiniti account required.

What if I already use a mobile hotspot for AgFiniti cloud access (such as DisplayCast) on my display(s)? How does this affect my operation?

Any cellular/mobile hotspot can be used! Since NTRIP RTK on InCommand and AgFiniti use the same internet connection, there is no need for an additional mobile hotspot in the cab. With that, there is also no need for an additional data plan!

You will only need NTRIP network credentials and necessary cabling to send RTK NTRIP from InCommand display to an RTK unlocked GPS receiver.

Can I use this InCommand feature with SteerCommand, GeoSteer, or ParaDyme? What about other 3rd party receivers?

Growers can use with SteerComand, ParaDyme, and GeoSteer. This is also a great opportunity for users to transition to a single data plan for NTRIP RTK and AgFiniti with the BR1 Mini hotspot.
3rd party receivers may work, but Ag Leader does not support this. As long as the GPS receiver supports NTRIP RTK input via serial, NTRIP on the InCommand display acts no different than an external modem with a built in NTRIP client.

For cabling options, see "What additional cabling from my InCommand display AUX port to my GPS receiver will I need?"

When was the feature release date?

February 6, 2018

Does the InCommand display have a built in cell modem mobile hotspot?

No. The InCommand display does not have a built in cell modem hotspot. An external internet connection (mobile hotspot) is still required to use NTRIP RTK on InCommand displays.

Which mobile hotspot can I use?

Any cellular/mobile hotspot can be used! Bring your own mobile hotspot (mobile phone, iPad, jetpack, etc.)!

Alternatively, order the BR1 Mini hotspot direct from Ag Leader. BR1 Mini cellular hotspot is a great option for Verizon and GSM customers and comes with standard 2-year Ag Leader warranty. The BR1 Mini will also power on/off with your Ag Leader display, no extra interaction required.

What is required to use NTRIP on the InCommand display?

1. InCommand display (firmware version 3.1+)
2. Internet connection (mobile internet hotspot)
3. Aux to 9-pin serial cable (cable options allow for video camera inputs)
4. RTK unlocked GNSS receiver with two serial ports
5. RTK NTRIP network and login credentials

What additional cabling from my InCommand display AUX port to my GPS receiver will I need?

Assuming InCommand display has been previously installed, growers will only need to add an Aux to 9-pin serial cable option and necessary GPS receiver serial cable. These Aux to 9-pin serial cables are available in three options, Aux to 9-pin serial, and Aux to serial with 2 video camera inputs, and Aux to serial with 4 video camera inputs. See NTRIP RTK on InCommand cabling guide.

GPS 6500/7500 (RTK Unlocked):

- InCommand Aux Serial (9-pin) Cable - Cable part number is dependent on number of cameras in use
- Dual port GPS receiver cable (ships with all GPS 6500/7500 receivers from Ag Leader)

ParaDyme and GeoSteer (RTK Unlocked):

- InCommand Aux Serial (9-pin) Cable - Cable part number is dependent on number of cameras in use
- AUX/NMEA out cable PN: 4002226-15 (ParaDyme) or 4003263-6 (GeoSteer)

GPS 2500 (RTK Unlocked):

- InCommand Aux Serial (9-pin) Cable - Cable part number is dependent on number of cameras in use
• Dual port GPS receiver cable (shipped with all GPS 2500s from Ag Leader)
• Recommend RTCM data format. **CMR data format is not supported.**

3rd Party Receivers may or may not function properly as they are not supported by Ag Leader:

• Aux to 9-pin serial (cable part number is dependent on number of cameras in use)
• 9-pin serial GPS receiver adapter cable (provided by GPS receiver manufacturer)
• Null modem cable PN: 2000819 (where applicable)

Can I create or connect to multiple NTRIP streams?

As standard practice, only one NTRIP network can be used/connected to at a time. Users do have the ability to create multiple NTRIP network connections that can be saved as “Profiles.” This allows for easy switching between NTRIP data streams.

See "RTK Settings - NTRIP RTK on InCommand" section within the InCommand display user guide.

Does NTRIP on the InCommand display support "web links" as the NTRIP server entry?

Yes! It also supports standard IP address NTRIP server entry.

How do I know if NTRIP RTK on InCommand will work in my fields?

The best approach is to consult cellular network coverage maps and then verify cellular hotspot performance in the field, prior to beginning an operation.

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If I don't want to use NTRIP RTK on InCommand, can I still use my cellular CDMA or GSM RTK Relay? What about my ParaDyme or GeoSteer internal cell modem?

**Verizon has announced plans to retire its non 4G LTE network (CDMA) entirely at the end of 2019.**

• Non 4G LTE devices include CDMA Relays and internal modem ParaDyme/GeoSteer systems
• New (or new to user) CDMA Relays must be activated prior to June 30th, 2018. Non 4G LTE devices cannot be activated after this date.
• CDMA Relays will NOT be able to be suspended and reactivated after June 30th, 2018. If users expect to use their CDMA Relay past June 30th, 2018, their device data plan must stay activated.
• This does not affect users outside of North America. The cellular GSM RTK Relays can be used as normal in North America (and internationally) and are not affected by this as they do not use Verizon cell network.

With little incentive to maintain cellular network hardware as the shut down date approaches, end users may experience degraded performance of non 4G LTE devices (CDMA Relay, ParaDyme, and GeoSteer) on Verizon CDMA network.

• Internal cell modem ParaDyme and GeoSteer users can still utilize Sprint, Sprint like, and AT&T cell networks (where cell coverage exists).
• Alternatively, the BR1-Mini (Verizon 4G LTE capable modem) is available for customers that want to utilize NTRIP RTK and/or AgFiniti on a single data plan, with GPS 6500, ParaDyme, or GeoSteer systems. See **BR1-Mini FAQ** for more information.

Note: If a CDMA Relay in the field fails or has to be replaced after June 30th, 2018 and the unit has an active line on a Verizon account (data plan), Verizon should be able to transfer service to a replacement device only on that existing account, until July 1st, 2019.
What if I turn my display off or lose connection to NTRIP network while using this feature? Will I have to reconfigure settings?

No. Once configured and connected, InCommand display will automatically connect to NTRIP on each subsequent display boot up. NTRIP RTK on InCommand display will automatically reconnect in the event internet connection to the NTRIP server is lost.

Can I use NTRIP RTK on InCommand with my GPS 6500/7500 while an RTK Relay is connected?

In the event users attempt to use NTRIP RTK on InCommand with an RTK Relay (Relay 400, 900, CDMA, or GSM) connected to a GPS 6500, users may experience performance issues due to auto detecting and selecting "RTK" as the correction source.
Q: Why can't I create a boundary with Compass display?

In order to create a boundary on the Compass display, the user must set appropriate permissions for the "User" in the display.

If there is no option on the mapping screen to create a boundary, the appropriate permissions have not been set for the active "User" on the display.

- To add permissions to a user, please see the Compass operator's manual.

Content last reviewed on: 3/10/16
Reviewed by: JW
Q: What version of Sidekick Pro is needed when running with Ag Leader ISO liquid?

The Sidekick Pro ISO is required for use with Ag Leader ISO liquid.

Not supported with ISO liquid:

- Raven Sidekick Pro
- Raven Sidekick Pro ICD

Content last reviewed on: 3/6/17
Reviewed by: JW
Q: What kind of card do I use for my display?

Question: What kind of card do I use for my display?

Answer: Ag Leader® InCommand 1200 and 800, Integra, Versa, and Compass displays require USB media sticks, ~4GB in size.

InSight and EDGE displays require a compact flash card. 512 MB or 256 MB work best for data transfers, but larger cards work, too.

PF3000/PF3000 Pro/ PFA monitors may use up to a 32 MB PCMCIA Flash Card or a compact flash card/PC card adapter.

YM2000 monitors require a 1,2,or 4 MB SRAM card.

Using too large of a data card/USB may result in the display locking up when logging/copying data.

Content last reviewed on: 11/16/16
Reviewed by: JW
**Q: Can I clear last year's data out of the display's memory**

**Question:** Can I clear last year's data out of the display's memory?

**Answer:** Yes, it is recommended that you clear out all of last year's data before you start your new season. On the YM and PF series displays, you may clear last year's load data and leave field names or clear all the data.

- With the Ag Leader® InCommand 1200 and 800, Integra/Versa/Compass/InSight/Edge displays it is recommended that you start a new growing season. You can then delete past seasons once all the logged data is exported, if desired.

- On a YM2000/PF series monitor, to delete the last years data while keeping the field names and calibration loads go to:

  **Setup-->Memory-->Clear Load-->Clear ALL**

Content last reviewed on: 11/16/16
Reviewed by: JW
Q: I traded for a different model of combine. Can I move my Ag Leader system to my new machine?

**Question:** I traded for a different model of combine. Can I move my Ag Leader system to my new machine?

**Answer:** Yes. We can provide a list of required hardware and cables in most cases. Contact your local Ag Leader dealer for more details.

Content last reviewed on: 5/11/17
Reviewed by: SSW
Q: How do I get my field data from my display to my computer?

**Question**: How do I get my field data from my display to my computer?

**Answer**: If using a PF or YM type display then simply power down the monitor and take the card to your computer.

If using InCommand 1200 and 800 displays, touch the satellite icon, select Data Transfer, then Export Data.

On an Ag Leader® Integra and Versa display, you need to touch the USB icon and select Export Data.

On an InSight display you need to go to the Home screen and press 'Copy to Card'.

With the EDGE display, when you insert the data card, it will prompt you for Copy Data or Upgrade, select Copy Data.

Additionally, if using an Ag Leader® Integra, Versa, InSight, or Edge, you can toggle the display to copy log files automatically upon every shutdown. Contact your dealer for instruction on how to do this.

Then the log file(s) will be on the external storage device, ready to read in to your desktop software program such as SMS.

Content last reviewed on: 5/8/17
Reviewed by: TJA
Q: What is the best way to preserve harvest data collected in my Ag Leader display?

**Question**: What is the best way to preserve harvest data collected in my Ag Leader display?

**Answer**: Once you've processed your data through your mapping program, we strongly recommend you copy all .yld files, .ilf files or .agdata files to a write-able CD.
Q: How can I tell if I am logging GPS data while I am combining?

**Question:** How can I tell if I am logging GPS data while I am combining?

**Answer:** There are two different ways to check that latitude and longitude points are being recorded when using the PF 3000/PFAdvantage monitors. The first thing that you should check is that there is a capital D (differential) and a capital G (GPS) in the upper right-hand corner of the screen with an arrow pointing to the card. This tells you that you have a gps signal along with a differential signal and that you are writing information to the memory card. Another way to check that you are logging points is to push the show map button. This will display a map on the PF of what you have harvested.

Using the Insight display you should see DGPS in the upper left hand corner of the run screen. You should then see your map in the map pane.
Q: Can I use WAAS (Wide Area Augmentation System) differential with my current GPS receiver?

**Question:** Can I use WAAS (Wide Area Augmentation System) differential with my current GPS receiver?

**Answer:** Newer Ag Leader Technology GPS receivers are all WAAS compatible. Contact our Tech Support department for more details.
Q: Can I use a Greenstar GPS receiver with an Ag Leader display?

**Question:** Can I use a Greenstar GPS receiver with an Ag Leader display?

**Answer:** Yes, with the proper cabling, you can connect an Ag Leader display for the GreenStar receiver to input speed and position data into the Ag Leader display. When using with Intellislope or an autosteer controller, terrain compensation in Greenstar receivers must be turned off to ensure proper plow performance.

*Note:* The following adapter cables will input to Ag Leader YM2000, PF3000, InSight, EDGE, Versa, Compass, Ag Leader® Integra, and InCommand Displays.

For use with a PF Advantage or PF Pro (without built in GPS), a cable 2000986 must also be used.

**Required adapter cables for John Deere receivers, both the Ag Leader and Deere cables are required**

- **StarFire** No JD cabling
  - **Deere Receiver**
  - **Deere Cable**
  - **Ag Leader Cable**
  - **StarFire iTC**
  - **StarFire 3000**

*PF90350* required 2000972

*PF80754*

**PF10470 and PF80722 may also be required**

**PF80722**
Q: Can I use a Greenstar GPS receiver with an Ag Leader display?
Q: I have a 3rd party guidance system. Can I use this GPS receiver with my Ag Leader display?

**Question:** I have a 3rd party guidance system, (e.g. Outback, Trimble, CaseIH, Deere, etc.) can I use this GPS receiver with my Ag Leader display?

**Answer:** Yes, the guidance system's receiver can be used to provide speed and position to an Ag Leader display. The proper cabling will end in a 9 pin serial connection (RS 232) for the Ag Leader null modem cable PN 2000819. Use this cabling guide to source the proper cables per receiver.

The receiver will need to output NMEA:

- VTG and GGA strings at 5 hz rate
- 38400 baud
Q: My Combine has a factory yield monitor in it, can I remove it when I install a Ag Leader System?

**Question:** My Combine has a OEM Monitor in it from the factory, can I remove it when I install a Ag Leader System?

**Answer:** As long as the OEM Monitor does not do any of the combine functions (Rotor Speed, Engine Diag, etc..)

*Example:* Case 8010 combine with a Case IH Pro 600 display, the Pro 600 does all the combine functions so we cannot completely remove the OEM monitor.
Q: Why do I get a warning message saying my speed has been exceeded for a 1hz GPS receiver?

**Question:** Why do I get a warning message saying my speed has been exceeded for a 1hz GPS receiver?

**Answer:** We recommend using a GPS receiver that will output greater than 1hz and a baud rate of 19200 in order to have the best performance.
Q: How do I create a map to show where I planted different varieties?

**Question:** How do I create a map to show where I planted different varieties?

**Answer:** The Ag Leader® InCommand 1200 and 800, Integra, Versa, Compass, InSight, and Edge displays offer this capability under the Planting configuration screen.

Use the PF3000, Pro, or Advantage in Site Verification Mode. You'll see the field names you use during harvest. Name the loads with the seed variety; when you start planting a different variety, just switch loads. In our SMS™ software, each load will appear in a different color on the map.

Content last reviewed on: 11/16/16
Reviewed by: JW
Q: What equipment do I need to map varieties?

Question: What equipment do I need to map varieties?

Answer: It can be as simple as getting power to the display, using GPS as your speed source, and employing the internal area-count switch as your on/off switch. For a more automated approach, mount an implement switch that will turn your area counter on when the planter is down and off when your planter is up.
Q: Can I map tile lines with my PF series monitor?

**Question:** Can I map tile lines with my PF series monitor?

**Answer:** Yes, you may use the PF in Site Verification mode to map tile lines. The most effective way to map tile lines is to use the area count switch to map out the individual lines. You simply turn the area count on when you want to map a particular line, and then turn it off when you move to the next tile line. (Tip: if you have different tile sizes in the field, use a different load for the different tile sizes. Simply name the load the size of the tile. When you make the map in SMS, the different tile sizes will be different colors on the map.)
Q: What vehicles can the EZ-Steer system be installed on?

**Question:** What vehicles can the EZ-Steer system be installed on?

**Answer:** The EZ-Steer system can be installed on any approved agricultural vehicle with power steering. This includes tractors, articulated tractors, tracked tractors, combines, swathers, floaters and sprayers. There are currently over 440 approved platforms. Contact your local Ag Leader dealer or check www.agleader.com to see if your vehicle is approved for use with the EZ-Steer system.
Q: How should I perform the weight calibrations?

**Question:** How should I perform the weight calibrations when harvesting on an Ag Leader display?

**Answer:** Refer to the most recent version of your displays User Guide or Manual to accurately calibrate for Harvest.

Content last reviewed on: 7/7/17
Reviewed by: JMD
Q: Do I have to perform weight calibrations at the beginning of harvest?

**Question:** Do I have to perform the weight calibrations at the beginning of harvest?

**Answer:** No. You may calibrate the monitor anytime during the harvest season for weight. When you perform the weight calibration it will adjust all previously harvested loads. Refer to the most recent version of your displays User Guide or Manual to accurately calibrate for Harvest.

Content last reviewed on: 7/10/17
Reviewed by: JMD
Q: How often do I need to perform calibrations?

**Question:** How often do I need to perform calibrations?

**Answer:** Harvest calibrations must be completed at least once per harvest product used. Calibrate once per season for best results. Refer to the most recent version of your displays User Guide or Manual to accurately calibrate for Harvest.

Content last reviewed on: 7/10/17
Reviewed by: JMD
Q: Do I need to recalibrate every time I change from harvesting one type of grain to another?

**Question:** During the harvest season, I switch between harvesting corn and soybeans. Do I need to recalibrate every time I change grain types?

**Answer:** No (and yes.) You have to calibrate the display once for each harvest product. (Corn, Soybeans, Wheat) The calibrations remain attached to that harvest product for the entire season. You are able to move from one crop to another as harvest conditions dictate. Additionally only vibration calibration and header height calibration are required before harvesting. Weight calibration, although not ideal, can be completed at any point during the season.

Content last reviewed on: 7/11/17
Reviewed by: JMD
Q: What calibrations need to be performed before the combine is used?

**Question:** What calibrations need to be performed before the combine is used?

**Answer:** Vibration, Header Stop Height, Distance, and Temperature all need to be calibrated before operation.
Q: How can I get accurate readings all season?

**Question:** Towards the end of harvest, my yield monitor was not as accurate as it was when I first calibrated it. How can I get accurate readings all season?

**Answer:** Key factors that affect accuracy throughout the harvest season are crop moisture and grain flow rates changes caused by yield and speed variations. If the average yield/speed is different when compared to original calibration, adding a calibration load/loads at the currently yield/speed should improve the calibration.

If moisture is significantly different compared to the original calibration, making a second harvest product and completely recalibrating is normally the best option. Example: a corn high moisture can be created for moisture above 18-20%, and corn low moisture can be created for anything below 18-20%.
Q: How do I monitor my varieties during harvest while on the go?

**Question:** How do I monitor my varieties during harvest while on the go?

**Answer:** With the InCommand, Ag Leader® Integra/Versa, or InSight displays, you can compare varieties on the go with variety tracking as long as the varieties were mapped when planted with the same display type. When selecting your field and configuration, select the variety tracking option. While in the field harvesting your varieties, these displays will compare them by avg yield, moisture, and total weight. You may see the comparison on the summary screen or see field totals by touching the 'Field' button while harvesting.

Content last reviewed on: 11/16/16
Reviewed by: JW
**Q: Why can I not load my harvest configuration to the run screen?**

**Question:** Why can I not load my harvest configuration to the run screen?

**Answer:** The CAN-based displays (e.g. InCommand, Ag Leader® Integra, Versa, InSight, EDGE) must recognize the operation’s respective modules on the CAN bus in order to load the run screen. For harvest, this means the Flow Sensor module, Speed module and Moisture module must be on the CAN bus.

To see if the modules are on the CAN bus, select the devices or system button in the upper right corner. Additionally, CAN communication is noted by a blinking green light on the module. If a module or modules are missing from the devices list, try cycling power on the display, sometimes that is all that is needed to get communication again. Next, check the CAN line for pinched cables and broken connections. Try unplugging and plugging connections, sometimes this may be enough to get a communication back.

If all CAN modules are missing from the devices list, the relay on the display cable may be suspect. Inspect the relay on the display cable to ensure it is fully plugged in and it should be blinking green. Another symptom of a bad relay is the GPS wouldn’t be receiving power so the display would not be getting GPS information. The relay is pictured below.

Note: When using InCommand specific display cabling (non-Legacy), there will be no relay in use.

If the above suggestions are not working, another consideration is the terminator plug. Ag Leader’s CAN system needs one terminator plug to complete the CAN communication line. The terminator is a plug with a brown rubber grommet. There is a resistor placed on the CAN communication pins and the resistance should be around 120 ohms. Typically on an Ag Leader yield monitor, the terminator will be off the Y splice up by the flow sensor. The terminator will look as below, with a brown rubber grommet opposite of the clip. A dust plug will have the same general appearance but with a blue rubber grommet. Dust plugs will not terminate the CAN line.

Q: Why can I not load my harvest configuration to the run screen?
Lastly, try moving the module without CAN communication up the CAN line (closer to the display) to rule out connections or cabling. Be sure to thoroughly inspect CAN stubs and harness connections and pins before replacing a whole harness.
Q: After changing initially, why is my moisture reading locked on the same percentage?

Question: After changing initially, why is my moisture reading locked on the same percentage?

Answer: When the moisture reading isn't changing, this is most likely being caused by the EMU motor not turning - therefore grain is stagnant in front of the moisture sensor.

The first item to address is to ensure the 5 AMP fuse of the the EMU control cable is still good. Visually inspect the spade fuse, there will be a thin strip of metal enclosed in transparent plastic. The strip will be present and clean if the fuse is good, the strip will be clearly broken if the fuse is blown. If the fuse is blown, replace it with a 5 AMP fuse. Any larger of a fuse will cause undue harm to the EMU motor.

If the fuse is good, the next consideration is to ensure the EMU battery cable is providing 12 Volts to the EMU control cable on the 2 pin connection into the fused line. If not, be sure that the 30 AMP fuse on the EMU battery power cable is still good. Also, take the battery power connection and plug it directly to the EMU motor. The motor should turn, ensuring that it is good.

If the motor is good, remove the cover to the EMU - you'll need to remove two 1/4" nuts to access the proximity switch. To adjust the proximity switch, turn the screw clockwise until the EMU motor turns. Now, turn the set screw counter-clockwise three whole revolutions to set the sensitivity correctly. If the switch never turns the motor on, the switch is the culprit. This video may be of assistance in adjusting the proximity switch.

If the LED light on the proximity switch comes on but the motor doesn't turn then the relay may likely need to be replaced. The relay (PN 3100128) is external on moisture module PN 4000158 and integrated into the new module (EMU control cable 4001539-3) so the module itself may need to be replaced.
Q: Why is my harvest area count inaccurate?

**Question:** Why is my area count inaccurate?

**Answer:** For harvest field operation, area is calculated by looking at speed and swath. First, make sure the header width (swath) is entered correctly. Also be sure to make sure that area cuts on and off when the header is lifted and set properly for the crop type.

Another consideration is speed source. Make sure the AutoSwath sensitivity level is set properly for the correction source being used (e.g. set to level 3 for a 5 Hz WAAS receiver, level 5 for terrain compensated RTK receiver, etc.) Also be sure the back up speed sensor has been calibrated by performing a distance calibration.

If AutoSwath performance seems degraded and all the above considerations have been verified, a simple display power cycle will reset the AutoSwath background map.
Q: Why is my moisture reading staying at 5% or 0%?

**Question:** Why is my moisture reading staying at 5% or 0%?

**Answer:** First, make sure the manual moisture setting isn't check-marked. This setting is found under the calibrate moisture button on the run screen.

Next, ensure the EMU chamber and moisture sensor are not plugged up with green matter or mud. Clean the chamber and blade of the moisture sensor.

Another symptom of a low moisture reading is the EMU motor may be constantly running or not running at all. The harvest diagnostics page will display several readouts to help you determine if the motor is cycling during harvesting. Proximity switch on/off, relay status and motor current should all populate each second or two during normal operation. If the motor is drawing a current and proximity and relay status' are on, the motor is always cycling grain past the sensor and not allowing enough grain to accumulate around the sensor for a reading. Adjust the proximity switch or clean the debris from in front of the proximity “eye.”

Lastly, make sure the temperature has been calibrated or the moisture reading may not be accurate.
Q: Why can I not load my clutch control configuration? Detected module outputs do not match planter sections.

**Question:** Why can I not load my clutch control configuration to the run screen? An error message states the number of detected module outputs do not match the number of planter sections.

**Answer:** When loading the run screen (start field operation wizard), the above error will display if the number of clutches on the planter do not match the number of sections specified in the configuration. To load the run screen:

1.) Check that the high power connection is made to the Clutch Control Module adapter cable on the grey Deutsch 2 pin connectors.

![High Power Connectors](image)

2.) Ensure the configuration has the correct number of sections, pictured below. If not, redo the planter configuration for the correct number of sections (refer to the chart below for assistance.)
<table>
<thead>
<tr>
<th>Adapter Family</th>
<th>Section Adapter PN</th>
<th># Of Rows</th>
<th># Of Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Row/Section</td>
<td>4002372</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4001743</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>4001746</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>4001747</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>4001748</td>
<td>36</td>
<td>34</td>
</tr>
<tr>
<td>2 Rows/Section</td>
<td>4002039</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4001778</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4001779</td>
<td>16</td>
<td>8</td>
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<td></td>
<td>4001780</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>4001783</td>
<td>36</td>
<td>18</td>
</tr>
<tr>
<td>1 Row/Section (RTK Correction only)</td>
<td>4002759</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>4002760</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>4002761</td>
<td>16</td>
<td>16</td>
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<tr>
<td></td>
<td>4002762</td>
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<tr>
<td></td>
<td>4002763</td>
<td>36</td>
<td>36</td>
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<tr>
<td>John Deere RowCommand</td>
<td>4001927-6</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>4001923-6</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>4001924-6</td>
<td>24</td>
<td>24</td>
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<tr>
<td></td>
<td>4002231-6</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>4001926-6</td>
<td>36</td>
<td>36</td>
</tr>
</tbody>
</table>

Q: Why can I not load my clutch control configuration? Detected module outputs do not match planter sections.
3.) Inspect all cabling and connections from the Clutch Control Module(s) to the clutches. It is imperative to have all clutches plugged in for the output detection process.

<table>
<thead>
<tr>
<th>Code</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001928-6</td>
<td>12/23 (Interplant)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>4003069-6</td>
<td>12/24 (Interplant)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>4001951-6</td>
<td>16/31 &amp; 16/32 (Interplant)</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>4001925-6</td>
<td>12,16, 24</td>
<td>6, 8, 12</td>
<td></td>
</tr>
<tr>
<td>4003062-6</td>
<td>12/23 (Interplant)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>4003063-6</td>
<td>12/24 (Interplant)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>4003066-6</td>
<td>16/31, 16/32 (Interplant)</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>4002993-6</td>
<td>12, 16, 24</td>
<td>6, 8, 12</td>
<td></td>
</tr>
</tbody>
</table>

Ag Leader Swath/STMM

<table>
<thead>
<tr>
<th>Code</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4002784</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>4002785</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>4002786</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>4002787</td>
<td>24</td>
<td>24</td>
<td></td>
</tr>
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<td>4002788</td>
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<td>36</td>
<td></td>
</tr>
<tr>
<td>4003937</td>
<td>12</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>4003938</td>
<td>16</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>4003939</td>
<td>24</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Q: Why can I not load my clutch control configuration? Detected module outputs do not match planter section.
Q: What alarms if a main drive chain slips off to where zero rows are planting (STMM)?

Question: What happens if a main drive chain slips off and no rows are planting?

Answer: With the Seed Tube Monitor Module (STMM) (with or without clutches) all the rows with zero seed flow will alarm as long as the implement switch is tripped and ground speed is present. The "No Seed Flow" alarm will flash on the screen and an audible alarm will be present.
Q: What requirements need to be met for coverage logging with the Seed Tube Monitor Module (STMM)?

**Question:** What needs to be met for coverage logging with the Seed Tube Monitor Module?

**Answer:**

- **STMM only**: Area On/Off indicator on the display will be toggled by using the implement switch signal into the STMM.

- **STMM with clutch control**: The system will map when clutch sections are on and ground speed is present.

- **STMM with clutch and rate control**: The system will map when the hydraulic drive shaft RPM is greater than 0, ground speed is present and clutch sections are on.
Q: What will alarm with the Planter Monitor Module if a row goes into a high/low seed flow situation?

**Question:** What will alarm with the PMM when a row goes to high/low seed flow?

**Answer:** When high or low seed flow is recognized on a row (seed flow is high/lower than the % threshold), a warning will appear on screen listing the offending row(s) and will be accompanied by an audible alarm as well as a seed rate warning across the top of the screen.

The population bar graph will also show red at the corresponding % level of the threshold setting, e.g. row 3 threshold was 100%.
Q: What will alarm with the Planter Monitor Module if a row goes into a high/low seed flow situation?
Q: What alarms on the Seed Tube Monitor Module during a high/low seed flow situation?

**Question:** When using the STMM, what will alarm during a high/low seed flow scenario?

**Answer:** When seed tube feedback changes above/below the specified threshold, a warning will appear on the screen listing the offending row(s) accompanied by an audible alarm and a warning across the top of the screen. There are specific alarms for low, high and no seed flow with the STMM.

The bar graph will also highlight the row in red, below the threshold amount. In this example, the low alarm threshold was set to 70%.
Q: What alarms on the Seed Tube Monitor Module during a high/low seed flow situation?
Q: What requirements must be met for coverage logging with the Planter Monitor Module (PMM)?

**Question:** What is needed for coverage logging with the PMM?

**Answer:**

- **PMM only with shaft speed sensor:** Area on/off will be toggled on from off if shaft speed sensed by the PMM is greater than 0. Area on/off will be toggled off from on if shaft speed sensed by the PMM is equal to 0.

- **PMM only without shaft speed sensor:** Area on/off will need to be manually toggled by the area on/off button in the lower right corner of the screen.

- **PMM with clutch control:** The system will map when clutch sections are on and ground speed is present.

- **PMM with rate control:** The system will map when hydraulic drive(s) shaft speed RPM is greater than 0 and ground speed is present.

- **PMM with clutch and rate control:** The system will map when drive shaft speed RPM is greater than 0, ground speed is registering and clutch sections are on.
Q: What happens when seed flow for a row goes to zero when planting with a Planter Monitor Module?

**Question:** What happens when seed flow for a row goes to zero when planting with a PMM and ground speed is present?

**Answer:** User will receive a "Seed Rate Alarm" dialog with the row(s) reporting no seed flow along with an audible alarm and a warning across the top of the screen. User will need to acknowledge the dialog for the audible alarm to stop.

Additionally, the offending row(s) on the bar graph will flash red at the 60% population rate level.
Q: What happens when seed flow for a row goes to zero when planting with a Planter Monitor Module?
Q: What happens when seed flow for a row goes to zero when planting with the Seed Tube Monitor Module?

**Question:** What happens when seed flow for a row goes to zero when planting with the STMM and ground speed is present?

**Answer:** User will receive a "No Seed Flow" dialog with the row(s) that have no seed flow, audible alarm and a "No Seed Flow" warning across the top of the page. The user will need to acknowledge the dialog box for the audible alarm to stop.

Additionally, the offending row(s) with zero seed flow will be red on the population bar graph of the run screen.
Q: What happens when seed flow for a row goes to zero when planting with the Seed Tube Monitor Module?
Q: There's an error stating number of rows in configuration does not match STMM setup; why can't I load the run screen?

**Question:** There's an error stating the number of rows in configuration does not match STMM setup; why can't I load the run screen?

**Answer:** The configuration has a different number of row sensors than what was specified in the Seed Monitor Setup page. In this case, the configuration was setup for 16 rows but specified as 15 rows in this page. Set to the correct number of seed tube sensors and press Sensor Configuration to carry out the AutoConfig sensors process.

The configuration will then be allowed to load to the run screen.

Q: There's an error stating number of rows in configuration does not match STMM setup; why can't I load the run screen?
Q: There's an error - the row sensor map has not been set; why can't I load the configuration?

**Question:** There's an error - the row sensor map has not been set; why can't I load the configuration?

**Answer:** The configuration has not performed the AutoConfigure sensors routine. To do so, navigate to the Seed Monitor Setup page and press Sensor Configuration.

Proceed through the AutoConfig process by pressing AutoConfig. After this, the configuration should be ready to load to the run screen.

Q: There's an error - the row sensor map has not been set; why can't I load the configuration?
Q: There's an error - the row sensor map has not been set; why can't I load the configuration?
Q: There's an error - the number of rows in the configuration does not match PMM setup; why can't I load the configuration?

Question: There's an error - the number of rows in the configuration does not match PMM setup; why can't I load the configuration?

Answer: The error is occurring because there is a difference in the number of seed tube sensors in the configuration vs. the Planter Monitor Setup. Navigate to the PMM Setup page and press Planter Configuration.

From the Planter Configuration page, specify the correct number of seed tube sensors on the planter. In this case, 16 sensors were in the configuration yet I specified 15 sensors in the Planter Configuration page.

Q: There's an error - the number of rows in the configuration does not match PMM setup; why can't I load the configuration?
Changing the number of sensors in the Planter Configuration page will require the MUX-bus detection process to be re-done. The configuration should be able to load to the run screen following this correction.

Q: There's an error - the number of rows in the configuration does not match PMM setup; why can't I load the configuration?
Q: I have a Raven flow meter/encoder that needs 5 volts, can I use it with DirectCommand?

**Question:** I have a Raven flow meter/encoder that needs 5V+ power, not 12 volts, can I use it with DirectCommand?

**Answer:** Yes. The channel port of the Liquid Product Control, Spinner Spreader and Strip Till modules have provisions for 5V+ output to power these feedback devices. All control/feedback cables come from Ag Leader pinned out for 12V+ power so to change the cable for 5V+, follow the steps below (Liquid module pictured):

1.) The control/feedback cable will plug into the channel port of the module.

![Image of control/feedback cable](image)

All control/feedback cables will have 12V+ power on pin 1 (red wire), as pictured above.

2. Unplug the control/feedback cable from the channel port and carefully remove the wedgelock on the 8 pin Deutsch connector.
3.) Using a small screwdriver or pocket knife, undo the tab holding the pin 1 socket in place. Pull the socket/wire out of position 1.

4.) Remove the dust plug from pin position 8 and place it in position 1. Insert the red wire socket into pin position 8 for the Liquid module (refer to the chart below for other module positions.)

<table>
<thead>
<tr>
<th>Module</th>
<th>From Pin (12V+)</th>
<th>To Pin (5V+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Product Control</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

Q: I have a Raven flow meter/encoder that needs 5 volts, can I use it with DirectCommand?
5.) Ensure the socket is fully seated and the tab is holding the socket in place. Install the wedgelock on the Deutsche connector.

6.) Connect the control/feedback cable back into the channel port. Now the module should output 5V+ for the Raven feedback device.

Q: I have a Raven flow meter/encoder that needs 5 volts, can I use it with DirectCommand?
Q: I have a Raven flow meter/encoder that needs 5 volts, can I use it with DirectCommand?
Q: Can I use Precision Planting's WaveVision seed tube sensors with an Ag Leader display?

**Question:** Can I use WaveVision seed tube sensors with an Ag Leader display?

**Answer:** Yes, WaveVision sensors are compatible with an Ag Leader display when a Seed Tube Monitor Module or Row Control Module is used.

- When a Seed Tube Monitor Module is used on planters 6 rows and larger, the use of a Precision Planting power module is required to power the seed tube sensors outlined here. The Ag Leader CT 250 (pn 4001533-6) and CT 350 (pn 4001534-6) 37 pin adapter cables plug directly in-between the PP power module and the Seed Tube Monitor Module.

- When a Row Control Module is used, either in a SureDrive or Individual Row Down force system, the Precision Planting power module IS NOT required to power the seed tube sensors. Each Row Control Module supplies its own 12 volts for the seed tube sensor; unlike the Seed Tube Monitor Module that shares voltage to power the sensors.

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Content last reviewed on: 6/27/2017
Reviewed by: AMJ
Q: How do I enable an OmniSTAR correction signal on my GPS 2500 receiver?

**Question:** How do I enable an OmniSTAR correction signal on my Ag Leader GPS 2500 receiver?

**Answer:** Follow the guide to do so, attached below.

***Note:*** 2500 receivers are OmniStar capable "out of the box." OmniStar subscriptions are then required.

Content last reviewed on: 3/16/2017
Reviewed by: AMJ
Q: How do I enable an OmniSTAR correction signal on my Ag Leader ParaDyme?

Question: How do I enable an OmniSTAR correction signal on my Ag Leader ParaDyme?

Answer: Follow the guide, attached below.
Q: Where do I find firmware for my Kinze Vision or Cobalt display?

**Question:** Where do I find the latest firmware for my Kinze Cobalt or Vision display?

**Answer:** Kinze hosts these updates in their resources section found here: [www.kinze.com/firmware.aspx](http://www.kinze.com/firmware.aspx)
Q: What Unlocks Are Available for the New Leader NL7?

**Question**: What unlocks does the New Leader NL7 offer?

**Answer**: The New Leader NL7 offers every unlock that the Ag Leader InSight has:

- AutoSwath section control
- Multiple Product
- AutoPilot interface (no longer available)
- NORAC UC5 boom height control
Q: Where do I find the current firmware for the NL7 display?

Question: Where do I find the current firmware for the NL7 display and its associated modules?

Answer: Current firmware for the NL7 can be found on Highway Equipment Company's Updates page.
Q: Will I need a switchbox for Task Controller functionality?

**Question:** Will I need a switchbox for Task Controller functionality?

**Answer:** It will depend on if the particular ECU will support an external switchbox or not. Some will and others will transmit user input through the virtual terminal. For Spring 2014, supported Task Controller planters cannot utilize switchbox input.

More commonly used is the switchbox for external input with product application ECUs. Ag Leader does not maintain a list of ECUs that support switchbox input.

The Ag Leader switchbox will work with Task Controller. To enable this functionality, mark the auxiliary module support setting. Then, set the switch functionality in auxiliary input.

![ISOBUS Settings](image-url)
Q: What unlocks do I need for planter Task Controller functionality?

Question: What unlocks do I need for planter Task Controller functionality?

Answer: Specific unlocks required for Task Controller will vary based on the display being used and the implement to be controlled. For instance, to control a Kinze 4900 planter the display will require a Multi-product unlock. Assuming the ISOBUS ECU supports Task Controller functionality; features include section control, data logging and variable rate control.

Unlocks by display

- The InCommand 1200 and Ag Leader® Integra displays come with the Universal Terminal and AutoSwath unlock standard, so it is ready to run Task Controller. However, certain ECUs will also require the use of a Multiple Product unlock. As always, it is still needed for growers wanting to apply or plant multiple products and/or varieties.

- The InCommand 800 and Versa displays will need the Universal Terminal unlock, AutoSwath unlock and the Multiple Product unlock, depending on the implement to be controlled or the products to be logged, applied.

- The Compass display does support ISOBUS through a Universal Terminal unlock but does not support Task Controller functionality. Universal Terminal supports multiple ECUs without the need for a Multiple Product unlock.

Unlocks by planter ECU

- The Kinze 4900 planter ECU will require the Universal Terminal, AutoSwath and Multiple Product unlocks.

- The John Deere planter ECU will require the Universal Terminal and AutoSwath unlocks, though the Multiple Product unlock will be needed if the grower wants split planter, fertilizer or pesticide application functionality. If the John Deere planter has 2 or more hydraulic drives, a Multiple Product unlock will be required, regardless if only one variety will be logged.

- Other planter ECUs: Other 3rd party planter ECUs will require the Universal Terminal and AutoSwath unlocks. A Multiple Product unlock will be needed if the grower wants split planter, fertilizer or pesticide application functionality. If the Device Description of the planter ECU is defined as 2 or more hydraulic drives or "meters," a Multiple Product unlock will be required, regardless if only one variety will be logged. To learn more about Device Description and Task Controller setup please reference the Task Controller Display Configuration Guides (https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=1453)
Q: What unlocks do I need for planter Task Controller functionality?
Q: When do I need a Multiple Product unlock?

**Question:** When do I need a Multiple Product unlock?

**Answer:** You will need the Multi-product unlock anytime you are controlling or logging (monitoring) more than one product. With the Multiple Product unlock, the EDGE can control and/or log up to 2 products*, the Versa, 3, the InSight, 5 and the Ag Leader® Integra, 8. The InCommand 1200 can control 8 and the InCommand 800 can control 3.

**Some scenarios where the multiple product unlock is needed:**

- Application product control on a planter and seed tube monitoring
- Application product monitoring and seed product controlling
- Application product monitoring and seed tube monitoring
- Application product control and seed product controlling
- Controlling or monitoring more than one seed variety
- Controlling or monitoring more than one liquid or granular application product
- Controlling more than one product with Task Controller functionality
- Task Controller functionality with a Kinze 4900 planter
- Serial controlling and product monitoring
- Serial controlling and seed tube monitoring

*The EDGE can control up to 3 planter drives but assign only one rate. The EDGE will only log one variety. The EDGE can control up to 2 products with DirectCommand.*

Content last reviewed on: 5/31/16
Reviewed by: SSW
Q: Will the Compass support module functionality on CAN A?

**Question:** Will the Compass display support traditional Ag Leader modules on CAN A?

**Answer:** The Compass only supports module functionality of the L160 lightbar and the Application Rate module on CAN A. The Application Rate module functionality is limited to implement switch operation for area logging.
Q: What do I need to connect a PFAdvantage or PFPro to a GPS 1500/1600/2500 receiver?

**Question:** How do I connect a GPS 1500/1600/2500 to an Ag Leader PFAdvantage or PFPro console?

**Answer:** Depending on how you'd prefer the receiver powered there are two options, one that allows the console to provide the receiver power and one that relies on the receiver power being provided elsewhere.

You'll need the following:

A. A Single Port Mobile Logging Cable, PN 4002675-18 and an Adapter Cable NMEA to Aux Port 1, PN 2000990, where receiver power will be provided elsewhere (cigarette lighter power:)

OR B. A Single Port GPS cable, PN 4002673-18 and an Adapter Cable Port 1 to Aux Port 1, PN 2000986, where the console provides receiver power:
Q: Can I make a guidance vehicle icon such as a combine or front boom sprayer?

**Question:** Can I have a vehicle icon that better represents my combine or front boom sprayer guidance configuration?

**Answer:** Yes. Under the Guidance Configuration Settings menu, specify the distance from antenna value and set the location as In Front of the antenna.

1.) Press the wrench by the guidance configuration:

![Wrench icon](image1)

2.) Assign the Distance from Antenna and location value to in front of the antenna:

![Configuration Settings](image2)

3.) The vehicle icon will now appear as such:

![Vehicle Icon](image3)

Q: Can I make a guidance vehicle icon such as a combine or front boom sprayer?
Q: Can I make a guidance vehicle icon such as a combine or front boom sprayer?
Q: Will I lose my data when upgrading to version 5.2?

**Question:** When upgrading to version 5.2, will I lose my data?

**Answer:** No. When upgrading from an earlier display firmware version to version 5.2 you will not lose any data. However, after upgrading, the ability to add to the last instance of any field operations that occurred before the upgrade will be lost.

As an example, say a field was half planted with version 4.5 before rains came. The dealer stopped by to upgrade the display during the break and now the previously applied map for AutoSwath will not be available for planting the second half of the field.

Wait until the field operation is completed before upgrading to version 5.2 if the grower wants to utilize the previously applied map.
Q: What electric pumps are supported for use with the DC Motor Driver?

**Question:** Which electric pump is supported for use with the DC Motor Driver?

**Answer:** Any electric motor/pump outputting 25 amps for less should be acceptable for use with the DC Motor Driver.
Q: With the DC Motor Driver, will the pump always run?

**Question:** When using the DC Motor Driver, will the pump always run?

**Answer:** No. The pump will be stopped for areas that AutoSwath turns off application. The default controller settings for the DC Motor Driver ensure that the pump will respond fast enough for satisfactory performance.
Q: What is the Annual Remote Service Plan? Will all ParaDyme/GeoSteer systems need the plan?

**Question:** What is the Annual Remote Service Plan and will all ParaDyme and GeoSteer systems need it?

**Answer:** All new ParaDyme and GeoSteer systems come with a 2 year service plan for the purpose of remote diagnostics via CBS. After the 2 years all systems wishing to continue with remote diagnostics will need the $495 Annual Remote Service Plan, part number 4100654. Remote diagnostics is not required for system operation.

The Annual Remote Service Plan is separate from the cell modem maintenance (active MIN/MDN.)
Q: When is the appropriate corn growth stage to start using OptRx sensors?

**Question:** When is the appropriate growth stage to begin using OptRx crop sensors for corn?

**Answer:** V5 is the earliest recommended growth stage to operate OptRx sensors in corn. The crop canopy is just not adequate enough for identifying crop needs before then.

OptRx can be used from V5 until tassel in corn. Tasselling interferes with the sensor's ability to accurately identify plant vigor.
Q: I traded my combine in, can I have my flow sensor rebuilt to fit the new combine?

**Question:** Can I have my old flow sensor rebuilt to fit my new combine?

**Answer:** No, as of May 2017, Ag Leader no longer rebuilds combine flow sensors to fit a different model combine. Customers would need to purchase a new flow sensor if moving an existing system to a new machine. Please consult an Ag Leader dealer to determine which flow sensor is required for the specific application.

Content last reviewed on: 5/17
Reviewed by: RC
Q: Is the John Deere Active pneumatic down force controllable through the Ag Leader VT?

**Question:** Is the John Deere Active pneumatic down force controllable through the Ag Leader Virtual Terminal?

**Answer:** Yes. The Ag Leader® InCommand 1200 and 800, Integra and Versa UT/VT screen will control John Deere's Active pneumatic down force just as a GreenStar display would.

Content last reviewed on: 11/16/16  
Reviewed by: JW
Q: Is an unlock required to use OptRx Crop Sensors?

**Question:** Is an unlock required to utilize OptRx Crop Sensors?

**Answer:** No. OptRx Crop Sensors operate on the Ag Leader® InCommand 1200, Integra and InSight displays without any additional unlocks.

Content last reviewed on: 11/16/16
Reviewed by: JW
Q: Which lightbar is compatible with my display?

**Question:** Which guidance lightbar is compatible with my Ag Leader display?

**Answer:** The current lightbar offering sold by Ag Leader is the L160 CAN A lightbar. It is compatible with the Ag Leader® InCommand 1200 and 800, Integra, Versa, Compass and EDGE displays.

The AgGPS 21A lightbar is no longer sold by Ag Leader but is compatible with the InSight display and PF series consoles when used in conjunction with an Ag Leader add-on GPS, such as the 3050, 3100 and 4100 model receivers.

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Content last reviewed on: 11/16/16
Reviewed by: JW
Question: Does Ag Leader still sell cotton yield monitoring systems?

Answer: Yes. Ag Leader sells the cotton yield monitoring kits for use with the InSight display. The customer will need the kit for the particular stripper/picker, a display cable kit and a GPS receiver. The InSight display will need to be sourced elsewhere as Ag Leader no longer sells the InSight display.

Refer to the Parts Catalog for specific supported models and equipment configurations.
Q: Which internet browser is optimal for use with CBS?

**Question:** Which internet browser is optimal for use with Central Business System?

**Answer:** Technical Support has found that while Internet Explorer is the officially supported browser for CBS, other popular browsers with the IE tab add-on are typically more robust.

- The Google Chrome IE Tab is a free application available here: https://chrome.google.com/webstore/detail/ie-tab/hehijbfgiekjkmkfbkbbamsjkdenadd?hl=en-US
- The Mozilla Firefox IE Tab is a free application available for download here: https://addons.mozilla.org/en-US/firefox/addon/ie-tab-2-ff-36/
Q: Are planter drives and the Hydraulic Seed Rate Module supported for section control?

Question: Are planter drives used in conjunction with the HSRM a supported tool for section control?

Answer: No. Ag Leader testing has shown that planter drives do not provide adequate performance for section control.

The clutch control module, paired with AutoSwath and either point row clutches or section clutches provides the section control on an Ag Leader SeedCommand system.
Q: The Trimble receiver will only output speed at 1Hz, what can be done?

Question: The Trimble receiver I am using for speed and position will only broadcast speed at a 1Hz rate. What can be done?

Answer: Connect the Trimble receiver to the computer’s serial port and open AgRemote. Follow these directions:

1. Go to the File drop down menu and select Connect.

2. Choose the appropriate port for your computer and press OK.

3. The following screen should appear. If it doesn’t press esc until it does.
4. Press the right arrow until the Configuration menu appears.

![Configuration menu](image)

5. Press Down once the press Right until Port A appears.

![Port A configuration](image)

6. Press Down until the 1Hz NMEA VTG screen appears. Capitalized VTG means that 1Hz VTG is turned on. (Note: If the screen is already has a lower case vtg as shown in step 8 the setting does not need changed.)

![1Hz NMEA VTG setting](image)

7. Press the Right arrow once followed by the Down arrow. VTG should become lower case like show below and VTG will now have the ability to output at 5Hz.

![Lower case VTG setting](image)
8. Press the Return button to save the setting.

9. If no other changes need to be made, you can disconnect from disconnect From AgRemote.
Q: Is the GPS 6000 compatible with the RTK Relay Module?

**Question:** Is the GPS 6000 compatible with the RTK Relay Module?

**Answer:** No. The connection is the same but the GPS 6000 receiver does not have the functionality to be compatible with the RTK Relay Module. The GPS 6500 is the only receiver that will work with the Relay.
What is SteerCommand®?

SteerCommand® is Ag Leader’s newest steering controller, released in November of 2014.

SteerCommand is compatible with steer ready machines, hydraulic (integrated) steering through GeoSteer® vehicle kits and with assisted steering (OnTrac3â c MDU-G4).

The SteerCommand controller features 9 axis terrain compensation by having 3 sensors on each axis - one each for yaw, pitch and roll, familiar AutoSteer user interface and calibration routines and a familiar installation procedure.

SteerCommand requires the use of an Ag Leader branded GPS 6500 and an InCommand, Ag Leader® Integra, Versa or Compass display. SteerCommand is not compatible with the GPS 6000 receiver, nor is it compatible with any other third party receiver.

Content last reviewed on: 1/19/16
Reviewed by: SSW
Q: Does Ag Leader have an Educational Program?

**Question:** Does Ag Leader have an education program that caters to precision agriculture instructors?

**Answer:** Yes. Ag Leader has a tailored program for secondary and post-secondary precision agriculture instructors. Please visit [www.agleader.com/educators](http://www.agleader.com/educators) for additional information or contact us at (515) 735-7230 or education@agleader.com.

Content last reviewed on: 2/13/17
Reviewed by: SSW
Q: Will I need to replace my 10 section switchbox to work with the ISO Liquid Module?

**Question:** Will I need to replace my 10 section DirectCommand or SeedCommand switchbox to be compatible with the ISO Liquid Module?

**Answer:** No. The 10 section switchbox will work with the ISO Liquid Module. Currently, the 7 section ISO switchbox is only compatible with ISOBUS, not CAN A.

The 10 section switchbox/Auxiliary Input module will need to be enabled to work over VT, as pictured below:
Q: Is a nitrogen rich strip needed for OptRx calibration?

**Question:** Is a nitrogen-rich strip required for calibration?

**Answer:** N rich strips are not required with the OptRx system. University research and broad scale field testing have proven that nitrogen sufficient areas almost always exist in passes not treated with nitrogen-rich strips. OptRx selects the highest crop vigor readings from the nitrogen sufficient areas and sets them as the reference value during the Virtual Reference Strip scan. This produces the same result as scanning a nitrogen rich strip, only without the hassle of installing nitrogen-rich strips.
Q: How often do I need to create a Virtual Reference Strip?

**Question:** How frequently do I need to create a Virtual Reference Strip?

**Answer:** It is best to create a Virtual Reference Strip in every field. It is critical that the application is done with a reference value of the same growth stage. However, a previous field's reference value may be used in place of creating a new reference value. Selection of previous reference value should be based on crops that are in similar growth stages as the field about to be applied to ensure accurate nitrogen recommendations.
Q: Is OptRx affected by different varieties?

**Question:** Is OptRx affected by different crop varieties?

**Answer:** There is some affect, but the affect is small enough the recommended rates are not changed to any significant difference. OptRx crop sensors are using wave bands that are in a range that a human eye can not detect (Near Infrared) or are barely visible (Red Edge). When a grower looks at corn plants, the differences between each variety are mostly in shades of green. Since the OptRx sensors are not measuring green reflectance, the difference between varieties is not as influential to OptRx as they are to the human eye.
Q: How much pre-plant nitrogen should I apply with OptRx?

**Question:** How much Pre-plant Nitrogen should I use with OptRx?

**Answer:** It is recommended that 1/3 to 1/2 of the total amount of nitrogen that will be applied throughout the entire year is applied to corn at or before planting. The reason is the corn plant determines both kernels per row and number of rows by growth stage V5. Any stress on a plant this early can result in yield losses that cannot be recovered. Therefore, it is best to supply enough nitrogen to sustain the corn plants through V5. Any stress shown by a corn plant between V5 and V12 can be recovered by side-dressing nitrogen with OptRx.
Q: Why don't I just apply the whole year's worth of nitrogen at pre-plant?

**Question:** Why don't I just apply the whole year's worth of Nitrogen at pre-plant and not risk stressing the corn plants?

**Answer:** The management of nitrogen can mean the difference between great yields and great losses of profit. If all of the nitrogen that is needed by a plant is applied at or before planting, there is a great risk that the nitrogen will be lost to the environment and not used by the corn plants. Loss of nitrogen in the soil will happen every year due to weather and other variable conditions. Minimizing those losses by splitting the application into two applications is vital to controlling the amount of lost nitrogen. Split applications also provide an opportunity to provide more nitrogen to plants that do not have enough nitrogen for optimal growth.

Recent university studies have shown that side-dressing nitrogen can be one of the biggest factors in yield improvement: [http://news.aces.illinois.edu/news/greater-additive-management-effects-key-reducing-corn-yield-gaps](http://news.aces.illinois.edu/news/greater-additive-management-effects-key-reducing-corn-yield-gaps)
**Question:** Does OptRx account for nitrogen available in the soil before side-dressing?

**Answer:** Yes. OptRx allows growers to enter known nitrogen credits so the algorithm can take into account the existing nitrogen levels. Nitrogen can come from a previous nitrogen application or organic material in the field. For example, if a plant is growing in a high organic matter soil or a soil that has an abundance of pre-plant nitrogen, the corn plant will typically be a taller healthier looking plant. OptRx senses this and applies less nitrogen because the plant shows little to no stress. If a plant is growing in a low organic matter area or has been in soils saturated long enough to cause denitrification, the plant will often be a smaller weaker looking plant. OptRx senses this and applies more nitrogen to compensate for the lack of nitrogen available to the plant.
Q: What if the low crop vigor in plants is due to a nutrient deficiency other than nitrogen?

**Question:** What if the low crop vigor in plants is due to a nutrient deficiency other than nitrogen?

**Answer:** If a plant is shorter and has less crop vigor than a reference value plant, OptRx will respond by applying more nitrogen. OptRx is a tool used to help with recommendations on one of the most vital and difficult nutrients to maintain, nitrogen. Other issues such as a lack of potassium, phosphorus, sulfur or even low or high soil PH must be in balance in order for corn to grow optimally and for OptRx to perform its best.
Q: What if nitrogen is not my limiting factor? Will OptRx detect factors like water or potassium?

**Question:** OptRx determines plant health, will it tell me plant stress is from water or potassium deficiencies?

**Answer:** There is a possibility that OptRx can incorrectly diagnose an unhealthy plant. Ag Leader recommends that users do regular soil sampling and maintaining agronomic best practices on the other nutrients to the best of their ability. Since nitrogen moves so easily with water and into the air, we are assuming that to be the cause of most variability in the field caused by plant nutrition.

That being said, if there is too much water that has caused the plants to appear "sick", there has been enough water to cause leaching and denitrification. Applying more N in these situations will likely be a big return on investment. If it is lack of water like in a sandy soil in the heat and dry spell of the summer, an extra shot may not help here. If you are familiar with this area of the field, take over for OptRx and switch to manual to apply a flat rate in this spot of your choosing.
Q: Does dew/water affect the crop sensor readings?

**Question:** Does dew/standing water affect crop sensor readings?

**Answer:** Yes, it will have a minimal affect. Wait for leaves to dry or perform a separate calibration with wet conditions. Keep an eye on the recommended rates as conditions dry and revert to the dry calibration as soon as possible.
Q: Does the temperature of the day affect the VI readings?

Question: Does the temperature of the day affect the crop's VI readings?

Answer: Yes. In summer's intense heat, the plant's leaves will start to roll and respiration/photosynthesis will slow down. This can significantly affect the sensor's readings. A user can continue to operate in these conditions if they re-calibrate to compensate for this plant behavior.
Q: What does OptRx do when I enter variable seeding rate zones?

**Question:** How does OptRx account for variable rate seeding zones?

**Answer:** The sensor doesn't know anything about the variable rate seeding in that field. Typically, variable rate seeding is directed by yield environments and a lot of times, nitrogen availability in those environments has a large bearing on why that area yields higher or lower than other regions. Higher populations go in more productive soils and where there tends to be more water availability. There is naturally less need for additional nitrogen except when we put more seeds in that zone by VR seeding. If VR seeding was done right, the plants shouldn't be stressed beyond what you would normally see, but the sensors may notice increased vegetation. This would be viewed as "healthier" plants. OptRx may call for less N on regions where there may be higher demand and work in the same way except opposite in areas where there are few plants. Fewer plants that are stressed results in OptRx thinking it should apply more than it needs to in reality.

What to do? Here are some suggestions:

High population zones - Assume these zones are going to be read as the least stressed regions. Evaluate the season so far and potentially set your minimum rate slightly higher than you would normally to make sure you adequately feed those additional plants.

Low population zones - Assume these zones are going to be read as the most stressed areas. Evaluate the season so far and set your maximum rate potentially lower than you would normally to make sure you aren't overcorrecting the stress in a condition with fewer plants.
Q: How does OptRx define plant health?

**Question:** How do OptRx Crop Sensors define plant health?

**Answer:** OptRx Crop Sensors pulse light at 40,000 Hz to detect raw plant vigor. The raw plant vigor feedback is reflected back to the sensor then the NDRE algorithm uses a combination of NIR and RedEdge measurements to define the vegetative index (VI).

NIR looks at plant biomass while RedEdge focuses on evaluating Chlorophyll. Looking at these two factors, plants express stress by stunted growth and decreases in Chlorophyll efficiency.
Q: What switchbox/switch inputs can I use with the ISOBUS Liquid Control Module?

**Question:** What switchbox/switch inputs can I use with the ISOBUS Liquid Control Module?

**Answer:** There are many available options for switch input with the ISOBUS liquid control module. Operators can use the 10 section Ag Leader CAN switchbox, the Auxiliary Input module to tie into OEM switches, or the ISO WSM switchbox. The Ag Leader CAN switchbox can only be used with Ag Leader displays. The same goes for using the Aux Module and OEM switch cable. When using a non-Ag Leader display (e.g. Pro700, 2630, etc.), you will need to use the ISO WSM Switchbox.

![The Ag Leader ISO WSM Switchbox](image)

Q: What switchbox/switch inputs can I use with the ISOBUS Liquid Control Module? 105
Q: What parts will I need to consider when installing the ISO module on a machine with a non-Ag Leader VT compatible display?

**Question:** What parts will I need to consider when installing the ISO module on a machine with non-Ag Leader UT/VT compatible display?

**Answer:** A switchbox rail mounting kit, module 3rd party unlock, any cabling/IBBC hardware from the vehicle manufacturer to get the vehicle up to ISOBUS spec from the display to the IBBC breakaway. The non-Ag Leader display should already be connected to the tractors ISO connection. If the tractor does not have the IBBC connection, then the customer will need to contact that manufacture to make it ISO ready. The Ag Leader retrofit kit will not work with other displays.

Content last reviewed on: 11/16/16
Reviewed by: JW
Q: When should I use the ISOBUS retrofit kit? The Power/Data cable option?

**Question:** When should I use the ISOBUS retrofit kit? The Power/Data cable option?

**Answer:** The ISOBUS retrofit kit can be used with an Ag Leader display to bring the non-ISO vehicle up to spec for use with any ISO implement.

The power/data cabling is an affordable option for customers wanting to control an Ag Leader ISOBUS module with an Ag Leader display. This is typically used for pull behind machines when the modules are on the implement. If the modules are mounted in the cab, like a self-propelled machine, then the CAN B to ISO cable would just be needed. Again, the power/data cabling option is only compatible with an Ag Leader display.
Q: Why is my vehicle driving straight but parallel to my guidance line? My display is showing the machine is consistently offline on the display light bar but my machine never drives over to the guidance line.

**Question:** Why is my vehicle driving straight but parallel to my guidance line? My display is showing the machine is consistently offline on the display light bar but my machine never drives over to the guidance line.

**Answer:** When a SteerCommand, GeoSteer or ParaDyme steering system is driving along beside the guidance line and will not steer to the line, the first item to check is the wheel angle sensor.

- For SteerCommand, check out the System log and look for “Curvature Bias Warning” message. This indicates a WAS, calibration, or realignment issue. Follow this link for more info.
- For SteerCommand, GeoSteer, and ParaDyme, a Zero Curvature test can be performed to verify the current calibration of the wheel angle sensor. The Zero Curvature test is accessed by entering the Autosteer Setup screens and pressing the Steering Components button, followed by the Wheel Angle Sensor selection on the right as shown below:

![Steering Components](image)

In a zero curvature test the steering controller will attempt to steer the machine straight ahead solely based off the wheel angle sensor counts from the initial calibration. The steering system will put the machine's wheels at the wheel angle sensor reading that was recorded as “centered wheels” during the auto calibration. The test will determine if the machine deviates off a straight line, based on the GPS position travel, while holding the wheels at the previously calibrated wheel angle sensor value. If there is deviation off the straight line, the test will show a recalibration is suggested.

See this article for more information on troubleshooting wheel angle sensor issues.

Possible causes for recalibration needed on wheel angle sensor:
- Loose or bent wheel angle sensor brackets

Q: Why is my vehicle driving straight but parallel to my guidance line? My display is showing the machine is...
· Loose or bent wheel angle sensor rods
· Failing wheel angle sensor potentiometer
· Loose or worn vehicle steering components
· Adjustment/movement of the sensor since calibration

After the possible causes have been checked and corrected, run through the auto calibration and the machine should acquire the line with the new wheel angle sensor calibration.

Content last reviewed on: 6/4/19
Reviewed by: JW
Q: How do I interpret the Tilt Zero calibration error with SteerCommand, Ontrac3, or GeoSteer?

This article was created to better understand and interpret the Tilt Zero Calibration Error users can experience during the Tilt Zero portion of the vehicle calibration. The tilt zero calibration error dialog has been improved to include how far off (in degrees) the orientation is given the roll or pitch.

1. Upon failing the Tilt Zero calibration with ECU-S1 or GCU, a more informative calibration error dialog will be displayed. The information displayed in this prompt will change depending on the ECU orientation defined versus the actual orientation of the ECU. The image below is used as a reference to help users interpret the error.

2. This message displays exactly how far off (in degrees) the user defined orientation is from the actual ECU orientation.
   a. The user entered orientation must be within +/- 3 degrees of the actual orientation.
   b. Roll = If sitting in the seat of tractor, this would be the rotation left to right (think "barrel roll").
   c. Pitch = If sitting in the seat of the tractor, this would be the incline front to back.

3. For this instance, we will assume that the ECU is mounted as X=0, Y=180, Z=0 (Cables to the left, and lights facing up, flat on the floor). Remember, the ECU orientation is always relative to the tractor, not the ECU.

   a. Roll -1.3 degrees (ok) = User defined X value is 1.3 degrees lower than the actual ECU orientation. If
user defined ECU orientation for the X axis is entered at 0, the actual X degree must be entered at 1.3 degrees. Since this also states "(ok)" that means that no adjustment is required as it already falls within the +/- 3 degree range allowance.

b. **Pitch -3.8 degrees (front is too low) =** User defined Y value is 3.8 degrees higher than the actual ECU orientation. If user defined ECU orientation for Y axis is entered at 180, the actual Y degree must be entered at 176.2 degrees.

c. **Other examples of ECU orientation Calibration Error message:**

- Roll -3.8 degrees (left is too low) = Increase X degree by 3.8 degrees.
- Roll +3.8 degrees (right is too low) = Decrease X degree by 3.8 degrees.
- Pitch -3.8 degrees (front is too low) = Decrease Y degree by 3.8 degrees.
- Pitch +3.8 degrees (rear is too low) = Increase Y degree by 3.8 degrees.

5. Once users have experienced this prompt, they will need to exit the auto calibration and edit the ECU orientation by selecting the "Manage Vehicle" icon, then highlight the vehicle profile and select "Edit Vehicle."

6. To ensure proper orientation adjustments, edit one measurement, X or Y, at a time. Once you have one measurement established and correct, that will make it easier to adjust and correct other measurements that may be incorrect.

The Tilt Zero Calibration Failure message is intended to assist users in correcting improper ECU setup and/or mounting. If you are not able to resolve the tilt calibration failure after editing incorrect measurement one by one, please contact technical support.

Last Reviewed
Date: 4/30/16   Reviewer: JW

Content last reviewed on: 4/30/16
Reviewed by: JW
Q: What happens if my Pressure and Return hoses are connected backwards on the hydraulic block?

**Question:** What happens if my Pressure and Return hoses are connected backwards on my Hydraulic Down Force valve block?

**Answer:** If the Pressure and Return hoses are connected backwards on the Hydraulic Down Force valve block, the hydraulic flow will be sent directly to the channels connected to the valve block. Once this happens, the actuators on all of the channels will be applying max supplemental force. On the screen of the controlling display, this may likely result in very high gauge wheel load. This will occur on all variations of valve blocks that Ag Leader supports.

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Content last reviewed on: 3/30/16
Reviewed by: SSW
Q: How can I get a cap for my 4000724 Implement Cable?

Question: My implement cable hangs out the back window of my tractor and I want to protect the connector from mud, dust and the elements when the implement is not connected. What can I do?

Answer: The 4000483 Implement Terminator Plug is available for these purposes.

4000483 Terminator:
Q: Do I need a CAN Implement Switch Module for Each Implement Switch?

**Question:** Do I need a CAN Implement Switch Module for each Implement Switch on the planter?

**Answer:** Ag Leader recommends it each switch have its own module. A single module can be used with multiple switches with additional extensions and tee cables, but having a module for each switch aids in the diagnostic/troubleshooting process; as well as makes for a cleaner, simpler install.

Content last reviewed on: 6/30/16
Reviewed by: SSW
What do I need in order to use DisplayCast?

Requirements:

- AgFiniti Account - visit [www.agfiniti.com](http://www.agfiniti.com) to create an account.
  - Users must login on InCommand display with AgFiniti account username/password
- AgFiniti Essentials License
  - This is a yearly license
  - Up to 3 displays per license
- DisplayCast feature unlock
  - Unlock entered via InCommand display
  - On InCommand display, select Setup>Console>Features>DisplayCast
- Active internet connection
  - 3G or faster data speed suggested for best performance
- InCommand display using firmware v2.2+
  - Note: For best results, always update all displays in use to the latest display firmware.

For additional information and troubleshooting help with DisplayCast, follow [this link](#).

Content last reviewed on: 10/4/18
Reviewed by: JW
Getting Started With DisplayCast

Before logging into AgFiniti on each display to use DisplayCast, there is a list of best practice recommendations to make sure initial setup and sync goes smoothly. The following recommendations are the best practices to perform either before or during the initial DisplayCast sync. For more information about DisplayCast setup, requirements, and settings, see the InCommand Display User Guide.

Best Practices for Initial DisplayCast Setup/syncing:

1. Upgrade display to latest firmware.
2. Clear any non-essential information
   - Ex: old guidance lines, configurations, management items, etc
   - Note: The most recent information will automatically sync and update across all displays that are using DisplayCast.
3. Utilize a non-cellular, unlimited data internet connection
   - Ex: Home or shop Wi-Fi
4. Sync only one display at a time
   - Login to AgFiniti on display A and complete sync prior to logging display B, C, D, etc. into AgFiniti. After display A syncs, change DisplayCast setting to manual to allow display B to sync data.
   - Continue to only allow one display to sync at a time by changing the previously synced display to "Manual Only," until all displays have synced data.
5. After initial sync of each individual InCommand display, start back with the 1st display and sync all displays one at a time again, in the same order as the initial sync
6. This will ensure that all information from all displays are on each of the displays within the operation
   - Change the DisplayCast setting back to "Automatic" and ensure all displays have current data/information.

If data is not syncing properly on initial setup (due to multiple displays attempting to sync at the same time):

1. Upgrade all displays in use to latest firmware.
2. Change DisplayCast setting to "Manual Only" on all displays logged into AgFiniti.
   - Manual DisplayCast setting will only sync data when prompted by the user.
3. On display A select the "Sync" button to manually sync data from this display to AgFiniti cloud.
4. After display A sync is complete, move to display B and select the "Sync" button to manually sync data from this display to AgFiniti cloud.
5. Continue to manually sync each display, one at a time to ensure DisplayCast data is syncing properly.
6. After manually syncing each display data one at a time, verify that all data is the same on each individual display.
7. Change each DisplayCast setting back to the desired setting for the customer's operation (Automatic, Manual, Off).

Figure 1 - DisplayCast setting set to "Manual" shown below. The "Sync" button to begin manual sync is also pictured below.
For additional information and troubleshooting help with DisplayCast, follow this link.

Content last reviewed on: 3/10/17
Reviewed by: JW
ISO Liquid Common Questions

How does the container level work?

The container starts out as blue and then turns yellow when it gets empty.

Does the nozzle picture change on the screen?

The nozzles show up as blue like there is water coming out. The outside part of the nozzle will show up as red when they are off.

Will the main page show up the number of sections?

When the configuration is setup, it will show the number of section on the screen. If there are 24 sections on the sprayer, it will have a picture of the 24 sections on the screen.

Does the color on the left side of the screen show the droplet size?

Yes. The dial on the side will match up with what nozzles that are currently on the sprayer. The colors match up with the ISO standard of what the droplet size is.

Does the conversion factor need to be changed when the product changes?

Yes.

Is a manual speed needed to make the prime boom button work?

No. A manual speed is not needed.

If the product is NH3, does it show the % in the tank?

Yes. It will show the % in the tank for NH3 and it will show gallons when it is liquid.

Will the VT screen record the data?

No. The data is only being recorded through the task controller function.

What valves will work with the prime button feature?

The prime button will work with PWM valves and the pump servo.

When making a configuration, what is the red circle on the section widths?

The red circle is for disabling a section in the configuration.

Do the offsets transfer over to the task controller configuration?

The offset do not transfer over at this time.

What is the maximum amperage per pin on the Swath Module?

The max amperage per pin is 3amps. The entire module cannot exceed the 30amp load based on the fuse Ag Leader recommends on the battery cable.

What is the maximum Number of Sections that can be controlled?
Up to 36 sections using 3 Ag Leader Liquid Swath Control Modules
Up to 144 sections with Non Ag Leader ISO ECU's. This is dependent on the maximum number of sections
the Non Ag Leader ECU can control up to 144 sections.

Content last reviewed on: 1/6/17
Reviewed by: JW
Q: Why are AGSETUP, AGDATA, display backup, log files, vehicle profiles, and other data taking a long time to export from my display?

Causes of longer export times when exporting to the USB flash drive are below:

- Issue with USB flash drive device
  - Try a different USB flash drive device (appropriate data size for corresponding display in use)
- Large amounts of data being exported
  - Export data on regular basis to have smaller amounts of data exported
  - Export data via AgFiniti

Content last reviewed on: 1/6/17
Reviewed by: LM
Q: I am getting a 0 bushel per acre yield reading, what should I look at?

**Question:** I am getting 0 bushels per acre yield reading, what should I look for?

**Answer:** The first item to look at is elevator speed. Ag Leader yield monitoring systems need to register elevator speed of 250 to 650 RPMs in order to record grain yield. If the display is not reading elevator speed, look into the elevator speed sensor or the cabling going from the speed module to the sensor. Also check in the display that pulses/rev value is not 0. Further elevator speed troubleshooting can be found here.

If elevator speed is registering within the threshold, another factor is the vibration calibration. Check the C numbers for the grain grain calibration, On displays/Firmware older than InCommand v2.5; C1 should be greater than -100 (e.g. -80, -20) and C2 through C11 should not be 0. If C1 is less than -100, perform the vibration calibration again. If C1 is still less than -100, ensure the flow sensor is mounted properly. On InCommand v2.5+ C1 is not affected by the vibration calibration. Refer here for troubleshooting vibration calibration tips.

If the C numbers look to be fine, the next consideration is paddle clearance. Paddle clearance is the distance from the tip of a paddle closest to the deflector plate in the clean grain elevator. This value must be within 3/8" to 5/8" for most combine models and 1 1/2" for Lexion combines. Also make sure the deflector, impact plates are installed correctly and in fine operating condition. Here is a cutaway showing the top of the clean grain elevator:

![Diagram of clean grain elevator](image_url)
Q: What crop types are supported for Advanced Seed Tube Monitoring

Supported crop types will differ between the Integra and InCommand1200 displays.

**Answer:** Advanced Seed Monitoring supported crop types for the **InCommand1200** are:
- Corn
- Cotton
- Sugar Beets
- Cucumber
- Vegetable - generic vegetable crop type
- Sorghum
- Popcorn
- Potatoes

**Answer:** Advanced Seed Monitoring supported crop types for the **Integra** are:
- Corn
- Cotton
- Sugar Beets
- Cucumber
- Vegetable - generic vegetable crop type
- Sorghum

Q: What crop types are supported for Advanced Seed Tube Monitoring
Q: What crop types are supported for Advanced Seed Tube Monitoring?
***NOTE*** - Advanced Seed Monitoring values will be displayed and recorded as long as the target population is within the correct range. The correct range is dependent on the row spacing, and can be viewed in the Advanced Seed Monitoring quick reference sheet, page 4. [Example: The target population range for a 30 inch row planter is between 20,909 sds/acre and 69,696 sds/acre]

Content last reviewed on: 6/12/18
Reviewed by: AMJ
Q: How can I see my SmartFirmer data on SMS 19.0 if it was read into a previous version of SMS?

Question: How can I see my SmartFirmer data on SMS 19.0 if it was read in to a previous version of SMS?

Answer: Users will need to delete the planting data from the Management Tree and then reprocess the data by going to Services > Reprocess Files. It is recommended to create a backup prior to deleting the data from the Management Tree.

Content last reviewed on: 11/28/18
Reviewed by: CW