

John Deere G5 CommandCenter™ Display Software Version: 11.2.4067-XXX



JOHN DEERE

OPERATOR'S MANUAL

**G5 CommandCenter™ Models: G5CS,
G510, G512**

OMPFP27571 ISSUE C6 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

John Deere Ag Management Solutions

Introduction

Foreword

THANK YOU for purchasing a John Deere product.

READ THIS MANUAL carefully to learn how to operate and service your product correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your product may also be available in other languages. See www.techpubs.deere.com (Ag&Turf/JDPS), www.johndeereotechinfo.com (C&F), or your John Deere dealer to order.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your product and should remain with the product when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the machine or implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I. N.) in the Operator's Manual. Accurately record all the numbers to help in tracing the product should it be stolen. Your dealer also needs these numbers when you order parts. File a backup of the identification numbers in a safe location off the machine or away from the product.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused or modified

to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied.

If you are not the original owner of this product, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

DX,IFC,PRE-19-24SEP25

John Deere Is at Your Service



TS201—UN—15APR13

Customer satisfaction is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts, and service:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.
- **John Deere replacement parts, repair services, and information for maintenance or repair are available. For more information, please visit deere.com or deere.ca.**

DX,IFC,JDS-19-30SEP25

Trademarks

Trademarks	
AutoTrac™	Trademark of Deere & Company
CommandCenter™	Trademark of Deere & Company
FurrowVision™	Trademark of Deere & Company
GreenStar™	Trademark of Deere & Company
iGrade™	Trademark of Deere & Company
iPad™	Trademark of Apple
iTEC™	Trademark of Deere & Company
JDLINK™	Trademark of Deere & Company
John Deere	Trademark of Deere & Company
RowSense™	Trademark of Deere & Company
SeedStar™	Trademark of Deere & Company

Introduction

Service ADVISOR™	Trademark of Deere & Company
StarFire™	Trademark of Deere & Company
Voyager®	Trademark of ASA Electronics

ch177nn,1658757772656-19-23MAY25

Display Usage and Exposure

IMPORTANT: Do not power wash or submerge the John Deere G5e CommandCenter Displays.

John Deere G5e CommandCenter Displays and associated connectors, when connected or plugged, are IP65 water and dust resistant to withstand conditions typically found in agricultural applications. The display can be used in an open or closed cab. Extreme conditions should be avoided, for example, power washing or submersing the display. Remove the display from the machine when not in use to avoid extended periods of exposure to the elements.

ch177nn,1676275764495-19-04MAR25

John Deere Technical Information Bookstore

Product functionality may not be fully represented in this document due to product changes occurring after time of printing. Read the latest Operator's Manual prior to operation. To obtain a copy, see dealer or visit techpubs.deere.com.

CZ76372,000071F-19-04AUG25

Onscreen Operator's Manual

The G5 Display Operator's Manual is available on the display in the Help Center application. Refer to Onscreen Help in the Display Introduction section.

AL70325,000063C-19-04MAR25

Download Software Updates

Ensure display is updated with latest software. Software updates are available for download from:

<https://my.deere.com/software-downloads/software-manager/>

CZ76372,000071E-19-17JUN14

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Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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Safety

Recognize Safety Information



T81389—UN—28JUN13

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

DX,ALERT-19-03OCT22

Understand Signal Words



⚠ WARNING

⚠ CAUTION

TS187—19—30SEP88

DANGER; The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION; The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-05OCT16

Follow Safety Instructions



TS201—UN—15APR13

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ-19-01AUG22

Practice Safe Maintenance



TS218—UN—23AUG88

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing away from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine and secure the machine. If equipped, remove the key, disconnect the battery, and allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

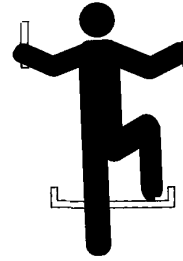
On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.

Falling while cleaning or working at height can cause serious injury. Use a ladder or platform to easily reach each location. Use sturdy and secure footholds and handholds.

DX,SERV-19-20JAN26

Use Steps and Handholds Correctly



T133468—UN—15APR13

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

DX,WW,MOUNT-19-12OCT11

Handle Electronic Components and Brackets Safely



TS249—UN—23AUG88

Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

If installing or servicing a RTK base station on a tower or other tall structure, use a certified climber.

If installing or servicing a global positioning receiver mast used on an implement, use proper lifting techniques and wear proper protective equipment. The mast is heavy and can be awkward to handle. Two people are required when mounting locations are not accessible from the ground or from a service platform.

DX,WW,RECEIVER-19-24AUG10

Use Electronic Display Properly

Electronic displays are secondary devices intended to

aid the operator in performing field operations, increase comfort and provide entertainment. Displays offer a wide range of functionality, are used in many different machine system applications and can be used with other secondary devices such as handheld electronic devices.

A secondary device is any device that is not required to operate your machine for its primary use. The operator is always responsible for safe operation and control of the machine.

To prevent injury while operating the machine:

- Position the display according to the installation instructions. Ensure that the device is secured and does not obstruct the driver's view or interfere with the machine operating controls.
- Do not become distracted by the display. Stay alert. Pay attention to the machine and surrounding environment.
- Do not change settings or access any functions that require prolonged use of the display controls while machine is moving. Stop the machine in a safe location and place in park position before attempting such operations.
- Never set the volume so high that you cannot hear outside traffic and emergency vehicles.

To promote safe operation, certain functions of displays may be disabled unless the machine movement is restricted and/or has been placed in the park position. Overriding this safety feature may violate applicable law and can result in damage, serious injury, or death.

Only use available display functionality when conditions permit you to do so safely and in accordance with instructions provided. Always observe safe driving rules, state, or local laws and traffic regulations when using any secondary device.

DX,ELEC,DISPLAY-19-13JAN15

Stay Clear of Harvesting Units



ES 118 704

ES118704—UN—21MAR95

Cutterbar, auger, reel and feed rolls cannot be completely shielded due to their function. Stay clear of

these moving elements during operation. Always disengage main clutch, shut off engine and remove key before servicing or unclogging machine.

FX,CUT-19-21DEC90

Operating the Tractor Safely

You can reduce the risk of accidents by following these simple precautions:

- Use your tractor only for jobs it was designed to perform, for example, pushing, pulling, towing, actuating, and carrying a variety of interchangeable equipment designed to conduct agricultural work.
- Operators must be mentally and physically capable of accessing the operator's station and/or controls, and operating the machine properly and safely.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/ attachments, such as front loaders.
- Follow the instructions outlined in the operator's manual of any mounted or trailed machinery or trailer. Do not operate a combination of tractor-machine or tractor-trailer unless all instructions have been followed.
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.
- Stay clear of the three-point linkage and pickup hitch (if equipped) when controlling them.
- Keep hands, feet, and clothing away from power-driven parts.

Driving Concerns

- Never get on or off a moving tractor.
- Complete any required training prior to operating vehicle.
- Keep all children and nonessential personnel off tractors and all equipment.
- Never ride on a tractor unless seated on a John Deere approved seat with a seat belt.
- Keep all shields/guards in place.
- Use appropriate visual and audible signals when operating on public roads.
- Move to side of road before stopping.
- Reduce speed when turning, applying individual brakes, or operating around hazards on rough ground or steep slopes.

- Stability degrades when attached implements are at high position.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.
- Regularly clean fenders and fender valances (mud flaps) if installed. Remove dirt before driving on public roadways.

Heated and Ventilated Operator's Seat

- An overheated seat heater can cause a burn injury or damage to the seat. To reduce the risk of burns, use caution when using the seat heater for extended periods of time, especially if the operator cannot feel temperature change or pain to the skin. Do not place objects on the seat, such as a blanket, cushion, cover, or similar item, which can cause the seat heater to overheat.

Towing Loads

- Be careful when towing and stopping heavy loads. Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control.
- Consider the total weight of the equipment and its load.
- Hitch towed loads only to approved couplings to avoid rearward upset.

Parking and Leaving the Tractor

- Before dismounting, shut off SCVs, disengage PTO, stop engine, lower implements/attachments to ground, place implement/attachment control devices in neutral, and securely engage park mechanism, including the park pawl and park brake. In addition, if the tractor is left unattended, remove key (if equipped) and secure tractor.
- Leaving transmission in gear with engine off will NOT prevent the tractor from moving.
- Never go near an operating PTO or an operating implement.
- Wait for all movement to stop before servicing machinery.

Common Accidents

Unsafe operation or misuse of the tractor can result in accidents. Be alert to hazards of tractor operation.

The most common accidents involving tractors are:

- Tractor rollover
- Collisions with motor vehicles
- Improper starting procedures
- Entanglement in PTO shafts
- Falling from tractor

- Crushing and pinching during hitching

DX,WW,TRACTOR-19-25NOV25

Operate Guidance Systems Safely

Do not use guidance systems on roadways. Always turn off (disable) guidance systems before entering a roadway. Do not attempt to turn on (engage) a guidance system while transporting on a roadway.

Guidance systems are intended to aid the operator in performing related use case operations more efficiently. The operator is always responsible for the path and safe operation of the machine. Guidance systems do not automatically detect or prevent collisions with obstacles, machines, or other vehicles.

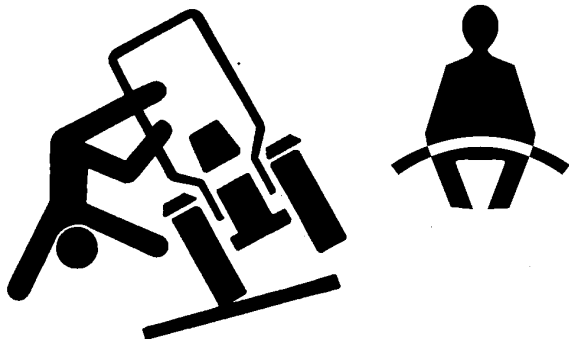
Guidance systems include any application that automates machine steering. This includes, but may not be limited to, AutoTrac, iTEC, AutoTrac Turn Automation, AutoTrac Implement Guidance (passive), AutoTrac Universal, AutoTrac Controller, AutoTrac RowSense, and Machine Sync.

To prevent injury to the operator and bystanders:

- Never get on or off a moving machine.
- Verify that the machine, implement, and guidance system are set up correctly.
 - If using iTEC, AutoTrac Turn Automation, or AutoTrac Implement Guidance (passive), verify that accurate boundaries have been defined.
 - If using Machine Sync, verify that the follower's home point is calibrated with sufficient space between the machines.
- Remain alert and pay attention to the surrounding environment.
- Take control of the steering wheel, when necessary, to avoid field hazards, bystanders, equipment, or other obstacles.
- Stop operation if poor visibility conditions impair your ability to operate the machine or identify people or obstacles in the machine path.
- Consider field conditions, visibility, and machine configuration when selecting machine speed.

ch177nn,1660716404585-19-23MAY24

Use Seat Belt Properly



TS1729—UN—24MAY13

Avoid crushing injury or death during rollover.

This machine is equipped with a rollover protective structure (ROPS). USE a seat belt when you operate with a ROPS.

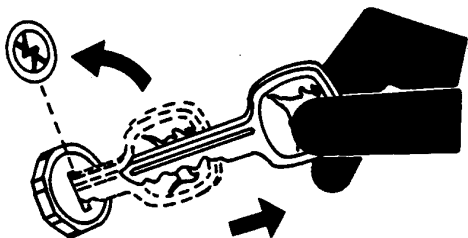
- Hold the latch and pull the seat belt across the body.
- Insert the latch into the buckle. Listen for a click.
- Tug on the seat belt latch to make sure that the belt is securely fastened.
- Snug the seat belt across the hips.

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with replacement parts that meet specifications for your machine.

DX,ROPS1-19-22AUG13

Park Machine Safely



TS230—UN—24MAY89

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and secure the machine. If equipped, remove the key before leaving the machine unattended.

- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.

DX,PARK-19-25NOV25

Instructional Seat



TS1730—UN—24MAY13

The instructional seat, if so equipped, has been provided only for training operators or diagnosing machine problems.

DX,SEAT,NA-19-22AUG13

Operate Implement Automation Systems Safely



PC13793—UN—25MAY11

Do not use implement automation systems on roadways. Always turn off (disable) implement automation systems before entering a roadway. Do not attempt to turn on (activate) an implement automation system while transporting on a roadway.

Implement automation systems are intended to aid the operator in performing field operations more efficiently.

The operator is always responsible for the machine path.

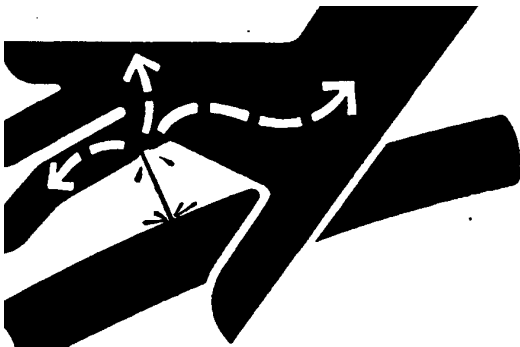
Implement automation systems include any application that automates implement movement. This includes, but may not be limited to, iGrade and Active Implement Guidance.

To prevent injury to the operator and bystanders:

- Verify the machine, implement, and automation systems are set up correctly.
- Remain alert and pay attention to the surrounding environment.
- Take control of the machine, when necessary, to avoid field hazards, bystanders, equipment, or other obstacles.
- Stop operation if poor visibility conditions impair your ability to operate the machine or identify people or obstacles in the machine path.

ch177nn,1660716425482-19-17AUG22

Avoid High-Pressure Fluids



X9811—UN—23AUG88

Inspect hydraulic hoses periodically—at least once per year—for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

In case of accidental skin injection, seek immediate surgical treatment.

DX,FLUID-19-05NOV25

Read Operator's Manuals for ISOBUS Controllers

In addition to GreenStar Applications, this display can be used as a display device for any ISOBUS Controller that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and control functions placed on the display are provided by the ISOBUS Controller and are the responsibility of the ISOBUS Controller manufacturer. Some of these functions could pose a hazard to either the operator or a bystander. Read the Operator's Manual provided by the ISOBUS Controller manufacturer and observe all safety messages in manual and on ISOBUS Controller product prior to use.

NOTE: ISOBUS refers to the ISO Standard 11783

ch177nn,1660716458058-19-17AUG22

Avoid Backover Accidents



PC10857XW—UN—15APR13

Before moving machine, be sure that all persons are clear of machine path. Turn around and look directly for best visibility. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.

DX,AVOID,BACKOVER,ACCIDENTS-19-30AUG10

Prevent Electrical Shock and Fires



PC12631—UN—04JUN10

Battery-powered equipment or other electric power sources produce an electrical shock, sparks, or arcs if a short circuit occurs. Electrical short circuits can reach temperatures high enough to burn people, or ignite or melt common materials.

To prevent injury from electrical shock, burns, or potential fire hazards, always disconnect battery power or other electric power source on equipment before installing or servicing:

- Remove ground (negative terminal [-]) battery clamp.
- Detach and remove battery.
- Switch off main battery or other electric power source.
- Unplug electric power source from equipment.

Understand and follow all local codes and regulations when installing electrical equipment.

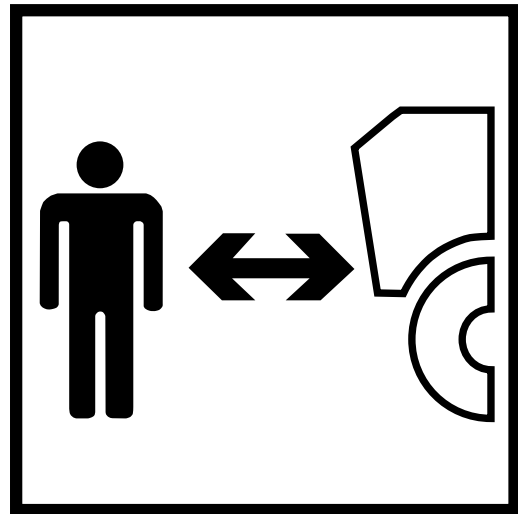
HC94949,0000487-19-27JAN14

- Keep away from all low-hanging electrical cables while operating or transporting machine.

HC94949,0000488-19-24JAN14

Proper Distance During Autonomous Operation

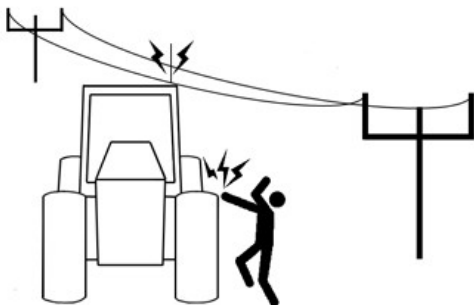
To initiate autonomy, the remote operator must be within 450 meters (1500 ft) of the machine and implement. There should be no person in the cab when autonomy is approved remotely. Operators and bystanders must be 16 m (50 ft) or more from machine and implement before approving autonomous operations. Once the machine and implement are operating autonomously, operators and bystanders should always remain 16 m (50 ft) or more away. Operators and bystanders should never be in the path of the machine and implement.



APY76278—UN—04AUG22

bvwmst,1656505908907-19-24FEB25

Avoid Electrical Power Lines



PC13658—UN—08NOV11

Machine antenna may be high enough to come in contact with low-hanging electrical cables. Avoid severe electrical shock injury:

Riding in the Machine During Autonomous Operation

If the operator chooses the Ride Along mode, the machine will require the operator to remain in the seat. Do not leave the seat or attempt to leave the operator station cab while the machine is in motion. The machine may stop suddenly and abruptly at any time. Make sure to wear the seat belt at all times while the machine is in motion, or injury may occur.

The system monitors the seat switch and enforces the operating mode. If the operator leaves the operator's seat while running autonomously, the machine stops, and autonomy turns off. The system shifts the transmission to Park, and the engine remains running.

Safety

There should be no person in the cab when autonomy is approved remotely.

ZID XK1X,1763035942608-19-13NOV25

Stopping the Autonomous Machine Safely

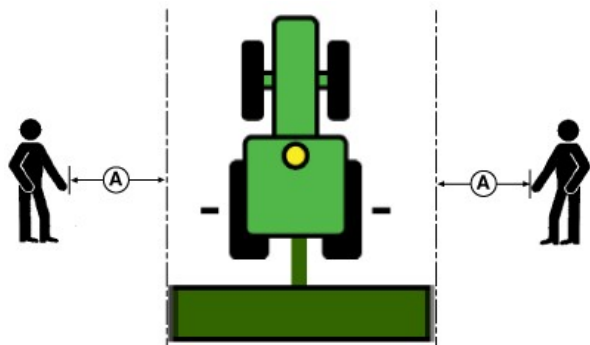
CAUTION: Avoid injury or death. Stay out of the equipment path and do not attempt to enter the operator station when autonomy is active. Seeing the perception cameras on the equipment does not mean that the perception system can or will detect a person.

• Machine in Motion

- Use Operations Center Mobile to stop the machine. This is the primary method of controlling the autonomous machine. It is the operator's responsibility to use a machine connected device to stop the autonomous machine.
- If the autonomous machine has lost connectivity to Operations Center, wait 15 minutes. After 15 minutes, the autonomous machine will stop and exit autonomy.
- If the autonomous machine must be stopped and there is no access to Operations Center, the following person or vehicle stop procedure may be used:

IMPORTANT: The future path and speed of the machine may change, especially in areas such as headlands, rolling hills, and similar terrain. If the machine is performing a headland turn or similar maneuver, it is advised to follow the walking procedure.

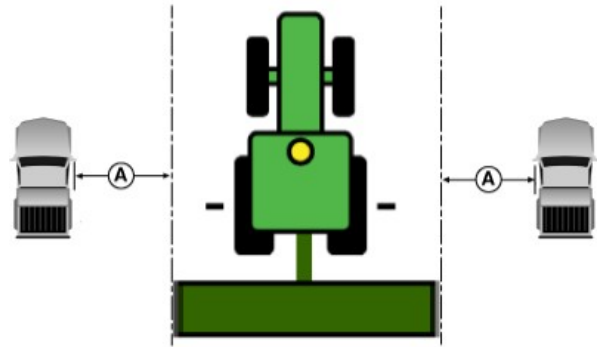
From within the field, cautiously approach either side of the machine either walking adjacent to the cab, or driving parallel to the cab in the same direction of travel as the machine, staying 2—4 m (6—13 ft) away from the equipment path until the machine stops. Wait for the amber lights, excluding beacons, to stop flashing before entering the cab.



PC662151N—UN—04JUN25

Person Stopping Machine When There Is Loss of Operations Center

A—Distance from Machine, 2—4 m (6—13 ft)



PC693485—UN—14NOV25

Vehicle Stopping Machine When There Is Loss of Operations Center

A—Distance from Machine, 2—4 m (6—13 ft)

NOTE: Amber lights may take up to 5 minutes to stop flashing

• Stopped Machine in Active Autonomous State:

If the machine is stopped in an active autonomous state (amber lights flashing, excluding beacons), cautiously approach either side of the machine adjacent or parallel to the cab. Stay 2—4 m (6—13 ft) away from the equipment path and wait for amber lights, excluding beacons, to stop before entering the cab.

NOTE: Amber lights may take up to 5 minutes to stop flashing.

ch177nn,1739532758280-19-02FEB26

Waste Electrical and Electronic Equipment



PC17530—UN—06AUG13

Products marked with the crossed-out wheeled bin symbol indicate electrical and electronic equipment that must not be disposed of as unsorted municipal or household waste.

Safety

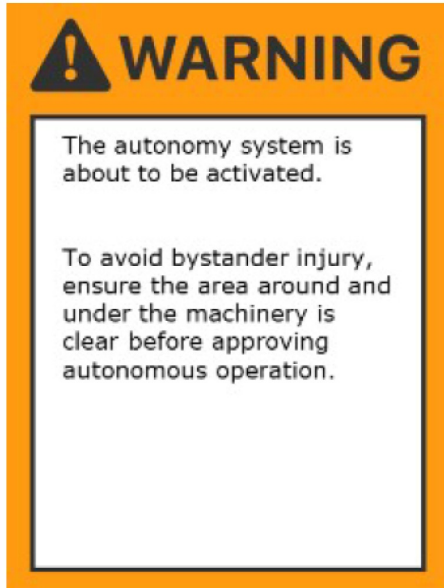
Send electrical and electronic equipment, accessories and packaging for environmental recycling.

HC94949,00007E8-19-16JUN15

Safety Signs

Autonomous Safety

This message indicates that the operator has initiated the process of transitioning the machine from manual operation to fully autonomous operation.



Warning

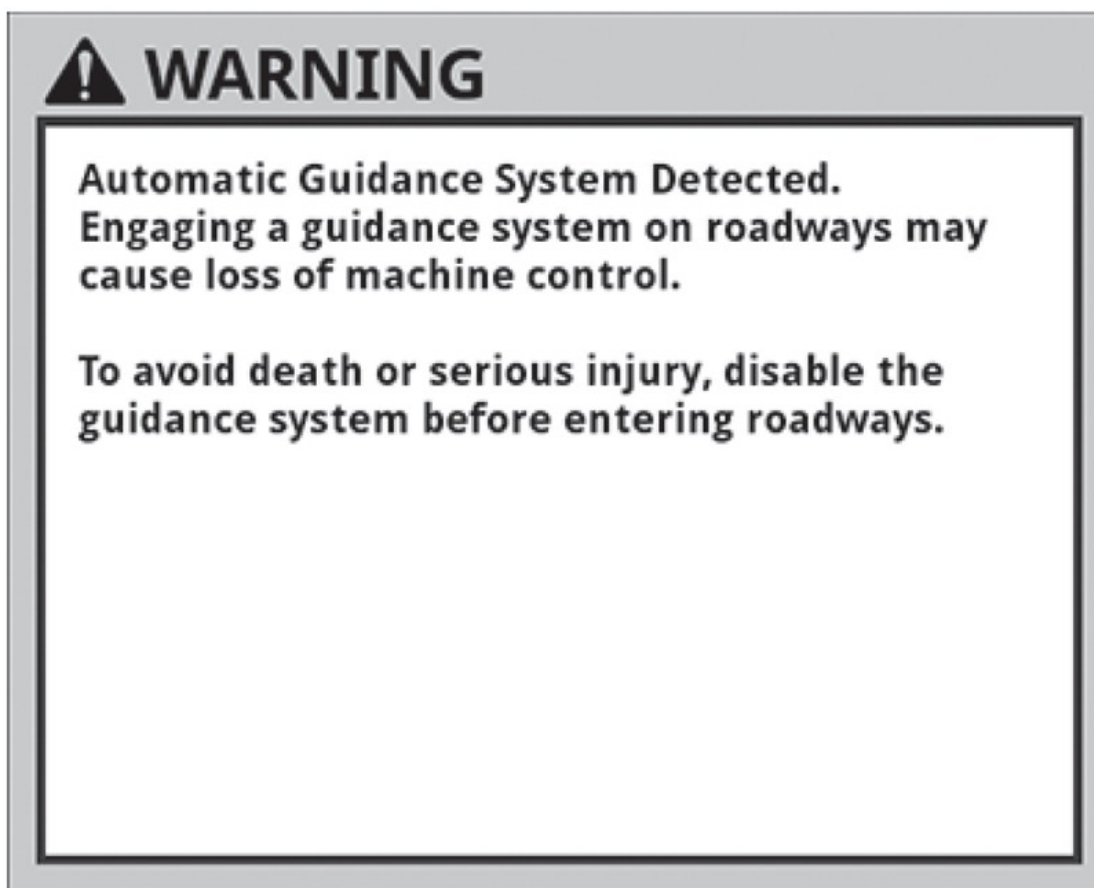
PC703789—19—27FEB26

NOTE: An autonomy transition warning message appears after pressing the Start Autonomy button in Operations Center Mobile.

NOTE: This is required to enter the autonomy active state of the system and hand over autonomous control to the machine.

bvwmst,1657202622886-19-27FEB26

Safety Warning — AutoTrac Detected

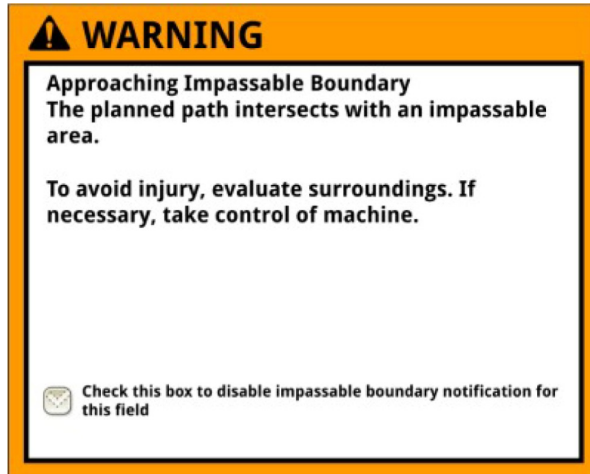


This message occurs during startup on machines with an automatic guidance system installed.

PC27620—19—29MAR22

ch177nn,1660716819242-19-17AUG22

Safety Warning — Impassable Boundary



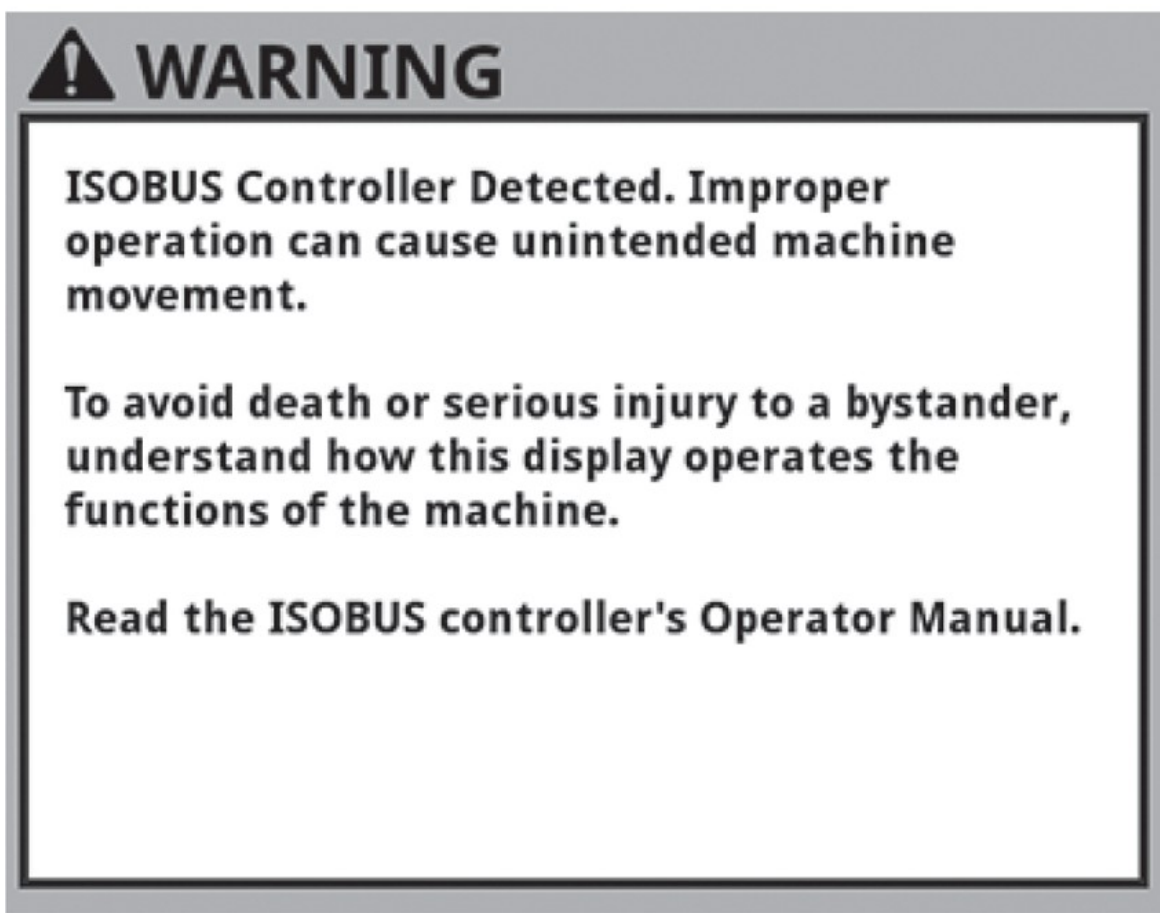
This message appears when the machine path intersects an impassable boundary while AutoTrac Turn Automation is active.

ch177nn,1738560303121-19-27FEB26

PC703797—19—27FEB26

AutoTrac Turn Automation

Safety Warning — ISOBUS Controller



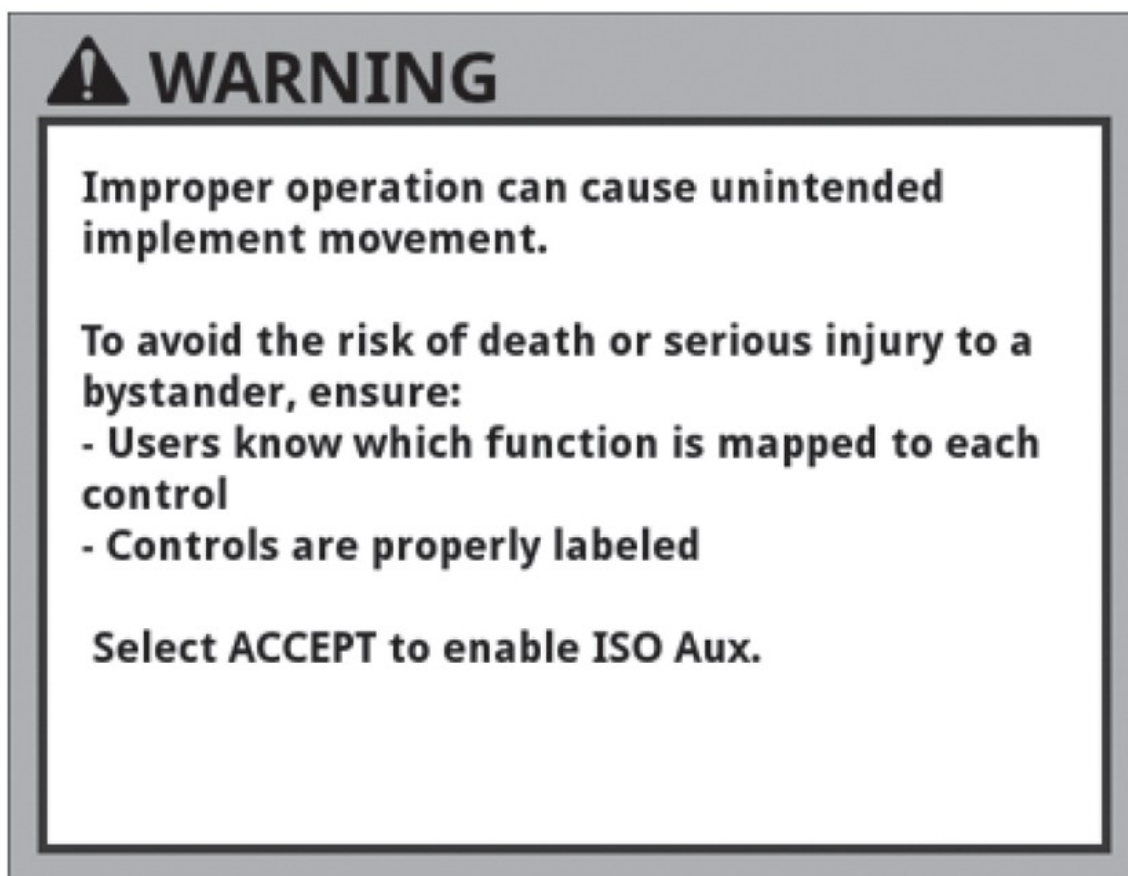
This message occurs when the system detects an ISOBUS controller. For more information, see Read

Operator's Manuals for ISOBUS Controllers in the Safety section.

PC27622—19—29MAR22

AL70325,0000563-19-19NOV25

Safety Warning — ISO Aux Improper Operation

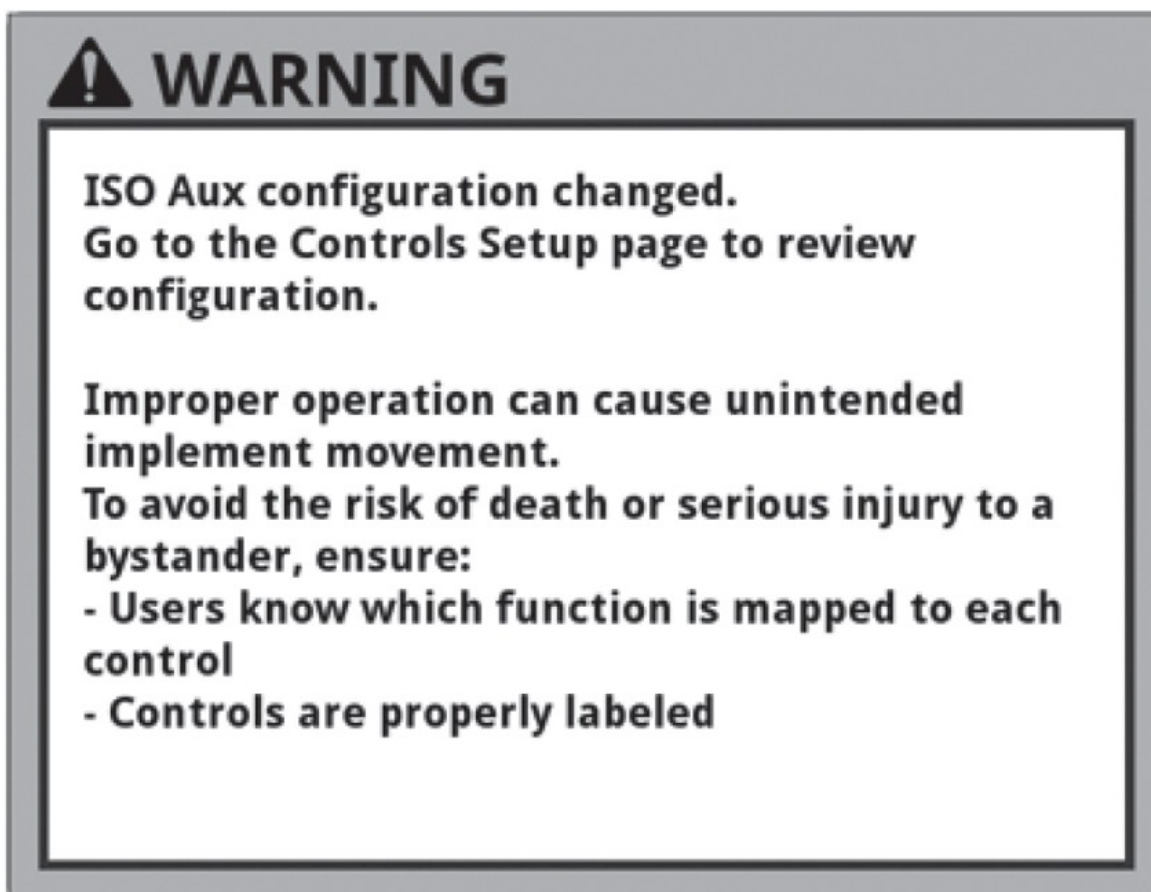


This message occurs when the operator enables ISO Aux control.

PC27623—19—29MAR22

AL70325,0000564-19-21OCT22

Safety Warning — ISO Aux Configuration



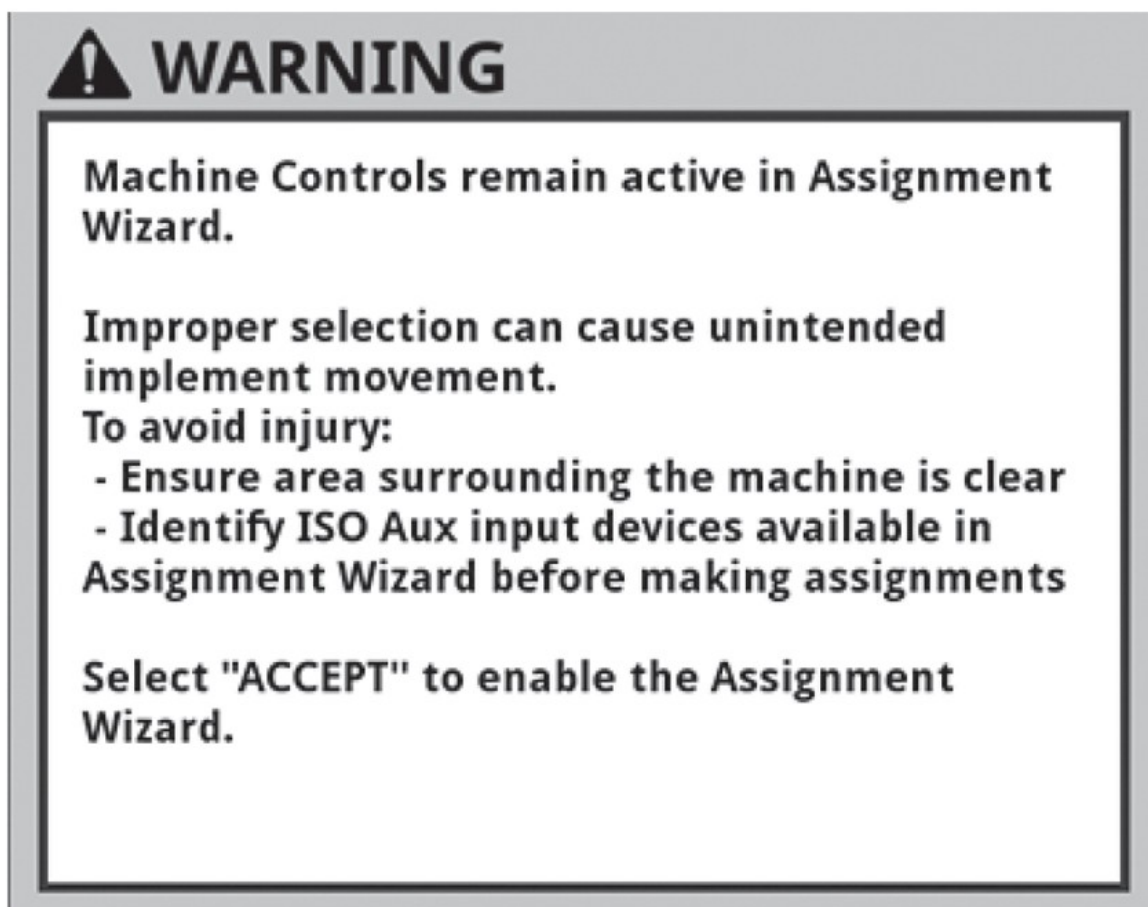
This message occurs when the system detects an ISOBUS controller with ISO Aux functionality, or the ISO Aux control configuration has been modified during run

time. For example, an additional input or implement has been added.

PC27624—19—29MAR22

AL70325.0000565-19-21OCT22

Safety Warning — ISO Aux Wizard

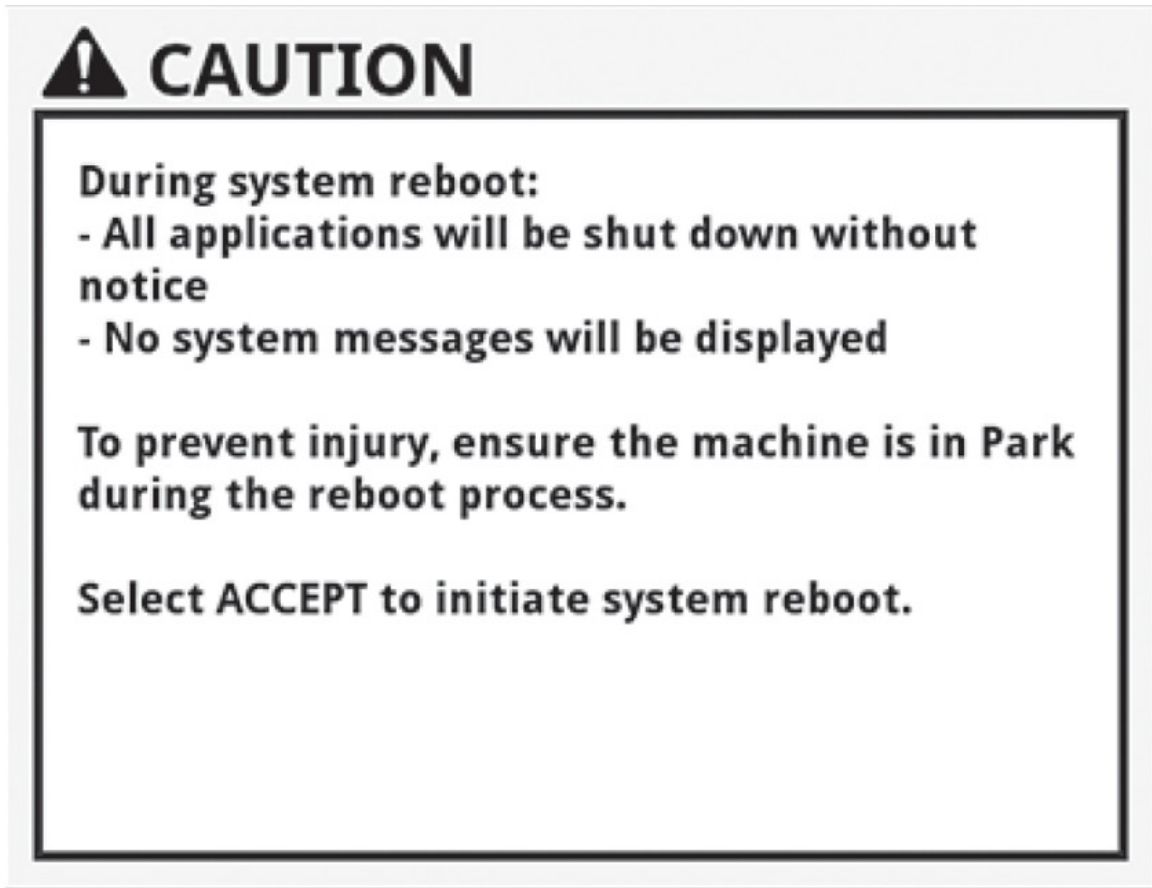


This message occurs when the display detects a compatible ISOBUS controller and joystick.

PC27901—19—29MAR22

AL70325,00005D5-19-03APR20

Safety Warning — System Reboot



This message occurs when the display encounters an error that requires a system reboot.

PC27625—19—29MAR22

AL70325,0000566-19-21OCT22

Safety Warning — Software Installation

**WARNING**

During software installation:

- All applications will be shut down**
- No system messages will be displayed**

To prevent injury, ensure the machine is in Park and maintain electrical power throughout the installation process.

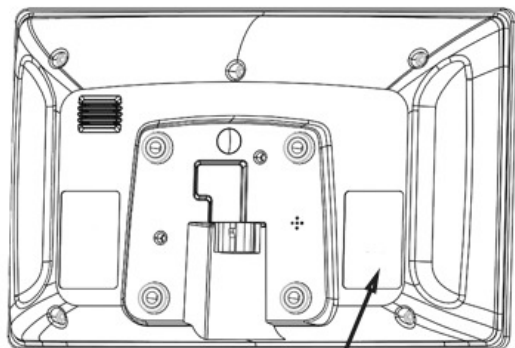
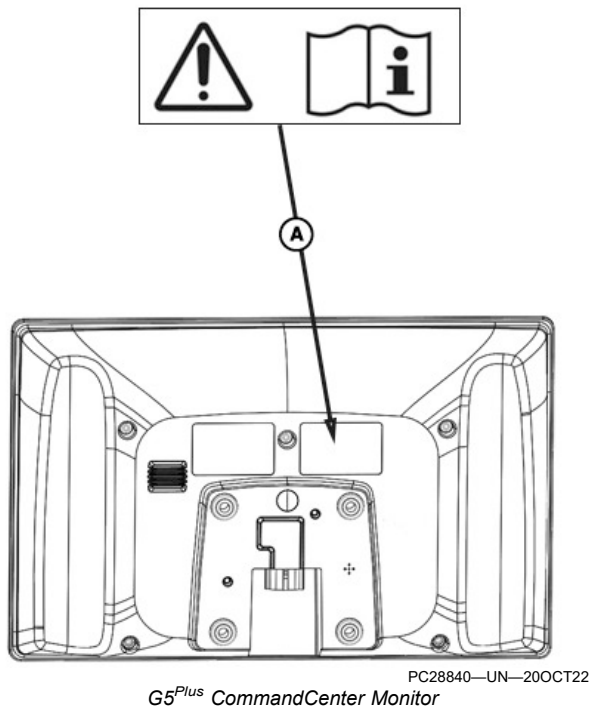
This message occurs when a software installation is started.

PC27626—19—29MAR22

AL70325,0000567-19-21OCT22

Safety Labels without Text

Safety Label Location



A—Safety Label Location

ct47125,1666283263903-19-20OCT22

Understanding the Safety Labels without Text



TCT005498—UN—11SEP12

On this device, safety signs are affixed which signify potential danger. The hazard is identified by a pictorial in a warning triangle. An Adjacent pictorial provides information on how to avoid personal injury. These safety signs, their placement on the equipment, and a brief explanatory text are shown in this Safety section.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator manual.

ct47125,1666286428449-19-03MAR25

Read Operator Manual



PC28680—UN—11MAY22

- This operator manual contains important information necessary for safe device operation.
- Carefully read operator manual before operating display. Observe all safety rules to avoid accidents.

ct47125,1666207682979-19-03MAR25

Disclosures

Model and Label Names

The model and label names of the hardware covered in this operator manual are:

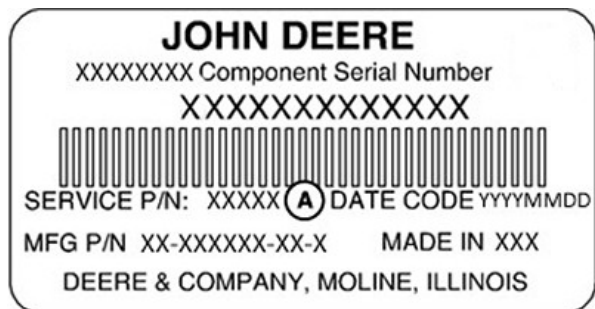
- G5CS - G5/G5^{Plus} Processor
- G510 - G5 Display
- G512 - G5^{Plus} Display

ct47125,1663856028059-19-10OCT22

Identify Date Code

Date code on the product label is shown using either of the following methods:

Method 1



PC28833—UN—11OCT22

Product Label Method 1



PC25149—UN—20DEC17

Date Code Method 1

- A—Date Code (Date of Manufacture)
 B—Year of Manufacture
 C—Month of Manufacture
 D—Day of Manufacture

Use the date code (A) on the product label to identify the date of manufacture. "YYYY" (B) identifies the year of manufacture; "MM" (C) identifies the month of manufacture; "DD" (D) identifies the day of manufacture.

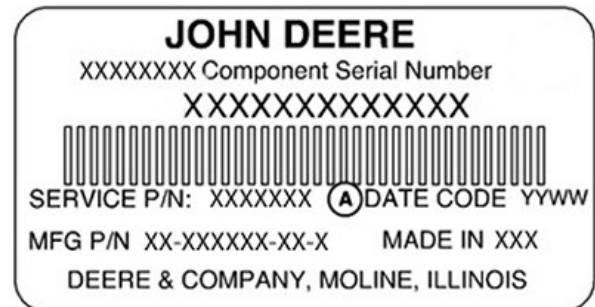
NOTE: The month number of manufacture ranges between 01-12.

The day number of manufacture ranges between 01-31.

Date Code		
YYYY	Year of Manufacture	Example: 2011, 2012, 2013....
MM	Month Number for Year of Manufacture	Example: 01, 02, 03...12
DD	Day Number for	Example: 01, 02, 03...31

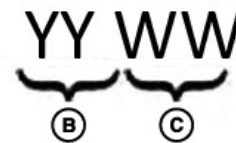
Date Code		
	Month of Manufacture	

Method 2



PC28834—UN—11OCT22

Product Label Method 2



PC26494—UN—08NOV18

Date Code Method 2

- A—Date Code (Date of Manufacture)
 B—Year of Manufacture
 C—Week of Manufacture

Use the date code (A) on the product label to identify the date of manufacture. "YY" (B) identifies the year of manufacture; "WW" (C) identifies the week of manufacture.

NOTE: The week number of manufacture ranges between 01-52.

Date Code		
YY	Year of Manufacture	Example: 11, 12, 13....
WW	Week Number for Year of Manufacture	Example: 01, 02, 03...52

AL70325,000052D-19-11OCT22

Federal Communications Commission Notification

John Deere 10.1" Monitor

John Deere 12.8" Monitor

G5 Processor

These devices must be operated as supplied by John Deere Ag Management Solutions. Any changes or modifications made to these devices without the express written approval of John Deere Ag

Management Solutions may void the user's authority to operate these devices.

This device complies with FCC Part 15. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, no guarantee shall be made that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ch177nn,1660116079863-19-11OCT22

EU Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A.

The undersigned hereby declares that:

Product Name: G5/G5^{Plus} Processor

Model(s): G5CS

fulfill(s) all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Restriction of Hazardous Substances	2011/65/EU	Article 7 of the Directive
Electromagnetic Compatibility Directive	2014/30/EU	Annex II of the Directive

The product is in conformity with the following standards and/or other normative documents:

EN55024
EN 55032
EN 55035
EN ISO 14982

Name and address of the person in the European Community authorized to compile the technical construction file:

John Deere Walldorf GmbH & Co. KG
Customer Support
Impexstraße 3
D-69190 Walldorf
EUConformity@JohnDeere.com

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Urbandale, IA

Date of Declaration: 28 November 2022

Manufacturing Unit: Deere & Company, Moline, IL, 61265

Name: Eric Rains

Title: Global Electronic Hardware Engineering Manager



DXCE01—UN—28APR09
ct47125,1751554412563-19-03JUL25

EU Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A.

The undersigned hereby declares that:

Product Name: G5 Display

Model(s): G510

fulfill(s) all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Restriction of Hazardous Substances	2011/65/EU	Article 7 of the Directive
Electromagnetic Compatibility Directive	2014/30/EU	Annex II of the Directive

The product is in conformity with the following standards and/or other normative documents:

EN 55032
EN 55024
EN 55035
EN ISO 14982

Name and address of the person in the European Community authorized to compile the technical construction file:

John Deere Walldorf GmbH & Co. KG
Customer Support
Impexstraße 3
D-69190 Walldorf
EUConformity@JohnDeere.com

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Urbandale, IA

Date of Declaration: 28 November 2022

Manufacturing Unit: Deere & Company, Moline, IL, 61265

Name: Eric Rains

Title: Global Electronic Hardware Engineering Manager



DXCE01—UN—28APR09
ct47125,1669663196089-19-01DEC22

EU Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A.

The undersigned hereby declares that:

Product Name: G5^{Plus} Display

Model(s): G512

fulfill(s) all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Restriction of Hazardous Substances	2011/65/EU	Article 7 of the Directive
Electromagnetic Compatibility Directive	2014/30/EU	Annex II of the Directive

The product is in conformity with the following standards and/or other normative documents:

EN 55032
EN 55024
EN 55035
EN ISO 14982

Name and address of the person in the European Community authorized to compile the technical construction file:

John Deere Walldorf GmbH & Co. KG
Customer Support
Impexstraße 3
D-69190 Walldorf
EUConformity@JohnDeere.com

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Urbandale, IA

Date of Declaration: 28 November 2022

Manufacturing Unit: Deere & Company, Moline, IL, 61265

Name: Eric Rains

Title: Global Electronic Hardware Engineering Manager



DXCE01—UN—28APR09
ct47125,1669663208606-19-01DEC22

UK Declaration of Conformity

Deere & Company
Moline, Illinois, U.S.A.

The undersigned hereby declares that:

Product: G5/G5^{Plus} Processor

Model(s): G5CS

fulfill(s) all relevant provisions and essential requirements of the following UK regulations:

REGULATION	NUMBER	CERTIFICATION METHOD
The Electromagnetic Compatibility Regulations	S.I. 2016 / 1091	Schedule 2, Module A
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations	S.I. 2012 / 3032	Part 2, Section 12

The product is in conformity with the following standards and/or other normative documents:

EN ISO 14982
ISO 13766-1

EN55032
EN55024
EN55035

Name and address of the person authorized to compile the technical construction file:

John Deere Ltd.
Harby Road
Langar
Nottinghamshire
NG13 9HT
United Kingdom
EUConformity@JohnDeere.com

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Urbandale, Iowa, USA

Date of Declaration: November 28, 2022

Manufacturing Unit: Deere & Company, Moline, IL 61265

Name: Eric Rains

Title: Global Electronic Hardware Manager

Ag & Turf Products Importer: John Deere Ltd- Harby Road, Langar, Nottinghamshire, NG13 9HT, United Kingdom

Forestry Products Importer: John Deere Forestry Ltd- Carlisle Airport Industrial Estate, Carlisle, Cumbria, CA6 4NW, United Kingdom

Construction Importer: Wirtgen Limited, Wirtgen Group House, Overfield Park, Godfrey Drive, Newark, Nottinghamshire, NG24 2UA, United Kingdom



RXA0179545—UN—16APR21
ct47125,1751554708149-19-03JUL25

Disclosures

UK Declaration of Conformity

Deere & Company
Moline, Illinois, U.S.A.

The undersigned hereby declares that:

Product: G5 Display

Model(s): G510

fulfill(s) all relevant provisions and essential requirements of the following UK regulations:

REGULATION	NUMBER	CERTIFICATION METHOD
The Electromagnetic Compatibility Regulations	S.I. 2016 / 1091	Schedule 2, Module A
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations	S.I. 2012 / 3032	Part 2, Section 12

The product is in conformity with the following standards and/or other normative documents:

EN55032
EN55024
EN55035
EN ISO 14982

Name and address of the person authorized to compile the technical construction file:

John Deere Ltd.
Harby Road
Langar
Nottinghamshire
NG13 9HT
United Kingdom
EUConformity@JohnDeere.com

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Urbandale, Iowa, USA

Date of Declaration: November 28, 2022

Name: Eric Rains

Manufacturing Unit: Deere & Company, Moline, IL 61265

Title: Global Electronic Hardware Manager

Ag & Turf Products Importer: John Deere Ltd- Harby Road, Langar, Nottinghamshire, NG13 9HT, United Kingdom

Forestry Products Importer: John Deere Forestry Ltd- Carlisle Airport Industrial Estate, Carlisle, Cumbria, CA6 4NW, United Kingdom

Construction Importer: Wirtgen Limited, Wirtgen Group House, Overfield Park, Godfrey Drive, Newark, Nottinghamshire, NG24 2UA, United Kingdom



RXA0179545—UN—16APR21
ct47125,1669663251172-19-01DEC22

Disclosures

UK Declaration of Conformity

Deere & Company
Moline, Illinois, U.S.A.

The undersigned hereby declares that:

Product: G5^{Plus} Display

Model(s): G512

fulfill(s) all relevant provisions and essential requirements of the following UK regulations:

REGULATION	NUMBER	CERTIFICATION METHOD
The Electromagnetic Compatibility Regulations	S.I. 2016 / 1091	Schedule 2, Module A
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations	S.I. 2012 / 3032	Part 2, Section 12

The product is in conformity with the following standards and/or other normative documents:

EN ISO 14982
ISO 13766-1

EN55032
EN55024
EN55035

Name and address of the person authorized to compile the technical construction file:

John Deere Ltd.
Harby Road
Langar
Nottinghamshire
NG13 9HT
United Kingdom
EUConformity@JohnDeere.com

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Urbandale, Iowa, USA

Date of Declaration: November 28, 2022

Manufacturing Unit: Deere & Company, Moline, IL 61265

Name: Eric Rains

Title: Global Electronic Hardware Manager

Ag & Turf Products Importer: John Deere Ltd- Harby Road, Langar, Nottinghamshire, NG13 9HT, United Kingdom

Forestry Products Importer: John Deere Forestry Ltd- Carlisle Airport Industrial Estate, Carlisle, Cumbria, CA6 4NW, United Kingdom

Construction Importer: Wirtgen Limited, Wirtgen Group House, Overfield Park, Godfrey Drive, Newark, Nottinghamshire, NG24 2UA, United Kingdom



RXA0179545—UN—16APR21

ct47125,1669663290093-19-01DEC22

Eurasian Economic Union – EAC

Eurasian Economic Union

Information on products that have a mark of conformity with the requirements of the EAEU technical regulations

Manufacturer: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, USA

Product: G5/G5Plus Processor

Model: G5CS

Factory: Motores John Deere, S.A.DEC.V. (ISG-Torreón) Boulevard Ferropuertos #305,
Parque Industrial Ferropuertos Torreón, Coahuila 27297 Mexico

Name and address of the authorized representative in the territory of the Eurasian Economic Union:
Eurasian Group Kazakhstan

Address: Astana City, Karaotkel Microdistrict, Kazant Street, Building 1/1, 4th Floor

For technical support, please contact your dealer.



G5/G5^{Plus} Processor EAC in English

PC29166—UN—31JUL23

Евразийский Экономический Союз

Информация о продукции, имеющей знак соответствия требованиям технических регламентов ЕАЭС

Изготовитель: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, США

Продукт: Процессор G5/G5Plus

Модель: G5CS

Завод: Motores John Deere, S.A.DEC.V. (ISG-Torreon) Boulevard Ferropuertos #305, Parque Industrial Ferropuertos Tereon, Coahuila 27297 Мексика

Наименование и адрес уполномоченного представителя на территории Евразийского Экономического Союза: Евразийская группа Казахстан

Адрес: г. Астана, микрорайон Караоткель, ул. Казант, д. 1/1, 4-й этаж

Для получения технической поддержки обращайтесь к дилеру, обслуживающему вашу организацию.



Еуразиялық экономикалық одақ

ЕАЭО техникалық шарттарының талаптарына сәйкестік белгісі бар өнімдер туралы ақпарат

Өндіруші: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, АҚШ

Өнім: G5/G5Plus Процессоры

Үлгі: G5CS

Зауыт: Motores John Deere, S.A.DEC.V. (ISG-Torreon) Ferropuertos бульвары #305, Parque Industrial Ferropuertos Terreon, Coahuila 27297 Mexico

Еуразиялық экономикалық одақ аумағындағы уәкілетті өкілдің атауы мен мекенжайы: Евразиялық топ Қазақстан

Мекенжайы: Астана қаласы, "Қараөткел" шағын ауданы, Казант көшесі, 1/1 ғимарат, 4-қабат

Техникалық қолдау алу үшін дилерге хабрласыңыз.



Eurasian Economic Union – EAC

Eurasian Economic Union

Information on products that have a mark of conformity with the requirements of the EAEU technical regulations

Manufacturer: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, USA

Product: G5 Display

Model: G510

Factory: Motores John Deere, S.A.DEC.V. (ISG-Torreón) Boulevard Ferropuertos #305,
Parque Industrial Ferropuertos Torreón, Coahuila 27297 Mexico

Name and address of the authorized representative in the territory of the Eurasian Economic Union:
Eurasian Group Kazakhstan

Address: Astana City, Karaotkel Microdistrict, Kazant Street, Building 1/1, 4th Floor

For technical support, please contact your dealer.



G5 Display EAC in English

PC29167—UN—31JUL23

Евразийский Экономический Союз

Информация о продукции, имеющей знак соответствия требованиям технических регламентов ЕАЭС

Изготовитель: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, США

Продукт: Дисплей G5

Модель: G510

Завод: Motores John Deere, S.A.DEC.V. (ISG-Torreón) Boulevard Ferropuertos #305, Parque Industrial Ferropuertos Torreón, Coahuila 27297 Мексика

Наименование и адрес уполномоченного представителя на территории Евразийского Экономического Союза: Евразийская группа Казахстан

Адрес: г. Астана, микрорайон Караоткель, ул. Казант, д. 1/1, 4-й этаж

Для получения технической поддержки обращайтесь к дилеру, обслуживающему вашу организацию.



Еуразиялық экономикалық одақ

ЕАЭО техникалық шарттарының талаптарына сәйкестік белгісі бар өнімдер туралы ақпарат

Өндіруші: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, АҚШ

Өнім: G5 дисплейі

Үлгі: G510

Зауыт: Motores John Deere, S.A.DEC.V. (ISG-Torreon) Ferropuertos бульвары #305, Parque Industrial Ferropuertos Terreon, Coahuila 27297 Mexico

Еуразиялық экономикалық одақ аумағындағы уәкілетті өкілдің атауы мен мекенжайы: Евразиялық топ Қазақстан

Мекенжайы: Астана қаласы, "Қараөткел" шағын ауданы, Казант көшесі, 1/1 ғимарат, 4-қабат

Техникалық қолдау алу үшін дилерге хабрласыңыз.



Eurasian Economic Union – EAC

Eurasian Economic Union

Information on products that have a mark of conformity with the requirements of the EAEU technical regulations

Manufacturer: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, USA

Product: G5Plus Display

Model: G512

Factory: Motores John Deere, S.A.DEC.V. (ISG-Torreón) Boulevard Ferropuertos #305,
Parque Industrial Ferropuertos Torreón, Coahuila 27297 Mexico

Name and address of the authorized representative in the territory of the Eurasian Economic Union:
Eurasian Group Kazakhstan

Address: Astana City, Karaotkel Microdistrict, Kazant Street, Building 1/1, 4th Floor

For technical support, please contact your dealer.



G5^{Plus} Display EAC in English

PC29168—UN—31JUL23

Евразийский Экономический Союз

Информация о продукции, имеющей знак соответствия требованиям технических регламентов ЕАЭС

Изготовитель: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, США

Продукт: Дисплей G5Plus

Модель: G512

Завод: Motores John Deere, S.A.DEC.V. (ISG-Torreón) Boulevard Ferropuertos #305, Parque Industrial Ferropuertos Torreón, Coahuila 27297 Мексика

Наименование и адрес уполномоченного представителя на территории Евразийского Экономического Союза: Евразийская группа Казахстан

Адрес: г. Астана, микрорайон Караоткель, ул. Казант, д. 1/1, 4-й этаж

Для получения технической поддержки обращайтесь к дилеру, обслуживающему вашу организацию.



Еуразиялық экономикалық одақ

ЕАЭО техникалық шарттарының талаптарына сәйкестік белгісі бар өнімдер туралы ақпарат

Өндіруші: Deere & Company, One John Deere Place, Moline, IL, 61265-8098, АҚШ

Өнім: G5Plus Дисплейі

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Зауыт: Motores John Deere, S.A.DEC.V. (ISG-Torreon) Ferropuertos бульвары #305, Parque Industrial Ferropuertos Terreon, Coahuila 27297 Mexico

Еуразиялық экономикалық одақ аумағындағы уәкілетті өкілдің атауы мен мекенжайы: Евразиялық топ Қазақстан

Мекенжайы: Астана қаласы, "Қараөткел" шағын ауданы, Казант көшесі, 1/1 ғимарат, 4-қабат

Техникалық қолдау алу үшін дилерге хабрласыңыз.



Operation - Display Introduction

G5 CommandCenter

The John Deere G5 CommandCenter is designed for maximum ease of use and productivity. One software system provides commonality while hardware options provide a range of price and functionality. The CommandCenter monitor is attached to the CommandARM. There are G5 and G5^{Plus} monitor options available.

NOTE: Software in a G5 CommandCenter is on the processor, not the monitor.

G5 CommandCenter (10.1 Inch)



PC665165—UN—03APR25
G5 CommandCenter Monitor

- Run page modules same as 12.8 inch display.
- Shortcut softkeys are always visible.

G5^{Plus} CommandCenter (12.8 Inch)



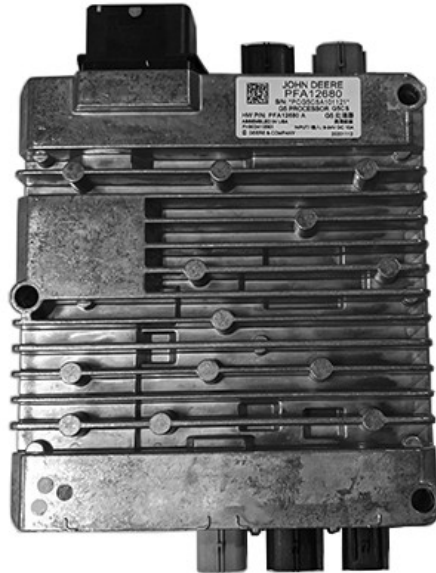
PC28490—UN—26MAY21
G5^{Plus} CommandCenter Monitor

- Title bar displays currently viewed run page.
- Large status center provides more information.
- Shortcut softkeys are always visible.

G5 CommandCenter Processor

G5 CommandCenter software runs on a processor separate from the display.

NOTE: Maximum capabilities for each processor are listed. Depending on machine configuration, some functions may not be available.



G5 Processor

PC28489—UN—26MAY21

G5 Processor

- Four Analog Video Camera Inputs
- Two Digital Video Camera Inputs
- Two USB Inputs
- Two Display Outputs
- 1000BASE-T Ethernet Port
- Upgradable for Future Applications

Rebooting the G5 CommandCenter Processor

CAUTION: Avoid the risk of injury. Ensure that the machine is in park mode and maintain electrical power throughout the installation process. When rebooting processor:

All applications will be shut down.

No system messages will be displayed.

- **Warm Boot:** Occurs when the machine is keyed on within 24 hours of the last time the machine was keyed on. To perform a warm boot, press the power button. When the display has powered off, press the power button again.
- **Cold Boot:** Occurs if the machine has been keyed off for more than 48 hours, or when on-screen prompts require the display to reboot (such as changing languages or adding a secondary display).

NOTE: After every 20 warm boots, the display performs a cold boot.

There are following additional methods to perform a cold boot:

- Remove power to the display by disconnecting the machine battery.
- Language change.
- Numeric format change.
- Units of Measurement change.

USB Ports

For best water and dust protection, ensure USB covers are in place when USB ports (E) are not in use.

ct47125,1708113151155-19-21MAY24

Run Page Structure



PC28807—UN—20SEP22

Display Run Page

- A—Menu
 B—Shortcut Softkeys
 C—Next or Previous Run Page Buttons
 D—Status Center
 E—Run Page
 F—Title Bar/Run Page Selection

Menu (A) lists all applications installed on display and machine.

Shortcut softkeys (B) provide quick access to frequently used applications and functions.

Next and Previous Run Page buttons (C) cycle through multiple run pages.

Select the area indicated (D) to display **Status Center**. Important information for display functions is highlighted, such as GPS signal strength and available data storage.

Run page (E) is configured using Layout Manager application.

Select **title bar (F)** to display **Run Page Selection** page. Choose desired run page from list of available pages.

(Refer to Layout Manager application for information about customizing the run page.)

ct47125,1708274355289-19-18FEB24

Menu



Menu Button

PC28688—UN—25AUG22

Selecting Menu button lists all applications installed on display and machine. Select left-hand tabs to view different groups of applications.

NOTE: Available applications vary depending on machine configuration.

ct47125,1708274355252-19-18FEB24

Onscreen Help



APY76313—UN—21SEP22

Help Center Application and Information Button

Help Center is a supplement to the paper Operator's Manual. Read the Operator's Manuals prior to operation. Help Center can be accessed three ways:

1. Navigate to the Help Center Application
 - a. Select Menu
 - b. Select the Application Tab
 - c. Select Help Center
2. Select Help Center Shortcut
3. Application page question mark

ct47125,1708274355193-19-18FEB24

Status Center



Status Center

PC28826—UN—22SEP22

Status Center is located in the title bar and highlights important information for display functions, such as GPS signal strength and notifications.

Select Status Center to display additional information in a drop down window. The expanded Status Center provides quick access to notifications and settings.

NOTE: Date and Time and Data Storage are always displayed in Status Center.

Additional information is displayed depending on machine configuration and notifications.

ct47125,1708274355155-19-18FEB24

Shortcut Softkeys



APY76316—UN—22SEP22

Shortcut Softkeys

Shortcut softkeys display status information and provide quick access to application functions.

Softkeys are always visible along the bottom of a run page.

(Refer to Layout Manager application for information about customizing the shortcut bar.)

ct47125,1708274355111-19-24MAY24

Display Licenses

The display requires specific licenses to run the various application on the display.

Basics License

A Basics license is required to operate the G5 Display.

Contact your John Deere dealer to transfer Basics from a non-working display to a new display.

When a display does not have a Basics license, access is limited to the following applications:

- Software Manager
- Language and Units

- File Manager
- Display and Sound
- Diagnostics Center

NOTE: Data cannot be exported without a Basics license.

Additional Licenses

NOTE: Licenses are only transferable to similar equipment.

Additional licenses are required to unlock advanced features of the display.

Navigate to License

1. Select Menu.
2. Select System tab.
3. Select Software Manager application.
4. Select License tab.

With the valid licenses, the following features are available:

- AutoTrac
- Data Sync
- In-Field Data Sharing
- Section Control
- Idle Reasons

To purchase licenses, contact a John Deere dealer.

Demo Features

In Software Manager application, demo features are available to try out features on the display. A blue light next to a feature indicates that demo is turned on.

Demo is available from the factory for 15 hours of use. For example, AutoTrac demo only counts down when it is engaged.

Navigate to Features:

1. Select Menu.
2. Select System tab.
3. Select Software Manager application.
4. Select Feature tab.

Hardware Activations

Hardware activations are installed at the factory or transferred as part of the service activation transfer process. Hardware activations provide information to the display software for correct functionality of the associated hardware

ct47125,1708274355040-19-18NOV25

Operation—Display Setup

Display Settings

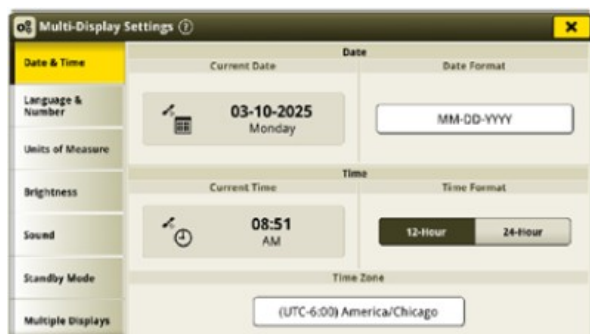


Display Settings icon

PC689856—UN—26SEP25

Display Settings application in System tab adjusts some Display configurations.

Date and Time



Date and Time Tab

PC689859—UN—26SEP25

Information from Date and Time application is used for several important functions on system. These include error logging, licenses, and data recording.

Date and time are set automatically if a GPS receiver is connected and receiving valid signal. In this case, only set time zone.

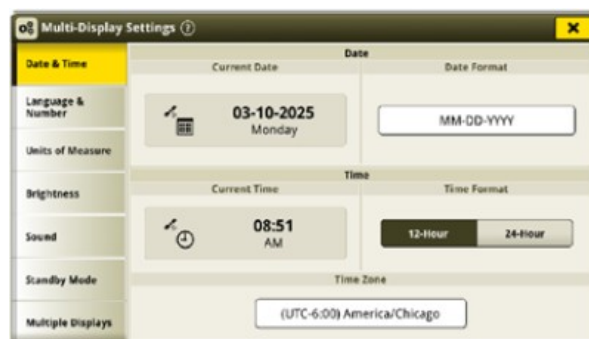
Current date and time can be found at any time by selecting Status Center at top of main run page.

NOTE: Date and Time setting affects how Guidance and Documentation data are filtered on display and desktop software.

Navigate to Date and Time

1. Select Menu.
2. Select System tab.
3. Select Date and Time application.

Change Current Date



Date and Time Tab

PC689859—UN—26SEP25

A—Date Set by User

B—Date Determined by GPS

Date can only be changed if GPS is not connected or GPS signal is not available. Otherwise, GPS signal determines date.

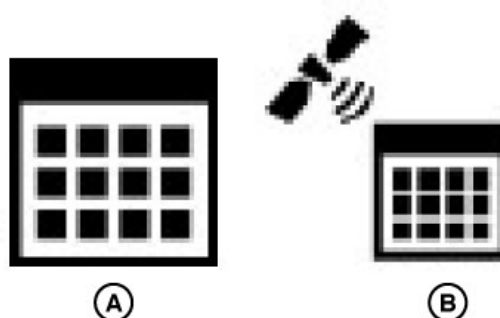
Date Format does not depend on GPS signal, and can be changed at any time.

1. Select day, month, or year.
2. Use keypad to enter correct value.
3. Select Done to apply changes or Cancel to return to previous page without applying changes.

Date Format

1. Select Date Format box.
2. Select desired date format from list.
3. Select Done to apply changes or Cancel to return to the previous page without applying changes

Change Current Time



Change Current Time Icon

PC689854—UN—26SEP25

A—Time Set by User

B—Time Determined by GPS

Current Time can only be changed if GPS is not connected or GPS signal is not available. Otherwise, GPS signal determines time.

Change Time

1. Select hour or minute.
2. Use keypad to enter correct value.
3. Select Done to apply changes or Cancel to return to previous page without applying changes.

Time Zone and Time Format do not depend on GPS signal, and can be changed at any time.

Time Zone

1. Select a continent or ocean and select Next.
2. Select a country and select Next.
3. Select a time zone and select Next.
4. Confirm selected time zone and select OK.

Time Format

Use radio button to select 12 Hour or 24 Hour time format.

Language and Number

Language and Number is used to change Language and Number Format.



PC689858—UN—26SEP25

Language and Number Tab

- Language Format (Active and Alternate)
- Swap Language button
- Number Format (Decimal Point or Decimal Comma)

Select either tab to change settings.

Navigate to Language and Number

1. Select Menu.
2. Select System tab.
3. Select Display Settings.
4. Select Language and Number.

Unit of Measure



PC689863—UN—26SEP25

Unit of Measure Tab

Different settings can be created for both the display and for controllers that are displayed in ISOBUS VT. Select either tab to change settings.

Display

Select English, Metric or Mixed English.

ISOBUS VT



PC689857—UN—26SEP25

ISOBUS VT

It is possible for controllers that display in ISOBUS VT to have different units of measure than rest of display. Remove check from Use Same Units of Measure as Display to enable list boxes for:

- Units of Measurement
- Number Format
- Distance
- Area
- Volume
- Mass
- Temperature
- Pressure
- Force

NOTE: It is possible to use same units of Measure as Display.

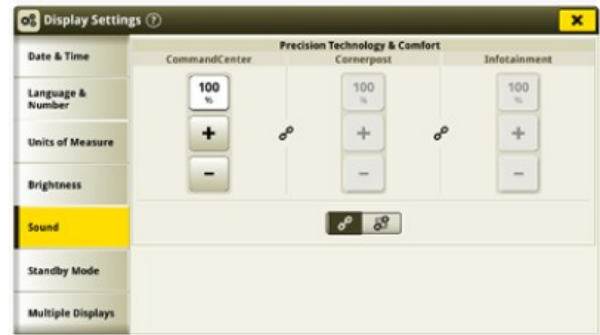
Brightness



PC684078—UN—26SEP25

Brightness Tab

Sound



PC689861—UN—26SEP25

Sound Tab

Brightness Mode

- **Auto Mode**

Auto Mode is recommended setting. This synchronizes display brightness with cab light switch. If cab lights are off, display is in Day Mode. If cab lights are on, display is in Night Mode.

- **Day and Night Modes**

Select either mode to prevent display brightness from synchronizing with cab light switch.

NOTE: The mode selected does not adjust brightness of a second display. Adjust brightness of that display through its settings.

Brightness Settings

Select either settings button to display a popup page for corresponding brightness mode.

- Day
- Night

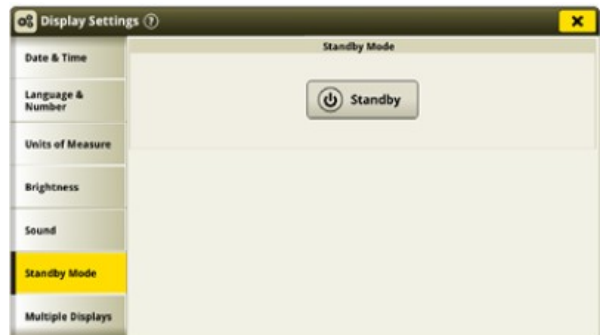
For Day or Night Settings, is possible to adjust different Brightness percentage:

- Percision Technology and Comfort
- Visibility

Change display volume by selecting increase (+) or decrease (-) buttons, applicable for:

- CommandCenter
- Cornerpost
- Infotainment

Standby Mode



PC689862—UN—26SEP25

Standby Mode Tab

NOTE: On sprayers, standby mode is unavailable. The standby mode button is used to power off the display.

Use standby mode to place the display into a power saving mode.

Multiple Displays



PC689860—UN—26SEP25

Multiple Displays Tab

NOTE: Changing these settings individually is *NOT* recommended.

Multiple displays in a machine are often used to provide different types of information simultaneously to the operator, allowing for better control, monitoring, and decision-making.

There are two ways of using multiple displays. Both displays can be Precision Ag displays, or one of them

can be a Precision Ag display while the other is an extended monitor. The configuration of multiple display settings is necessary only when utilizing two Precision Ag displays; no changes are required for an extended monitor.

On 8R tractors, for example, multiple displays are used. These displays can be set up in two ways.

1. The CommandCenter is integrated with the optional extended monitor. Both monitors are working off the same processor, so there is no need to configure the multiple display settings.
2. The CommandCenter is paired with a G5 Universal Display. Each display has its own processor so the multiple display settings must be configured.

The CommandCenter display serves as the primary interface for monitoring and controlling machine operations and displaying information like guidance, machine settings, implement controls, and performance data. The extended monitor, typically mounted on the right-hand side of the cab, can be used to show additional information such as camera feeds, documentation, field mapping, or diagnostic tools.

If there is a need to configure functions individually, turn functions on or off using toggle switches. Then select a priority for each function.

Precision Ag Applications

A Precision Ag application is a display application that uses data-driven technological solutions for precision

farming. These applications are designed to help farmers make informed decisions to optimize operation.

These applications enable farmers to gather real-time data, use field mapping, analyze field variability, and implement site-specific management practices to enhance productivity, reduce input costs, minimize environmental impact, and improve overall farm sustainability.

Leverage Precision Ag applications to increase efficiency, make more precise decisions, and achieve better outcomes. Precision Ag Applications include AutoTrac, Section Control, and Documentation.

ISOBUS Implement Viewer

ISOBUS Implement Viewer determines if the CommandCenter can display virtual terminal (VT) interfaces.

ISOBUS Implement Viewer 2

NOTE: If an extended monitor is not connected, ISOBUS Implement Viewer 2 toggle is grayed out.

NOTE: ISOBUS Implement Viewer 2 requires a Premium subscription.

ISOBUS Implement Viewer 2 determines if the CommandCenter can display a VT interface on an extended monitor.

ISOBUS Certification

ISOBUS Certification toggle disables the use of the Original GreenStar Monitor on the G5 Display. To enable use of the Original GreenStar Monitor, switch ISOBUS Certification off.

Task Controller

IMPORTANT: *Do NOT turn on Precision Ag Applications for both displays. Guidance and other applications will not function properly.*

NOTE: ISOBUS Implement Viewer is also known as ISOBUS VT on GreenStar 2 and GreenStar 3 Displays.

Task controller (TC) determines if the CommandCenter can send and receive TC commands with implement control units. This includes Section Control messages.

File Server

NOTE: When using multiple displays, ensure that File Server is active on only one display.

File Server exchanges files or arbitrary data between machine and implement, such as configuration files, fertilizer tables, and language files. File Server requires a USB drive to function. Data sent from the implement is stored in the folder named Fileservers on the USB drive.

Priority Setting

NOTE: To view priority on each display, select the virtual terminal button in Status Center.

Priority setting, also known as Function Instance, determines display priority when loading different functions. For example, if Implement Viewer on CommandCenter has a Priority of 1 and GreenStar 3 2630 has a Priority (Function Instance) of 2, then ISOBUS implements show up on CommandCenter in most cases.

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Layout Manager



Layout Manager

PC28704—UN—25AUG22

Use Layout Manager to create and modify run pages and shortcut bars so that important information and functions can be accessed from the main page.

Run pages are made of "modules" (blocks that contain information and buttons). Modules can be added, removed, and rearranged on a run page.

Run pages are grouped together to create run page sets. The run page sets can be created for an operation (planting or tillage) or for the preferences of different operators.

Unlimited run pages can be created and saved. Unlimited run page sets with up to ten run pages per set can be created.

Custom run pages can be imported from another G5 display that is the same size. Imported run pages are available on the All Run Pages tab.

Navigate to Layout Manager

1. Select Menu.
2. Select Applications tab.
3. Select Layout Manager application.

Run Page Sets



Run Page Sets

PC15336—UN—10JUL13

Run page sets are a collection of up to ten run pages

that are grouped together for an operation, such as planting or tillage. Only the pages in the active run page set are displayed when cycling through run pages on the main page.

Select a run page set to display the Edit Run Page Set page.

Add a Run Page Set



PC28705—UN—25AUG22

- A—Create New Set**
B—Change Active Set

Select the Create New Set button (A) to create a new run page set. Select the Change Active Set button (B) to select an existing run page set.

Edit Run Pages in a Run Page Set



PC28706—UN—25AUG22

- A—Edit Button**
B—Duplicate Button
C—Up Button
D—Down Button
E—Remove Button

Select one of the run pages to show a row of buttons for editing that run page.

Select the Edit button (A) to change the modules on the run page.

Select the Duplicate button (B) to create a new run page with the same modules.

Select the Up and Down buttons (C and D) to change the order of run pages. Run page order is used when cycling through pages on the main page.

Select the Remove button (E) to delete run page from the run page set. The run page is removed from the run page set, but it is still available in the All Run Pages list.

NOTE: The Remove button is not shown if only one run page is in the run page set.

Edit Run Page Sets

Edit the name, assigned shortcut bar, or add additional run pages to a run page set.

Run Page Name



- A—Edit Button**
B—Include Additional Run Pages Button

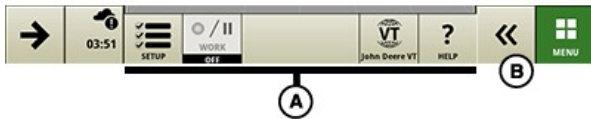
PC28707—UN—25AUG22

Every run page must have a unique name. Select the Edit button (A) to name or rename the run page set.

Select the Edit button to add or change the shortcut bar assigned to the run page set.

Select the Include Additional Run Pages button (B) to add an existing run page to the run page set.

Shortcut Bars



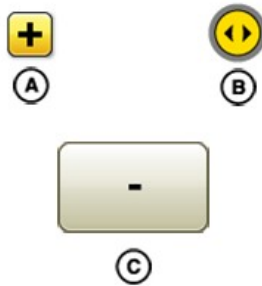
PC28914—UN—19JAN23

Shortcut Softkeys

- A—Shortcut Bar**
B—Shortcut Access Softkey

A shortcut bar is a collection of shortcut softkeys that display status information and provide quick access to application functions. The shortcut bar displays a maximum of nine shortcut softkeys.

Use the Shortcut Bars tab to select, edit, or create a shortcut bar. Shortcut bars can be imported using the File Manager application.



PC28708—UN—25AUG22

Edit Shortcut Bar

- A—Create New Shortcut Button**
B—Move Shortcut Button
C—Remove Shortcut Button

Edit Shortcut Bar

Shortcuts can be added, removed, and rearranged on the shortcut bar.

NOTE: The same shortcut can only be placed on the shortcut bar once.

Select the Create New Shortcut button (A) to create a new shortcut bar and choose applications with appropriate content. From the list, find a shortcut that performs the desired function and select the Add button.

Once added to the shortcut bar, select the shortcut to highlight it. Press and slide the Move Shortcut button (B) to move it to an open area.

To remove a shortcut, select the shortcut to highlight it and select the Remove Shortcut button (C).

All Run Pages



All Run Pages

PC15340—UN—10JUL13

NOTE: Run pages can be imported and exported using the File Manager application.

The All Run Pages tab displays every run page that has been created on the display. The tab includes current run pages that are in the active set, as well as run pages that are used in other run page sets.

Edit Run Page



PC28709—UN—25AUG22

- A—Edit Button**
B—Duplicate Button
C—Remove Button

Select one of the run pages to show a row of buttons for editing that run page.

Select the Edit button (A) to change the modules on the run page.

Select the Duplicate button (B) to create a new run page with the same modules.

Select the Remove button (C) to delete the run page from the display. This permanently removes the run page from the display and the active set.

NOTE: Remove button is not shown if factory default run page is selected.

Create New Run Page



Create New Run Page Button

PC28710—UN—25AUG22

Select the Create New Run Page button to create a new run page.

Add, Edit, or Duplicate Run Pages

The same interface is displayed when adding, editing, or duplicating a run page. A new run page starts out blank, while duplicate or edited run pages have existing modules.

Run Page Name



PC28707—UN—25AUG22

A—Add Module Button
B—Edit Button

Every run page must have a unique name. Select Edit button (A) to either name or rename run page.

Add Module

Select Add Module button (B) and choose application with appropriate content. From list, find module with desired information and select Add button.

NOTE: The same module can only be placed on a run page once.

NOTE: Start with larger modules before adding smaller modules to fill in space.

Use grid to determine amount of space required for a module.

Rearrange Modules



Move Module

PC28712—UN—25AUG22

Once added to run page, select module to highlight it. Press and slide module to move it to an open area.

Remove Module



Remove Module Button

PC28711—UN—25AUG22

Select module to highlight it, and select Remove button.

Navigate Run Pages on Main Page

Guidance

PC28713—UN—25AUG22

Title Bar



PC28714—UN—25AUG22

Next and Previous Buttons

A—Title Bar
B—Next and Previous Run Page Buttons

If more than one run page is in the active run page set, there are multiple ways to choose which run page is displayed on the main page.

Title Bar (A)

Select the title bar at the top of the main page to display a list of all run pages that are in the active run page set. Select a run page to view, create a new run page, edit the run page set, or select a different run page set to view.

Next and Previous Run Page Buttons (B)

Select either right or left arrows to cycle through run pages.

Finger Swipe (C)

Swipe a finger left or right across the display to cycle through run pages.

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Users and Access—Key Start Machines



Users and Access

PC28700—UN—25AUG22

Users and Access manages user profile settings to lock users out of certain features.

User Profiles tab

- Change display profile and set personal identification number (PIN) for administrator access.

Access Groups tab

- Store display features that are locked.

Security PIN Code tab

- Enable display lock. An operator or administrator PIN is required to access the display.

Navigate to Users and Access

1. Select Menu.
2. Select System tab.
3. Select Users and Access application.

User Profiles



PC28701—UN—25AUG22

A—Administrator Profile
B—Operator Profile

Display can be set to one of two profiles, Administrator or Operator. The active profile is displayed above profile list.

Administrator Profile (A)

Administrator profile always set to Full Access Group. It allows unlimited access of all features, and ability to lock and unlock features in Operator Profile. A PIN can be set to lock users out of the Administrator Profile.

Operator Profile (B)

Operator profile always set to Limited Access Group. It is restricted to only features it is given access to. Operator Profile must be active profile and Administrator Profile must have a PIN for features to be locked.

Change Active Profile



PC28702—UN—25AUG22

A—Change Profile Button
B—Edit Button
C—View Button

Select Change Profile button (A) and select profile from list.

NOTE: If a PIN has been created for the administrator profile, it must be entered when switching from Operator Profile to Administrator Profile.

Add/Change PIN

Select Edit button (B) for Administrator Profile. Select Add/Change PIN button.

Access Group

Use Access Groups to set, view, or modify access rights to a limited access group.

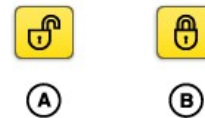
Full Access Group

A full access group is able to use all features on the display. A full access group cannot be edited.

Limited Access Group

A limited access group can be restricted to certain features by the administrator. Limited access groups can only be edited if the administrator profile is the active profile.

Edit Access Rights



PC28703—UN—25AUG22

A—Unlock Icon
B—Lock Icon

For each application listed, “None Locked” is displayed if no features are locked. When features are locked, they are listed under the application name and the icon changes to locked.

Select an application to highlight it and select the Edit button.

Edit Access Groups page displays a list of features that can be locked or unlocked by selecting the Lock/Unlock toggle next to each feature. Save changes to access groups by closing the page.

Security PIN Code

When enabled, a personal identification number (PIN) is required to access display functions. Separate PIN codes can be set up for administrator and operator profiles.

If a factory data reset or system recovery is performed on the display, the operator PINs are lost. The administrator PIN is saved and the display remains locked after power-up.

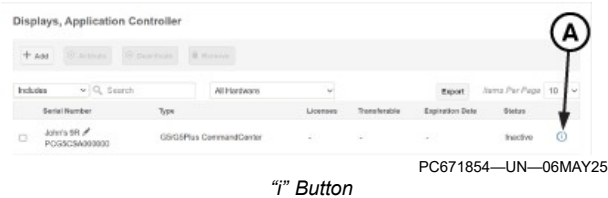
Temporary Access

The display enters temporary access mode after the operator enters five incorrect PIN attempts. All display features are available for 24 hours of operation. After the temporary access time has expired, a master unlock code is required to unlock the display.

Obtain a Master Unlock Code

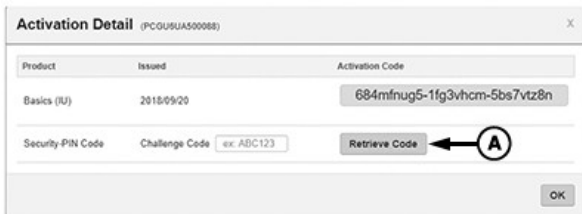
1. Sign in to your account at myjohndeere.com.

2. Select Stellar Support.
3. Select Ag & Turf.
4. Select Manage Product in the Displays, Application Controller section.
5. Select Display.
- 6.



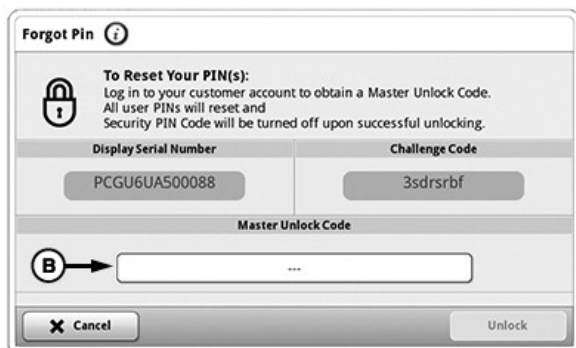
A—"i" Button

Select the locked display, and then the "i" button on the right-hand side.



A—Retrieve Code Button

7. Enter the challenge code from the display, and then select the Retrieve Code button (A) to obtain a master unlock code.



B—Master Unlock Code

8. At the display, enter the master unlock code (B).

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Users and Access—Push Button Start



Users and Access

PC28700—UN—25AUG22

Users and Access manages user profile settings to lock users out of certain features.

User Profiles tab

- Change display profile and set personal identification number (PIN) for administrator access.

Access Groups tab

- Store display features that are locked.

Security PIN Code tab

- Enable display lock. With Security PIN enabled, an operator or administrator PIN is required to start the engine.

Navigate to Users and Access

1. Select Menu.
2. Select System tab.
3. Select Users and Access application.

User Profiles



PC28701—UN—25AUG22

A—Administrator Profile

B—Operator Profile

Display can be set to one of two profiles, Administrator or Operator. The active profile is displayed above profile list.

Administrator Profile (A)

Administrator profile always set to Admin Access level. It allows unlimited access of all features, and ability to lock and unlock features in Operator Profile. A PIN can be set to lock users out of the Administrator Profile.

Operator Profile (B)

Operator Profile can either be set to Advanced Access or Limited Access.

Admin can create up to 250 unique operator profiles.

NOTE: Make sure that PINs must be 4-8 numeric characters.

Change Active Profile



PC28702—UN—25AUG22

A—Change Profile Button
B—Edit Button
C—View Button

Select Change Profile button (A) and select profile from list.

NOTE: If a PIN has been created for the administrator profile, it must be entered when switching from Operator Profile to Administrator Profile.

Add/Change PIN

Select Edit button (B) for Administrator Profile. Select Add/Change PIN button.

Access Rights

Use Access Rights to set, view, or modify access rights to a limited access group.

Admin Access

As an Admin this profile and access level can manage Operator Profiles, add or delete Operator Profiles, and create PINS for these profiles.

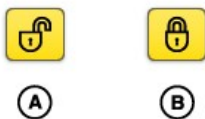
Advanced Access

Users with Advanced Access can edit other Operator Profiles name and access level only.

Limited Access Rights

Users with Limited Access can view the list of operators and profiles, change the active profile via a correct PIN. Limited Access users are only granted access to applications that are unlocked.

Edit Access Rights



PC28703—UN—25AUG22

A—Unlock Icon
B—Lock Icon

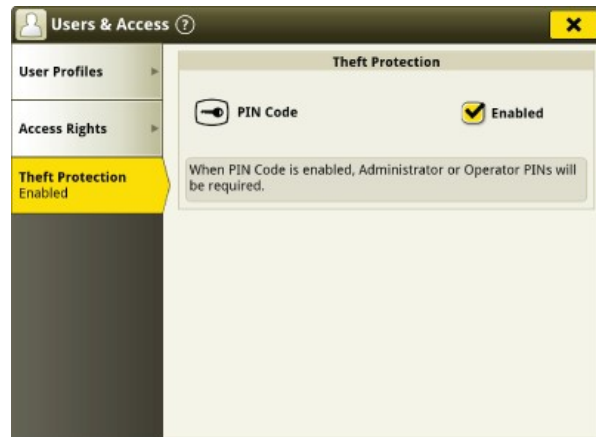
For each application listed, “None Locked” is displayed if no features are locked. When features are locked, they are listed under the application name and the icon changes to locked.

Select an application to highlight it and select the Edit button.

Edit Access Groups page displays a list of features that can be locked or unlocked by selecting the Lock/Unlock toggle next to each feature. Save changes to access groups by closing the page.

Theft Protection

The Secure Start Tab will allow the admin to Enable/Disable the PIN Code Entry requirement for non immobilizer machines.



PC697606—UN—20JAN26

Theft Protection Tab

Security PIN Code

When enabled, a personal identification number (PIN) is required to access display functions. Separate PIN codes can be set up for administrator and operator profiles.

If a factory data reset or system recovery is performed on the display, the operator PINs are lost. The administrator PIN is saved and the display remains locked after power-up.

Security Levels

- **PIN Code Disabled** : PIN Enablement button is unchecked. Operator does not need to enter PIN in order to start the machine's engine. No PIN entry screen will be displayed upon display boot up.
- **PIN Code Enabled** : PIN Enablement button is checked. Display allows for unlimited incorrect PIN entries. Engine will only start after a correct PIN entry.
- **PIN Code Required (Immobilizer option installed)** : The PIN Enablement option is preselected and locked by default. Operators must enter a valid PIN to start the engine. After 5 consecutive invalid PIN attempts, the display will enter a 15 minute lockout period before additional attempts are permitted.

Obtain a Device Unlock Code (DUC)

1. On the G5 display, navigate to the upper right corner and select PIN Recovery.
2. Using a connected device, sign in to John Deere Operations Center™ with your Deere credentials.
3. In Operations Center, follow the **PIN Recovery / DUC Generation** workflow. Enter the **Product Identification Number (PIN)** and the **Challenge Code** from the G5 display to generate the **DUC Code**.
4. Return to the G5 display and enter the generated **DUC Code**, then confirm.
5. After DUC validation, enter and confirm a **new Admin PIN**.

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Wireless Settings



Wireless Settings

PC28801—UN—29AUG22

Use Wireless Settings to connect to a wireless network or create a wireless network to connect mobile devices to the machine. Wireless Settings application uses a JDLINK Modem or a wireless USB Adapter.

NOTE: Wireless Settings page functionality is only available for the JDLINK Modem when the Modem or MTG is 'active' on the Machine CAN.

Wireless Settings functionality is not available when the JDLINK Modem is connected to the machine via Ethernet only. The JDLINK Modem must be connected to the machine's CAN network for this functionality to work.

Navigate to Wireless Settings

1. Select Menu.
2. Select System tab.
3. Select Wireless Settings application.

Refer to Onscreen Help for instructions on how to establish a Machine to Wireless or Mobile to Machine connection.

Machine to Wireless



Machine to Wireless

PC24041—UN—05APR17

NOTE: External wireless internet adapter may be used to establish a Machine to Wireless connection. Contact your John Deere dealer for a list of compatible devices.

Machine to Wireless connects the machine to a wireless network using the JDLINK modem.

Use Machine to Wireless for the following:

- Over-the-air software updates
- Remote diagnostics
- Remote Display Access (RDA)
- Online licenses
- Data Sync using a personal access point

NOTE: Machine to Wireless is disabled while the Machine Sync application is in use.

Mobile to Machine



Mobile to Machine

PC24042—UN—05APR17

Mobile to Machine establishes a wireless network using the JDLINK modem to connect wireless devices to the machine.

Use Mobile to Machine for the following:

- John Deere Connect Mobile

NOTE: Mobile to Machine is disabled on tractors while the Machine Sync application is in use. Tractor operators must use the Machine Sync application to connect to the leader network.

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COM Port Settings



COM Port Settings

PC28803—UN—29AUG22

The COM Port Settings application is used to configure RS232 signal so that the display can communicate with different control units or devices.

Navigate to COM Port Settings

1. Select Menu.

2. Select System tab.
3. Select COM Port Settings application.

NOTE: An additional wiring harness is needed to connect to devices through the COM ports. Contact your John Deere dealer.

The display features two serial COM ports to connect the following types of devices:

- Field Doc Connect
- Global positioning system (GPS) receiver
- Nitrogen (N) Sensing (manufacturers: Yara and Fritzmeier)
- GreenSeeker
- LH 5000
- Grain Cart Scale

Field Doc Connect Requirements:

- Baud rate is set to 9600.
- Data logging on the Raven control unit is on.
- Data log trigger value is less than 3 seconds (1 second or less is recommended).

Serial GPS Requirements:

NOTE: AutoTrac guidance is not compatible with third-party RS232 GPS.

- Baud rate is set to 19200.
- Output rate is set to 1 or 5 Hz (guidance, manual guidance, and parallel tracking require 5 Hz).
- Receiver is set up to output the following messages:
 - GGA
 - GSA
 - RMC
 - Data bits 8
 - Parity – None
 - Stop bits 1
 - Flow control – None

Nitrogen (N) Sensing Setup

1. Install, calibrate, and set up the N-Sensing system according to the manufacturer Operator's Manual.
2. Configure COM Port settings for device type and manufacturer.
3. Select N-Sensing for the Target Rate/Rx on the work summary page in the Work Setup application.

GreenSeeker Setup

1. Install, calibrate, and set up the GreenSeeker system according to the manufacturer Operator's Manual.

2. Configure COM Port settings for device type.
3. Select GreenSeeker for the Target Rate/Rx on the work summary page in the Work Setup application.

LH 5000 Setup

1. Install, calibrate, and set up the LH 5000 system according to the manufacturer Operator's Manual.
2. Configure COM Port settings for device type Field Doc Connect and manufacturer as LH Technologies.
3. Select LH 5000 in the Equipment Manager application.

Grain Cart Setup

1. Install, calibrate, and set up grain cart system according to the manufacturer Operator's Manual.
2. Select Grain Cart in Device Type.
3. Select the grain cart manufacturer.

COM Port Diagnostics

COM port diagnostics are used to determine if the requirements to operate the connected control unit or device have been met. Values displayed in COM port diagnostics are determined by the device type.

NOTE: Some grain cart scale manufacturers require specific software versions and scale settings for the scale to appear on the John Deere display.

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Original GreenStar Monitor



PC28804—UN—29AUG22

Original GreenStar Monitor

The Original GreenStar Monitor application allows the G5 CommandCenter to communicate with control units designed for use with the Original GreenStar Monitor and with 00 Series, 10 Series, and 20 Series Tractors with a CCD bus.

NOTE: Reference the G5 Display compatibility chart listed on www.stellarsupport.deere.com for compatible machines and implements.

Navigate to Original GreenStar Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Original GreenStar Monitor.

Original GreenStar Monitor is turned off by default and

can be enabled or disabled in the Advanced Settings of the Original GreenStar Monitor application.

ct47125,1708275550824-19-18FEB24

Machine Monitor



Machine Monitor

PC28820—UN—20SEP22

Machine Monitor displays machine-specific performance values. Groupings of values include:

- Speed and Power
- Fuel and Pressure
- Temperature
- Electrical
- Hours

NOTE: Values available in each group depend on machine model.

Select tabs on left-hand side of the page to switch between groups. Select a value to view a popup of just that value.

If a value is not available, dashes will be shown.

Navigate to Machine Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Machine Monitor application.

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Operation—Work and Field Setup

Equipment Manager



Equipment Manager

PC28716—UN—25AUG22

Select Equipment Manager application to enter Machine and Implement Profile settings. Profile settings are important for accurate performance of John Deere Precision Agriculture applications, such as AutoTrac, Section Control, and work data maps.

Navigate to Equipment Manager

1. Select Menu.
2. Select Applications tab.
3. Select Equipment Manager application.

Machine Profile

General Settings

Some information is automatically set by machine control units if the display detects the machine.

Settings specific to certain machine types only appear on the page when applicable.

NOTE: Some measurements apply only to certain machine types.

GPS Offsets

NOTE: When using multiple implements, only the lateral offset for the first implement is used.

To avoid errors in mapping, documentation, and Section Control, combine the lateral offsets from all implements and enter that value for the first implement. For example, if the first implement is 5.1 cm (2 in) to the right and the second implement is 2.5 cm (1 in) to the left, enter 1.3 cm (0.5 in) to the right.

- **GPS Lateral Offset**
 - Lateral distance (left or right) from the center line of the machine to center of GPS receiver. This value is usually set to 0.0 unless GPS receiver is offset left or right of the machine center line.
- **GPS Inline Offset**
 - Inline distance from the center of the GPS receiver to a point on the machine.
 - GPS Inline Offset measurement differs based on the machine type. Refer to Onscreen Help for information on measuring offsets.
- **GPS Height**
 - Vertical distance from GPS receiver to ground.

Connection Offset

- Connection point is the location where the implement connects to the machine. The connection offset is the measurement of the distance between the connection point and a point on the machine.

Connection Offset measurement differs based on the machine type. Refer to Onscreen Help for information on measuring offsets.

Restore Profile to Factory Defaults

NOTE: Only machines detected by the display can have profile settings restored to factory default.

Default machine profile settings are stored in machine control units. Changes to these settings are stored in the display. To reset the profile to factory defaults, select the Reset Profile button.

Use Help Center Onscreen Help for more information about Equipment Manager and the Machine Profile.

Implement Profile

Profile name is set automatically based on implement that is auto-detected and cannot be saved. On implements without a control unit, profile name is set by the operator.

The G5 Display supports two AEF (Agricultural Industry Electronics Foundation) certified ISOBUS control units. The use of two ISOBUS control units is limited to the configuration of one front and one rear implement.

NOTE: If the second ISOBUS control unit does not show up in Equipment Manager, ensure that the machine has the front connector configured.

The use of multiple ISOBUS control units as rear implements is not supported.

Grain Harvest Weight Sharing Setup

To correctly configure and link a detected and compatible ISOBUS scale with a grain cart implement, follow these steps:

1. Implement Profile Configuration
 - Set the Implement Type to Grain Cart

PC684073—UN—19SEP25

Implement Profile

B—Equipment Type

- Assign the Operation to Harvesting.



A—Operation Type

2. Special Requirements for Unverferth UHarvest Pro ISOBUS Scales Additional setup steps are required for Unverferth UHarvest Pro models:

- Confirm that the UHarvest Pro software is updated to version 24.1.0.4 or newer.
- On the Unverferth ISOBUS VT page, ensure the "Enable Task Controller Communication" setting is selected.

Saving Profile Settings

Select Save button to store settings from all tabs and close Implement Profile application. Selecting Save is not required when switching between tabs.

Implement Profile settings are saved in the display according to the following factors:

- Profile name
- ISO name of the detected implement control unit

NOTE: Set up pre-operation settings in the implement control unit, such as drive configuration, before configuring Implement Profile settings.

ISO name changes when some implement control unit settings change. This includes changing control unit setup between fertilizer and seeding.

Automatic Detection of Profile Settings

NOTE: Section Control must be OFF to detect SeedStar 2 or SeedStar XP planters when first connected to tractor. After first connection, planter is detected whether Section Control is ON or OFF.

If an implement control unit is connected, some Implement Profile settings are automatically set by the implement control unit.

An alert stating "Implement Profile Created" is displayed the first time the control unit is connected. When the implement is reconnected in the future, it is identified by its ISO name, and Implement Profile settings that are saved in the display are loaded.

NOTE: The alert continues to appear if "Setup Later" is selected.

When an implement is connected that is not recognized, a profile must be created for that implement. Select Add

Implement button in Equipment Manager to create an implement profile.

To view currently detected ISO Name, select Diagnostics Center > Controller Diagnostics tab > choose implement control unit > Controller Info tab.

Verify all required settings before operation. Work point is not set automatically.

Connection Types

- Connection type, or hitch, describes how implement is attached to machine and controls how display determines implement movement behind machine. Coverage map, documentation, and Section Control require Connection Type settings.

- **Pivoting Offset**

Some implements have a pivoting hitch that connects to machine's three-point rear hitch. The offset for this pivoting location is required for display to determine implement movement behind the machine. Option is available when three-point rear hitch is selected as the connection type.

Working Width

- Working Width is the width of the area tilled, planted, sprayed, or harvested on each pass through the field. It is used to create work data maps and calculate area worked. Guidance, Mapping, and Area Totals applications require Working Width.

Dimensions

- **Lateral Offset**

Lateral distance from center point of the machine to center point of working width of implement. Guidance and Mapping applications require Lateral Offset setting.

NOTE: When using multiple implements, only the lateral offset for the first implement is used.

To avoid errors in mapping, documentation, and Section Control, combine the lateral offsets from all implements and enter that value for the first implement. For example, if the first implement is 5.1 cm (2 in) to the right and the second implement is 2.5 cm (1 in) to the left, enter 1.3 cm (0.5 in) to the right.

- **Center of Rotation**

In-line distance from connection point to the implement's center of rotation while in working position. Usually, this is where load-bearing parts of implement make contact with ground. Center of Rotation offset is important to accurately model trailing action of implement around curves. AutoTrac Turn Automation, Mapping, and passive implement guidance require the Center of Rotation setting. It is

recommended that the center of rotation value be verified for proper operation. Refer to Onscreen Help for additional information.

- **Work Point**

In-line distance from connection point to point where the operation occurs, for example, where seed or product is dropped, a crop is harvested, or ground is tilled. Mapping application requires Work Point setting.

- **Section Offset (ISOBUS Implements)**

In-line distance from center of rotation to point where the operation occurs. For example, where seed or product is dropped, a crop is harvested, or ground is tilled. Mapping application requires Section Offset setting.

Work Recording

- Recording Triggers determine when map recording and Work Monitor totals are turned ON and OFF. Not all recording triggers are available for all machine types.

NOTE: In Manual mode, operator must push Record or Pause button to turn work data map recording ON or OFF.

Mechanical Delay

- Mechanical delay is the average time for the product to reach the ground after an ON or OFF command. It may need to change with each machine, implement, and display combination. Mapping application requires Mechanical Delay settings. Settings are critical for Section Control performance.

NOTE: Some controllers may dynamically engage with the display based on known implement work point and dimension values to automatically calculate the mechanical delay values.

NOTE: A disabled input field indicates that the controller is dynamically interacting with the display to update the mechanical delay parameters.

Use Help Center Onscreen Help for more information about Equipment Manager and the Implement Profile.

Reset Option for ISOBUS Implements



Reset Button

PC697601—UN—11FEB26



PC702246—UN—13FEB26

Reset Button Location

A—Reset Button
B—Reset Profile

A Reset Button (A) is displayed next to each setting that has been changed manually and saved. If a profile has been modified but not yet saved, the Reset icon is not shown for those settings. Once one or more settings in the Implement Profile are modified and the profile is saved, users can reset each modified setting individually or reset all settings to default by using Reset Profile (B).

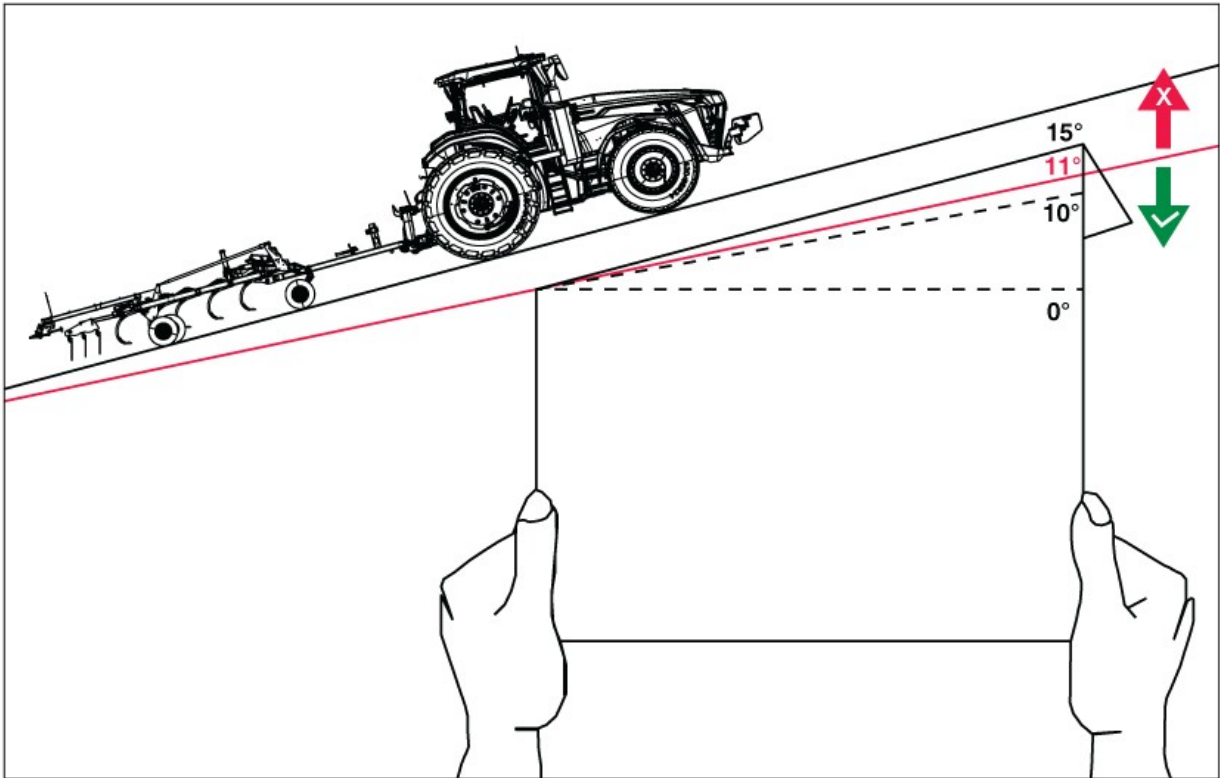
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Field Selection

A field selected for autonomous operations must be carefully considered. Factors for a good field candidate for autonomous operation include:

- Flat topography (up to 11° slope). In slope conditions, the system may limit speed below the operators speed setting.

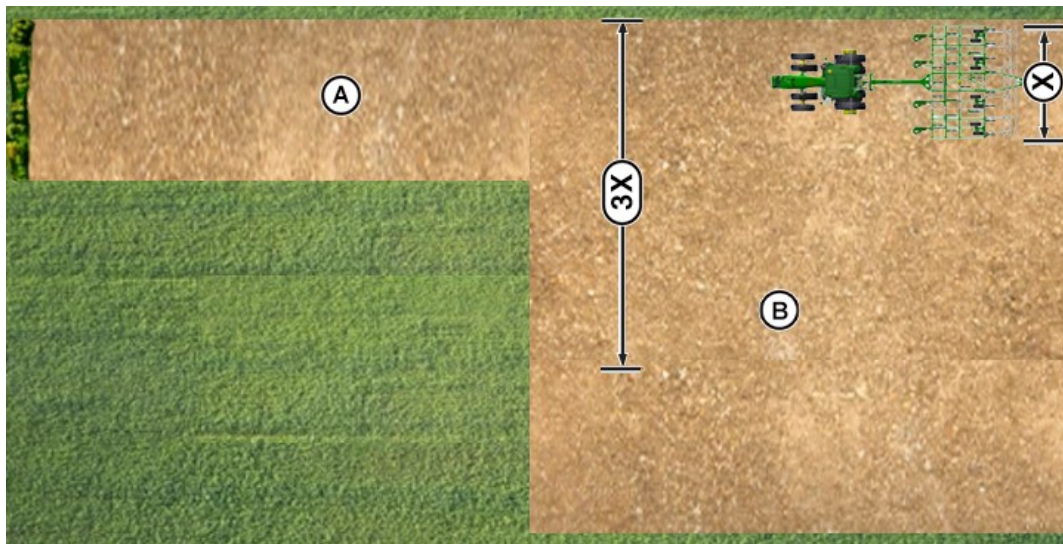
IMPORTANT: Do not operate equipment on a field that exceeds 11 degrees/20 percent grade slope.



PC620804—UN—27AUG24

Machine Exceeding Slope

- Workable field areas of at least 3 times the implement width



APY80354R—UN—02MAR23

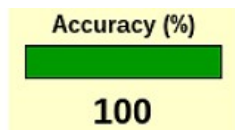
Workable Field Area

A—Autonomy Non-Approved Field Area (less than 3X)
B—Autonomy Approved Field Area (more than 3X)

X—Implement Width

IMPORTANT: Attempting to include an area smaller than three times the implement width could result with the machine crossing the exterior boundary and the autonomous system coming to a stop in the buffer area.

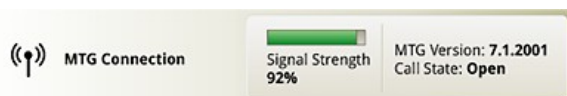
- StarFire signal coverage at or above 80% Global Accuracy Indicator (GAI)



Global Accuracy Indicator

APY80304—UN—01FEB23

- Cellular signal coverage above 80%

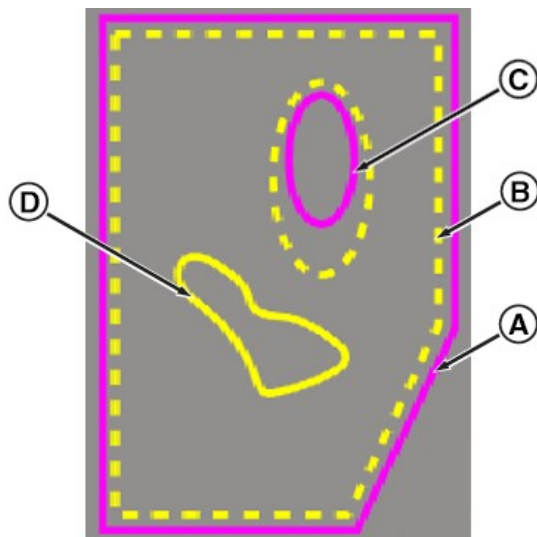


Cellular Signal Coverage

APY80305—UN—01FEB23

- Mapped internal obstacles (ex. waterways, inlets, and permanent structures)

IMPORTANT: Do not create narrow passageways with the exterior boundary to connect multiple fields.



Mapped Internal Obstacle

APY80306—UN—01FEB23

A—Autonomy Exterior Boundary
B—Headland Boundary
C—Interior Impassable Boundary
D—Interior Passable Boundary

- Fields with a single straight track angle (example: The whole field is a 5° North.)

- Fields allowing headland boundaries for three or more headland passes

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Field Setup

The field must be free of any movable objects. Any objects intentionally left in the field should have a boundary mapped around them. The perception system is not a substitute for good boundary mapping. Objects not mapped may be worked through or cause unnecessary stops.

NOTE: If the system detects excessive wheel slip the tractor will stop.

NOTE: Puddles in the field may trigger the Obstacle Detected alert.

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Fields & Boundaries



Field and Boundaries Application

PC28766—UN—25AUG22

Field names organize information so it is easier to find and use data, such as guidance lines. Using field names is optional, and a "---" appears for undefined names.

Use the Field and Boundaries application to:

- Select field location name used for all other applications.
- Create a client, farm, or field name.
- Change the name of a client, farm, or field.
- Associate a field to a different farm or client.
- Delete a client, farm, or field.
- Create boundaries and boundary sets.

Select Client, Farm, and Field box to set current location and choose field name used for all other applications.

NOTE: Recording data under the correct client, farm, and field is required if managing data using John Deere Operations Center.

Integration with Guidance

- A field can be associated to a guidance track when the track is created or by editing the track.
- Guidance track list can be filtered by field name.

Run Page Module

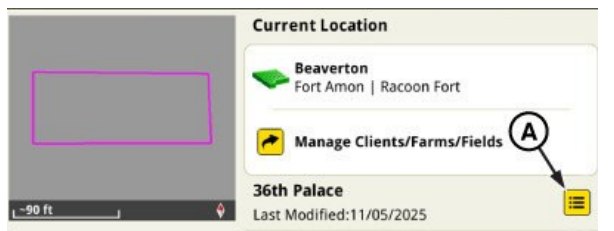
A Location module for the Fields application is available in Layout Manager application. It is available on the default Guidance Run Page, and it can be added to any run page.

Select a field in Location module to:

- Filter guidance track list.
- Associate new tracks to the field when they are created.
- Begin new or continue previous work data.

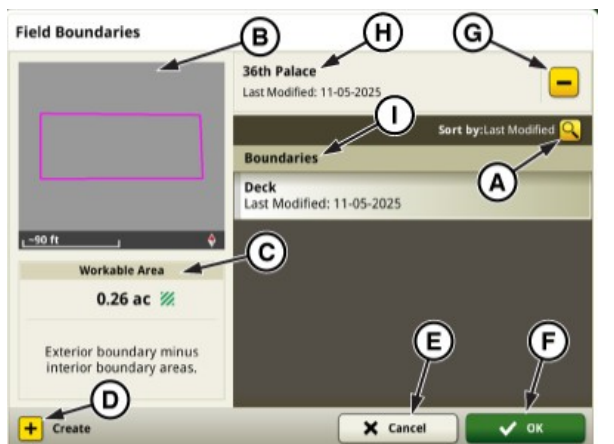
Navigate to Fields & Boundaries

1. Select Menu.
2. Select Applications tab.
3. Select Fields & Boundaries application.



List Icon

A—List Icon



Field Boundaries

- A—Magnifying Glass— Sort or filter available boundaries by different criteria
 B—Top section— Current active or selected boundary
 C—Workable Area— Calculated area that is covered by boundary
 D—Plus Button— Use to create a new boundary
 E—Cancel— Cancel selection or any changes
 F—OK— Submit field boundary selection changes
 G—Minus Button— Used to Unselect current Boundary
 H—Current Boundary Selection
 I—Other Available Boundaries

NOTE: Current active boundary selection in Operations Center does not automatically update the selected boundary for a Client, Farm, Field. Boundary selection must be made manually.

Manage Clients/Farms/Fields

Field Organization



PC28767—UN—25AUG22

A—Client
 B—Farm
 C—Field

Use the following hierarchy to help organize data:

- Clients (A) are the highest level of organization.
- Farms (B) are the middle level of organization. A farm can be associated with a client.
- Fields (C) are the basic level of organization. A field can be associated with a farm and a client.

A strict hierarchy is not necessary, though it is possible to use only field names and leave farm and client names blank. It is even possible not to use field names at all.

These decisions depend on amount of data being kept. More data requires structure to find fields.

NOTE: In previous John Deere displays, maps and guidance lines were saved based on field names. In the G5 Display, data is saved as latitude and longitude points. The field name is only needed as a way to filter data.

Select and Filter Names

In the Client, Farm, and Field hierarchy, select clients and farms to find fields.

1. Select Client tab.
2. From list, select client. Client name is displayed on Client tab.
3. Farm tab is automatically displayed. Only farms associated with the client are listed.
4. From list, select farm. Farm name is displayed on Farm tab.
5. Field tab is automatically displayed. Only fields associated with the client and farm are listed. Select field.

Remove Filter

Remove filter by selecting Clear Selections button.

Create and Edit Names

NOTE: Clients, farms, or fields should not be renamed after data is recorded. If renamed, change name in other locations, such as John Deere Operations Center.

Client, Farm, and Field names cannot be duplicated. Names associated with different clients and farms must be unique.

Client and Farm Tabs

When Client or Farm tabs are selected, select Edit button at bottom of page to display Edit Client or Edit Farm list.

On either list, select one of the client or farm names to edit it, or select New button at bottom of page to create a name.

Field Tab

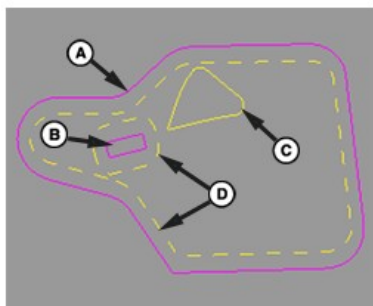
When Field tab is selected, highlight field name and select edit button to edit a field. Select New button at bottom of the page to create a name.

Delete Names

To delete a name, edit the client, farm, or field, and select the delete button on the edit page.

- Deleting a client also deletes all farms and fields associated with the client.
- Deleting a farm also deletes all fields associated with the farm.

Field Boundaries



PC28768—UN—25AUG22

- A—Exterior Boundary (pink)
- B—Interior Impassable Boundary (pink)
- C—Interior Passable Boundary (yellow)
- D—Headland Boundary (yellow)

The exterior boundary (A) marks the perimeter of a field.

NOTE: Creating and using interior boundaries requires an exterior boundary.

Interior boundaries mark important areas of field. These boundaries can either be impassable (pink) (B) or passable (yellow) (C). An example of an impassable boundary is a well, while an example of a passable boundary is a waterway.

Headland boundaries (yellow dashes) (D) mark areas in the field where there are end rows or turn rows. They are created inside the exterior boundary and around impassable interior boundaries.

When used with the Section Control application, boundaries prevent application of a product inside marked areas of the field and outside of the field.

Area Calculation

An estimated boundary area is calculated on a flat two-dimensional plane. All active interior boundary areas are subtracted from exterior boundary area. Elevation changes are not used in boundary area calculation.

Work Totals include elevation changes in area worked totals. Due to calculation differences, boundary and work totals vary.

Creating a boundary using a coverage map requires the following:

- Field name
- Coverage map with no coverage gaps around the exterior of the field

Creating a driven boundary requires the following:

- Field name
- StarFire Receiver with SF1 or better signal

Creating an autonomy boundary requires the following:

- Field name
- Driven boundary
- StarFire 7000/7500 Receiver with SF-RTK/RTK signal

Autonomy Boundaries

An autonomy boundary is a high quality boundary which contains repeatability attributes and is recorded to meet the safety requirement set for the autonomous operation.

Autonomy boundaries must be driven boundaries recorded using a StarFire 7000/7500 Receiver, and a Generation 4/G5 display to provide the accuracy and repeatability for full field automation and autonomy. The information is captured and stored with the data at the time of the driven boundary recording.

Autonomy boundaries are represented with a blue color and show a blue autonomy icon adjacent to boundary name or type.

Boundaries that do not meet the requirements for autonomy are represented with an orange color and show a black autonomy icon adjacent to boundary name or type.

A dashed line represents a prediction of the quality of that segment of the boundary if the operator were to

complete the next available action, such as selecting Save.

For instance, while recording, a dashed line connects the current point to the recording starting point. The dashed line changes color, blue or orange, depending on whether that segment would be autonomy (blue) or non-autonomy (orange) if the boundary were saved at that moment.

NOTE: The current point must be within 100m (329 ft) of the recording starting point and all requirements must be met for the segment to be autonomy (blue).

When pausing recording, the dashed line connects the current point to the point where recording was paused. The dashed line changes color, blue or orange, depending on whether that segment would be autonomy (blue) or non-autonomy (orange) if recording were resumed at that moment.

Autonomy Boundaries Overview

NOTE: Boundaries used for the autonomy system must fulfill autonomy requirements. See *Requirements for Mapping Autonomy Field Boundaries* in this section.

Accurate autonomy boundaries allow the autonomy system to perform safely and precisely. The field boundary is used as the reference point for these products. Accuracy is key to success and precise machine control.

The autonomous system uses a driven autonomy boundary for the exterior, and impassable boundaries to safely navigate the field and remain inside the designated work area. Boundaries that do not meet the requirements for autonomy are represented with an orange or red color.

Display Quality	Not Autonomy			Autonomy
Operations Center Quality	Unknown	Basic	Advanced	Autonomy
Method	-	- Imported - Hand Drawn - From Previous Operation - Driven	Driven	Driven
Correction Mode	-	- Digitized - SF1 - SF2	- SF3 - RTK - RTKX - mRTK - SF-RTK	- RTK - RTKX - SF-RTK
Additional	None	None	None	All items on

Requirements				the Details checklist must be fulfilled
Editing	No editing restrictions	No editing restrictions	No editing restrictions	Edits that shrink the boundary are allowed. Edits that expand the boundary are not allowed.
Recommended Use Cases	Use with discretion	- Maps - Reporting - Field detection - Weather - Logistics - Predictive Ground Speed - Automation	All Basic use cases plus: - Section Control - AutoTrac (Boundary Track) - AutoTrac Turn Automation - AutoTrac Implement Guidance - AutoPath (Rows) - AutoPath (Boundaries) - Machine Sync	All Advanced use cases plus: Autonomy Autonomy boundary quality is a requirement for use with Autonomous Solutions.
Color of Boundaries while recording	Red	Red	Orange	Blue

If the Boundary Recording Accuracy drops below 80%, the recorded boundary will no longer be autonomy capable.

The following can cause Boundary Recording Accuracy to drop below 80%:

1. Shading
2. TCM calibration has not been performed on the receiver.
3. Inadequate receiver signal acquisition time.
4. Receiver mounting direction has changed.
5. New receiver has been installed.
6. Receiver has been reconnected.
7. Receiver offset dimensions have changed.

CAUTION: Avoid injury or property damage. Place exterior autonomy boundaries and interior impassable boundaries at least 1.5 m (5 ft) from the following:

- Dwellings, private property, buildings, and public roadways

- Areas of sloped land exceeding 11 degrees (20 percent grade)
- Holes, ditches, gullies, steep embankments, bodies of water, and other drop offs
- Wind turbines, utility poles, and center pivot irrigation equipment
- Low-hanging items such as electrical cables, branches, and guy-wires
- Propane and natural gas inlets or storage.

IMPORTANT: Do not create narrow passageways with the exterior boundary to connect multiple fields.

NOTE: Not all conditions that can lead to a hazard are listed. Be alert for any situation in which machine stability may be compromised, hazards that are not clearly visible, or there is an increase in human presence.

IMPORTANT: Field topography can change from year to year and season to season. If this happens, the field must be re-mapped. Examples: erosion, ditches, mudslides, sinkholes.

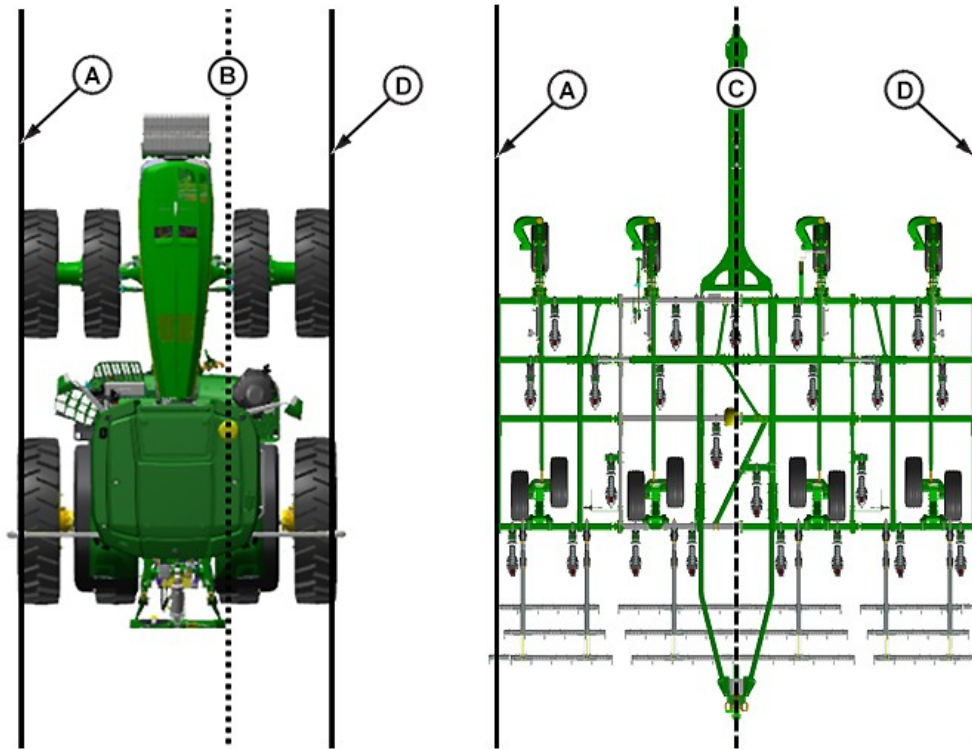
Autonomy Boundary Recording Offsets:

 **CAUTION:** Avoid injury or property damage. Improper boundary offsets and incorrect equipment dimensions may result in a machine path through hazardous areas. Verify boundary offsets and equipment dimensions before mapping.

An autonomy boundary recording offset can be generated from either the machine GPS or the implement work point depending on the equipment being used for mapping. If a boundary is being recorded using a machine with no implement, use the machine GPS. If using an implement with a receiver for recording use the implement work point.

- Machine GPS
 - Universal StarFire Receiver - The boundary recording offset is measured using the distance from the edge of the machine to the center of the receiver.
 - Integrated StarFire Receiver - The boundary recording is measured using the distance from the edge of the machine to the center of the machine. For all integrated receivers use the center of the machine as the reference point regardless of the receiver location.
- Implement Work Point - The boundary recording offset is measured using the distance from the edge of the implement to the center of the implement.

NOTE: For any universal receiver being used, machine or implement, be sure to establish correct GPS Lateral Offsets in the machine or implement profile to ensure accurate boundary placement.



Autonomy Boundary Recording Offset Measurement

APY80353—UN—23FEB23

A—Left Frame Edge
B—Center of Machine Universal Receiver

NOTE: If the machine universal receiver is not mounted on the machine centerline, establish a lateral offset in the machine profile to account for the accurate mounting location. Then utilize the center of the receiver to the left or right for the boundary recording offset.

NOTE: If the implement receiver is not mounted at the implement centerline, be sure to establish a lateral offset in the implement profile to account for the accurate mounting location. Then utilize the centerline of the implement to measure to the left or right for the boundary recording offset. Offset values to both the left and the right of the implement centerline will be equal, and the implement receiver location does not influence the boundary recording offset value.

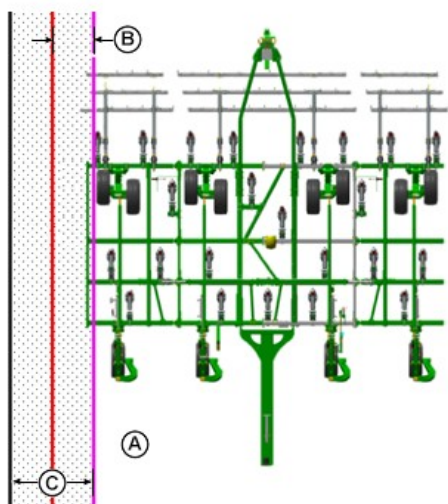
C—Center of Implement
D—Right Frame Edge

The distance between the working tolerance and the maximum buffer area can vary based on equipment type and GPS quality, but the working tolerance will never exceed the buffer area. If the equipment stops within the buffer area, reposition equipment as required.

IMPORTANT: Avoid autonomous operation failure. Detailed autonomy field boundary mapping is a critical part of ensuring successful autonomous operation. For more information, see Requirements for Mapping Autonomy Field Boundaries in this section.

Equipment Overhang:

During operation, the autonomous equipment may physically overhang (implement, flashers, implement hitch, machine weights, etc.) into the buffer area while working in the field. The amount of overhang allowed in the buffer area is enforced with the working tolerance.



APY80321—UN—21FEB23

Minimum Distance from Hazards

A—Autonomy or Impassable Boundary

B—Working Tolerance

C—Buffer Area, 1.5 m (5 ft)

Requirements for Mapping Autonomy Field Boundaries

- **Display Driven:** The most accurate way to digitally represent field boundaries is by physically driving them while the GPS system records the machine location. Boundaries must be driven and created on a display. Any boundaries created or modified in outside of the display will not function for autonomy.
- **GPS Accuracy:** During exterior boundary recording,

if GPS accuracy falls below 80% the boundary will not meet autonomy requirements. Wait for the signal to improve and re-map the area.

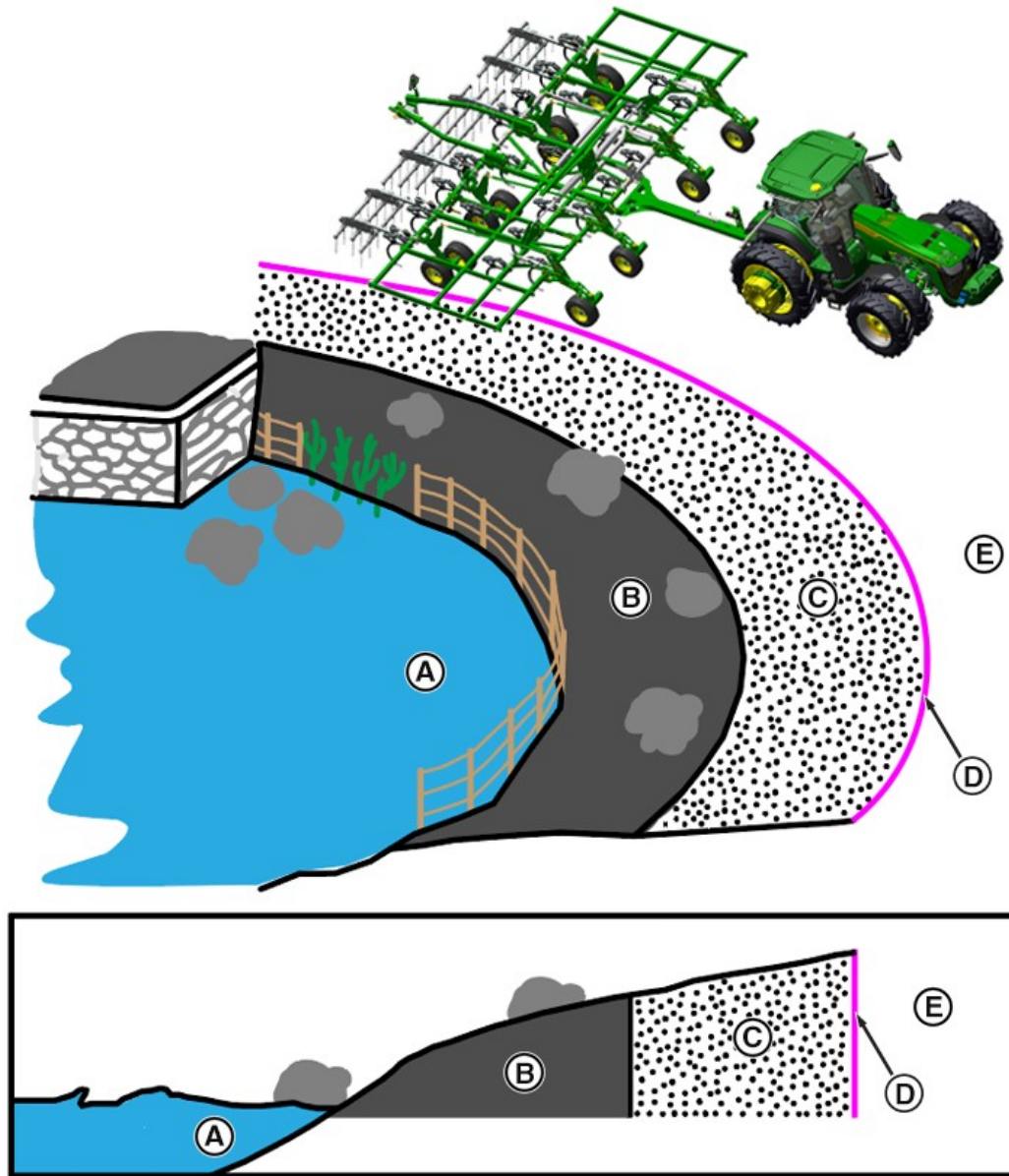
- **Dimensions:** When recording a driven boundary, all equipment dimensions, and receiver dimensions must be accurate. GPS Lateral offset is critical to ensure boundary recording offsets are properly applied.

CAUTION: Avoid injury or property damage. Improper boundary offsets and incorrect equipment dimensions may result in a machine path through hazardous areas. Verify boundary offsets and equipment dimensions before mapping.

- **Pause and Resume:** Use the pause and resume buttons when needed to stop and start boundary recording when encountering corners. This practice avoids inaccurate boundary shapes. The machine must be within 100 m (328 ft) of the pause location to maintain Autonomy quality for that segment. If resume is selected further than 100 m (328 ft) from the pause location, the segment will be classified as not autonomy capable.

NOTE: For Software Version 25.2 (10.31.xxx-XXX) and earlier, the pause and snap distance is 5 m (17 ft).

NOTE: Normal operation can include some equipment overhang into the buffer area. This is acceptable. Excessive overhang (before exceeding the buffer area) may cause the autonomy system to stop.



Hazards and Slopes

APY80302—UN—02FEB23

A—Hazard
B—Hazard
C—Buffer, 1.5 m (5 ft)

D—Autonomy Operational Boundary
E—Inside of Field

ch177nn,1738323754322-19-04MAR26

Mapping



Mapping

PC28771—UN—25AUG22

Mapping application is used to view spatial features, such as the following:

- Guidance
- Coverage and Work Data
- Map-Based Prescriptions

The map view can be added to run pages using several different size modules in Layout Manager.

Navigate to Mapping

1. Select Menu.
2. Select Applications tab.
3. Select Mapping application.

Work Data Maps

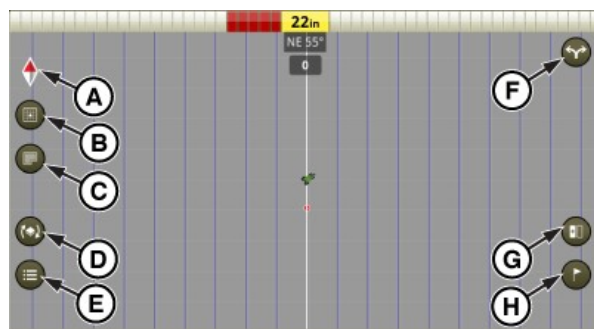
NOTE: Work data maps are cleared when new work begins. For information on starting new work, see Work Setup in this section or the Work Setup Onscreen Help.

Work data includes rate, product, and coverage (work state) information. It is recorded based on the global positioning system (GPS) location and time.

Work data files include the following information:

- Time
- Latitude and longitude
- Elevation
- Field name (if set by operator)
- Coverage
- Documentation

There is no size limit for recording work data for each field name. The only limit is the memory capacity of the display. Available display memory is found in Status Center on the main page.



Mapping

PC649529—UN—11OCT24

Compass (A): Indicates cardinal direction on the map. Select Compass (A) to toggle between Machine Heading Up and North Up modes.

- **Machine Heading Up:** By default, the compass is in this mode, where the machine heading is at the top of the screen and the view rotates with the machine heading (similar to perspective view).
- **North Up:** In this mode, north is always at the top of the screen, and the view does not rotate with the machine heading (similar to fixed field view).

Map View (B): Select to switch map views.

- **Field View:** An overhead view of the machine and field. View adjusts as machine travels through field.
- **Perspective View:** Shows the field as the user sees it. View adjusts as machine travels through field.
- **Fixed Field View:** An overhead view of machine and field. View does not adjust as machine travels through field, though it is possible to pan the view.

Field View (C): Select to zoom out to the boundary edges. If there is no boundary, the map zooms out to the extend of the coverage.

Map Layer Toggle (D): Select to switch between map types. Information displayed in the legend changes based on the type of map selected.

Legend (E): Select to show the map legend.

Turn Predictor (F): Alerts the operator by predicting the end of the pass and displays the distance to the end of the pass in the map view.

Split (G): Enable/disable visualization of multiple map modules at the same time.

Flags (H): Select to add a flag type to the map or, in the case of area and line flags, to start recording. Flag types are created in the Flags application.

Coverage Map

Coverage data displays where work has been done. Area that has been worked once displays as light blue, and area that has been worked more than once is displayed as dark blue. Coverage map aligns with area worked total in Work Monitor.

Work data is displayed on the map for 3.21 km (2 mi) in all directions from the current GPS location.

Coverage map is available with all G5 Displays. A StarFire Receiver is required to record coverage data.

Prescription Map

Prescription maps contain target rate information for management zones within a field. They are used by the display to change the target rate automatically when operating in each management zone.

Prescriptions can be imported to the display as shapefiles using File Manager and are displayed on the map when selected in Work Setup. Work data maps overlay on top of prescription maps.

A rate of zero in the prescription is displayed as black on the map. Zero rates in the prescription command sections OFF in Section Control.

Additional Map Types

Rate Map

Rate map displays the rate received from a machine or implement control unit. If an area is covered more than once, the rate of the most recent pass is displayed.

Yield Map

Yield map displays the average yield received from the mass flow sensor.

Moisture Map

Moisture map displays the average moisture of the harvested crop received from the moisture sensor.

Trash Map

Trash map displays the measure of non-crop material from the sensing system.

Variety Map

Variety map displays the varieties of a planted crop in the field. Up to ten different colors are used to distinguish varieties. If more than ten varieties are recorded, colors are repeated.

The G5 Display documents and displays the variety being harvested at the center point of the header working width. If the center point of the header is positioned in a location without a variety defined in the variety locator map, then the display documents and displays "---" as the variety.

Product Map

NOTE: The product map is only displayed when applying a single liquid operation.

Product map displays products or tank mixes applied to the field. Up to ten different colors are used to distinguish between products and tank mixes. If more than ten products and tank mixes are recorded, the colors are repeated.

Singulation Map

Singulation map displays a percentage measurement of the planter metering system performance at delivering one seed at a time to the ground. The singulation map layer will show Row by Row singulation performance.

Map Features

Gestures: The Mapping application allows users to navigate maps within the G5 displays using gestures. The following gestures are available:

1. Zoom:

- Pinch in or out with two fingers to zoom in or out.
- Double tap with one finger, hold, and drag up or down for one finger zoom.
- Double tap with one finger to zoom in incrementally.
- Single tap with two fingers to zoom out incrementally.

2. Panning:

Pan across the map using one finger.

NOTE: When panning in Perspective view, the machine icon may go from being upright to flat.

3. Run Page Flip:

Start with finger off the display edge and move across display border to move to the next run page either to left or right.



PC646024—UN—11SEP24

Pass Direction

Pass Visualization: Arrow marks layered above the passes indicate the pass direction.



PC646027—UN—13SEP24

Split Map Icons

A—Split Icon
B—Merge Icon

Split Map: Mapping has the ability to split a large map

screen. This feature enables visualization of multiple map layers at the same time. If a map module is capable of being split, the Split icon (A) is displayed. Selecting the Merge icon (B) merges the screens back. Split map screens are locked together. Any gestures such as panning or zooming will affect both sides of a split map.

Satellite View: A satellite background can be enabled/disabled using the Background toggle button on the Mapping run page.

NOTE: G5 Advanced license is required to enable the satellite background layer.

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Flags



Flags

PC28773—UN—25AUG22

Flags is used to mark points of interest within a field. These points can be used for either guidance or documentation.

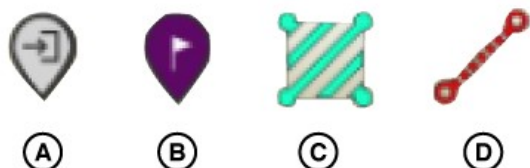
Flags notifies operators in the cab if their current machine path intersects with a flagged area, point, or line, allowing them to make immediate adjustments if needed.

NOTE: An alert from a flag placed in an autonomous field will not influence the behavior of a machine running in Autonomy mode. To have an autonomous machine avoid a specific area or object, use boundaries.

Navigate to Flags

1. Select Menu.
2. Select Applications tab.
3. Select Flags.

Flag Shape Types



A—Entrance Flag
B—Point Flag

PC684076—UN—25SEP25

C—Area Flag
D—Line Flag

- Entrance Flag (A)—Mark a machine entrance point in the field.
- Point Flag (B)—Mark a specific point in the field, such as a rock or where an applicator ran out of product.
- Area Flag (C)—Mark areas of interest, such as a patch of weeds or a low spot in the field.
- Line Flag (D)—Mark lines in the field, such as tile lines or fences.

NOTE: If a work point is defined, the flag is recorded at the work point. If no work point is defined, the flag is recorded directly under the GPS receiver.

ch177nn,1738294533577-19-24SEP25

Entrance Flags



Entrance Flag

PC620771—UN—08AUG24

Entrance flags are defined or created by the operator to specify the entrance location of the machine into the field. The ideal method to place the flags is near the boundary line where a field entrance is located. There is no limit to placing flags in the field. They can be placed inside the boundary, outside the boundary, or at the current machine location as well.

It is advised to limit the number of flags placed in the field for optimal machine performance. Entrance flags can be set via the display, Operations Center, and Operations Center Mobile app.

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Work Setup



Work Setup

PC28769—UN—25AUG22

Use Work Setup when changing implements, fields, or applying a different product. The settings available in

the Work Setup application change based on the operation.

Use Layout Manager application to add Work Setup shortcut softkey to the shortcut bar.

Navigate to Work Setup

1. Select Menu.
2. Select Applications tab.
3. Select Work Setup application.

Work Summary

Use Work Summary to select operational details, such as product, crop type, and target rate/prescription.

Work List

Select Work List to view and select from planned, shared, or historical work.

- Planned - Select an imported work plan and automatically set up the display to begin executing the work.
- Shared - Select and join a work group for sharing coverage, machine position, and guidance lines.
- History - Select and resume previous work events.

New Work



New Work Button

PC28710—UN—25AUG22

Select New Work button to clear work data from the map for the selected field. If a field name is not selected, all work data recorded without a field name is saved to the work list and then cleared from the map.

Other conditions that start new work:

- The operator changes client, farm, or field and does not resume work.
- The operator changes the crop while planting or harvesting. If more than one operation is present, new work is started for the operation that was modified.
- The operator changes the product or dry blend when applying a dry or gas operation. If more than one operation is present, new work is started for the operation that was modified.
- The operator changes the product or tank mix when more than one liquid operation is actively being applied. New work is started for the operation that was modified.

NOTE: Changing the product or tank mix while applying a single liquid operation does not automatically generate new work. The New Work button must be selected if new work is desired.

- A new implement or platform is detected that creates a set of operations that do not match a previous set of operations.
- A previously detected implement or platform is disconnected and a virtual implement or platform is created.
- The operator joins a sharing work group and any of the other listed conditions occur.

Target Rate/Prescription



Prescription

PC28806—UN—29AUG22

The display only supports ArcGIS shapefile format.

An unlimited number of prescriptions can be imported.

Each prescription has an unlimited number of rate zones.

There is no measurable minimum to rate zone size.

Multiple Zone Rate Selection

Select the Multiple Zone Rate Selection entry box to select the method the display uses to determine the target rate across a split section or sections:

- Highest – Uses the highest prescription rate among all the rates that fall within a given meter coverage area.
- Lowest – Uses the lowest non-zero prescription rate among all the rates that fall within a given meter coverage area.
- Average – Uses a weighted, non-zero, mean prescription rate derived from all the rates that fall within a given meter coverage area.
- Most Common – Uses the non-zero prescription rate that spans the greatest share of a given meter coverage area.

By default, the multiple zone rate is set to Highest. The multiple zone rate can be configured for each unique operation. The selection for a given operation persists indefinitely unless a factory reset is performed. After a factory reset, the display sets all operations to Highest.

ISOBUS Tasks

The John Deere G5 Display is able to record ISOBUS totals provided by AEF (Agricultural Industry Electronics Foundation) certified implements with TC-GEO (task controller geo-based) and by John Deere pull-type sprayers. All totals provided by the ISOBUS implement, such as time, area, mass, and volume, are recorded in the task.

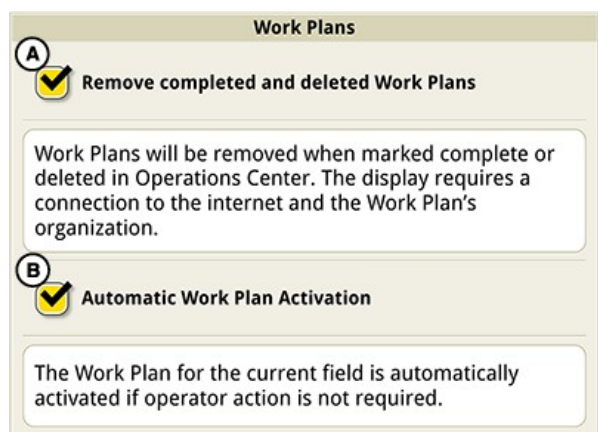
Conditions

Use Conditions to manually document weather

conditions, field conditions, and work notes while performing work in a field.

NOTE: If a Mobile Weather station is active, manual documentation of weather conditions is disabled.

Work Plan Settings



PC29324—UN—28NOV23

Work Plan Settings

A—Remove Completed and Deleted Work Plans
B—Automatic Work Plan Activation

Remove completed and deleted Work Plans (A)—When this setting is enabled, once a Work Plan reaches 90% completion or hasn't been used for at least 2 weeks, it is marked as complete and removed from the Work List.

Automatic Work Plan Activation (B)—When this setting is enabled, as soon as a field is entered for which a Work Plan exists, it is automatically activated. However, if any conflicts are present, they must be resolved for this setting to function properly.

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Work Totals



Work Totals

PC28770—UN—25AUG22

Totals are displayed for the active field and work operation. To change fields, go to Fields and Boundaries application and set current location. Use Layout Manager application to add Work Totals modules to the run page.

Navigate to Work Totals

1. Select Menu.
2. Select Applications tab.

3. Select Work Totals application.

Work Operation

If multiple work operations are recorded, select the toggle to choose an operation type.

If multiple varieties or products are recorded for an operation, separate totals for each are listed after the field totals.

NOTE: Other specific work totals are available for certain machines and implements. Refer to Onscreen Help for additional information.

NOTE: Certain work totals may not be visible due to the configuration of the machine or implement, or an improper calibration.

Area

Area is the total area that was worked while work recording was turned on. The calculation is based on implement working width, ground speed, and time worked.

Area remaining is the area of the field that has not yet been worked. Calculation requires an exterior boundary and takes into account interior boundaries.

Time

Time is the amount of time work recording has been on for the current operation, measured to the tenth of an hour.

Time remaining is the estimated time to finish working the field based on the remaining area and the time taken to work the completed part of the field.

Rate

Rate is the total number of seeds or product applied divided by area worked.

Total Applied

Total Applied is the total number of seeds or product applied.

Product

Product remaining is the amount of product required to complete work. It is calculated by multiplying the area remaining and the rate.

NOTE: When using a tank mix, the amount listed is the whole tank mix and not the individual ingredients.

Fuel

Fuel is the amount of fuel consumed while recording work.

Load Totals

Load Totals display the selected harvest data per load of the harvested crop. When more than three load total

values are available, the operator can select which totals to display. Exactly three values must be selected.

Shared Totals

Work totals can be shared using in-field data sharing. Shared totals are updated both incrementally by the display and when information is received from other group members. For more information on joining a work group, see the Work Setup application Onscreen Help.

Custom Totals

View the work history for a field or group of fields within a selected date range. Custom totals can be filtered by client/farm/field, crop, operation, and product.

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Work Monitor



Work Monitor

PC28775—UN—25AUG22

NOTE: Certain machine and operation-specific values may not be visible due to the configuration of the machine or implement, or the absence of proper calibration.

Work Monitor displays averaged and totaled machine and operation-specific values. Select a value on the page to view a popup window of just that value. Every one of these values can be placed on the main run page.

Use the Reset button at the bottom of the page to clear all values, except instant values. Date and time of the last reset will be indicated next to the button.

To the right of the Reset button, Work Recording indicates whether the Work Monitor is active and currently counting. A pulsing light shows it is active.

Navigate to Work Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Work Monitor application.

Work Recording

When Work Recording is ON, map recording and counters that require a recording trigger accumulate. Counters requiring Work Recording include:

- Area Worked
- Time Worked

- Productivity
- Average Fuel Per Area
- Average Working Speed

Select Work Recording in the bottom right hand corner to view a popup window with recording settings.

Recording status is based on the current recording trigger selected in Implement Profile. If the recording trigger does not fit the current operations, press Edit button to change the selected recording trigger. For more information, see Implement Profile section.

NOTE: If recording trigger is set to manual, work recording can be switched on or off by pressing the recording button.

ch177nn,1728630571459-19-11OCT24

Work Recording

When Work Recording is ON, map recording and counters that require a recording trigger accumulate. Counters requiring Work Recording include:

- Area Worked
- Time Worked
- Productivity
- Average Fuel Per Area
- Average Working Speed

Select Work Recording in the bottom right hand corner to view a popup window with recording settings.

Recording status is based on the current recording trigger selected in Implement Profile. If the recording trigger does not fit the current operations, press Edit button to change the selected recording trigger. For more information, see Implement Profile section.

NOTE: If recording trigger is set to manual, work recording can be switched on or off by pressing the recording button.

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Sharing



Sharing

PC28774—UN—25AUG22

NOTE: For optimal performance, all displays and all JDLINK modems should use the same software version.

NOTE: Sharing application works between Generation 4 and G5 displays.

Use the Sharing application to view requirements for sharing data between machines. Data sharing allows up to six operators to share guidance lines and data while working in the same field. To join a team, operators navigate to the work list tab in the Work Setup application. To share guidance lines, the operator navigates to the AutoTrac Guidance application.

Shared work data is sent and received in 30-second segments. Including data transfer, a display typically receives updates to coverage from group members every 30 seconds. The position of group members updates every 6 seconds.

NOTE: Data transfer times vary depending on the strength of the wireless connection.

When Sharing application is enabled, the following information is shared between displays:

- Guidance lines (straight and circle tracks only)

NOTE: Straight tracks created using the methods Machine Access A + B, Machine Access A + Heading, or Machine Access Lat/Lon + Heading cannot be shared.

- Coverage maps
- As-applied maps

Coverage, overlap, shared coverage, and shared overlap are displayed using unique colors. Shared coverage maps are visible on certain run page modules and within the AutoTrac Guidance and Mapping applications.

Requirements for sharing machine position and guidance lines:

NOTE: For best results, use a correction level of SF2 or higher. Using SF1 can result in undesired shifts to shared guidance tracks and shared coverage, which negatively affect AutoTrac and Section Control performance.

- Automatically Sync Data and Receive Work Group Data options are toggled on within Sharing or File Manager applications.
- A JDLINK modem with an active JDLINK Connect subscription is required.
- A 4600 CommandCenter or a 4640 Universal Display with an In-Field Data Sharing activation is required.
- A G5 CommandCenter or a G5 Universal Display

with a valid license for In-Field Data Sharing is required.

- All Generation 4 and G5 Displays in the work group are associated to the same John Deere Operations Center organization.
- Work groups must use the same work ID.
- Operators must have the same client, farm, and field.

Additional requirement for sharing coverage maps and work data:

- Operators must have the same operation and the same crop, product, or tank mix.

NOTE: If prescriptions are used, operators must use the same prescription. For multi-bin air carts, Tank Configuration must be defined the same for each cart in the work group.

NOTE: Coverage maps can be shared between machines that are using a single Section Control-capable liquid application operation and are applying different products or tank mixes. The system does not automatically join the group. The operator must manually join the other machines by selecting the appropriate work group from the shared work list.

NOTE: Before beginning new work, all machine operators must select New Work to clear their local display coverage in the field. In addition, one designated display operator must select New Group to reset the shared group coverage. Once this is done, the remaining displays can join the newly created group. After completing these steps, In-Field Data Sharing will function as expected for the new work session.

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Video



Video

PC684074—UN—19SEP25

CAUTION: Avoid the risk of injury or death. Do not rely on a camera for collision avoidance or bystander detection. Always remain alert and aware of surroundings when operating the machine. Read and understand Avoid Backover Accidents in the Safety section.

IMPORTANT: Determine if the camera image or Video application is mirrored before using the Video application.

NOTE: Reference the Ag Sales Manual for the latest list of compatible cameras.

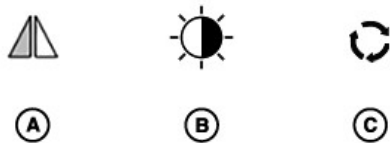
The Video application is used to observe areas around the machine.

G5 CommandCenter can support up to four camera inputs.

Navigate to Video

1. Select Menu.
2. Select Applications tab.
3. Select Video application.

Camera Controls



A—Mirror Video
B—Contrast
C—Scan View

PC27708—UN—31OCT19

Switching Cameras

If more than one camera is connected, choose between video inputs by selecting different camera names.

NOTE: The digital camera will remain assigned to the selected display until manually reassigned.

Mirror Video

Select the Mirror Video button (A) to simulate a rear view mirror. Selecting mirror view swaps the left and right sides of the video image.

Contrast

NOTE: Contrast controls are not available for cameras with a digital source.

Adjust the video contrast (B) using plus (+) and minus (-) buttons. Brighten the video by selecting the plus button, and darken the video by selecting the minus button.

Scan View

Select the Scan View button (C) to scan between video inputs of active cameras.

Full-Screen Mode

Select the video area to open full-screen mode. Video controls in full-screen mode differ from normal view.

Camera Feed

The camera feed displays the names of each camera that is detected by the Video application. Select a camera from the list to view in full-screen mode.

Scan View

While in full-screen mode, select scan view to scan between video inputs of active cameras. A video input is displayed for a specified amount of time before switching to the next video input in the camera list. Scan time is set up in Advanced Settings.

Video Triggers

Video can be displayed when certain machine functions are performed (For example, Reversing or PTO engage). Video triggers are available when compatible machine functions are detected.

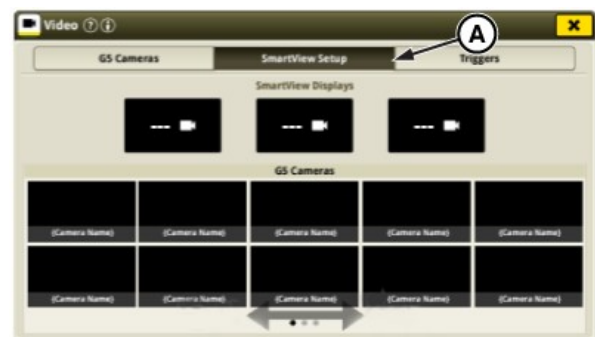
1. Select Advanced Settings to configure settings.
2. Select a trigger.
3. Select camera input for the current trigger. This camera is displayed when trigger is activated.

NOTE: To prevent video from displaying for a trigger, select No Camera.

4. Enter video Timeout length. This is the amount of time video is shown after the trigger becomes inactive.

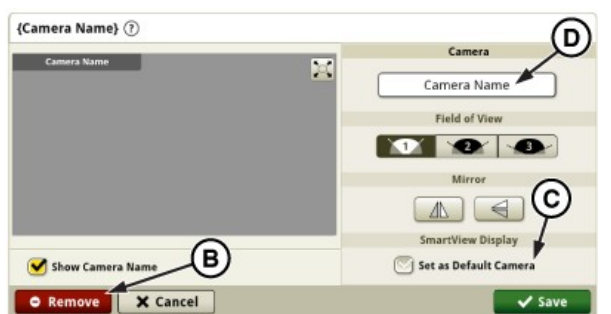
SmartView Setup

- **SmartView (A)** - Allows an operator to setup video cameras on their Sprayer to be viewed on the SmartView display bar above the windshiled in order to help obtain better visibility while trasporting the machine on roads or in tight spaces.



PC689867—UN—01OCT25

SmartView Setup Tab



Camera Setup

PC689869—UN—06OCT25

- **Remove (B)** - Remove camera from assignment to one of the SmartView displays.
- **Set as Default Camera (C)** - Check this box in order to assign the camera as the default camera view for this SmartView Display.
- **Camera (D)** - Operator can name a camera to help better understand which camera feed they are seeing and where it is on the machine.

NOTE: Smartview Setup Tab is available in the CommandCenter Display.

ct47125,1708275984738-19-03DEC25

Controls Setup



Controls Setup

PC28805—UN—29AUG22

Use Controls Setup application to configure ISOBUS inputs that are used to control implement functions or to reconfigure other controls.

Navigate to Controls Setup

1. Select Menu.
2. Select Applications tab.
3. Select Controls Setup application.

Controls Setup application and available configurable inputs vary between machine types. For additional information on the Controls Setup application, see the machine Operator's Manual.

ct47125,1708275984679-19-18FEB24

Settings Manager



Settings Manager

PC28715—UN—25AUG22

Use Settings Manager to load, edit, or save configurations of machine and implement settings. Saved configurations are used to easily restore the settings that a machine and implement use during an operation.

Navigate to Settings Manager

1. Select Menu.
2. Select Applications tab.
3. Select Settings Manager application.

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Machine Idle Theory of Operation



Machine Idle Theory of Operation

PC620652—UN—15MAY24

The Machine Idle application documents the reason the machine is idling. When the machine comes to a complete stop at 0 km/h (0 mph) for a specified duration, a popup window will appear on the display, prompting the operator to provide a reason for the machine idling.

The popup contains a list of idling reasons to select from. The reasons vary based on machine type and operation detected by the display. When an idle reason is selected, the reason is sent to the associated organization in John Deere Operations Center.

Collected data can be analyzed in Operations Center to make informed decisions for efficiency improvements.

Navigate to Machine Idle

1. Select Menu.
2. Select Applications tab.
3. Select Machine Idle application.

NOTE: For more information on idle reasons, see OnScreen Help.

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Tramline Control



Tramline Control

PC620653—UN—10MAY24

Tramlines are the designated paths or tracks within a field where machines, such as tractors or sprayers, travel during planting, spraying, or harvesting operations. Tramlines are typically created and recorded during planting operations.

The Tramline Control application creates and manages the use of tramlines within a field. Tramline Control works with Section Control.

Use Tramline Control to optimize field operations with precise tramline patterns and manage the movement of equipment. Tramline Control can be used to minimize soil compaction, reduce crop damage, and enhance operational efficiency.

Navigate to Tramline Control

1. Select Menu.
2. Select Applications tab.
3. Select Tramline Control application.

Tramline Levels

As Per ISOBUS standard, Tramline Control has three levels:

- **Level 1**—Offers basic tramline management when using straight tracks. The implement functions as the master, allowing the operator to control tramline settings directly using machine GPS (global positioning system).
- **Level 2**—Allows to work with asymmetric rhythm. It also allows to save tramline settings on display. However, the implement remains the master, ensuring consistent operation.
- **Level 3**—Predefined tramlines can command the implement to turn tramlines ON/OFF automatically. This level integrates advanced functionalities for automation.

At present, Tramline Control is compatible with ISOBUS Tramline Level 1 functionality. As soon as an ISOBUS implement is detected being Tramline Level 1

compliant, the system allows to select Auto mode. In Auto mode, the implement calculates the tramline based on the GNSS (global navigation satellite system) input. In this stage the ISOBUS implement controls and owns Tramline Control. The John Deere Task Controller only provides GNSS Data & Guidance Track Data.

NOTE: For more information on Tramline Control, see OnScreen Help.

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Operation—File Manager

File Manager



File Manager

PC28785—UN—29AUG22

File Manager application is used to transfer data to and from the display. Data can be transferred wirelessly with John Deere Operations Center, or a USB drive can be used to transfer data between displays or compatible desktop software.

It is important to back up data to a USB drive periodically.

Display internal memory is intended to have enough capacity to store all data from a machine per season. A message appears when 90% of memory is used. Data should be exported and deleted before memory used exceeds 90%.

Navigate to File Manager

1. Select Menu.
2. Select System tab.
3. Select File Manager application.

Data Types



PC28786—UN—29AUG22

A—Guidance Tracks
B—Layout Manager Files
C—Implement Profiles
D—Machine Profiles

- Guidance tracks (A) include guidance lines and associated client, farm, and field names.

NOTE: Imported Adaptive Curve tracks require a minimum of one complete segment.

NOTE: Adaptive Curves, Boundary Tracks and AutoPath lines are not supported by Data Sync Setup Data.

NOTE: Straight tracks created using the methods Machine Access A + B, Machine Access A + Heading, or Machine Access Lat/Lon + Heading and machine patterns cannot be exported or imported. The guidance line is imported as track 0.

NOTE: When exporting data, shared guidance tracks from In-Field Data Sharing are also exported.

- Layout Manager files (B) can be transferred between G5 Displays. They can also be imported from a

Generation 4 Display. These files include custom run pages, run page sets, and shortcut bars.

NOTE: Layout Manager files cannot be transferred from a G5 Display to a Generation 4 display, but vice versa is supported.

NOTE: Imported run pages are available on the All Run Pages tab in Layout Manager.

Some run page modules reset to default settings when imported.

Run page modules created for ISOBUS VT implement control units appear as unavailable if control unit is not connected to machine.

- Implement profiles (C) can be transferred between G5 Displays. This includes profiles saved to the display for implements without a control unit.

NOTE: Connection type, work recording, operation, and rate controller are not imported with implement profiles.

- Machine profiles (D) are configured using Equipment Manager application.

NOTE: Machine profiles can only be imported and exported using a G5 Universal Display.

NOTE: The G5 Display automatically generates machine profile settings when a compatible John Deere machine is detected.

NOTE: Imported machine profiles containing a machine PIN are not visible in the Equipment Manager application. A machine profile is automatically generated when the display detects a compatible John Deere machine. The automatically generated machine profile overrides any imported profiles containing machine PINs. Imported machine profiles without a machine PIN are still visible in the Equipment Manager application.



PC28787—UN—29AUG22

E—Work Data
F—Boundaries
G—Setup Data
H—Prescriptions

- Work data (E) includes mapping and totals data. It can be uploaded to John Deere Operations Center or unloaded into compatible desktop software. When importing work data, only mapping data is transferred. Work totals cannot be imported.

NOTE: Shared coverage from In-Field Data Sharing cannot be exported from the display. To export coverage from an In-Field Data Sharing event, data must be exported from the display of each contributing team member.

NOTE: Incomplete work data can be exported from one display and imported to another to be resumed using the Work History feature in the Work Setup application. Associated work totals are not imported.

- Boundaries (F) are configured using Fields and Boundaries application.
- Setup data (G) includes Boundaries, Guidance tracks, Flags, Operators, Client, Farm, Field names, Crop varieties, and products.

NOTE: Boundaries, Guidance tracks, Flags, and Operators cannot be exported on their own, but are included when exporting setup data. Flags data includes locations, flag type, and color of flags for each CFF. Operator data includes operator profile information.

- Prescriptions (H) are configured using Work Setup application.



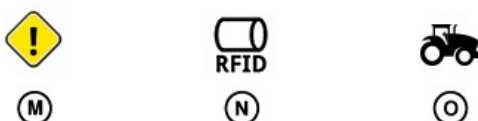
PC28788—UN—29AUG22

I—ISOBUS Tasks
J—Screenshots
K—Error Logs
L—Variety Locator

- ISOBUS tasks (I) are configured using ISOBUS Tasks application.

NOTE: The file size limit for ISOBUS tasks is 10 MB.

- Screenshots (J) are copies of images displayed on the screen.
- Error logs (K) are automatically generated by the display and can be used by John Deere to troubleshoot issues.
- Variety locator (L) files are configured using John Deere Operations Center.



PC28789—UN—29AUG22

M—Quarantined Data
N—Harvest ID Data
O—Settings Configurations

- Quarantined data (M) is a file created when the

operator selects to quarantine data after experiencing an unexpected error.

NOTE: Recovering quarantined data files requires technical assistance. Contact your John Deere dealer to attempt data recovery.

- Harvest ID data files (N) are configured in the Work Setup application and contain recorded cotton harvest information.
- Settings configurations (O) can be transferred between G5 Displays. Available settings vary by machine and implement type. Settings configurations are configured using the Settings Manager application.



PC28153—UN—05OCT20

P—Access Manager Settings
Q—AutoPath Line Data
R—StarFire Data Capture
S—Ethernet Device Files

- Access manager settings (P) are configured using Users and Access application.

NOTE: Configure the Users and Access application to prevent unwanted changes by operators.

- AutoPath line data files (Q) are configured in John Deere Operations Center and are used to create AutoPath guidance tracks.

NOTE: AutoPath files cannot be exported from the display.

- StarFire Data Capture (R) contains logged data from the StarFire Receiver used by John Deere to troubleshoot issues. To enable StarFire Data Capture, select the Capture Data option within the receiver VT page.

NOTE: StarFire Data Capture is only available on StarFire 6000 Integrated Receivers.

- Ethernet device files (S) are collected from John Deere devices that support File Transfer Protocol and have an Ethernet connection to the display. They are used by John Deere to troubleshoot issues.

John Deere Operations Center



Operations Center

PC21844—UN—16NOV15

Use Operations Center to automatically transfer data between displays and John Deere Operations Center. Data is transferred using cellular signal through the JDLink modem or a wireless internet connection.

NOTE: Operations Center requires an active JDLink modem or a wireless USB adapter with internet access.

Data Sync Setup

Data is sent to and received from John Deere Operations Center when the JDLink modem has cellular signal or internet access or the wireless USB adapter has internet access.

When John Deere Operations Center or a connected display is used to create and delete an active setup data type, the changes are synchronized with John Deere Operations Center and all connected displays within the organization. Items deleted from a display are archived on John Deere Operations Center, and items archived on John Deere Operations Center are deleted on displays.

NOTE: If Data Sync Setup is enabled, following data items cannot be deleted from the display:

- *CFF information*
 - Client
 - Farm
 - Field
- *Guidance Tracks*
 - AB Lines
 - A + B
 - A + Heading
 - Auto B
 - Lat/Lon
 - Lat/Lon Heading
 - AB Curves
 - Circles
 - Drive
 - Lat/Lon
- *Boundaries*

- *Boundaries*
- *Headlands*
- *Flags*
- *Point*
- *Line*
- *Area*
- *Entrance*
- *Products*
 - *Crop*
 - *Variety*
 - *Chemical*
 - *Fertilizer*
 - *Tank Mix/Dry Blend*
- *Operators*

To delete an item from the display, disable the Data Sync Setup option from the operation center.

When no internet connection is available, changes made locally are stored on the display and are synchronized when an internet connection is made.

Data Sync – Work Data

NOTE: On the Operations Center page, select the *Enable Sync to Operations Center* checkbox to send data to John Deere Operations Center every 30 seconds.

Data is sent to John Deere Operations Center when the JDLink modem has cellular signal or internet access or the wireless USB adapter has internet access. If a connection is not available, work data is stored on the display. Data is sent when the connection is restored.

Work data is uploaded to Field Analyzer and Files in John Deere Operations Center.

Work Data Triggers

Even though work data is automatically sent from the display to John Deere Operations Center every 30 seconds, files cannot be viewed in the Operations Center until one of these triggers occurs:

- New work is started, or client, farm, or field is changed.
- Cellular communication or internet access is lost between the display and John Deere Operations Center for more than 30 minutes.
- Key is turned off, then key is turned on within 30 minutes.
- Key is turned off for more than 30 minutes.

Import Data



Import Data

PC20405—UN—30APR15

Select import method:

- Import from USB Drive – Select folders on USB drive that contain data to be imported.
- Import Received Files – Import setup and prescription files from John Deere Operations Center.

To import files from John Deere Operations Center, a JDLink modem is required.

After setup files and prescriptions are imported to the display, use Work Setup to apply the files. Reference help files on John Deere Operations Center for how to create and send setup files to the G5 Display.

Compatibility

Data can be transferred from another G5 Display, Generation 4 Display, compatible desktop software, or John Deere Operations Center in the Current Systems format. 25.3 and newer software cannot import or export files in the previous Legacy Systems format.

- Current Systems displays (G5, G5e, G5Plus, 4600 V2, 4200 V2, 4640, 4240)
- Legacy System displays (4600 V1, 4200 V1, 4100, 2630)

John Deere Operations Center does not support the ability to view, send, or receive run pages. If a setup file only contains run pages, the file displays as invalid in John Deere Operations Center. If a setup file contains guidance lines or boundaries along with run pages, the setup file loads correctly, though run pages are not viewable.

Setup files from a GreenStar 3 2630 Display cannot be imported directly to a Generation 4 or G5 Display after the 25.3 software update. In order to import files from these devices, they must be uploaded to Operations Center first and a setup file must be created in the Generation 4/G5 format.

NOTE: With the 25.3 software update or newer, G5 displays can no longer export data in the APEX format. All product support for APEX has ended. As a result, customers using APEX can no longer send data to Operations Center from APEX.

Imported fields must include an exterior boundary when an interior boundary is imported. An interior boundary cannot be created or imported in the display without an exterior boundary first being created or imported.

NOTE: In order to successfully import complete implement profiles from another display, ensure that the source display is operating on 25.3 software or newer.

Data Conflicts

When necessary, imported client, farm, and field names are changed. For example, "Field1" is renamed "Field1 (1)" if there is an existing field with the same name.

When work data from fields with names exceeding 20 characters have been exported into John Deere Operations Center, the names display correctly. When importing the data back to the display, the field name is shortened. Any data is recognized as belonging to the field that was originally exported from the display.

If guidance lines are in the same field and created with the same tracking method, the display handles the following conflicts.

Different Name, Same Line

- If lines are the same, name of guidance line on display is replaced by name on USB drive.

Same Name, Different Line

- If there are two different lines with the same name, line on USB drive is renamed when imported. For example, "Track1" is renamed "Track1(1)."

NOTE: A file may fail to import for multiple reasons. Address the error condition provided by the display for any files that fail to import. Refer to Onscreen Help for additional assistance with failed imports.

Prescriptions

To import prescriptions, the shapefiles must be located in a folder named Rx on the root of the USB drive.

Export Data



Export Data

PC20406—UN—30APR15

NOTE: When exporting work data using a USB drive, use a different device for each display. Exported work data is not placed in any individual profile folders. Setup data is placed in the JD4600 folder and work data is placed in the JD-Data folder on the root of the USB drive.

Select export method to transfer desired data types.

- Select Export All Data to quickly transfer all work data, guidance lines, and run pages using default settings.

- Select Diagnostic Data to transfer screenshots and error log files.

Exporting Data for use with Legacy System Displays (4600V1, 4200V1, 4100, GreenStar 3 2630)

Setup data exported from Generation 4 Displays is not automatically structured to be used by a Legacy System Displays. Before exporting Generation 4 Display data:

1. Export Data to a USB drive or over the air to John Deere Operations Center.
2. Using the Setup File Creator in John Deere Operations Center, create a setup file in the Legacy Systems file type and export the file to a USB drive.
3. Import the newly created Legacy Systems setup file from the USB drive into the desired Legacy Systems display(s).

Delete Data



Delete Data

PC20407—UN—30APR15

Delete data removes selected data types from the display.

- Select Custom Delete to remove work data and run pages.
- Select Clear Diagnostic Data to remove screenshots and error log files.

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- Use a USB drive that is 16 GB or larger, so multiple backups can be stored.
- Clean all files off the USB drive that are not associated with John Deere displays.

Check Display Hardware tab in Diagnostics Center application to determine if display recognizes USB drive.

ch177nn,1728630654672-19-11OCT24

Capture Screen Shots



PC28811—UN—20SEP22

A—Screen Shot Area

Select area highlighted in top left corner of screen. Press and hold until screen flashes and display makes camera shutter sound.

Insert USB drive and select Export Data to transfer screen shots to drive.

ct47125,1708277939611-19-18FEB24

USB Drive

NOTE: G5 Display USB ports are not intended for use as a charging station for other devices.

Requirements for John Deere Displays

- USB format - Must be FAT32 or NTFS.

NOTE: NTFS format cannot be used for system recovery.

- Capacity - Recommended capacity is 32—64 GB. Maximum supported capacity is 512 GB.
- Connectivity - USB 2.0 or USB 3.0.
- Maximum Dimensions - 9.2 mm (3/8 in) thick by 21.7 mm (7/8 in) wide.

Best Practices

- After inserting USB drive, wait 10 seconds. Large USB drives may take time to be recognized.

Operation—Software Manager

Software Manager



Software Manager

PC28693—UN—25AUG22

Use Software Manager to update software, activate features, and find software version details.

Navigate to Software Manager

1. Select Menu.
2. Select System tab.
3. Select Software Manager application.

Software Packages

G5 Display software and help files are organized into packages. Each package is listed individually on Installations and Updates tab and Version Information tab.

G5 Operating System



G5 Operating System

PC28694—UN—25AUG22

- Contains display operating system and basic applications.

G5 Operating System Help



G5 Operating System Help

PC28695—UN—25AUG22

- Contains help files for display applications.

AMS Applications



AMS Applications

PC28808—UN—20SEP22

- Contains display software.

NOTE: Onscreen Help packages include each language that the display supports.

Licenses

A license enables the enhanced features on the display. The features and products within a license depend on the type of license that is purchased.

Licenses can be transferred between universal displays or between CommandCenter displays that are on similar machine types.

NOTE: Available licenses may be different in your region. Contact your John Deere dealer for details.



Details Button

PC28697—UN—25AUG22

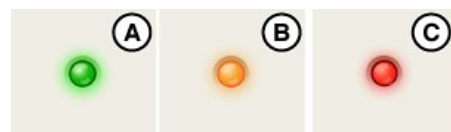
StellarSupport.com requires the display serial number to create a license. A CommandCenter license also requires the machine PIN. Use the details button to view the display serial and machine PIN.

License Status

Navigate to Software Manager to view the license information:

1. Select Menu.
2. Select System tab.
3. Select Software Manager.
4. Select Licenses tab.
5. Select a license from the list.
6. Select Details to view the details of the selected license. The details available are determined by the license type.

A license can have following statuses:



PC649528—UN—09OCT24

License Status

Active (A): License is active.

Issue (B): Implies that there was a problem with serial number, license delivery, etc.

Start Date Pending (B): License activation date is yet to come.

Expired (C): License has expired.

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Update Display and Control Unit Software

Software updates are periodically released for G5 Displays to provide enhancements and performance improvements. These updates are managed by a desktop application called Software Manager.

Software updates for GreenStar system components, such as StarFire Receivers, AutoTrac Universal, and GreenStar Rate Controller, are also downloaded using Software Manager. The update files are copied to the USB drive along with display updates. If the components are connected to the machine, they are updated using the display when the USB drive is inserted.

Determine Software Versions on Display

Version numbers for all installed software packages are available in Version Information tab in Software Manager.

Download Software Updates



USB Drive

PC15348—UN—11JUL13

A FAT32 or NTFS formatted USB drive with at least 16 GB is recommended. For more information on USB drive requirements, see USB Drive in the File Manager section.

Software updates are available for download from:

<https://my.deere.com/software-downloads/software-manager/>

Once USB drive has latest software, take it to machine to install update.

Install Software Updates

USB Drive

1. Insert USB drive into upper USB port next to accessory port.



A—Install Software Button

PC23932—UN—21MAR17

2. When "USB Drive Options" page is displayed, select Install Software button (A). This displays the Installations & Updates tab of Software Manager.
3. Select "View Updates for the Display" or "View

Updates for Other Devices" and select the Next button.

4. Only software packages that are newer than what is currently installed are displayed. All display software packages are selected by default.
5. Select Install button. If an update does not start, follow the on-screen messages to resolve conflicts.

CAUTION: Avoid the risk of injury. Ensure that the machine is in park mode and maintain electrical power throughout the installation process. During software installation:

All applications will be shut down.

No system messages will be displayed.

Do not remove USB drive.



PC28696—UN—25AUG22

A—Progress Indicator
B—Green Check Mark

6. A progress indicator (A) displays percentage of each package that is being installed. A green check mark (B) is displayed when package installs successfully.
7. Display will reboot to complete update.
8. Remove USB drive and take back to computer. Run Software Manager Utility to upload return files.

NOTE: Return files contain software version information and are used to assist dealers with supporting display and machine.

Online Updates

1. On Installation and Updates tab, select Check for Updates Online. The display searches for available updates.
2. Select "View Updates for the Display" or "View Updates for Other Devices" and select the Next button.
3. Only software packages that are newer than what is currently installed are displayed. All packages are selected by default.
4. Select Download button. If an update does not start, follow the on-screen messages to resolve conflicts.
5. A progress indicator (A) displays percentage of each package that is being downloaded. A green check mark (B) is displayed when package downloads successfully.

6. Select Install button to begin installation of downloaded software packages.

⚠ CAUTION: Avoid the risk of injury. Ensure that the machine is in park mode and maintain electrical power throughout the installation process. During software installation:

All applications will be shut down.

No system messages will be displayed.

7. Display will reboot to complete update.

Remote Updates Using Equipment Mobile

1. Login to Equipment Mobile and check if there are any pending software updates.
2. Select the software update and select Request Remote Update.
3. Power the machine ON.
4. The software will be automatically downloaded to the display. Select Install when installation request appears on the display.
5. The display will reboot.
6. The display will show Programming Complete after successful installation.

Programming via Wireless Streaming

NOTE: For programming via wireless streaming, the computer should be near to the machine.

Programming via wireless streaming is available through Service Center or John Deere Operations Center.

1. Turn machine's ignition ON and keep it ON throughout the software update procedure.
2. On the machine's display, select Menu.
3. Select System tab.
4. Select Wireless Settings.
5. Turn Mobile to Machine toggle ON.
6. At the computer, login to Service Center or John Deere Operations Center and check if there are any pending software updates.
7. Download the software update on the computer.
8. Once the updates are downloaded, connect the computer to the machine JDLINK Modem's wireless network.
9. On the software update page, select Start Installation.
10. At the prompt Connect to Machine's MTG Wi-Fi, read the onscreen instructions and select Connect.
11. On Service Center Software Updates page, select

Choose File(s) and select the downloaded update package. Select Open.

12. Select Start Upload to transfer the downloaded software to the display.
13. Once the software transfer is complete, select Start Programming.
14. The Installations & Updates window will open on the machine's display, stating the installation status.
15. Once the programming is successful, select Download Return File on the Service Center Software Updates page.
16. Select Upload Return File and upload the downloaded file to finish the software update procedure.

Remote Programming via Wireless Streaming

1. Turn machine's ignition ON and keep it ON throughout the software update procedure.

NOTE: Ensure that strong JDLINK connection is established before proceeding with Remote Programming.

NOTE: Equipment Mobile also supports Remote programming.

2. At the computer, login to Service Center or John Deere Operations Center and input machine PIN in Machine Lookup bar.
3. Select the desired machine from Machine Lookup dropdown.
4. Under Software Programming, check if there are any new software updates.
5. Select install and the software will download and install on the display.
6. On the machine's display, select Install Software on the ISOBUS VT Remote Software Updates prompt.
7. Software download should start on the display.
8. Once the software download is complete, select Install.
9. Follow the onscreen instructions and select Continue to proceed with the installation.
10. Software installation should start on the display. Once the installation is complete, verify that the display is on latest software version.

Troubleshooting

If update fails, display will remain on current version.

Record error message if software update fails. Remove files from USB drive, then reload software update to USB drive. Repeat software installation process.

If software update continues to fail, contact a John Deere dealer.

Optimize Space on USB Drive to Update Display Software

Perform the following procedure to optimize space on USB drive:

1. Connect the USB drive to the computer.
2. Select My Computer.
3. Select Local disk C.
4. Select sds.

NOTE: For JDSync folder select App Data\Roaming folder.

5. Select DisplayDependencies.
6. Delete all content inside the folder RpmCache.
7. Format the USB drive with FAT32 format.
8. Download the display update files via the Software Manager and transfer them to the USB drive.

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Online Activations uses a wireless connection to view or check for current subscriptions. The display checks for subscriptions automatically when powered on. Go to StellarSupport.com to purchase a subscription.

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Non-Display Hardware and Software Activations

To activate non-display hardware and software, select the details button to enter the activation code. A single code may include multiple features, but it can perform only one type of action (activation or deactivation). For example, one code may activate three features, while a separate code would be needed to deactivate two features.

Enter Activation or Deactivation Code



Enter Code Button

PC28698—UN—25AUG22

1. Select Enter Code button.
2. Using the keyboard, enter activation or deactivation code. Select OK button.
3. Record confirmation code and enter code at StellarSupport.com.

Online Activations



Online Activations

PC28699—UN—25AUG22

Operation—ISOBUS VT

ISOBUS VT



ISOBUS VT

PC28796—UN—29AUG22

are only available while the control unit is connected. The types of modules available are dependent on the control unit manufacturer. This display is capable of displaying ISOBUS VT version 4.

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This John Deere display supports Agricultural Industry Electronics Foundation (AEF) ISOBUS-compatible control units according to ISO 11783. These control units can be viewed and operated within the ISOBUS virtual terminal (VT). If an extended monitor is connected, a second VT can be viewed and operated.

When an ISOBUS control unit is connected, graphic files for the user interface are loaded into ISOBUS VT. Then, ISOBUS VT provides a means for the operator to navigate through and operate all available functions of the ISOBUS control unit.

Navigate to ISOBUS VT

1. Select Menu.
2. Select Applications tab.
3. Select ISOBUS VT application.

Connected ISOBUS Implements and Control Units

The G5 Display loads and communicates with different ISOBUS control units at the same time. A list of all connected ISOBUS control units is displayed after selecting the menu button.

Select the desired ISOBUS control unit and press the OK button to view the user interface.

Troubleshooting

If the interface for an ISOBUS control unit does not display correctly:

- View the ISOBUS control unit in Status Center and follow the troubleshooting steps for the status indicated. For more information, view ISOBUS control units in the Diagnostic Center application.

If the interface still does not display correctly:

1. Select settings at the top of the ISOBUS VT application.
2. Select Clean Up ISOBUS VT in advanced settings to clear stored ISOBUS control unit user interface files.

The user interface is reloaded the next time the control unit is connected.

Run Page Module

ISOBUS VT modules can be added to a run page using the Layout Manager application.

Modules are loaded from the implement control unit and

Operation—StarFire Receiver

StarFire GPS Receiver



PC28798—UN—29AUG22

The StarFire GPS Receiver acquires global positioning and differential correction signals through a single receiver.

NOTE: The TCM in the StarFire 7000/7500 Integrated Receiver is calibrated at the factory. If there is a need to perform a field calibration, refer to the Troubleshooting section of the StarFire 7000/7500 Receiver Operator's Manual.

A terrain compensation module (TCM) is integrated into the receiver and corrects for machine dynamics, such as roll and pitch on side slopes, rough terrain, or varying soil conditions. An accurate TCM calibration is necessary for proper operation.

See the StarFire Receiver Operator's Manual for setup and calibration instructions.

Advanced TCM Calibration

The TCM must be calibrated when a receiver is first installed on a machine or moved to a different machine. Advanced TCM calibration generates a temporary AutoTrac guidance line for the machine to drive while the receiver TCM calibrates. Advanced TCM calibration can calibrate the TCM of multiple receivers at once, is more accurate than the old calibration process, and does not require the machine to be located on level ground.

Refer to Onscreen Help for instructions on how to perform the Advanced TCM Calibration procedure.

Requirements

- Receiver model is a StarFire 6000 or newer.
- Receiver software version is 4.40N (software bundle 20-2) or newer.
- Display is a G5 CommandCenter or G5 Universal Display.
- Display has a valid license for AutoTrac.

Navigate to StarFire GPS Receiver

1. Select Menu.
2. Select Applications tab.
3. Select StarFire application.

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StarFire Remote Software Updates

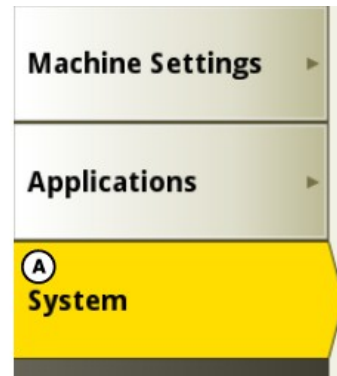
1. Select Menu.



Menu

PC28688—UN—25AUG22

2. Select System tab (A).



System Tab

PC28821—UN—21SEP22

A—System Tab

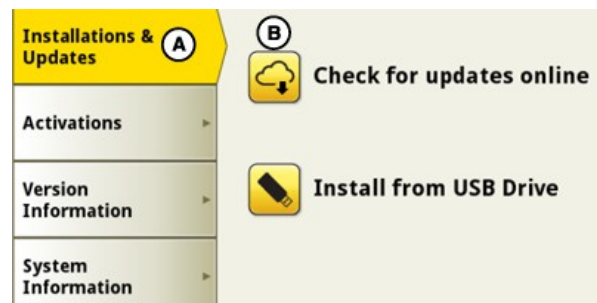
3. Select Software Manager.



Software Manager

PC28693—UN—25AUG22

4. In the Installations & Updates tab (A), select Check for updates online (B).



Check For Updates Online Button

PC28822—UN—21SEP22

A—Installation & Updates Tab

B—Check for Updates Online Button

5. Select View Updates for Other Devices (A) then press Next (B).



PC28823—UN—08MAY23

View Updates for Other Devices Button

A—View Updates for Other Devices Button
B—Next Button

6. Select the software to be downloaded and press Install.



PC28824—UN—08MAY23

Install Softkey

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Operation—AutoTrac Guidance

AutoTrac



Guidance

PC28717—UN—25AUG22

AutoTrac is an assisted steering system that allows operators to take their hands off the steering wheel as the machine travels down the created guidance line in the field. Operators still have to turn the machine around on the end rows. By pressing the resume button, AutoTrac regains control and steers machine down the adjacent pass.

General Information

IMPORTANT: AutoTrac system relies on global positioning system (GPS) operated by the United States government, which is solely responsible for its accuracy and maintenance. System is subject to changes that could affect accuracy and performance of all GPS equipment.

Operator must maintain responsibility for machine and must turn at end of each track. This system will not turn at end of a track.

AutoTrac basic system is intended to be used as an assistance tool to mechanical markers. Operator must evaluate overall system accuracy to determine specific field operations where assisted steering may be used. This evaluation is necessary because accuracy required for various field operations may differ depending on farming operation. AutoTrac uses StarFire differential correction network along with GPS. Slight shifts in position may occur over time.

NOTE: In-season repeatability and using the same correction signal are critical when using AutoTrac for multiple jobs throughout the season. This includes creating AutoTrac guidance lines during planting and then relying on those same lines for subsequent tasks such as side dressing fertilizer, post-emerge spraying, and harvesting. Maintaining the same correction signal ensures alignment accuracy across all operations, minimizing overlap and skips while maximizing efficiency.

AutoTrac Guidance Overview



PC665155—UN—19MAY25

AutoTrac Guidance Main Page

- A—AutoTrac
- B—Steering
- C—Next Track
- D—Lightbar
- E—Map Controls
- F—Guidance
- G—Shift Track

AutoTrac (A)—Contains the AutoTrac ON/OFF toggle and displays current AutoTrac stage. Selecting the AutoTrac stage opens the AutoTrac diagnostics page.

Steering (B)—Shows the Steering Sensitivity as the top number and Acquire Sensitivity as the bottom number. Selecting Steering opens the Steering Optimization page.

Next Track (C)—Identifies the next guidance track AutoTrac is set to acquire and contain Swap. Select Swap to change the next track to next available track in the guidance track list. Selecting the track opens the Guidance Track List page.

Lightbar (D)—Indicates the distance to the left or right that the machine is off the guidance track.

Map Controls (E)—Contains view toggle, pan, heading, zoom out, and zoom in functions.

Guidance (F)—Shows the current track and track spacing. Selecting Set Track opens the Guidance Track List. Selecting the track spacing opens the Track Spacing page.

Shift Track (G)—Adjusts the position of the set track left, center, or right of the machine. Selecting Shift Increment opens the Shift Increment page.

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Operate Guidance Systems Safely

Do not use guidance systems on roadways. Always turn off (disable) guidance systems before entering a

roadway. Do not attempt to turn on (engage) a guidance system while transporting on a roadway.

Guidance systems are intended to aid the operator in performing related use case operations more efficiently. The operator is always responsible for the path and safe operation of the machine. Guidance systems do not automatically detect or prevent collisions with obstacles, machines, or other vehicles.

Guidance systems include any application that automates machine steering. This includes, but may not be limited to, AutoTrac, iTEC, AutoTrac Turn Automation, AutoTrac Implement Guidance (passive), AutoTrac Universal, AutoTrac Controller, AutoTrac RowSense, and Machine Sync.

To prevent injury to the operator and bystanders:

- Never get on or off a moving machine.
- Verify that the machine, implement, and guidance system are set up correctly.
 - If using iTEC, AutoTrac Turn Automation, or AutoTrac Implement Guidance (passive), verify that accurate boundaries have been defined.
 - If using Machine Sync, verify that the follower's home point is calibrated with sufficient space between the machines.
- Remain alert and pay attention to the surrounding environment.
- Take control of the steering wheel, when necessary, to avoid field hazards, bystanders, equipment, or other obstacles.
- Stop operation if poor visibility conditions impair your ability to operate the machine or identify people or obstacles in the machine path.
- Consider field conditions, visibility, and machine configuration when selecting machine speed.

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AutoTrac Guidance Methods

AutoTrac is capable of multiple different guidance methods to accommodate for different field types and operations. From the AutoTrac main page, select Set Track to open the Guidance Track List then select New Track to access the Select Guidance Method page.

For procedures on how to create each type of guidance line, reference the Onscreen Help.

The following guidance methods are available:

- Straight Track Methods
 - A + B Method
 - A + Heading Method
 - Auto B Method
 - Lat/Lon Method
 - Lat/Lon + Heading Method

- Access: A + B
- Access: A + Heading
- Access: Lat/Lon + Heading
- Curve Track Methods
 - Adaptive Curve
 - AB Curve
- Circle Track Methods
 - Drive Circle
 - Lat/Lon Circle
- Boundary Track Method
 - Boundary Fill

Straight Track Methods



Straight Track

PC28721—UN—25AUG22

Straight track mode assists the operator in driving straight, parallel paths by using the display and audible tones to alert the operator when the machine is off track.

Straight track allows the operator to create an initial straight track for the field using a variety of track 0 options. Once the track 0 (reference path) has been defined, all passes for the field are generated. Each pass is identical to the original driven pass to ensure that steering errors are not propagated through the entire field. Generated passes can be used to operate parallel tracking or AutoTrac.

The methods of defining track 0:

- A + B – Define track 0 by driving it with the machine.
- A + Auto B – Define track 0 by driving it with the machine.
- A + Heading – Define track 0 by driving the machine to point A and entering a predefined heading value.
- Lat/Lon – Define track 0 by entering predefined latitude and longitude values for the A and B points.
- Lat/Lon + Heading – Define track 0 by entering predefined latitude and longitude values for the A point and entering a predefined heading value.
- Machine Access A + B – Define track 0 by driving it with the machine.
- Machine Access A + Heading – Define track 0 by driving the machine to point A and entering a predefined heading value.
- Machine Access Lat/Lon + Heading – Define track 0 by entering predefined latitude and longitude values for the A point and entering a predefined heading value.

NOTE: Track 0 may be defined during an operation (for example, planting), but some buttons are not available while the guidance line is being created.

Machine Access

Machine access is a straight track method used to insert field roads between crop passes.

Heading

NOTE: Track heading edits are available only when using straight tracks created with the A + Heading method or the Lat/Lon + Heading method.

New heading information is stored to the existing track each time this value is changed. If the data is exported to John Deere Operations Center after making a heading change, the modified track replaces the existing track stored in Operations Center.

Guidance Line Calculation Method

Guidance line calculation defaults to the John Deere method. Other guidance line calculation methods are:

- Non-John Deere 1 – uses the BeeLine calculation method.
- Non-John Deere 2 – uses the Trimble calculation method.

NOTE: Guidance lines can be transferred to another user via In-Field Data Sharing or via setup files utilizing a USB drive or Wireless Data Transfer.

Use Help Center Onscreen Help for more information about creating straight tracks.

Duplicate Track

Duplicate track creates a copy of the active guidance track.

The new duplicate track name defaults to the name of the original track plus (1). Select the track name entry box to modify the track name. The new track can be centered on the machine or shifted left or right.

If the original track was created using the A + Heading method or the Lat/Lon + Heading method, the new track heading can be modified by selecting the Heading entry box.

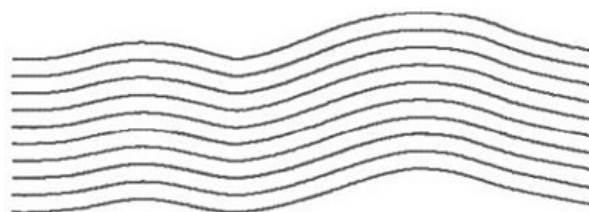
Curve Track Methods

AB Curves



AB Curves

PC28723—UN—25AUG22



PC9028—UN—16APR06

AB Curves allows an operator to drive a curved line in the field with two end points (beginning and end). Parallel passes in either direction are generated based on the original driven track. Each pass is generated from original driven pass to ensure that steering errors are not propagated through entire field. Passes are not identical copies of the original pass. Curvature of the pass changes to minimize pass-to-pass error.

NOTE: See Curve Track Settings for information about adjusting your system for optimal performance.

The initially recorded AB Curve must be at least 3 m (10 ft) in length to be a valid AB Curve.

Once the AB Curve (track 0) is recorded, ten additional tracks are generated (five passes on both sides of track 0). When the machine drives past the fifth track from track 0, ten additional tracks are generated in that direction. The system continues to generate additional passes when the machine drives past the last pass displayed on the screen. The machine must be within 400 m (0.25 mi) of the last generated line for the system to continue to generate curve paths. If the machine is at the outer limit, it may take several minutes to generate a path that shows up on the screen near the machine. During this time, "Calculating Curves" displays on the screen.

NOTE: Skip pass is available in AB Curves mode.

Passes are not identical copies of the original pass. Curvature of the pass changes to maintain pass-to-pass error. With each subsequent pass, curvature of the passes gets more convex or concave.

NOTE: Sharp Curve and End of Path messages might appear when in AB Curve track mode.

AB Curve paths are generated with 91 m (300 ft) straight-line extensions attached to the ends of the actual recorded paths. The line extensions extend

before and after the recorded line to line up the machine or continue the path.

When shift track is selected, current track is adjusted and five passes on both sides of track are regenerated. AB Curve can be used after initial tracks are generated. Additional tracks are generated while operating. Use left and right shift buttons to move and regenerate the AB Curve tracks.

Refer to Onscreen Help for more information about creating AB Curve tracks.

Duplicate Track

Duplicate track creates a copy of the active guidance track.

The new duplicate track name defaults to the name of the original track plus (1). Select the track name entry box to modify the track name. The new track can be centered on the machine or shifted left or right.

Guide on an AB Curve

The closest track is highlighted with a thicker white line.

Track number is displayed under path accuracy indicator, and automatically updates when new track is approached. Track number indicates number of lines away, and direction from Track 0. Track direction is shown relative to Track 0 (North, South, East, or West). Track number changes when machine is halfway between two tracks.

Path accuracy indicator shows off-track error distance. Off-track error shows distance from closest track to machine. Error counts up until machine reaches point halfway between two tracks. After reaching mid-point, error counts down as machine approaches next track.

Adaptive Curves



PC702238—UN—05FEB26
Adaptive Curve Search

NOTE: Refer to additional information about system performance optimization. (See Curve Track Settings in this section.)

Adaptive Curve track allows an operator to record a manually driven curved path. Once the first curved pass has been recorded and the machine has turned around, the propagated path is displayed and the operator can use parallel tracking or engage AutoTrac.

After the initial pass is recorded, each additional pass is generated from the previous pass to ensure that steering errors are not propagated throughout the entire field.

When an adaptive curve is selected, the icon will appear on the top right-hand corner of the screen. Selecting this icon will allow the user to toggle through available curves.

NOTE: Skip Pass allows the operator to drive past or skip over the track next to the current track. Skip Pass is not available in an Adaptive Curve recording session.

Generated passes are not identical copies of the original pass. Curvature of the pass changes to maintain pass-to-pass accuracy. When necessary, the operator can change the curve path anywhere in field by simply steering the machine off the propagated path.

NOTE: Sharp Curve and End Path messages may be displayed when in Adaptive Curve track mode.

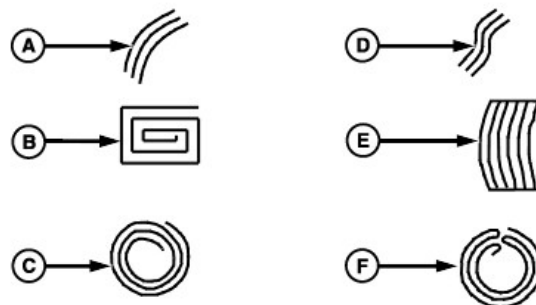
The operator can either manually drive on the generated guidance lines using parallel tracking or engage AutoTrac once the initial pass is recorded and the propagated path is displayed.

If a curve recording session is stopped, the line does not project in front of the machine. The operator can only use AutoTrac on available lines from the previous recording sessions. Ending a recording session saves all recorded curve segments within the session as a single track.

NOTE: Shift track is not recommended when using Adaptive Curve. When in Adaptive Curve mode, shift track does not compensate for GPS drift.

Additional curve segments can be added to the existing Adaptive Curve track when editing a guidance track.

Use Help Center Onscreen Help for more information about creating Adaptive Curve tracks.



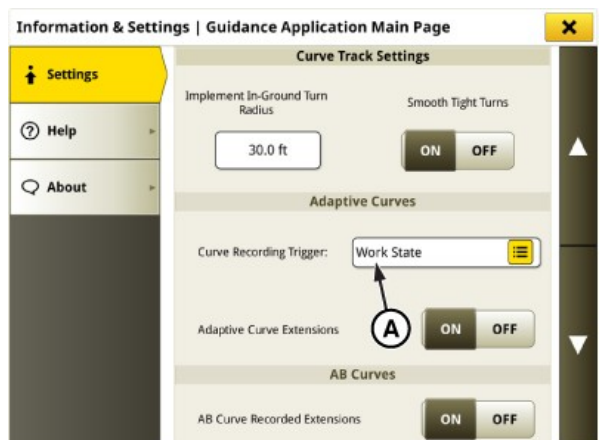
A—Simple Curve
B—Boxed
C—Spiral
D—S-Curve
E—Race Track
F—Circle

PC9032—UN—17APR06

Adaptive Curve track mode allows an operator to drive and be guided along various field patterns.

- Simple Curve
- S-Curve
- Boxed
- Race Track
- Spiral
- Circle

Line Extensions can be added to the existing Adaptive Curve track. These are temporary extensions (90m) that show up when near the line. They do not need to be recorded.



PC676265—UN—26JUN25

Adaptive Curve Extensions

Guide on Adaptive Curves

IMPORTANT: If repeatability is needed with saved Adaptive Curve Track data, it is required that the initial track data and subsequent trips across the field be created using StarFire RTK accuracy. RTK base station should be operating in Absolute Base mode.

NOTE: Track spacing for Adaptive Curve Track data is constant. If a different implement width is used when returning to the field, new data must be recorded.

The closest track is highlighted with a thicker white line. Path accuracy indicator shows off-track error distance. Off-track error shows distance from closest track to machine. Error counts up until machine reaches point halfway between two tracks. After reaching mid-point, error counts down as machine approaches next track.

If a curve is not being recorded, lines are not projected and operator is only able to AutoTrac on available lines. When recording, lines project off of previous line. This session can be used to record another line manually, or an operator can select AutoTrac in Curve Recording Triggers and AutoTrac on the projected line.

Circle Track Methods



Circle Track

PC28726—UN—30AUG22

Circle track allows operator to create concentric circle guidance lines. It is designed to be used in fields with a center pivot.

A circle track is based on latitude and longitude coordinates at center of a pivot. Concentric guidance lines are created based on track spacing out to 1.6 km (1 mi.) from center of pivot.

Circle track is designed for center pivot operation on ground with less than 2% slope. Since circle track creates circle spacing on a level plane, guidance line spacing and center pivot track do not match as tracks get farther away from center pivot in sloped conditions. This spacing is due to difference between distance traveled on a hill and on a level plane. The difference in distance increases as slope increases.

Use shift track to move tracks radially closer or further from center point. Shift track does not move center point. Shift track allows operator to use various implement widths, account for different lengths of center pivot towers, or to account for stretching or shrinking of center pivot irrigation sections. If a circle track edge is added, modified or deleted, existing shifts for that track are deleted. Using shift track with an edge causes the implement not to align with the edge.



Distance to Center Point

PC20395—UN—08DEC14

Distance to Center Point displays distance from center of circle to current location. The distance only shows to 1609 m (5280 ft.). Feature must be turned on in circle track settings to show button on guidance map. Once button is on guidance map, select button to show or hide distance.

There are two methods to create a circle track:

Lat/Lon Circle



Lat/Lon Circle

PC28727—UN—25AUG22

- If latitude and longitude coordinates at center of a pivot are known, enter location to create a circle track.

Drive Circle



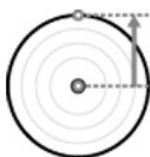
Drive Circle

PC28726—UN—30AUG22

- Latitude and longitude coordinates at center of a pivot are calculated from path driven. Concentric circle guidance lines are created from coordinates.
- It is recommended that entire circle is driven for optimum circle center calculation. Driving more than a complete circle does not increase accuracy of calculation.

Use Help Center onscreen help for more information about creating circle tracks.

Circle Track Edge



PC17399—UN—08DEC14

NOTE: Circle Track Edge can only be used on Gen 4 and G5 displays. Edge information cannot be used on GreenStar 3 Displays.

Circle Track Edge represents outer boundary of a center pivot. It is displayed as an orange line on guidance map.

Creating a circle track edge allows guidance lines to be generated starting from edge. Otherwise, guidance lines are generated starting from center of pivot.

NOTE: Track spacing and working width must be equal for end of implement to line up against the edge.

When guidance lines are created, the edge is the reference point, instead of the circle center. This can be useful if implements with different track spacings are used in the same field. Just enter a new track spacing, and guidance lines are adjusted starting at the edge. Guidance lines are generated based on the edge using track spacing and shifts. If edge is deleted, guidance lines are created from center outward.

Guide on a Circle Track

When operating circle track, it is not necessary to drive

tracks in a specific order. The closest track is highlighted with a thicker white line.

Track number is displayed under path accuracy indicator, and automatically updates when new track is approached. Track number indicates number of lines away, and direction from Track 0. Track direction is shown relative to Track 0 (North, South, East, or West). Track number changes when machine is halfway between two tracks.

Path accuracy indicator shows off-track error distance. Off-track error shows distance from closest track to machine. Error counts up until machine reaches point halfway between two tracks. After reaching mid-point, error counts down as machine approaches next track.

Boundary Track Method



Boundary Fill Track

PC28728—UN—25AUG22

Boundary Fill Track creates guidance lines from the dimensions of the exterior boundary and the track spacing.

NOTE: Boundary Fill Track does not utilize slope compensation. If operating in a sloped field, it is recommended to use Adaptive Curves.

The display creates three guidance lines based on boundary shape and track spacing, one outside of the boundary and two inside the boundary. Additional boundary tracks are created as the machine moves into the field. Straight-line extensions 15 m (50 ft) long are added onto the ends of each boundary track.

NOTE: When shift track is selected, all tracks are adjusted and regenerated.

Straight Fill Track

Select Record Fill button to generate guidance lines using Straight Fill across the entire field within the boundary. Straight Fill Track utilizes the A + B method of Straight Track to generate guidance lines. When using Section Control, it is recommended that you complete the Boundary Fill Track passes before using Record Fill.

Boundary Fill Track cannot be exported to another display. If Boundary Fill Track is needed on another display, the same track can be generated using the same exterior boundary.

Guide on a Boundary Fill Track

The closest track is highlighted with a thicker white line.

Track number is displayed under the path accuracy indicator and automatically updates when new track is approached. Track number indicates number of lines away and direction from Track 0. Track direction is shown relative to Track 0 (North, South, East, or West). Track number changes when machine is halfway between two tracks.

Path accuracy indicator shows off-track error distance. Off-track error shows distance from the closest track to machine. Error counts up until machine reaches point halfway between two tracks. After reaching mid-point, error counts down as machine approaches next track.

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AutoPath

AutoPath utilizes row or boundary information to create guidance lines for subsequent operations in the field. AutoPath reduces guesswork and operator input needed to accurately navigate through the field. AutoPath lines reduce setup time, wrong guess rows, and crop damage from inaccurate guidance setup.

Before using AutoPath guidance lines, import AutoPath line data from John Deere Operations Center. AutoPath line data is included in the setup file. If no source data is available, AutoPath guidance lines can be generated using a boundary. See Edit AutoPath in Onscreen Help for more information.

Machine-Specific Requirements:

AutoPath is compatible with the following machines equipped with John Deere or Reichardt Green Fit AutoTrac systems:

NOTE: For optimal performance, use AutoTrac RowSense with AutoPath.

- Tractor
- Sprayer
- Harvester
- Windrower

NOTE: AutoPath documentation is not available when ISOBUS Documentation Mode is enabled in Work Setup settings.

- StarFire Receivers using SF3 signal level or greater on both the machine and the implement.

NOTE: StarFire Receivers using SF-RTK signal or greater is needed to support sugar cane planting and harvesting for multiple season repeatability.

NOTE: Verify that TCM is calibrated on all receivers (machine and implement).

NOTE: Shared signal can be used to record data.

- A G5 CommandCenter Display.
- G5 CommandCenter Display must have a valid license for AutoPath.

AutoPath (Rows)

AutoPath (rows) uses recorded source operation data, machine offsets, and track spacing to create guidance lines for subsequent operations in that field. AutoPath (rows) reduces guesswork and operator input needed to accurately navigate through standing crops. AutoPath lines reduce setup time, wrong guess rows, and crop damage from inaccurate guidance setup.

Source Operation Requirements for AutoPath (Rows):

NOTE: The accuracy of AutoPath lines depends on the accuracy of the source operation data. When recording the source operation, active implement guidance or AutoTrac Implement Guidance is recommended.

The source operation is the recorded operation that is used to generate AutoPath lines. Compatible source operations are tillage, planting, and application.

NOTE: The source operation must be recorded with an implement receiver.

If the source operation does not include row data, any subsequent operation in that field, such as planting, product application, or harvesting, must contain defined rows in order for AutoPath to generate guidance lines.

Source operation data sent to John Deere Operations Center must be recorded using:

Compatible Implements for AutoPath (Rows):

- John Deere planter with a SeedStar 2 control unit or newer
- Non John Deere ISOBUS planter
 - Working width must be set as rows.
 - If row width is greater than 254 cm (100 in), subsequent operations require defined rows.
- Virtual planter (implement without a control unit)
 - Working width must be set as rows.
- John Deere tillage implement with a control unit
 - Subsequent operations require defined rows.
- Virtual tillage implement (without a control unit)
 - It is recommended to set the working width as rows.
 - If the working width is not set as rows, or if the row width is greater than 254 cm (100 in), subsequent operations require defined rows.

AutoPath (Rows) Usage Requirements

- Setup file from John Deere Operations Center contains AutoPath data.
- G5 Universal Display must have a valid license for AutoPath.
- Machine is equipped with a StarFire Receiver using SF3 signal level or greater.

NOTE: For optimal performance, use the same signal level that was used to record the source operation.

- Machine is equipped with John Deere or Reichardt Green Fit AutoTrac systems.
- Crop Type must be a row crop and it is recommended to use the most recent source data for best results.

Generating AutoPath (Rows):

NOTE: AutoPath files cannot be exported from the display.

NOTE: AutoPath files imported to the display can be modified but the changes won't sync to John Deere Operations Center.

When a machine is pulled into a field that has an associated Source Operation file, AutoPath lines optimized for fewest paths will be generated automatically. Current AutoPath track can then be edited from Select Guidance Track page. Select the Method button to select the method used for generating passes. AutoPath (rows) has following track generation options:

- Select Optimize for Fewest Passes to fully cover the field using as few passes as possible.

NOTE: If the current operation working width is narrower than the source operation working width, the option to Follow Source Operation Passes is automatically grayed out.

- Select Follow Source Operation Passes to use only passes that align with the source operation passes. Following source operation passes reduces compaction but may result in coverage overlap.



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Default Method Checkbox

The default option is Optimize for Fewest Passes. To change the default to Follow Source Operation Passes, select radio button and then check the Default to this Method checkbox. This step ensures that the generation method stays the same between fields.

AutoPath (rows) lines default to 20 m (66 ft) past the end of the row. Line extensions can be changed in advanced

settings. AutoPath (rows) can connect lines across a gap of up to 50 m (164 ft), such as across a waterway.

NOTE: Line Extensions will default to "Off" if the platform detected is Sugarcane machine.

NOTE: Refer to Onscreen Help for more information on advanced settings.

AutoPath (Boundaries)

NOTE: AutoPath files cannot be exported from the display.

AutoPath (boundaries) uses field boundary information to create guidance lines. AutoPath (boundaries) requires accurate field boundary information for generating passes. This method is suitable for machine operating in non-crop rows and planting new row crops.

Generating AutoPath (Boundaries):

When a machines pulls into field that does not have an associated source operation file, but does have a defined boundary, AutoPath (boundaries) generates passes based on following conditions:

- When an Off-board Guidance Plan from Boundary has been shared, AutoPath (boundaries) will generate data directly.
- If no Off-board plan has been shared, but a boundary is defined for the current field, operator can select an existing Boundary Plan for the field or can create a new boundary plan using the Data menu.
- If No Field Boundary information is complete user can select the shortcut to Fields and Boundary Application to complete setting up boundary information. AutoPath (Boundaries) can not be completed until boundary is complete.

NOTE: If Source Operation file exists, AutoPath (rows) will generate passes from Source Operation data.

If initial prompt for Align to boundary was skipped, AutoPath (Boundaries) can be generated at any time using the Set Track to select the AutoPath Line and selecting an existing boundary plan or creating new when editing the AutoPath line.

AutoPath (boundaries) has following track generation methods:

- Select Heading angle to generate tracks at the desired angle.
- Select Align to boundary to generate tracks that are parallel to a boundary edge.
- Select From existing track to generate straight tracks that are parallel to an existing guidance line.

Align to boundary feature allows an operator to easily

create a set of straight guidance tracks that are aligned with a defined section of a field boundary. The display defaults to the longest straight edge of the boundary but any edge can be selected.

AutoPath (boundaries) lines default to 20 m (66 ft) past the end of the row.

NOTE: Refer to Onscreen Help for more information on advanced settings.

Create Headlands:

When headland is defined in AutoPath - boundary, Fields and Boundaries should indicate that headland is defined elsewhere and direct users to AP headland definition.

To create Headland follow the given procedure:

1. Go to Edit Autopath.
2. Select Autopath Headland Source.



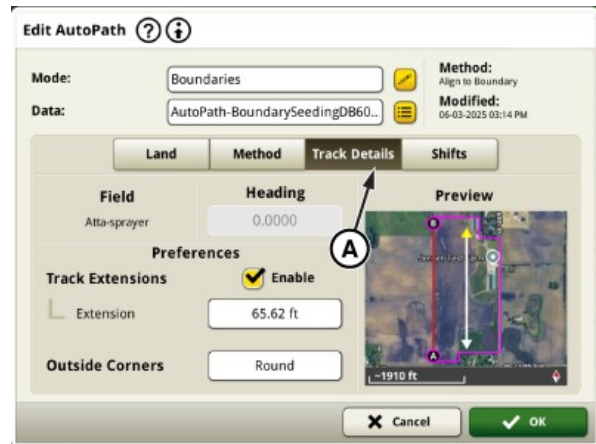
PC676263—UN—17JUN25

Headland Source

A—Autopath

3. Click on Machine Passes to set the number of passes.
4. Click on OK to complete the procedure.

Track Details:



PC676267—UN—24JUN25

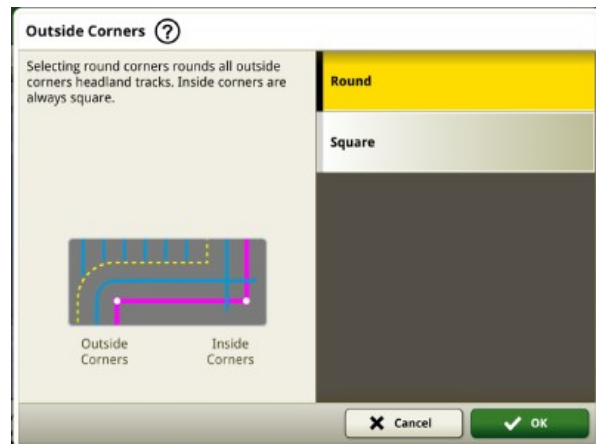
Track Details Page

A—Track Details Tab

Track Details tab displays the Field, Heading, and Boundary and Headland information of the selected track.

NOTE: Boundary and Headland information is not required with AutoPath is generated from rows.

The Outside Corner Type preference provides the option to select between a square or a round outer corner.



PC676266—UN—24JUN25

Outside Corners

The Preview window displays a preview of AutoPath that would be generated. Track heading can be modified by selecting the input box and adjusting to the required values.

AutoPath generation method can be changed from Track Details tab by selecting Edit button next to the method name.

NOTE: Refer to Onscreen Help for more information.

Track Visibility settings can be used to select which lines

are shown on the map view. Map view can be switched between all tracks, field tracks, and headland tracks. Default view is Show All Tracks.

NOTE: Track Visibility settings are not available when using AutoPath (rows).

ZIDXK1X,1768306979200-19-13JAN26

Shift Track



PC16665—UN—18MAR13

A—Shift Track Center
B—Shift Track Left
C—Shift Track Right

Shift track adjusts position of the set track left, center, or right of the machine. Use Shift track to compensate for global positioning system (GPS) drift.

NOTE: Drift is inherent to any satellite-based, differentially corrected GPS system.

When using SF1, SF2, or SF3 differential correction (or when using RTK Quick Survey mode), the track may drift over time or when power cycles. Shift track can be used to compensate for GPS drift.

Shift track adjusts track 0 and all guidance lines associated with the track. Guidance lines are shifted right or left by the pre-specified distance. An operator can also center a guidance line on the machine.

To center the line on the current machine location, select Shift Track Center (A). To move the line to the left, select Shift Track Left (B). To move the line to the right, select Shift Track Right (C).

NOTE: Shift track master defaults to ON.

Shift track is disabled while adaptive curve recording is active.

The maximum shift increment value allowed with AutoTrac active is 30 cm (12 in). With AutoTrac inactive, operator is allowed to shift up to 914 cm (360 in).

Shift track is not recommended with adaptive curves. Shift is based on the current heading of the track, not the geometry of the entire track. Shift track can cause some portions of the track to shift closer or further away from the desired shift.

NOTE: Center Shift Track Is not available when Row Sense is being used for AB Curves and Boundary Tracks.

Shift track is available when using AB curves. (Refer to Shifting AB Curves.)

Total shifts are visible when editing a straight track or circle track guidance line only. Clear shifts are eligible for all tracks.

Shared Guidance Line Shifts

To share a guidance line shift:

1. Shift the active guidance line.
2. Open the Guidance Track List.
3. Select the Share button to share the active line and its line shifts with the work group.

To receive a guidance line shift:

NOTE: If the active guidance line was shifted by another operator, the shift notification does not appear until the active line is reselected.

1. Select a different guidance line.
2. Reselect the previous guidance line.

Single-Line Shift

NOTE: Single-line shift is only available for straight tracks and AB curves.

AutoTrac remains active if a single-line shift is applied.

NOTE: Single line shift can only be used to shift the track up to 30% of the track spacing for straight tracks and 40% for AB curves.



PC28718—UN—25AUG22

Single-Line Shift Buttons

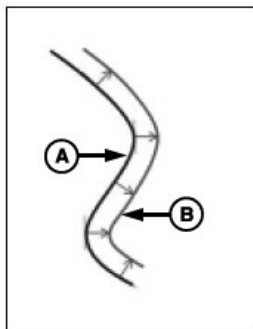
A—Shift Track Center
B—Shift Track Left
C—Shift Track Right

Single-line shift adjusts the position of a single guidance line left or right without affecting the location or shape of the tracks around it. At the end of a turn or when a new track is selected, the shift resets to zero.

Single-line shift module can be added to a run page using the Layout Manager application.

Shifting AB Curves

G5 Displays shift AB curves using different logic than other guidance methods. Instead of straight, lateral shifts, AB curves uses radial shifts. Radial shifts support directional movement perpendicular to the tangent of the curve at each point along the track. Each point along the curve is shifted during regeneration. The shape and geometry of the curve change with the shift.



PC27479—UN—06SEP19

AB Curve Shift Example

A—AB Curve
B—New AB Curve

When an AB curve (A) is shifted, the new AB curve (B) is shifted radially at the point of the shift. The radial shift is propagated along the length of the line. The track spacing and heading of the new AB curve are based on the original AB curve.

NOTE: Smoothing of curves is applied to each new pass. Smoothing can cause small gaps in coverage. If necessary, smoothing of line segments can be turned off in the guidance settings.

Importing and Exporting AB Curve Shifts

If importing AB curves with shifts from a GreenStar 3 2630 Display, the shifted lines import. If any dimensions or applications change, the AB curves do not regenerate based on those changes. To account for those changes, the AB curve must be recreated using the original AB curve.

Radial shifts from a G5 Display are not compatible with other display types.

AB curves exported to GreenStar 2 Displays, GreenStar 3 Displays, or John Deere Operations Center retain their radial shifts when imported back to a G5 Display only if the AB curve is not modified while on other display types.

NOTE: Generation 4 display does not support importing shifts.

ct47125,1705346976821-19-29SEP25

Working Width Change Notification

Enable Working Width Change Notification to receive a notification any time the working width of the machine or implement is changed.

ct47125,1708279572721-19-18FEB24

Tram Lines

Tram lines are guidance lines that are highlighted in a different color to remind the operator to perform an action on that pass. For example, tram lines can remind the operator to manually turn off planter sections so seed is not planted on predetermined paths. These predetermined paths can be used for wheel rows during the season to reduce soil compaction and crop damage in the rest of the field.

For more information on tram lines, see onscreen help.

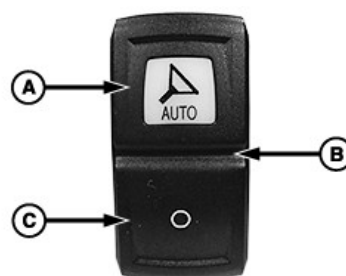
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Shared Signal

Shared signal uses the machine correction signal to share signal with the implement receiver and other machines when using Machine Sync. The receiver with the most accurate correction signal must be mounted on the machine.

ct47125,1708279572455-19-18FEB24

Road and Resume Switch



PC20494—UN—19AUG19

Road and Resume Switch

A—Resume Position
B—On Position
C—Off Position

On the road and resume switch, select the:

- Resume position (A) – AUTO half of the toggle switch.
- On position (B) – Middle position of the toggle switch.
- Off position (C) – Open half of the toggle switch.

ct47125,1708279572310-19-18FEB24

Track Spacing

NOTE: When the machine is over 16 km (10 mi) from the track 0, the accuracy of the guidance lines is reduced.

Track Spacing is used in the Guidance application to determine how far each pass is from the last pass. Track Spacing is similar to Working Width, but Track Spacing is only used for guidance and the two values are independent of each other.

To maintain row width between passes, set Track Spacing the same as Working Width. To ensure some overlap for tillage or spraying, or to account for some GPS drift, make the Track Spacing less than the Working Width.

ct47125,1708279572181-19-18FEB24

Track Set

A track set is a group of guidance lines created by the operator. Track sets allow an operator to switch between different guidance tracks quickly.

Create a Track Set

1. Select Set Track button or select the Next Track run page module.
2. Select the New Track Set button.
3. Select the Add Track button and select the desired track from the list.
4. Repeat step 3 until all desired tracks are added to the track set.

Select a Track Set

1. Select the Set Track button or select the Next Track run page module.
2. Select a track set from the Guidance Track List page.

NOTE: Removing a line from a Track Set does not delete it from the display. Deleting a Track Set does not delete the lines in the Track Set from the display.

More information can be found in the Onscreen Help files.

ct47125,1708279572049-19-18FEB24

Swap Track



PC17412—UN—15JUL13

Swap Track allows operators to switch between guidance lines. Swap Track can either be used by creating a Track Set (group of guidance lines) or by using the global track set (all available guidance lines on the display). When selected, Swap Track changes the guidance track based on the order of guidance lines in the Track Set.

Swap To Next Track

NOTE: Swap Track button is grayed out when a track is not selected.

To select the next guidance track, use one of the following methods:

- Select Swap button in the Next Track module.
- Select Swap Track in the shortcut bar.

ct47125,1708279571907-19-18FEB24

Guidance Track Selection

When Guidance Track Selection is enabled, the display automatically selects a guidance track any time a client, farm, and field are selected. If a field has multiple tracks associated with it, the first track on the Guidance Track List is selected as the active track.

NOTE: The active track does not change if an operator selects a new field while AutoTrac is engaged.

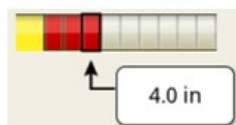
If the selected field has no associated guidance tracks or the operator clears the client, farm, and field selection, the track name changes to "---" to indicate there is no active track. To select a guidance track, select Set Track on the Guidance application main page or select a client, farm, and field in the Fields application.

NOTE: Guidance Track Selection is enabled by default. A factory data reset or software reprogramming returns this feature to the default setting.

ct47125,1708279571781-19-18FEB24

Lightbar Settings

NOTE: Lightbar is also referred to as Path Accuracy Indicator.



Lightbar Step Size

PC28719—UN—25AUG22

Step Size — Used to set the value of off-track distance each box on the lightbar represents.

Steer Toward Direction — When this option is selected, lights illuminated to the left on the lightbar mean that the machine must be steered to the left to align with the guidance track.

Off Track Direction — When this option is selected, lights illuminated to the left on the lightbar mean that the machine must be steered to the right to align with the guidance track.

Passive Implement Guidance Lightbar



PC671879—UN—24JUN25

A—Machine Lightbar
B—Implement Lightbar

When using passive implement guidance, the display adds a second lightbar.

Machine lightbar (A) — Displays the distance to the right or left that the machine is off the guidance track.

Implement lightbar (B) — Displays the distance to the right or left that the implement center of rotation is off the guidance track.

ZIDXXK1X,1750077355275-19-16JUN25

AutoPath Map Details

Select AutoPath Map Details button to view row information and passes from the source operation. The AutoPath Map details allow an operator to view how AutoPath has planned the guidance lines through a specific field.

Select the Rows button to either hide or display the row data.

Select the Source Operation Passes to either hide or

display the passes generated from the source operation.

Select the Source Directions checkbox to either hide or display directional arrows. When enabled the directional arrows show the Source Pass direction of travel.

ct47125,1708279571499-19-18FEB24

AutoTrac Status Pie

AutoTrac icon has four stages represented by the AutoTrac Status Pie:

1. Installed



Installed

PC28729—UN—25AUG22

Steering controller and all other hardware necessary for use are installed.

- The steering control unit is detected.
- An AutoTrac license is detected.

NOTE: If supported, steering controller security must be completed.

2. Configured



Configured

PC28730—UN—29AUG22

Tracking Mode has been determined and a valid Track 0 has been established. Correct StarFire signal level for AutoTrac is selected. The following machine conditions need to be met:

- The guidance system is turned ON.
- Track 0 is defined.
- Valid GPS Signal Detected
- The steering control unit has no active faults.
- The TCM message is available and valid.
- The machine is in proper operating gear.

NOTE: AutoTrac stays in "1 Pie" when Orchard Mode is active because Orchard Mode isn't supported for AutoTrac guidance. This is defined by the SF License, which controls feature access. Orchard Mode is not valid signal for AutoTrac.

NOTE: If GPS Signal is not valid then refer to the StarFire OM or TM for more information.

3. Enabled



Enabled

PC28731—UN—25AUG22

AutoTrac ON/OFF button has been pressed. All conditions are met for AutoTrac to operate and system is ready to be engaged.

- Select the STEER ON/OFF button to turn “Steer On.”

4. Engaged



Engaged

PC28732—UN—25AUG22

The resume switch has been pressed and AutoTrac is steering the machine.

- Press the machine resume switch to engage AutoTrac.
- Speed is within valid range
- Machine heading/angle within proper range of track
- Machine within 40% of track width
- Resume Switch engaged

Last Exit Code: Indicates why AutoTrac is disengaged or will not engage. Exit codes show up in a new window shade at top of page.

ZIDXX1X,1749541393875-19-10OCT25

Set Guidance Track



A—Set Track Button
B—Add Guidance Track
C—Filter/Sort Guidance Tracks

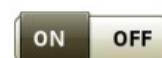
PC28720—UN—25AUG22

1. Select SET TRACK on the main guidance page.
2. On the Guidance Track List, either select an existing guidance line, or create a guidance line.

Use Help Center onscreen help for information about creating different guidance tracks.

ct47125,1708279571183-19-23MAY24

Enable AutoTrac



Steer ON/OFF Toggle

PC28733—UN—30AUG22

A—Steer On
B—Steer Off

The following criteria must be met for AutoTrac to be enabled:

- The machine must have an AutoTrac capable steering control unit.
- Valid license that includes AutoTrac.
- A guidance track has been created. For information on creating a guidance track see Create Guidance Track in this section.
- Correct StarFire signal level for AutoTrac is selected (SF1, SF2, SF3, or RTK) and a valid GPS signal is acquired.
- AutoTrac with valid GPS signals, including SF1, SF2, SF3, or RTK.
- The steering control unit must have no active faults.

NOTE: Machine type and software version of the steering control unit determines minimum and maximum speeds allowed.

To enable AutoTrac, select Steer ON/OFF toggle on the AutoTrac Guidance application main page or by selecting the AutoTrac shortcut key on the home page. These buttons disable AutoTrac if selected again.

ct47125,1708279571041-19-18FEB24

Engage AutoTrac

CAUTION: Avoid the risk of accident or injury. While AutoTrac is engaged, the operator is responsible for steering at the end of path and for collision avoidance.

Do not attempt to turn on (engage) the AutoTrac system while transporting on a roadway.

1. Select the Steer ON/OFF button to turn steering on or off.
2. Drive the machine onto a guidance track and a highlighted navigation line appears in front of the machine icon.
3. Manually engage AutoTrac when steering assistance is desired by pressing the resume switch.

ct47125,1708279570911-19-18FEB24



AutoTrac Icon

PC20427—UN—28JUL16

A—Resume Switch

NOTE: Resume switch location differs based on machine type and model. For information on locating the resume switch, see the machine Operator's Manual.

Press the resume switch to move AutoTrac from the enabled stage to the engaged stage.

ct47125,1708279570776-19-18FEB24

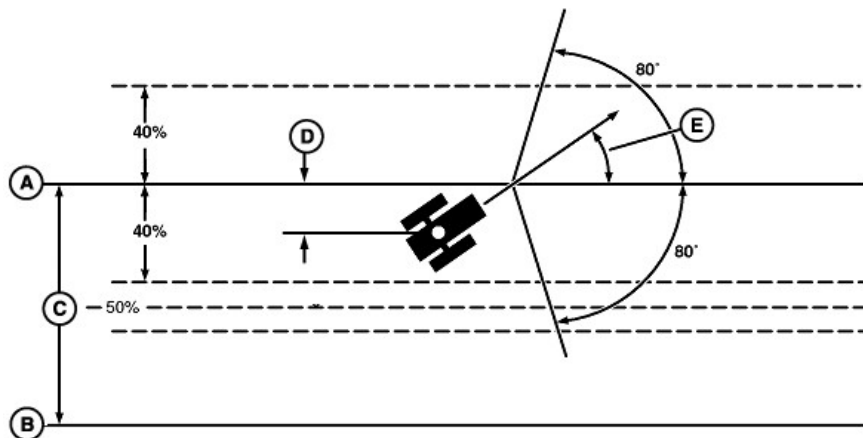
Resume Switch



PC28734—UN—29AUG22

Resume Switch Example

Re-Engage AutoTrac on Next Pass



Tracking

PC8866—UN—02NOV05

A—Track 0

B—Track 1 South

C—Track Spacing
D—Off-Track Error

Once the end of the row is reached, the operator must turn the machine onto the next pass. By turning the steering wheel, AutoTrac is disengaged.

AutoTrac can be engaged again by pressing the resume switch only after the following conditions are met:

NOTE: Steering control unit determines the maximum speed when the machine is using AutoTrac.
Reverse timeout depends on machine. After reverse timeout the machine must be put in forward gear before reverse will engage again.

- Forward speed is less than 30 km/h (18.6 mph).
- Reverse speed is less than 10 km/h (6 mph).
- Machine heading is within 80° of the desired track.
- The machine is within 40% of track spacing.
- Operator is seated.
- TCM is on.

NOTE: The track number is displayed on the map at half the distance between two guidance tracks.

ct47125,1708279570643-19-09DEC25

Minimum and Maximum Speeds

Machine and software versions of the steering control unit determine minimum and maximum speeds.

NOTE: On certain machines, AutoTrac can operate at speeds as low as 0.1 km/h (0.06 mph). Refer to the machine Operator's Manual for more information.

Forward Speed Limits

Integrated AutoTrac		
Machine	Forward High Speed Limit	Forward Low Speed Limit
6R, 7R, and 8R Row Crop and Track Tractors	Wheel: 36 km/h (22.4 mph) Track: 31 km/h (19.3 mph)	0.5 km/h (0.3 mph)
Articulated Tractors	31 km/h (19.3 mph)	1 km/h (0.6 mph) MST: 1.5 km/h (0.9 mph)
Sprayers	40 km/h (24.8 mph)	0.5 km/h (0.3 mph)
Combines	22 km/h (13.7 mph)	0.5 km/h (0.3 mph)
Self-Propelled Forage Harvesters	22 km/h (13.7 mph)	0.5 km/h (0.3 mph)
Self-Propelled Windrowers	28 km/h (17.4 mph)	0.5 km/h (0.3 mph)
Cotton Harvesters	15 km/h (9.3 mph)	0.5 km/h (0.3 mph)
Gator (XUV 845E,	30 km/h (18.6 mph)	0.5 km/h (0.3 mph)

E—Track Heading Error

Integrated AutoTrac		
Machine	Forward High Speed Limit	Forward Low Speed Limit
XUV 845M, XUV 845R)		

AutoTrac Universal 300 and AutoTrac Controller 300		
Machine	Forward High Speed Limit	Forward Low Speed Limit
Row Crop and Track Tractors	30 km/h (18.6 mph)	0.5 km/h (0.3 mph)
Articulated Tractors	30 km/h (18.6 mph)	1 km/h (0.6 mph)
Sprayers	37 km/h (23.0 mph)	0.5 km/h (0.3 mph)
Combines	25 km/h (15.5 mph)	0.5 km/h (0.3 mph)
Self-Propelled Forage Harvesters	25 km/h (15.5 mph)	0.5 km/h (0.3 mph)
Self-Propelled Windrowers	25 km/h (15.5 mph)	0.5 km/h (0.3 mph)
Cotton Harvesters	25 km/h (15.5 mph)	0.5 km/h (0.3 mph)

AutoTrac Universal 200		
Machine	Forward High Speed Limit	Forward Low Speed Limit
Row Crop and Track Tractors	30 km/h (18.6 mph)	0.5 km/h (0.3 mph)
Articulated Tractors	30 km/h (18.6 mph)	0.8 km/h (0.5 mph)
Sprayers	37 km/h (23.0 mph)	0.8 km/h (0.5 mph)
Combines	25 km/h (15.5 mph)	0.8 km/h (0.5 mph)
Self-Propelled Forage Harvesters	25 km/h (15.5 mph)	0.8 km/h (0.5 mph)
Self-Propelled Windrowers	25 km/h (15.5 mph)	0.8 km/h (0.5 mph)
Cotton Harvesters	25 km/h (15.5 mph)	0.8 km/h (0.5 mph)

AutoTrac Controller—Raven		
Machine	Forward High Speed Limit	Forward Low Speed Limit
Row Crop and Track Tractors	31 km/h (19.3 mph)	0.5 km/h (0.3 mph)
Articulated Tractors	31 km/h (19.3 mph)	1 km/h (0.6 mph)
Self-Propelled Windrowers	20 km/h (12.4 mph)	0.5 km/h (0.3 mph)

Reverse Speed Limits

Integrated AutoTrac		
Machine	Reverse and Allowable Time	Reverse High Speed Limit
7R and 8R Row Crop and Track Tractors 7R (S.N. 110101—) 8R (S.N. 160001—) 8RT (S.N. 923001—) 8RX (S.N. 801001—)	Yes, No Limit	10 km/h (6.2 mph)
6R, 7R, and 8R Row Crop and Track Tractors 7R (S.N. —110100) 8R (S.N. —160000) 8RT (S.N. —923000)	Yes, 45 s	10 km/h (6.2 mph)
Articulated Tractors	No	—
Sprayers	Yes, 45 s	10 km/h (6.2 mph)
Combines	Yes, 45 s	10 km/h (6.2 mph)
Self-Propelled Forage Harvesters	Yes, 45 s	10 km/h (6.2 mph)
Self-Propelled Windrowers	No	—
Cotton Harvesters	Yes, 45 s	5 km/h (3.1 mph)
Gator (XUV 845E, XUV 845M, XUV 845R)	Yes, 45 s	10 km/h (6.2 mph)

AutoTrac Universal 300 and AutoTrac Controller 300		
Machine	Reverse and Allowable Time	Reverse High Speed Limit
Row Crop and Track Tractors	Yes, 45 s	10 km/h (6.2 mph)
Articulated Tractors	No	—
Sprayers	Yes, 45 s	10 km/h (6.2 mph)
Combines	Yes, 45 s	10 km/h (6.2 mph)
Self-Propelled Forage Harvesters	Yes, 45 s	10 km/h (6.2 mph)
Self-Propelled Windrowers	No	—
Cotton Harvesters	Yes, 45 s	10 km/h (6.2 mph)

AutoTrac Universal 200		
Machine	Reverse and Allowable Time	Reverse High Speed Limit
Row Crop and Track Tractors	Yes, 45 s	10 km/h (6.2 mph)
Articulated Tractors	No	—
Sprayers	Yes, 45 s	10 km/h (6.2 mph)
Combines	Yes, 45 s	10 km/h (6.2 mph)
Self-Propelled Forage Harvesters	Yes, 45 s	10 km/h (6.2 mph)
Self-Propelled Windrowers	No	—
Cotton Harvesters	Yes, 45 s	10 km/h (6.2 mph)

AutoTrac Controller—Raven		
Machine	Reverse and Allowable Time	Reverse High Speed Limit
Row Crop and Track Tractors	Yes, 45 s	10 km/h (6.2 mph)
Articulated Tractors	No	—
Self-Propelled Windrowers	No	—

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Turn Predictor



PC17238—UN—11JUL13

Turn predictor alerts the operator by predicting the end of the pass and displays the distance to the end of the pass in the map view.

From the Guidance application Advanced Settings page, use the toggle button to enable or disable turn predictor. When turn predictor is enabled, the turn predictor icon appears on the map.

Turn predictor is intended to predict only the turn point of a machine using parallel tracking or AutoTrac while in straight track mode. Turn predictor is not a headland alert. Turn predictions are based solely on previous turn behavior of machine. Turn points are also defined when AutoTrac is deactivated and heading error exceeds 45°. Turn predictions only coincide with the field boundary if the boundary is linear and continuous or if the operator makes a turn before or after the boundary.

Distance counts down to predicted turn, and tones sound when the machine is 10 seconds from intersecting the turn point. The tones sound again when the predicted turn point has been reached.

The visual indicator changes to yellow within 10 seconds of predicted turn and then red after passing the predicted turn location. A white intersection line marks the turning location.

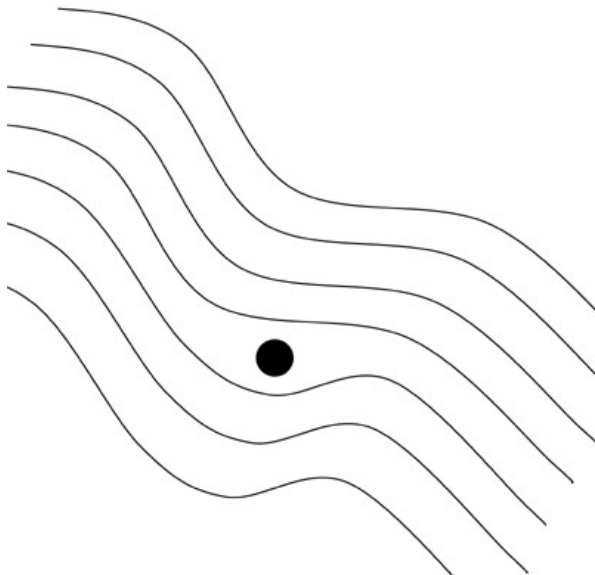
Turn Predictor Map Icon

When turn predictor is on, the turn predictor icon is displayed on the map. The turn predictor icon is used to access Turn Predictor Settings and turn off turn predictor using the toggle button.

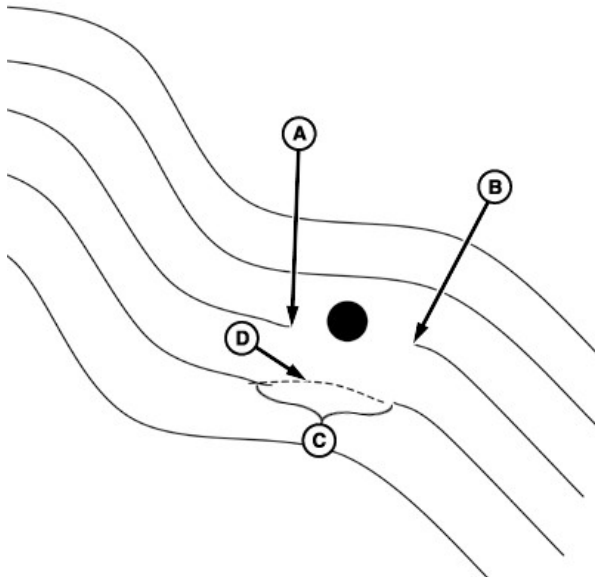
When turned off, turn predictor does not alert the operator by predicting the end of the pass and display the distance to the end of the pass in the map view. Turn predictor must be manually turned back on in the Guidance application Advanced Settings page. The turn predictor symbol is not displayed on the map when turned off.

ct47125,1708279570255-19-18FEB24

Navigate Around Obstacles



PC9029—UN—17APR06



PC9030—UN—17APR06

- A—Turned Recording Off**
B—Turned Recording On
C—Gaps Results in Next Pass
D—Manually Driven to Re-Establish Path

The operator must drive around any obstacles encountered in a field while operating Adaptive Curves, such as a well head, telephone pole, or power line.

NOTE: Use the straight button to record a straight line around the obstacle to avoid a gap in the path.

Recording ON: If recording is left on while driving around an obstacle, that deviation to the propagated path will be recorded and become a part of the path. On the next pass that approaches the area in the field, the

propagated path for the pass the machine is on will have incorporated the deviation. The machine will steer along the deviation. To straighten out that deviation, the operator must take over manual steering of the machine and straighten out that deviation. Once the operator has driven past the deviation in the field and reacquired the intended path, the resume switch may be engaged and AutoTrac will take over machine steering.

Recording OFF: If recording is turned off when the obstacle is approached and steered around and then recording turned back on once the obstacle has been navigated around and AutoTrac is engaged to finish the pass, there will be a gap in the recorded path where the obstacle is. On the next path when the machine approaches the gap, the operator must take over manual steering of machine and navigate through the gap. Once the gap has been navigated and the propagated path is reacquired, AutoTrac can be engaged. The gap will not appear in subsequent passes as long as recording is turned on for the next pass.

ct47125,1708279570135-19-18FEB24

AutoTrac Disengaged Messages

AutoTrac disengaged messages – Each time AutoTrac is disengaged, two tones are followed by an alert explaining why it was disengaged. Messages are also displayed as to why AutoTrac did not engage. Disengaged messages display for 7 seconds and then disappear.

AutoTrac Disengaged Messages	
Code	Message
702752.00	Nothing Checked Yet
702752.01	Steering Wheel Moved
702752.02	Wheel Speed Too Slow
702752.03	Wheel Speed Too Fast
702752.04	Gear Invalid
702752.05	Track Number Changed
702752.06	No Dual Frequency GPS
702752.07	SSU Has Active DTCs
702752.08	Last Transition Okay
702752.09	GSD Messages Bad
702752.10	No Parallel Tracking
702752.11	Keycard Not Present
702752.12	Heading Error Too Large
702752.13	Off-Track Error Too Large
702752.14	Seat Switch Open
702752.15	Oil Temperature Too Low
702752.16	TCM Not Present
702752.17	Activation Code Invalid
702752.18	Diagnostic Mode Controls Valve
702752.19	Combine Header Switch Off
702752.20	Combine Road/Field Switch On
702752.21	Voltage Not Stable

702752.22	AutoTrac Active in Reverse Too Long
702752.23	AutoTrac Active Below Low Speed Threshold Too Long
702752.24	Curvature Too High
702752.25	Machine Not Traveling in Forward Direction
702752.26	ELX Line Low (Shutdown)
702752.27	Gear Data Bad
702752.28	Resume Switch Data Bad
702752.29	Key Switch Message Invalid
702752.30	SPFH AutoTrac/Row Guidance Switch Off
702752.31	SPFH Quick-Stop Switch On
702752.32	AutoTrac Not Enabled
702752.33	Acquiring Line
702752.34	Tracking on Line
702752.35	Unknown Direction
702752.36	Transition to GPS Too Large
702752.37	Out of Row
702752.38	Sensor Coast Timed Out
702752.39	Bad Message Sequence
702752.40	Machine Cannot Achieve Commanded Track Curvature
702752.41	GPS Machine Speed Does Not Match Wheel-Based Machine Speed
702752.42	Present Curvature Mismatch
702752.43	Machine is in Park
702752.44	Auxiliary Steering Commands Message Timed Out
702752.45	Auxiliary Steering Status Message Timed Out
702752.46	Seat Switch Data Bad
702752.47	VIN Data Bad
702752.48	Wheel Base Data Bad
702752.49	TCM Info Message Timed Out
702752.50	Machine Automation Message Timed Out
702752.51	Machine Roll/Yaw Rate Message Timed Out
702752.52	Wheel-Based Speed/Direction Message Timed Out
702752.53	Track Data Timed Out
702752.54	Unknown Steering Control Unit Failure
702752.55	AutoTrac Universal Temperature Out of Range
702752.56	AutoTrac Active in Four-Wheel Steer Too Long
702752.57	Machine in Crab Steer
702752.58	Authorization Not Permitted
702752.62	Reserved
702752.63	Take No Action

ct47125,1708279569946-19-18FEB24

AutoTrac Implement Guidance (Passive)

AutoTrac Implement Guidance (passive) is used to improve accuracy in changing field conditions, curved passes, and sloped terrain. AutoTrac Implement Guidance (passive) drives the machine in a way that keeps the implement on the guidance line.

AutoTrac Implement Guidance uses the implement profile measurements in the Equipment Manager

application and the GPS signals from the machine and implement receivers. This information is used to determine the location of the implement receiver in relation to the machine receiver. Based on the guidance line, AutoTrac Implement Guidance steers the machine so the implement follows the guidance line. This may cause the machine to travel off the guidance line.

Navigate to AutoTrac Guidance

1. Select Menu.
2. Select Applications tab.
3. Select AutoTrac Guidance application.



Settings Icon

PC15305—UN—19MAR13

Select Settings icon to enable AutoTrac Implement Guidance (passive).

NOTE: Implement guidance can be affected by changes in field conditions, changes in environmental conditions, and improper machine or implement setup.

Requirements:

NOTE: C-Series and 1910 Hydraulic Drive tow-between air carts are compatible with AutoTrac Implement Guidance (passive) and supported with straight, curve, boundary, and AutoPath track type.

- G5 Universal Display
- Valid license for Implement Guidance
- Machine-mounted StarFire Receiver
 - StarFire 3000 Receiver with SF2 or RTK signal
 - StarFire 6000 Receiver with SF3 or RTK signal
 - StarFire 7000/7500 Receiver with SF-RTK or RTK signal
- Implement-mounted StarFire Receiver
 - StarFire 3000 Receiver with SF1, SF2, or RTK signal
 - StarFire 6000 Receiver with SF1, SF3, or RTK signal
 - StarFire 7000/7500 Receiver with SF1, SF-RTK, or RTK signal
- Shared signal turned on

NOTE: If using receivers with different signal strengths, the machine receiver must have the better signal.

Shared signal for implement receiver is automatically set to on.

AutoTrac Implement Guidance in Reverse Mode

AutoTrac Implement Guidance in reverse mode is supported on following machines:

- All machines that are running AT2 configuration
- 7, 8, and 9 Series Tractors with single drawn implements

Recommended speed while operating AutoTrac Implement Guidance in reverse mode is between 3—6 km/hr (2—4 mph). For optimal performance, shift back into forward mode when machine and implement errors are 13 cm (5 in) or less.

To see which configuration the machine is running on, navigate to AutoTrac Diagnostics:

1. Select AutoTrac Pie.
2. Select Health.
3. Select AutoTrac System.
4. Verify that AutoTrac Mode is AT 2.0.

AutoTrac Implement Guidance Mounted

NOTE: AutoTrac™ Implement Guidance is not compatible with rear 3-point mounted implements, except for the TT 8022 Planter using a Non-Pivoting Rear 3-Point Hitch.

The system automatically enables or disables based on the hitch position (hitch all way down is 0% and all the way up is 100%):

Enable Condition: Activated when the implement is lowered and reaches 70% of the hitch travel (default).

Disable Condition: Deactivated when the implement is raised above 85% of the hitch travel (default).

Configuration Rules:

1. The Enable and Disable thresholds must differ by at least 10%.
2. The Disable threshold must not exceed 95%.
3. The Enable (lower limit) cannot be set higher than THE Disable (upper limit).
4. The Disable (upper limit) cannot be set lower than THE Enable (lower limit).

ZIDXX1X, 1751351942342-19-01JUL25

AutoTrac RowSense

AutoTrac RowSense is an enhancement to integrated AutoTrac when harvesting corn or applying product. Signals provided by row sensors are integrated with existing AutoTrac signals to keep the machine on rows. When there is no signal from row sensors (such as when driving through a waterway), normal global positioning system (GPS) guidance is used.

AutoTrac RowSense works with all tracking methods and most standard harvesting and application patterns. All tracking modes are set up the same way as they are with GPS-based AutoTrac.

Contact your John Deere dealer to purchase AutoTrac RowSense.

Refer to the AutoTrac RowSense Operator's Manual for additional information.

Guidance Line Shifts

NOTE: Guidance Line Shifts requires a Premium Display.

When AutoTrac RowSense is enabled, the guidance line is shifted to keep it centered with the position of the row sensors. When a new field is selected or AutoTrac RowSense is toggled off, the system clears any shifts for all guidance tracks that were set by AutoTrac RowSense.

AutoTrac RowSense Status Icons



Standby (white icon)

PC24011—UN—31MAR17

System is disengaged.



System Engaged (green icon)

PC28735—UN—25AUG22

System is engaged and operating with both row sensors and GPS.



No GPS Signal (yellow icon)

PC28736—UN—25AUG22

System is engaged and operating with row sensor data only.



No Row Sensor Signal (orange icon)

PC28737—UN—25AUG22

System is engaged and operating with GPS only.

Engage the Row Sensors

Once initial path has been set, the AutoTrac resume switch can be pressed when the machine is within half the track spacing and at an acceptable angle to the rows. RowSense guides the machine as soon as the row sensors are able to determine row position.

Headland turns are accomplished the same as with GPS-based AutoTrac.

1. Operator lines up with path.
2. Press the resume switch to engage AutoTrac.
3. Row sensors detect position of the row and follow it.

Line extension feature of Adaptive Curves, Circle Track, and AB Curves can be used to extend adjacent path projection into headlands.

Row Dropout

Row dropout occurs when row sensor data is lost. AutoTrac operates using GPS until row data is reacquired. This dropout can occur when entering waterways.

When using Straight track or AB Curve track and the row drops out, the guidance track is re-centered. This method provides a greater chance for AutoTrac RowSense to reacquire the correct track on the other side of the waterway.

Manual RowSense

Select Manual RowSense mode to use the row sensor on the header only. Manual RowSense does not require a license.

Manual RowSense mode is available in the Advanced Guidance Settings if the following conditions are met:

- A G5 Universal Display is installed on the machine.
- The display detects the machine as a self-propelled forage harvester, cotton picker, or cotton stripper.
- The display detects the row finder sensors on the CAN bus.

ct47125,1708279569656-19-18FEB24

Disable AutoTrac When Not In Use



Settings Icon

PC15305—UN—19MAR13

CAUTION: Avoid the risk of accident or injury. Always turn off (disengage and disable) AutoTrac system before entering a roadway.

Guidance Master ON/OFF controls the Guidance application.

IMPORTANT: Avoid system malfunction. Deselect any active track in the Guidance Track list before toggling off Guidance Master.

The ON/OFF button on a run page module only enables or disables AutoTrac, and does not turn off the Guidance Application.

NOTE: The Guidance application is disabled when Guidance Master is turned off. This includes all display guidance functionality.

Guidance Master is found in the guidance settings. Select the Settings icon at the top of the Guidance application.

ct47125,1708279569656-19-18FEB24

Disengage and Disable System

CAUTION: To avoid death or serious injury, disable guidance system before entering roadways.

Disengage AutoTrac System

AutoTrac system is disengaged by:

- Turning steering wheel.
- Slowing to speeds less than 0.5 km/h (0.3 mph).

NOTE: AutoTrac on certain machines can operate at speeds as low as 0.1 km/h (0.06 mph). Refer to the machine Operator's Manual for more information.

- Toggling the Steer On-Off button until Steer Off is displayed in the Guidance View tab or the Guidance application and AutoTrac is dropped to 2/4 status pie.
- Operator being out of seat for more than 7 seconds if using seat switch, or no activity is detected by operator presence monitor for 7 minutes.

When AutoTrac is engaged, the operator can turn the steering wheel to disengage AutoTrac and steer manually. Alternatively, the operator can toggle the road and resume switch to OFF position to disengage AutoTrac. This drops AutoTrac to 1/4 status pie and starts a 30-second timer:

- If the switch is turned ON before the 30-second timer expires, AutoTrac is enabled at 3/4 status pie. Press the resume switch to re-engage AutoTrac.
- If the switch is turned ON after the 30-second timer expires, AutoTrac is configured at 2/4 status pie. AutoTrac must be re-enabled to 3/4 status pie before re-engaging AutoTrac by pressing the resume switch.

NOTE: The road and resume switch is not present in integrated AutoTrac steering.

NOTE: The MY26 XUV Gator (AT2) is equipped with a Seatbelt Unbuckled operator presence system. Operator presence is monitored through the seatbelt status; if the seatbelt is unbuckled, Autotrac Guidance will be disengaged.

Disable AutoTrac System

On the road and resume switch, toggle the switch to OFF position to drop AutoTrac to 1/4 status pie.

To disable AutoTrac through GreenStar Displays:

1. Select the Guidance softkey.
2. Select Guidance Settings tab.
3. Select Tracking Mode drop-down menu.
4. Choose Guidance Off.

On the Display, select the Settings icon at the top of the Guidance application and toggle Guidance Master to OFF.

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Guidance Settings



Settings Icon

PC15305—UN—19MAR13

Select SETTINGS icon at the top of the guidance application to configure guidance settings.

Guidance Master

Guidance Master toggle turns Guidance application ON or OFF.

ct47125,1708279569355-19-18FEB24

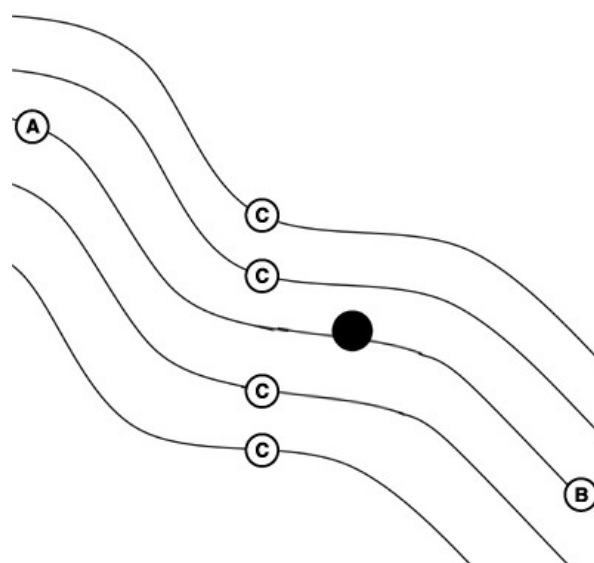
Tracking Tones

Tracking tones can be used as an audible indication of steering direction. If the track is right of machine, two low beeps sound. If left of machine, a single high beep sounds. The alarm repeats while off-track error between machine and guidance track is 10—40 cm (4—16 in.).

NOTE: Tracking Tones default to ON.

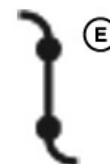
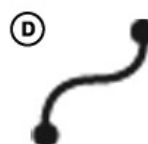
ct47125,1708279569259-19-18FEB24

Record a Straight Path or Navigate Around Obstacles



PC9030C—UN—27OCT06

Navigating Around Obstacles



PC15310—UN—09APR13

Curved Line and Straight Line Buttons

- A—A Point
- B—B Point
- C—Paths Generated from Track 0
- D—Curved Segment
- E—Straight Segment

1. Start AB Curves Recording
2. When you would like to record a straight path, select Straight Segment button.

NOTE: A straight segment will “snap” from when the Straight Segment button is pressed until the Curve Segment button is pressed or Done button is pressed to complete the track.

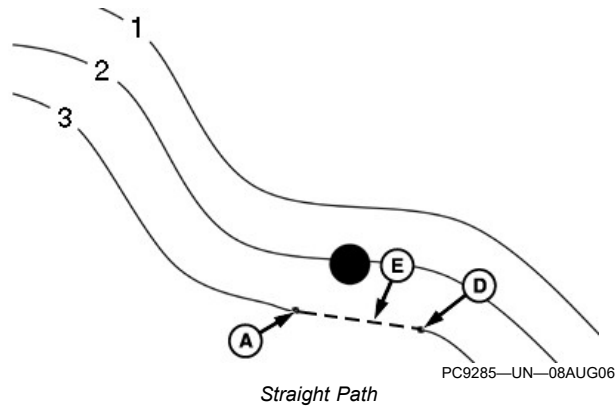
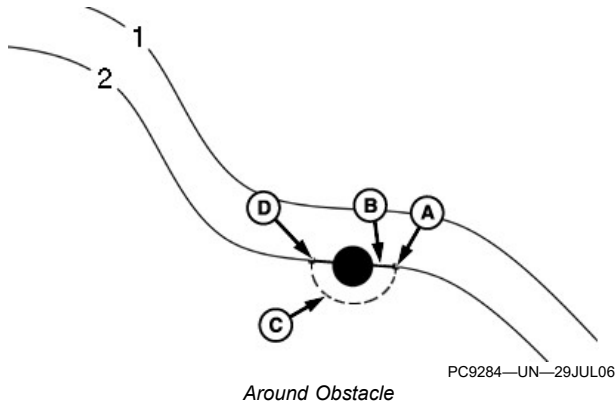
3. Select the Curved Line button to finish recording the straight line and resume curved path recording.

This procedure can be helpful when there is a long straight section of path or when navigating around obstacles.

Curve and straight segment buttons can be switched as needed while recording.

ct47125,1708279569088-19-18FEB24

Record a Straight Path Within an Adaptive Curve



PC15311—UN—09APR13

Curved Line and Straight Line Buttons

- A—Straight Line selected
- B—Straight segment is generated to connect two points
- C—Tractor path not recorded
- D—Curved Line selected
- E—Path recorded as a straight line between points A and D
- F—Curved Line Button
- G—Straight Line Button

1. Start recording an Adaptive Curve.
2. When you would like to record a straight path, select Straight Line button.

NOTE: A straight segment will “snap” from when the Straight Segment button is pressed until the Curve Segment button is pressed or Done button is pressed to complete the track.

3. Select the Curved Line button to finish recording the straight line and resume curved path recording.

This procedure can be helpful when there is a long straight section of path or when navigating around obstacles.

Curve and straight segment buttons can be switched as needed while recording.

NOTE: The longest straight segment that can be created is a distance of 0.8 km (0.5 mi.) (2,640 ft.). For a greater distance, line segment will not connect resulting in a gap in the path.

ct47125,1708279568819-19-18FEB24

Operation—AutoTrac Turn Automation

AutoTrac Turn Automation



PC28762—UN—25AUG22

AutoTrac Turn Automation

The AutoTrac Turn Automation application automates end turns in equipped machines. This automation allows the operator to focus on other tasks instead of coordinating end turns.

It is recommended to use the default settings when initially setting up AutoTrac Turn Automation. The default settings provide a starting point that performs well with many machine and implement configurations. With some configurations, it may be necessary to adjust the AutoTrac Turn Automation advanced settings to fine-tune performance. For example, if a tractor is made wider by adding triple tires or the turn radius is affected by adjusting steering stops, then the Maximum Turn Radius and Maximum Turn Angle values may need adjustment.

Navigate to AutoTrac Turn Automation

1. Select Menu.
2. Select Applications tab.
3. Select AutoTrac Turn Automation application.

Mapping

AutoTrac Turn Automation map module displays information about upcoming turns, such as distance to the turn and direction of the turn. Use the Onscreen Help for more information about the Mapping application.

AutoTrac Turn Automation Compatibility:

AutoTrac Turn Automation is compatible with the following displays and receivers:

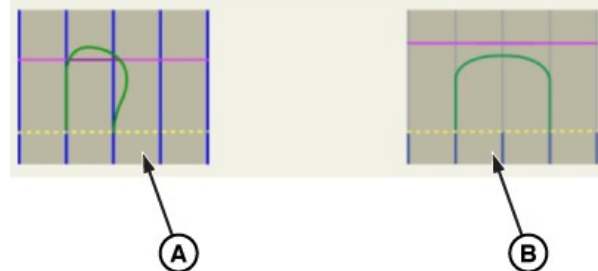
NOTE: Update software to the latest version.

- 4600 CommandCenter Display
- 4640 Universal Display
- G5 CommandCenter Display
- G5 Universal Display
- StarFire 3000 Receiver
- StarFire 6000 Receiver
- StarFire 7000 Receiver
- StarFire 7500 Receiver

AutoTrac Turn Automation is not compatible with the following displays:

- 4200 CommandCenter
- 4600 CommandCenter version 1 processor
- 4240 Universal Display
- Original GreenStar Display
- GreenStar 2 1800 Display
- GreenStar 2 2600 Display
- GreenStar 3 2630 Display when used with a 4600 CommandCenter or a 4640 Universal Display

Skip Turn Recommendation



PC613045—UN—20FEB24

Skip Turn Recommendation

A—No Skip
B—Skip Turn

AutoTrac Turn Automation suggests to skip a turn as needed when track spacing is less than machine minimum turn diameter. This feature is implemented only when U-Type turns are selected.

Select OK on the Skip Turn Recommendation message to accept the skip turn. Close the message or select cancel to dismiss the recommendation and continue without performing a skip turn.

NOTE: The selections are retained during cold and warm boot cycles.

NOTE: Recommendation shall re-appear when changing fields and track spacing is less than turn diameter.

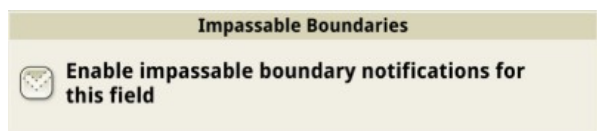
Intelligent Turn Sizing:

When the track spacing is equal to or larger than machine's minimum turn diameter, the application will plan an efficient U-turn.

When the track spacing is less than machine's minimum turn diameter, the turn shape will be a light bulb shape which takes more space to complete.

NOTE: If Skip turn is accepted, the application disregards the intelligent turn sizing feature.

Impassable Boundaries



PC661533—UN—30JAN25

Impassable Boundaries

Impassable boundaries warning can be disabled by selecting the checkbox in AutoTrac Turn Automation Advanced Settings. The checkbox sets to default state (warning enabled) in the following conditions:

- Change of field
- Operator is out of seat
- Key cycle

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Tractor AutoTrac Turn Automation

Use AutoTrac Turn Automation with iTEC to automate many in-cab tasks. This automation allows the operator to focus on the equipment and tasks instead of the manipulation of the operating equipment.

Requirements for Operation

- AutoTrac Turn Automation must be activated.
- Turn Automation must be on.
- iTEC master must be on.

NOTE: AutoTrac Turn Automation is not compatible with machine access tracks.

NOTE: To use AutoTrac Turn Automation with AB Curves, the AB Curves must be recorded from one end of the field to the other (headland to headland). End turns will not be generated if the AB Curves are not properly recorded.

- Straight track, AB curves, or AutoPath must be selected.
- Headland sequences must be defined.
- Field boundary information must be complete.
- Implement profile requirements must be met.
- Machine profile requirements must be met.
- Figure 8 turn may be enabled (optional).

AutoTrac Turn Automation contains advanced guidance and speed control, implement management system (IMS) functions, and iTEC functions. When using AutoTrac Turn Automation on tractors with IMS or certain tractors with iTEC, the tractor IMS or iTEC must be disabled. Use the following table to determine whether the tractor iTEC must be disabled.

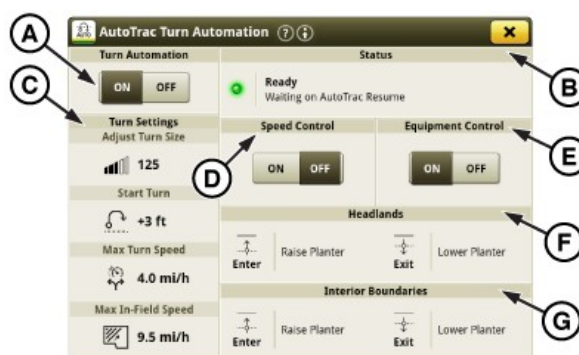
Machine Model	Serial Number
6R	-20100

7R	-10001
8R	-67001
8RT	-909001
9R	-10000
9RT	-904000

NOTE: If IMS or iTEC is enabled, the iTEC master switch on the G5 Universal Display is automatically turned off and the AutoTrac Turn Automation setup cannot be completed.

Depending on the machine, disable IMS or iTEC either under iTEC on the CommandCenter or on the right-hand side console. To use IMS or iTEC on the CommandCenter again, disable AutoTrac Turn Automation and iTEC on the G5 Universal Display.

Tractor AutoTrac Turn Automation Settings



PC620657—UN—17MAY24

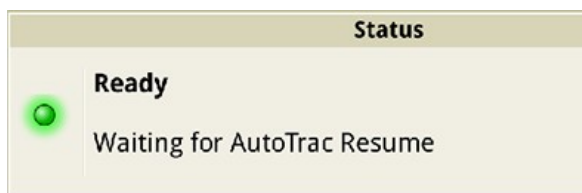
Tractor AutoTrac Turn Automation Settings Page

- A—Turn Automation
- B—Status
- C—Turn Settings
- D—Speed Control
- E—Equipment Control
- F—Headlands
- G—Interior Boundaries

Turn Automation (A)—Toggle ON to enable AutoTrac Turn Automation.

NOTE: For machines with iTEC, Turn Automation ON also enables iTEC features. If iTEC is toggled OFF, AutoTrac Turn Automation also turns OFF

Status (B)—Provides the operator a visual indicator of the automation status.



PC28997—UN—24APR23

Status—Ready—Waiting for AutoTrac Resume

- Gray LED (Automation OFF)—The Turn Automation master toggle is OFF.
- Amber LED (Not Ready)—One or more turn automation requirements not met.
- Red LED (Error Detected)—System error detected.
- Green LED (Ready)—Turn automation is ready. Press the resume switch to enable.
- Blue LED (Active)—System is operating.

Turn Settings (C)—Provides a quick view of the values of various settings related to Turn Automation.

Speed Control (D)—Toggle Speed Control OFF to manually control machine speed.

NOTE: Do not use speed control if other applications or machine functions are also using speed control.

NOTE: The display shows a warning message before a turn, instructing the operator to reduce speed for a safe and accurate turn.

Equipment Control (E)—Toggle Equipment Control OFF to allow turn automation to run without iTEC setup.

Headlands (F)—Select the text area to modify the triggered sequences for headlands.

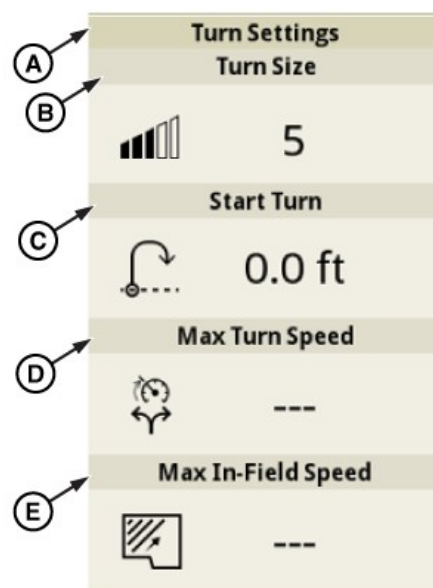
NOTE: If Interior Boundaries is grayed out, it means there are no interior boundaries in the field. An interior boundary must be driven to access the settings.

Interior Boundaries (G)—Select the text area to modify the triggered sequences for interior boundaries.

NOTE: If Interior Boundaries is grayed out, it means there are no interior boundaries in the field. An interior boundary must be driven to access the settings.

NOTE: For more information on Turn Automation, refer to the AutoTrac Turn Automation Onscreen Help.

Turn Settings



PC613043—UN—12FEB24

Turn Settings

- A—Turn Settings
- B—Turn Size
- C—Start Turn
- D—Max Turn Speed
- E—Max In-Field Speed

Turn Settings (A)—Provides a quick view of the values of various settings related to Turn Automation.

Turn Size (B)—Adjust the shape of the turn path. A smaller number will result in a smaller turn, and vice versa.

Start Turn (C)—Adjust the turn path to begin before or after crossing the headland boundary.

NOTE: If the machine speed is manually changed during active AutoTrac Turn Automation operation, speed automation settings for maximum turn speed and maximum in-field speed are no longer used for speed control functions. However, AutoTrac Turn Automation remains active and continues to execute advanced turn guidance, implement management system (IMS) functions, and iTEC functions.

NOTE: The maximum turn speed does not override the set speed of the tractor. The maximum speed that the machine can operate while using AutoTrac Turn Automation is the lower of the two values.

Max Turn Speed (D)—Adjust the maximum speed that the machine can travel while turning.

NOTE: The maximum in-field speed does not override the set speed of the tractor. The maximum speed that the machine can operate while using AutoTrac Turn Automation is the lower of the two values.

Max In-Field Speed (E)—Adjust the maximum machine speed when not in the headland.

John Deere Tractor Compatibility

Tractor AutoTrac Turn Automation is compatible with the following John Deere tractors:

NOTE: 8x30T and 9x30T are not compatible with AutoTrac Turn Automation.

- 6R FT4 (IVT and iTEC)
- 7M (CQT) model year 2024 and newer
- 7R FT4 (IVT, CQT, and e23)
- 8R, 8RT FT4 (EVT, IVT, PST 16, and e23)
- 8RX (EVT, IVT and e23)
- 9R, 9RX, 9RT FT4 (e18)
- 6R IT4 (IVT and iTEC)
- 7R IT4 (IVT and CQT)
- 8R, 8RT IT4 (IVT and PST 16)
- 9R, 9RT IT4 (PST 18)
- 8x30 (IVT and PST 16)
- 9x30 (PST 18)

IVT (Infinitely Variable Transmission)

CQT (CommandQuad II Transmission)

PST (PowerShift Transmission)

e18 (18-Speed PowerShift Transmission with Efficiency Manager)

e23 (23-Speed PowerShift Transmission with Efficiency Manager)

Tow-Between Air Carts Compatibility

Tractor AutoTrac Turn Automation is compatible with the following air carts:

- C Series
- 1910 Hydraulic Drive

Implement Compatibility

Tractor AutoTrac Turn Automation is not compatible with the following implements:

- Front-mounted implements
- Multiple implements pulled in series where the work piece is not connected directly to the tractor

Tractor Turn Patterns

Figure 8 Turns

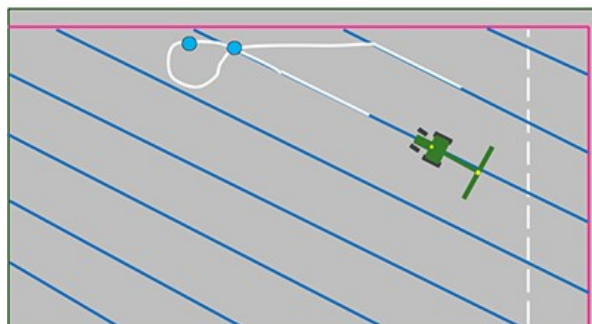
NOTE: Figure eight turns are enabled in the AutoTrac Turn Automation map legend in the Mapping application.

Figure eight turns are used when a field has top/bottom boundaries and angled tracks. The turn is set inside the

boundary by half of the implement width to keep the implement inside the boundary. The machine automatically switches to a U-type turn if the angle of the guidance line to headland exceeds 45° and switches back to figure eight when the angle is 45° or less.

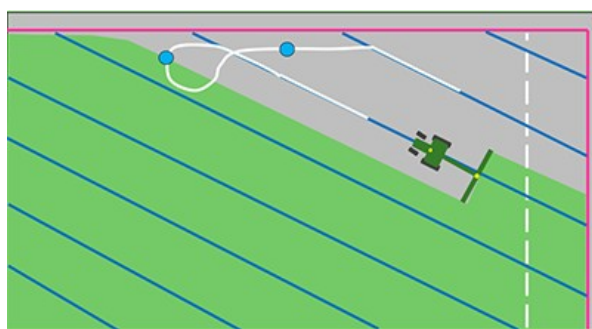
Figure eight is compatible with straight track.

When selected, Maximize Coverage on Turns synchronizes iTEC settings with coverage. iTEC sequences are placed where coverage starts and stops. This setting is turned on in Information and Settings.



PC28850—UN—08MAY23

Maximize Coverage on Turns—OFF



PC28851—UN—08MAY23

Maximize Coverage on Turns—ON

A—Coverage is OFF
B—Coverage is ON

For more information on figure eight turns, see the AutoTrac Turn Automation Onscreen Help.

ch177nn,1707730259045-19-18SEP25

Combine AutoTrac Turn Automation

AutoTrac Turn Automation for combine machines automates end turns only. AutoTrac Turn Automation for combines does not control speed or other machine functions.

AutoTrac Turn Automation is compatible with integrated AutoTrac and RowSense.

Requirements for Operation

- AutoTrac Turn Automation must be activated.
- Turn Automation must be on.

- Straight track or AutoPath must be selected.
- Field boundary information must be complete.
- Machine profile requirements must be met.
- Spiral turns may be enabled (optional).

At the end of a pass, AutoTrac Turn Automation is disabled before the turn if the unload auger is active or extended.

NOTE: *NOTE: The unload auger can be extended if the feature is enabled in Advanced Settings.*

Combine AutoTrac Turn Automation Settings



PC29160—UN—01JUN23

Combine AutoTrac Turn Automation Settings

1. **Aggressiveness (A)**—Adjust the shape of the turn path.
2. **Start Turn (B)**—Adjust the turn path to begin before or after crossing the headland boundary.

Header Raise/Lower Automation



PC661531—UN—29JAN25

Header Raise/Lower Automation

Header Raise/Lower Automation works together with AutoTrac Turn Automation to raise and lower the header automatically when entering and exiting coverage/ boundaries in mainland areas.

Once both features are on and prerequisites are met, press the activation (2 or 3) button on the multi-function control lever to engage Header Raise/Lower Automation.

NOTE: *Refer to Onscreen Help and/or compatible Combine Operator's Manual for more information on Header Raise/Lower Automation.*

Combine AutoTrac Turn Automation Compatibility

Combine AutoTrac Turn Automation is compatible with the following combines:

John Deere Combines	Model Year
S600 Series	2012-2017
S540 and S550 Series	2012 and Newer

John Deere Combines	Model Year
T Series	2012 and Newer
W Series	2012 and Newer
S 700 Series	2017 - 2024
S4 Series	2027 and Newer
S7 Series	2025 and Newer
X Series	All

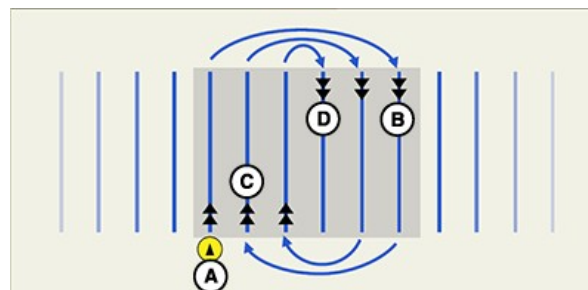
Turn Patterns

NOTE: *Turn patterns will select which pass to drive based on coverage. If a pass is mostly covered, the combine will skip the pass and go to the next pass.*

NOTE: *When multiple machines are working on the same land, shared coverage can be used to determine the next pass in order to avoid overlap.*

Combine AutoTrac Turn Automation is capable of two spiral turns:

1. **Spiral In**—During a Spiral In turn, the combine will always turn right. The number of skips is the land size subtracted by 2. Once the work is completed, the number the number of skips incrementally decrease to zero. In this example the land size is set to 6 resulting in a maximum of 4 skips. From the starting point (A), the combine will complete the initial pass, skip 4 passes, and completes pass five (B). The combine skips 3 passes and completes the next pass (C) in the pattern. The combine continues to spiral in until every pass is completed. Upon completing the final turn (D), the machine defaults to straight through pass. The operator goes to the next land and continues the selected pattern.



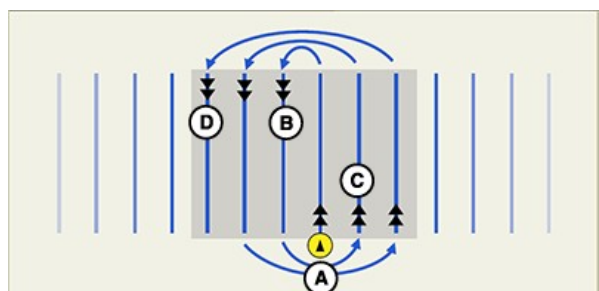
PC29159—UN—01JUN23

Spiral In Turn with a Land Size of 6

- A—Starting Point
- B—Pass Five
- C—Next Pass
- D—Final Turn

2. **Spiral Out**—The combine will start in the middle of the land and spiral out, always turning left. The land size determines the maximum number of skips. During Spiral Out turns, the number of skips starts at zero. During passes, the number of skips increases incrementally until the maximum number of skips is reached. In the example, the land size is 6 and starts with 0 skips. The combine goes from the starting

point (A) up the row and travels down the adjacent pass to the left (B). When the combine reaches the end of the second pass (B), the number of skips increases by one allowing the combine to skip the completed row and travel up the closest unworked pass (C). The combine will continue to spiral out until the desired number of passes have been completed. Upon completing the final turn (D), the machine defaults to straight through pass. The operator goes to the next land and continues the selected pattern.



Spiral Out Example

A—Starting Point
B—Second Row
C—Third Row
D—Final Turn

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Sprayer AutoTrac Turn Automation

Requirements for Operation

Sprayer AutoTrac Turn Automation is available on following display types with Automation 4.0 or G5 Advanced License:

- 4640 Universal Display
- 4600 CommandCenter Display
- G5/ G5^{Plus} Universal Display
- G5/G5^{Plus} CommandCenter Display

Following track types are supported with Sprayer AutoTrac Turn Automation:

- Straight track
- AutoPath (rows)
- AutoPath (boundaries)

NOTE: During headland entry and field exit, the system shall set the Out of Crop flag to true at the headland intersection with the center of the front axle of the machine.

During headland exit and field entry, the system shall set the Out of Crop flag to false at the headland intersection with the center of the front axle of the machine.

Following functionalities are not available in Sprayer AutoTrac Turn Automation:

- Speed Control
- Sequence Setup
- Speed settings for in-field and turn speed
- AB Curves, Adaptive Curves, and Circles

Sprayer AutoTrac Turn Automation Settings

NOTE: When enabled, Sprayer AutoTrac Turn Automation moves to Ready state without speed control settings or sequence setup.

Turn Settings—Straight Track



Turn Settings—Straight Track

Turn Size (A): Adjust the shape of the turn path. A smaller number will result in a smaller turn, and vice versa.

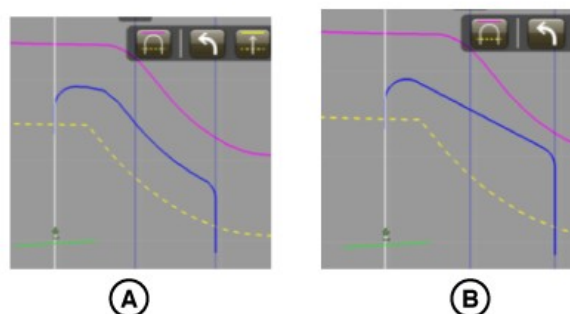
Start Turn (B): Adjust the turn path to begin before or after crossing the headland boundary.

Follow The Headland



Follow The Headland

Follow the Headland is an advanced setting only available when using the Straight Track guidance mode.



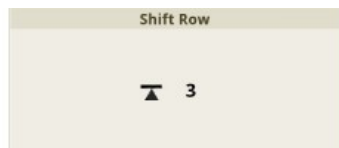
Follow The Headland

A—Follow The Headland ON
B—Follow The Headland OFF

When enabled, the machine follows the curvature of the headland where curves are present. When disabled, the machine follows the shortest (straight) path across the headland and does not follow the curvature if present. Follow the Headland is ON by default. The toggle selection is maintained across key cycles.

NOTE: Follow the Headland is only available when using the Straight Track guidance mode.

Turn Settings—AutoPath (Rows)



PC659264—UN—29JAN25

Shift Row

When using AutoPath (rows), the Shift Row setting moves the specified row(s) from current AutoPath headland pass. Shift Row allows to choose the direction of shift (in or out) and the number of rows to move.

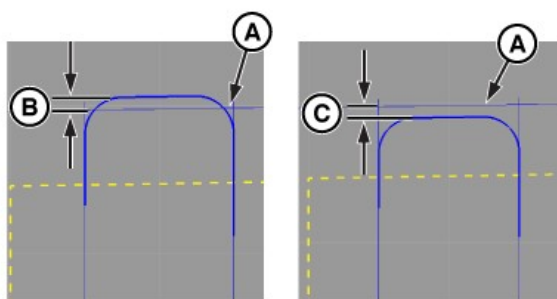
Turn Settings—AutoPath (Boundaries)



PC661529—UN—29JAN25

Start Turn Offset

Start Turn Offset is the location where the machine begins its automated turn in relation to the AutoPath boundary track.



PC662154—UN—20FEB25

Start Turn Offset

- A—AutoPath Boundary Track
- B—Positive Offset
- C—Negative Offset

A positive offset (B) means the machine makes the turn after the AutoPath boundary track (A). A negative offset (C) means the turn is made before the AutoPath boundary track (A).

Start Turn Offset value range is +100 to -100 and is adjusted in increments of 0.3 m (1 ft).

Sprayer AutoTrac Turn Automation Compatibility

John Deere Self-Propelled Sprayer	Model
400R	408R, 410R, and 412R
600R	612R and 616R
Hagie	ST12S, ST16S, and ST20s (model year 2022 and newer)

John Deere Floater	Model
800R	800R

Turn Patterns

Sprayer AutoTrac Turn Automation supports U-turns only.

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Operation—Machine Sync

Machine Sync



Machine Sync

PC28763—UN—25AUG22

John Deere Machine Sync enables synchronized movement between compatible machines. Machine Sync utilizes AutoTrac to guide the follower to a home position set in relation to the leader. The follower maintains that position during operation. Machine Sync maintains in-line and lateral offsets between the leader and follower using information from StarFire Receivers. Information is transmitted wirelessly between machines using the JDLink modem on each machine.

Machine Sync does not use cellular communication.

Navigate to Machine Sync

1. Select Menu.
2. Select Applications tab.
3. Select Machine Sync application.

Requirements

The following requirements must be met for Machine Sync to function:

Network Requirements

Machine Sync requires the transmission of information between leader and follower machines. Both leader and follower must be connected to the same wireless network. The leader can create a network in the Machine Sync application or the Wireless Settings application. The follower joins the leader network using the Machine Sync application.

For more information on setting up and joining a wireless network, see the Wireless Settings application.

Leader Requirements

NOTE: Update software to the latest version.

- Machine must have a Generation 4 Display or G5 Universal Display.
- Machine must have a StarFire 6000, StarFire 7000, or StarFire 7500 Receiver with Shared Signal.
- Machine must have a JDLink modem.
 - JDLink Boost connection is supported.
- Machine must have a supplemental antenna kit installed.
- Machine must have the proper license.

Follower Requirements

NOTE: Update software to the latest version.

- Machine must be a tractor.
- Machine must have a G5 CommandCenter, G5 Universal Display or Generation 4 Display.
- Machine must have a StarFire 6000, StarFire 7000, or StarFire 7500 Receiver with Shared Signal.
- Machine must have a JDLink modem.
- Machine must have a supplemental antenna kit installed.
- Machine must have the proper license.
- Machine must have a tractor implement automation activation.

NOTE: Contact your John Deere dealer for a tractor implement automation activation.

Before Operating Machine Sync

Equipment Manager Application

Verify that machine information, including measurements and offsets, are correct and entered in the display.

Leader

- Verify that the machine and implement settings are correct.

Follower

- Verify that machine type is tractor.
- Verify that machine offsets are correct.

AutoTrac Application

IMPORTANT: Machine Sync does not support curves greater than 0.5° per meter.

If the leader is on a sharp curve or is changing direction, the follower is unable to track and Machine Sync deactivates. When Machine Sync is deactivated, a tone followed by an alert explains why it deactivated.

NOTE: Before changing any AutoTrac or Machine Sync settings, write down current values.

Leader

NOTE: The system maintains Machine Sync leader state through a key cycle without prompting the leader to keep Machine Sync enabled.

- Machine Sync can operate with any available AutoTrac guidance method.
- AutoTrac is not required for the leader.

Follower

NOTE: The system prompts the follower to keep Machine Sync enabled only when it was enabled on the last key cycle.

NOTE: The Machine Sync usage toggle is set to ON by default on the prompt.

- Fine-tune AutoTrac forward steering adjustments for each machine individually before using Machine Sync.

Sharing Application

Sharing application provides additional data transfer between the leader and follower.

NOTE: Sharing must be enabled on both the leader and follower displays. A shortcut to the Sharing application is available on the Machine Sync Information and Settings page.

NOTE: To shut off IFDS ensure Machine Sync is OFF.

Leader

- Verify that Sharing is toggled on in order to utilize In-Field Data Sharing features.
- Verify that all G5 Displays in the work group are associated to the same Work ID.

Follower

- Verify that Sharing is toggled on in order to utilize In-Field Data Sharing features.
- Verify that all G5 Displays in the work group are associated to the same Work ID.
- Verify that an implement profile is defined within Equipment Manager with the operation type matching the leader.

The following information is transferred between the leader and follower when using Sharing:

- Operator name on map
- Automatically select leader
- Grain tank fill level
- Unloading auger status
- Network password sharing
- Coverage map sharing

Grain tank fill level and unloading auger status are displayed in the Selected Leader box on the Machine Sync application main page. These status icons can also be viewed on the Home page by selecting one of the Machine Sync Leader List run page modules in the Layout Manager application.

Sharing Using JDLINK Boost

When the leader and follower are within 50 m (165 ft) of one another, Wi-Fi tethering will be disabled. Connectivity functions, such as live data monitoring, Remote Display Access, In-Field Data Sharing, etc., will not be available during this period.

NOTE: Data remains intact during this period and is shared with the host upon connectivity re-establishment.

Disengagement Best Practices

When turning the steering wheel to disengage Machine Sync, the follower set speed is changed to match the last known speed of the leader. To avoid or reduce the delay in having to reset the tractor set speed every time Machine Sync is disengaged, the following disengagement methods are recommended:

- In a tractor with a PST transmission, adjust the shift lever up, or select the Set Speed 1 or Set Speed 2 buttons that have a defined speed higher than current speed or scroll up on the speed adjustment wheel.
- In a tractor with IVT or EVT transmission with a Linear Lever, manually move the speed control lever from F1 position to F2 position, or use the speed adjustment wheel to increase the set speed.
- In a tractor with IVT or EVT transmission with a CommandPro lever, any lever movement, including rearward, will disable speed automation.

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Machine Sync Compatibility

John Deere Tractor Compatibility:

NOTE: 6R Series Tractors with CommandPro are compatible with G5 Machine Sync only with the installation of MFTCU payload AL229483A.

NOTE: 8x30T and 9x30T machines are not compatible with Machine Sync.

- 6R (IVT)
- 7M (CQT) model year 2024 and newer
- 7R (IVT, CQT, and e23)
- 8R (EVT, IVT, PST, and e23)
- 8RT (EVT, IVT, PST, and e23)
- 8RX (EVT, IVT and e23)
- 8x30 (IVT and PST)
- 9R (PST)
- 9RT (PST)
- 9RX (PST)
- 9x30 (PST)

EVT (Electric Variable Transmission)

IVT (Infinitely Variable Transmission)

CQT (CommandQuad II Transmission)

PST (PowerShift Transmission)

e23 (23-Speed PowerShift Transmission with Efficiency Manager)

John Deere Combine Compatibility:

- S-Series
- T-Series
- W-Series
- X-Series
- 50, 60, and 70 Series

NOTE: An additional kit is required to see grain tank fill information for 70 Series.

John Deere Self-Propelled Forage Harvester Compatibility:

- 8000
- 9000

John Deere Self-Propelled Sugar Cane Harvester Compatibility:

- CH570W
- CH570T
- CH950
- CH960

ATU/ATC/Reichhardt GREENFIT Compatibility:

ATU300/ATC300 and GREN FIT can technically function as a Machine Sync Leader, though performance of the Follower will be highly dependent on the accuracy of the steering system of the Leader Machine.

NOTE: Our strong recommendation is to use Integrated AutoTrac for Machine Sync Leaders.

Machine Sync Is Not Compatible with the Following:

- Original GreenStar, GreenStar 2 1800, and GreenStar 2 2600
- GreenStar 3 2630 Display when used with a 4600 CommandCenter
- JDLINK 2G and JDLINK 3G modems
- Machine communication radio (MCR)
- Original StarFire, StarFire 300, and StarFire iTC Receivers

Machine Sync on Mixed Displays:

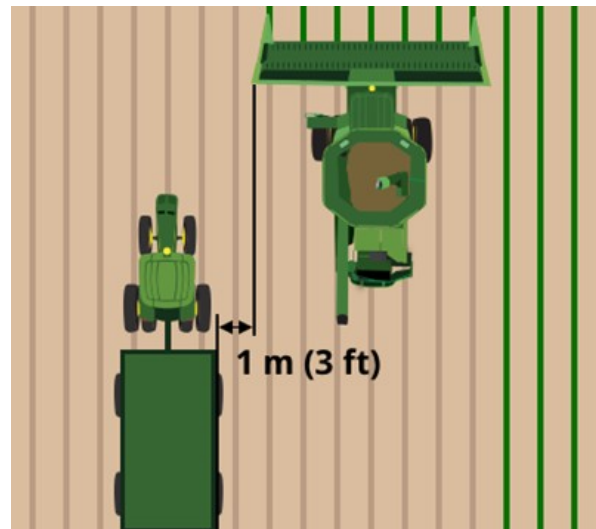
Machine Sync will work between compatible Generation 4 and G5 displays. Ensure that each display being used has the appropriate activations or licenses for Machine Sync operation. Refer to the Ag Sales Manual for a list of required activations or licenses.

NOTE: Generation 4 displays require an activation for Machine Sync while G5 displays require a license.

Disclaimers:

CAUTION: Avoid the risk of injury or accident. Stay alert and take control of the steering wheel, when necessary. Machine Sync does not detect or avoid obstacles and bystanders.

CAUTION: Avoid the risk of injury or accident. When tracking behind the leader, stay alert and take control in case of sudden stops by the leader. Machine Sync does not stop the follower completely.



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- Machine Sync is not designed to support operation with any part of the machine or equipment closer than 1 m (3 ft) to the other machine or equipment.
- Machine Sync is not designed for end turns.
- Machine Sync does not compensate for slope differences between the machines.
- Machine Sync does not support operation when leader speed exceeds 16.0 km/h (10 mph).
- Machine Sync does not support operation at 0 km/h (0 mph).

NOTE: Minimum speed requirement for 9 Series Articulated Tractors is 2 km/h (1.2 mph) when acquiring or tracking.

For best Machine Sync performance:

- Straight track is more accurate than curve track.

- Slower speeds are more accurate than faster speeds when not using straight track.
- Gentle curves are more accurate than tight turn radius curves.
- Articulated tractors exhibit the previously mentioned performance variations more than other platforms.
- Machine Sync requires adjustment of advanced AutoTrac settings for optimal performance.

Shared Signal

Shared signal enables StarFire Receivers to share information when paired using Machine Sync harvest automation. This allows the two machine receivers to maximize system performance during harvest. The following table describes the accuracy expected from this system:

Combine receiver activation level	Grain cart tractor receiver activation level	Overall system accuracy level	Relationship between two receivers
SF1	SF1	SF1	RTK
SF3 / SF2	SF1	SF3 / SF2	RTK
SF3 / SF2	SF3 / SF2	SF3 / SF2	RTK
RTK	SF1	RTK	RTK
RTK	SF3 / SF2	RTK	RTK

Shared Signal

Shared signal is compatible with the same or different model receivers. It is required to operate Machine Sync unless the following conditions are met on both the leader and follower:

- Starfire 7000 or newer receiver
- StarFire SF-RTK correction on both receivers.

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Machine Sync Controls

NOTE: All the settings which involve movement will be blocked until RDC session is completed.

Home Point

IMPORTANT: The default home point is based on settings in the Equipment Manager application and the operational zone shape. Before operating Machine Sync, verify that all machine and implement settings and offsets are correct.

NOTE: Set Home Point button is only available when the follower is within the operational zone. The operational zone is marked on the map by a boundary.



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The home point is where the system guides the follower to allow product to be unloaded. Home point is generated automatically based on settings within the Equipment Manager application and the operational zone shape.

The default home point is unique to the leader and follower settings.

To save a different home point from the default, select Set Home Point button.

NOTE: The user-defined home point may be lost if the display is ever connected to a different machine, a different machine profile is selected, or another component is removed or replaced. Verify that the user-defined home point is set before operation.

Multiple Home Points



Set/Engage Toggle

PC28765—UN—25AUG22

The follower can create multiple home points in Information and Settings. Each home point is automatically assigned a number.

To set a home point, select Set on the Set/Engage toggle, then select the number of the home point. The home point is set to the follower's location.

To change an active home point, select Engage on the Set/Engage toggle, then select the number of the home point. When AutoTrac is engaged, the follower tracks to the selected home point.

Mirroring

The home point/home points set on one side of the U-shape zone will be mirrored to the other side automatically when the follower has moved to the other side. This feature is activated when the following functions are enabled in the Machine Sync settings:

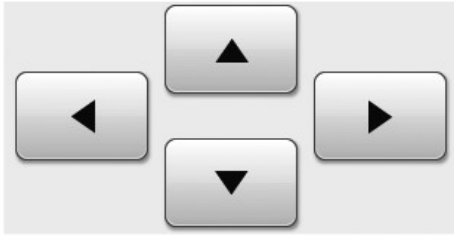
- 1.U-Shaped Operational Zone Override is enabled.
- 2.Controlled Traffic Mode is enabled.
- 3.Multiple Home Points is enabled.

IMPORTANT: This feature is not supported on Combines.

Speed Sensitivity

Enter speed sensitivity in Machine Sync Advanced Settings. The follower can adjust speed sensitivity to make speed transitions more gradual or aggressive.

Nudging



Nudging Buttons

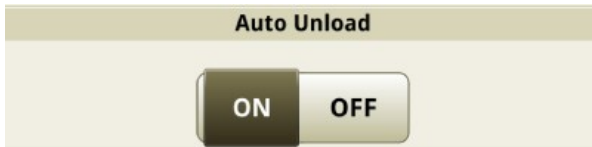
PC28082—UN—28JUL20

Machine Sync allows both the leader and follower to nudge the follower position to distribute product evenly into the unloading cart.

Nudge increment is the distance the follower moves each time a nudge button is selected. In-line and lateral nudge increments can be adjusted in Information and Settings.

NOTE: Adjustments made using the nudge buttons are not saved unless Save Nudges for Next Connection is toggled ON in Information and Settings.

Auto Unload



Auto Unload

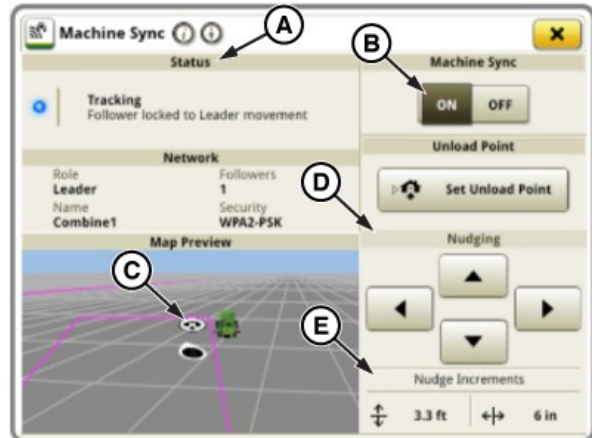
PC662149—UN—11FEB25

Auto Unload can be toggled ON/OFF by navigating to Machine Sync Advanced Settings. It uses a vision-based stereo camera to nudge the grain cart forward or backwards automatically until fill is complete.

NOTE: For more information, refer to the standalone Combine Auto Unload Operator's Manual.

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Operating Machine Sync—Leader



PC689864—UN—26SEP25

- A—Machine Sync Status
- B—Master Toggle
- C—Home Point
- D—Nudging Buttons

Leader—Not Ready

Machine Sync status (A) remains Not Ready until the follower is inside the operational zone. The status indicator color is orange.

NOTE: The operational zone is displayed when the follower and leaders are communicating.

Master toggle (B) must be on for Machine Sync to function.

NOTE: Machine Sync must be enabled after each power cycle.

NOTE: Interference from wireless routers, citizens band (CB) radios, additional electric motors, remote control devices, Bluetooth devices, or antenna line of sight may cause signal issues. Signal issues may result in not being able to initially connect or experiencing communication latency kickouts. If the follower is in the operational zone and not detected by the leader, contact your John Deere dealer for assistance.

Leader—Ready

When the follower and leader are in position and ready to track, Machine Sync status changes to Ready. The status indicator changes to green.

Leader—Acquiring

Machine Sync status changes to Acquiring when the follower is within the operational zone and the AutoTrac resume switch has been pressed. The status indicator changes to blue.

NOTE: When the Machine Sync is in Acquiring/Tracking state, following functionalities are disabled:

- *Shift Track (AutoTrac Guidance)*
- *Shifts (for all track types)*
- *Lateral shifts (pressing configuration buttons on the hydro handle)*

NOTE: RowSense shifts are not affected by the Machine Sync state.

Leader—Tracking

Machine Sync status changes to Tracking after the follower reaches its home point (C).

The follower is now tracking with the leader. As the leader changes direction or speed, the follower matches the leader changes.

The leader is now able to unload into the follower cart.

If needed, select nudging buttons (D) to adjust the follower position.

Leader Operational Zone Settings

NOTE: U-shaped Operational Zone Override can be enabled in Information and Settings.

IMPORTANT: U-shaped Operational Zone Override option is not applicable for combine leader.

When the machine type is set to Combine, Harvester, or Other in Equipment Manager, Machine Sync defaults to a left-hand operational zone. All other machine types default to a U-shaped operational zone.

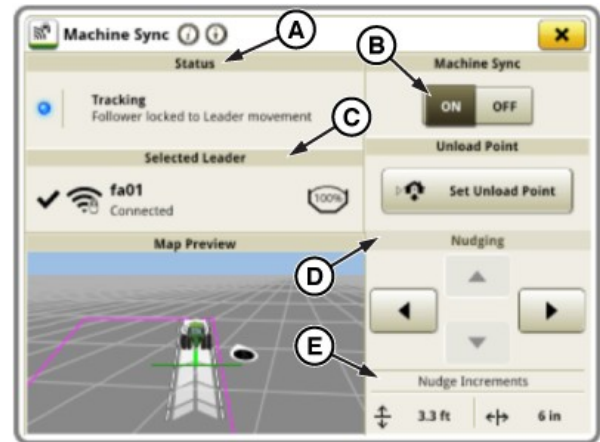
When the U-shaped operational zone override is ON, the operational zone is U-shaped. When the U-shaped operational zone override is OFF, the operational zone is on the left-hand side of the machine only. U-shaped operational zone allows for interior width and interior length to be adjusted in the leader's Information and Settings.

The overall length of Operational Zone can be adjusted by changing Operational Zone Front Edge and Operational Zone Back Edge values. Default values are:

- 25m (82ft) front edge
- 20m (65.6ft) back edge

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Operating Machine Sync—Follower



PC689865—UN—26SEP25

- A—Machine Sync Status
- B—Master Toggle
- C—Nudging Buttons
- D—Selected Leader Box

Follower—Not Ready

Machine Sync status (A) remains Not Ready until the follower is inside the operational zone and is ready to track. The status indicator color is orange.

NOTE: The operational zone is displayed when the follower and leader are communicating.

Master toggle (B) must be on for Machine Sync to function.

NOTE: Machine Sync must be enabled after each power cycle.

Follower—Ready

When the follower and leader are in position and ready to track, Machine Sync status changes to Ready. The status indicator changes to green.

Follower—Acquiring

Machine Sync status changes to Acquiring when the follower is within the operational zone and the AutoTrac resume switch has been pressed. The status indicator changes to blue.

NOTE: White arrows and a designated engagement zone guide users to the optimal location for activating Machine Sync just behind the home point—enhancing customer comfort and minimizing variability in acquisition.

Follower—Tracking

Machine Sync status changes to Tracking after the follower reaches its home point.

The follower is now tracking the leader. As the leader

changes direction or speed, the follower matches the leader changes.

The leader is now able to unload into the follower cart.

If needed, select nudging buttons (C) to adjust the follower position.

Grain tank fill level and unloading auger status are displayed in the Selected Leader box (D).

During operation, adjust speed using the throttle only. Shifting the transmission during operation disengages Machine Sync.

Due to speed automation characteristics of 9R and 6R Tractors, it is recommended that these machines be operated at full throttle when using Machine Sync.

To disengage, the tractor operator may turn steering wheel, increase the machine transmission speed setting, or stop the machine.

NOTE: Ensure that the follower transmission set speed is high enough for the follower to catch and maintain leader speed.

Controlled Traffic Mode

NOTE: When controlled traffic mode is enabled, left and right nudges are disabled.

Controlled traffic mode is enabled in the Information and Settings.

When controlled traffic mode is enabled, the follower travels on a guidance line while its speed is controlled by the leader. If the home point is not on the guidance line, the follower travels parallel to the home point while remaining on the guidance line.

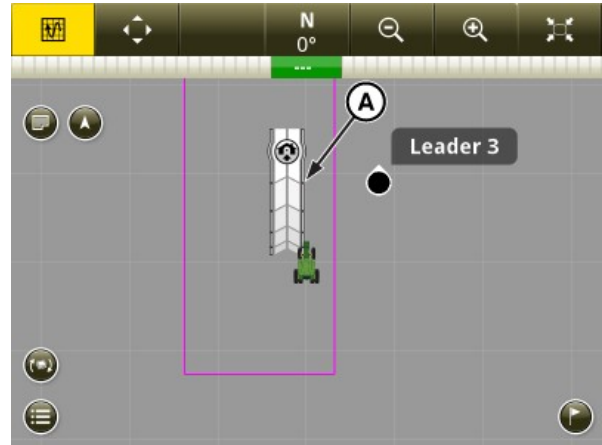
When using controlled traffic mode, select the AutoTrac resume switch once to track on the active guidance line. When the follower is in the operational zone, select the AutoTrac resume switch again to synchronize speed with the leader.

NOTE: If the leader and follower are tracking on different guidance lines, the follower may not track parallel to the leader.

Max Automation Set Speed

NOTE: Max Automation Set Speed is not available for all machines.

Engagement Runway



PC689868—UN—03OCT25

Engagement Runway

A—Engagement Runway

The **Engagement Runway** Icon is displayed to help operators more easily align with the home point. The recommended best practice is to engage when the machine is aligned with the white arrow. While engagement can occur at other positions within the operational zone, aligning with the arrow before engaging Machine Sync ensures a smoother transition from acquisition to tracking.

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Operation—Overlap Control

Overlap Control

Overlap Control automatically adjusts the width of the header as the harvester moves over areas that have already been harvested. This feature improves the accuracy of the area and yield data.

Navigate to Overlap Control

1. Select Menu.
2. Select Applications tab.
3. Select Overlap Control application.

When using other headers that are 15.2 m (50 ft) or less, header sections are automatically divided into 15.2 cm (6 in) sections. Headers that are greater than 15.2 m (50 ft) have 100 sections split evenly across the width of the header.

Overlap Control ensures that harvested area does not extend over or out of field boundaries or extend into an interior boundary.

- Exterior boundary—only one exterior boundary can be defined for a field.
- Interior boundaries—multiple interior boundaries can be defined and named for a field.

Boundaries, though optional, can be helpful when using Overlap Control. For example, an exterior boundary can help ensure that there is no area outside of the field included in the yield calculation if a section of the head or platform extends over the boundary. Similarly, an interior boundary allows you to drive across a waterway and help ensure that each section is off while crossing.

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Manual Overlap Control

Manual overlap control divides the header into segments called groups. Row-crop headers default to one group per row and cannot be changed. Platform headers can be configured with 2—24 groups.

The operator can manually turn groups on and off individually to match where crop is entering the header. Manual overlap control is compatible with automatic overlap control. Manually turning off a group overrides any other state for that group. Manual overlap control helps improve documentation accuracy in conditions other than when previous coverage or a boundary prevents crop from entering a specific part of the header.



PC28776—UN—25AUG22

A—Enable All
B—Disable All

Select Enable All button (A) to enable all groups.

Select Disable All button (B) to disable all groups.



PC28777—UN—25AUG22

Left/Right Toggle

NOTE: Left/Right toggle appears only when there are 13 or more groups.

The display only shows up to 12 group buttons at a time. Select Left / Right toggle to view groups on the left or right side of the header. Select group button to turn an individual group on or off.

Enabled groups are green. Manually disabled groups are black. Groups automatically disabled by Overlap Control are hashed green and white.

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Operation—Section Control

Section Control



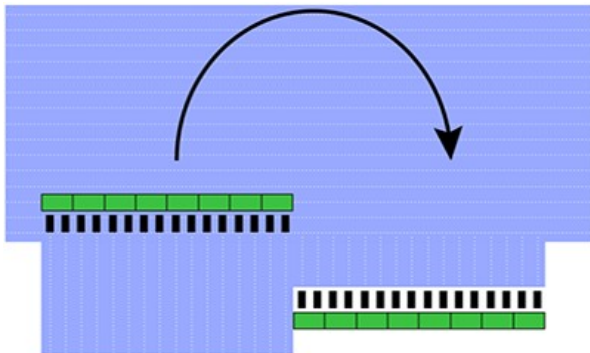
PC28778—UN—25AUG22

John Deere Section Control turns machine or implement sections on and off automatically to reduce overlap and improve input management. Section Control requires the following components:

- Global navigation satellite system (GNSS) receiver (minimum of SF2 signal accuracy is recommended if using StarFire receiver)
- Section Control Activation
- Machine or implement with a Section Control compatible unit (compatibility can be confirmed with the control unit manufacturer)

Navigate to Section Control

1. Select Menu.
2. Select Applications tab.
3. Select Section Control application.



PC28779—UN—25AUG22

Section Control automatically controls machine or implement sections when entering and exiting previously covered areas. Sections are turned off when entering coverage and are turned back on when entering areas without coverage. The coverage map shows the previously covered areas by recording where the machine or implement has been in the field. Light blue coverage indicates a single pass through the field. Any overlap is indicated by dark blue coverage.

Section Control determines when to turn on or turn off a section based on the following factors:

- GPS position
- Coverage map
- Machine and implement offsets
- Section status
- Overlap settings

- Mechanical delay
- Field boundaries
- Headland boundaries

Section Control sends a CAN bus message to the machine or implement control unit to change section status. Section is turned on to apply product to an area. It is turned off to prevent reapplication of the product in the same area. There is no distance limit from where operation started in the field.

IMPORTANT: Some operators connect two separate fields into one using a “land bridge” between them. Product may still be applied over this strip of land if Section Control is left on. To prevent unexpected coverage, always turn Section Control or the master switch off while transporting between fields.

Section Control Accuracy

The following factors impact Section Control performance:

- GPS accuracy of the previous coverage map
- Current GPS accuracy
- Machine Profile and Implement Profile settings
- Constant speed and heading when entering and exiting coverage

Compatibility

Section Control is compatible with AEF (Agricultural Industry Electronics Foundation) certified ISOBUS implements with TC-SC (task controller section control) functionality. See G5 Display Release Notes for more information about specific John Deere machine and implement compatibility.

Multiple Displays

Section Control requires task controller communication with the implement control unit, and the task controller cannot run on two connected displays. Status of the task controller can be viewed in multiple display settings.

Section Control Master Switch



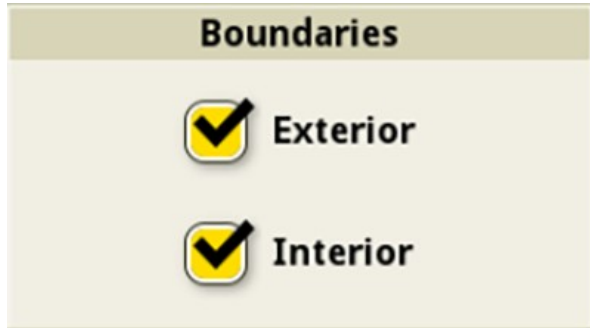
PC28780—UN—25AUG22

Section Control Master Switch

Select the Master Switch to turn on Section Control.

Switch can also be placed in shortcut bar using the Layout Manager application.

Boundaries



Boundaries

PC28812—UN—20SEP22

Exterior Boundaries

Select the Exterior checkbox to use exterior boundaries. Section Control commands off sections that are outside of the exterior boundary.

Interior Boundaries

Select the Interior checkbox to use interior boundaries. Section Control commands off sections that are inside of an interior boundary.

NOTE: If both boundary types are deselected, Section Control ignores boundaries and uses only previous coverage to control sections on and off.

Headland Control Switch



Headland Control Switch and Headland Offset

PC28781—UN—25AUG22

Use Headland Control switch to turn on Headland Control.

Select Offset to change the headland dimension. Changes to the headland offset are saved to the current field.

NOTE: Headland Control requires that one or both boundaries be checked. If both Exterior and Interior are deselected, Headland Control automatically turns off.

If one boundary type is deselected, Headland Control ignores any headlands associated with that boundary.

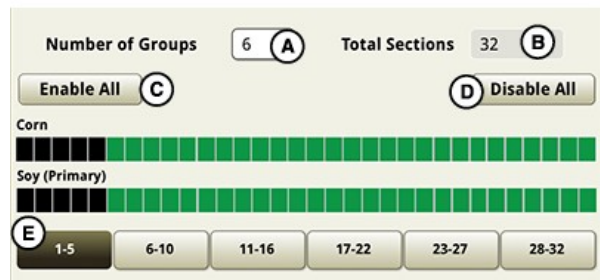
Manual Section Control



Manual Section Control

PC28653—UN—29SEP22

Use Manual Section Control to turn on or off groups of sections. Select Manual Section Control to activate the Manual Section Control Page.



Manual Section Control Page

PC28654—UN—29SEP22

A—Number of Groups
B—Total Section
C—Enable All
D—Disable All
E—Section Groups

- Number of Groups (A) — The number of groups in which the sections are divided. The operator will determine this value.
- Total Sections (B) — The number of sections the implement can use. The machine or implement will determine the value and it cannot be changed.
- Enable All (C) — Enables all sections.
- Disable All (D) — Disables all sections.
- Section Groups (E) — Will enable or disable sections within a group.

ch177nn,1738062318219-19-02FEB25

Section Status Module

Section Status Module is used to determine if Section Control has commanded each section ON or OFF. The module can be added to a run page using Layout Manager. The following section states are possible:

NOTE: Section status does not change based on section seed rate. If rows in section are out of seed, green is displayed unless all sections across a drive motor have a rate of zero. Check seed populations using SeedStar.

Section Enabled (Not Applying)



PC28782—UN—29AUG22
Section Enabled - Gray with Green Outline

- Planter or Air Seeder tool is raised.
- Planter or Air Seeder clutches are turned OFF.
- A rate of zero is reported from all sections across a drive motor.

Section Applying



PC28783—UN—29AUG22
Section Applying - Solid Green

- Section is commanded on.
- Section is applying product or seed.

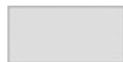
Section Commanded Off (Not Applying)



PC28784—UN—29AUG22
Section Commanded Off - Green and White Stripes

- Section is over existing coverage.
- Section is commanded off by a boundary.
- Air Seeder or GreenStar Rate Controller is below minimum Section Control speed.
- Driving over a zero rate prescription zone.

Section Disabled (Not Applying) (Sprayer Only)



PC24037—UN—05APR17
Section Disabled - Solid Gray

- Section Control is disabled.
- Section is manually controlled.

Section Indexed Off (Not Applying) (Sprayer Only)



PC24038—UN—05APR17
Section Indexed Off - Solid Black

- Section indexed off by controller.

ct47125,1708280101719-19-18FEB24

Overlap Settings

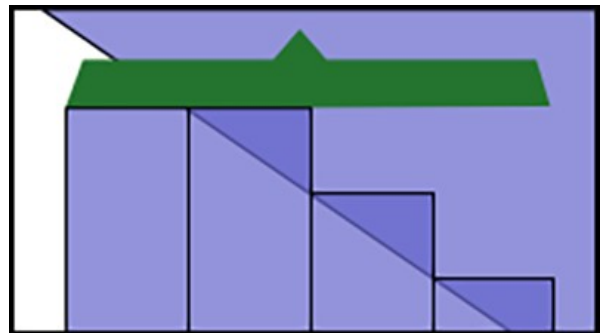
Overlap occurs when crossing previous coverage or boundary. Amount of overlap is an operator preference.

Configure Overlap settings for intentional overlap. Use Performance Tuning to compensate for unintentional skips and overlap. For more information, refer to the Section Control Onscreen Help.

100% Overlap + Additional

Additional overlap ensures product coverage over previous applied area, eliminating skips. Additional overlap results in overapplication.

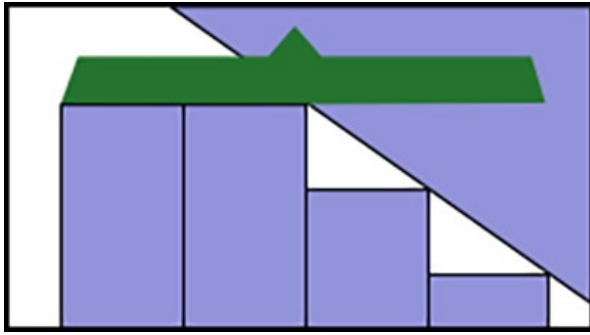
100% Overlap - Minimize Skip



PC28836—UN—11OCT22
100% Overlap - Minimize Skips

Minimize skip ensures product coverage up to previous applied area, reducing skips. Minimize skip can result in over application.

0% Overlap - Minimize Overlap



PC28835—UN—11OCT22

0% Overlap - Minimize Overlap

Minimize overlap ensures that product coverage does not extend over previous applied area. Minimize overlap can result in skips in application.

Percentages between 0—100% ensure product coverage into previous covered area based on individual section widths.

ct47125,1708280101564-19-18FEB24

Operation—Autonomy

Autonomy Application Overview



APY76284—UN—28JUL22

Autonomy Application

The Autonomy Application runs the autonomy system which allows the machine to perform field operations without the physical presence of an operator in the operator seat.

NOTE: For more information refer to the Autonomy OM.

Autonomy Requirements

NOTE: For Autonomy compatible machines and implements, refer to your dealership for more information.

The following machine hardware must be present for the Autonomy application to operate:

- Autonomy Ready/Prep Configuration
- StarFire 7500 Integrated on tractor

The following requirements must be met for the Autonomy application to operate:

- Autonomy License (refer to your dealership for more information)
- G5 Advanced License
- SF-RTK or Radio RTK License
- TruSet (tillage)
- John Deere Operations Center on a compatible web browser
- Operations Center Mobile on a compatible Android or Apple device updated to the latest software.
- Approved software for Autonomy operation

NOTE: Software may need to be updated routinely. If the system detects outdated controllers, an Update Recommended notification will show on the cab display when turning the machine on. If the autonomy related controllers are not updated within 7 days the notification will turn to an Update Required message and autonomy will not function until all controllers are updated.

ct47125,1736794444709-19-12FEB26

Operation—Remote Display Access

Remote Display Access



Remote Display Access

PC684075—UN—06OCT25

The Remote Display Access application (RDA) allows for both Remote Display Access and Remote Display Control.

Remote Display Access (RDA)

RDA enables remote users to **view a machine's display** in real time, providing valuable insights into operations without needing to be physically present.

Remote Display Control (RDC)

RDC goes a step further by allowing users to **interact directly with the display**—adjusting settings, navigating pages, monitoring live updates, and performing real-time troubleshooting.

Navigate to Remote Display Access (RDA)

1. Select Menu.
2. Select Applications tab.
3. Select RDA application.

Using Remote Display Access (RDA)

From a computer or mobile device, log in to JDLINK.com or MyJohnDeere.com and select the desired machine. Initiate a Remote Display Access session to begin viewing the display remotely.

Once connected, the display view is sent through an Ethernet cable to the JDLINK modem. Using a cellular connection, information from the JDLINK modem is sent to the John Deere communications network, allowing the display screen to be viewed on JDLINK.com or MyJohnDeere.com.

From a remote location, the operator in the cab can be assisted with display setup, optimization, and troubleshooting.

RY24MV1,1760031346047-19-20OCT25

Steps for Initiating Remote Display Access for Remote Display Control

Using Remote Display Access (RDA) and Remote Display Control (RDC) from a Mobile Device:

1. From a mobile device, open Mobile Operations Center.



Mobile Operations Center RDA Button

PC693496—UN—21NOV25

2. Initiate Remote Display Access session by selecting the RDA button. The cab display will be outlined in blue to indicate an RDA session.



View Session

APY80337—UN—10FEB23

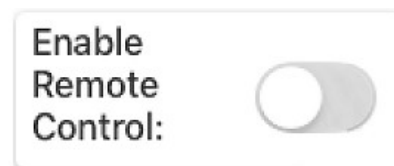
NOTE: This icon shows up on the display in the status bar to help indicate view session.



Status Bar

PC582194—UN—30AUG23

3. Initiate a Remote Display Control session by selecting Enable Remote Control toggle.



Enable Remote Control Toggle

APY80338—UN—10FEB23

4. Read and acknowledge the Remote Display Control operational reminder by selecting the Begin button.



Begin button

APY80340—UN—10FEB23

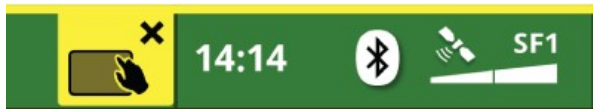
The cab display will be outlined in yellow to indicate an Remote Display Control session.



APY80341—UN—10FEB23

Remote Display Control Session

NOTE: This icon shows up on the display in the status bar to help indicate Remote Display Control session.



PC582195—UN—30AUG23

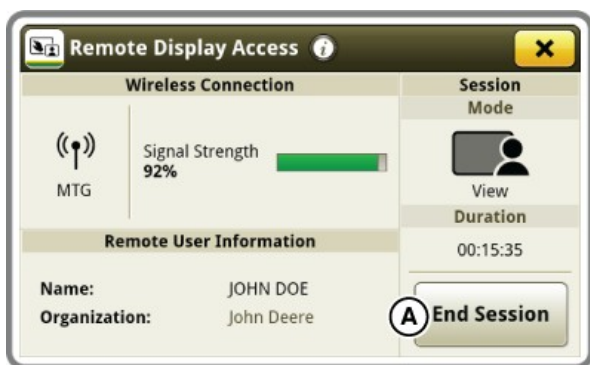
Status Bar

NOTE: Access to Diagnostics Center will be limited to view-only during an RDC session.

Ending Session:

Remote Display Access (RDA) will end if a remote operator selects End Session button (A). This will end Remote Display Access (RDA) and Remote Display Control (RDC).

The End Session button will be enabled if a RDA session is active.



APY80342R—UN—30AUG23

End Session User Interface

A—End Session Button

ZIDXX1X,1759924147017-19-21NOV25

Operation—Fluid & Filter Monitoring

Fluid & Filter Monitoring



PC697598—UN—10FEB26

Fluid & Filter Monitoring Icon

Fluid Monitoring displays different types and indicates the status of each fluid.

Access Fluid Monitoring

- 1.Menu
- 2.Applications tab
- 3.Fluid Monitoring

 PC697599—UN—12FEB26	OK indicates that the fluid level is good.
 PC697600—UN—12FEB26	Too Full indicates that the level is too high, and it is recommended to reduce fluid.
 PC697600—UN—12FEB26	Low indicates that the level is too low, and it is recommended to add fluid.

Compatibility:

Currently the Fluid and Filter monitoring application is compatible with the following machine platforms:

- MY25 and newer 9RX series Tractors
- MY27 and newer 400R series Sprayers
- MY27 and newer 600R series Sprayers

ZID XK1X,1770013806717-19-02FEB26

Adjustment and Optimization—AutoTrac Guidance

Circle Track Settings



Distance to Center Point

PC20395—UN—08DEC14

Distance to Center of Pivot — Distance from center of circle to current location. The distance only shows to 1609 m (5280 ft.). Turn on to show button on guidance map.

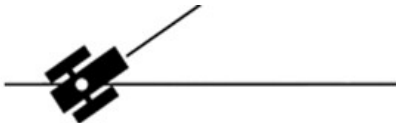
ci47125,1708280148254-19-18FEB24

Steering Optimization

Monitor Performance

Monitor performance shows heading error and tracking error. It is designed to aid in tuning of Advanced AutoTrac Settings. Heading error indicates relationship of the machine direction relative to the current track. Tracking error displays the machine off-track error or offset relative to the current track.

Heading Error Meter

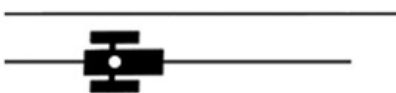


PC16972—UN—22MAY13

Heading Error indicates relationship of the machine direction relative to the current track. Heading Error should be within $\pm 1^\circ$.

Adjustments may be needed if they are outside of this range.

Tracking Error Meter

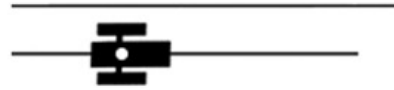


PC16969—UN—22MAY13

Tracking Error displays the machine off-track error or offset relative to the current track. Arched bar graph value updates minimum and maximum Heading Error changes live during last 10 seconds.

NOTE: Steering control unit values are based on steering controls of machine.

Forward Steering Adjustments



Tracking Error

PC16969—UN—22MAY13



Forward High Setting Icon

PC28738—UN—25AUG22



Forward Low Setting Icon

PC28739—UN—25AUG22

Line Sensitivity Tracking

Determines how aggressively AutoTrac responds to off-track error.

- Higher settings: Result in more aggressive response to machine off-track error.
- Lower settings: Result in less aggressive response to machine off-track error.

Heading Lead



High Heading Lead

PC28740—UN—25AUG22



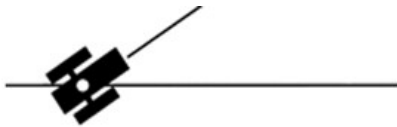
Low Heading Lead

PC28741—UN—25AUG22

Determines impact of yaw rate (machine rate of turn) on tracking performance. Heading lead acts as a look-ahead parameter and can be used to minimize oversteering. Large adjustments may result in poor performance.

- Higher settings: Result in more aggressive response to yaw rate.
- Lower settings: Result in less aggressive response to yaw rate.

Line Sensitivity Heading



Heading Error

PC16972—UN—22MAY13



High Line Sensitivity Heading

PC28742—UN—25AUG22



Low Line Sensitivity Heading

PC28743—UN—25AUG22

Determines how aggressively AutoTrac responds to heading errors.

- Higher settings: Result in more aggressive response to machine heading error.
- Lower settings: Result in less aggressive response to machine heading error.

Steering Response Rate



High Steering Response Rate

PC28744—UN—25AUG22



Low Steering Response Rate

PC28745—UN—25AUG22

Adjusts rate of the machine steering to maintain tracking performance. Increasing steering responsiveness generally results in better tracking performance.

- Higher settings: Result in better tracking performance, but may also cause increased wheel motion or jittery behavior.
- Lower settings: Result in decreased wheel motion, but may also result in worse tracking performance.

Acquire Sensitivity



High Acquire Sensitivity

PC28746—UN—25AUG22



Low Acquire Sensitivity

PC28747—UN—25AUG22

Determines how aggressively machine acquires track. This setting only affects performance while acquiring track.

- Higher settings: Result in aggressive line acquisitions.
- Lower settings: Result in smoother line acquisitions.

Curve Sensitivity



High Curve Sensitivity

PC28748—UN—25AUG22



Low Curve Sensitivity

PC28749—UN—25AUG22

Determines how aggressively AutoTrac responds to a curve in track. This setting affects performance in curve track guidance only.

- Higher settings: Turn machine in a smaller radius (tighter) around curve.
- Lower settings: Turn machine in a larger radius (wider) around curve.

Implement Steering

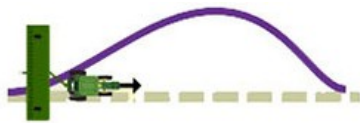
IMPORTANT: Implement center of rotation measurement is required for proper implement guidance function. See Measure Center of Rotation in the Onscreen Help for instructions on accurately measuring center of rotation. An inaccurate center of rotation measurement can cause poor performance or damage to the implement.

Line Sensitivity Tracking



High Line Sensitivity Tracking

PC28750—UN—25AUG22



PC28751—UN—25AUG22

Low Line Sensitivity Tracking

Determines how aggressively AutoTrac responds to off-track error.

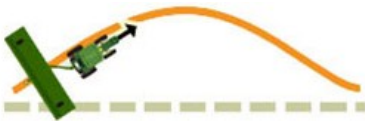
- Higher settings: Result in more aggressive response to an implement off-track error.
- Lower settings: Result in less aggressive response to an implement off-track error.

Line Sensitivity Heading



PC28752—UN—25AUG22

High Line Sensitivity Heading



PC28753—UN—25AUG22

Low Line Sensitivity Heading

Determines how aggressively AutoTrac responds to implement heading errors.

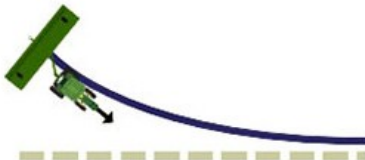
- Higher settings: Result in more aggressive response to an implement heading error.
- Lower settings: Result in less aggressive response to an implement heading error.

Acquire Sensitivity



PC28754—UN—25AUG22

High Acquire Sensitivity



PC28755—UN—25AUG22

Low Acquire Sensitivity

Determines how aggressively the machine acquires track. This setting only affects performance while acquiring track.

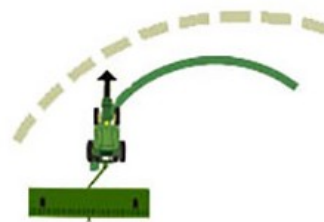
- Higher settings: Result in aggressive line acquisitions.
- Lower settings: Result in smoother line acquisitions.

Curve Sensitivity



PC28756—UN—25AUG22

High Curve Sensitivity



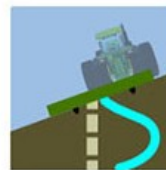
PC28757—UN—25AUG22

Low Curve Sensitivity

Determines how aggressively AutoTrac responds to a curve in track. This setting affects performance in curve track guidance only.

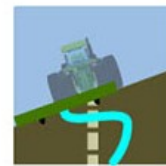
- Higher settings: Turn machine in a smaller radius (tighter) around curve.
- Lower settings: Turn machine in a larger radius (wider) around curve.

Slope Sensitivity



PC28758—UN—25AUG22

High Slope Sensitivity



PC28759—UN—25AUG22

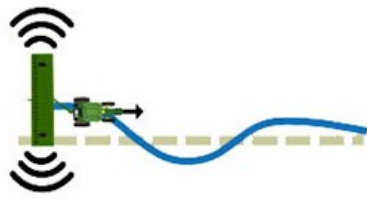
Low Slope Sensitivity

NOTE: This setting may require adjustment as soil conditions change.

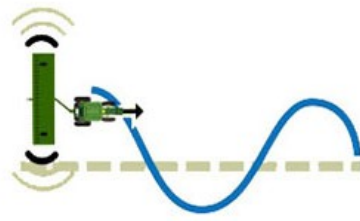
Determines how aggressively AutoTrac responds to changes in slope. Too high of a value and the tractor steers the implement uphill. Too low of a value and the tractor steers the implement downhill.

- Higher settings: Machine drives higher on the slope to compensate for an implement that is less resistant to sliding downhill.
- Lower settings: Machine drives lower on the slope to compensate for an implement that is more resistant to sliding downhill.

Slope Response Rate



PC28760—UN—25AUG22
High Slope Response Rate



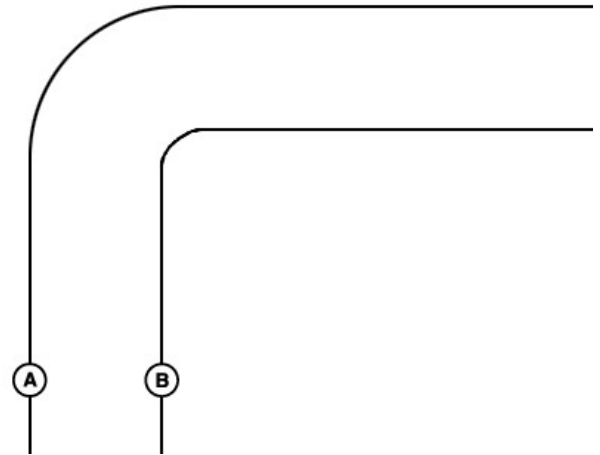
PC28761—UN—25AUG22
Low Slope Response Rate

Determines how rapidly AutoTrac responds to a change in slope.

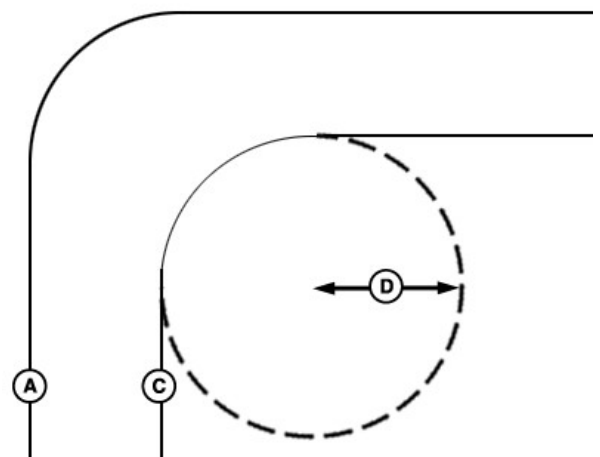
- Higher settings: Result in a more rapid response to a change in slope.
- Lower settings: Result in a less rapid response to a change in slope.

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Curve Track Settings



PC9529—UN—27OCT06
Smoothing Tight Turns OFF



PC9530—UN—27OCT06
Smoothing Tight Turns ON

- A—Previous Pass
- B—Next Pass—Smoothing Tight Turns Off
- C—Next Pass—Smoothing Tight Turns On
- D—In-Ground Turn Radius

Smooth Tight Turns — When enabled, system automatically smooths a propagated path that is too tight.

Curve Recording Trigger — Adaptive Curve Track recording can be triggered in three ways: Manually Recording, AutoTrac Mode and Work State mode.

NOTE: It is recommended to stop recording if a direction change is needed. Recording while reversing could lead to poor guidance line creation.

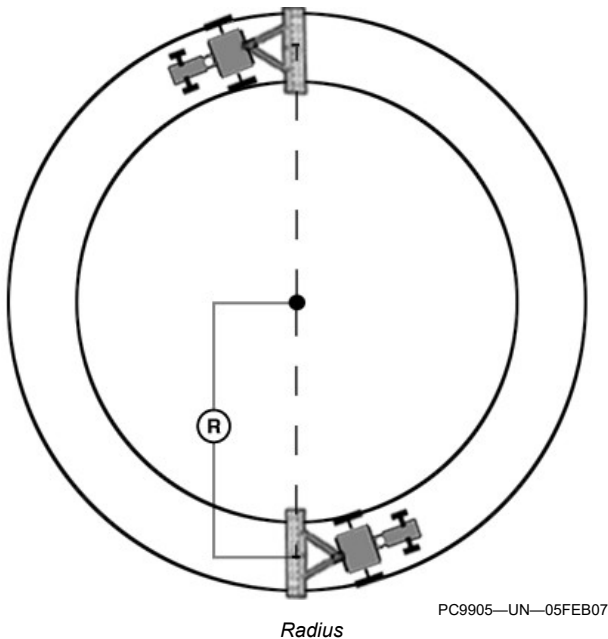
1. **Manual Recording:** Recording begins only when the operator presses the record button. No automatic triggers are used in this mode.
2. **AutoTrac Mode:** Recording starts automatically

when AutoTrac is engaged on a projected line and stops when AutoTrac is disengaged. The record button can still be used to manually start or stop recording while in this mode.

3. **Work State Mode:** Recording is tied to the "Work Recording" status. When "Work Recording" is turned on and work is actively being performed, adaptive curve recording begins. It stops automatically when "Work Recording" is turned off.

AB Curve Recorded Extensions — Straight-line extensions can be added to the beginning and end of an AB curve path. Extensions are generated for 90 m (300 ft). Turning setting ON does not add extensions to previously recorded AB curves.

NOTE: Extensions may need to be turned off to prevent lines from crossing each other. If lines cross, the remaining curves may fail to generate.



R—Implement Turn Radius

Implement In-Ground Turn Radius — The smallest turn radius the implement can turn while in the ground.

A larger Implement In-Ground Turn Radius results in smoother turns. A smaller Implement In-Ground Turn Radius results in tighter turns. This value is also used on machines without drawn implements.

NOTE: Ensure that the Implement In-Ground Turn Radius is set to a realistic value for the size of implement being used.

ZIDXK1X,1749562485257-19-25JUN25

Adjustment and Optimization—Section Control

Advanced Settings



Settings Icon

PC15305—UN—19MAR13

Select the settings icon at the top of the Section Control application to configure advanced settings.

- Drive perpendicular to the headland or as close to a 90 degree angle as possible.
- When additional overlap is desired, adjust the setting after Performance Tuning is complete.

Use Section Control onscreen help for performance tuning instructions.

ct47125,1708280187055-19-18FEB24

Continuous Tillage

Use continuous tillage to keep the tillage tool in the ground when going over previous coverage. This is used to not leave tire tracks over previous coverage. This feature is only available when using a tillage implement capable of Section Control.

Map Diagnostics

Map diagnostics displays the Section Control look-ahead function. The look ahead turns white when sections are commanded off and orange when sections are commanded on.

For best accuracy, maintain a constant speed and direction when entering and exiting the transition area where Section Control turns sections on or off.

Changing speed or direction between when the look ahead crosses the transition area and when the work point crosses the transition area may cause undesired gaps or overlaps in coverage. Use map diagnostics to verify that the look-ahead window is stable when the machine is driving at a constant speed and direction.

NOTE: At slow speeds and with very low mechanical delay times, the look ahead may be very close to or overlap with the green work point bar.

ct47125,1708280187177-19-18FEB24

Performance Tuning

Performance Tuning is used to correct skips and overlaps in product applied on the ground. It uses distance and speed to adjust mechanical delay settings.

Ensure that the following factors are correct before attempting Performance Tuning:

- GPS accuracy.
- Machine Profile and Implement Profile settings.
- Operator must drive at a constant speed when entering and exiting coverage.

While attempting Performance Tuning, ensure the following:

- Drive the same speed while turning and making field passes.

Troubleshooting—Display

Diagnostics Center



Diagnostics Center

PC28791—UN—29AUG22

Diagnostics Center provides advanced diagnostic tools for systems connected to the display. Select one of the tabs for more information.

System Diagnostics

- View diagnostics information for machine, implement, and display applications.

Machine Messages

- View machine messages and information.

Controller Diagnostics

- Access diagnostic addresses, diagnostic trouble codes, and information specific to each connected device.

Trouble Codes

- View all active or stored diagnostic trouble codes.

CAN Bus Info

- View diagnostic information for each CAN bus.

CCD Bus Info

- View diagnostic information for each CCD bus.

Network

- View JDLINK modem diagnostic readings.

Sharing

- View Sharing application and data transfer diagnostic information.

Ethernet Bus Info

- View diagnostic connection issues with all controllers on the Ethernet network.

Navigate to Diagnostics Center

1. Select Menu.
2. Select System tab.
3. Select Diagnostics Center application.

System Diagnostics

View diagnostics information for machine, implement, and display applications.

The following information is available in System Diagnostics:

Display Hardware

View diagnostic readings for the processor, monitor, or display.

AutoTrac Health

View diagnostic readings affecting AutoTrac performance.

Guidance Diagnostics Wizard

Troubleshoot common AutoTrac issues on AT2 compatible machines.

Select Machine Systems

Select a machine system to view details about that system. Most systems provide the following information:

General Tab

General tab indicates if the system has valid calibration data and is also used to communicate other system status information.

Switch Readings Tab

Switch Readings tab indicates the status of detected switches that the system uses to control machine functions.

Remote Display Control

View diagnostic values for if software, versions, or virtual interfaces are capable with an Remote Display Control Session.

Sensor Readings Tab

Sensor Readings tab indicates the values that are reported by detected sensors that the system uses as input information.

Output Readings Tab

Output Readings tab indicates the commanded and actual output values for selected system outputs.

CCD Bus Information

CCD Bus Information tab displays status of communication between the control units on the CCD bus. The machine CCD bus connects control units such as engine, hydraulics, and transmission.



A—Green Indicator, Normal Range
B—Yellow Indicator, Out of Range

PC28794—UN—29AUG22

Some values display a green indicator or a yellow indicator with an exclamation point. Depending on machine and implement configuration, yellow might be expected.

- Green Indicator (A) — Value within normal range.
- Yellow Indicator (B) — Value out of normal range.

Controller Diagnostics

Controller Diagnostics displays the following information for control units connected to the CAN bus.

Device

- Each device in the list is identified by Device ID, CAN Address, and CAN Network location.

Codes

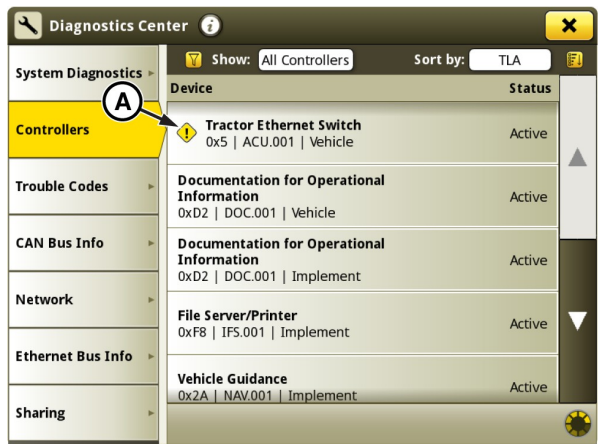
- Codes indicates if the device has diagnostic trouble codes.

Message Count

- Message Count displays the number of CAN messages received from the control unit. Use the zero button at the bottom of the page to reset message counts for all controllers.

Information Icon

- When the system-retrieved database version does not match the version reported by the controller, an icon appears on the Controller List page to indicate the mismatch. Clicking icon takes you to get more information.



Information Icon

A—Information Icon

Viewing and Sorting

Select the button next to **View by** to change the way control units are displayed. Available views are:

All Controllers

- All control units connected to display are shown.

Ethernet Bus Controllers

- Only control units with an associated Ethernet connection are displayed.

Implement Bus Controllers

- Only control units on the implement CAN bus are displayed.

Machine Bus Controllers

- Only control units on the machine CAN bus are displayed.

Controllers with Active DTCs

- Show devices with active DTCs.

Inactive Controllers

- Show devices that have been active in the past, but a currently inactive

Select the button next to **Sort by** to arrange the list according to these filters:

Device

- Sort the list by device ID.

Last Seen

- List sorted by control units that have most recently communicated with the display.

Diagnostic Information

Select a control unit from the list for more detailed information.

NOTE: Display is set to Diagnostic Mode when a control unit is selected. Diagnostic Mode is removed when control unit page is closed.

Depending on the type of control unit, diagnostic information is displayed in either the Diagnostic Addresses tab or the Readings tab.

Diagnostic Addresses

IMPORTANT: Changing settings in Diagnostic Addresses may damage machine or implement controllers. Follow instructions, and use caution when changing address values.

Control units have addresses that store values for different settings. Each Address is identified by an Address Number and Type. Data addresses can only be

viewed (for example, software version information) while Input addresses can be edited (for example, calibration settings).

Readings

IMPORTANT: Changing settings in Readings may damage machine or implement control units. Follow instructions and use caution when changing address values.

Control units have readings that store values for different settings. Each reading is identified by a number and name. Select a reading to display the reading details popup. If the value can be edited, the value field is white. If the value is read-only, the value field is grayed out.

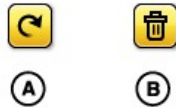
Diagnostic Trouble Codes

Current and stored codes for the selected control unit are displayed. Select a code from list to view code details.

Controller Information

Controller Information displays detailed specifications and identification information from a control unit. This information is useful for ISOBUS diagnostics.

Diagnostic Trouble Codes



A—Refresh Button
B—Clear Codes Button

PC28792—UN—29AUG22

Diagnostic Trouble Codes tab displays all current and stored codes that have occurred on the system.

Select Refresh button (A) to clear, and then retrieve all codes.

Select Clear Codes button (B) to remove all codes from display.

Viewing and Sorting



A—Stop Alert
B—Service Alert
C—Info Alert

Select button next to **View by** to change the way codes are displayed. Available views are:

Code

Code Types

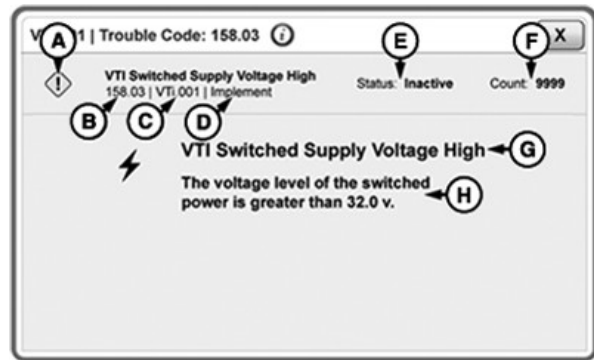
PC28793—UN—29AUG22

- View by “Code” lists all codes on display. Code Type (A—C), Details, Status, and Count are all displayed. Select a code from list to view Code Details.

Device

- View by “Device” lists all controllers on CAN Bus. Device ID, CAN Network, and if device has codes are all displayed. Select a controller in list to view Device Codes.

Code Details



PC15334—UN—09JUL13

Code Details

A—Diagnostic Trouble Code Type
B—Diagnostic Trouble Code Number
C—Device ID
D—CAN Bus Network
E—Code Status
F—Count
G—Diagnostic Trouble Code
H—Diagnostic Trouble Code Description

Select a diagnostic trouble code to view code details.

CAN Bus Information

CAN Bus Information tab displays status of communication between the controllers on CAN Bus. Vehicle CAN Bus connects controllers such as engine, hydraulics, and transmission. Implement CAN Bus connects controllers such as StarFire Receiver, second ISOBUS display, and ISOBUS implements.



A—Green Indicator, Normal Range
B—Yellow Indicator, Out of Range

PC28794—UN—29AUG22

Some values display a green indicator or a yellow indicator with an exclamation point. Depending on machine and implement configuration, yellow might be expected.

- Green Indicator (A) — Value within normal range.
- Yellow Indicator (B) — Value out of normal range.

CAN Bus Values

Network Status

Active

- System is working as expected. In addition to display, at least one controller is connected and communicating on CAN Bus.

Inactive

- Display is not communicating with any other controllers on CAN Bus. If display is only controller on CAN Bus, Total Message Count increases, but Network Status is inactive.

Total Message Count

Total message count is number of messages sent over CAN Bus. When machine is running, this value counts up continuously since there are always messages sent on CAN Bus.

CAN High and CAN Low Voltage

Peak voltage is highest average voltage that has occurred since last cold boot. Voltage measurements are averaged for each second. Peak CAN High and Peak CAN Low voltages normally range between 1.8 and 3.3 Volts.

NOTE: The display will perform a cold boot if it has been inactive for 48 hours, if its unswitched power has been disconnected, or if it has undergone 20 warm boots.

Bus Utilization

Information on CAN Bus is sent in messages between controllers. The John Deere implement CAN Bus is running at a baud rate of 250 kbd, meaning it can switch power up to 256,000 times per second to transmit messages. This is a Bus utilization of 100%.

If a controller, such as an implement, is not running as expected, a Bus utilization of 45% or higher could be a reason for the issue. Some controllers cannot send and receive all necessary messages due to high Bus load.

NOTE: Some ISOBUS implements do not work with Bus loads higher than 25%.

A working StarFire Receiver causes a Bus load of about 5—7%.

Unplugging implements or GPS receivers can reduce Bus utilization.

Baud Rate

Baud Rate indicates how fast the Bus is working. ISOBUS and John Deere implement Bus are running at a rate of 250 kbd. Any controller connected to this system must work at 250 kbd, otherwise it will not function properly.

CAN Bus State and Error Counts

Four CAN Bus states are possible:

- Active – CAN Bus is running without any problems.
- Passive – Passive errors have occurred.
- Warn – Bus Warn errors have occurred.
- Off – Bus Off errors have occurred.

If one of these errors occurs, display records number of times it happens.

Passive Error Count

- If value counts up higher than zero, a controller on CAN Bus did not receive all messages. Important information might have been lost. This is most likely due to high CAN Bus Utilization.

BUS Warn Count

- If value counts up higher than zero, a controller on CAN Bus has issues.

BUS Off Count

- If value counts up higher than zero, a controller on CAN Bus has issues. It missed a certain number of messages and does not receive messages anymore. Important information has been lost. It most likely occurs in combination with high CAN Bus Utilization.

Overrun Error Count

- Overrun Error Count indicates that applications or controllers on CAN Bus receive messages faster than they can process them. This results in missing messages and malfunction of the system. It most likely occurs in combination with high CAN Bus Utilization.

Network

Network tab displays diagnostic readings for the JDLINK modem, the network connection, and a customer-owned SIM.

The JDLINK modem is one of the main components that enable John Deere telematics solutions, such as JDLINK, Service ADVISOR Remote, and John Deere Remote Display Access (RDA).

The JDLINK modem contains firmware, a cellular modem, and SIM device. It sends and receives data and messages over cellular networks.

RA requires an uninterrupted cellular connection to function. JDLINK does not require an uninterrupted cellular connection because the JDLINK modem can store up to 1000 hours of data.

Ethernet Bus Info

Ethernet Bus Info displays diagnostic connection issues with all controllers on the Ethernet network.

NOTE: G5 Display supports only ETH100-1 and ETH100-2 hardware ports.

Items displayed by Ethernet Bus Info:

- *Ethernet Link Status* – Displays if the network is up or down.
- *Internet Address* – Displays the assigned or static IP address used by the display.
- *Transmitted Packets* – The number of packets transmitted since the display powered on.
- *Received Packets* – The number of packets received since the display powered on.
- *Packet Error* – The number of damaged or improperly formatted packets received since the display powered on.
- *Packet Loss* – The number of packets that were lost before reaching their destination.
- *Speed* – The speed of the connected Ethernet network.
- *Connected Device Count* – The number of

controllers with IP addresses that the display sees on the network.

- *Disconnections* – Number of disconnections since the display powered on.

Hide Diagnostic Center



Hide Diagnostics Center

PC15331—UN—08JUL13

Display is set to Diagnostic Mode once a controller is selected. Select Hide Diagnostic Center to minimize application and return to main page.

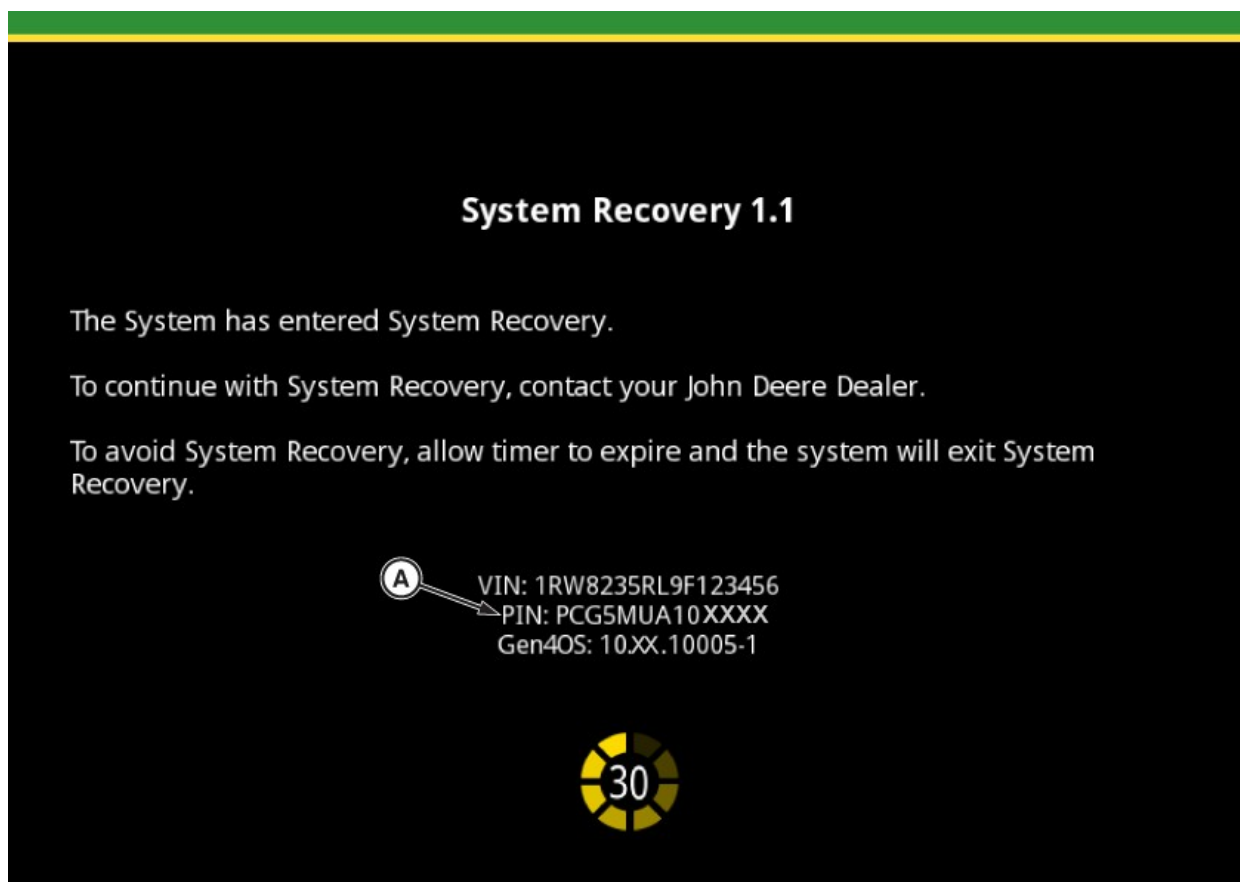
Hide button is useful for accessing another part of display during a calibration procedure. To return to the same diagnostic page, select Diagnostic Center application from menu.

NOTE: Leaving display in Diagnostic Mode is not recommended, because it can negatively affect performance.

Remove Diagnostic Mode by closing controller page.

ZIDXK1X,1770830382630-19-12FEB26

System Recovery



PC620654—UN—14MAY24

A—Recovery PIN

System Recovery tries to protect and potentially save user data. System Recovery initiates when the system detects a conflict that might corrupt the intended functions.

When the display first enters system recovery, a 30 second timer begins on the screen for the system recovery. To proceed with system recovery, contact a John Deere dealer and provide recovery PIN (A).

Allowing the timer to expire will return the display to normal operations. If this screen persists, contact a John Deere dealer and provide recovery PIN (A).

ZIDXK1X,1770621032342-19-10FEB26

Troubleshooting—AutoTrac

AutoTrac Disengaged Messages

AutoTrac disengaged messages – Each time AutoTrac is disengaged, two tones are followed by an alert explaining why it was disengaged. Messages are also displayed as to why AutoTrac did not engage. Disengaged messages display for 7 seconds and then disappear.

AutoTrac Disengaged Messages	
Code	Message
702752.00	Nothing Checked Yet
702752.01	Steering Wheel Moved
702752.02	Wheel Speed Too Slow
702752.03	Wheel Speed Too Fast
702752.04	Gear Invalid
702752.05	Track Number Changed
702752.06	No Dual Frequency GPS
702752.07	SSU Has Active DTCs
702752.08	Last Transition Okay
702752.09	GSD Messages Bad
702752.10	No Parallel Tracking
702752.11	Keycard Not Present
702752.12	Heading Error Too Large
702752.13	Off-Track Error Too Large
702752.14	Seat Switch Open
702752.15	Oil Temperature Too Low
702752.16	TCM Not Present
702752.17	Activation Code Invalid
702752.18	Diagnostic Mode Controls Valve
702752.19	Combine Header Switch Off
702752.20	Combine Road/Field Switch On
702752.21	Voltage Not Stable
702752.22	AutoTrac Active in Reverse Too Long
702752.23	AutoTrac Active Below Low Speed Threshold Too Long
702752.24	Curvature Too High
702752.25	Machine Not Traveling in Forward Direction
702752.26	ELX Line Low (Shutdown)
702752.27	Gear Data Bad
702752.28	Resume Switch Data Bad
702752.29	Key Switch Message Invalid
702752.30	SPFH AutoTrac/Row Guidance Switch Off
702752.31	SPFH Quick-Stop Switch On
702752.32	AutoTrac Not Enabled
702752.33	Acquiring Line
702752.34	Tracking on Line
702752.35	Unknown Direction
702752.36	Transition to GPS Too Large
702752.37	Out of Row
702752.38	Sensor Coast Timed Out
702752.39	Bad Message Sequence
702752.40	Machine Cannot Achieve Commanded Track Curvature
702752.41	GPS Machine Speed Does Not Match Wheel-Based Machine Speed

702752.42	Present Curvature Mismatch
702752.43	Machine is in Park
702752.44	Auxiliary Steering Commands Message Timed Out
702752.45	Auxiliary Steering Status Message Timed Out
702752.46	Seat Switch Data Bad
702752.47	VIN Data Bad
702752.48	Wheel Base Data Bad
702752.49	TCM Info Message Timed Out
702752.50	Machine Automation Message Timed Out
702752.51	Machine Roll/Yaw Rate Message Timed Out
702752.52	Wheel-Based Speed/Direction Message Timed Out
702752.53	Track Data Timed Out
702752.54	Unknown Steering Control Unit Failure
702752.55	AutoTrac Universal Temperature Out of Range
702752.56	AutoTrac Active in Four-Wheel Steer Too Long
702752.57	Machine in Crab Steer
702752.58	Authorization Not Permitted
702752.62	Reserved
702752.63	Take No Action

ct47125,1708283950104-19-18FEB24

Troubleshooting

NOTE: AutoTrac has been tuned to perform successfully in most field conditions using a variety of implements. For abnormal conditions, Advanced Settings allow the operator to fine tune systems for specific field conditions and implements. Adjusting steering sensitivity should be tried before using the steps in the following scenarios.

Check and fix other problems before tuning. Perform necessary mechanical checks and calibrations through associated machine. If this step is not performed, machine faults may occur or operator wastes time tuning a system that cannot be tuned.

Excessive Wheel Motion: Overall AutoTrac Performance is acceptable, but wheels quickly twitch back and forth.

Aggressive S-ing Motion: Continual back and forth motion is observed by looking over the front nose of machine. Motion is observed, but off-track error shown on display (distance away from the A–B line) is often relatively small.

Lazy S-ing Motion: Performance of AutoTrac seems sluggish when trying to stay on line and slowly wanders from side to side.

Lazy Line Acquisition: AutoTrac appears sluggish during line acquisition. Tractor remains off to one side of line for a long time before getting lined up.

Aggressive Line Acquisition: AutoTrac overshoots line and continues to overcompensate during

acquisition, resulting in a high frequency, tight S-ing pattern during acquisitions.

Tracking Outside of Curve: AutoTrac is sluggish in a curve track, resulting in slow, wandering S-ing about the desired line. This line often tracks to the outside of the desired path.

Tracking Inside of a Curve: AutoTrac exhibits rapid and high frequency corrections in Curve Track Mode, resulting in a tight S-ing pattern, or tracking to the inside of the desired path.

NOTE: For troubleshooting techniques, refer to the Onscreen Help files.

General Tuning

Adjustment recommendations:

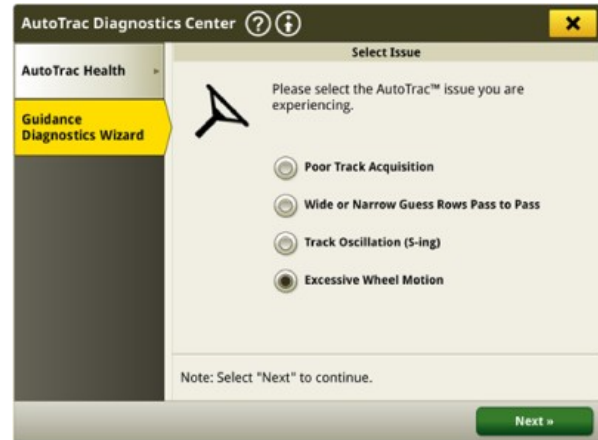
- Steering Sensitivity: Set at 70 before making other adjustments. Adjust in increments of 10.
- Line Sensitivity Tracking: Adjust in increments of 20.
- Line Sensitivity Heading: Adjust in increments of 10.
- Heading Lead: Adjust in increments of 10.
- Steering Response Rate: Adjust in increments of 10.
- Acquire Sensitivity: Adjust in increments of 20.
- Curve Sensitivity: Adjust in increments of 20.

One Value at a Time: Attempt to adjust settings in problem field conditions while AutoTrac is active by performing the following steps:

1. Start with factory default settings. Steering Sensitivity value correlates to value on Guidance View Tab. Attempt to use a value for this setting that is similar to running conditions (70 for concrete, 100 for most conditions, and 120 for soft ground). This number may still need to be modified beyond suggested settings.
2. While AutoTrac is active in problem conditions (such as speeds, ground, and tire setup), increase or reduce Line Sensitivity Heading by a factor of 10.
3. If change in Line Sensitivity Heading is ineffective at addressing issue, reset Line Sensitivity Heading parameter. Increase or reduce Heading Lead in same manner as previous step.
4. If none of the previous steps were effective, reset Heading Lead and increase or reduce Steering Response Rate in a similar fashion to the previous steps.

Combining Settings: If above procedure does not give satisfactory performance and once operator becomes more comfortable with how parameters change AutoTrac performance, try different combinations of parameters while AutoTrac is active.

Guidance Diagnostics Wizard



PC689866—UN—26SEP25

Guidance Diagnostics Wizard Tab

Guidance Diagnostics Wizard provides step-by-step troubleshooting for common guidance issues.

NOTE: Guidance Diagnostics Wizard is only available to machines with an AT2 AutoTrac system configuration. This information is available on the AutoTrac Health page under AutoTrac System → AutoTrac Mode.

Select the radio button corresponding to the issue you are experiencing:

- Poor guidance track acquisition – either the machine remains off to one side of the line for a long time before getting lined up, or it overshoots the line and continues to overcompensate during acquisition.
- Wide/Narrow guess rows pass to pass – there is inconsistent spacing between the passes, but the spacing remains off for the entire pass, resulting in a constant offset for the entire pass.
- S-ing – continual back and forth motion is observed by looking over front nose of machine.
- Excessive wheel motion – overall AutoTrac performance is acceptable, but wheels quickly twitch back and forth.

ct47125,1705350329386-19-03MAR26

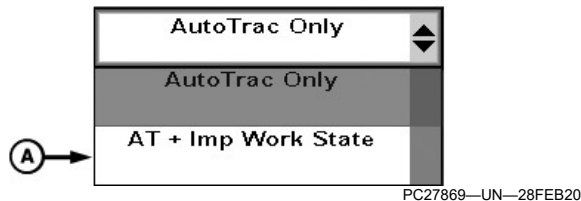
Troubleshooting—AutoTrac Turn Automation

Troubleshooting with Active Implement Guidance

Active Implement Guidance

To prevent the implement from steering during end turns while running Active Implement Guidance and AutoTrac Turn Automation, adjust the following settings:

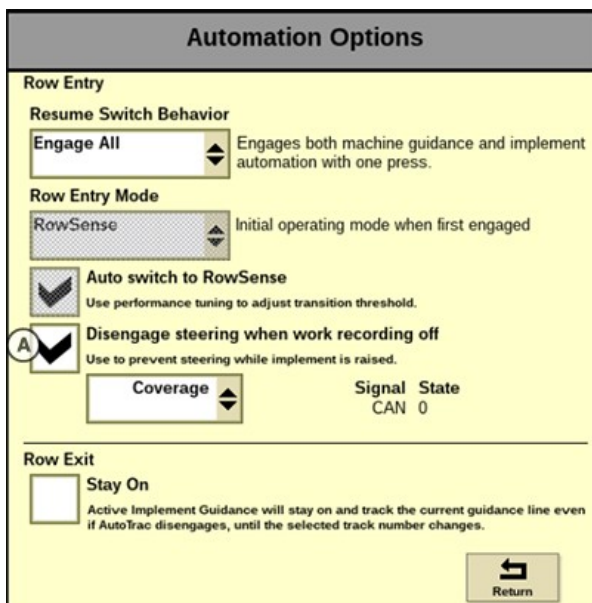
Application Controller 1100 (UCC1)



A—AT + Imp Work State

1. Select Application Controller 1100 under ISOBUS VT application.
2. Select either the Implement Steer Setup button or Implement Shifter Setup button.
3. Select "AT + Imp Work State" (A) from the drop-down menu under the Requirement to Engage setting.

Application Controller 1100 (UCC2 S.N. PCXL01C201000—)



A—Disable Steering Checkbox

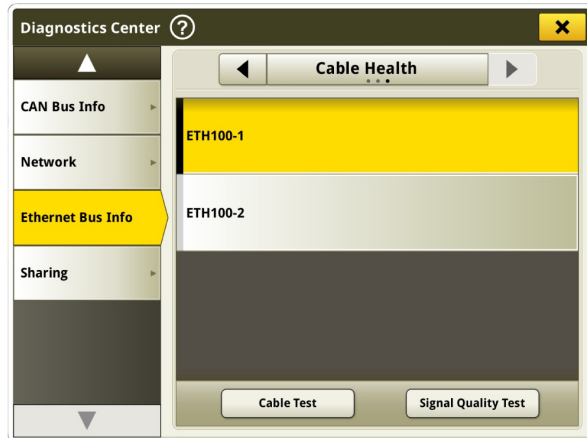
1. Select Application Controller 1100 under ISOBUS VT application.
2. Select the Active Implement Guidance softkey.
3. Select the Automation Options under Setup tab.

4. Select the "Disable steering when work recording off" checkbox (A).

ct47125,1705351301467-19-24SEP25

Troubleshooting—Ethernet

Ethernet



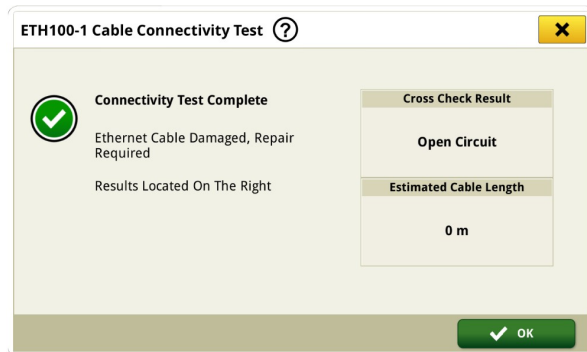
PC702240—UN—12FEB26

Cable Health

To access the Ethernet Tests: Diagnostics Center → Ethernet Bus Info → Cable Health (Tab)→ Select Port. There are two Ethernet tests available:

- Cable Test— Select to run a cable diagnostics test.
- Signal Quality Test— Select to run an ethernet signal quality test.

Cable Connectivity Test



PC702241—UN—12FEB26

Cable Connectivity Test

NOTE: Running this test may cause multiple devices to briefly lose communication. Ensure that the machine is stopped in a safe state and is not engaged in active work before proceeding.

NOTE: The Start button is disabled when the machine is moving.

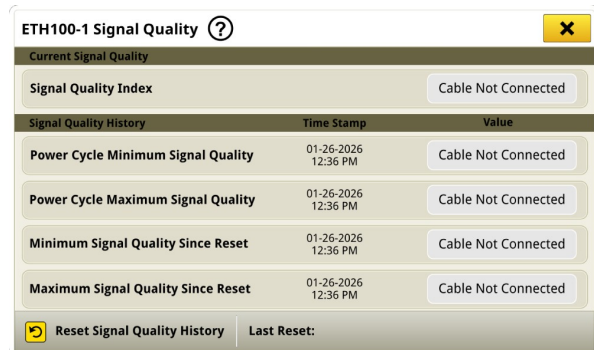
- Cross Check Result—Displays the result of the Cable Connectivity Test.

Display Test	Descriptive Meaning
Test in process	Test is currently underway.

Ethernet cable healthy	Test was not able to find any faults.
Ethernet cable damaged, repair required	Test determined that a wire pair is open.
	Test determined that a wire pair is shorted together.
	Test determined that two wire pairs have a short between them.
Internal switch fault	Internal hardware failed, read/write issue detected.
Test complete	Test is complete.

- Estimated Cable Length— displays the estimated length of the Ethernet cable being tested.

Signal Quality Test



PC702239—UN—12FEB26

Signal Quality Test

Items Available on Signal Quality Page:

Level	Display Text	Range
0	Very Bad	0—2
1	Bad	3—5
2	Good	6—8
3	Very Good	9—11
4	Excellent	12—15
5	Cable Not Connected	N/A

ZID XK1X,1770705010531-19-04MAR26

Maintenance—Calibrations

Maintenance and Calibrations



PC28795—UN—29AUG22

Maintenance and Calibrations

Maintenance and Calibrations application allows the operator to set up service intervals and perform calibrations on machine components.

Navigate to Maintenance and Calibrations

1. Select Menu.
2. Select Tractor Settings tab.
3. Select Maintenance and Calibrations application.

ct47125,1708284386704-19-18FEB24

Service Checks

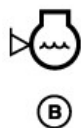
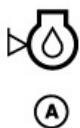
NOTE: Availability of the Service Checks feature depends on purchase options.

Perform service checks with machine on level ground and engine off. For accurate readings, wait at least 40 minutes after engine shut down before checking fluid levels.

A light indicates the status of a machine service checkpoint.

- Green light — Normal level
- Red light — High level or low level

The following checkpoints are available:



PC17385—UN—15MAY14

A—Engine Oil Level
B—Engine Coolant Level

- Engine Oil Level (A)
- Engine Coolant Level (B)

DX,PC,MAINT,SERVCHECK-19-07APR17

Service Intervals

Service Intervals are reminders of when regular maintenance needs to be performed on a machine.

Select Add Service Interval button to create a new

service interval. An unlimited number of service intervals can be added.

Once a service interval is created, it is added to the list and displayed with the name, elapsed time, and interval amount.

- The operator selects the name to identify the specific service interval.
- Elapsed indicates the number of hours since the service interval was reset.
- Interval is the number of hours between each service.

The intervals are sorted from least amount of time due to the most amount of time due. They are then sorted by name, in alpha-numerical order, with priority given to numbers.

Twenty hours before the service interval is due, the system will inform the operator that the machine will need to be serviced soon. Once the message has been acknowledged, the system will inform the operator about the upcoming service at every startup until service interval is reset.

DX,PC,MAINT,SERVINTERVAL-19-23DEC15

Calibrations

Use this application to perform wheel slip calibration and radar calibration.

Radar Calibration



Radar Calibration

PC23946—UN—22MAR17

A radar device needs to be calibrated when it is first installed on the machine or if there is a difference between radar speed and actual ground speed when operating unloaded on a hard surface.

NOTE: In windy conditions, moving parts such as leaves, dust, or gravel can cause inaccurate radar speed.

Wheel Slip Calibration



Wheel Slip Calibration

PC23947—UN—22MAR17

Calibrate wheel slip if there is a mismatch between radar speed and wheel speed when operating unloaded on a hard surface.

Perform calibration while driving with an unloaded machine on a hard, dry, clean, and level surface.

NOTE: Wheel slip calibration is only available on a connected and calibrated radar device.

Make sure that radar speed is accurate before performing wheel slip calibration.

ct47125,1708284386858-19-18FEB24

Maintenance—Service

Clean Display

IMPORTANT: Always clean display screen with power off. Cleaning screen while operating could result in unintended button selections.

To clean display, power down and wipe screen with a soft cloth sprayed with a non-ammonia based cleaner, such as John Deere glass or multipurpose cleaner.

DX,PC,CLEAN,DISP-19-21OCT16

Factory Data Reset



File Manager Settings

PC20398—UN—09DEC14

Select Settings at the top of File Manager application to open Factory Data Reset.

Perform a Factory Data Reset when transferring a display between users. The process removes all user data from the display and cannot be undone. User data includes setup and documentation data, guidance information, totals, and custom run page layouts. Licenses, language settings, and regional settings are not reset. A reboot is required after reset.

Factory Data Reset should be performed on a G5 CommandCenter prior to selling the machine.

Factory Data Reset should be performed on a G5 Universal Display prior to selling the display.

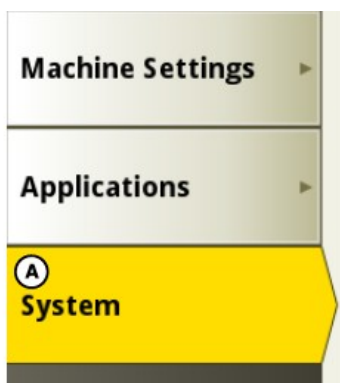
1. Select Menu.



Menu

PC28961—UN—24APR23

2. Select System tab.



System Tab

PC28821—UN—21SEP22

3. Select File Manager.



File Manager

PC28785—UN—29AUG22

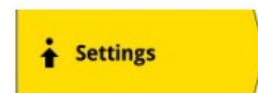
4. Select Settings.



Settings

PC28970—UN—24APR23

5. Select Settings tab.



Settings Tab

PC29090—UN—08MAY23

6. Select Begin Factory Reset.



PC29091—UN—08MAY23

7. Follow on screen prompts.

ch177nn,1660729958790-19-15OCT25

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