



Generation 4 CommandCenter™

Software Version: 10.32.3817-XXX



JOHN DEERE



OPERATOR'S MANUAL

Generation 4 CommandCenter™

OMPFP26845 ISSUE J5 (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.johndeeretechno.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 product or implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (PIN) in the Specification or Product Numbers section. Accurately record all the numbers to help in tracing the product should it be stolen. PIN information is helpful when ordering parts. File the identification numbers in a secure place off 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 at time of purchase.

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,IFC5E-19-08SEP25

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	
APEX™	Trademark of Deere & Company
ArcGIS™	Trademark of Esri
AutoPath™	Trademark of Deere & Company
AutoTrac™	Trademark of Deere & Company
BeeLine™	Trademark of Relish Technologies Ltd.
Bluetooth®	Trademark of Bluetooth SIG
CommandARM™	Trademark of Deere & Company
CommandCenter™	Trademark of Deere & Company
CommandQuad™	Trademark of Deere & Company
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Introduction

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Field Doc™	Trademark of Deere & Company
GreenSeeker®	Trademark of Trimble Navigation Limited Corporation
GreenStar™	Trademark of Deere & Company
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iGrade™	Trademark of Deere & Company
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iTEC™	Trademark of Deere & Company
IVT™	Trademark of Deere & Company
JDLink™	Trademark of Deere & Company
PowerShift™	Trademark of Deere & Company
RowSense™	Trademark of Deere & Company
SeedStar™	Trademark of Deere & Company
See & Spray	Trademark of Deere & Company
Service ADVISOR™	Trademark of Deere & Company
StarFire™	Trademark of Deere & Company
StellarSupport™	Trademark of Deere & Company
Trimble®	Trademark of Trimble
Wi-Fi®	Trademark of Wi-Fi Alliance

ch177nn,1685609353995-19-08JUN23

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

Refer to Onscreen Help in the Display Introduction section.

AL70325,00005A6-19-07NOV19

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

Onscreen Operator's Manual

The Generation 4 Display Operator's Manual is available on the display in the Help Center application.

Generation 4 CommandCenter Display Components

The Generation 4 CommandCenter Display contains the following components:

Compliance Name

4600 Processor - Multi-Functional Controller, Integrated Premium Server (IPVS)

4200 Processor - Multi-Functional Controller, Integrated Mid-Spec Server (IMVS)

4100 Processor - Multi-Functional Controller, Integrated Value Server (IAVS)

ch177nn,1685613981788-19-08JUN23

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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

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

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

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. Remove the key. 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.

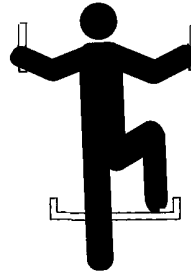
On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

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-19-28FEB17

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

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),

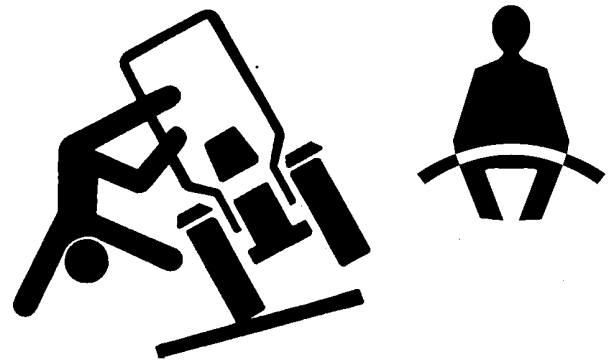
AutoTrac Universal, AutoTrac Controller, AutoTrac RowSense, and Machine Sync.

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

Stay Clear of Harvesting Units



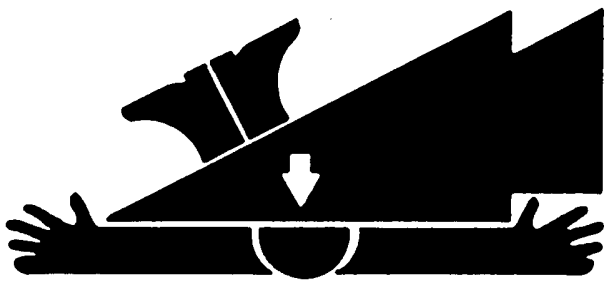
ES118704—UN—21MAR95

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.

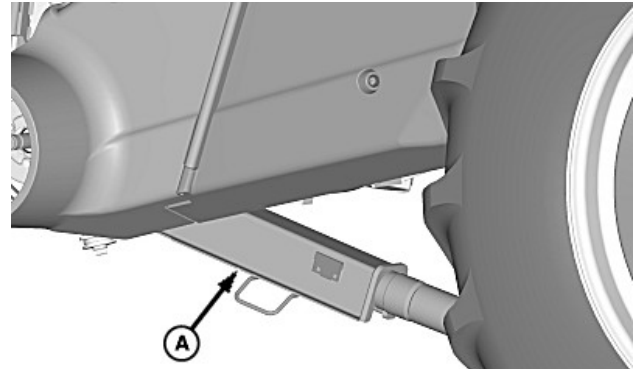
FX,CUT-19-21DEC90

Cleaning Row Sensors

CAUTION: Avoid the risk of injury. Shut OFF engine, set parking brake and remove key.



TS696—UN—21SEP89



H90891—UN—26FEB08

A—Safety Stop

Raise header and lower safety stop (A) onto hydraulic cylinder rod.

Row Sensors should be checked daily to see if cleaning is necessary. If material has accumulated on sensors it may prevent free movement and affect performance. To clean row sensors, remove debris from sensors and surrounding area. Check that sensors move freely without obstruction.

Annually check for excessive wear of sensor bushings and shafts. Replace as necessary.

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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.

- 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-19-08MAY19

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.

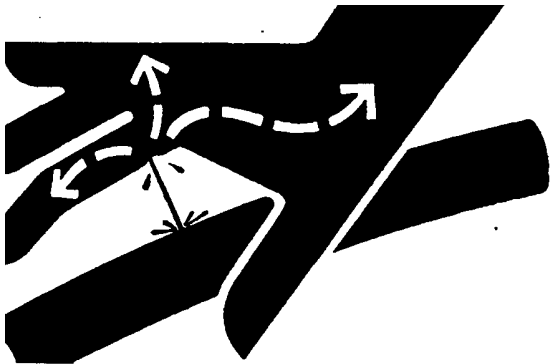
Implement automation systems include any application that automates implement movement. This includes, but may not be limited to, iGrade and Active Implement Guidance.

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.

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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.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical

Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID-19-12OCT11

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. The display 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 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 before use.

NOTE: ISOBUS refers to the ISO Standard 11783.

DX,WW,ISOBUS(T)-19-04APR22

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



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

HC94949,0000488-19-24JAN14

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.

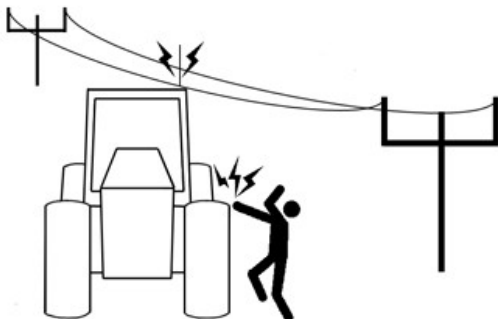
To prevent injury from electrical shock, burns, or potential fire hazards, always disconnect battery power or other electric power source on equipment before installing or servicing:

- 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

Avoid Electrical Power Lines

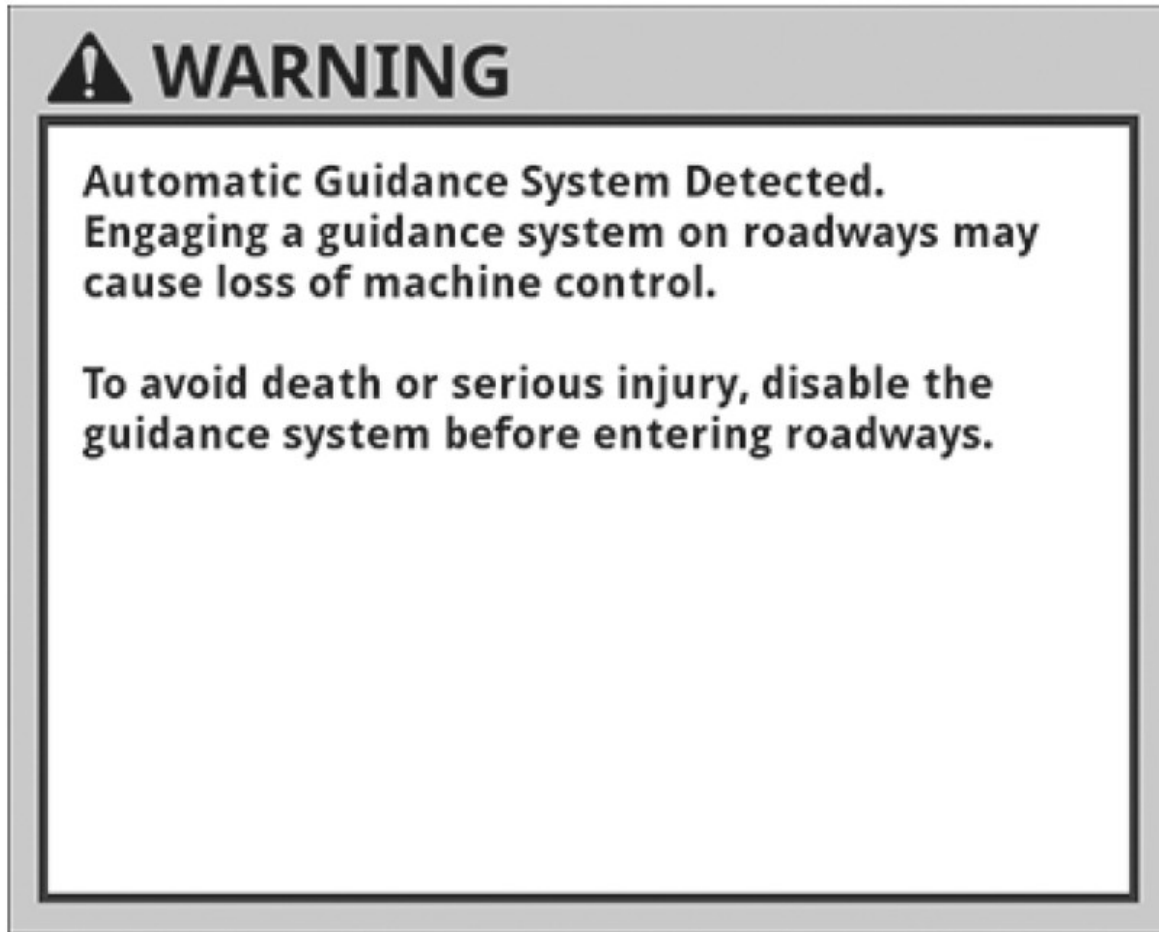


PC13658—UN—08NOV11

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

Safety Signs

Safety Warning — AutoTrac Detected

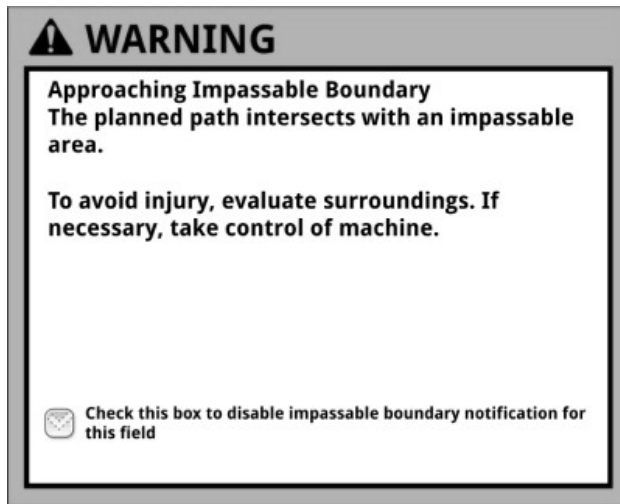


This message occurs during startup on machines with an automatic guidance system installed.

PC27620—19—29MAR22

ch177nn,1685614175290-19-01JUN23

Safety Warning — Impassable Boundary



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

ch177nn,1738560303121-19-02FEB25

PC661534—UN—01FEB25

AutoTrac Turn Automation

Safety Warning — ISOBUS Controller



WARNING

ISOBUS Controller Detected. Improper operation can cause unintended machine movement.

To avoid death or serious injury to a bystander, understand how this display operates the functions of the machine.

Read the ISOBUS controller's Operator Manual.

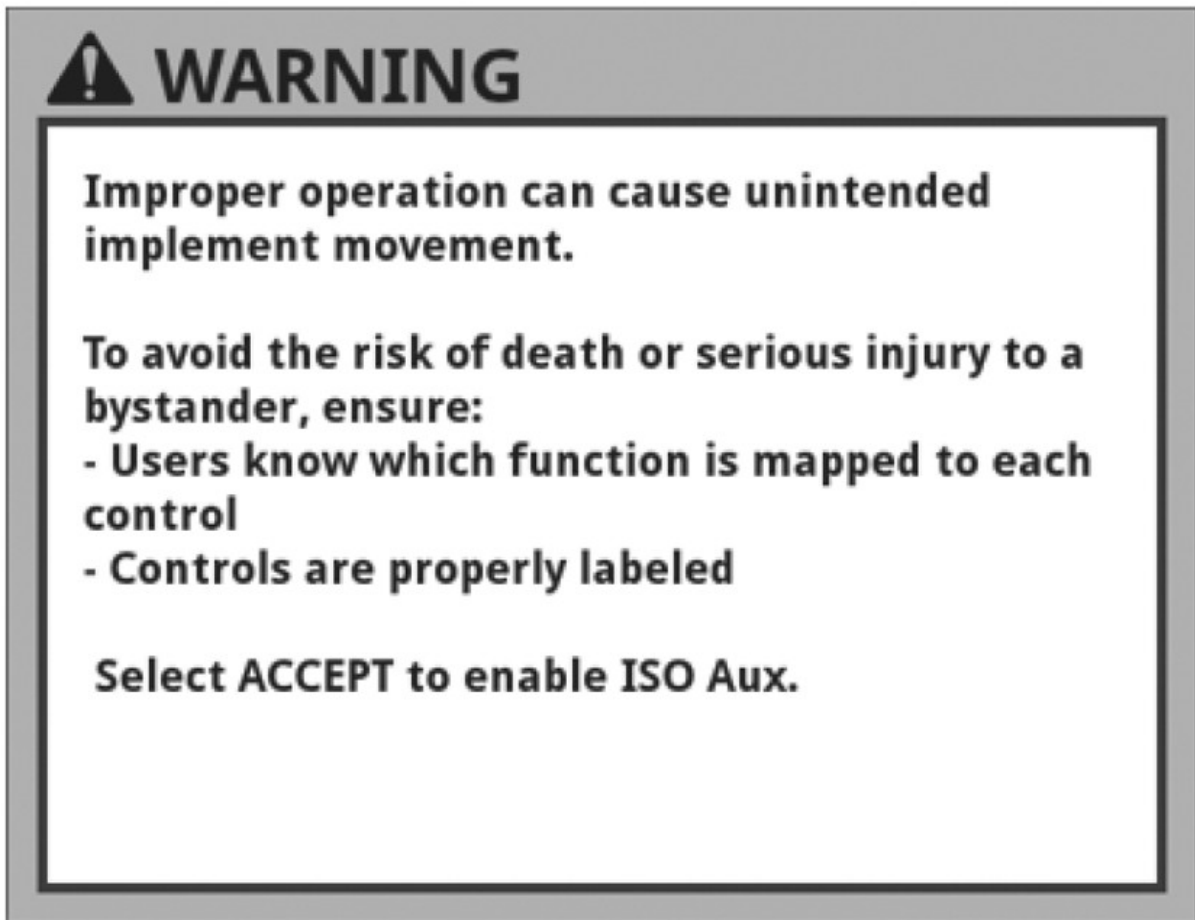
This message occurs when the system detects an ISOBUS controller. For more information, see Read

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

PC27622—19—29MAR22

AL70325,0000563-19-21OCT22

Safety Warning — ISO Aux Improper Operation

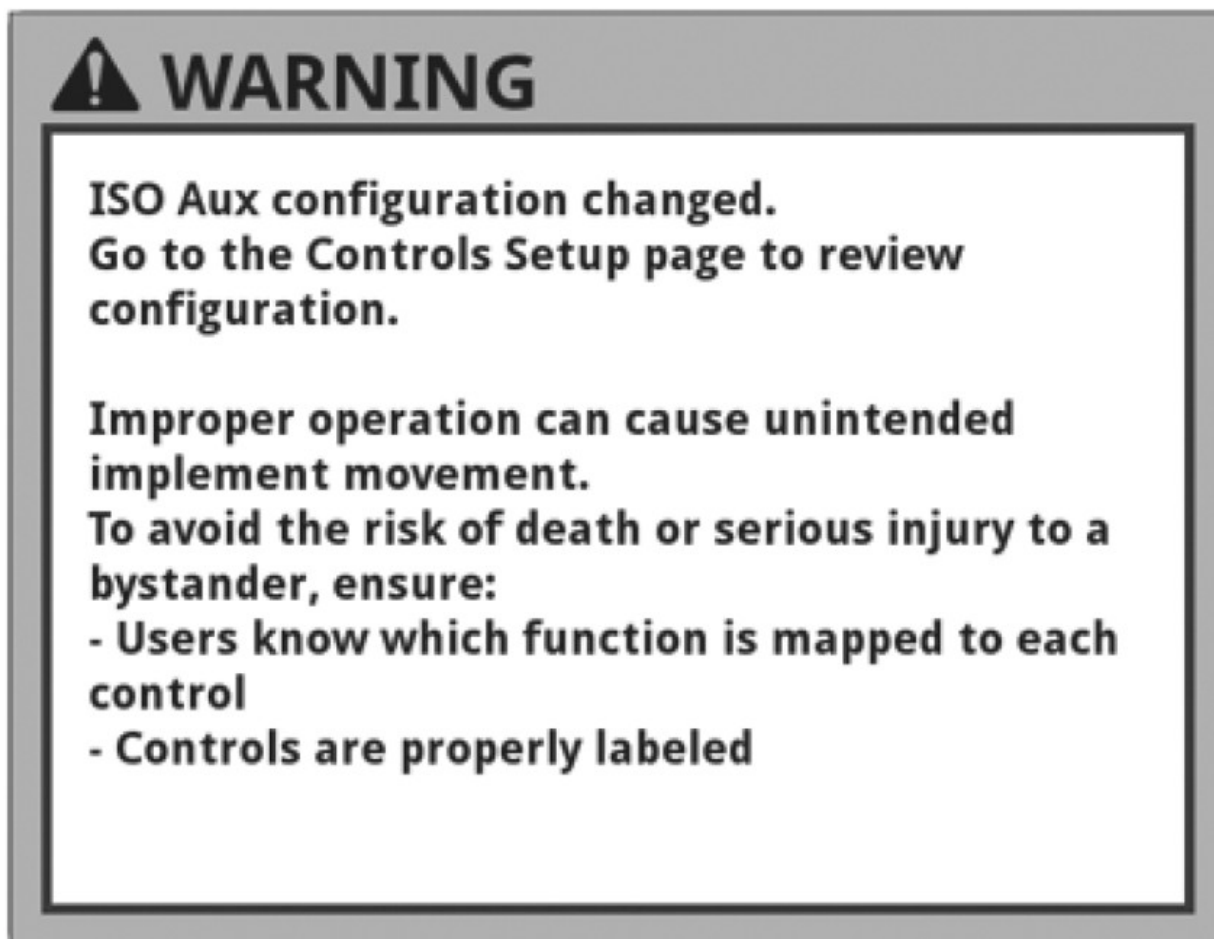


This message occurs when the operator enables ISO Aux control.

PC27623—19—29MAR22

AL70325,0000564-19-21OCT22

Safety Warning — ISO Aux Configuration



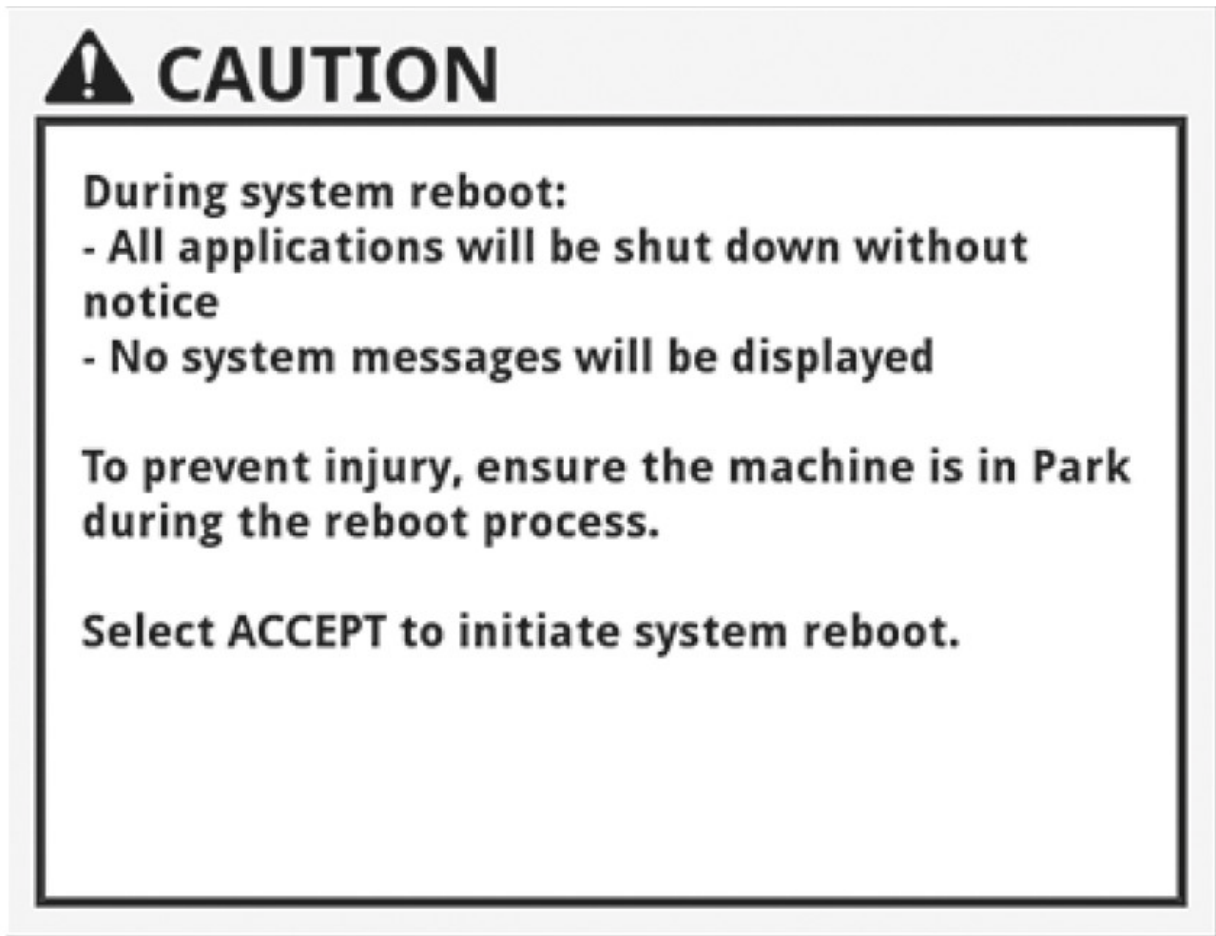
This message occurs when the system detects an ISOBUS controller with ISO Aux functionality, or the ISO Aux control configuration has been modified during run

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

PC27624—19—29MAR22

AL70325,0000565-19-21OCT22

Safety Warning — System Reboot

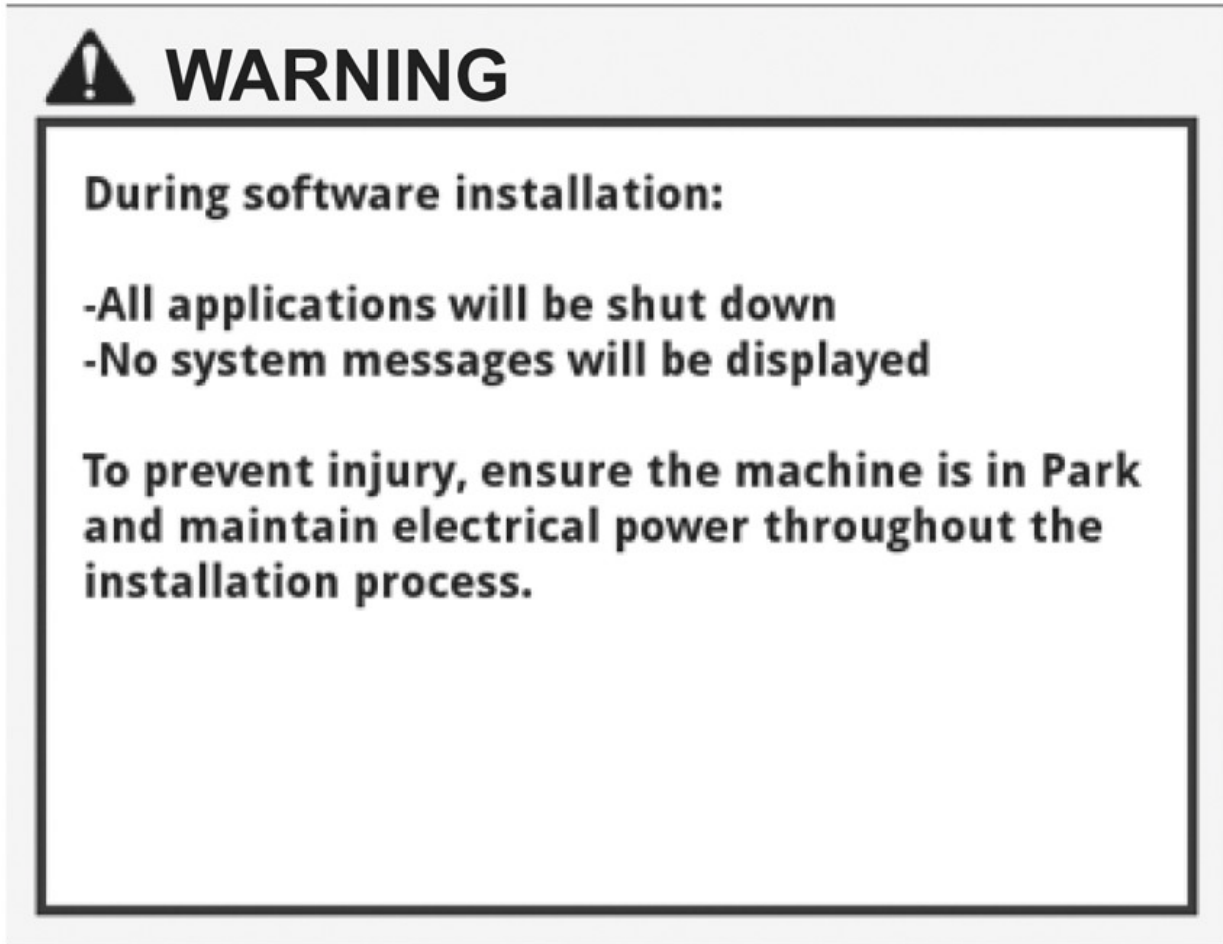


This message occurs when the display encounters an error that requires a system reboot.

PC27625—19—29MAR22

AL70325,0000566-19-21OCT22

Safety Warning — Software Installation

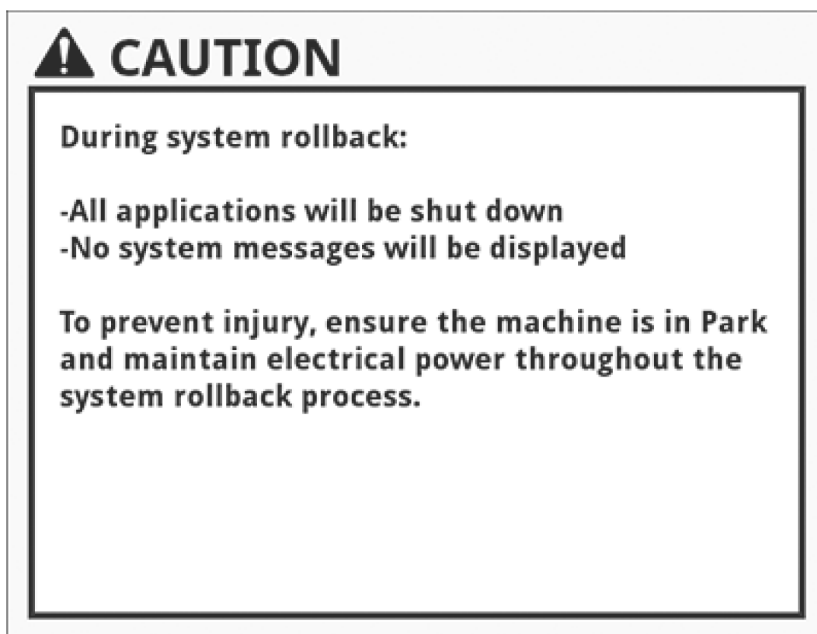


This message occurs when a software installation is started.

PC27626—19—29MAR22

AL70325,0000567-19-21OCT22

Safety Caution — System Rollback



ប្រយ័ត្ន

នៅអំឡុងពេលជួសជុលប្រព័ន្ធ៖

-កម្មវិធីទាំងអស់នឹងបិទ។

-មិនមានសារប្រព័ន្ធបង្ហាញឡើង។

-ដើម្បីបង្ការការរងរបួស

ចូរប្រាកដថាគ្រឿងចក្រស្ថិតនៅក្នុងទីតាំងចត

និងរក្សាថាមពលនៅទូទាំងដំណើរការជួសជុលប្រព័ន្ធ។

PC19763—19—23FEB22

NOTE: System Rollback is not available in software version 10.5.230-89 and later. In previous versions of software, this message is not displayed in Khmer and Ukrainian.

This message occurs when a system rollback is started.

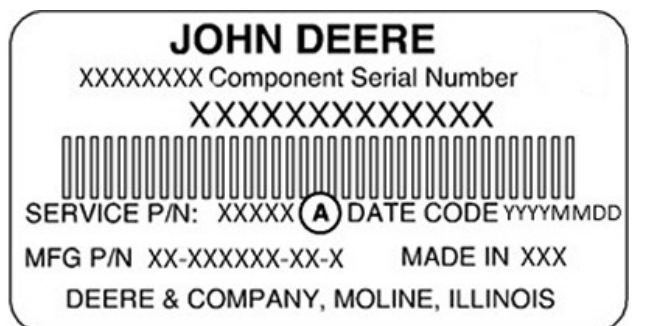
HC94949,00003A9-19-25APR17

Regulatory Information

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

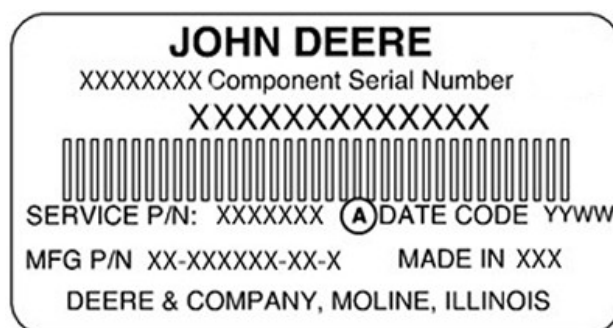
Use the date code (A) on the product label to identify the date of manufacture. "YYYY" (B) identifies the year of manufacture; "MM" (C) identifies the month of manufacture; "DD" (D) identifies the day of manufacture.

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

The day number of manufacture ranges between 01-31.

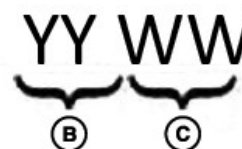
Date Code		
YYYY	Year of Manufacture	Example: 2011, 2012, 2013...
MM	Month Number for Year of Manufacture	Example: 01, 02, 03...12
DD	Day Number for Month of Manufacture	Example: 01, 02, 03...31

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 10.4" Monitor and 4600 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.

AL70325,00006A3-19-03AUG21

Eurasian Economic Union—EAC

Eurasian Economic Union - EAC

Information for products that bear conformity mark of the Eurasian Economic Union member states

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

Model: Data Processing Unit 4600 Premium Processor, Model GUPS
Made in USA

Name and address of the authorized representative in the Eurasian Economic Union:
Limited Liability Company "John Deere Rus"

Address: 142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi micro district, vladenye
"Warehouse 104," Building 2.

For technical support, please contact your dealer.



PC25151—UN—20DEC17

Евразийский экономический союз (ЕАЭС)

Информация об изделиях, которые имеют знак соответствия требованиям технических регламентов Евразийского экономического союза (ЕАЭС)

Производитель: Компания Deere & Company
г. Молин, Штат Иллинойс, США

Модель: блок обработки данных 4600 Premium Processor, модель GUPS
Сделано в США.

Наименование и адрес уполномоченного представителя на территории Евразийского экономического союза (ЕАЭС):
Общество с ограниченной ответственностью "Джон Дир Русь"

Адрес:
142050, Россия, Московская область, Домодедовский район, г. Домодедово, микрорайон "Белые столбы", владение
"Склады 104," стр. 2.

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



PC25152—UN—20DEC17
AL70325,0000518-19-15NOV18

Eurasian Economic Union—EAC

Eurasian Economic Union - EAC

Information for products that bear conformity mark of the Eurasian Economic Union member states

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

Model: John Deere 10.4 inch Monitor, Model G410
Made in Mexico

Name and address of the authorized representative in the Eurasian Economic Union:
Limited Liability Company "John Deere Rus"

Address: 142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi micro district, vladenye
"Warehouse 104," Building 2.

For technical support, please contact your dealer.



Евразийский экономический союз (ЕАЭС)

Информация об изделиях, которые имеют знак соответствия требованиям технических регламентов Евразийского экономического союза (ЕАЭС)

Производитель: Компания Deere & Company
г. Молин, Штат Иллинойс, США

Модель: дисплей 10.4 товарный знак John Deere, модель G410
Сделано в Мексике.

Наименование и адрес уполномоченного представителя на территории Евразийского экономического союза (ЕАЭС):
Общество с ограниченной ответственностью "Джон Дир Русь"

Адрес:
142050, Россия, Московская область, Домодедовский район, г. Домодедово, микрорайон "Белые столбы", владение
"Склады 104," стр. 2.

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



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 Terreon, 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-Torreon) Boulevard Ferropuertos #305, Parque Industrial Ferropuertos Terreon, 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-Torreon) Boulevard Ferropuertos #305, Parque Industrial Ferropuertos Terreon, 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 Дисплей

Үлгі: G512

Зауыт: Motores John Deere, S.A.DEC.V. (ISG-Torreón) Ferropuertos бульвары #305, Parque Industrial Ferropuertos Torreón, 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.



EU Declaration of Conformity

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

The undersigned hereby declares that:

Product Name: John Deere 4100 Display, John Deere 4200 Display

Model(s): GUVS, GUMS

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

DIRECTIVE	NUMBER	CERTIFICATION METHOD
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 ISO 14982:2009

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, Iowa, USA

Date of Declaration: 12 April 2021

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

Name: Scott Torgerson

Title: Delivery Manager Electronic Hardware



DXCE01—UN—28APR09
ZIDXK1X,1751441597202-19-02JUL25

EU Declaration of Conformity

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

The undersigned hereby declares that:

Product Name: 4600 Processor

Model(s): 4600, 4600 Premium Server, GUPS

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

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Electromagnetic Compatibility Directive	EMC 2014/30/EU	Annex II of the Directive

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

EN ISO 14982:2009

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, Iowa, USA

Date of Declaration: 12 April 2021

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

Name: Scott Torgerson

Title: Delivery Manager Electronic Hardware



DXCE01—UN—28APR09
ZIDXK1X,1751446934502-19-02JUL25

EU Declaration of Conformity

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

The undersigned hereby declares that:

Product Name: John Deere 8.4" Monitor

Model(s): John Deere 8.4" Monitor, John Deere 8.4" Monitor F9 color, G408

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

DIRECTIVE	NUMBER	CERTIFICATION METHOD
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 ISO 14982:2009

EN 13309: 2010-07

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, Iowa, USA

Date of Declaration: 12 April 2021

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

Name: Scott Torgerson

Title: Delivery Manager Electronic Hardware



DXCE01—UN—28APR09
ZIDXK1X,1751447098524-19-02JUL25

EU Declaration of Conformity

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

The undersigned hereby declares that:

Product Name: John Deere 10.4" Monitor

Model(s): 10.4" Display, Display JD 10.4" Monitor, G410

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

DIRECTIVE	NUMBER	CERTIFICATION METHOD
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 ISO 14982:2009

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, Iowa, USA

Date of Declaration: 12 April 2021

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

Name: Scott Torgerson

Title: Delivery Manager Electronic Hardware



DXCE01—UN—28APR09
ZIDXK1X,1751447261781-19-02JUL25

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

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

EN 55032
EN 55024
EN55035
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
ZIDXK1X,1751460675034-19-02JUL25

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
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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: John Deere 4100 Display, John Deere 4200 Display

Model(s): GUVS, GUMS

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

EN ISO 14982:2009

EN55032

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: 13 April 2021

Name: Scott Torgerson

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

Title: Delivery Manager Electronic Hardware

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
ZIDXK1X,1751448090041-19-02JUL25

UK Declaration of Conformity

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

The undersigned hereby declares that:

Product: 4600 Processor

Model(s): 4600, 4600 Premium Server, GUPS

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

EN ISO 14982:2009

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: 13 April 2021

Name: Scott Torgerson

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

Title: Delivery Manager Electronic Hardware

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
ZIDXK1X,1751448196363-19-02JUL25

UK Declaration of Conformity

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

The undersigned hereby declares that:

Product: John Deere 8.4" Monitor

Model(s): John Deere 8.4" Monitor, John Deere 8.4" Monitor F9 color, G408

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

EN ISO 14982: 2009

EN 13309: 2010-07

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: 12 April 2021

Name: Scott Torgerson

Manufacturing Unit: Deere & Company, Moline, IL 61265

Title: Delivery Manager Electronic Hardware

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
ZIDXK1X,1751448296271-19-02JUL25

UK Declaration of Conformity

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

The undersigned hereby declares that:

Product: John Deere 10.4" Monitor

Model(s): 10.4" Display, Display JD 10.4" Monitor, G410

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

EN ISO 14982:2009

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: 15 April 2021

Name: Scott Torgerson

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

Title: Delivery Manager Electronic Hardware

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
ZIDXK1X,1751450330329-19-02JUL25

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

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
ct47125,1751554708149-19-03JUL25

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

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

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
ct47125,1669663290093-19-01DEC22

Display Introduction

Onscreen Help



PC15300—UN—19MAR13

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.

Navigate to Help Center

1. Select Menu.
2. Select System tab.
3. Select Help Center application.

DX,PC,INTRO,HELP-19-17DEC15

Generation 4 CommandCenter

The John Deere Generation 4 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 display is attached to the CommandARM. There are 7, 8.4, and 10 inch display options available.

NOTE: Software in Generation 4 CommandCenter is on processor, not display.

4100 CommandCenter (7 Inch)



PC17356—UN—03DEC13

4100 CommandCenter

- Run Page Modules same as 10 inch display
- Shortcut Softkeys must be expanded to view.

4200 CommandCenter (8.4 Inch) and 4600 CommandCenter (10 Inch)



PC17355—UN—03DEC13

4200 and 4600 CommandCenter

- Title Bar displays currently viewed Run Page
- Large Status Center provides more information
- Shortcut Softkeys are always visible.

ch177nn,1685614419187-19-01JUN23

Generation 4 CommandCenter Processor

Generation 4 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.



PC25546—UN—19APR18

4100 and 4200 Processor



4600 Processor

PC25545—UN—19APR18

4100 and 4200 Processor

- 1 Video Camera Input
- 1 USB Input
- 1 Display Output

4600 Processor

- 4 Video Camera Inputs
- 4 USB Inputs
- 2 Display Outputs
- Upgradable for future applications

ch177nn,1685614419134-19-01JUN23

Extended Monitor



Swap Button

PC28687—UN—25AUG22

NOTE: Extended monitor is only supported on the 4600 CommandCenter and the 4640 Universal Display.

Extended monitor is a secondary display used to show a second active run page.

CAUTION: Avoid the risk of injury. Ensure that the machine is in park mode and maintain electrical power throughout the installation process. When rebooting display:
All applications will be shut down.

No system messages will be displayed.

NOTE: Complete work in any fields that have already been started before installing or disconnecting a secondary display.

When a secondary display is detected or removed, a system reboot is required.

NOTE: Extended monitor does not support viewing two run pages from the same control unit simultaneously.

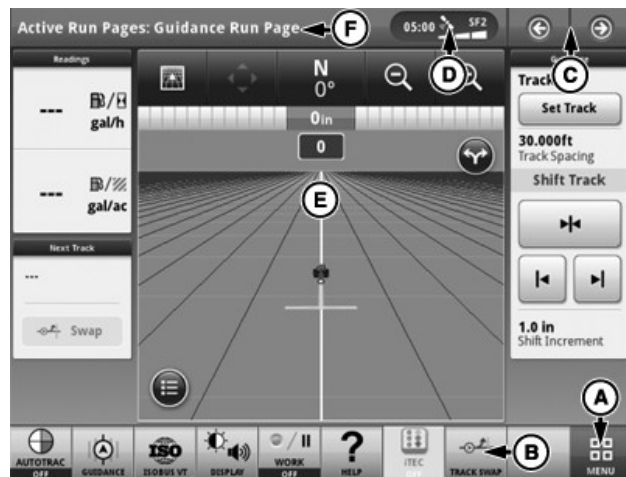
Select the Swap button to transfer active run page to the secondary display. All functionality of the transferred run page remains active on the extended monitor. The next run page in the active set becomes the active run page on the primary display.

The ability to scroll through run pages remains enabled on the primary display; however, the run page moved to the secondary display is removed from the rotation.

Select the Swap button again to swap active run pages between displays.

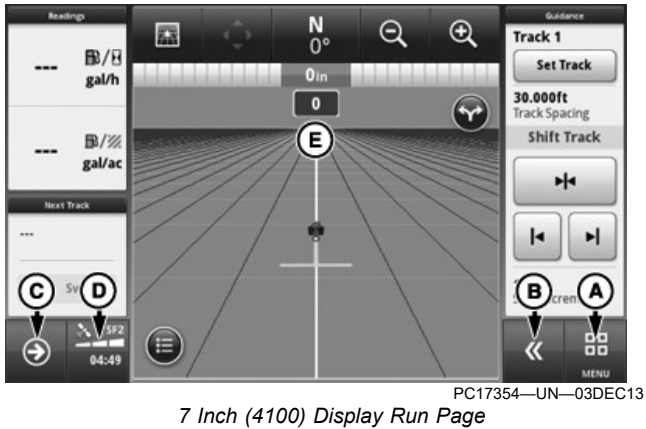
ch177nn,1685614447116-19-28JUN23

Run Page Structure



PC17353—UN—03DEC13

8.4 Inch (4200) and 10 Inch (4600) Display Run Page



Status Center highlights important information for display functions, such as GPS signal strength and notifications. It is located in title bar on 8.4 and 10 inch displays, and in lower left corner on 7 inch displays.

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.

DX,PC,INTRO,STATUS-19-23APR18

Shortcut Softkeys



PC17276—UN—13AUG13

A—Shortcut Softkeys

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



PC17277—UN—13AUG13

B—7 Inch Display Expand Button

Softkeys are always visible along the bottom of the 8.4 and 10 inch displays. On 7 inch display, select expand button (B) to display softkeys.

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

DX,PC,INTRO,SHORTCUTBAR-19-23APR18

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.

- 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. On 7 inch display, select expand button to display shortcut softkeys.

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.

On the 8.4 and 10 inch displays, press **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.)

DX,PC,INTRO,RUNPAGE-19-30APR18

Status Center



- A—8.4 and 10 inch Display Status Center
- B—7 inch Display Status Center

PC17275—UN—13AUG13

NOTE: Available applications vary depending on machine configuration.

ct47125,1663940824410-19-26SEP22

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 hr. of use. For example, AutoTrac demo only counts down when it is activated.

ch177nn,1685614480317-19-01JUN23

Basics Activation

Basics activation is required to operate the Generation 4 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 activation, 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 activation.

AL70325,0000590-19-06NOV19

Additional Activations

NOTE: Software activations are non-transferable if equipment is lost or stolen.

Additional activations are required to unlock advanced features of the display. Activations can be found by selecting Menu button > System tab > Software Manager application > Activations tab.

The following activations are available:

- AutoPath
- AutoTrac
- AutoTrac Turn Automation
- AutoTrac RowSense
- Data Sync
- Implement Guidance
- In-Field Data Sharing
- Machine Sync
- Section Control

To purchase activations, contact a John Deere dealer.

ch177nn,1685614480351-19-01JUN23

Demo Activations

In Software Manager application, demo activations are

Display and Sound

Display and Sound



PC28689—UN—25AUG22

Display and Sound

Display and Sound application adjusts display brightness and volume level.

If multiple displays are connected, use this application to configure which functions appear on each display.

If screen touches do not register in correct location, use Touchscreen Calibration to realign screen.

NOTE: Generation 4 displays use resistive touch screens compatible with standard styluses.

Exceptions: The 4200 and 4240 monitors use capacitive touch, requiring a finger, capacitive stylus, or other conductive input.

Navigate to Display and Sound

1. Select Menu.
2. Select System tab.
3. Select Display and Sound application.

ZIDXK1X,1749797261526-19-13JUN25

Brightness

Brightness and Color 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



A

A—Day Mode
B—Night Mode



B

PC15319—UN—20MAY13

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



A

A—Day Settings
B—Night Settings



B

PC15320—UN—20MAY13

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



C



D

C—Display Brightness
D—Cab Brightness

PC15321—UN—20MAY13

Depending on mode selected with settings button, adjust display and cab brightness by using plus (+) and minus (-) buttons.

DX,PC,DISP,BRIGHT-19-07APR17

Sound



Display Volume

PC15322—UN—20MAY13

Change display volume by selecting increase (+) or decrease (-) buttons.

DX,PC,DISP,SOUND-19-21DEC15

Multiple Displays



Multiple Displays

PC28690—UN—25AUG22

NOTE: Multiple display support varies by machine. Refer to Generation 4 Display compatibility documentation on the StellarSupport website for specific machine compatibility.

NOTE: Generation 4 OS software updates 2015-1 (8.12.2500-17) and newer disable Precision Ag Applications when a secondary GreenStar display is detected. Disconnect GreenStar display inside cab to operate Precision Ag functions on Generation 4 CommandCenter with these software versions.

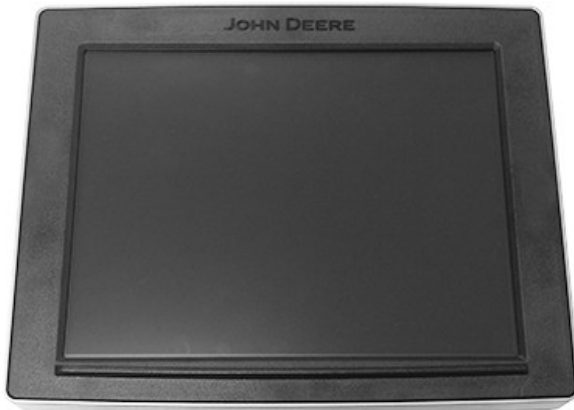
The Generation 4 CommandCenter may be configured to run with the following John Deere displays:

- GreenStar 3 2630 Display
- 4240 Universal Display
- 4640 Universal Display

Some applications, such as AutoTrac, cannot run on both displays at the same time.

Activations do not transfer between displays. Second display must have its own activations to run AMS applications.

Additional hardware is required to use multiple displays. Contact your John Deere dealer for information.



PC23195—UN—18OCT16
4640 Universal Display

Installing a GreenStar 3 or Generation 4 Display

NOTE: Enable Precision Ag Applications (GreenStar or AMS) on one display only. Guidance and other applications do not function properly when multiple displays have Precision Ag Applications enabled.

1. Ensure that key switch and CommandCenter are off.
2. Attach display harness to corner post connector and 26-pin display connector to back of display.
3. Turn on key switch.

4. CommandCenter searches for second display on implement CAN bus for approximately 60 seconds. If CommandCenter was previously in Primary Display Mode, it displays a message stating "Multiple Displays Detected."

5. Select a configuration preset:

Primary Display

- Do NOT use this option in this scenario. This mode is only used if second display is not installed.

Multiple Display – Implement Viewer

- Precision Ag Applications appear on second display.
- ISOBUS implements appear on CommandCenter or second display, depending on the "Next VT display" setting of implement.

NOTE: If ISOBUS implement does not have "Next VT display" function, implement appears on display that starts up first.

Advanced Setup

- Manually set configurations.

6. Cycle key switch off and on to save settings.

When display settings are changed, corresponding changes must be made to the other display.

If Primary Display Mode is selected, either disable GreenStar, task controller, and implement bus virtual terminal (VT) on the other display, or disconnect the other display.

To access multiple display settings on the 4240 or 4640 Universal Display, select Menu button > System tab > Display and Sound application > Multiple Display tab.

To access multiple display settings on the GreenStar 3 Display, select Menu button > Display button > Diagnostics button > Multiple Display tab.

Removing a GreenStar 3 or Generation 4 Display

1. Ensure that key switch and CommandCenter are off.
2. Detach display harness from the 26-pin display connector at back of display.
3. Turn on key switch.
4. CommandCenter searches for second display on implement CAN bus for approximately 2—3 minutes. If CommandCenter was previously in one of the Multiple Display Modes, it displays a message stating "Second Display Not Found."
5. Cycle key switch off and on to save settings.

Removing a Third-Party Display

1. Ensure that key switch and CommandCenter are off.
2. Detach display harness from third-party display.
3. Turn on the key switch.
4. CommandCenter display searches for second display on Implement CAN bus for approximately 2—3 minutes. If CommandCenter was previously in one of the Multiple Display Modes, it displays a message stating “Second Display Not Found.” If the “Second Display Not Found” message does not appear after 3 minutes, skip to step 5.
5. Ensure CommandCenter is in Primary Display Mode and third-party display is unplugged.
6. Cycle key switch off and on to save settings.

ch177nn,1685614567146-19-01JUN23

Multiple Display Settings

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.

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 Generation 4 Display. To enable use of the Original GreenStar Monitor, switch ISOBUS Certification off.

Task Controller

IMPORTANT: Do NOT turn on Precision Ag (GreenStar or AMS) 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 Fileserver 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.

ch177nn,1685614583368-19-23MAY24

Display Calibration

Touchscreen Calibration may be required if the screen does not register a touch in a desired location. The touchscreen is factory calibrated and should not need to be calibrated under normal operation. If the calibration does not resolve the issue, contact a John Deere dealer.

1. Select Menu button > System tab > Display and Sound application > Calibration tab.
2. Select Begin Calibration.
3. A large "X" and instructions are provided to lead operators through the calibration process.
4. Each time "X" is pressed, instructions change and "X" moves to another area of the screen.

NOTE: If the touchscreen malfunctions, a USB mouse may be used. Connect the mouse to the display USB port.

AL70325,00005F8-19-30JUL20

Date and Time

Date and Time



Date and Time

PC28691—UN—25AUG22

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

ct47125,1663943359087-19-26SEP22

3. Select Done to apply changes or Cancel to return to the previous page without applying changes.

DX,PC,DATE,DATE-19-21DEC15

Change Current Time



A



B

PC15316—UN—15MAY13

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.

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

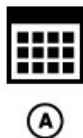
1. Select a continent or ocean and select Next.
2. Select a country and select Next.
3. Select a time zone and select Next.
4. Confirm selected time zone and select OK.

Time Format

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

DX,PC,DATE,TIME-19-21DEC15

Change Current Date



A



B

PC15315—UN—15MAY13

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.

Language and Units

Language and Units



PC28692—UN—25AUG22

Language and Units

Language and Units is used to change Language, Number Format, and Units of Measurement.

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

Navigate to Language and Units

1. Select Menu.
2. Select System tab.
3. Select Language and Units application.

ct47125,1663944930163-19-26SEP22

Language and Units Settings

Display

Select Language, Number Format, and Units of Measurement from list boxes.

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:

- Number Format
- Distance
- Area
- Volume
- Mass
- Temperature
- Pressure
- Force

Saving Settings

After new settings are selected, select Save button. Display must reboot to apply changes.

DX,PC,LANG,SETTINGS-19-21DEC15

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

Generation 4 display software and help files are organized into packages. Each package is listed individually on Installations and Updates tab and Version Information tab.

Generation 4 Operating System



PC28694—UN—25AUG22

- Contains display operating system and basic applications.

Generation 4 Operating System Help



PC28695—UN—25AUG22

- Contains help files for display applications.

AMS Applications



PC28808—UN—20SEP22

- Contains display software.

Machine Applications



PC28817—UN—20SEP22

- Contains Machine software. A John Deere dealer with Service ADVISOR is required to install package.

Machine Applications Help



PC28818—UN—20SEP22

- Contains help files for machine applications. Package may be installed without Service ADVISOR.

NOTE: Onscreen Help packages include each language that the display supports.

ch177nn,1685614648442-19-01JUN23

Update Display and Control Unit Software

Software updates are periodically released for Generation 4 Displays to provide enhancements and performance improvements. These updates are managed by a desktop application called Software Manager.

NOTE: John Deere Software Manager requires 32-bit application support.

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 the display USB port.



PC23932—UN—21MAR17

A—Install Software Button

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 has been installed. A green check mark (B) is displayed when package installs successfully.

7. Message displays when software update is finished. Some software packages require a reboot to finish installation. Select Reboot button to restart display.
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. Message displays when software update is finished. Some software packages require a reboot to finish installation. Select Reboot button to restart display.

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.

Proximity Programming via Wireless Streaming

NOTE: For proximity programming via wireless streaming, the computer should be in close proximity to the machine.

Proximity programming via wireless streaming is available through Service Center, John Deere Operations Center, and John Deere Property 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, John Deere Operations Center, or John Deere Property 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.

2. At the computer, login to Service Center, John Deere Operations Center, or John Deere Property

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 the desired software update and select Queue For Remote.
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 a software package fails to install, system rolls back all software to version before update started.

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 when performing the display system recovery procedure:

1. Connect the USB drive to the computer.
2. Select My Computer.
3. Select Local disk C.
4. Select sds.
5. Select DisplayDependencies.

NOTE: Do not delete the folder RpmCache.

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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Activations

Use this tab to manage software activations on the display.



PC28697—UN—25AUG22

Details Button

StellarSupport.com requires display serial number, challenge code, and may require a confirmation code in order to generate a code. Select Details button to find this information.

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



PC28698—UN—25AUG22

Enter Code Button

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



PC28699—UN—25AUG22

Online Activations

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.

AL70325,000056E-19-26SEP22

Service ADVISOR Remote

Service ADVISOR Remote



ISOBUS VT

PC16682—UN—18MAR13

Service ADVISOR Remote is available in the ISOBUS VT application.



ISOBUS VT Menu

PC15293—UN—18MAR13

1. Select Menu button within ISOBUS VT.



Remote Software Updates

PC17281—UN—10SEP13

2. Select Remote Software Updates.

Theory of Operation

Service ADVISOR is a diagnostic tool used by John Deere dealers to perform diagnostics as well as updates to machine settings and software. Dealers can access diagnostic trouble codes and diagnostic addresses, create readings and recordings, and program controllers. This technology consists of both software and hardware. Technicians attend a minimum of 8 hours of training to become certified in utilizing this tool.

Service ADVISOR Remote (SAR) is a function of Service ADVISOR that allows the dealer technician to connect to a SAR enabled machine via the JDLink network to remotely access diagnostic trouble code information and record diagnostic data, as well as to remotely program controllers on SAR-enabled machines.

Similar to software (payload) updates in the computer industry, SAR enables John Deere to remotely deliver updated software via the JDLink hardware onboard. Remote programming gives John Deere the ability to update software to enhance the performance of the machine. This capability can be used to reprogram most machine controllers. The user actively participates with the dealer in this process by both downloading the software update and installing the software update.

NOTE: Some vehicle controllers may not be compatible for SAR reprogramming.

Vehicle Compatibility

NOTE: If equipped, Users and Access application provides capability to unlock, partially lock, or lock operator access to specific components. This includes the ability to download and install software updates. Please refer to Users and Access for more details.

For a current list of approved vehicles, please contact a John Deere dealer or visit StellarSupport.com.

ch177nn,1685616589331-19-01JUN23

Vehicle Reprogramming



PC20419—UN—13NOV15

Software Update Available

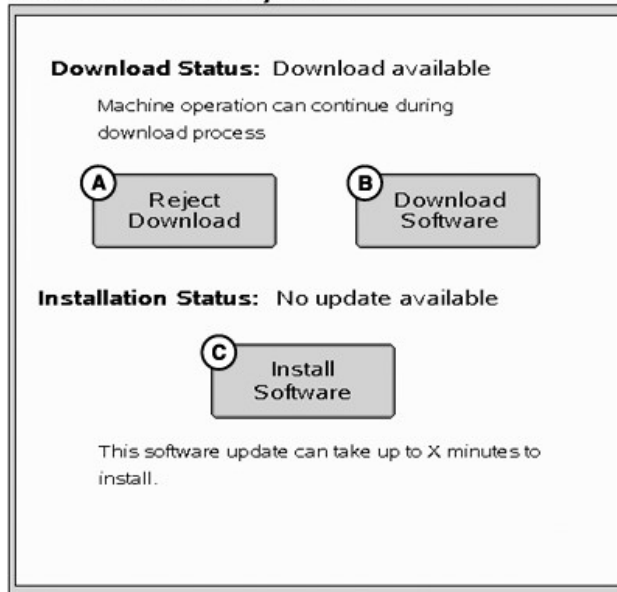
A—Accept Button
B—Cancel Button

With Service ADVISOR Remote (SAR), dealers can send new software to a machine to update control units. Once the dealer sends the software, a message appears on the display stating that there is new software available. Press Accept button (A) to display software updates page.

If the Cancel button (B) is selected, access the page by selecting Remote Software Updates from ISOBUS VT menu.

Download Updates

Remote Software Updates



PC17279—UN—10SEP13

Remote Software Updates

- A—Reject Download Button
B—Download Software Button
C—Install Software Button

On the Remote Software Updates page, the operator can either reject (A) or download (B) the new software. Press the Download Software button to start the download process. This process continues in the background and normal machine operation can continue.

Install Updates



PC20420—UN—13NOV15

Update Ready for Install

- A—Accept Button
B—Cancel Button

Once the software has been downloaded and it is ready for installation, a message appears on the display. Press the Accept button (A) to go to the Remote Software Updates page.

Software installation can take up to 40 minutes. Press the Cancel button (B) to update the software at a later time.



PC12856—UN—07SEP10



PC12672—UN—28JUN10

On the Remote Software Updates page, press the Install Software button to begin the installation process.

Once prompted, accept the terms and conditions and then follow the on-screen instructions.

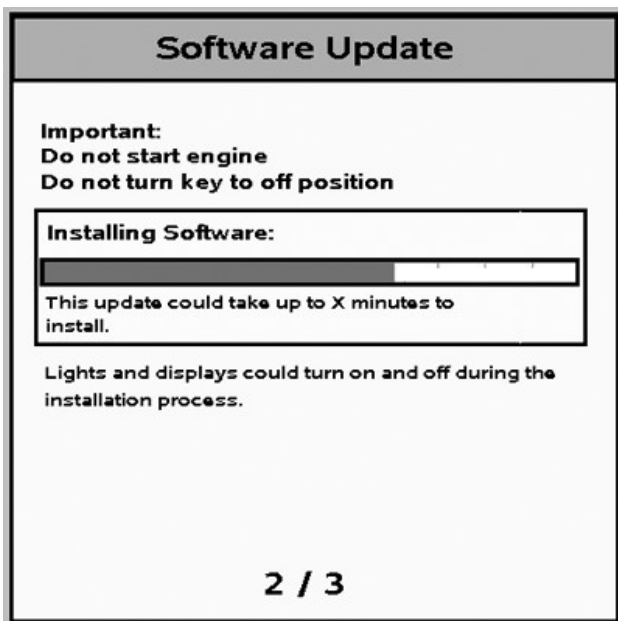
CAUTION: Avoid the risk of injury. Ensure that the vehicle is in a safe location and configuration before reprogramming. Some vehicle functions, including lights, may become inoperable during reprogramming. Do not reprogram near public roadways or in active work sites.



PC17630—UN—10SEP13

If a Generation 4 Display update is included with the software download, the display is updated first. When complete, a message appears stating "Software successfully installed" and the display reboots.

Once display is updated, control unit update begins.



PC12857—UN—07SEP10



PC13582—UN—09MAY11

If there is a problem during the install process, the system tries a second install. If the second attempt fails, contact your John Deere dealer.

ch177nn,1685616589239-19-28JUN23

Troubleshooting — Reprogramming

Symptom

Problem

Solution

Accessory Power Lost

Engine started or key turned off.

Do not start engine or remove power while software updates are being installed. Turn key off and return to ON position.

Symptom	Problem	Solution
Voltage Low	The system voltage is too low to proceed with the software installation.	Turn off or remove accessories that are unnecessary. Check battery voltage and recharge battery if necessary.
Communication Fault	The software installation cannot be completed because of a communications fault.	Turn key off and then back to on. Then retry software installation. Contact a John Deere dealer if communication cannot be established.
Remote Software Updates button is not on display. <i>NOTE: Remote Software Updates should be available at all times, whether there is a payload or not.</i>	Cannot access Remote Software Updates page on the display.	Check harness and connections to MTG.

ch177nn,1685616608661-19-01JUN23

Users and Access

Users and Access



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.

Navigate to Users and Access

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

AL70325,00005D2-19-26SEP22

User Profiles



A—Administrator Profile
B—Operator Profile

PC28701—UN—25AUG22

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.

ct47125,1663953810525-19-26SEP22

Access Groups

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

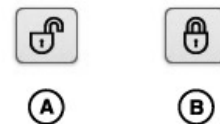
Full Access Group

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.

AL70325,000057B-19-26SEP22

Layout Manager

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 Generation 4 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.

AL70325,0000617-19-27SEP22

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

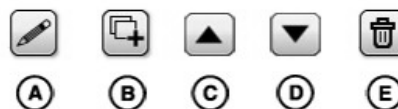


A—Create New Set
B—Change Active Set

PC28705—UN—25AUG22

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



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

PC28706—UN—25AUG22

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.

AL70325,000060B-19-27SEP22

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.

AL70325,0000618-19-27SEP22

Shortcut Bar

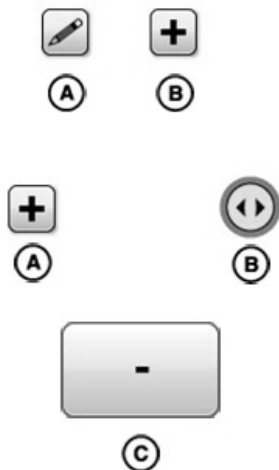


PC23265—UN—31OCT16

Shortcut Bar

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.



PC28707—UN—25AUG22

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).

AL70325,000060E-19-27SEP22

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

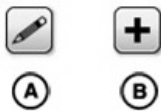
Select the Create New Run Page button to create a new run page.

AL70325,000060C-19-27SEP22

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



A—Edit Button
B—Add Module Button

PC28707—UN—25AUG22

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.

cl47125,1663959646625-19-27SEP22

Navigate Run Pages on Main Page



A—Title Bar
B—Next and Previous Run Page Buttons
C—Finger Swipe

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 and right across the display to cycle through run pages.

Navigation Bar Shortcut Button



D—Navigation Bar Shortcut Button

PC17359—UN—03DEC13

Select right arrow (D) below display in CommandCenter Navigation Bar.

ch177nn,1685616646910-19-01JUN23

Settings Manager

Settings Manager



PC28715—UN—25AUG22

Settings Manager

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.

Saved configurations can be imported and exported using the File Manager application.

Import and export of configurations is limited to:

- Profile name
- Run pages
- iTEC settings
- John Deere ISOBUS pulled-type sprayer settings

ch177nn,1685616681655-19-01JUN23

Equipment Manager

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.

AL70325,000054E-19-25APR23

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.

AL70325,00005DB-19-04AUG20

Implement Profile

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

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
- 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.

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

Automatic Detection of Profile Settings

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 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 Implement 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 and documentation, 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**

Inline 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**

Inline 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 (John Deere VT Implements)**

Inline 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.

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

AutoTrac Guidance

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.

ch177nn,1685616767892-19-01JUN23

Manual Guidance

Information about guidance tracks and operating in each Tracking Mode is given later in SET GUIDANCE TRACK and in tracking mode sections.

After creating a guidance track, drive machine onto track. The closest track is highlighted with a thicker white line. Off Track error distance is shown in the path accuracy indicator. This number shows the distance from machine to closest track. Error number will count up until machine reaches point halfway between two tracks. After reaching midpoint, error number will count down as machine approaches next track.

Track number is displayed below the path accuracy indicator and is automatically updated by the system as a new track is approached. Track number changes when machine is half way between two tracks. Tracking Tones alert the operator when machine is close to a track. Adaptive Curves does not display track numbers.

HC94949,00003A0-19-25SEP13

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.

HC94949,000039F-19-23SEP13

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.

HC94949,00003AD-19-02OCT13

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.

ch177nn,1685616786842-19-01JUN23

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.

HC94949,00003AE-19-23SEP13

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.

AL70325,0000550-19-06SEP19

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. Reference Onscreen Help for information about creating tram lines.

AL70325,0000551-19-12SEP19

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.

AL70325,0000552-19-24SEP19

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.

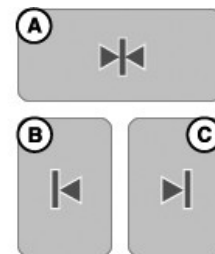
If the selected field has no associated guidance tracks or the operator clears the client, farm, and field selection, the track name changes to "---" to indicate there is no active track. To select a guidance track, select Set Track on the Guidance application main page or select a client, farm, and 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.

NOTE: Guidance Track Selection toggle is always ON when the guidance line type is Coverage Track.

ch177nn,1685616820674-19-01JUN23

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.

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

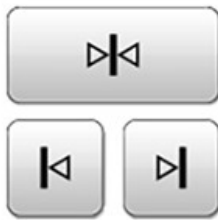
Guidance line shifts are shared on the guidance track list. To receive a guidance line shift, select a different guidance line, then select the original guidance line. A notification displays, stating that a shift has been applied to the shared guidance line.

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

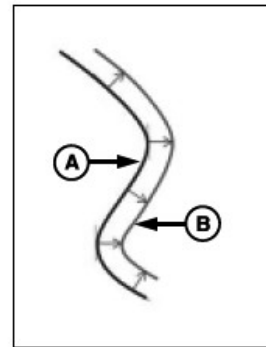
Single-line shift adjusts the position of a single guidance line left or right without affecting the location or shape of the tracks around it. At the end of a turn or when a new track is selected, the shift resets to zero.

Single-line shift module can be added to a run page using the Layout Manager application.

ch177nn,1685616840395-19-01JUN23

Shifting AB Curves

Generation 4 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 Generation 4 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 Generation 4 Display only if the AB curve is not modified while on other display types.

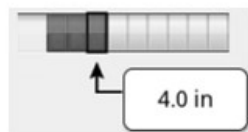
ch177nn,1685616864851-19-01JUN23

right or left that the implement center of rotation is off the guidance track.

ZIDXK1X,1750231750064-19-18JUN25

Lightbar Settings

NOTE: Lightbar is also referred to as Path Accuracy Indicator.



Lightbar Step Size

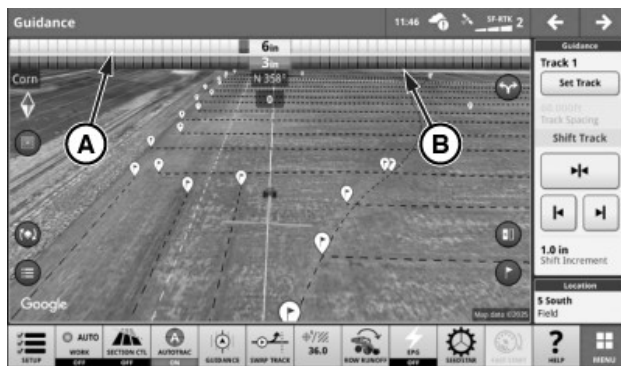
PC28719—UN—25AUG22

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

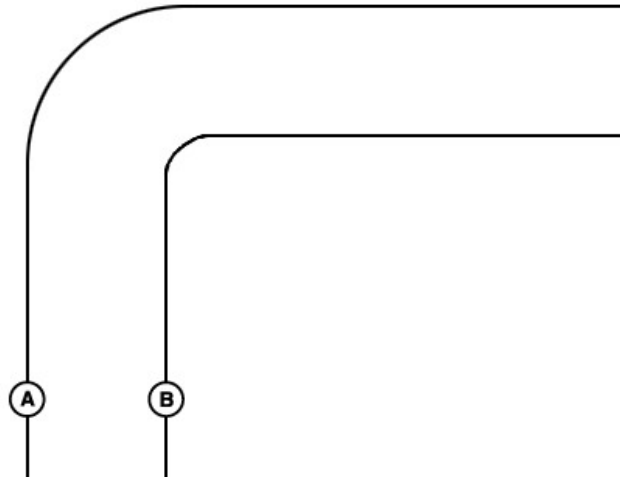
A—Machine Lightbar
B—Implement Lightbar

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.

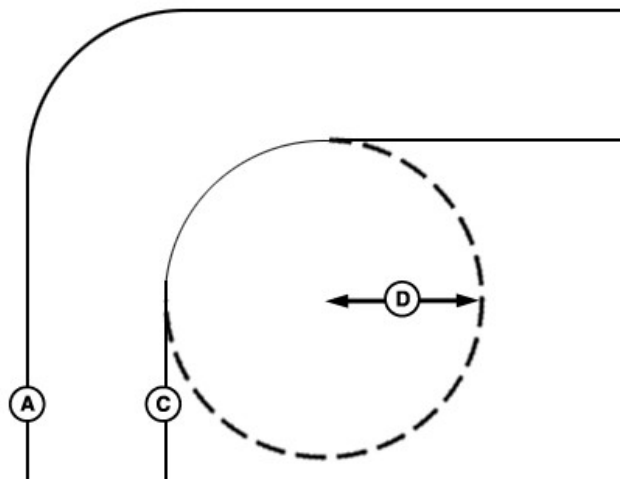
Implement lightbar (B) — Displays the distance to the

Curve Track Settings



Smoothing Tight Turns OFF

PC9529—UN—27OCT06



Smoothing Tight Turns ON

PC9530—UN—27OCT06

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.

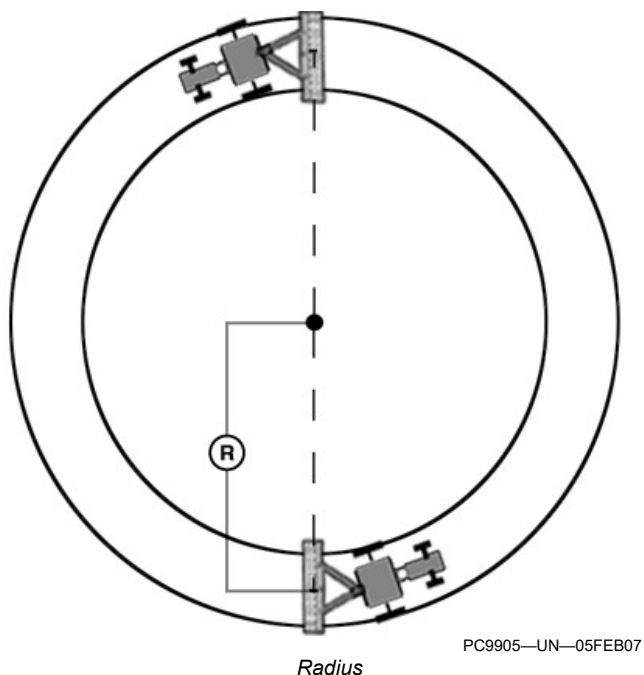
Curve Recording Trigger — Adaptive Curve Track recording can be triggered in three ways: Manually Recording, AutoTrac Mode and Work State mode.

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,1750229032945-19-26JUN25

Circle Track Settings



PC20395—UN—08DEC14

Distance to Center Point

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.

CZ76372,0000739-19-08DEC14

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.

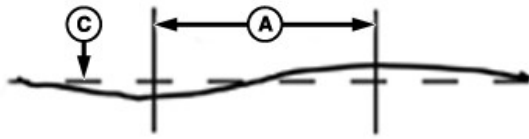
To maintain row width between passes, set Track Spacing the same as Working Width. To ensure some overlap for tillage or spraying, or to account for some GPS drift, make the Track Spacing less than the Working Width.

AL70325,00005DC-19-23JUL20

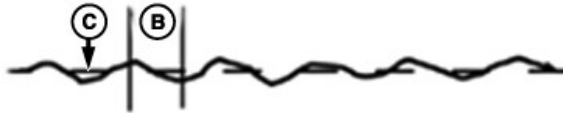
Steering Sensitivity

Steering sensitivity adjusts aggressiveness of AutoTrac steering system. A high steering sensitivity setting is more aggressive. This setting allows system to handle tough manual steering conditions, such as integral implements with a heavy draft load. A low steering sensitivity setting is less aggressive, and allows system to handle lighter draft loads and higher speeds.

Enter a number from 50 through 200. Default value is 70. Value may change based on steering controller



PC17128—UN—18JUN13



PC17129—UN—18JUN13

A—10 Second Interval
 B—1 Second Interval
 C—Track Error Pattern

- **Too Low:** If steering sensitivity is too low, a slow wandering track error pattern (C) takes approximately 10 seconds (A) to go from side to side. If excessive track error is occurring, increase steering sensitivity by small increments until desired accuracy is achieved.
- **Too High:** Setting steering sensitivity to highest level will not result in maximum tracking accuracy. If steering sensitivity is too high, excessive front wheel motion will be observed which reduces accuracy and causes unnecessary front axle component wear. At extreme high levels, machine motion will become large enough to cause steering sensitivity to be momentarily changed to default level. Wheel motion to watch for when determining if aggressiveness is too high occurs at an interval of approximately 1 second (B) from side to side. If excessive wheel motion is observed, lower steering sensitivity by small increments until desired performance is achieved.

NOTE: It is normal to see a momentary track error when encountering a large rut, furrow, or implement load change. Proper steering sensitivity adjustment will help minimize track error.

Use Help Center onscreen help for more information about steering sensitivity.

HC94949,0000377-19-26SEP13

Set Guidance Track



PC28720—UN—25AUG22

A—Set Track Button
 B—Add Guidance Track
 C—Filter/Sort Guidance Tracks

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.

HC94949,00003B0-19-24MAY24

Guided Line Acquisition

NOTE: Guided Line Acquisition requires an AutoTrac 2.0 control unit. Verify the control unit type on the AutoTrac Health page on the System Diagnostics tab in the Diagnostics Center application.

NOTE: Guided Line Acquisition is not available for all machines.

Guided Line Acquisition displays a white dotted line to represent the most efficient way to guide the machine onto the guidance line. The path to the guidance line is determined by the speed, machine position, wheel angle, and heading at the time that the resume switch is selected. The dotted line continuously updates as the machine moves with AutoTrac in the Configured (2/4 pie) or Enabled (3/4 pie) state. When the machine acquires the guidance line, the dotted line disappears.

NOTE: Guided Line Acquisition does not work while operating in reverse.

ch177nn,1685616932700-19-01JUN23

Straight Track



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 track) 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.

This feature is only supported when creating new Straight Track guidance lines. All methods for creating a new straight track are supported, but A+B method is recommended when creating guidance lines based on crop rows or beds that were previously made with a competitive system. Using the same A+ Heading as a competitive system will not result in desired performance.

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.

ch177nn,1740731168324-19-28FEB25

Quick Line



Quick Line Softkey

PC28722—UN—25AUG22

Use Quick Line to create a guidance track on the run page with minimal button presses. The track is named automatically with no setup information.

To save the Quick Line, open guidance track list, select edit button, and rename the track.

Quick Line methods:

- Quick Line-Auto B – Automatically creates the B-point after traveling 15 m (49.2 ft).
- Quick Line-A+B – Manually create an A+B guidance track.

Use Layout Manager application to add Quick Line-Auto B or Quick Line-A+B shortcut key to the shortcut bar.

AL70325,000050D-19-27SEP22

Guide on a Straight Track

When operating straight 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.

Turn predictor displays distance to end of pass in the top right portion of the guidance view. Distance counts down to predicted turn and tones sound when machine is 10 seconds from intersecting turn point, and again when predicted turn point has been reached.

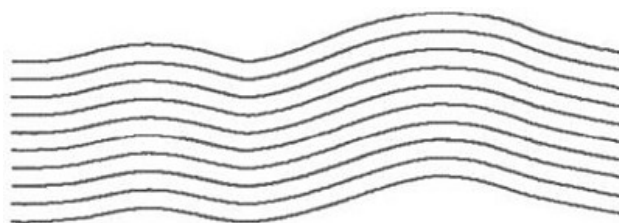
CZ76372,0000737-19-08DEC14

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.

ch177nn,1740731212961-19-28FEB25

Guide on an AB Curve

The closest track is highlighted with a thicker white line.

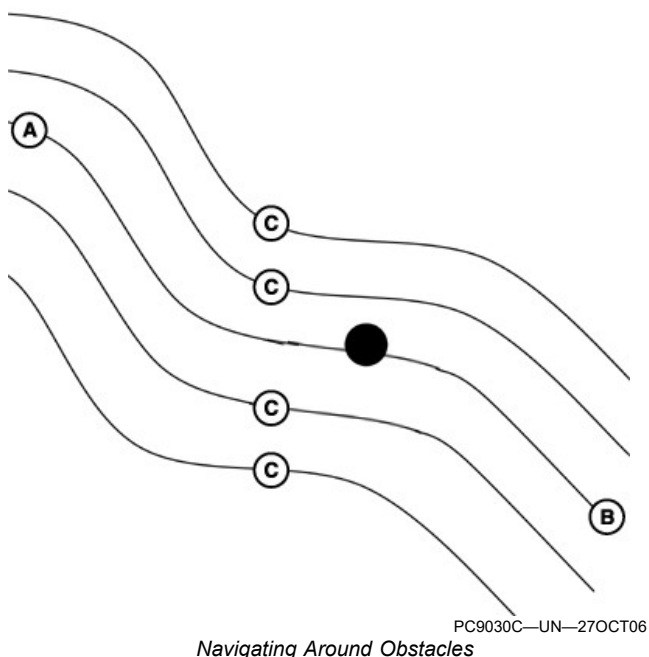
Track number is displayed under path accuracy

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.

CZ76372,0000736-19-08DEC14

Record a Straight Path or Navigate Around Obstacles



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.

HC94949,00003C3-19-13SEP13

Adaptive Curves



Adaptive Curves

PC28725—UN—30AUG22

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.

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.

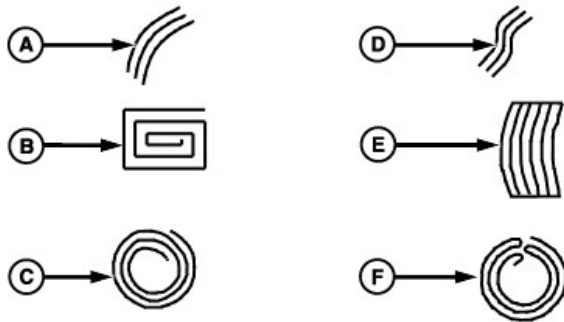
The operator can either manually drive on the generated guidance lines using parallel tracking or engage AutoTrac once the initial pass is recorded and the propagated path is displayed.

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.



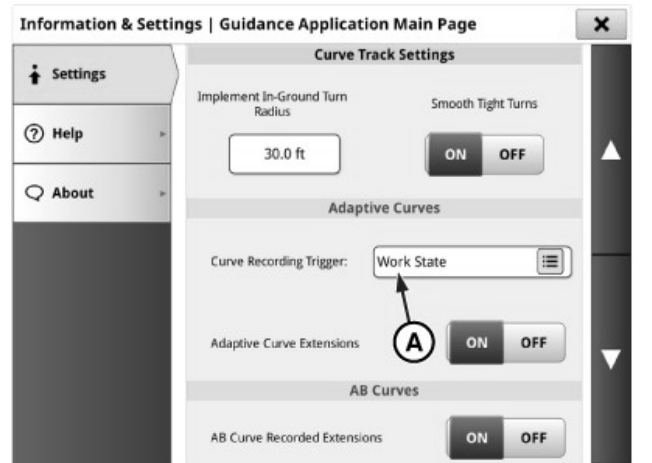
PC9032—UN—17APR06

- A—Simple Curve
- B—Boxed
- C—Spiral
- D—S-Curve
- E—Race Track
- F—Circle

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

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Guide on an Adaptive Curve

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.

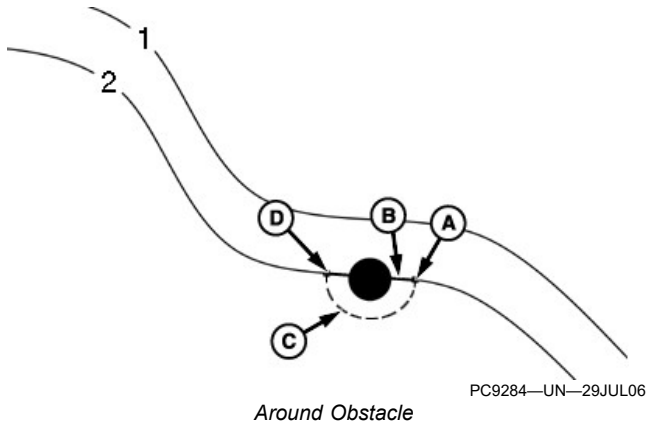
NOTE: Track spacing for Adaptive Curve Track data is constant. If a different implement width is used when returning to the field, new data must be recorded.

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.

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Record a Straight Path Within an Adaptive Curve



3. Select the Curved Line button to finish recording the straight line and resume curved path recording.

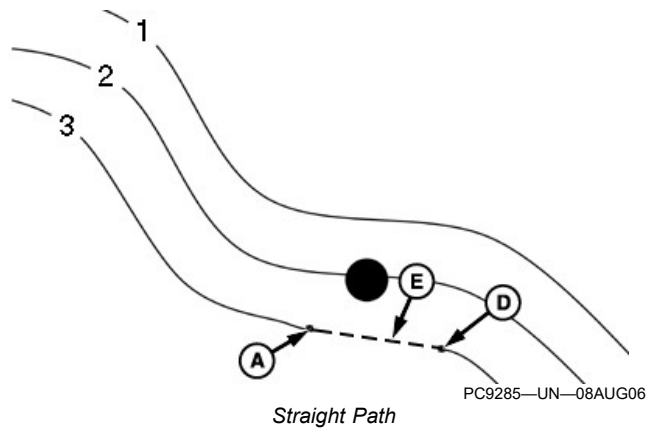
This procedure can be helpful when there is a long straight section of path or when navigating around obstacles.

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.

HC94949,0000395-19-13SEP13

Navigate Around Obstacles



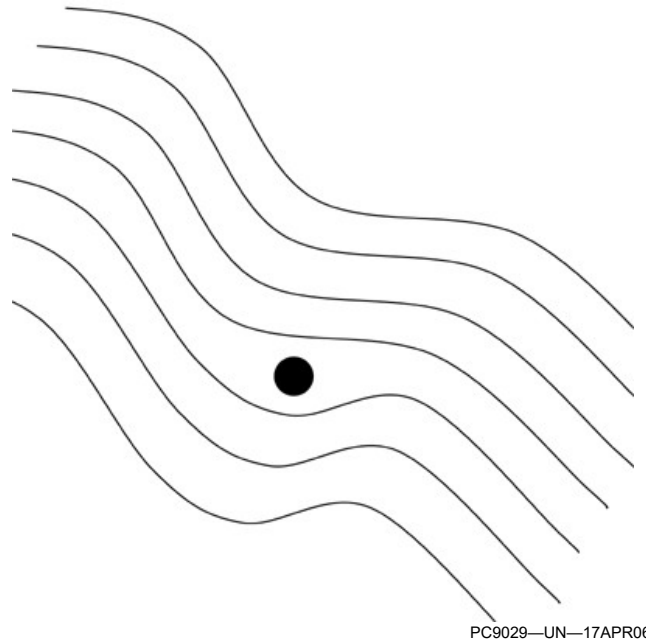
PC15311—UN—09APR13

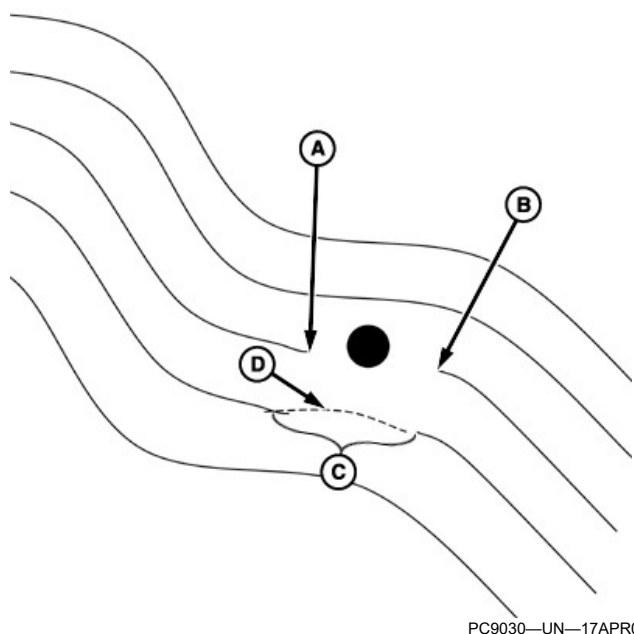
Curved Line and Straight Line Buttons

- 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.





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.

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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
- John Deere Windrower [only AutoPath (boundaries) is compatible]

NOTE: AutoPath documentation is not available when ISOBUS Documentation Mode is enabled in Work Setup settings.

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:

- StarFire Receivers using SF3 signal level or greater on both the machine and the implement.

NOTE: Verify that TCM is calibrated on all receivers (machine and implement).

NOTE: Shared signal can be used to record data.

- A Generation 4 CommandCenter or 4640 Universal Display, or G5 CommandCenter or G5^{Plus} Universal Display.

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.
- The 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 annually planted row crop.

NOTE: AutoPath does not support perennial crops.

Generating AutoPath (Rows):

NOTE: Only one AutoPath file can be imported per field. If a second AutoPath file is imported, the older file is overwritten.

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.



Default to this Method

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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 machine 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.

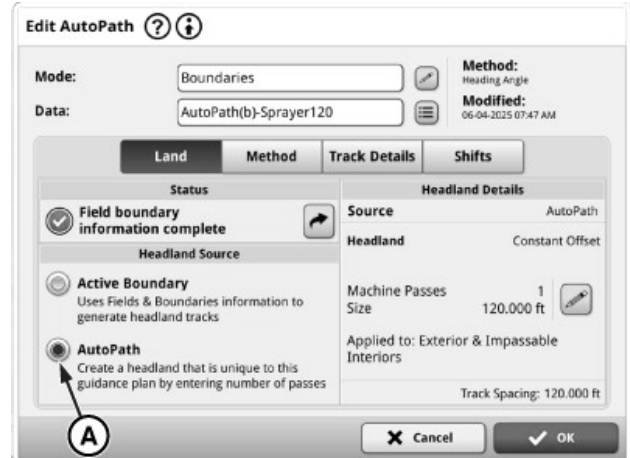
Create Headlands:

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.



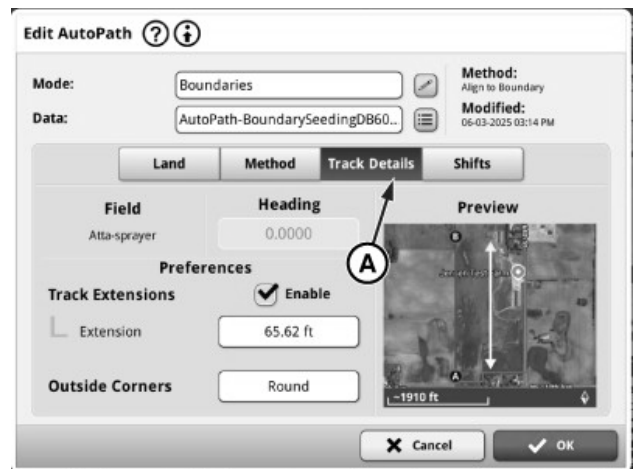
PC676263—UN—17JUN25

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

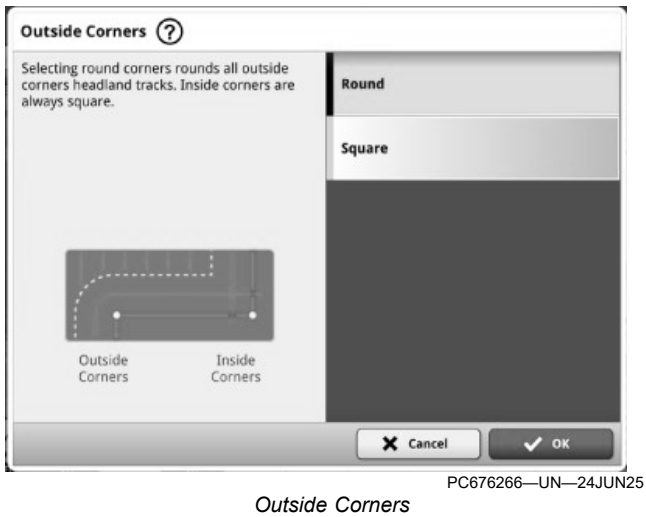
Track Details Page

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.



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).

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AutoPath Setup

For best accuracy when using AutoPath, machine, implement, and display application setup is recommended.

Create Source Operation

Planting as Source Operation

- Measure and enter implement dimensions in Equipment Manager application.

NOTE: Use Virtual Implement on non SeedStar 2 and legacy implements.

- Set up a Virtual Implement profile if necessary.
- Enter implement width in rows.

- Install implement receiver and enter receiver dimensions in the Equipment Manager application.
- Establish SF3 or real-time kinematic (RTK) implement receiver correction (shared signal compatible).
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.

NOTE: Accurate terrain calibration module (TCM) calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine and implement TCM.
- Optimize Implement Guidance pass to pass accuracy. (recommended)
- Define the Organization, Client, Farm, and Field.
- Set operation type to planting.
- Set crop type to an annually planted row crop, such as corn.
- Create AutoTrac guidance lines. Manually driven guidance lines may be used, but are not recommended.

Tillage as Source Operation

- Measure and enter implement dimensions in Equipment Manager application.

NOTE: Use Virtual Implement on non SeedStar 2 and legacy implements.

- Set up a Virtual Implement profile if necessary.
- Enter implement width in rows.
- Install implement receiver and enter receiver dimensions in the Equipment Manager application.
- Establish SF3 or RTK machine receiver correction.
- Establish SF3 or RTK implement receiver correction (shared signal compatible).
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.

NOTE: Accurate TCM calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine and implement TCM.
- Optimize Implement Guidance pass to pass accuracy. (recommended)
- Define the Organization, Client, Farm, and Field.

NOTE: Tillage should be used as a secondary operation to define the number of rows and row spacing. Implements with a Rate Controller and older Air Carts do not support number of rows and row spacing.

- Set operation type to application and tillage.
- Create AutoTrac guidance lines. Manually driven guidance lines may be used, but are not recommended.

Utilize Source Operation

Planting with Tillage Source Operation

- Measure and enter implement dimensions in Equipment Manager application.

NOTE: Use Virtual Implement on non SeedStar 2 and legacy implements.

- Set up a Virtual Implement profile if necessary.
- Enter implement width in rows.
- Install implement receiver and enter receiver dimensions in the Equipment Manager application.
- Establish SF3 or RTK machine receiver correction.
- Establish SF3 or RTK implement receiver correction (shared signal compatible).
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.

NOTE: Accurate TCM calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine and implement TCM.
- Optimize Implement Guidance pass to pass accuracy. (recommended)
- Define the Organization, Client, Farm, and Field.
- Set operation type to planting.
- AutoPath data is included in the setup file.
- Create guidance lines using AutoPath data.

Post-Planting Application (Self-Propelled Applicator)

- Establish SF3 or RTK machine receiver correction.

NOTE: Accurate TCM calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine TCM.
- Define machine width or track spacing.
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.
- AutoTrac RowSense and/or Vision is equipped. (recommended)
- Define the Organization, Client, Farm, and Field.
- Set operation type to application.
- Set crop type to an annually planted row crop, such as corn.
- AutoPath data is included in the setup file.

- Create guidance lines using AutoPath data.

Post-Planting Application (Pull-Type Applicator)

- Measure and enter implement dimensions in Equipment Manager application.

NOTE: Use Virtual Implement on non SeedStar 2 and legacy implements.

- Set up a Virtual Implement profile if necessary.
- Establish SF3 or RTK machine receiver correction.

NOTE: Accurate TCM calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine TCM.
- Define machine width, track spacing, or attach header.
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.
- AutoTrac RowSense and/or Vision is equipped. (recommended)
- Define the Organization, Client, Farm, and Field.
- Set operation type to application.
- Set crop type to an annually planted row crop, such as corn.
- AutoPath data is included in the setup file.
- Create guidance lines using AutoPath data.

Harvest (Self-Propelled Harvester)

- Measure and enter implement dimensions in Equipment Manager application.
- Establish SF3 or RTK machine receiver correction.

NOTE: Accurate TCM calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine TCM.
- Define machine width, track spacing, or attach header.
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.
- AutoTrac RowSense and/or Vision is equipped. (recommended)
- Define the Organization, Client, Farm, and Field.
- Set operation type to harvest.
- Set crop type to an annually planted row crop, such as corn.
- AutoPath data is included in the setup file.
- Create guidance lines using AutoPath data.

Harvest (Pull-Type Harvester)

- Measure and enter implement dimensions in Equipment Manager application.

NOTE: Use Virtual Implement on non SeedStar 2 and legacy implements.

- Set up a Virtual Implement profile if necessary.
- Install implement receiver and enter receiver dimensions in the Equipment Manager application.
- Establish SF3 or RTK machine receiver correction.
- Establish SF3 or RTK implement receiver correction (shared signal compatible).
- 4600 CommandCenter v2 server or 4640 Universal Display with an Automation 4.0 activation/subscription.

NOTE: Accurate TCM calibration is critical to AutoPath performance. Use the advanced TCM calibration method if possible.

- Calibrate machine TCM.
- AutoTrac RowSense and/or Vision is equipped. (recommended)
- Define the Organization, Client, Farm, and Field.
- Set operation type to harvest.
- Set crop type to an annually planted row crop, such as corn.
- AutoPath data is included in the setup file.
- Create guidance lines using AutoPath data.

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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.

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Circle Track



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.

AL70325,000041F-19-27SEP22

track spacing and shifts. If edge is deleted, guidance lines are created from center outward.

ch177nn,1685617082154-19-01JUN23

Guide on a Circle Track

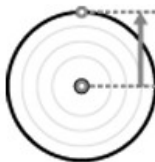
When operating circle track, it is not necessary to drive tracks in a specific order. The closest track is highlighted with a thicker white line.

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.

CZ76372,0000734-19-08DEC14

Circle Track Edge



PC17399—UN—08DEC14

NOTE: Circle Track Edge can only be used on Generation 4 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



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 line outside of the boundary and two lines inside of the boundary. Additional boundary tracks are created as the machine moves into the field.

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.

AL70325,0000454-19-27SEP22

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.

AL70325,0000455-19-06NOV17

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

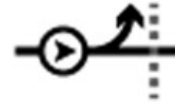
1. Select the Set Track button or select the Next Track run page module.
2. Select a track set from the Guidance Track List page.

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.

AL70325,00005EE-19-21JUL20

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.

AL70325,00005E0-19-08JUL20

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.
- StarFire signal is present.
- The steering control unit has no active faults.
- Machine speed is in range.
- The TCM message is available and valid.
- The machine is in proper operating gear.

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.

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.

ZIDXK1X,1750251383846-19-18JUN25

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:

- Machine has an AutoTrac capable steering control unit.
- Valid AutoTrac Activation.
- A guidance track has been created. See Create Guidance Track later in this section.
- Correct StarFire signal level for AutoTrac activation 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.
- Steering control unit has no active faults.

NOTE: Machine type and software version of steering control unit determines minimum and maximum speeds allowed.

To enable AutoTrac, select Steer ON/OFF toggle. This button disables AutoTrac if selected again.

ch177nn,1685617259334-19-01JUN23

Disable AutoTrac When Not In Use



Settings Icon

PC15305—UN—19MAR13

CAUTION: To avoid death or serious injury, disable guidance system before entering roadways.

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.

ch177nn,1685617259241-19-08JUL25

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.

ch177nn,1685617259095-19-28JUN23

Resume Switch



PC28734—UN—29AUG22

Resume Switch Example



PC20427—UN—28JUL16

AutoTrac Icon

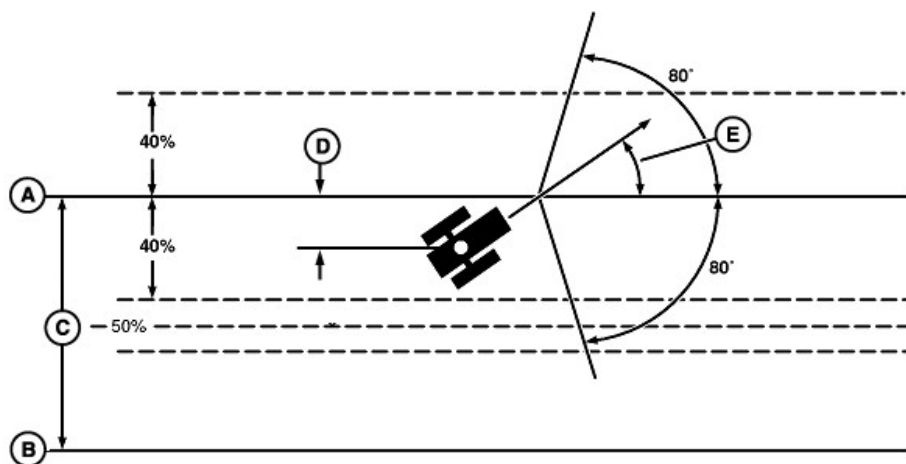
A—Resume Switch

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.

ch177nn,1685617258989-19-01JUN23

Re-Engage AutoTrac on Next Pass



Tracking

PC8866—UN—02NOV05

A—Track 0
B—Track 1 South
C—Track Spacing

D—Off-Track Error
E—Track Heading 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.

In reverse, AutoTrac remains engaged for 45 seconds. After 45 seconds, the machine must be put in a 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.

ch177nn,1685617258751-19-01JUN23

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.

ZIDXX1X,1749792007505-19-08JUL25

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)

ch177nn,1685617258482-19-01JUN23

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 Speeds 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)

Reverse Speed Limits

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 Engaged in Reverse Too Long
702752.23	AutoTrac Engaged 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

ch177nn,1685617258342-19-01JUN23

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.

- Generation 4 CommandCenter or 4640 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).

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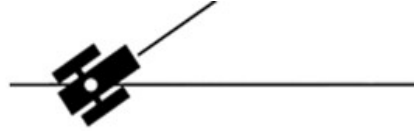
Steering Optimization

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

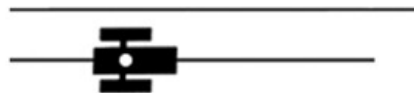


PC16972—UN—22MAY13

Heading Error indicates relationship of the machine direction relative to the current track. Heading Error should be within +/- 1°.

Adjustments may be needed if they are outside of this range.

Tracking Error Meter

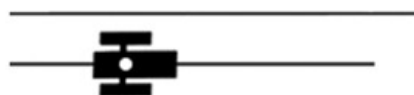


PC16969—UN—22MAY13

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



PC16969—UN—22MAY13

Tracking Error



PC28738—UN—25AUG22

Forward High Setting Icon



PC28739—UN—25AUG22

Forward Low Setting Icon

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



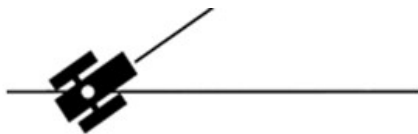
Low Heading Lead

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

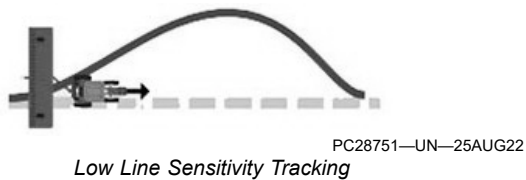
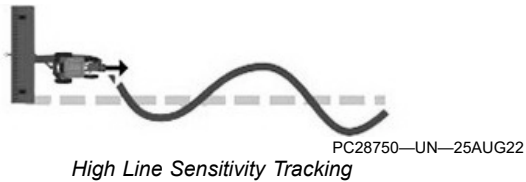
curve in track. This setting affects performance in curve track guidance only.

- 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.

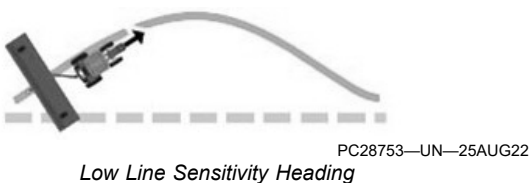
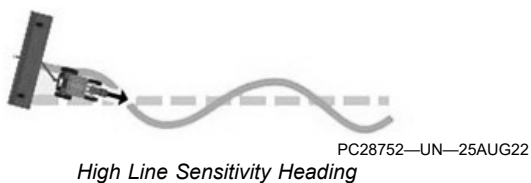
Line Sensitivity Tracking



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.

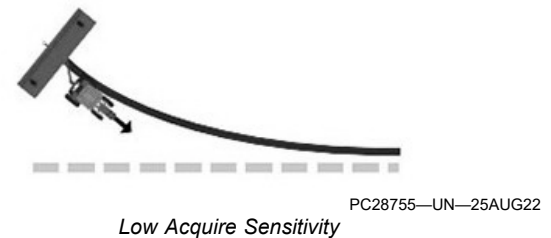
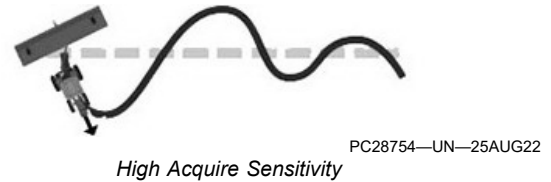
Line Sensitivity Heading



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.

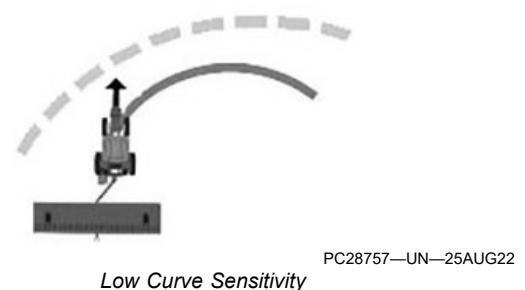
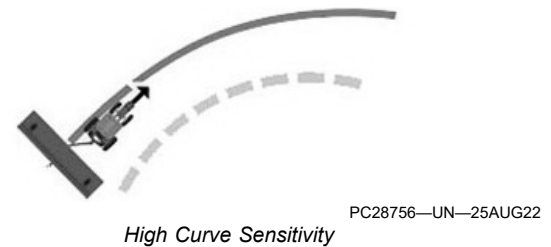
Acquire Sensitivity



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

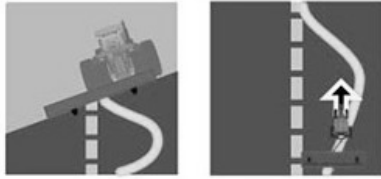


Determines how aggressively AutoTrac responds to a curve in track. This setting affects performance in curve track guidance only.

- Higher settings: Turn machine in a smaller radius (tighter) around curve.

- Lower settings: Turn machine in a larger radius (wider) around curve.

Slope Sensitivity



High Slope Sensitivity

PC28758—UN—25AUG22



Low Slope Sensitivity

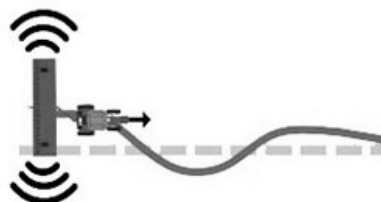
PC28759—UN—25AUG22

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.

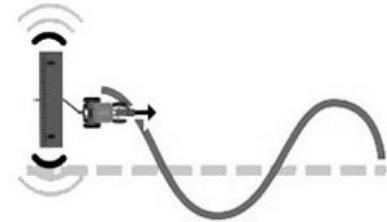
- Higher settings: Machine drives higher on the slope to compensate for an implement that is less resistant to sliding downhill.
- Lower settings: Machine drives lower on the slope to compensate for an implement that is more resistant to sliding downhill.

Slope Response Rate



High Slope Response Rate

PC28760—UN—25AUG22



Low Slope Response Rate

PC28761—UN—25AUG22

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.

ch177nn,1685617257742-19-01JUN23

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

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.



PC28735—UN—25AUG22

System Engaged (green icon)

System is engaged and operating with both row sensors and GPS.



PC28736—UN—25AUG22

No GPS Signal (yellow icon)

System is engaged and operating with row sensor data only.



PC28737—UN—25AUG22

No Row Sensor Signal (orange icon)

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 an AutoTrac guidance activation.

Manual RowSense mode is available in the Advanced Guidance Settings if the following conditions are met:

- A 4600 CommandCenter or 4640 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.

ch177nn,1685617257495-19-01JUN23

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. Adjust steering sensitivity 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 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 100 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.

ch177nn,1685617257238-19-24MAY24

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:

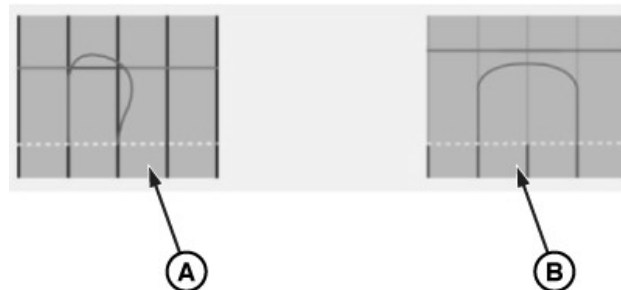
NOTE: Update software to the latest version.

- 4600 CommandCenter Display
- 4640 Universal Display
- G5 Universal Display
- G5 CommandCenter 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.

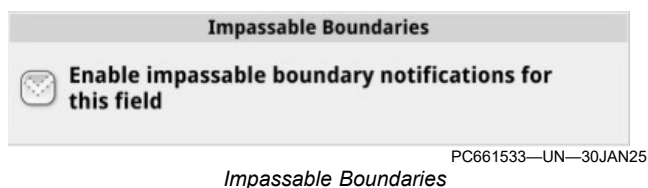
Intelligent Turn Sizing:

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



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

ch177nn,1740727678852-19-28FEB25

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

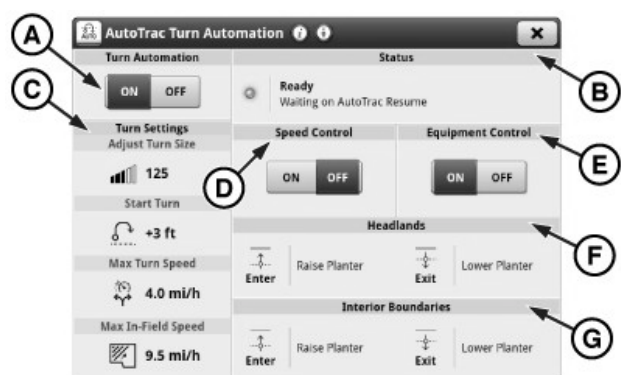
- AutoTrac Turn Automation must be activated.
- Turn Automation must be on.
- iTEC master must be on.

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).

Tractor AutoTrac Turn Automation Settings



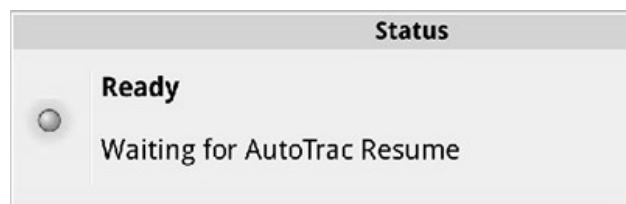
PC620660—UN—24MAY24
Tractor AutoTrac Turn Automation Settings Page

- 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: 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 AutoTrac Turn Automation to run without iTEC setup.

Headlands (F)—Select the text area to modify the triggered sequences for headlands.

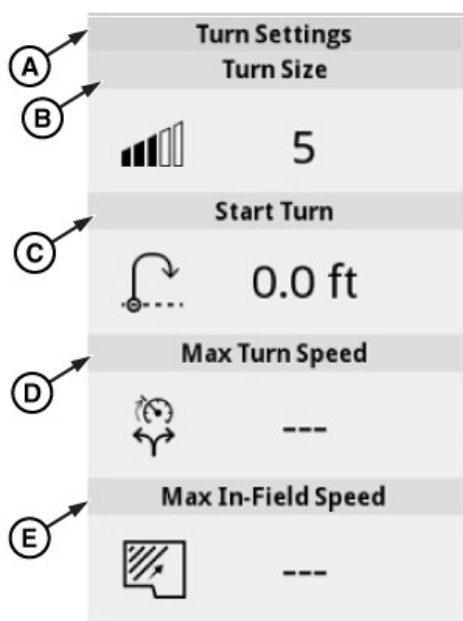
NOTE: If Interior Boundaries is grayed out, it means there are no interior boundaries in the field. An interior boundary must be driven to access the settings.

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)
- 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
- Tow-between air carts
- Multiple implements pulled in series where the work piece is not connected directly to the tractor

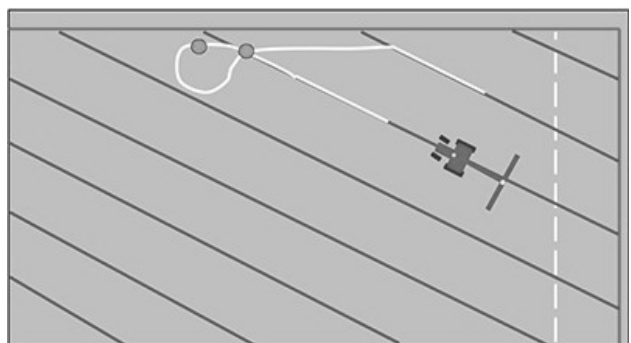
Figure 8 Turns

NOTE: Figure eight turns are enabled in the AutoTrac Turn Automation map legend in the Mapping application.

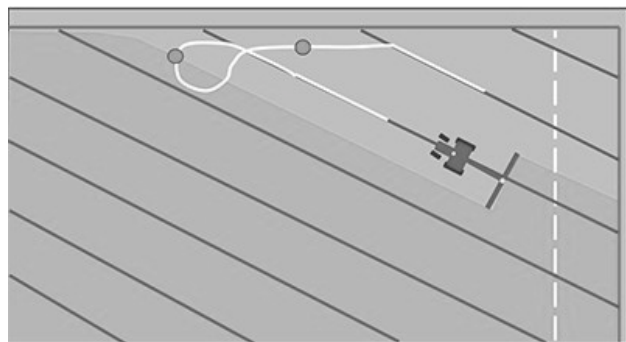
Figure eight turns are used when a field has top/bottom boundaries and angled tracks. The turn is set inside the boundary by half of the implement width to keep the implement inside the boundary. The machine automatically switches to a U-type turn if the angle of the guidance line to headland exceeds 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.



Maximize Coverage on Turns—OFF



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.

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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



A

B

PC29160—UN—01JUN23

Combine AutoTrac Turn Automation Settings

1. **Turn Size (A)**—Adjust the shape of the turn path. A

smaller number will result in a smaller turn, and vice versa.

2. **Start Turn (B)**—Adjust the turn path to begin before or after crossing the headland boundary.

Combine AutoTrac Turn Automation Compatibility

Combine AutoTrac Turn Automation is compatible with the following combines:

John Deere Combines	Model Year
X Series	2021 and Newer
S700 Series	2018 and Newer
S430 and S440 Series	2017 and Newer

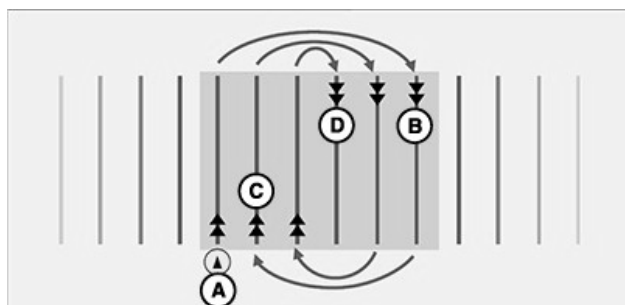
Turn Patterns

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.

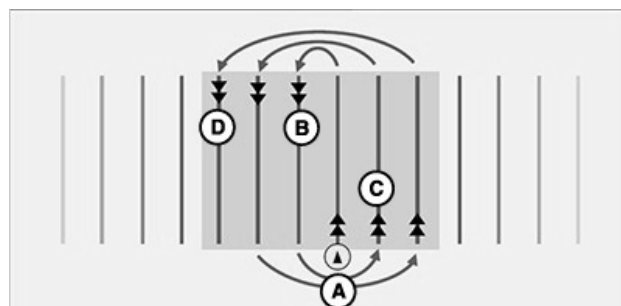


PC29159—UN—01JUN23

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.



PC29158—UN—01JUN23

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.

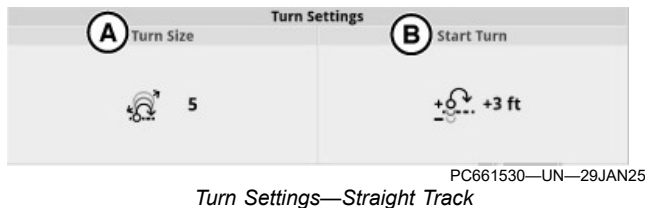
Following functionalities are not available in Sprayer AutoTrac Turn Automation:

- 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.

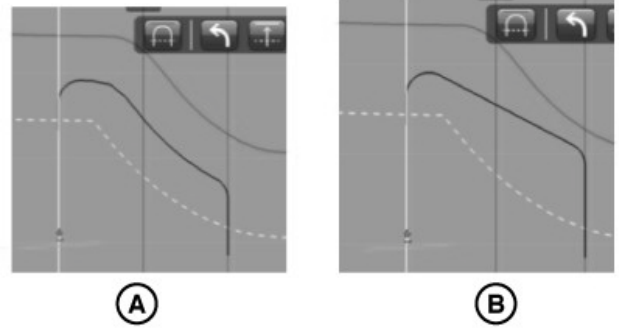
Start Turn (B): Adjust the turn path to begin before or after crossing the headland boundary.

Follow The Headland



Follow The Headland

Follow the Headland is an advanced setting only available when using the Straight Track guidance mode.



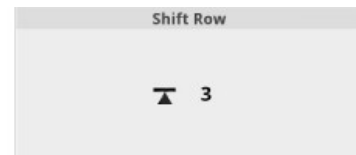
Follow The Headland

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)



Shift Row

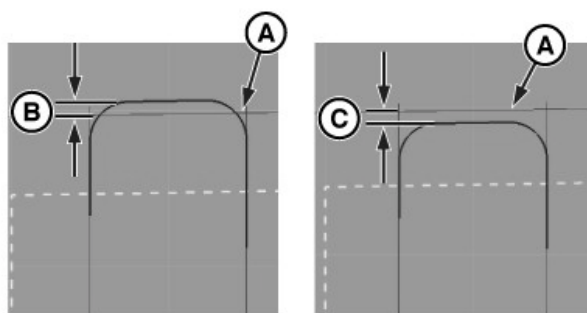
When using AutoPath (rows), the Shift Row setting moves the specified row(s) from current AutoPath headland pass. Shift Row allows to choose the direction of shift (in or out) and the number of rows to move.

Turn Settings—AutoPath (Boundaries)



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.

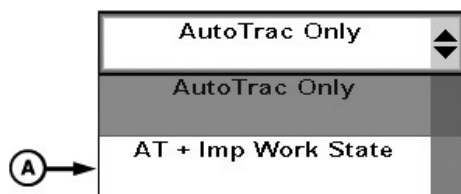
ch177nn,1740727609880-19-28FEB25

Troubleshooting

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)

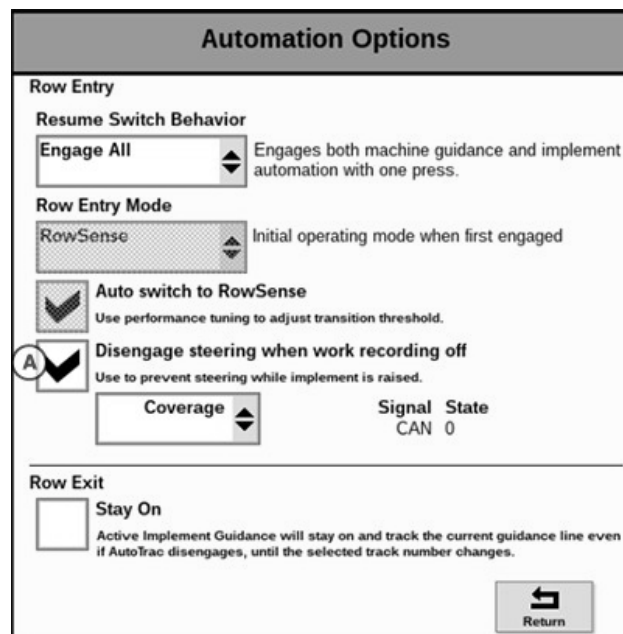


PC27869—UN—28FEB20

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-)



PC28809—UN—20SEP22

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).

ch177nn,1685617395656-19-01JUN23

Machine Sync

Machine Sync



PC28763—UN—25AUG22

Machine Sync

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 modular telematics gateway (MTG) 4G LTE 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 4600 CommandCenter or a 4640 Universal Display.
- Machine must have a StarFire 6000, or StarFire 7000 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 a Machine Sync activation.

Follower Requirements

NOTE: Update software to the latest version.

- Machine must be a tractor.
- Machine must have a 4600 CommandCenter or a 4640 Universal Display.
- Machine must have a StarFire 6000, or StarFire 7000 Receiver with Shared Signal.
- Machine must have an MTG 4G LTE.
- Machine must have a supplemental antenna kit installed.
- Machine must have a Machine Sync activation.
- Machine must have a tractor implement automation activation.

NOTE: Contact your John Deere dealer for a tractor implement automation activation.

- If the leader is either a tractor or a self-propelled forage harvester, machine must have an MTG 4G LTE supplemental antenna kit installed.

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: In order to avoid machine collisions, 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.

Leader

- Verify that Sharing is toggled on in order to utilize In-Field Data Sharing features.
- Verify that all Generation 4 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 Generation 4 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 Generation 4 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

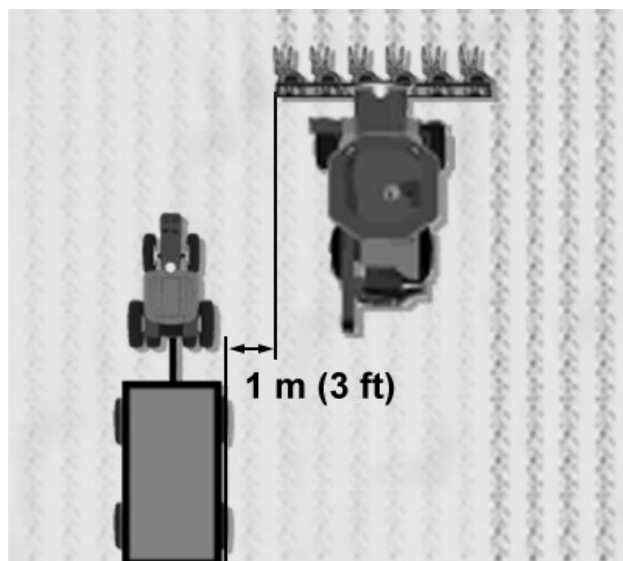
Machine Sync Is Not Compatible with the Following:

- 4600 CommandCenter version 1 processor
- Original GreenStar, GreenStar 2 1800, and GreenStar 2 2600
- GreenStar 3 2630 Display when used with a 4600 CommandCenter
- MTG 2G and MTG 3G
- Machine communication radio (MCR)
- Original StarFire, StarFire 300, and StarFire iTC Receivers

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 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 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
- 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



PC28765—UN—25AUG22

Set/Engage Toggle

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

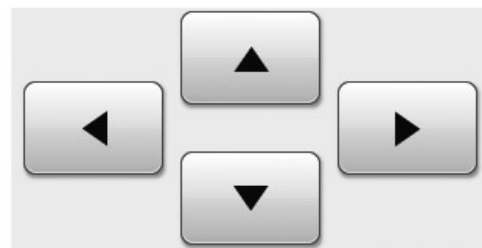
The home point/home points set on one side of the U-shape zone will be mirrored to the other side automatically when the follower has moved to the other side. This feature is activated when the following functions are enabled in the Machine Sync settings:

1. U-Shaped Operational Zone Override is enabled.
2. Controlled Traffic Mode is enabled.
3. Multiple Home Points is enabled.

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



PC28082—UN—28JUL20

Nudging Buttons

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.

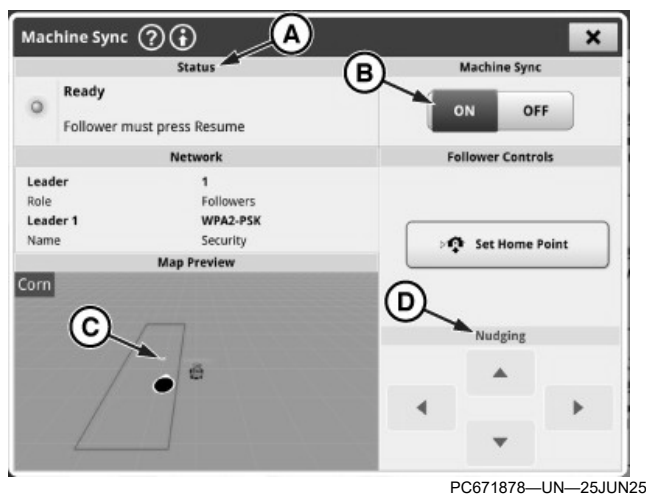
Auto Unload



Auto Unload 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.

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Operating Machine Sync—Leader



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.

NOTE: 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

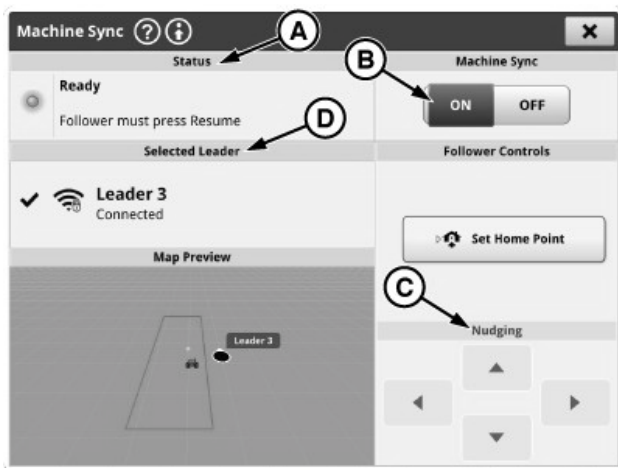
is on the left-hand side of the machine only. U-shaped operational zone allows for interior width and interior length to be adjusted in the leader's Information and Settings.

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



PC671877—UN—09JUN25

- 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.

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.

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Fields and Boundaries

Field and Boundary Sets



PC28766—UN—25AUG22

Field and Boundary Sets Application

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 Field and Boundary Sets 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 and Boundary Sets

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

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Manage Clients, Farms, and 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 Generation 4 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.

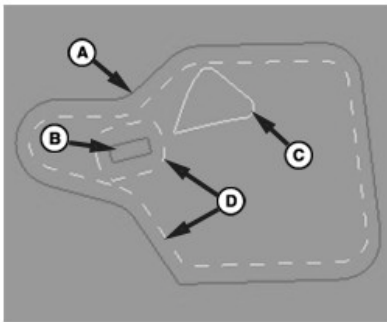
Delete Names

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.

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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 an autonomy boundary requires the following:

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

Autonomy - Capable Boundary

Autonomy capable boundary is a high quality boundary which contains repeatability attributes and is recorded to meet the safety standards set for the Autonomy operation.

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

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

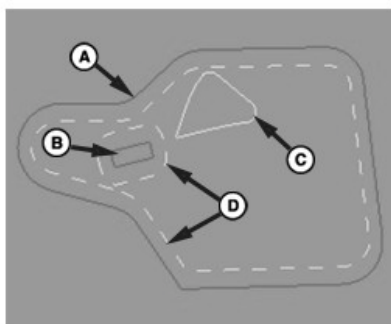
The boundaries that are not capable for Autonomy are represented with orange color and show a black Autonomy icon adjacent to boundary name or type.

Boundary Sets

Boundary sets allow the operator to create different operational boundaries for use with different operations. Boundary sets include an exterior boundary and any number of interior boundaries associated with the exterior boundary. Multiple boundary sets can be created, imported, and exported for the associated client, farm, and field.

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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 an autonomy boundary requires the following:

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

Boundary Sets

Boundary sets allow the operator to create different operational boundaries for use with different operations. Boundary sets include an exterior boundary and any number of interior boundaries associated with the exterior boundary. Multiple boundary sets can be created, imported, and exported for the associated client, farm, and field.

Autonomy Boundaries

An autonomy boundary is a high quality boundary which contains repeatability attributes and is recorded to meet the safety standards 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.

⚠ CAUTION: Avoid personal 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.

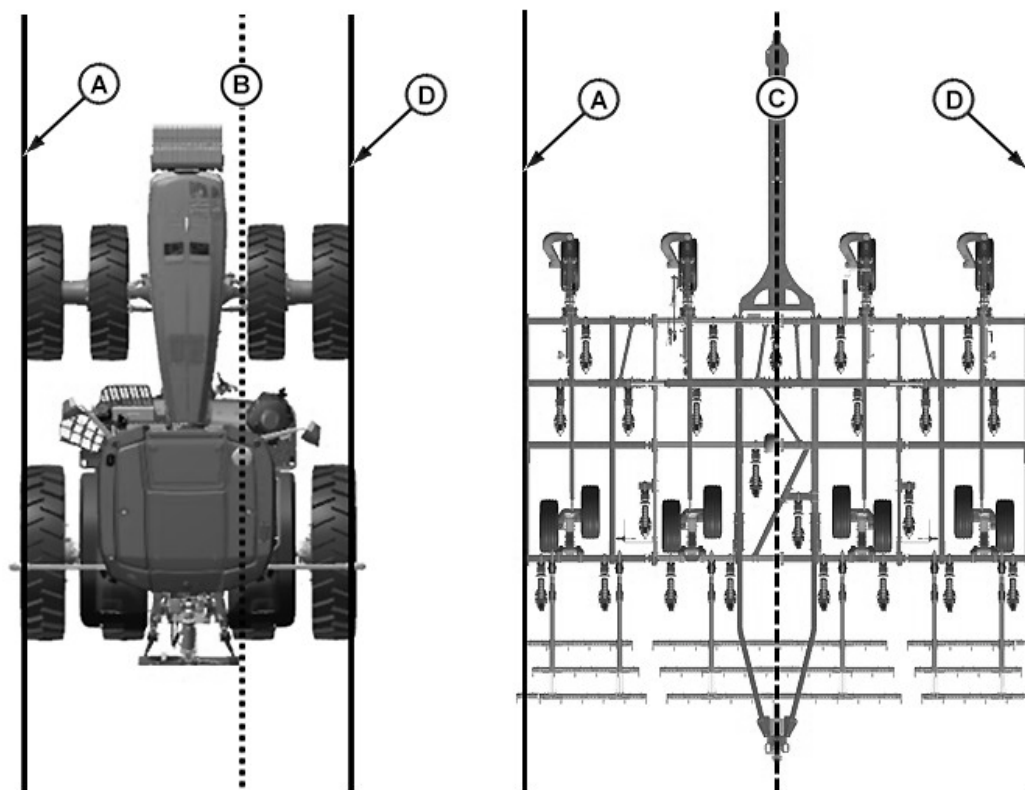
Autonomy Boundary Recording Offsets:

⚠ CAUTION: Avoid personal 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

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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.

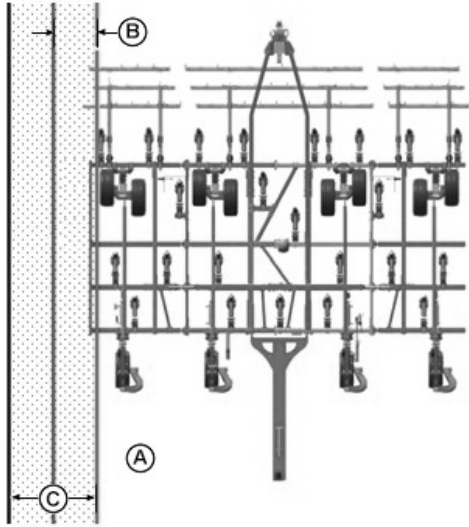
C—Center of Implement
D—Right Frame Edge

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

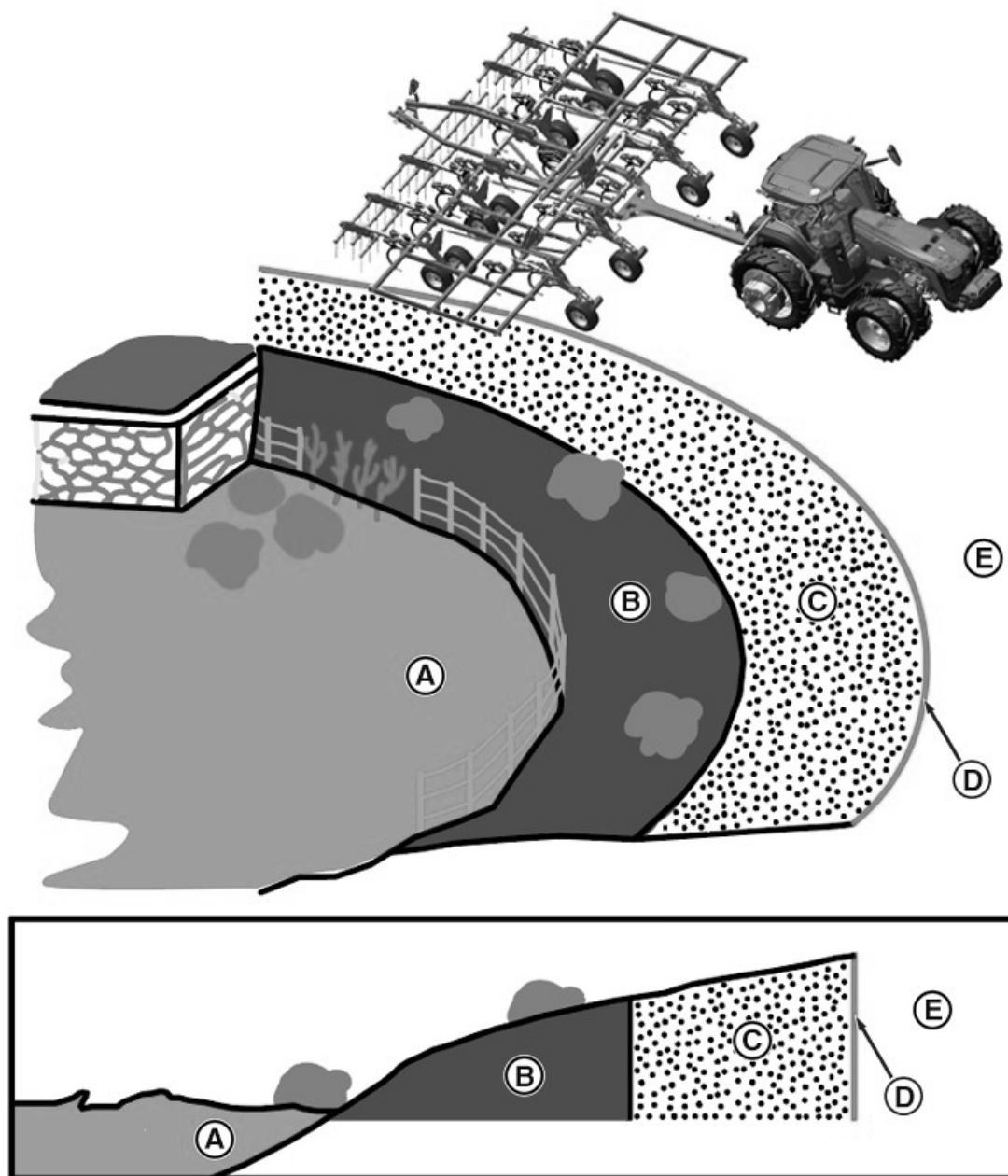
- **Display Driven:** The most accurate way to digitally represent field boundaries is by physically driving them while the GPS system records the machine location. Boundaries must be driven and created on a display. Any boundaries created or modified in outside of the display will not function for autonomy.

- **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 personal 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 5 m (17 ft) of the pause location to maintain Autonomy quality for that segment. If resume is selected further than 5 m (17 ft) from the pause location, the segment will be classified as not autonomy capable.

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.



APY80302—UN—02FEB23

Hazards and Slopes

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

D—Autonomy Operational Boundary
E—Inside of Field

ch177nn,1740733738471-19-01JUL25

Work Setup, Mapping, and Flags

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 the Layout Manager application to add the 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.
 - **Enable Auto-Complete** — If enabled, planned work with over 90% coverage or incomplete work older than 2 weeks will be automatically deleted.
- **Shared** — Select and join a work group for sharing coverage, machine position, and guidance lines (4600 and 4640 only).
- **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 zone rates.

There is no measurable minimum to zone rate 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

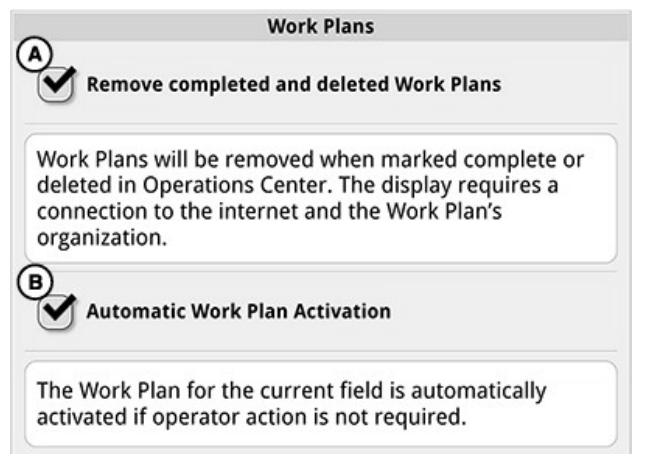
The John Deere Generation 4 Display is able to record ISOBUS totals provided by Agricultural Industry Electronics Foundation (AEF) certified implements with task controller geo-based (TC-GEO) and by John Deere pull-type sprayers. All totals provided by the ISOBUS implement, such as time, area, mass, 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.

ch177nn,1701679375548-19-04DEC23

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 dry blend or 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.

Module Totals

Module Totals display the selected cotton module data. When more than four module values are available, the operator can select which totals to display.

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, tank mix, and product.

ch177nn,1701679375500-19-04DEC23

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.

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

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Product

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NOTE: When using a dry blend or 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.

Module Totals

Module Totals display the selected cotton module data. When more than four module values are available, the operator can select which totals to display.

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, tank mix, and product.

AL70325,0000690-19-01JUN23

- 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



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*.

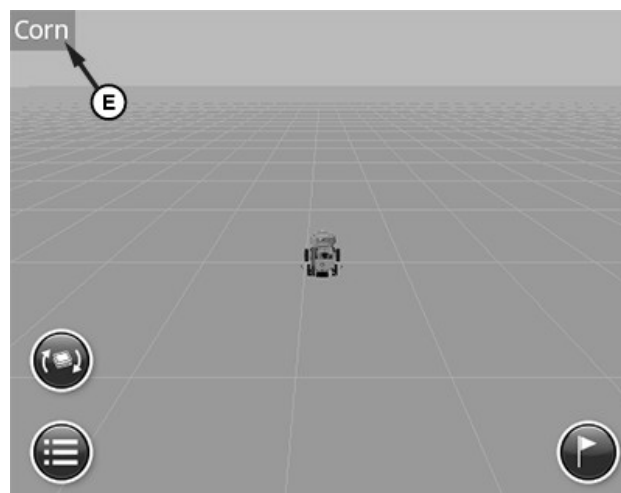
Work data includes rate, product, and coverage (work state) information. It is recorded based on the global positioning system (GPS) location and time.

Work data files include the following information:

- Time



PC28772—UN—25AUG22



PC28819—UN—20SEP22

- A—Map Layer Toggle Button
- B—Legend Button
- C—Layer Button
- D—Flags Button
- E—Operation Toggle Button

Select the map layer toggle button (A) to switch between map types. Information displayed in the legend changes based on the type of map selected. Select the legend button (B) to show the map legend. The layer button (C) is found in the legend menu. Select the layer button to change between operational map layers. Edit the map legend to set the minimum and maximum values for the legend range.

Select the flags button (D) to select the flag type to add to the map. The selected flag type is added to the map or, in the case of area and line flags, recording starts. Flag types are created in the Flags application.

Select the operation toggle button (E) to swap between work data maps when multiple operations are present.

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 Generation 4 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 Generation 4 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.

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Flags



Flags

PC28773—UN—25AUG23

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

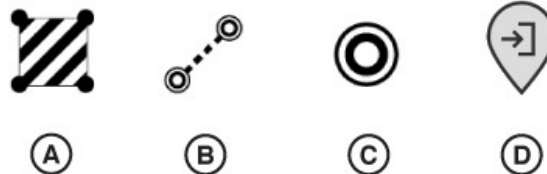
Flags notifies operators in the cab if their current machine path intersects with a flagged area, point, or line, allowing them to make immediate adjustments if needed.

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



PC620658—UN—17MAY24

A—Area Flag
B—Line Flag
C—Point Flag
D—Entrance Flag

- Area (A)—Mark areas of interest, such as a patch of weeds or a low spot in the field.

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

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,1740717836387-19-27FEB25

Sharing

Sharing



Sharing

PC28774—UN—25AUG22

NOTE: For optimal performance, all displays and all modular telematics gateways (MTGs) 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.
- An MTG 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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Work Monitor

Work Monitor



Work Monitor

PC28775—UN—25AUG22

DX,PC,WORKMON,REC-19-23DEC15

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.

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.

NOTE: Generation 4 Universal Displays does not show instantaneous yield values. For instantaneous yield value use the primary (armrest) machine display.

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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

Machine Idle

Machine Idle Theory of Operation



PC620652—UN—15MAY24

Machine Idle Theory of Operation

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.

bvvmsit,1715251816294-19-14MAY25

Tramline Control

Tramline Control



Tramline Control

PC620653—UN—10MAY24

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.

ch177nn,1740663913543-19-27FEB25

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.

NOTE: Functionalities like AB Curves and Autopath are not compatible with Tramline Control.

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.

Machine Monitor

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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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.

AL70325,000055B-19-12SEP19

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.



(A)



(B)

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.



Left/Right Toggle

PC28777—UN—25AUG22

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.

AL70325,000059B-19-27SEP22

Section Control

Section Control



Section Control

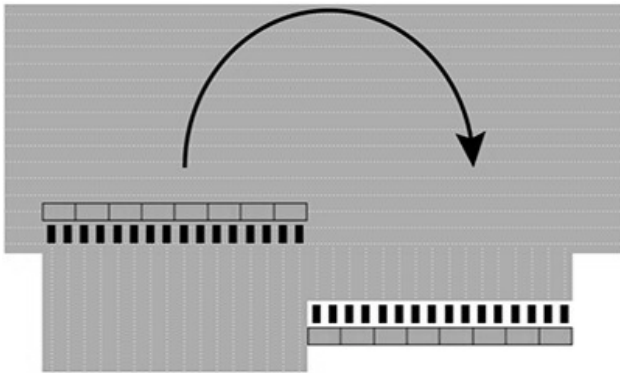
PC28778—UN—25AUG22

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.



Planter Sections

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.

NOTE: 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 Agricultural Industry Electronics Foundation (AEF) certified ISOBUS implements with task controller section control (TC-SC) functionality. See Generation 4 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



PC28812—UN—20SEP22

Boundaries

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



PC28781—UN—25AUG22

Headland Control Switch and Headland Offset

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.

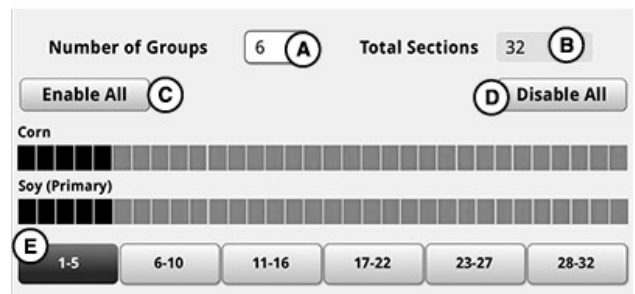
Manual Section Control



PC28653—UN—29SEP22

Manual Section Control

Use Manual Section Control to turn on or off groups of sections. Select Manual Section Control to activate the Manual Section Control Page.



PC28654—UN—29SEP22

Manual Section Control Page

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,1740633831844-19-26FEB25

Advanced Settings



Settings Icon

PC15305—UN—19MAR13

Select the settings icon at the top of the Section Control application to configure advanced settings.

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.

AL70325,000059D-19-07NOV19

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 is not commanded OFF by Section Control, See & Spray is enabled, and green foliage is not detected by the See & Spray system.

Section Applying



PC28783—UN—29AUG22
Section Applying - Solid Green

- Section is commanded on.
- Section is applying product or seed.
- Section is not commanded OFF by Section Control, See & Spray is enabled, and green foliage is detected by the See & Spray system.

Section Commanded Off (Not Applying)



PC28784—UN—29AUG22
Section Commanded Off - Green and White Stripes

NOTE: Minimum ground speed threshold is 0.8 km/h (0.5 mph).

- Speed is below minimum ground speed threshold.
- Machine or implement is inside an interior headland boundary.
- Machine or implement is outside an exterior headland boundary
- Machine or implement is inside an interior boundary

- Machine or implement is outside an exterior boundary
- The prescription rate is zero.
- Machine or implement is over existing coverage.

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)



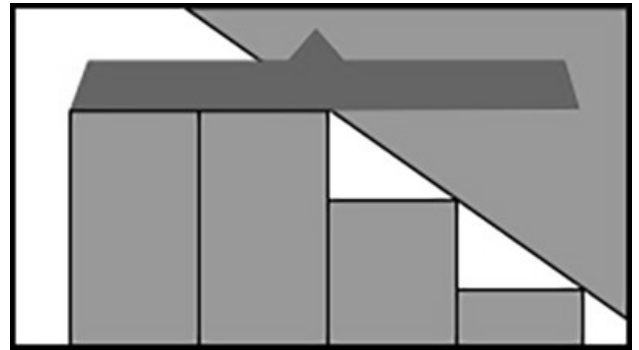
PC24038—UN—05APR17
Section Indexed Off - Solid Black

- Section indexed off by control unit.

ch177nn,1685617779631-19-01JUN23

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.

AL70325,000055D-19-13OCT22

Overlap Settings

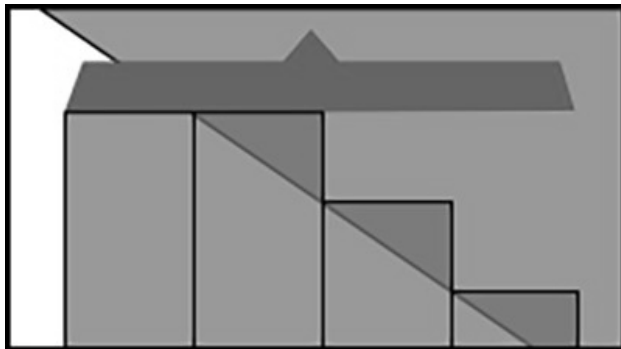
Overlap occurs when crossing previous coverage or boundary. Amount of overlap is an operator preference.

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

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.
- 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.

AL70325,0000452-19-21DEC17

Pre-Seeding Operation Setup Example

NOTE: Verify that the cart is configured the way it is intended to run while seeding.

1. Determine how the air tool is configured.
2. Measure and enter the Work Point value in the Implement Profile of the Gen 4 Work Setup Application:
 - a. Example 1: Air Cart with one tank routed to multiple ranks. Use the work point location that is in the middle of the ranks that tank 1 is routed to.
 - b. Example 2: Air Cart with one tank routed to a single rank. Use the work point location that is to that rank.
3. Measure and enter the Center of Rotation value in the Implement Profile of the Gen 4 Work Setup Application.

ZIDXK1X,1749804883058-19-13JUN25

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.

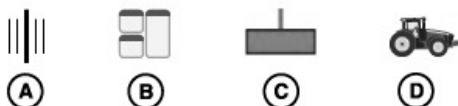
It is important to back up data to a USB drive periodically.

Display internal memory is intended to have enough capacity to store all data from a machine per season. A message appears when 95% of memory is used. Data should be exported and deleted before memory used exceeds 95%.

Navigate to File Manager

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

Data Types



Data Type Icons

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: Straight tracks created using the methods Machine Access A + B, Machine Access A + Heading, or Machine Access Lat/Lon + Heading cannot export or import the access pattern but the guidance line without patterns can be imported and exported 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 Generation 4 Displays that are the same size. They can also be exported to a G5 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 Generation 4 Displays. This includes profiles saved to the display for implements without a control unit.

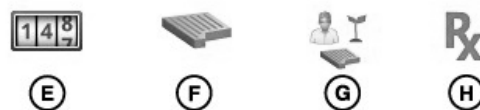
NOTE: Connection type, work recording, operation, and rate controller are not imported with implement profiles.

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

NOTE: Machine profiles can only be imported and exported using a 4240 or 4640 Universal Display.

NOTE: The Generation 4 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

Data Type Icons

- 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 (4600 and 4640 only).

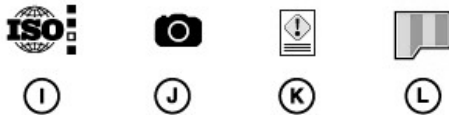
NOTE: Incomplete work data can be exported from one display and imported to another to be resumed using the Work History feature in the Work Setup application. Associated work totals are not imported.

- Boundaries (F) are configured using Fields and Boundaries application.
- Setup data (G) includes client, farm, and field names, crop varieties, and products.

NOTE: Setup data files cannot be imported from a USB drive while AutoTrac is engaged.

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

NOTE: Prescriptions created in APEX must be exported in the shapefile format.



Data Type Icons

PC28788—UN—29AUG22

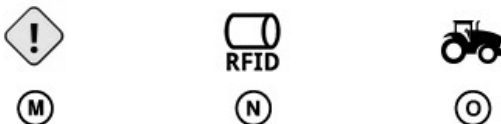
I—ISOBUS Tasks
J—Screenshots
K—Error Logs
L—Variety Locator

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

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

ISOBUS tasks cannot be imported or exported using Wireless Data Transfer (WDT).

- 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.



Data Type Icons

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 Generation 4 Displays. Available settings vary by machine, implement, and control unit type. Settings configurations are configured using the Settings Manager application.

NOTE: Only profile name, run pages, iTEC settings, and John Deere pulled-type sprayer settings can be transferred between Generation 4 Displays.



Data Type Icons

PC28790—UN—29AUG22

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.

Select which device files to export and the file log size. There are three log file size configurations:

- Runtime Logs (smallest log file size) are used to identify system configuration details.
- Recent and Setup Logs (medium log file size) include runtime logs, as well as device calibrations and performance logs. These are used to diagnose performance or setup issues.
- All Logs (largest log file size) capture all available control unit logs, including both the runtime logs and the recent and setup logs. These logs are used to diagnose unexpected shutdowns of applications or control unit hardware.

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 modular telematics gateway (MTG) or a wireless internet connection.

NOTE: Operations Center requires an active MTG, built-in Wi-Fi with internet access (4640 only), or a wireless USB adapter with internet access.

Auto-Import

Auto-Import does not automatically import data while an import, export, or delete process is active.

If Auto-Import is stopped by a power cycle, it resumes automatically after the display reboots.

Data Sync Setup

Data is sent to and received from John Deere Operations Center when the MTG has cellular signal or internet access, the built-in Wi-Fi has internet access (4640 only), 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:

- Client, Farm, and Field information
- Boundaries
- Guidance Tracks
- Flags
- Products
- Tank Mixes
- Operators
- Implements

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 MTG has cellular signal or internet access, the built-in Wi-Fi has internet access (4640 only), 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 modular telematics gateway (MTG) is required.

NOTE: Setup files containing planned work files are automatically imported when received from John Deere Operations Center when Auto-Import is enabled.

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 Generation 4 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 Apex or 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.

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. Refer to Onscreen Help for additional assistance with failed imports.

Address the error condition provided by the display for any files that fail to import.

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, guidance lines, and run pages.
- Select Clear Diagnostic Data to remove screenshots and error log files.

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USB Drive

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.

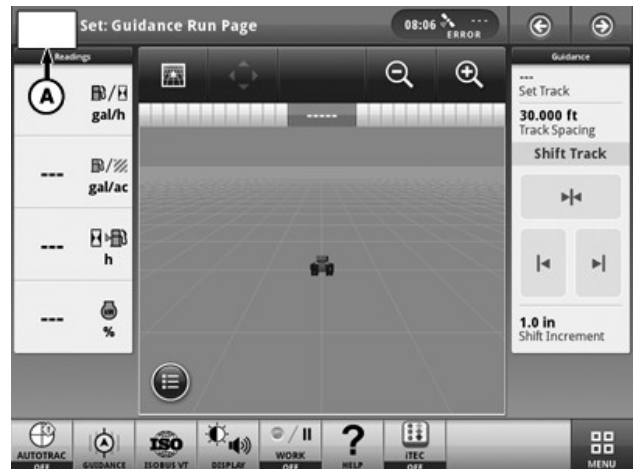
Best Practices

- After inserting USB drive, wait 10 seconds. Large USB drives may take time to be recognized.
- 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,1728987473948-19-15OCT24

Capture Screen Shots



PC17263—UN—15JUL13

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.

DX,PC,FILE,SCREENSHOT-19-22DEC15

Diagnostics Center

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 devices on the Ethernet network.

Navigate to Diagnostics Center

1. Select Menu.
2. Select System tab.
3. Select Diagnostics Center application.

ch177nn,1685617878029-19-01JUN23

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.

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.

ch177nn,1740728373324-19-28FEB25

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 devices.

Viewing and Sorting

Select the button next to **View by** to change the way control units are displayed. Available views are:

All Devices

- All control units connected to display are shown.

Ethernet Bus Devices

- Only control units with an associated Ethernet connection are displayed.

Implement Bus Devices

- Only control units on the implement CAN bus are displayed.

Machine Bus Devices

- Only control units on the machine CAN bus are displayed.

Select the button next to **Sort by** to arrange the list according to these filters:

Device

- Sort the list by device ID.

Has Codes

- Sort the list by which devices have diagnostic trouble codes.

AL70325,0000605-19-12NOV20

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.

AL70325,0000505-19-26OCT18

Hide Diagnostic Center



PC15331—UN—08JUL13

Hide Diagnostics Center

Display is set to Diagnostic Mode once a controller is selected. Select Hide Diagnostic Center to minimize application and return to main page.

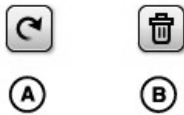
Hide button is useful for accessing another part of display during a calibration procedure. To return to the same diagnostic page, select Diagnostic Center application from menu.

NOTE: Leaving display in Diagnostic Mode is not recommended, because it can negatively affect performance.

Remove Diagnostic Mode by closing controller page.

DX,PC,DIAG,HIDE-19-22DEC15

Diagnostic Trouble Codes



PC28792—UN—29AUG22

- A—Refresh Button
B—Clear Codes Button

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



Code Types

PC28793—UN—29AUG22

- 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:

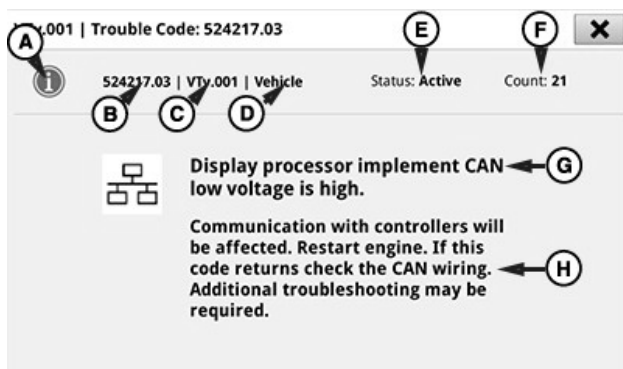
Code

- 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



PC28827—UN—29SEP22

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.

ct47125,1664233025259-19-09MAY23

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.



PC28794—UN—29AUG22

- A—Green Indicator, Normal Range
B—Yellow Indicator, Out of Range

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.

ch177nn,1685617902538-19-01JUN23

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.



PC28794—UN—29AUG22

- A—Green Indicator, Normal Range
B—Yellow Indicator, Out of Range

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.

AL70325,0000575-19-27SEP22

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: A cold boot occurs after display has been off for 24 hours or after unswitched power has been disconnected from display.

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 devices 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.

ch177nn,1685617918357-19-01JUN23

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.

RDA 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.

ch177nn,1685617932516-19-01JUN23

Ethernet Bus Info

Ethernet Bus Info displays diagnostic connection issues with all devices on the Ethernet network.

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 devices with IP addresses that the display sees on the network.
- *Disconnections* – Number of disconnections since the display powered on.

AL70325,0000603-19-12NOV20

Maintenance and Calibration

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.

ct47125,1664234209291-19-27SEP22

Service Checks

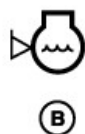
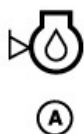
NOTE: Availability of the Service Checks feature depends on purchase options.

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



PC23946—UN—22MAR17

Radar Calibration

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



PC23947—UN—22MAR17

Wheel Slip Calibration

Calibrate wheel slip if there is a mismatch between radar speed and wheel speed when operating unloaded

on a hard surface. For more information, see Machine Monitor.

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.

DX,PC,MAINT,CAL-19-07APR17

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.

AL70325,0000634-19-26SEP22

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 Generation 4 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

StarFire Receiver

StarFire GPS 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 Generation 4 Display.
- Display is on the latest software.
- Display has a valid AutoTrac activation.

Navigate to StarFire GPS Receiver

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

ch177nn,1728893229756-19-14OCT24

StarFire Remote Software Updates

Remote Software Updates function enables John Deere to remotely deliver updated software using the JDLink modem on the machine. Once the software is downloaded to the machine, the operator must initiate the software installation.

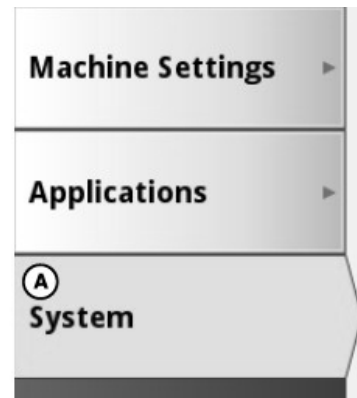
1. Select Menu.



Menu

PC28688—UN—25AUG22

2. Select System tab (A).



System Tab

PC28821—UN—21SEP22

A—System Tab

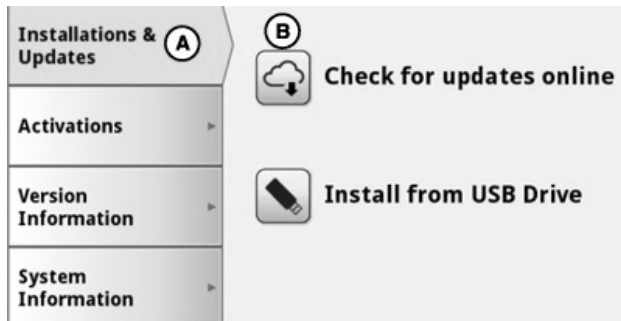
3. Select Software Manager.



Software Manager

PC28693—UN—25AUG22

4. In the Installations & Updates tab (A), select Check for updates online (B).



PC28822—UN—21SEP22

Check For Updates Online Button

- 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

ch177nn,1663767382508-19-27SEP22

Video

Video



Video

PC28800—UN—29AUG22

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: Avoid machine damage or collision. Determine if camera image or video application is mirrored before using Video application.

NOTE: While processing large amounts of data, images may be pixelated.

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

The 4200 processor can only support one video input. The 4600 processor can show a maximum of two video feeds and support up to four camera inputs.

For more information about the different types of displays, see Display Introduction section.

Navigate to Video

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

Switching Cameras



Camera Icon

PC23948—UN—22MAR17

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

Mirror Video



Mirror Video Button

PC23949—UN—22MAR17

Select Mirror Video button to simulate a rear view mirror. This swaps left and right sides of video image.

Contrast



Video Contrast Icon

PC23950—UN—22MAR17

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

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

ZIDXK1X,1749805629207-19-13JUN25

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.

AL70325,00005AF-19-08NOV19

Wireless Settings

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 the JDLINK Modem or and external wireless internet adaptor.

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

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

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 John Deere Connect Mobile.

ZIDXK1X,1751349960381-19-01JUL25

Remote Display Access

Remote Display Access



PC28802—UN—29AUG22

Remote Display Access

Remote Display Access (RDA) allows someone from a remote location to view an operating display.

Navigate to RDA

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

Using 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.

AL70325,00005A0-19-26SEP22

COM Port Settings

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

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.

ch177nn,1728641242778-19-11OCT24

Controls Setup

Controls Setup



Controls Setup

PC28805—UN—29AUG22

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

AL70325,00005A1-19-26SEP22

Service and Maintenance

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



File Manager

PC24753—UN—31OCT17

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. Activations, language settings, and regional settings are not reset. A reboot is required after reset.

Factory Data Reset should be performed on a Generation 4 CommandCenter prior to selling the machine.

Factory Data Reset should be performed on a Generation 4 Universal Display prior to selling the display.

1. Select Menu.



Menu

PC21495—UN—04SEP15

2. Select System tab.



System Tab

PC21264—UN—12JUN15

3. Select File Manager.

4. Select Settings.



Settings

PC20398—UN—09DEC14

5. Select Settings tab.



Settings Tab

PC28671—UN—18MAR22

6. Select Begin Factory Reset.



PC28672—UN—18MAR22

7. Follow on screen prompts.

ch177nn,1685618029193-19-01JUN23

Troubleshooting

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).

bvmsit,1715698463998-19-23MAY24

Software Update Fails

When completing a Display VTV controller software update using Service ADVISOR, the update fails due to one of the following installation errors: When an installation error occurs, the payload cannot be programmed, and the download fails.

The following Service ADVISOR errors can occur. Follow the suggest actions:

NOTE: *Machine or Precision Ag applications cannot be used during the debug. A debug capture takes 5-10 min to complete. Once complete, the customer can operate until the dealer exports debug.*

Error Message ID	Title Text	Situation	Repair Action
AM.MO.1	Installation Error	There was conflict that caused the download to fail.	SOLUTION A: 1. Initial Steps - Retry the installation. - Disconnect and reconnect battery power to the display, then key on the machine to attempt recovery - Reconnect power and begin the update without the USB inserted. When prompted, insert the USB and select OK.
AM.MO.3	Installation Restriction	John Deere requires authentication that is not present with this software package.	

Troubleshooting

AM.MO.4	Installation Error	The payload file is corrupt or incorrect.	2. USB Drive & Port Check - Ensure the USB is in the Diagnostic USB port. - Confirm the display detects the USB: MENU>SYSTEM>DIAGNOSTIC CENTER.DISPLAY HARDWARE>USB Indicator If not detected, try another USB or check for encryption/format issues. - Inspect and replace the USB cable if needed. 3. File Cleanup & Payload Reload - Close Software Manager - Delete contents from: C:\sds\DisplayDependencies C:\sds\payloads\n - Re-download the Display VTV payload from Service ADVISOR. - Reformat the USB and confirm Software Manager opens automatically. - After download, select the USB and click 'Sync USB'. - Ensure the USB contains the JD Display Updates-JD 5 folder at the root.
AM.MO.5	Installation Restriction	The payload file is corrupt or incorrect.	
AM.MO.6	Installation Error	The processor is not recognizing the USB.	
AM.MO.19	Installations & Updates	The system could not retrieve the necessary information to install the software.	
SA.MO.10	Installation Error	The payload file is corrupt or incorrect.	
SA.MO.11	Installation Restriction	The payload file is corrupt or incorrect.	
SA.MO.7	Installation Error	The software was not found on the USB.	SOLUTION A: • Refer to the troubleshooting materials for further guidance.
SA.MO.1	Installations & Updates	The processor is not recognizing the USB.	SOLUTION A: • Refer to the troubleshooting materials for further guidance.
SA.MO.2	Installations & Updates	The system could not retrieve the necessary information to install the software.	SOLUTION A: • Refer to the troubleshooting materials for further guidance.
AM.MO.12	Installation Error	The system could not retrieve the necessary information to install the software.	SOLUTION A: • Refer to the troubleshooting materials for further guidance.
AM.MO.11	Installation Error	The system could not retrieve the necessary information to install the software.	SOLUTION B: 1. Navigate to: Menu>System>File Manager>Export - Export or clear any available data. 2. If the issue persists: - Export and save all customer data. - Go to Menu > System > File Manager. - Tap the Settings icon (round button with arrow and dot on the top black banner). - Select Factory Data Reset.
SA.MO.6	Installation Error	The display does not have enough space to download the payload.	
AM.MO.9	Installation Error	The display does not have a good cellular connection.	SOLUTION C: • Confirm the display received the software payload via ISOBUS VT. • Ensure a strong cellular connection through the MTG. • Wait 1–3 minutes, then power cycle the machine. • Refer to the troubleshooting materials for further guidance.
SA.MO.4	Installation Error	The remote software update did not go through.	
SA.MO.5	Installation Error (REMOTE VERSION OF SA.MO.1)	The display does not have a good cellular connection.	
SA.MO.8	Installation Error (FACTORY TOOL/ REMOTE VERSION OF SA.7)	The display does not have a good cellular connection.	
SA.MO.9	Installation Error (REMOTE ONLY)	The display does not have a good cellular connection.	

AM.MO.25	Installation Error	Software is restricted until System Recovery is performed.	SOLUTION D: Refer to the troubleshooting materials for further guidance.
AM.MO.7	Installation Error	The system voltage is too low to proceed with the software installation.	SOLUTION E: Refer the software installation when the system is fully charged.
SA.MO.3	Installations & Updates	A software update is already underway.	SOLUTION F: - Wait until the programming event is finished. - If it occurs when programming attempt is not underway, then disconnect and reconnect battery power to the display, then key on the machine to attempt recovery. - Refer to the troubleshooting materials for further guidance.

ZID XK1X, 1749805706573-19-17JUN25

Custom Display Configurations

Custom display configurations can be adjusted under Advanced Settings - custom mode in the multiple display configuration. It is recommended to adjust the displays as follows:

Display Settings > Menu > System > Display and Sound > Multiple Display > Edit > Advanced Settings.

Example:

In the configuration listed below the 4640 will be your Precision Ag Display/Monitor and will operate a planter, and the 4600 will be a tractor display/monitor:

4640 configuration:

- Precision Ag Applications – “ON” – “PRIORITY 1”
- ISOBUS Implement Viewer – “ON” – “PRIORITY 1”
- Vehicle Bus – “ON” – “default”
- Task Controller – “ON” - “PRIORITY 1”
- File Server “Off” – “N/A”

- File Sever can be marked “off” on both displays

4600 Configuration

- Precision Ag Applications – “OFF” – “PRIORITY 2”
- ISOBUS Implement Viewer – “OFF” – “PRIORITY 2”
- Vehicle Bus – “ON” – “default”
- Task Controller – “OFF” - “PRIORITY 2”
- File Server “Off” – “N/A”

- File Sever can be marked “off” on both displays

NOTE: *Dual Display* refers to configurations involving two processors, such as CommandCenter + Universal or Universal + Universal.

ZID XK1X, 1751029556756-19-27JUN25

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