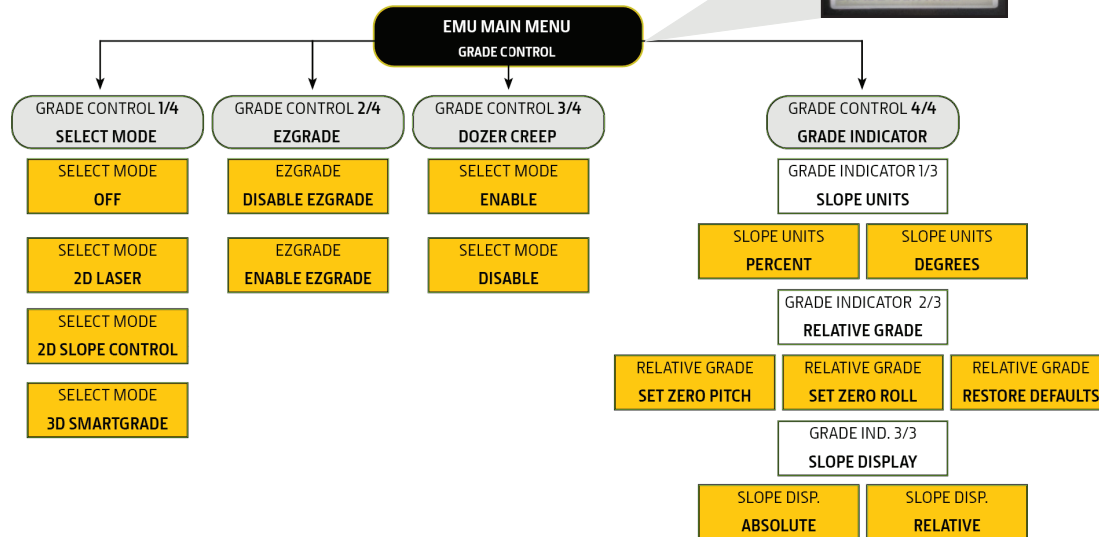


EMU Grade Control Menus



- 1/4. **Select Mode:** Selects grade control mode to operate in (as equipped).
- 2/4. **EZ Grade:** Uses the body IMU readings to provide blade mainfall corrections when the boom is on the stops and grade control is not active. This is useful for pushing large amounts of material without grade control active.
- 3/4. **Dozer Creep:** Enables full speed when traveling in reverse and full power turns.
- 4/4. **Grade Indicator:** Displays machine pitch and roll on the EMU. Allows operator to configure preferences for on-board grade indicator display within the EMU.

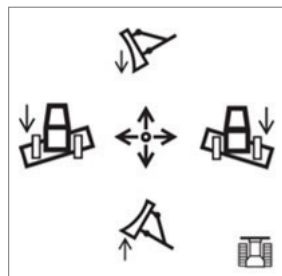
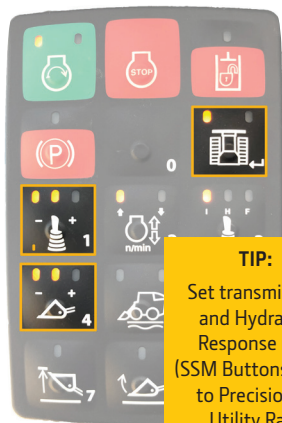


Dozer Mode

Engage Dozer Mode to mimic the control pattern of a dozer for ease of operation.

Left LED illuminated indicates Dozer mode is engaged.

Right LED indicates control is active.



Dozer Mode Blade Raise/Lower

- Raise:** Blade will rotate upward to it's limit and then the boom will begin to raise.
- Lower:** Boom will lower until it is against the boom lower stops and then the blade will begin to rotate down.

TIP:

Set transmission and Hydraulic Response rate (SSM Buttons 1 & 4) to Precision or Utility Rate

Left Joystick

- Trigger** – Press and hold to engage creep mode. Press momentarily to toggle between single and two speed.
- Dozer Mode Override** – press and hold for the duration you would like to disengage dozer mode.



Right Joystick

- Trigger** – Grade control auto engage switch.
- Blade Angle Roller Switch.**
- Increment** – 3D SmartGrade/Laser: Increases the active surface offset value. 2D Slope: Increases mainfall or cross slope percentage (as configured)
- Decrement** – 3D SmartGrade/Laser: Decreases the active surface offset value. 2D Slope: Decreases mainfall or cross slope percentage (as configured)

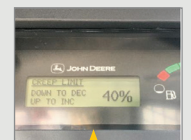
Dozer Creep Max Speed Recommendations

2D Slope Control: 60% Recommended*
3D SmartGrade: 40% Recommended *

*Ground conditions and material may affect recommended creep speed setting.

Increase or Decrease the creep speed by using the toggle switch by right hand joystick.

Press and hold left joystick trigger to engage creep mode.



Monitor indicates the creep speed setting.

Note: Please refer to the Operators Manual for additional information

2D Slope Control

Slope control, which is managed through the Deere rear view camera monitor is equipped with Joystick or Target modes.

Settings>Slope Control Mode> Select Mode Desired.

Joystick Mode: Uses manual operation adjustments of blade position (cross slope and/or mainfall) to control the blade based on the operator's last input. This allows the operator to change target slope and/or mainfall "on the fly" during operation.

Target Mode: Blade control is based on mainfall and/or cross slope target values entered by the operator. If the operator manually changes the blade mainfall and/or cross slope using the joystick, it will return to preset target values when the joystick returns to its neutral position.

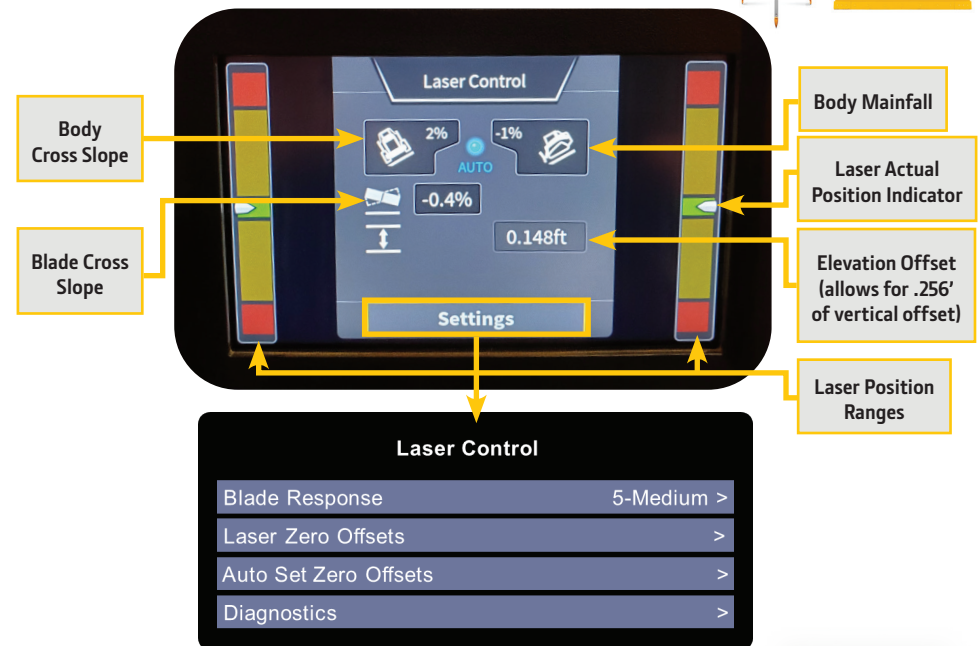
Flip Slope is available in Target Mode only, and used when turning the machine around.



Laser Slope Control

Color Legend (2D and Laser)

- Grade Control is active and controlling
- Grade Control is active, but not controlling



Setting Up Laser Transmitter/Receivers

Setup laser transmitter at an elevation not to exceed the height of the SG96 Blade masts.

Install 360° laser receivers on the masts.

Use a grade rod or an existing elevation to set the blade height to desired elevation.

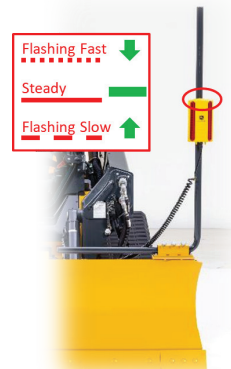
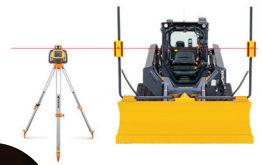
TIP: Square the blade. Use the blade cross slope indicator in the machine to set the cross slope to match the laser transmitter.

Raise or lower the laser receivers on the blade masts until the indicator lights (top LED's) are solid.

TIP: Flashing fast indicates the receiver needs to be lowered on the mast. Flashing slow indicates the receiver needs to be raised on the mast. (see graphic)

In the cab, navigate to the settings menu on the laser run time screen. Select Auto Set Zero Offsets. Follow prompts to zero laser receivers.

Grade Check Verification: Grade an approx. distance of 2-4'. Verify elevation with grade rod. If elevation is not accurate, use the Settings menu > Laser Zero offsets. Laser zero offsets allows an adjustment of +/- .03'. If unable to reach desired grade with adjustment, repeat the process above.



SmartGrade™ CTL

Quick Reference Guide

Note: Please refer to the Operators Manual for additional information



3D SmartGrade™ GX - 55 Layout

Data **Control** **Tools** **View**

To Display Screen Text:

1. Press and hold screen to display menu options.
2. Select 'Display Text.'
3. Configure as desired.

Auto Engaged

Right Trigger to engage.

Will also display on the right side.

Follows design surface +/- elevation offset.

Elevation Offset

Raise/Lower with right joystick buttons.

To change Increment/Decrement Amount: Long Press on Screen → Set Points → Increment.

Actual Distance to Target Grade (Surface +/- elevation offset.)

Current Blade Cross Slope

Target Cross Slope

Blade Rotation

Shortcut Bar:

View → Display Options → Shortcuts

A. Next View – Allows the operator to toggle between views created at View > Layout.

B. Blade Point of Interest (POI) - Toggle point on blade to use for elevation referencing. Menu → Control → Blade Control to change control to Best Fit or POI.

C. Topo Button – Used to measure and add a new point to the project.

D. Load Level – Toggle for Light, Medium or Heavy loads. This is used to fine tune the blade's response with respect to blade load. Light or medium is recommended for grading or spreading material. The heavy load setting is recommended for moving large amounts of material.

SmartGrade™ Remote Support



SmartGrade Remote Support

Remote Display Access (RDA) / Wireless Data Transfer (WDT)

- Remotely transfer project files to the machine.
- Remotely troubleshoot an issue. Confirm surfaces, vertical offsets, blade control, etc...
- Remotely view the GX55 monitor as the machine operates
- Coach new operators

*Contact your local John Deere Dealer if additional assistance is needed.

Step 1

Access SmartGrade Remote Support online at myjohndeere.deere.com to find your support desk number. Refer to the Operators Manual section 2-4 SmartGrade Remote Support Website for more information.

Step 2

Initiate the pair request to your support desk from the GX55 in the machine. Refer to the Operators Manual section 2-5 SmartGrade Remote Support On Machine Client for more information.

Step 3

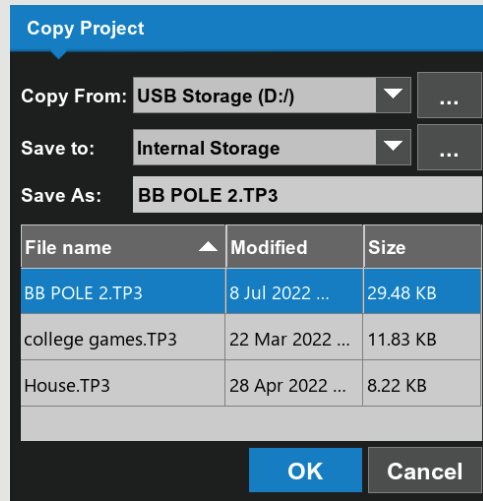
Access SmartGrade Remote Support online and accept the pair request.

3D SmartGrade™ Working with Surfaces

Copying Projects

Copying a project from a USB drive.

1. Data > Project > Copy
2. Insert USB with desired project in to the machine
3. Choose "Copy..."
4. Choose Copy From: "USB Storage"
5. Choose Save To: "Internal Storage"
6. Click on and highlight the project you would like to copy.
7. Click "Ok"



Copy Project

Copy From: USB Storage (D:/) ...

Save to: Internal Storage ...

Save As: BB POLE 2.TP3

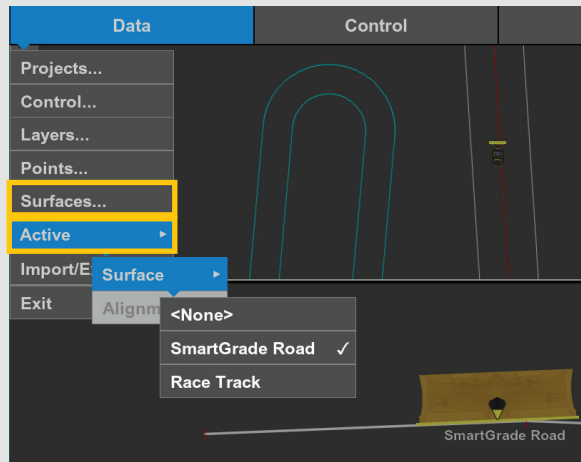
File name	Modified	Size
BB POLE 2.TP3	8 Jul 2022 ...	29.48 KB
college games.TP3	22 Mar 2022 ...	11.83 KB
House.TP3	28 Apr 2022 ...	8.22 KB

OK Cancel

Data Menu

Surfaces: List of surfaces within project. Check marks indicate surface is visible.

Active: Active is the current surface that 3DMC is controlling the blade on.



Data Control

- Projects...
- Control...
- Layers...
- Points...
- Surfaces...
- Active
- Import/E Surface
- Exit Alignm

Surface

- <None>
- SmartGrade Road ✓
- Race Track

SmartGrade Road

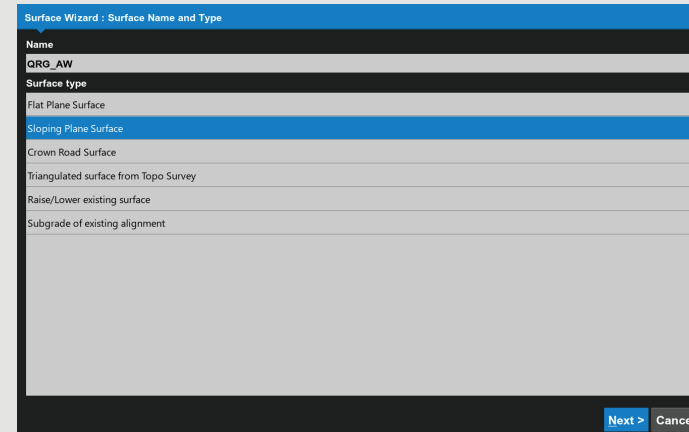
Operating Tips

- Let the machine settle out at the start of a cut.
- Keep blade angled.
- Make sure there's a load on the blade.
- Use Creep Mode ≤40% (3D) ≤60%(2d).

Creating a Sloping Plane Surface

1. Data > Surfaces > New

*steps to create a flat plane surface are similar



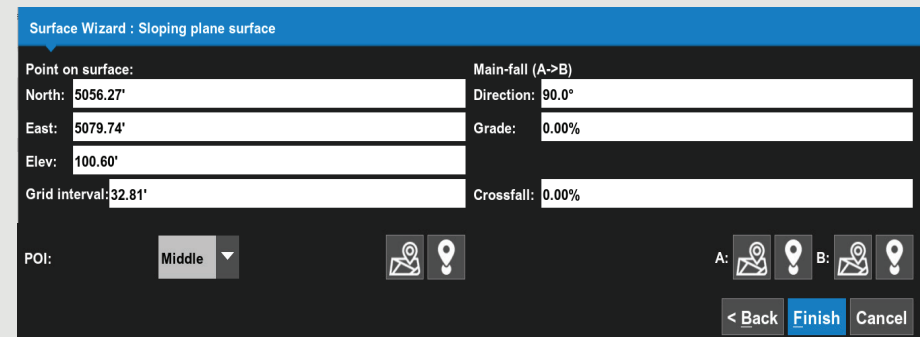
Surface Wizard : Surface Name and Type

Name: QRG_AW

Surface type:

- Flat Plane Surface
- Sloping Plane Surface
- Crown Road Surface
- Triangulated surface from Topo Survey
- Raise/Lower existing surface
- Subgrade of existing alignment

Next > Cancel



Surface Wizard : Sloping plane surface

Point on surface:

North: 5056.27' Main-fall (A->B) Direction: 90.0°

East: 5079.74' Grade: 0.00%

Elev: 100.60'

Grid interval: 32.81' Crossfall: 0.00%

POI: Middle

A: B:

< Back Finish Cancel

2. Choose Sloping Plane Surface
3. Name the surface
4. Select next
5. Choose POI on the blade for capturing points
6. Capture point "A" at the start of the surface (map symbol)
7. Drive machine to point B at the end of the surface and capture point "B"
8. Direction and Grade will be populated based off points captured in steps 5&6
*Adjust crossfall if desired
9. Click Finish

TIP:

Set "Grid Interval" to be a multiple of the blade width.