

T3RRA Ditch™

NOTE: Always start the T3RRA program first and access GPS info screen before turning tractor on.

Verify the selected SCV (1 and/or 3) is in Auto.

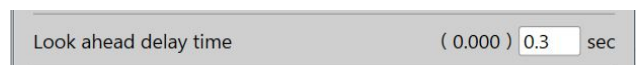
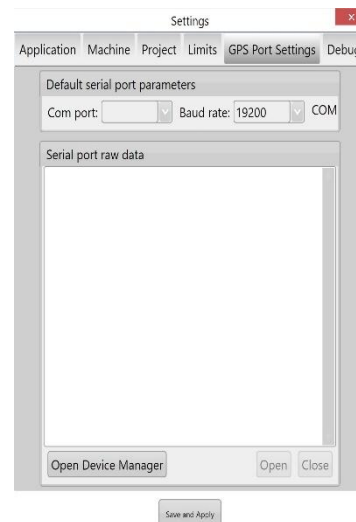
Serial Port Settings tab (iGrade, T3RRA, & Receiver need identical Baud Rate):
Select Settings button and then GPS Port Settings.

- Set 'COM Port' to the correct port
- Set 'Baud rate'
- Confirm raw data is streaming in window
- Choose 'Save and Apply'

Select Settings button and then Machine Tab to enter a 0.3 second look ahead time.....

Select Import button to load elevation data from other source.. For more info go to Project Options section of Manual.....

Select Load Project button to load an existing T3RRA project (.tci) file. For more info go to Project Options section of Manual.....



John Deere™ iGrade Remote Control Automation

Control Type Selection

Ref iGrade Manual 35-4

1. Select Application Controller...



2. Select Main Menu.....



3. Select Control Selection.....



4. Select SCV1 Control Type...



Select Remote Control

Serial Port Setup

Ref iGrade Manual 35-3

1. Select Main Menu....



2. Select Control Selection.....



3. Select Serial Port Setup.....

Baud Rate* – 38400

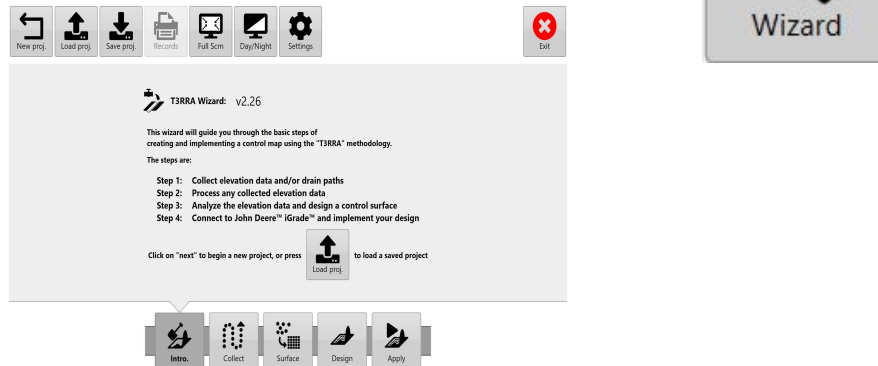
NMEA – GGA, GSA

NMEA Rate – 5 Hz



*Note: Baud Rate needs to match in iGrade, T3RRA, & Receiver

1. Select the Wizard Button

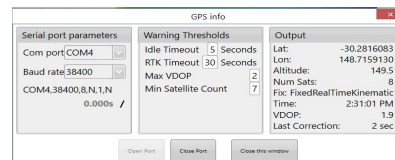


2. Surveying

a. Collect elevation data -
Select the Start button.....



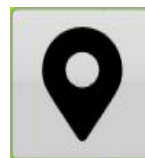
b. GPS info screen will open and
search for a GPS signal then
select the Close this window.....



NOTE: Survey screen defaults to Drain
Survey mode. You can change to Field
Survey mode by clicking on "Change
data collection mode" icon.....



c. Drop a marker for reference on
elevation wheel track.....



NOTE: Best practice is to place base in permanent location to avoid any GPS
location displacement.

2. Surveying

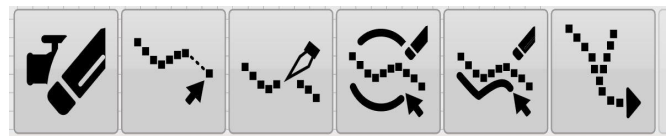
- d. Select the start button,
and start collecting your elevation data.....



- e. Select the pause button to pause data
collection or the stop button to
stop your data collection.....



- f. If desired, edit data points.....



- g. Select the Return button.....

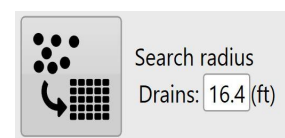
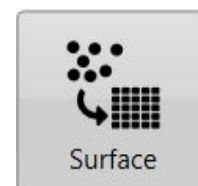


- h. Select the export button to save your
collected elevation data.....



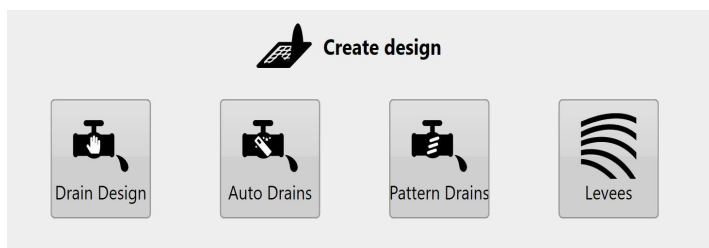
3. Surfacing

Upon exiting the Collect Step, T3RRA will automatically calculate the best search radius and create a Surface from the collected data. It is not necessary to use the Surface step in the wizard unless you wish to view the surface and/or possibly change the Search Radius.....



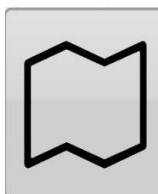
4. Design

a. Select the Design button for Drains, Auto-Drains, Pattern Drains, or Levees.....

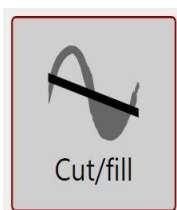


Enter all parameters to create design (refer to T3RRA Manual for detailed design information). NOTE: If you have a drain/field combination to design, always design the field first and the drain second.

b. Choose model/layer button.....



c. Select the create cut/fill button.....



d. Select the Return button....



e. Select Yes to keep the design surface.....



f. Select the Save project button to save the T3RRA project.....

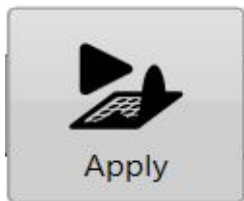


g. Select the Export button to save drains as guidance curves. Output multi-segment adaptive curves.....

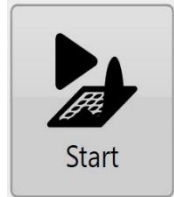


5. Implementing

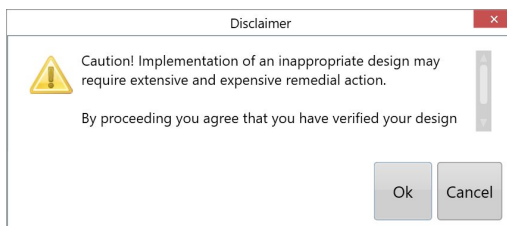
- a. Select the Apply button and follow on screen steps.....



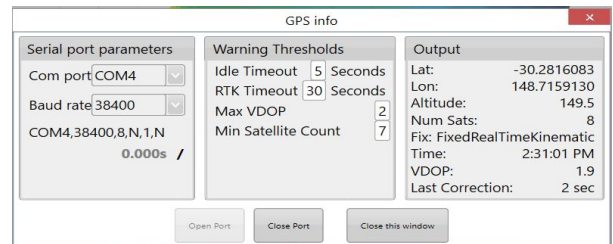
- b. Select the Start button to control John Deere iGrade™



- c. Read Disclaimer and select OK to implement your design.....



- d. GPS info screen will open and search for a GPS signal select the Close this window button.....



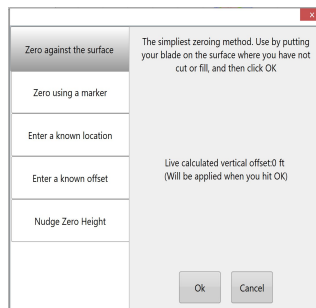
- e. Drive to a zero area (where green meets purple) close to the drain line and place the implement cutting edge on the ground (resave the project before shutting down to avoid the need for resetting zero).....



After placing implement's cutting edge on the ground, verify the selected SCV (1 and/or 3) is in Auto. Note: Manually adjusting blade height with SCV disables Automatic Control. Returning SCV to detent automates control.

5. Implementing

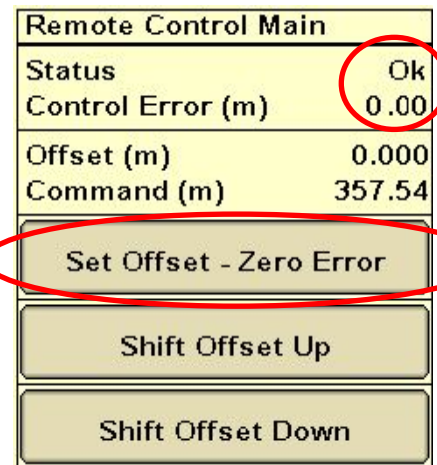
f. Select the Set Zero button to zero the T3RRA Cutta then choose “Zero against the surface” then OK.....



g. Select the Start button, to start sending commands to iGrade.....



h. Then press the Set Offset – Zero Error on the iGrade*.....



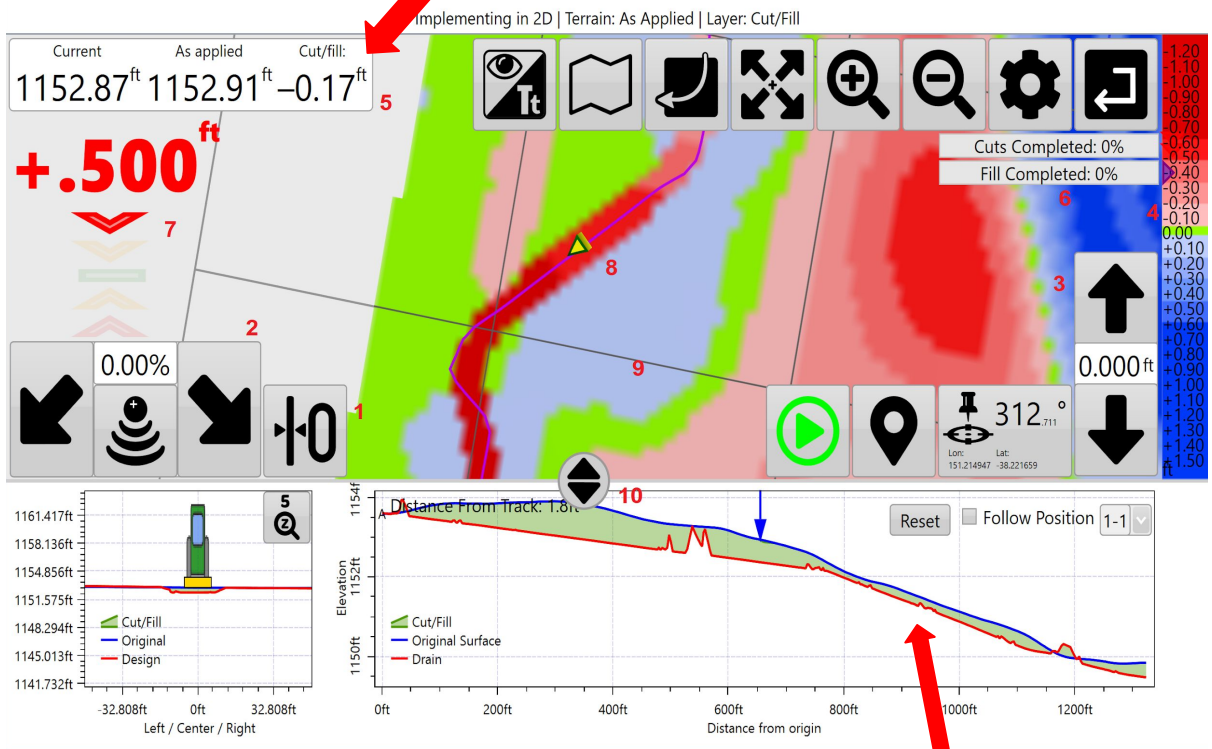
i. Drive forward and place the SCV1 used in Detent position, not float, for automatic control.

*NOTE: When setting zero in iGrade, timing is everything. iGrade will “time out” in approximately 5 seconds to “no remote commands” after tractor stops. The command will not be accepted and zero will not be set if you wait past this time frame. Best practice is to set zero while the Remote Control Main status says “Ok”. If you miss this opportunity, you can move the tractor slightly and try again. * Re-zero if the base is moved.

5. Implementing

Information about current ground height, design ground height and the amount needing to be added/removed. 2 percentage counters show the amount completed. These are only shown when 'Enable as-applied calculations' is turned on.

The purple triangle(s) on the indicator shows the original depth of cut or fill of the area that is currently being passed over, while the upwards and downwards facing arrows move along the gauge to show how much needs to be cut or filled to reach the design elevation.



At the left side of the map screen there are a grouping of up/down chevrons that show the current blade height relative to the target design height. They show how far the blade needs to move, and in what direction, in order to be "on grade".

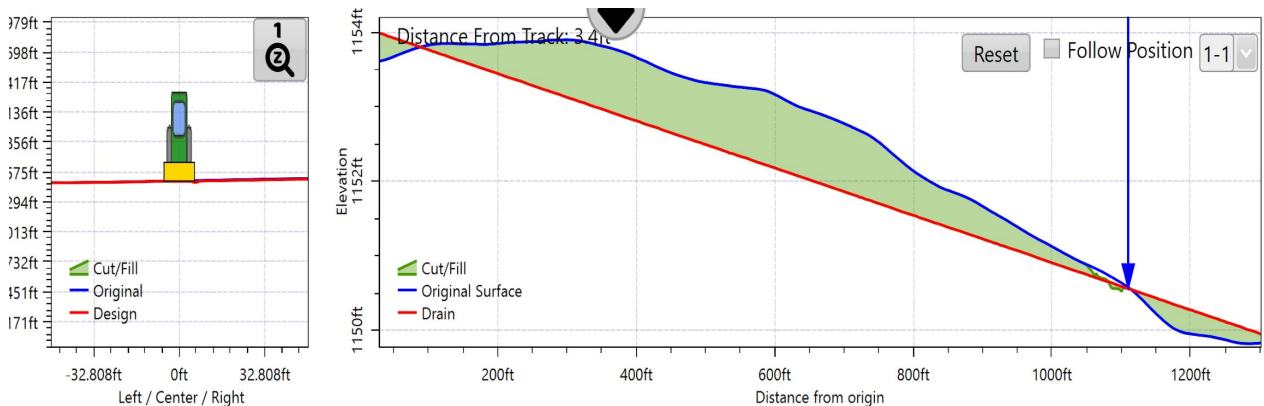
Profile view of drain shows current blade depth & applied progress. View can be minimized.

NOTE: Diagnostic method used on iGrade to ensure that iGrade is receiving control messages from T3C over serial connection is to check that the Line Count number in Sensor Level iGrade page is continuously incrementing.

5. Implementing

A small circular drag handle can be found at the bottom of the screen. Double tapping, or dragging this handle will display this screen. It shows both a cross section of the drain (window on the left) as well as a profile of the drain (window on the right).

The window on the left displays your current position relative to the drain centerline. It will indicate whether you are currently on the shoulder or in the bottom of the drain.



The right section of the screen shows design heights and original heights for the drain's full length. The blue arrow points to your current location and indicates the height of the blade. The red line in the diagram is the designed drain, the blue line shows the pre-implementation level of the ground and the green shading is area that will either be cut or filled. With this diagram you will be able to see cut depths along the length of the drain and estimate the number of passes required.

In the top right corner of this window there are 3 tools:

- **Reset**- Like the map above the graph you are able to zoom in to specific sections. 'Reset' allows you to reset the view of the graph.
- **Follow Position**-Zooms into the blue arrow and follows it along the graph as it implements the drain design.
- **Drain selector**-Used to select the drain to be displayed. The closest drain is not automatically selected, this needs to be selected manually.

6. John Deere™ iGrade Remote Control Automation

Operation

Select Application Controller Main Menu.....



- Use Shifts if cutting too deep or if more fill is needed
- Use Zero Error to set Zero to current blade height.
- Use Shift up/down to bench mark up or down.

Note: Manually adjusting blade height with SCV disables Automatic Control. Returning SCV to detent automates control.



Remote Control Main	
Status	Ok
Control Error (m)	0.00
Offset (m)	0.000
Command (m)	357.54
Set Offset - Zero Error	
Shift Offset Up	
Shift Offset Down	

Place SCV 1 in detent for automatic control

