T3RRA

T3RRA Cutta™ v2 & iGrade™ UCC1

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 <u>Auto</u>.

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' to 38400
- Open port
- 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………

T3RRA Cutta 2
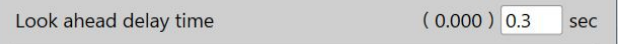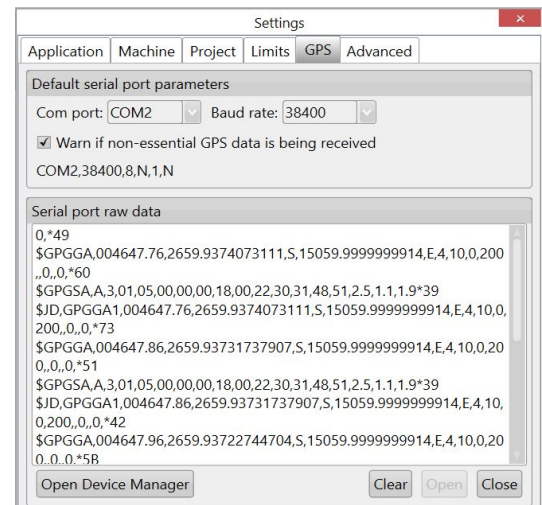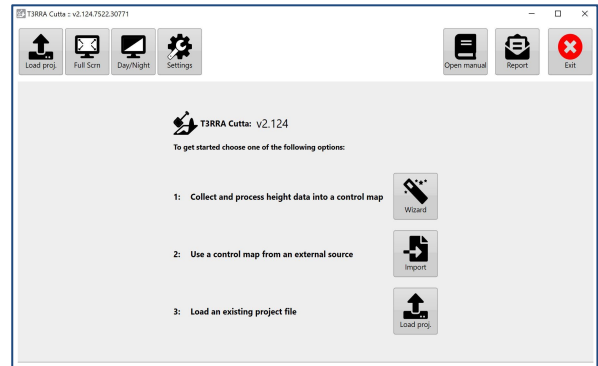
John Deere™ iGrade UCC1
Remote Control Automation

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...

Control Selection

SCV1 Control Type

Remote Control

Select Remote Control

Serial Port Setup
Ref iGrade Manual 35-3

1. Select Main Menu....

2. Select Control Selection......

Serial Port Setup

3. Select Serial Port Setup......
   Baud Rate – 38400
   NMEA – GGA, GSA
   NMEA Rate – 5 Hz

Serial Port Setup

Baud Rate 38400

NMEA - GGA, GSA

NMEA Rate - 5 Hz

Back

Note: Serial Port settings need to match
in **iGrade, T3RRA, & Receiver**

T3RRA Cutta 2

T3RRA

1. Select the Wizard Button to begin surveying

Wizard
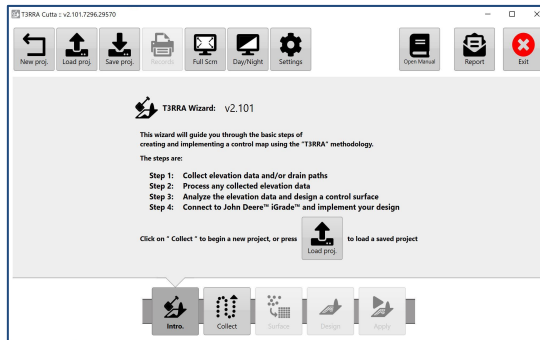
2. Surveying

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

Collect

Start
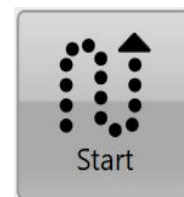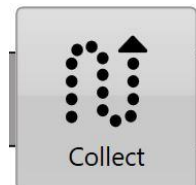
NOTE: Survey screen may default to Field Survey mode. Change to Drain or Boundary Survey mode by clicking on "Change data collection mode" icon.........

b. Drop a marker for reference on elevation wheel track...............
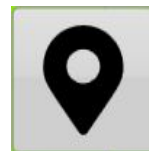
NOTE: Best practice - Use Absolute base permanently fixed in its calculated position to avoid any GPS location displacement.

T3RRA Cutta 2

T3RRA

2. Surveying

c. Select the start button,
and start collecting your elevation data............

d. Select the pause button to pause data
collection or the stop button to
stop your data collection...................
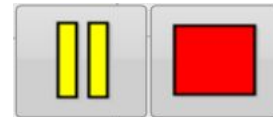
e. If desired, edit data points................

f. Select the Return button...............

g. Select the export button to save your
collected elevation data to save before designing.......

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............

Surface

Search radius
Elevation: 39.7 (m)

T3RRA Cutta 2
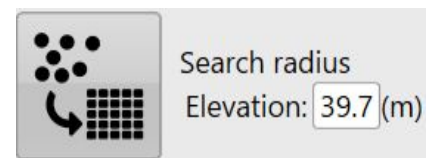
T3RRA

4. Design

a. Select the Design button for Best-fit, Multi-fit, Smooth, or Offset options to create full-field designs. Add Levees, Auto Drains, Pattern Drains then design Drains..........

Design

Create design
Best-fit   Multi-fit   Smooth   Offset
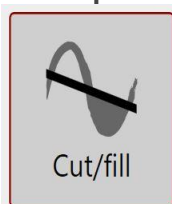Drains   Auto Drains   Pattern Drains   Levees
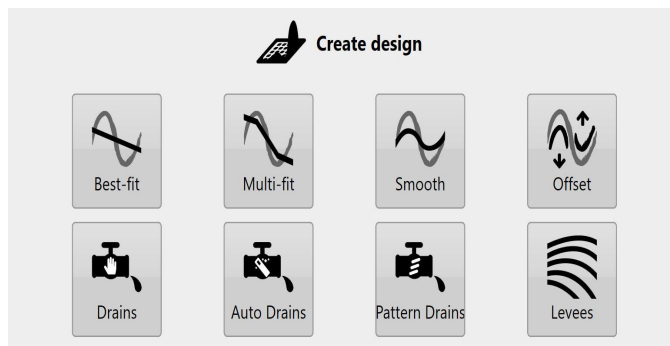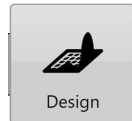
Enter all parameters to create design (refer to T3RRA Manual for detailed design information). NOTE: If you have a drain/field combination to design, always design the field first and the drain second.
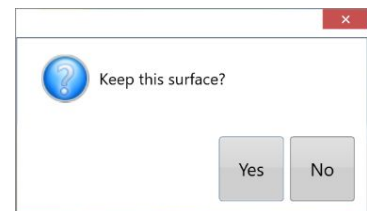
b. Choose model/layer button........
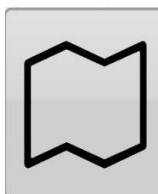
c. Select the cut/fill layer button to view the cut/fill map........

Cut/fill

d. Select the Return button....

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

Keep this surface?
Yes   No

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

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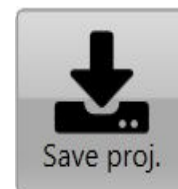
g. Select the Export button to save drains as guidance curves. Output multi-segment adaptive curves..........
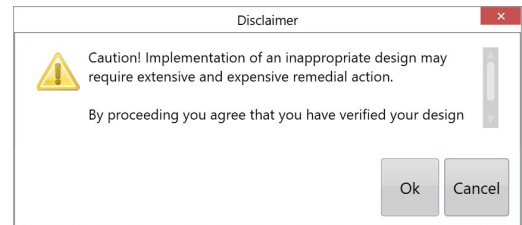

✓ Drains exist   Export

T3RRA Cutta 2

5. Implementing

a. Select the Apply button
   and follow on screen steps.......
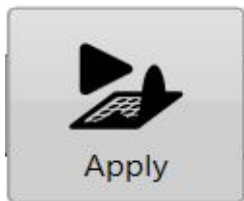
c. Read Disclaimer and select
   OK to implement your design.....

Disclaimer	×
⚠ Caution! Implementation of an inappropriate design may require extensive and expensive remedial action.	
By proceeding you agree that you have verified your design	
	Ok Cancel

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

d. Drive to a zero area (where green meets purple) preferably in wheel tracks from the elevation survey and place the scraper cutting edge on the ground (resave the project before shutting down to avoid the need for resetting zero)..........

Cut/fill:

$+0.00^{ft}$

After placing scraper cutting edge on the ground, verify the selected SCV'S are in Auto. Note: Manually adjusting blade height with SCV disables Automatic Control. Returning SCV to detent automates control.

T3RRA Cutta 2

T3RRA

5. Implementing

e. Select the Set Zero button to zero the T3RRA then choose "Zero against the surface" then OK.........

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

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

h. 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.

T3RRA Cutta 2

5. Implementing

Real time update of earthworks progress. Cut/Fill map progressively changes to reflect completed work. Elevation surface changes from original to design as work progresses. % job completion displayed.
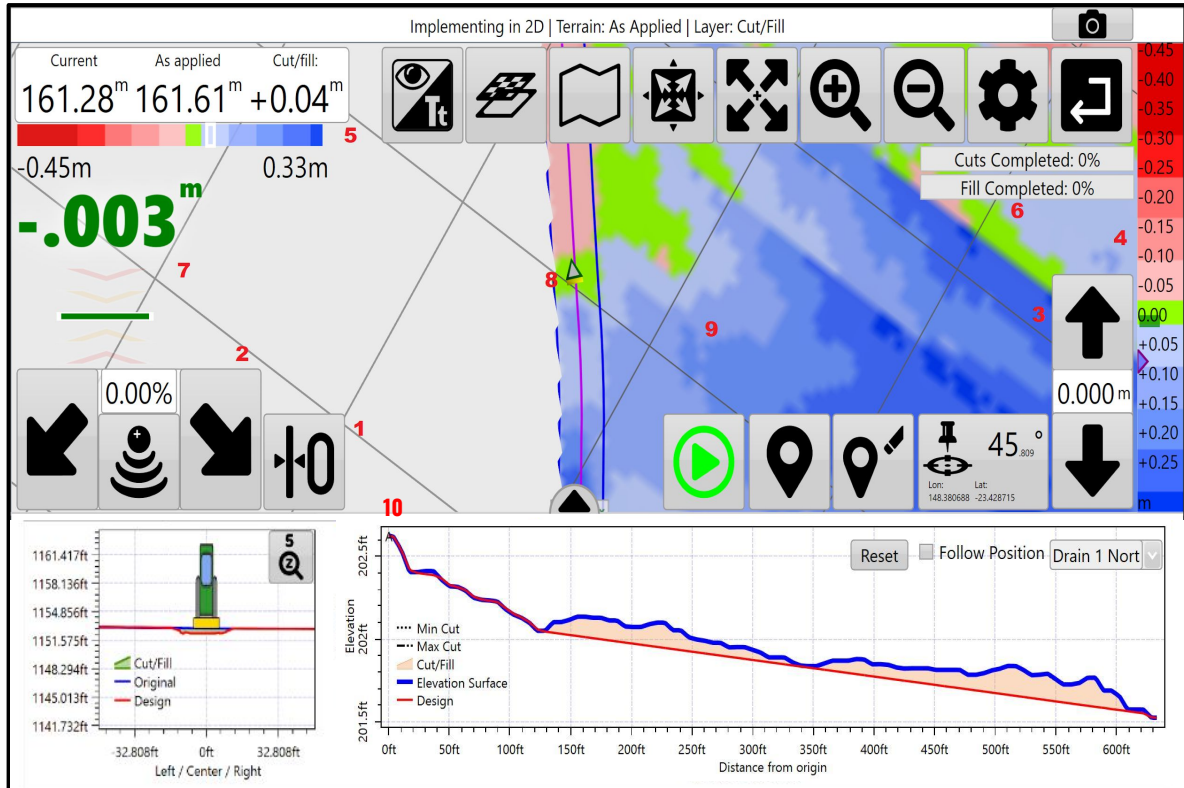
Screen features of interest include:

1. Setting Zero button.
2. Cross-slope nudge control buttons.
3. Vertical blade shift control buttons.
4. Cut/Fill legend.
5. Cut/Fill Information & horizontal colour bar.
6. Progress Indicator.
7. On-Grade Indicator.
8. Blade and Tractor Indicators.
9. Map display.
10. Drain profile and cross section.

Right side shows live legend for cuts & fills.

On-Grade Indicator: Left side shows chevrons of current blade height relative to target design height. They show how far the blade needs to move and in what direction for the blade to be "on grade".

Window on bottom left shows your current position relative to drain center line – whether you are on the shoulder or in the bottom.

Window on bottom right shows design & original heights for drains full length with arrow pointing to current location and blade height. Pick the drain to view from drop down.

T3RRA Cutta 2

5. Implementing Drains

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.
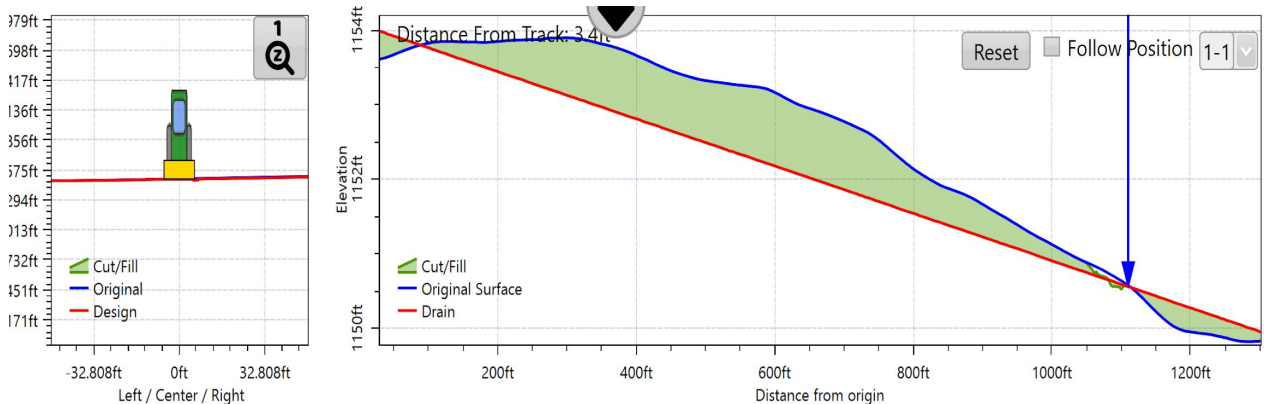
The right section of the screen shows design heights and original heights for the drain's full length. The blue arrow points to your current location and indicates the height of the blade. The red line in the diagram is the designed drain, the blue line shows the pre-implementation level of the ground 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 need to be selected manually.

T3RRA Cutta 2