Surveying issues

Collected survey data is blue and red only.

Symptoms:

Normally collected survey data is colored with a spectrum of red (low) through green through blue (high). In this instance there appears to only be two colors: red and blue.

Causes:

T3RRA software fits a red-green-blue spectrum of color to the survey points. It “stretches” these colors across the range of data points. If the data is “clumped” in groups that are well apart numerically then the majority of the spectrum of color will not be seen.

1. **One or more points has received a corrupted elevation value, placing it well above or below the bulk of the points**
2. **The base station has changed it’s elevation part way through the survey. Points collected before will be offset by this change.**

Solutions:

1. **If there are only a few corrupted data points, simply delete them using the tools available in surveying or surfacing.**
2. **If this problem is caught while surveying, stop the survey immediately. Check to see if the base station has been**

altered and fix it. Then delete the points that were too high or low and begin surveying at the location where the problem began.

3. **If it is not possible to resurvey the affected part of the field you have several (bad) options**
   a. **Export the elevation points as a CSV file. Open the CSV points in a spreadsheet. Add the appropriate offset to all bad points. Save the file as a CSV. Import this CSV file in the T3RRA software.**
      OR
   b. **Surface the collected data. Create a region around the section of the field that is too high or too low. Use the 'Offset Surface' design tool to change the height of the problem region. Some smoothing across regions may also be required. From this point onwards, use the resultant design surface as the basis for further designs.**

Elevation Offset during surveying.

Symptoms:

Recorded elevation data collected while surveying is offset and not in the correct location.

Possible Cause:

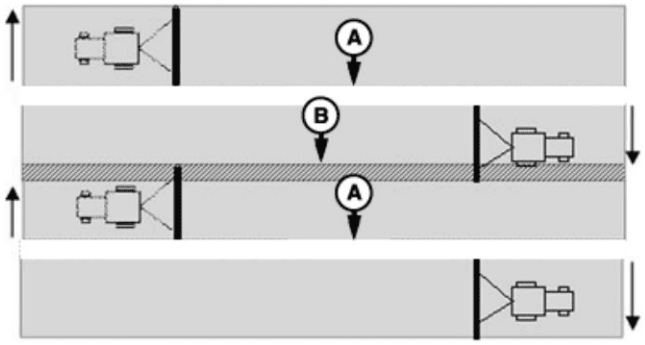
- **StarFire Receiver needs calibrated.**

Solutions:

- **Calibrate receiver’s TCM (refer to John Deere SF OM)**
- **Re-Survey**

IMPORTANT: Vehicle must be on a hard, flat level surface for calibration. If TCM is not calibrated on a level surface or TCM mounting angle is not level in relation to vehicle angle (StarFire mounting bracket or vehicle cab being slightly offset, uneven tire pressures from one side to other, etc.) operator may see offset during operation. This offset could look like a consistent skip (A) or overlap (B) in pass-to-pass operation. To eliminate offset, re-calibrate on a level surface, drive down a pass, turn around and drive down the same pass in the opposite direction. If the vehicle does not follow the same pass, measure the offset distance and enter in the implement offset. After initial calibration of TCM, it is

not necessary to calibrate again unless TCM angle in relation to the vehicle has changed. For example, tire pressure has been lowered on one side of the vehicle.



A—Skip B—Overlap

Drain Survey mode performed in error.

Symptoms:

Drain line is present in the elevation data path.

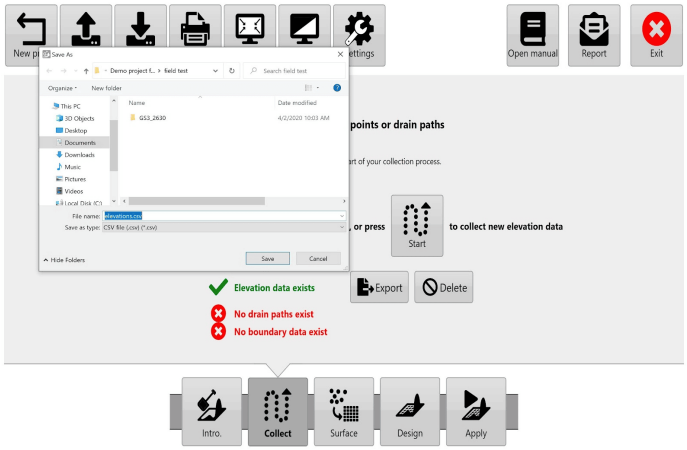
Possible cause:

T3C user has recorded in Drain survey mode instead of Field survey mode as intended. Drain lines are in a swath pattern across the field.

Solutions:

If a user does not wish to resurvey in Field survey mode, they can:

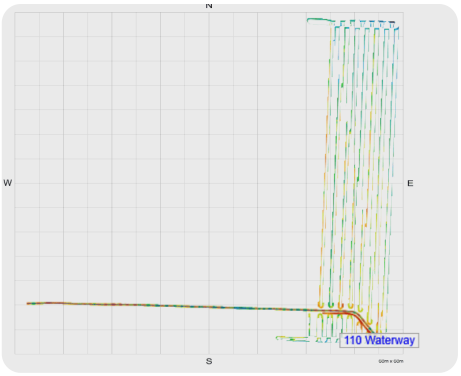
1. **Delete drain line T3RRA Design (T3RRA Cutta owners only).**
    1. **Load the project into T3RRA Design**
    2. **Delete the drain line on the Guide tab**
    3. **Export a control file for T3C**
2. **In Collect step of Wizard:**
    1. **Export data as CSV file**
    2. **Import CSV file into T3RRA Cutta v2.**


Open manual
Report
Exit
Save As
Demo project f... › field test
Search field test
Organize
New folder
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Name
Date modified
GS3_2630
4/2/2020 10:03 AM
File name:
Save as type:
CSV file (*.csv)
Hide Folders
Save
Cancel
points or drain paths
rt of your collection process.
or press
Start
to collect new elevation data
Elevation data exists
No drain paths exist
No boundary data exist
Export
Delete
Intro.
Collect
Surface
Design
Apply

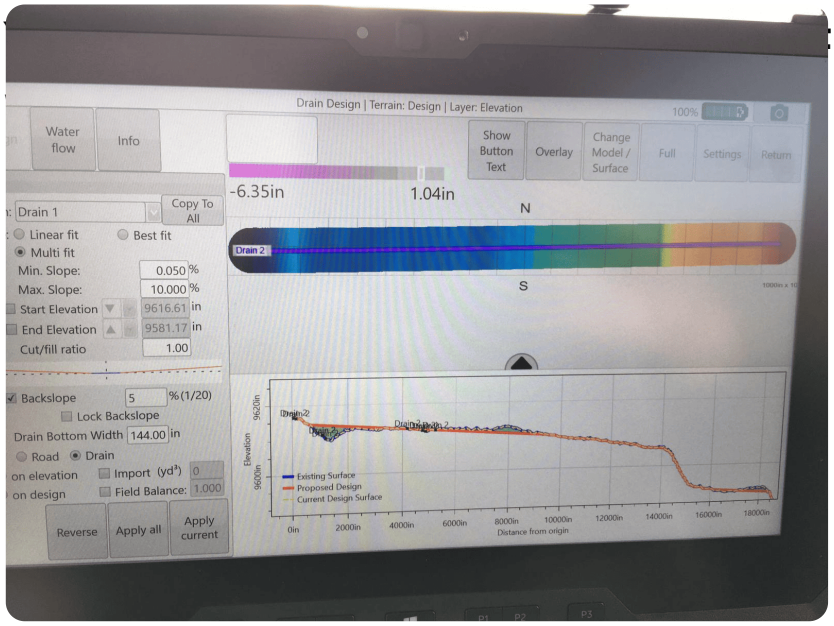
Elevation points not appearing correctly or with voids.

Symptoms:

1. **When you survey a field or drain and the elevation points are faint with black lines through them causing the survey to appear incorrect or with void like spaces.**



2. **names associated**



Cause:

1. **The elevation points have been recorded using the Boundary mode instead of the field or drain survey modes**
2. **Drain was resurveyed without starting a new project or deleting previous surveys.**

Solution:

1. **Delete the black boundary line using the delete boundary option in the boundary survey mode in the collection screen. After this the elevation points can be used as they normally would.**
2. **Delete the unwanted drain survey elevation data in the collection screen.**

Surveying at heights close to sea level results in an incorrect field surface.

Symptoms:

The collected field elevation map (in T3RRA software) appears vastly different from your expectation of what the actual field looks like. You are surveying a field where elevations can be both negative and positive (i.e., partially above and partially below sea level). When you examine your field map you see that all elevation values are either negative or positive (not both). You are using a StarFire 3000 receiver and receiving serial data directly from the receiver (not via iGrade).

Cause:

The StarFire 3000 has a bug that causes problems with output elevations when it crosses between positive and negative elevation values.

Solution:

1. **Alter your base station height so that the whole field can be surveyed using elevations that are either all positive or all negative.**
2. **Use iGrade and an implement receiver to survey the field.**