

## **BlackBox Software V12.7.0 release notes**

### **New**

1. Kuhn/Rauch GPS Control/VARISPREAD protocol added to allow spreader section control via the Quantron E2 and A control boxes.
2. A fleet mode called 'Multi-View' has been added to the BlackBox in order for multiple units to synchronize the coverage data on the same job within the same field, to avoid over application (additional hardware required).
3. PW Flow Sensor protocol implemented for use with the 'Patchwork Pulse' hardware that utilizes the frequency output from flow sensors to visualise and automatically record flow rate on the BlackBox Advance.

### **Implement Control**

1. Headland Management
  - a. Headland management issue with purging and using the master switch fixed.
2. VRT
  - a. A new protocol has been added for Raven control systems to work alongside Section control in order to take a switch feed directly from the master switch.
  - b. A VRT scaling factor has been added for the rate, this is for controllers which are not able to use rate values of over 9999.
  - c. Removal of original Kuhn protocol for section control due to changes made for the improved GPS Control system which has superseded it.
  - d. Fixed the Amazon+ switch issue that was introduced in the last software release.
3. Section Control
  - a. Auto headland mode added for sprayer section control. This mode stops the end sections coming on when turning on the worked headland, eliminating the need to turn off and on the master switch when working from pass to pass and improves the overall reaction time of the system as the headland is driven out of.
  - b. Section Control options have now been added to the 3D screen for the Hardi protocol.

### **Guidance**

1. Headland Guidance distance off line issues have been solved; now the value will be correct the entire distance around the headland even through the start and stop point.
2. The latest green trace points are no longer drawn due to an issue where they seemed to be jumping forward ahead of the user's position.

### **Steering –Evolution**

1. Auto steer recal line issue has been fixed and no longer causes the system to go crazy.
2. Auto steer can no longer at any time be engaged in headland mode.

3. Auto steer now clears all line data when changing to headland mode in order to avoid system failure and problem.

### **General**

1. Recording Details has been renamed to Recording; with sub menus; Job Details, Recording Options, Fleet Setup and Weather Station.
2. External GPS mode has been improved to allow it to perform more efficiently when using an external switch.
3. Previously paused jobs that have a same farm, field and job type name as a newly paused job are now moved to an archive folder to resolve reloading issues.
4. The switch type is now saved alongside the stored implement, when the implement is changed the switch type is also changed to that of the implement.
5. The unit can no longer freeze if the screen is pressed too many times when starting a job, this was caused by the recal line popup appearing.
6. Field boundaries are now saved to the completed folder again.
7. The 'Save/Load Profiles' has been improved using a new method of saving/ loading which works faster and more efficient. Also allows integration with WebTrack.