Field Research Software Release Notes Version 2.1.1.12
11 February 2010

FRS Laptop

- FRS Laptop registration not getting the correct unique machine id. If a machine is updated from a version with this problem, the unlock code will need to be regenerated.
- FRS Laptop not properly saving values from the GHM Configuration screen. The laptop was modified to work the same as the handhelds in that dialog.
- In FRS Laptop the call to locate ports using the wrong port name for ports greater than COM9.

All Modules

- It was discovered that actuator transition times were being applied on the handhelds at the software level and also down on the hardware at the firmware levels. This was causing transition times to be doubled. The delay was removed from the software so the transition time delay occurs only at the firmware level. In order to adjust for this correction, scripts and default transition times were adjusted to better reflect actual machine performance. Default timing for the High Capacity was changed to set the open transition times to .6 seconds and the open state times to .4 seconds. The Classic open state times were set to .3 seconds.
- Limit switch errors causing an apparent freeze of FRS. The error messages were causing the window to lose focus and, therefore, not allowing user input. This was corrected by restoring focus once the limit switch error went away.
- Tare warnings in the backup log causing collected data to be shifted. This was corrected by reformatting the tare warning in the backup log so it was not displaying on the same line as other data.
- Periodically a harvest map completes prematurely. The number of plots left to harvest was being miscalculated and FRS was modified to calculate the correct number of plots.
- The number of rows being incorrectly calculated for sub-maps inside 4-row maps. This was corrected by recognizing 4-row maps and removing the filler rows from the calculation.
- Combine observations always starting at the map starting location instead of the current position.
- The HM400 receives invalid values for moisture when doing a check tare. These values are filtered and no longer cause a tare warning.

Datalink

- Export misaligns traits when repetitive traits were present.
- Datalink not properly exporting multiple maps.

High Capacity

- Weight and moisture readings not being displayed live when entering harvest and following a tare.
- A “delay, weigh time” was added to the HM400 scripts to properly wait before requesting the plot weight.
- For the HM400 twin and single BDS modules, the emulation mode causing FRS to freeze up.
- Circular navigation.
- Performing a tare in harvest causes the level detects to be zeroed
- False “Tare Warning”
- Added HM800Updater to the HM400 BDS Install file

ClassicGG

- The tare is now checked when entering harvest and, if there is a tare warning, the current weight (W) and moisture (M) are displayed in the tare warning message.

GHM

- A “delay, Weigh Time” was added to NormalPlot.txt on the HM400 GHM. This was added in front of the request to get the plot weight to improve data integrity.

Known Issues

- **HM400 Classic** Performing a tare in weight or moisture diagnostics and the Auto/Manual switch in Manual mode results in an error.
    - Solution – Before Tare is initiated move switch to Auto mode.
- **HM800 Classic** When user encounters a limits switch error, FRS stops and displays an error message. If user uses Manual mode to cycle gates and clear sequence, gates will continue to cycle after limit switch error has cleared.
    - Solution – Disable close limit switch on Hopper gate. This gate is the one most likely to encounter limit switch error. Service reports that many users have disabled the hopper close limit switch to prevent false limit switch messages.
- **HM400 Classic** FRS currently checks the weight value when entering collect. It no longer automatically tares the weight, (moisture is does tare when entering collect). If the weight on the Classic is negative, user is not prompted to tare. Tare warning only occurs when weight is positive.
    - Solution – Always check the weight value when entering collect mode. Perform tare if needed.

- **FRS Laptop** If you re-position your current plot and have enabled a Sub Map the List portion of the screen does not update correctly.
    - Solution – Exit collect mode and re-enter in order for List to update correctly.
- **FRS Laptop** Re-positioning with Circular harvest does not complete map correctly
    - Solution – If user must re-position exit collect and re-enter to establish correct pattern.
- **DataLink for FRS** DataLink does not determine if a map is rectangular. Maps that do not have complete numbers for range and row cause error on import.
    - Solution – all maps must be complete and rectangular before importing.
- **HM800 GHM** If user un-checks the Holder Hopper selection, he can still enable a Test hopper. This results in an error when cycling the buckets.
    - Solution – User should not enable Test bucket if no Holding Hopper is being used.
- **FRS High Capacity** The backup file generated while in strip mode is confusing to users. If the system cycles 3 times from level detect then 1 time to finish strip backup file shows 4 entries. The first 3 cycles show weight for each of the first 3 cycles. The 4^{th} entry shows the total weight for the plot rather than the weight for the 4^{th} cycle.
    - Solution – Issue will be addressed in future release. To determine amount of grain in last cycle, add weight of previous cycles together then subtract from last cycle.
- **FRS High Capacity** Enabling limit switches in both HM400 and HM800 causes erratic behavior.
    - Solution – disable limit switches on High Capacity Systems.
- **FRS All Modules** Enter key can be pressed from Spatial screen before navigation pattern is selected. This causes the software to sequence and advance 1 plot.
    - Solution – Never press Enter key until Navigation has been set and FRS is at the Form screen
- **FRS All Modules** Some error messages cause FRS to lose focus and appear to user as if FRS has locked up.
    - Solution – If FRS appears to be locked up, use touchscreen to select FRS again. Key may be in the top message bar is dark color when program is in focus. If light colored, tap on screen to reselect FRS.
- **FRS All Modules** Errors in weight calibration can occur if the user calibrates weight and enables the Slope and Motion then changes units.
    - Solution – Always change units with Slope and Motion disabled then calibrate weight and enable Slope and Motion.

- **FRS All Modules** Standard Plot ID maps created with Plot increment other than 1 result in incorrect map.

    - Solution – import map when the plot increment needs to be greater than 1.
- **FRS All Modules** The Connect button on the main FRS screen does not always reset the HM800 electronics. In some cases FRS shows message “Connection Successful” but going into harvest or diagnostics results in error.
    - Solution – Always exit FRS and shut down HM800 console when losing communications.
- **HM400 All Modules** HM400 system can reset and possibly lose setup file stored to HM400 when a low power state occurs.
    - Solution – Always power off HM400 when starting the combine especially if a low voltage on the combine battery is suspected.
- **FRS All Modules** Setting a weight time longer than 2.5 seconds results in lost communications. Setting weight time to less than 0.5 seconds can result in incorrect weight data.
    - Solution – Never set the weight time longer than 2 seconds or less than 0.8s.
- **FRS All Modules** When a user re-positions back one plot during data collection, the printer prints new data collected with the wrong plots.
    - Solution – Exit collect mode and re-enter to establish correct navigation and printer sync.