FRS 2.2 Release Notes

Copyright: October 2010

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FRS version 2.2 was developed with the goal of improving software performance without affecting the stability attained in FRS 2.1. Version 2.2 of FRS has achieved this goal of faster bucket cycle times and greater efficiency in the processing. This release is not mandatory but is recommended for Twin and Single High Capacity systems and Generic Harvest Systems (GHM).

NOTE: Harvest Modules for the Classic GrainGage are still at V2.1 and is not affected by this release. For users who would like to take advantage of the faster cycle times, please follow the download process.

> **Caution**: Because of the improved speed and efficiency, timer settings that were previously used with High Capacity Systems may need to be increased so that data quality is not compromised.

The recommended Minimum timer settings for High Capacity Systems are listed below:
- Timers
  - Hopper Open 0.6
  - Plot Open 0.6
  - Weight Time 0.8
  - Countdown Timer Depends on Combine Cleanout

- Actuators
  - Left Holding Hopper
    - o Open Transit Time 0.6
    - o Close Transit Time 0.2

  - Right Holding Hopper
    - o Open Transit Time 0.6
    - o Close Transit Time 0.2

  - Plot
    - o Open Transit Time 1.0 JL **BDS and Non-BDS on HM400 Systems
    - o Close Transit Time 1.0 JL

  - Auxiliary
    - o Open Transit Time 0.2
    - o Close Transit Time 0.2

  NOTE: Users Running the BDS system MUST download the NEW script file from the Harvestmaster website and insert it into the TwinSingleBDS folder replacing the old script file. JL

- BDS Settings (access by pressing F12 from BDS Setup Screen)
  - Accel Factor 1.0
  - Wiper Delay 0.0
  - Wiper Return 200 JL 250-300 for wiper to go across in Diagnostics

• Settle Time 400
• Weigh Time 900
• Dump Return 800 JL

Caution: No other settings in this screen should be adjusted. Adjusting these times so that the Weigh Time plus the Settle Time are greater than 3000 will cause a lost connection during harvest.

- 400 Classic GG Timer Settings.

Caution: Open State Time, HM400 systems need to be set to 0.6 or higher. Failure to do so will result in erratic data. JL

Known Issues

FRS v2.1 & v2.2
• FRS HM400 Classic - Performing a tare in weight or moisture diagnostics with the Auto/Manual switch in Manual mode results in an error.

o Solution – Before Tare is initiated move switch to Auto mode.

• FRS HM800 Classic - When the system encounters a limit switch error, FRS stops and displays an error message. If user switches to Manual mode to cycle gates and clear the sequence, gates will continue to cycle after the limit switch error has cleared.

o Solution – Service reports that disabling the Hopper close limit switch will prevent false limit switch errors..

• FRS HM400 Classic - 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.

o 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.

o 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

o 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.

o 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.

o Solution – User should not enable Test bucket if no Holding Hopper is being used.

• FRS High Capacity - The backup file generated in strip mode works as follows. If the system cycles 3 times from level detect then 1 time to finish the strip, the backup file shows 4 entries. The first 3 entries show weight for each of the first 3 cycles. The 4th entry shows the total weight for the plot rather than the weight for the 4th cycle.

o 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 either the HM400 or HM800 systems causes erratic behavior.

o 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.

o 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.

o Solution – If FRS appears to be locked up, use touchscreen to select FRS again. The top message bar is a darker color when the 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 of measure.

o Solution – Always set units to metric or US 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.

FRS v2.1 and v2.2 additional notes:

1. A tare should be performed before entering <Collect> to properly set base weight, moisture and level detect readings. If running in "Strip" mode, failure to tare the system may cause the system to prematurely start cycling.

2. The user should set the Navigation pattern before pressing < Enter > when entering collect mode. Pressing <Enter> from the Spatial screen before setting the navigation pattern will result in erratic behavior.

3. Slope and motion on the HM400 overcorrects. This has little effect on small vibrations but can be a problem if running on a slope or rugged terrain. The compensation can be adjusted by increasing the reference weight. The reference weight is typically 4 lbs and it appears that setting the reference weight to 5.2 pounds may improve accuracy.

4. The "Plot Open State Time" is not used in the BDS script and changing it, therefore, will have no effect on the actual open time of the plot gate.

5. Combine observations do not follow the correct navigation path if the location is repositioned. To correct this problem: After repositioning, exit collect and then re-enter collect at the new position.

6. The default BDS wiper delay is set to 0.5 second. This adds a full second delay on a twin. For users needing that additional performance, contact customer service and they can give directions on how to correct the delay.

7. Navigating to a plot outside the bounds of the current map or sub-map causes FRS to freeze.

8. With the improved timing it's been discovered that, in some environments, the default actuator timers (open and transition timers) are too short to fully open High Capacity doors. Users should evaluate their environment to ensure the settings allow all grain to fully exit the buckets. See Note at the beginning of this document for recommended settings.

9. The open state timer does not accurately reflect the time the bucket remains open. It is recommended, if required to keep the gate open longer, that the open transition time be adjusted instead.

10. Using the GHM800 module and switching to manual mode before the auto tare is completed can cause the screen in FRS to lose focus. This looks like FRS is not responding. To avoid this, wait until you see that the auto tare is completed before switching from auto to manual mode on the console.

11. Do Not use FRS v2.2 harvest module software on a HarvestMaster Classic grain gauge. The known issue is in collection screen. If the "Tare" button is pressed during collection, weight and test weight will not be logged into the map file or displayed on the screen. Dedicate a handheld to the HMClassic with FRS v2.1 software installed.