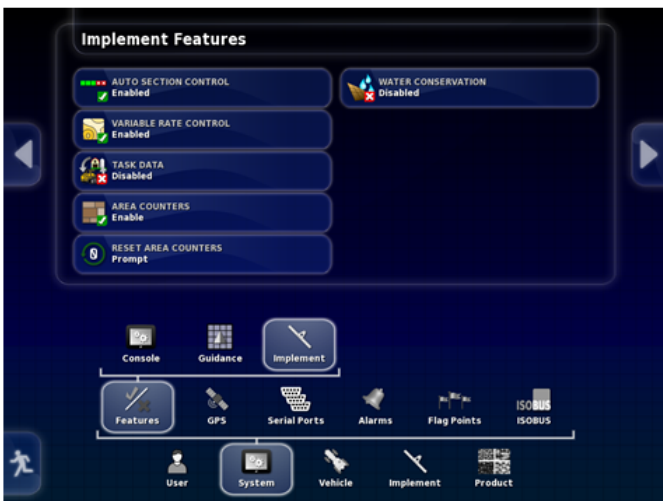


## Apollo ECU Profile Setup

1. Go to the settings page on the X30. There are many user settings that aren't mentioned but this will just review the ones more relevant to start seeding.
2. Under User/Region/Units set your user preference for units.

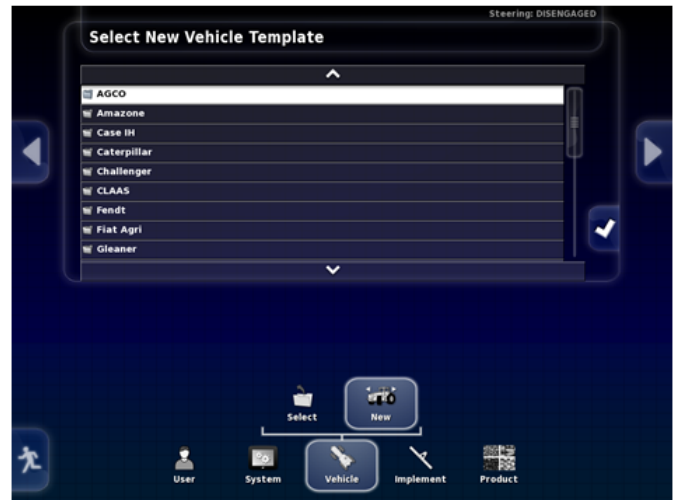


3. Under System/Features/Implement enable Auto Section Control (ASC) if you will be using GPS coverage to control the tank turning on & off (full width or sectional). Enable Variable Rate Control (VRC) if you will be using it. Enable Area Counters.



4. Under System/GPS/Receiver enter the receiver type. For non-Topcon receivers enter other. Set the Baud Rate that the receiver is outputting at.
5. Under System/Serial Ports enter the serial port you are connected onto from the X30 harness under GPS Receiver Com.

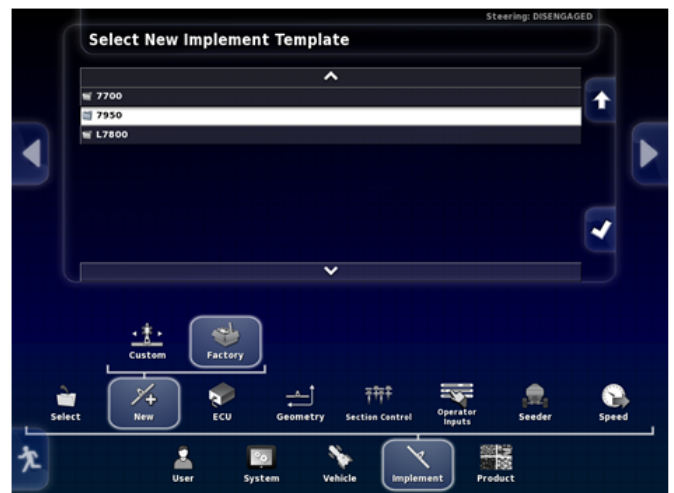
6. Under Vehicle/New select your tractor model or something similar. Under the Geometry tab verify the dimensions for accurate seed placement if using ASC.



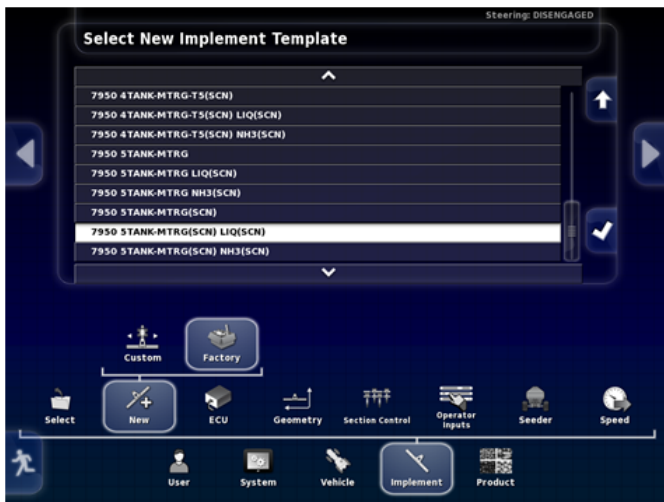
7. Go to Implement/New/Factory to create an implement profile. Select the tank series.



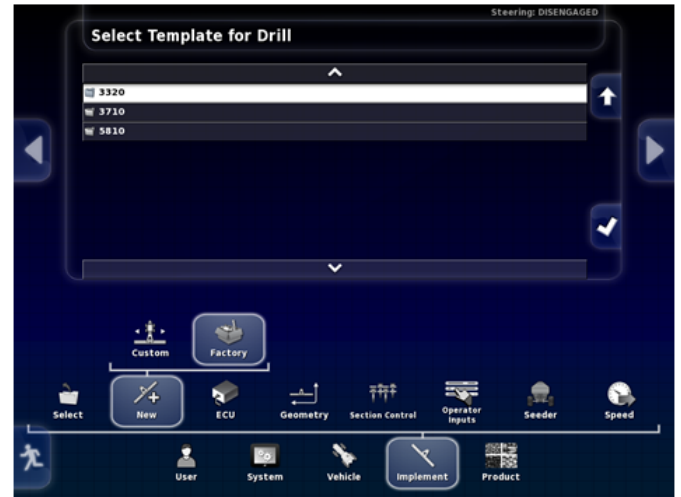
8. Select the tank model.



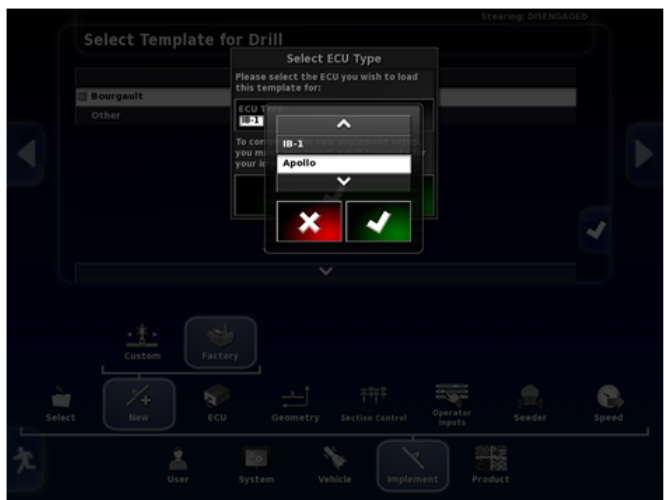
9. Select the tank configuration.



12. Select tillage series.



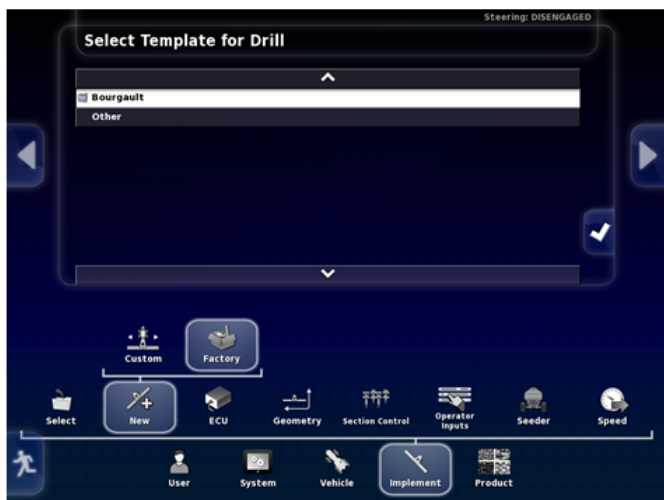
10. Select the ECU Type as Apollo.



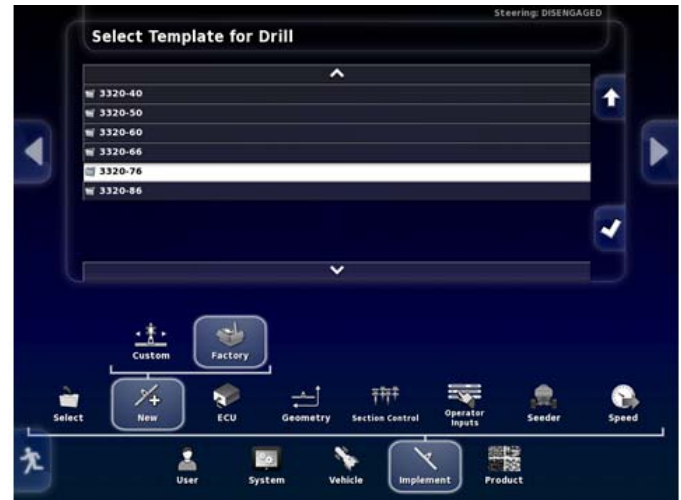
13. Select tillage model.



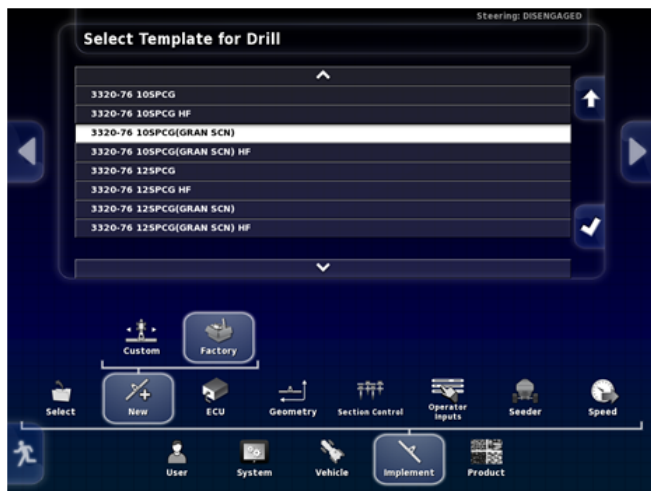
11. Select Bourgault.



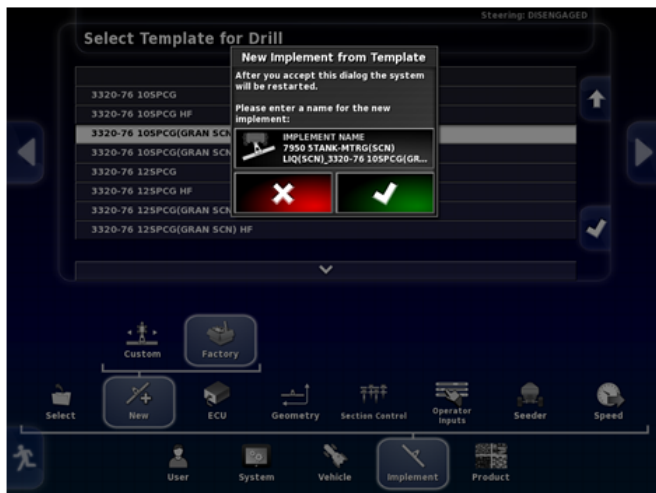
14. Select tillage size.



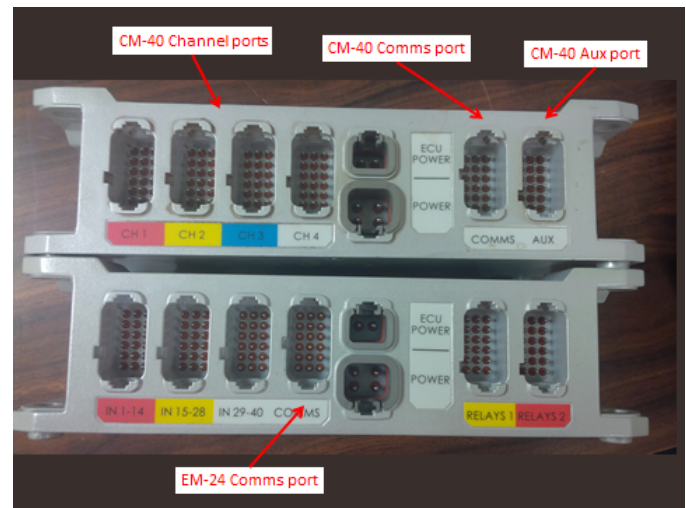
15. Select tillage configuration.



16. Rename implement or accept default name then system will restart.



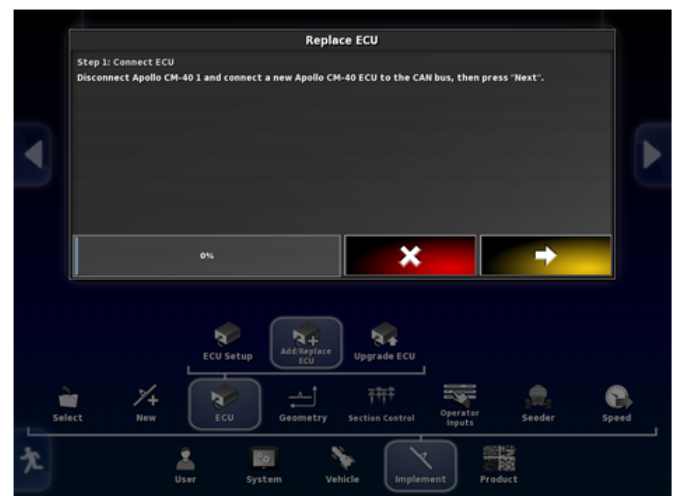
17. The ECU's need to be detected one at a time, starting with the master CM-40 ECU, for each new implement profile. To do this, all the Comms connectors on the ECU's need to be unplugged except the master CM-40 ECU. (If there is more than one CM-40 ECU on the tank the master should be the 1<sup>st</sup> one bolted to the tank. It will have all 4 channels connected and a harness connected in the AUX port.)



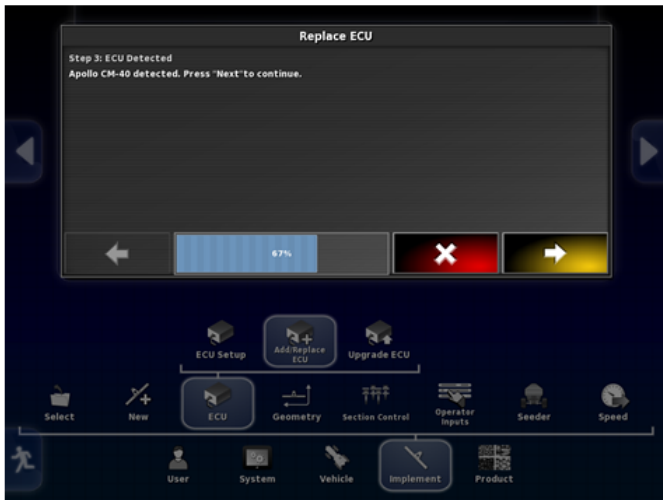
18. Under Implement/ECU/Add/Replace ECU select the tab under the Status column for the 1<sup>st</sup> CM-40 ECU on the list. Select Replace CM-40 and accept.



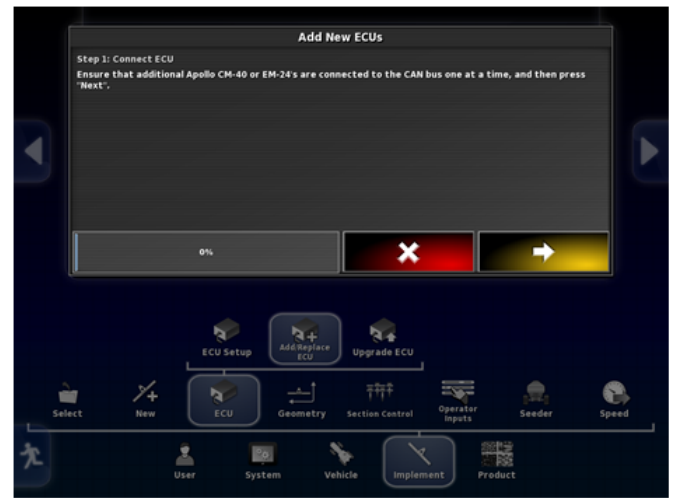
19. Hit the next arrow.



20. Once an ECU Detected message appears hit next.



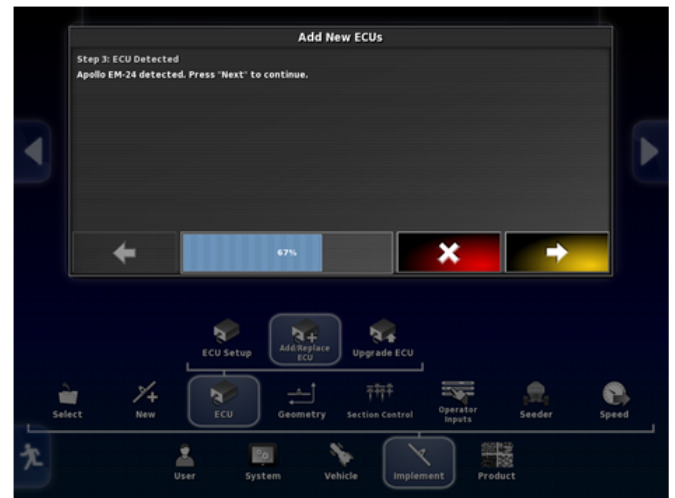
27. Hit the next arrow.



21. Hit the check mark and monitor will restart.

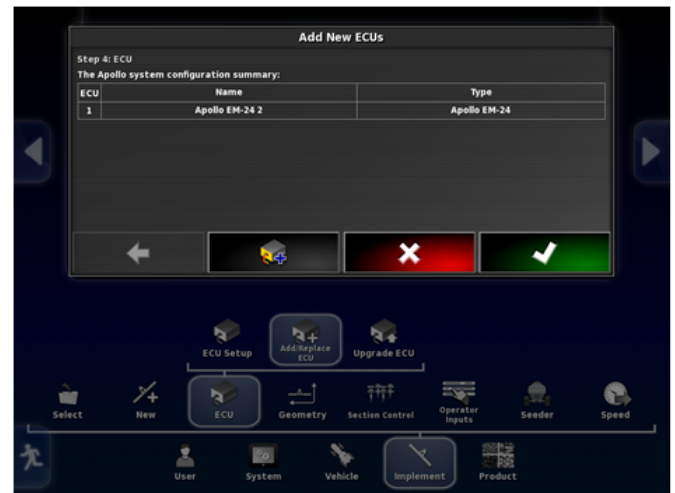


28. Once an ECU Detected message appears hit next.



22. ECU's that are already detected can remain plugged in.

29. Hit check mark.



23. If there are more than 4 tanks in the configuration there will be an additional CM-40 ECU on the list. Connect the Comms connector into the ECU and repeat steps 18-21 to replace it.

24. If the configuration has ASC for granular or liquid/NH3 there will be an EM-24 ECU on the list. Connect the Comms connector into the ECU and repeat steps 18-21 to replace it.

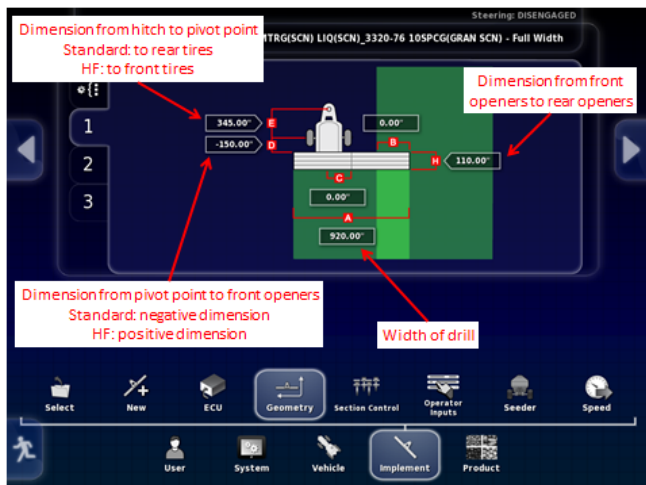
25. If there is an ECU on the list that is not present or won't be used select Disabled under the Status column.

26. If there is blockage installed, an additional EM-24 ECU will need to be added. Connect the Comms connector into the ECU and press on the tab at the top of the screen to Add New ECU's.

30. Once all ECU's are detected there should be firmware versions listed for each ECU indicating that the system is communicating with each.



31. Under Implement/Geometry verify dimensions look accurate for each boom.



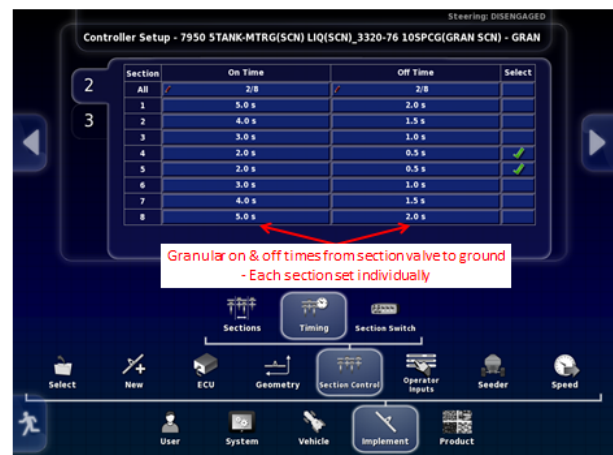
32. The Implement /Section Control tab only appears if configured with granular or liquid/NH3 ASC. On the Sections tab for the granular boom, the total width should match the width on the Geometry tab for that boom.



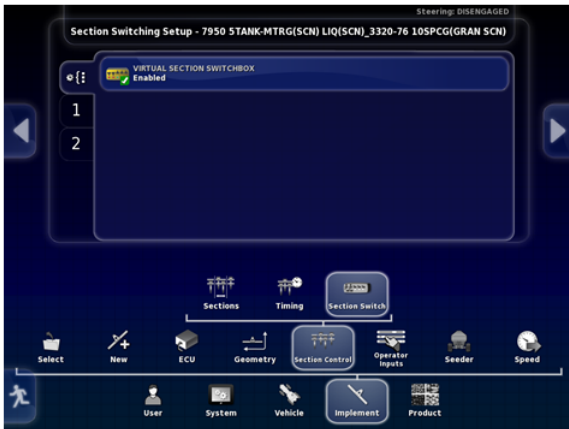
33. If configured with liquid/NH3 set up # of sections and the section widths for that boom.



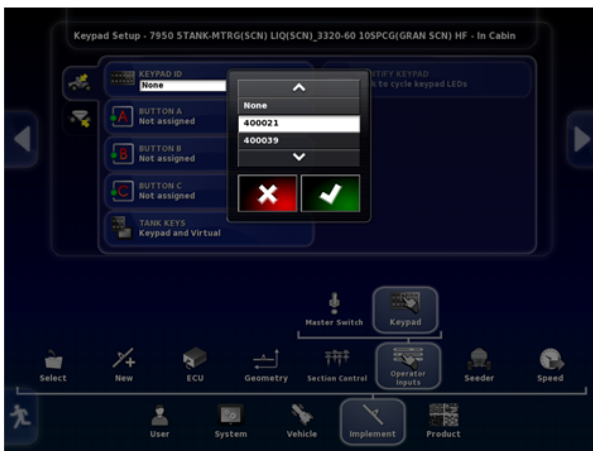
34. Under the Timing tab set the on & off timing for each section for each boom. This is the time for the product to flow from the section valve to the ground. Each section can be set the same (as the worst case) or they can have individual times for granular sections to have even less overlap. Since the product for the inner sections has less distance to travel it doesn't need to start as soon so can have a shorter on & off time.



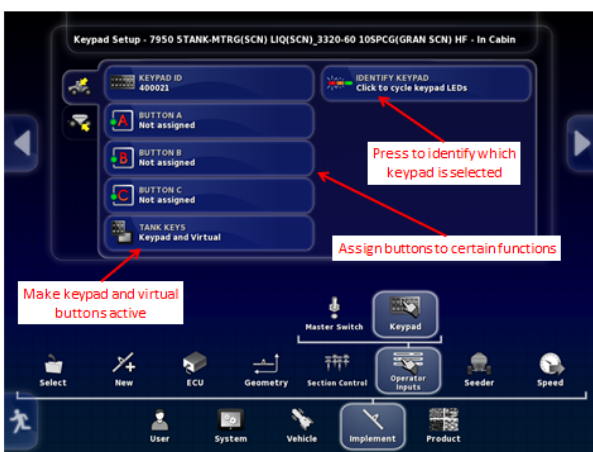
35. Under the Section Switch tab enable Virtual Section Switches if you want the ability to override ASC by manually shutting off sections. For the liquid/NH3 boom match the # of switches to the # of sections.



36. Under Implement/Operator Inputs/Keypad select the Keypad ID for the in-cab keypad & on-frame keypad.



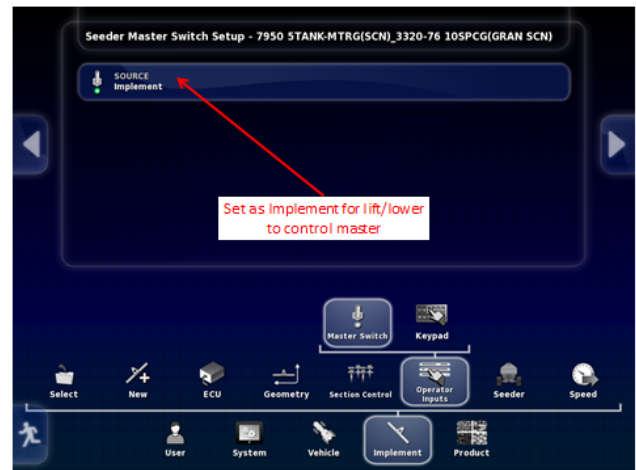
37. You can confirm you have the right keypad assigned in the cab as the LED lights will stop flashing. There is also an Identify Keypad button that changes the flash sequence to confirm you have the right one selected for the appropriate location.



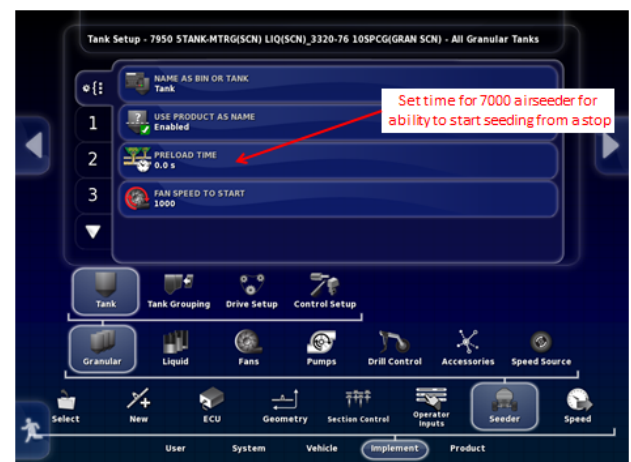
38. Under Implement/Operator Inputs/Master Switch set your master switch preference.



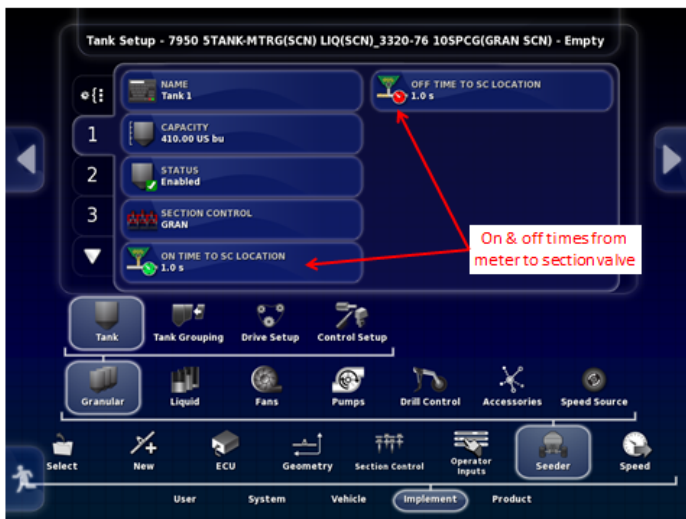
39. If you set Source to Implement, the tillage lift/lower will control the master.



40. Under Implement/Seeder/Granular/Tank set a Preload Time if desired.



41. Set the on & off timing for each tank. On a sectional boom this is the time from the meter to the section valve. This can be 1 sec on & off for a tow-behind configuration. This should be measured for a leading configuration since it may vary more significantly.

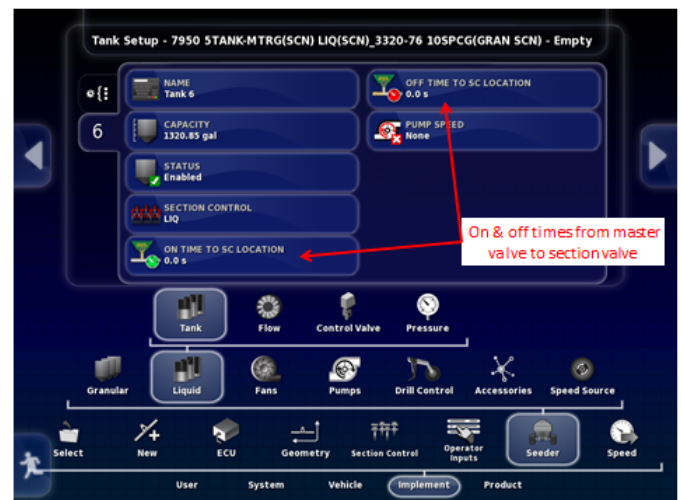
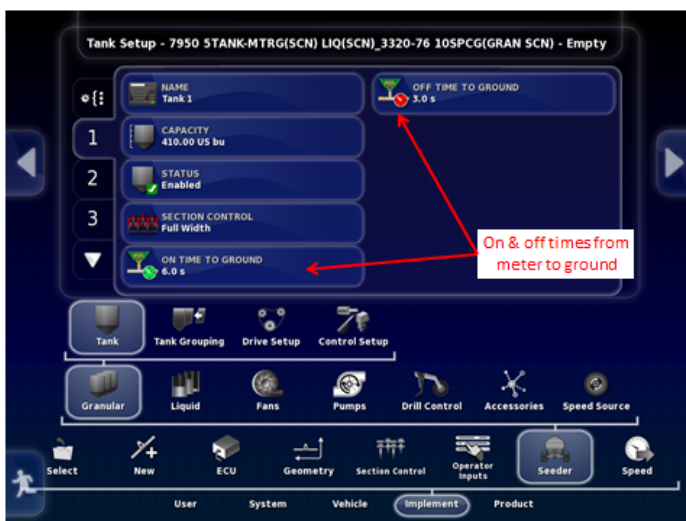


43. Under Implement/Seeder/Granular/Drive Setup set the Metering Auger type for each tank.



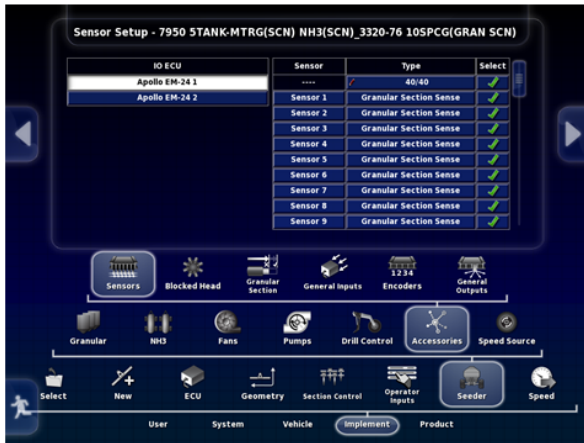
44. If configured with liquid/NH3 go to Implement/Seeder/Liquid or NH3/Tank and set the volume of the tank. Also set the on & off times, the same notes from steps 41 & 42 apply.

42. It is important to note that for a full width configuration, or if you change the tanks to be controlled by the full width boom, that the wording for this timing changes to Time to Ground. This timing needs to be changed to the time from the meter to the ground.

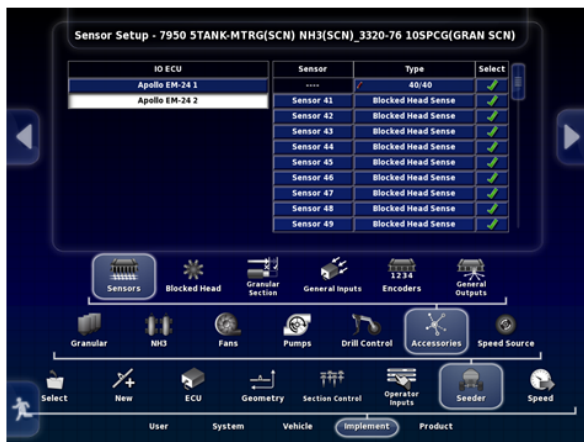


45. Under Implement/Seeder/Liquid or NH3/Flow set the Calibration Factor.
46. Under Implement/Seeder/Liquid or NH3/Control Valve enter your specific configuration settings.

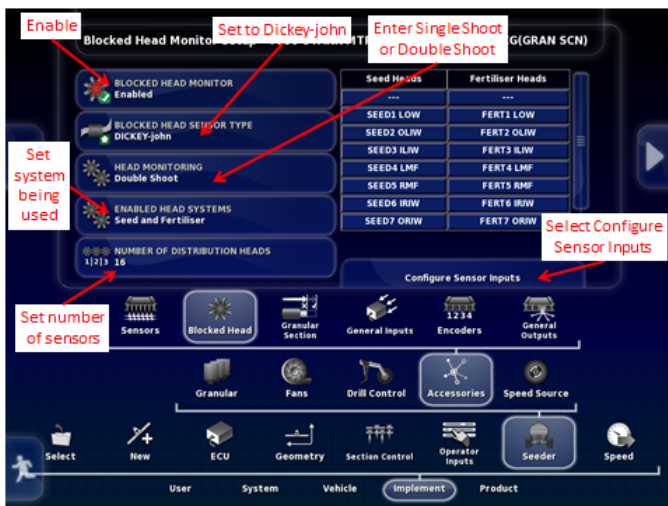
47. If configured with Granular ASC under Implement/Seeder/Accessories/Sensors the 1<sup>st</sup> EM-24 ECU should have the sensor Type column preset to Granular Section Sense.



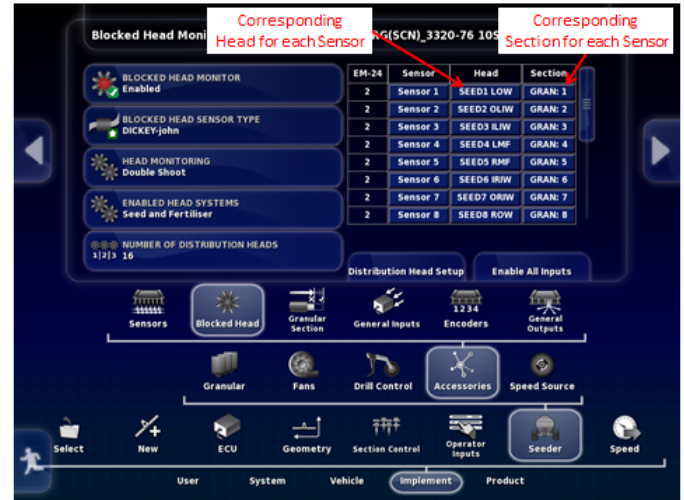
48. If configured with Blockage the 2<sup>nd</sup> EM-24 ECU (1<sup>st</sup> EM-24 if no ASC) should have the sensor Type column preset to Blocked Head Sense.



49. If configured with Blockage go to Implement/Seeder/Accessories/Blocked Head and select enabled. Settings should be preloaded from factory profile.



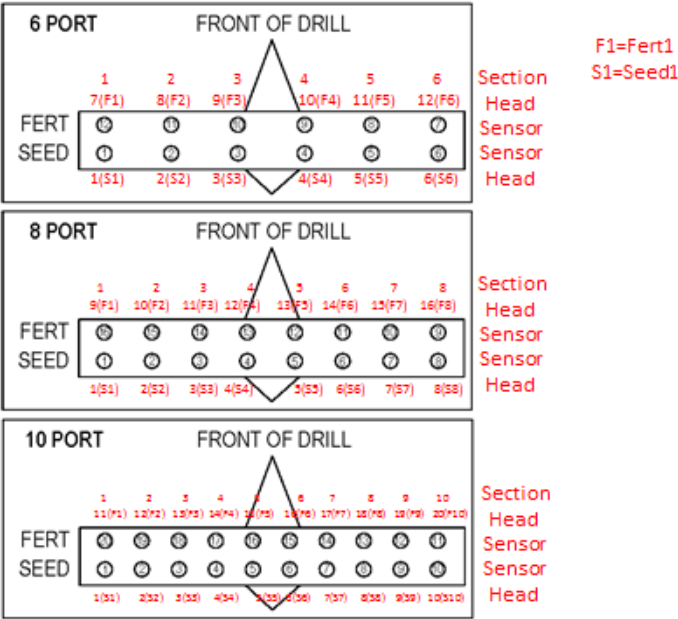
50. Press Configure Sensor Inputs. Sensors should be pre-assigned from factory profile. If configured with granular ASC then the sensors are also assigned to the corresponding section.



51. Refer to the figure below showing how the blockage sensors show up on the screen if assigned as described from factory settings.



52. Refer to the figure below showing how the blockage sensors are wired from the factory and should be assigned to show up correctly on the screen.



53. Under Implement/Seeder/Accessories/Granular Section there should be a section pre-assigned for each sensor in the same order.



54. Under Implement/Seeder/Speed Source select the Speed Source you will be using. If using GPS you can set a Fallback Type to keep seeding if the GPS signal drops out.



55. Under Product/Granular select the New Product tab and follow the prompts to set up your granular products.

56. Also set up Liquid products if configured with Liquid control. If configured with NH3 it has a default NH3 product setup.