What's New in Version 1.05

Update Type

S0C1-5N1-5T1.stf contains the following upgrade details.
Firmware V1.05
HMI Touchscreen V1.05
Automatic Changes and Settings…
The default profile Bulk Stabilisation changed from 500 to 200 milliseconds.
The default profile Fine Stabilisation changed from 1000 to 500 milliseconds.
The scale model type set to FX (this is a new setting).
The error log file will be renamed to V2-error.csv and a new error log created.
The Powder Cup Monitoring defaults will be reset

Purpose

Version 1.05 is a continuation of the push that drove 1.04. Some of the work was planned, but much of the work has been driven by owner feedback and an extended set of beta testers. The work on the laser is ongoing and still very much experimental. We are continuing to improve the AI Self-Learning (AISL) by either allowing it to do more or limiting its action. The focus of the AISL will remain to find a good balance of speed and consistency. We have evaluated several error.csv log files. These files have lot of information about a failed charge and the information can be used to feed back to the AISL over time. The user interface is also being improved with feedback and watching video of people operating the SuperTrickler. We will always be looking for finger hesitation and operator sequences (ways of doing things). Version 1.05 has many changes and improvements and is a big step in the right direction.

Future

The next version (1.06) will again continue this work with a push for more 'charge' information, with successive count information, actual inflight values and average inflight information. We want to open up more information for power users to make more intuitive tweaks. The ability to export/import and share profiles is also high on the priority list and we hope to get the laser to a more stable state, but will remain experimental (seems an easy thing, however it's proving not to be the case) at this time.

Install

To install the update; copy the S0C1-5N1-5T1.stf file on the root directory of the Micro SD card and reinsert the card (do not do this while the SuperTrickler is in sleep or power-down mode. We recommend removing the Micro SD card while the SuperTrickler is on the main menu). The card should automatically take you to the firmware upgrade. If not, take the following steps.
1. Turn off the power from the wall and wait 10 seconds.
2. Turn on the power and wait for the splash screen, followed by the waiting screen.
3. Touch the waiting screen - this will take you to the main menu.
4. Press Sub Menu.
5. Press System.
6. Press Setup.
7. Press System Core.
8. Press Firmware Update.

Firmware Upgrade
The Start button should be enabled in RED and Update Found displayed above that.
Press and HOLD the Start button for several seconds until the process starts.

New

- Support for AnD FZ series of balances.
- Share folder added to SD Card in preparation for future profile sharing.
- A new setting added to the System Core Menu (this was previously a hidden setting), that allows you to adjust the vibrator motor starting time. To start a vibrating motor it must be run at full power for a short time and then the operating speed can be used. Too long and you won't be able to control the Pulse Instrument, too short and the Pulse or any vibratory motor Instrument may not start reliably.

Changes & Improvements

- Motor test screen changed to "Motor Flow / Test" to better reflect the dual functionality of the screen.
- The Motor Flow / Test will use the current profiles Min and Max speed for the vibrator unless there is no valid profile, then it will use a default of 40-130.
- Motor Flow / Test screen modified to look and act like other motor screens with auto repeat etc.
- Test & Vibrator speed setting screen arrows now have auto repeat.
- System – Scale, will attempt to recognise a FZ model and if found will set the FZ button.
- Scale model type added, so that the FZ internal calibration is recognised for calibration via the SuperTrickler.
- Calibration changed to allow for FZ series scale.
- Main Menu - "Select Powder & Mode" button text changed to "Select..." for simplicity.
- If the vibrator speed has not been set, the alerts have been extended to the Selection Screen where either the appropriate Powder or Preset buttons will flash and on the charge screen the Profile button with flash.
- Set-point added to preset – NEW & EDIT. Editing can still be carried out by the normal method of selecting a set-point from the main menu or charge screen.
- Delete Button added to preset edit - deletion was always available, but was not obvious to operators.
- If the alarm bell is triggered while the SD Card is removed, the Alarm Bell screen will now be shown to cancel the alarm.
- The Alarm Bell screen now contains the text "Touch Anywhere to Cancel".
- Complete Upgrade of the Ladder Data Entry screen operations to make it considerably clearer as to what is changing in order to resolve the equations.
- Improvements to Fine self-learning, giving the AI a bit more scope to make changes.
- The AI Orchestrator has been given more power to change the Pulse 'ON' time when the weight gap is large. This change should reduce the charging time when the pulse has kicked in from a larger underthrow.
- The ability for the AI self-learning to automatically turn on the Slow Instrument has been disabled.
- Self-learning on the first run of a fresh profile has been altered to obtain better data.
- Slight changes to default profile - reduce stabilisations times for bulk and fine.
- The scale is now turned off during a firmware update.
- Laser System screen has been upgraded and defaults changed (more work still to be done).
- If the SuperTrickler is sleeping (or powered down) and the power is lost, when power is restored the SuperTrickler will power up and then resume its sleep mode. In the event this cycle gets stuck (cannot wakeup), removing the Micro SD Card and cycling the main power will disable the 'back to sleep' functionality.
- Error log format improved - existing file will be renamed as V2-error.csv.
- **Bulk Ramp Down time increased (ramps to 50% of the running speed).**
  - ➢ **You may have to reset or reduce the Bulk Inflight value as a result.**

Bug Fixes

- Start button on the charge screen - this could sometimes fail to initiate a start.
- When a preset heading had no 'item name' it would not allow a path forward. Now when a heading is selected and no 'item names' exists, it will take you directly to the Preset New page.
- Cancelling out the profile failed to turn on the work light.
- A problem that prevented the system from detecting a firmware upgrade if it was placed on the Micro SD card while the SuperTrickler was sleeping or powdered down, via the Sub Menu controls has been resolved.
- When a new powder was selected in the presets new or edit screens and the preset was then cancelled, the newly selected powder would become the active powder, now resolved.

- The Preset Edit that would allow a heading or name to be duplicated has now been resolved.
- A problem that could allow the previously active profile stay active if an un-profiled powder was selected from the preset screen is now resolved.
- A minor problem with the alphanumeric keypad, where the first key auto delete function was not operating correctly has now been resolved.

Patch 1. - V1.05.1

A small bug has been reported, where if you powder down your SuperTrickler from the Main Sub Menu and then remove the mains power source the unit will fail to restart and become stuck on the Hourglass screen.

- ➢ **Immediate fix**: Remove the Micro SD card and cycle the mains power, when the displays tells you that the Micro SD card is missing then, then insert the card.
- ➢ **Firmware fix:** Down load and install the "S0C1-5N-Patch.A.stf" firmware file patch and install on your SuperTrickler.
  - **Note**: The PATCH is only required from previously down loaded full upgrade of the Version 1.05, the current full upgrade file has the issue resolved.

Patch 2. - V1.05.2

- A problem that If the a firmware upgrade was loaded on to SD Card and reinserted while the SuperTrickler was powdered down; upon power up, the upgrade system would automatically take you to the Firmware Upgrade screen, however at the same time and end of the splash screen event would take place switching the screen to the Main Menu. This has now been resolved.
- A problem with the "no user activity monitor" failing to restart upon power-up or wake-up as now been resolved.
- A problem that should the SuperTrickler via the "no user activity monitor" put the unit to sleep while on the charge screen and the 'Auto 'was selected, could result in a powder drop upon wake-up.

Patch 3. - V1.05.3

- A problem that the AISL (self-learning) could add speed values greater than 100% has now been resolved.

Patch 4. - V1.05.4

- A problem that has been reported several times that the bulk rotating motor fails to start. I have slowed down the chip to chip communications between the main CPU and the motor driver chip as this may be the root cause of the problem. This change will have no impact on operational speeds of the SuperTrickler.
- In the even a Micro SD card is inserted into the SuperTrickler that has an incompatible format there was no way to proceed forward. The system has been changed that allows you touch and hold anywhere on the SD card removed screen, this will then take directly to the System, Peripheral, SD card screen with the Format button enabled.

Patch 5. - V1.05.5

- The bulk rotating motor fails to start, continued after patch 4, this has now been resolved.

Patch 6. - V1.05.6

- The Automatic Power Up Times – times were being corrupted (this could also impact the Powder Data Cup Monitoring data) has been resolved.