Version 4.1
June 29, 2018

Ensure More Accurate Dispense with Liquid Classes
Liquid classes are finally making their debut in MANTIS! Liquid classes help ensure dispense accuracy by dividing your reagents into classes based on viscosity. Each liquid class has its own delay settings for each type of MANTIS chip. You can also create new liquid classes with customized settings for particular reagents.

Featuring Fast and Precise Dispense Modes for Greater Versatility
The latest MANTIS software provides you with two dispense modes for greater flexibility. The new Precise mode gives you the lowest possible instrumental error, and is particularly useful for low volume dispensing. The higher precision is achieved by separating a dispense into separate passes using only one diaphragm at a time. Fast mode provides the same great dispense speed and performance you’re accustomed to from MANTIS. You can choose the mode that’s best for your dispense from the Reagent List menu.

Open Plate Clamp Option for Paused Dispenses
MANTIS 4.1 includes an option to open the plate clamp during a dispense delay or while a dispense is paused, so that you can easily remove the plate if needed. Select Yes for the Open Plate Clamp option in the Delay Settings window to enable this feature.

Easy Access to the Newest MANTIS Features
MANTIS will now automatically check for newer releases when starting up the software, making it easy to stay up-to-date with all the latest MANTIS features. You can also check for updates manually using the Check for Updates option in the Help menu. When an update is available, you’ll be taken directly to the installer for the new version of MANTIS.

A Revamped MANTIS Dispense List Designer
The Apply Gradient Volume button has been moved to the Plate Designer Toolbar, for easier access.

MANTIS Online Activation
You can now easily activate the MANTIS software license online, saving you more time.

Other Improvements
MANTIS has added several other improvements for better usability, including:
- Improvements to the Stuck Solenoid Check: The Stuck Solenoid Check has been replaced with the Pneumatic System Check, which in addition to checking solenoid function also checks the pressure and vacuum regulators. The new Pneumatic System Check also includes easier to understand instructions and diagnosis information.
• Improved the **Pressure Vacuum Setting** to continuously update the pressure and vacuum value when you click the Read button. You can also adjust the Read Interval time as needed.

• Moved the **Z drop** and **Min SD pumps** settings on the **Plate Type Editor** out of the **Advanced Options**, for easier access.

• API services: Added commands to monitor the status during dispense and read any error in the middle of the dispense.

**Changes:**

• Improved the board selection in the **Designer View** to easily select and deselect whole columns and rows for faster dispense design. Now you can click the outer box of a row or column in the **Plate Designer** to select that whole row or column.

• Updated the MANTIS software interface with the new MANTIS logo and branding.

• Improved the MANTIS API sample code to be compilable with MS Visual Studio 2017.

**Fixes:**

• Fixed an issue in the **Import Dispense Data** wizard, where the well location in the Grid View of the imported data did not match with the actual well locations.

• Fixed an issue where CF calibration did not work properly when the delay time and volume were set to zero.

• Fixed a homing issue that occurred with MANTIS LC3, where a motor skip caused the carousel to spin while the MANTIS arm stayed in place.

• Fixed an issue which would cause several MANTIS files to become corrupted.

Many of the best MANTIS updates have been suggested by our awesome user community!

Have a great idea on how to make MANTIS better? Let us know by contacting us at support@formulatrix.com.