

Improvements to DynaPro Plate Reader Plus Firmware

INTRODUCTION

This document highlights the most important enhancements, changes, and bug fixes made to the Wyatt Firmware. Please contact us at support@wyatt.com if you have any questions or suggestions.

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1.1.2.5

Improvements and Bug Fixes

- Improved accuracy of the refraction-corrected DLS detector angle. (#17627)

1.1.2.4

Improvements and Bug Fixes

- Corrected spurious troubleshooting messages. (#15352)

1.1.2.2

Improvements and Bug Fixes

- The following issues regarding Ethernet configuration have been fixed.
 - In some cases, the static IP address was not persisting after a reboot. (#11922)
 - Changes to the Ethernet configuration are now allowed without an active Ethernet connection. (#11935)
- Corrected a y-axis auto scaling issue on the DLS tab (formerly the ACF tab) (#8996)
- When attenuation was manually set between 2-4%, it could incorrectly reset to 0. (#7766)
- When Attenuation was manually set (i.e., Auto Attenuation is off), the attenuation wasn't getting set properly after a plate movement. (#4443)
- Faulty temperature reset (#7849)
 - When the temperature is set below 20 °C, dry nitrogen gas is required to prevent condensation. If it's not present at 20 psi, the temperature will spontaneously reset to 20.5 °C to protect the instrument. However, if the temperature is set to 20, it may sometimes fall slightly below 20.0, incorrectly

causing the temperature to reset to 20.5. This has been fixed to allow temperatures slightly below 20 °C in the absence of dry gas if the set temperature is 20 °C.

- Firmware Updater improvements (#**10709**, #**12331**)
 - For newer instruments, the updater will automatically restart the instrument to complete the firmware upgrade process. **Important:** if the instrument doesn't restart the user still must manually restart via the front panel.
 - Not all recent instrument models are compatible with older firmware. If you attempt to install older firmware, the installer will warn that you are downgrading.
- The ACF tab has been renamed to DLS. (#**12749**)

1.1.1.4

Improvements and Bug Fixes

- Implemented a new algorithm for controlling the fiber attenuator. (#**5358**)
- The Front Panel's "Comm" page no longer prevents the user from tabbing out of it when there is no network connectivity. (#**5414**)
- The Front Panel's "Main" page now loads faster when the user tabs into it. (#**4339**)

1.1.0.3

Improvements and Bug Fixes

- Improved the reliability of the "MoveToLoadPos" command.

1.1.0.2

Improvements and Bug Fixes

- Corrected the default minimum allowable temperature set point.

1.1.0.1

Improvements and Bug Fixes

- The "Overcount Intensity" parameter no longer overrides the "Attenuation Upper Threshold" parameter at start up.

1.1.0.0

Improvements and Bug Fixes

- The temperature control algorithm corrects unrealistic parameters.
- The Front Panel will not display N2 pressure when it is running on an ambient instrument.

- Corrected display issues with Attenuation controls on the Front Panel
- The user can now set the Auto Attenuation thresholds and targets from the Front Panel.
- The Front Panel correctly displays the Plate Position at start up.
- The Front Panel displays the correct Laser state when the user toggles the switch off during the "Laser Enable Pending" state.
- Fixed issue where the displayed Auto Attenuation state does not reflect the hardware state.
- Corrected an issue where certain Front Panel controls could cause the instrument to crash.

1.0.7.0

Improvements and Bug Fixes

- Improved Temperature algorithm.
- The Front Panel indicates Temperature Lock properly
- Added "GetMaxRampRate" and "GetRampRate" commands
- Fixed issue which caused the "SetAnalogOutput" command to behave unexpectedly.
- Merged code from DynaPro NanoStar 2.2.1.17
- Graph axes are displayed in exponential notation when possible.
- Implemented Instrument Startup diagnostic features.
- Enhanced the Firmware Updater software.
- The graphs on the Front Panel now share time scales with other Wyatt instruments.
- Implemented commands that calculates and sets the Dither Correlation Correction Reference.
- The Count Rate on the QELS tab now updates at the same rate as the data on the graph.
- Temperature lock duration and temperature lock range parameters are now configurable.
- Implemented QELS Lower Tau Cutoff on the Front Panel.
- Added "ClearParameter" command.
- Password protected configuration files to prevent inadvertent changes.
- Improved the (in house) "Service" tab to allow configuration of multiple daemons.
- Expanded the "Integration Time" text box to fit longer time values.
- Correlation correction factors can now be subtracted from the auto correlation function.
- Added "SetLowerTauCutoff", "SetCorrectionScale" and "SetCorrelationReference" commands.
- Fixed issue where a user can repeatedly get prompted to "Take-over control and resubmit the command?"
- The Front Panel Service page makes the configuration parameters editable when the user enters the correct password.
- Temperature ramp rate is set to the maximum allowable rate at instrument start up.

1.0.6.9

Improvements and Bug Fixes

- Auto Attenuation was not being attempted when intensity is too high and attenuation is already at maximum setting.

1.0.6.8

Improvements and Bug Fixes

- Turn instrument LED on when using new Wyatt Correlator. Previously, the light would go out during the boot sequence.

1.0.6.7

Improvements and Bug Fixes

- Temp Control now stabilizes three to four times faster than previously.
- The auto attenuation algorithm is faster, more robust, and modifies both the laser and attenuator settings.
- Correct ACF screen error that could cause the time axis of the correlation function view to display improperly.
- Instrument has better laser control behavior when not auto attenuating.
- When an overcount condition is encountered when the instrument is not autoattenuating, the instrument now generates a new alarm.
- Laser power to the physical laser is now lowered completely to 0% when laser power is set to 0% on the instrument front panel. Previously, laser power might actually be merely set to a very low level.
- Laser power is now set to 0% power during any plate movement. This is important to prevent bubble formation from the laser vaporizing the plate side walls.
- Additional support for new QELS correlator hardware.

1.0.5.1

Improvements and Bug Fixes

- Support for new QELS correlator hardware.
- Correct temperature ramp rate logic to avoid too rapid temperature changes.
- Correct ACF screen error that could cause the time axis of the correlation function view to display improperly.

1.0.4.1

Improvements and Bug Fixes

- Support for new ambient plate reader hardware.
- New laser enable delay needed for new laser options.
- Improved laser power adjustment for 0% power to be close to true zero.
- Improved temperature control and auto attenuation algorithms.
- Default configuration no longer causes door to open on startup.
- Network configuration page interface made more consistent with other WTC products.
- Various user interface corrections for minor usability issues.

1.0.3.12

Improvements and Bug Fixes

- Correct bug that generated an Access Violation in the ADF pane of the front panel when attempting to change the correlation function integration time.

1.0.3.11

Improvements and Bug Fixes

- Correct minor internal issues and system boot race condition.

1.0.3.10

Improvements and Bug Fixes

- Correct intermittent start-up error.

1.0.3.9

Improvements and Bug Fixes

- Revise plate control for low-temperature applications.

1.0.3.8

Improvements and Bug Fixes

- Correct plate moving command to properly check door state.

1.0.3.7

Improvements and Bug Fixes

- Correct error preventing some alarms from displaying properly.
- Remove two significant digits of N2 pressure.
- Change "Stage Not Communicating" to "Stage Communicating" on alarm page.
- Correct help message for instrument "GetTemperature" command to properly reflect order of thermometers.

1.0.3.6

Improvements and Bug Fixes

- Correct display error when SPCM alarm is active.

1.0.3.5

Improvements and Bug Fixes

- Correct command parsing bug.

1.0.3.4

Improvements and Bug Fixes

- Correct front panel display bug.
- Make plate movement commands 'control' type commands.
- Correct finalize message for installer.

1.0.3.3

Improvements and Bug Fixes

- Correct command processing bugs.
- Added front panel warning message if plate reader is in simulation mode.
- Add new firmware commands to report version information.
- Add support for minidump files for troubleshooting.

1.0.3.2

Improvements and Bug Fixes

- Correct problem in well position reporting.

1.0.3.1

Improvements and Bug Fixes

- Corrected problem preventing network changes from applying permanently.
- Updated GUI to show proper units in several places.
- Built customer-installable update process.

1.0.2.0

Improvements and Bug Fixes

- Corrected deadlock problems that caused some instrument start-up and shut-downs to hang.
- Corrected front panel error that could prevent door button from displaying properly.
- Corrected the "SetComputerName" command.

- Bonjour service now initializes and registers properly.

1.0.1.0

Improvements and Bug Fixes

- Initial Release. Derived from TREOS 2.1.9.0