
Technical Note

PAL Firmware Release History

Version 4.0.0. to Version 4.1.3

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A. Printing History

PAL Firmware Versions	Date	Author
4.0.0 to 4.13	Sept. 14. 2010	BBa

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C. PAL Firmware Release History

1. Version 4.0.0 to 4.1.3

No.	Key	Case Description	Firmware Version
1	N	LAN communication (TCP/IP) added.	4.0.0
2	E	System Parameters and Local Cycle selection can be set by Object Manager Version 2.2.1 or higher.	4.0.0
3	E	For Serial Valves mode 'High Speed' or 'High Torque' can be selected.	4.0.0
4	N	Possible Tray inclination in all three axes (X-,Y-,Z) can be corrected. New structure for Tray Type. For details see PAL- xt User Manual.	4.0.0
5	N	Tray Type new items 'ZSlideOffRetr' and 'YSlideOffDist'. Paths to move away from a vial in Z- and Y-direction is selectable.	4.0.0
6	N	A200S emulation eliminated.	4.0.0
7	E	Standby Temperature can be set either with 'OFF' or '-2147483647' (-MAX_LONGINT).	4.0.0
8	E	Read-out of temporary CPU Serial number enabled.	4.0.0
9	E	Active Plunger path movement detection.	4.0.0
10	N	Limited visibility of class 'Motor' on Extended User Level (F3-Setup Objects Motors) to access in 'Y-Motor' the parameters 'Strategy' and 'Path Speed'.	4.0.0
11	N	New item in 'Y-Motor': XY-Simul. Simultaneous movement of X- and Y-motors with individual motor speed settings.	4.0.0
12	E	Mode 'Vial PrePressure' is used by Atom 'GET_SAMPLE'. (FW version <4.0.0: 'Vial PrePressure' was only in standalone mode active.)	4.0.0
13	E	Range for Vial Penetration in SPME cycle extended from 5 to 38 mm (default 17 mm). Maximum penetration is only possible in mode 'Out of Tray' (Needle guide blocking). The SPME CC macros and CE cycles are adapted, Revision 02.	4.0.0
14	N	In Tray Type item 'Pattern' new 'Staggered+' and 'Staggered-' selectable. Staggered position in second Tray row either +50% or -50% off compared to first row. Row = sampling direction. For details see PAL- xt User Manual.	4.0.0
15	N	Z-Motor Injection Penetration Speed separated in: - 'Inj Penet Spd' = Injection penetration speed (no change). - 'Inj Retr Spd' = Injection Retract Speed. New parameter to provide flexibility for faster retraction of syringe needle from injector if required by application.	4.0.0
16	N	PAL DLW Option implementation. New Atom 'RINSE_INJ'. Activation of DLW Actuator to allow solvent flow control.	4.0.0
17	N	New type 'DLW' for Wash Station added. PAL DLW Option.	4.0.0
18	N	New type 'Active' for Wash Station added. Active Wash Station Revision B, new PCB required.	4.0.0
19	C	Motor X-Axis Limit corrected to allow X-Axis >80 cm.	4.1.0
20	C	Error in teaching (Setup Objects) Objects Tray 'dzCol' corrected. Inclination Z-Axis for column position.	4.1.0
21	C	Round off error for volume of 1.2 µL syringe corrected.	4.1.1

22	C	Text in Firmware Exception Code 14 changed to 'String to Number Conversion Error' (from 'Number to String Conversion Error').	4.1.2
23	C	Correction of internal clock handling in cases of battery replacement.	4.1.3
24	C	Round off error for total syringe volume if volumes are added together.	4.1.3
25	E	Absolute value and slope of heating curve adjustable for all 'AUX' and Syringe heaters, recalibration.	4.1.3
26	C	Test Head in section 'F3-Setup Service' for FW version 4 corrected and enhanced. Results and interpretation are different to FW versions 2 and 3.	4.1.3
27	C	Utilities Wash Station Needle Penetration enabled if Wash Syringe is selected.	4.1.3
28	C	SPME fiber movement corrected in situation of 'Abort'.	4.1.3
29	C	Tracking of traveled path for X- and Y-Axes corrected in FW version 4 (Log File read-out).	4.1.3
30	E	IP Address is displayed if DHCP mode is selected in LAN communication.	4.1.3
31	N	Limited visibility of class 'Motor' on Extended User Level (F3-Setup Objects Motors) to access in 'Z-Motor' the parameters 'Penetr Speed', 'Inj Penetr Spd' and 'Inj Retr Spd'.	4.1.3
32	C	X-, Y-, Z -axes stepper motor parameters optimized for smooth operation with noise abatement.	4.1.3
33	C	Error using module 'Dilutor' eliminated. Error message: 'MVLv-1-C' Not found (Exception 011).	4.1.3

2. Known Bugs

Key	Case Description	FW Version to be corr.
L	Barcode Reader Type LS1220 installed on PAL- xt System. The Barcode Reader cannot be operated in combination with Serial Valve Drives (Multiposition Valve Drive). The Barcode Reader and the Multiposition Valve Drives are connected to 'MODBUS'. The daisy chaining protocol cannot address the different modules.	open

Explanations:

Key:

- C: Corrections
- E: Enhancement
- N: New Feature
- L: Limitation

Firmware Version:

Error corrected in PAL Firmware Version as listed.

FW Version to be corr.

Bug correction foreseen in Firmware version as listed.

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