1 Release Notes KannMotion, StepperConfigTool - V0.7.0

Title	Group	Description
Documentation in English	*New*	embedded documentation in English (in all languages!)
Ready output can be defined	*New feature*	One output can be configured as Ready output. This output drives active signal levels while motor is **NOT in Error**, **and** Motor Control **is ready to operate**, means is in command executing thread
Firmware Update Fix	*Bug Fix / Improvement*	The Firmware update feature was improved to be more robust. @V0.6 depending on target system there could be some problems by executing a firmware update over StepperConfigTool.
Sequence Download robustness	*Improvement*	Sequence Download, and system search might not work correctly, or could be very slow. V0.7 changes timing and command queuing that this process is getting much more robust.
Comfortable motor update	*New feature*	V0.7 comes w. the possibility of comfortable getting new motor data over the web. Just press one menu point, and StepperConfigTool will gather new information from adlos server. No time-consuming search, download and store of standard motor parameters are needed anymore.
Bugfix @ English setup	*Bug Fix*	V0.6 had a path problem while system was using an English setup, V0.7 does this correction
Position Control mode selectable	*New feature*	Position control mode can be defined
Magnetic encoder enable/disable	*New feature*	Magnet (Encoder) presence can be defined, if defined as mounted (Yes), Position information is always coming from Position decoder
Expert mode	*New*	In normal mode, some parameters are hidden…to edit all parameters enable expert mode
Set Home Position	*Change*	Set Home Position is divided in 2 sub modes: standard homing (mulit-turn systems) and Save Homing (non-volatile homing for single turn systems) Using Save Homing enables direct positioning after powerup (only @ single turn systems) without the need of Re-learning Home-Position
ID Harmonization NEMA17 &24	*Change*	NEMA17 and NEMA24 do have for same function, identical configuration parameter ID's see 4.1

2 Release Notes KannMotion, PCB-Firmware NEMA24 - V0.7.0

Title	Group	Description
Ready output can be defined	*New feature*	One output can be configured as Ready output. This output drives active signal levels while motor is **NOT in Error**, **and** Motor Control **is ready to operate**, means is in command executing thread
Position Control mode	*New feature*	Position control mode, 2 modes available spindle or circle mode
Enable/Disable magnetic encoder	*New feature*	Magnetic encoder enable <Yes or No> .. if enabled, Position information is always collected from decoder side (not anymore depending on 'Enable control' setting)
Error compensation after 22-Bit overflow	*Bug Fix*	An overflow of 22-Bit Position information from motor driver, caused an angle error after this event. New version 0.7 compensates this effect by mathematical calculation. (was only a problem while working without magnetic decoder)
Set Home Position	*Change*	Set Home Position is divided in 2 sub modes: standard homing (mulit-turn systems) and Save Homing (non-volatile homing for single turn systems) Using Save Homing enables direct positioning after powerup (only @ single turn systems) without the need of Re-learning Home-Position
ID Harmonization NEMA17 &24	*Change*	NEMA17 and NEMA24 do have for same function, identical configuration parameter ID's, see 4.1

3 Release Notes KannMotion, PCB-Firmware NEMA17 - V0.7.0

Title	Group	Description
Ready output can be defined	*New feature*	One output can be configured as Ready output. This output drives active signal levels while motor is **NOT in Error**, **and** Motor Control **is ready to operate**, means is in command executing thread
Position Control mode	*New feature*	Position control mode, 2 modes available spindle or circle mode
Enable/Disable magnetic encoder	*New feature*	Magnetic encoder enable <Yes or No> .. if enabled, Position information is always collected from decoder side (not anymore depending on 'Enable control' setting)
Error compensation after 22-Bit overflow	*Bug Fix*	An overflow of 22-Bit Position information from motor driver, caused an angle error after this event. New version 0.7 compensates this effect by mathematical calculation. (was only a problem while working without magnetic decoder)
Set Home Position	*Change*	Set Home Position is divided in 2 sub modes: standard homing (mulit-turn systems) and Save Homing (non-volatile homing for single turn systems)

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		Using Save Homing enables direct positioning after powerup (only @ single turn systems) without the need of Re-learning Home-Position
ID Harmonization NEMA17 &24	*Change*	NEMA17 and NEMA24 do have for same function, identical configuration parameter ID's see 4.1
Motor direction Harmonization	*Change*	NEMA17 direction on move commands have been opposite to NEMA24 interpretation, Nema17 does now follow the same regime as NEMA24 and is defined according DIN EN60034-8

4 Detailed Changing Information

4.1 Cross Table, Device Configuration Parameter's, ID changes

New-ID		Parameter	NEMA17	NEMA24
			Old-ID V0.6	
0	0x00	MOTOR_VELOCITY_MAX	0	0
1	0x01	MOTOR_ACC_MAX	1	1
2	0x02	MOTOR_DEC_MAX	2	2
3	0x03	MOTOR_CURRENT_MAX	3	3
4	0x04	MOTOR_VOLTAGE	4	4
5	0x05	MOTOR_RESISTANCE	5	5
6	0x06	MOTOR_INDUCTION	6	6
7	0x07	MOTOR_KE_CONSTANT	7	7
32	0x20	RS232_BAUDRATE	**12**	**11**
33	0x21	OUTPUT_READY	-	-
34	0x22	POSITION_METHOD	-	-
35	0x23	METHOD_CIRCLE_CIRCLECOUNT	-	-
36	0x24	ENCODER_AVAILABLE	-	-
37	0x25	POSITION_TOLERANCE	**11**	**10**
64	0x40	OUTPUT_CONFIGUARTION	**8**	-
65	0x41	INPUT_ANALOG_FILTER	**9**	**8**
66	0x42	INPUT_ANALOG_HYSTERESIS	**10**	**9**
67	0x43	DIGITAL_INPUT_THRESHOLD_HIGH	**13**	-
68	0x44	DIGITAL_INPUT_THRESHOLD_LOW	**14**	-

4.2 Conversion of old settings

The new version can handle older settings and sequence files please check actual manual chapter 7.4.

	Please consider that moving direction @ **NEMA17** has been harmonized to NEMA 24 and EN60034-8, means is inverted now… so check your old NEMA17 script and change at rotate and Position commands the sign [+] -> [-]

5 Known unsolved problems

In our verification phase we recognized a chip set problem, which is under certain conditions a problem (getting an overcurrent or overheating error).

Conditions:

- Rotate command inside while loop **AND**
- Rotate command varies speed <except stop> **AND**
- Situation above is hold for several minutes

Avoidance:

decrease actualisation rate of rotate command inside while loop, this will increase running time until error occur.

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