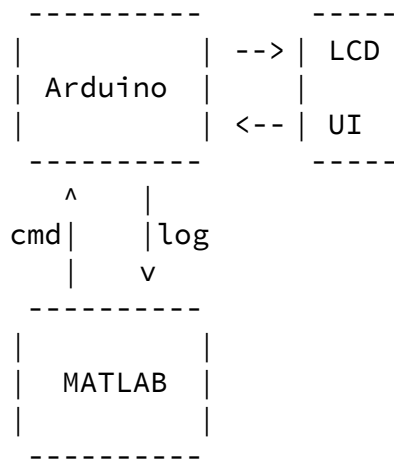


Needles in Ultrasound Project Nick van de Berg, Delft University of Technology

User Interface and Serial Communication codes

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diagram:



operation:

- set rotation angle and speed with buttons and LCD
- or: set rotation and speed over a serial link, e.g. from serial host (e.g. MATLAB)
- start and stop of movement with buttons, or by serial command from serial host
- Arduino logs over serial connection with event IDs (e.g. start, stop, settings programmed)

event-ID's:

100	<millis>	power on
101	<millis>	motor on
102	<millis>	motor off
103	<millis>	motor stop requested
104	<millis>	stepper disabled
120	<millis>	serial synced
150	<millis>	main menu
151	<millis>	zero position mode
152	<millis>	position mode
153	<millis>	speed mode
154	<millis>	speed and position mode
155	<millis>	external mode
161	<millis>	move to 0
162	<millis>	make current position new 0
171	<millis>	position set to,<pos>
172	<millis>	speed set to,<speed>
901	<millis>	impossible mode

serial commands:

!	sync byte from serial host
M x v	move (to_this_pos_x[d°], with_this_speed_v[d°/second])
V v	move (inf, with_this_speed_v[d°/second])
C1	control(start): stop movement
C0	control(stop): stop movement
C5	control(zero): make current position the new 0-position
C9	control(release): disable stepper to move motor around freely