LinuxCNC Lathe

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Chapter 1

Module Index

1.1 Modules

Here is a list of all modules:

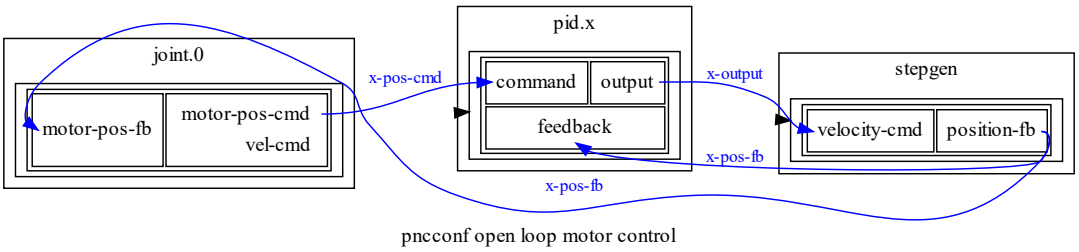
Chapter 2

Module Documentation

2.1 StepperControlOpenLoop

This diagram illustrates the .hal components and connections for stepper motor control.

Default open loop uses pid.x component to convert joint.L.motor_pos_cmd into a velocity command for the stepgen. The feedback signal for the pid and the joint is the stepgen position-fb.



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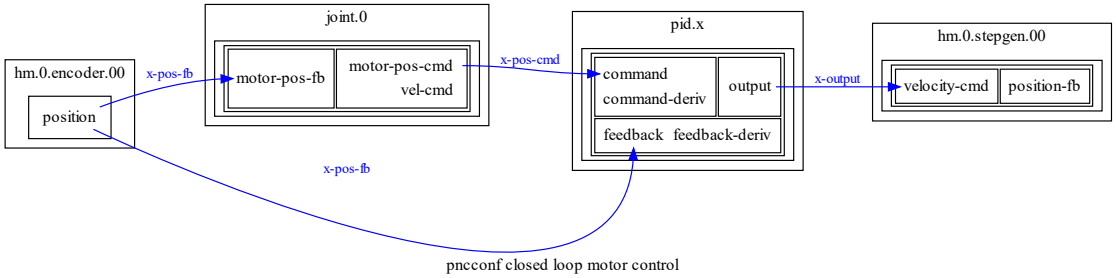
2.2 StepperControlClosed

This diagram illustrates the .hal components and connections for closed loop stepper motor control.

Default closed loop uses pid.x component to convert joint.L.motor_pos_cmd into a velocity command for the stepgen. The feedback signal for the pid and the joint is the encoder position.



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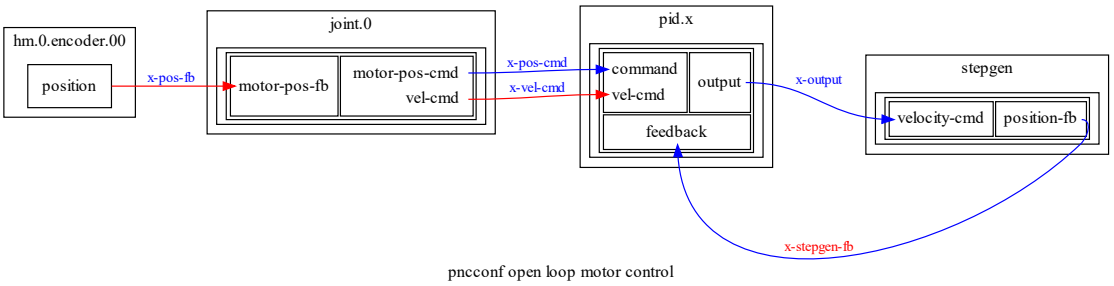
2.3 StepperControlOpenLoopProposed

Proposed open loop

- Use the trajectory planner velocity as an input to the pid FF1 calculation. This replaces a derivative estimatation within the pid.
- Use the encoder position as the joint position feedback instead of the stepgen position. (requires new signal name for pid feedback)



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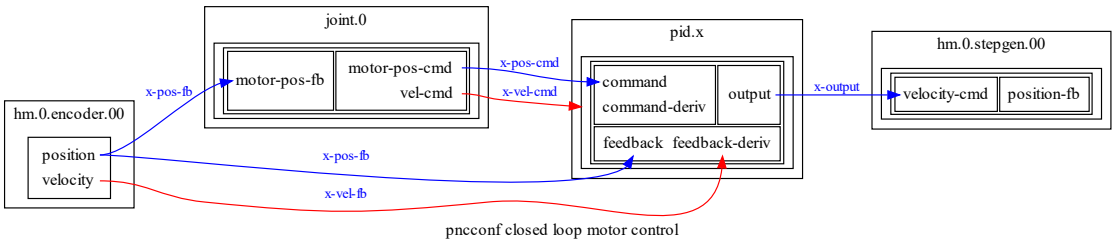
2.4 StepperControlClosedProposed

Proposed closed loop

- Use the trajectory planner velocity as an input to the pid FF1 calculation.
- Use the encoder velocity as an input to the pid feedback derivative.



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