

Modifications to HAL for C41 PWM spindle control board
Add/ edit stuff in **red**.

Change parports/pins to suit your application. This HAL is configured for 2 parallel ports, & a 4 axis machine. The spindle is on the 2nd parallel port (parpoint.1)

```
loadrt trivkins
loadrt [EMCMOT]EMCMOT base_period_nsec=[EMCMOT]BASE_PERIOD
servo_period_nsec=[EMCMOT]SERVO_PERIOD num_joints=[TRAJ]AXES
loadrt hal_parport cfg="0x378 out 0x10c0 out"
setp parport.0.reset-time 2000
loadrt stepgen step_type=0,0,0,0,0 ctrl_type=p,p,p,p,v

#Load the pwmgen to the real thread
loadrt pwmgen output_type=0

addf parport.0.read base-thread
addf parport.1.read base-thread
addf stepgen.make-pulses base-thread
addf parport.0.write base-thread
addf parport.0.reset base-thread
addf parport.1.write base-thread

#Add pwmgen to the base thread
addf pwmgen.make-pulses base-thread

addf stepgen.capture-position servo-thread
addf motion-command-handler servo-thread
addf motion-controller servo-thread
addf stepgen.update-freq servo-thread

#Add to the servo-thread
addf pwmgen.update servo-thread

#Set up the spindle pwmgen
setp pwmgen.0.pwm-freq 200.0 #(The frequency in Hz required by the C41)
setp pwmgen.0.scale 4400 #(your max spindle speed)
setp pwmgen.0.offset 0.0 #(no offset required in my case

net spindle-speed-cmd motion.spindle-speed-out => pwmgen.0.value
net spindle-on motion.spindle-on => pwmgen.0.enable
net spindle-pwm pwmgen.0.pwm => parport.1.pin-16-out #change parpoint/pin to suit your application
net spindle-at-speed => motion.spindle-at-speed
net spindle-fwd motion.spindle-forward => parport.1.pin-17-out #change parpoint/pint to suit your
application
```

Disclaimer: These basic settings worked for me. It is up to you to do the research required for your application. There are many variables that can be applied & used to suit your need. Just consult the LinuxCNC forums for help with any issues you may have.