

```
net y-null+ or2.3.in1 <= hm2_5i25.0.7i77.0.0.input-08-not
net y-pos-lim/null or2.3.out => joint.1.pos-lim-sw-in
```

```
#---Limit/Null-z---
```

```
net z-lim- or2.4.in0 <= hm2_5i25.0.7i77.0.0.input-09-not
net z-null- or2.4.in1 <= hm2_5i25.0.7i77.0.0.input-11-not
net z-neg-lim/null or2.4.out => joint.2.neg-lim-sw-in
```

```
net z-lim+ or2.5.in0 <= hm2_5i25.0.7i77.0.0.input-10-not
net z-null+ or2.5.in1 <= hm2_5i25.0.7i77.0.0.input-12-not
net z-pos-lim/null or2.5.out => joint.2.pos-lim-sw-in joint.2.home-sw-in
```

```
*****
```

```
# AXIS X JOINT 0
```

```
*****
```

```
setp pid.x.Pgain [JOINT_0]P
setp pid.x.lgain [JOINT_0]I
setp pid.x.Dgain [JOINT_0]D
setp pid.x.bias [JOINT_0]BIAS
setp pid.x.FF0 [JOINT_0]FF0
setp pid.x.FF1 [JOINT_0]FF1
setp pid.x.FF2 [JOINT_0]FF2
setp pid.x.deadband [JOINT_0]DEADBAND
setp pid.x.maxoutput [JOINT_0]MAX_OUTPUT
setp pid.x.error-previous-target true
```

```
net x-index-enable <=> pid.x.index-enable
net x-enable => pid.x.enable
net x-pos-cmd => pid.x.command
net x-vel-cmd => pid.x.command-deriv
net x-pos-fb => pid.x.feedback
net x-output <= pid.x.output
```

```
# ---PWM Generator signals/setup---
```

```
setp hm2_5i25.0.7i77.0.1.analogout0-scalemax [JOINT_0]OUTPUT_SCALE
setp hm2_5i25.0.7i77.0.1.analogout0-minlim [JOINT_0]OUTPUT_MIN_LIMIT
setp hm2_5i25.0.7i77.0.1.analogout0-maxlim [JOINT_0]OUTPUT_MAX_LIMIT
```

```
net x-output => hm2_5i25.0.7i77.0.1.analogout0
net x-pos-cmd <= joint.0.motor-pos-cmd
net x-enable <= joint.0.amp-enable-out
# enable_all_sserial pwmgens
net x-enable => hm2_5i25.0.7i77.0.1.analogena
```

```
# ---Encoder feedback signals/setup---
```

```
setp hm2_5i25.0.encoder.00.counter-mode 0
setp hm2_5i25.0.encoder.00.filter 1
setp hm2_5i25.0.encoder.00.index-invert 0
setp hm2_5i25.0.encoder.00.index-mask 0
setp hm2_5i25.0.encoder.00.index-mask-invert 0
setp hm2_5i25.0.encoder.00.scale [JOINT_0]ENCODER_SCALE
```

```
net x-pos-fb <= hm2_5i25.0.encoder.00.position
net x-vel-fb <= hm2_5i25.0.encoder.00.velocity
```