

Dear CNC colleagues, I'm reaching out for your help.

I just upgraded my PC to a 64-bit Win 10.

So I had to say goodbye to my old controllbox since it only was working with Parallel cable.

Invested in a PoKey57CNC and it works great on my CNC, except for one thing....

I do have a OX CNC with two motors on the Y axis where the "Y motor" is master and the "A motor" is slave.

Running Mach3 latest version (.066) – All in Metric system

The issue I have is when I'm trying to use the macro "Center probe inside diameter Metric Version"

There are 2 issues actually:

1. When I start the macro it goes to the left, slow and nice, touches the edge, stops and then it rapidly goes far to the right not stopping when the probe touches the right edge of the hole.
2. When it comes to the Y axis calibration for the hole it seems that the "slave" axis won't work. Only the "Y" motor moves a few step before machine crashes. The "A" motor won't move.

This is the scrip I use (HossProbing set). Made a copy of it from my old Win 7 setup.(Was working perfect) and now it doesn't .

Rem VBScript To center probe inside a pipe For Metric meassurment

If GetOemLed (825) <> 0 Then 'Check to see if the probe is already grounded or faulty

Code "(Probe plate is grounded, check connection and try again)"

Else

FeedCurrent = GetOemDRO(818) 'Get the current settings

XCurrent = GetDro(0)

YCurrent = GetDro(1)

Code "G4 P1" 'Pause 1 second to give time to position probe plate

Code "F100" 'slow feed rate to 4 ipm 100mm

Rem Probe Left

XNew = Xcurrent - 30 'probe to left 30mm

Code "G31 X" &XNew

While IsMoving() 'wait for the move to finish

Wend

XPos1 = GetVar(2000) 'get the probe touch location

Code "G0 X" &XCurrent 'rapid move back to start point

Rem Probe Right

XNew = XCurrent + 30 'probe to right 30mm

Code "G31 X" &XNew

While IsMoving()

Wend

XPos2 = GetVar(2000)

XCenter = (XPos1 + XPos2) / 2 'center is midway between XPos1 and XPos2

Code "G0 X" &XCenter 'rapid move to the x center location

Rem Probe up

YNew = YCurrent + 30

Code "G31 Y" &YNew

While IsMoving()

Wend

YPos1 = GetVar(2001)

Code "G0 Y" &YCurrent

Rem Probe down

YNew = Y+ACurrent - 30 ' A bör bort

Code "G31 Y" &YNew

While IsMoving()

Wend

YPos2 = GetVar(2001)

YCenter = (YPos1 + YPos2) / 2

Rem move To the center

Code "G0 Y" &YCenter

While IsMoving ()

Wend

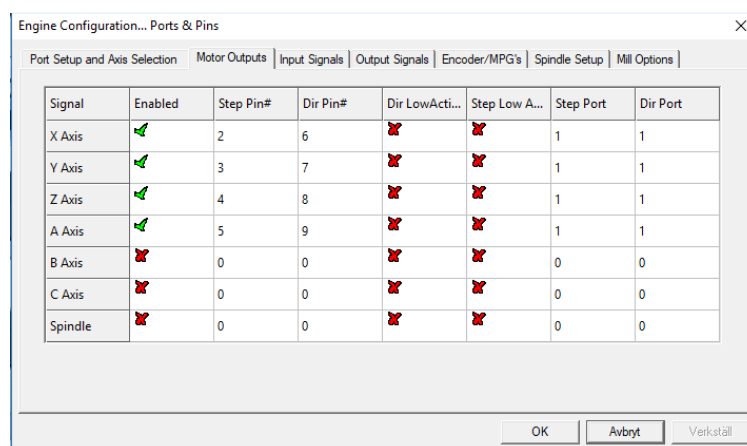
Code "F" &FeedCurrent 'restore starting feed rate

DoOEMButton (1008)

DoOEMButton (1009)

End If

Screen dump from Mach 3



Motor Home/SoftLimits

Entries are in setup units.

Axis	Reversed	Soft Max	Soft Min	Slow Zone	Home Off.	Home N...	Auto Zero	Speed %
X		280.00	40.00	1.00	0.0000			20
Y		524.00	40.00	1.00	0.0000			20
Z		100.00	-100.00	1.00	0.0000			20
A		524.00	40.00	1.00	0.0000			20
B		100.00	-100.00	1.00	0.0000			20
C		100.00	-100.00	1.00	0.0000			20

G28 home location coordinates

X 0 A 0

Y 0 B 0

Z 0 C 0

OK

Slave Axis Selection

X Axis

Slaved Axis

☐ A Axis
 ☐ B Axis
 ☐ C Axis
 ☒ None

Y Axis

Slaved Axis

☒ A Axis
 ☐ B Axis
 ☐ C Axis
 ☐ None

Z Axis

Slaved Axis

☐ A Axis
 ☐ B Axis
 ☐ C Axis
 ☒ None

Restart Mach3 after resetting these selections

OK

Pokey57CNC Mach3 plugin

Device settings

LCD

PWM

Analog inputs

Misc

PoKeys IO status

Import/Export settings

PoKeys mapping

Encoders settings

Matrix keyboard settings

Matrix LED

Pulse engine settings

Pulse engine configuration: External 6ch with IO

Emergency STOP on dedicated pin (NC switc

Status: Running / Ready

☐ Invert emergency stop input
 ☐ Enable safety charge pump (pin 45)
 ☐ Enable in emergency (Reset)

Limit+

Limit-

Home/Ref

Enable

Auto

MPG div.

X	External dedicate		Inv.	External dedicate		Inv.	Shared with limit+		Inv.	<input checked="" type="checkbox"/> Act.	Low	0
Y	External dedicate		Inv.	External dedicate		Inv.	Shared with limit+		Inv.	<input checked="" type="checkbox"/> Act.	Low	0
Z	External dedicate		Inv.	Disabled		Inv.	Shared with limit+		Inv.	<input checked="" type="checkbox"/> Act.	Low	0
A	External dedicate		Inv.	External dedicate		Inv.	Pin 23		Inv.	<input checked="" type="checkbox"/> Act.	Low	0
B	Disabled		Inv.	Disabled		Inv.	Disabled		Inv.	<input type="checkbox"/> Act.	Low	0
C	Disabled		Inv.	Disabled		Inv.	Disabled		Inv.	<input type="checkbox"/> Act.	Low	0

Probing input

Pin 19

☐ Inv.

☐ Don't de-ref on stop
 ☐ Switch step/dir signals

THC settings - axis Z

☒ Disabled
 ☐ Invert direction
 ☐ Anti-dive limit: 0.00 V
 ☐ Up/Down signals
 ☐ Voltage/analog mode

Deadband: 0.00 V

Torch voltage: Analog input 41 Gain: 0.00

Reference height: Manual 0.00 V

Show pinout

OK

Avbryt

Verkställ

Y axis

Pulse engine status/control

☒ Enable pulse engine ☒ Lock settings

☐ Enable safety charge pump output on pin
☐ Invert emergency input polarity
☐ Enable backlash compensation

Pulse generator options:
☐ 3ch integrated
☒ external
☐ external smart

6 channels
☒ Extended IO
☐ Swap DIR/STEP pins

State: 0
 Stopped
 STOP
 ERR
 Homing
 Running
 Jogging
 Emergency
 Limit override

Axis X Axis Y Axis Z Axis A Axis B Axis C Axis 7 Axis 8

Switch configuration
☒ Limit+ pin 0 Invert Filter: 0
☒ Limit- pin 0 Invert Filter: 0

Home/Ref switch:
☐ disabled
☐ on pin 0 Invert
☒ shared with Limit+
☐ shared with Limit-

Hover for help
 Homing algorithm
 on Home: ☒ ☒
 out Home: ☒ ☒

Axis enable output on pin 0 ☒ Invert axis enabled

Note: pin 0 equals to external I/O

MPG jog setup
 Encoder: Disabled
 Multiplier: 0 Divider: 0

Copy to all axes

Motion parameters
☒ Invert axis direction ☐ Mask enable
☐ Internal motion controller activated
☐ Speed ☐ Position

Homing
☐ Invert homing direction
 Speed: 20 % of full
 Reduced speed: 10 % of homing
 Back-off distance: 40 pulses

Maximum speed: 4445 pulses/s
 Maximum acceleration: 13334 pulses/s²
 Maximum deceleration: 13334 pulses/s²

☐ Enable soft limit
 Max: 13975 Min: 1066
 Backlash compensation
 Width/2: 0 Acceleration: 0

Pulse engine test

	Stopped	0	L-	H	L+	-	+	Home	0	0
X	Stopped	0	L-	H	L+	-	+	Home	0	0
Y	Stopped	0	L-	H	L+	-	+	Home	0	0
Z	Stopped	0	L-	H	L+	-	+	Home	0	0
A	Stopped	0	L-	H	L+	-	+	Home	0	0
B	Stopped	0	L-	H	L+	-	+	Home	0	0
C	Stopped	0	L-	H	L+	-	+	Home	0	0
7	Disabled	0	L-	H	L+	-	+	Home	0	0
8	Disabled	0	L-	H	L+	-	+	Home	0	0

Jog speed: < 1 % Home Move Move

Enable axis power: ☐ Stopped ☐ Limit triggered ☐ Emergency
 Enable charge pump: ☐ Stopped ☐ Limit triggered ☐ Emergency

Save configuration

Configure PoStep drivers

Aux. outputs
 Relays: ☐ 3 ☐ 2 ☐ 1 ☐ 0
 OC-outputs: ☐ 1 ☐ 2 ☐ 3 ☐ 4

Error inputs:
 1 2 3 4 5 6 7 8

A Axis (slave)

Pulse engine status/control

☒ Enable pulse engine ☒ Lock settings

☐ Enable safety charge pump output on pin
☐ Invert emergency input polarity
☐ Enable backlash compensation

Pulse generator options:
☐ 3ch integrated
☒ external
☐ external smart

6 channels
☒ Extended IO
☐ Swap DIR/STEP pins

State: 0
 Stopped
 STOP
 ERR
 Homing
 Running
 Jogging
 Emergency
 Limit override

Axis X Axis Y Axis Z Axis A Axis B Axis C Axis 7 Axis 8

Switch configuration
☒ Limit+ pin 0 Invert Filter: 0
☒ Limit- pin 0 Invert Filter: 0

Home/Ref switch:
☐ disabled
☐ on pin 23 Invert
☒ shared with Limit+
☐ shared with Limit-

Hover for help
 Homing algorithm
 on Home: ☒ ☒
 out Home: ☒ ☒

Axis enable output on pin 0 ☒ Invert axis enabled

Note: pin 0 equals to external I/O

MPG jog setup
 Encoder: Disabled
 Multiplier: 0 Divider: 0

Copy to all axes

Motion parameters
☒ Invert axis direction ☐ Mask enable
☐ Internal motion controller activated
☐ Speed ☐ Position

Homing
☐ Invert homing direction
 Speed: 20 % of full
 Reduced speed: 10 % of homing
 Back-off distance: 30 pulses

Maximum speed: 4445 pulses/s
 Maximum acceleration: 13334 pulses/s²
 Maximum deceleration: 13334 pulses/s²

☐ Enable soft limit
 Max: 13975 Min: 1066
 Backlash compensation
 Width/2: 0 Acceleration: 0

Pulse engine test

	Stopped	0	L-	H	L+	-	+	Home	0	0
X	Stopped	0	L-	H	L+	-	+	Home	0	0
Y	Stopped	0	L-	H	L+	-	+	Home	0	0
Z	Stopped	0	L-	H	L+	-	+	Home	0	0
A	Stopped	0	L-	H	L+	-	+	Home	0	0
B	Stopped	0	L-	H	L+	-	+	Home	0	0
C	Stopped	0	L-	H	L+	-	+	Home	0	0
7	Disabled	0	L-	H	L+	-	+	Home	0	0
8	Disabled	0	L-	H	L+	-	+	Home	0	0

Jog speed: < 1 % Home Move Move

Enable axis power: ☐ Stopped ☐ Limit triggered ☐ Emergency
 Enable charge pump: ☐ Stopped ☐ Limit triggered ☐ Emergency

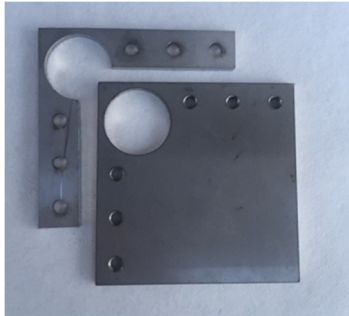
Save configuration

Configure PoStep drivers

Aux. outputs
 Relays: ☐ 3 ☐ 2 ☐ 1 ☐ 0
 OC-outputs: ☐ 1 ☐ 2 ☐ 3 ☐ 4

Error inputs:
 1 2 3 4 5 6 7 8

OX Zero and Corner Finding Tool



X Axis

Pulse engine status/control

☒ Enable pulse engine ☒ Lock settings

☐ Enable safety charge pump output on pin ☐ Invert emergency input polarity ☐ Enable backlash compensation

Pulse generator options: ☐ 3ch integrated ☐ external ☐ external smart

6 channels ☒ Extended IO ☐ Swap DIR/STEP pins

State: 0 Stopped

STOP ERR Homing Running Jogging Emergency Limit override

Enable axis power: ☐ Stopped ☐ Limit triggered ☐ Emergency

Enable charge pump: ☐ Stopped ☐ Limit triggered ☐ Emergency

Save configuration

Configure PoStep drivers

Aux. outputs

Relays: ☐ 3 ☐ 2 ☐ 1 ☐ 0

OC-outputs: ☐ 1 ☐ 2 ☐ 3 ☐ 4

Error inputs:

Switch configuration

☒ Limit+ pin 0 ☒ Invert Filter: 0

☒ Limit- pin 0 ☒ Invert Filter: 0

Home/Ref switch: ☐ disabled ☐ on pin 0 ☐ Invert

Homing algorithm: ☒ shared with Limit+ ☒ shared with Limit- on Home: ☒ out Home: ☒

Axis enable output on pin 0 ☒ Invert axis enabled

Note: pin 0 equals to external I/O

MPG jog setup

Encoder: Disabled

Multiplier: 0 Divider: 0

Copy to all axes

Motion parameters

☒ Invert axis direction ☐ Mask enable

☐ Internal motion controller activated

☐ Speed ☐ Position

Homing

☐ Invert homing direction

Speed: 20 % of full

Reduced speed: 10 % of homing

Back-off distance: 40 pulses

Maximum speed: 4445 pulses/s

Maximum acceleration: 13334 pulses/s²

Maximum deceleration: 13334 pulses/s²

☐ Enable soft limit

Backlash compensation

Width/2: 0

Acceleration: 0

Max: 7467

Min: 1066

Pulse engine test

Axis	Mode	Position	Limit+	Limit-	Home	Dir	Step	Home	Dir	Step
X	Stopped	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
Y	Stopped	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
Z	Stopped	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
A	Stopped	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
B	Stopped	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
C	Stopped	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
7	Disabled	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0
8	Disabled	0	L	H	L+	-	+	<input type="checkbox"/> Home	0	0

Jog speed: < 1% > 1%

Home Move Move

PoKeys configuration v4.2.39 (device: 41206 v4.2.39)

File Peripherals Settings Device Pulse engine

Mode Assignment **Connected to PoKeys57CNC (0 / Ser. 41206)** Assignment Mode

Send to device

Pin settings

☒ Inactive ☐ Analog input ☐ Digital input

☐ Invert pin ☐ Analog output ☐ Digital output

☐ 10k pull-up ☐ Triggered input 0

☐ Enable PWM ☐ Connection signal

☐ Matrix keyboard

Copyright PoLabs 2016

<http://www.poscope.com/>

Device load status: Near maximum performance 0 ms

1 2 3 4 5 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 28

52

45 A 44 A 43 A 42 A 41 A

38 37 36 35 34 33 32 31 30 29

