

Configuring PWM Spindle Speed Control

Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | Input Signals | Output Signals | Encoder/MPG's | Spindle Setup | Mill Options

Signal	Enabled	Step Pin#	Dir Pin#	Dir LowActi...	Step Low A...	Step Port	Dir Port
X Axis	<input checked="" type="checkbox"/>	2	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
Y Axis	<input checked="" type="checkbox"/>	4	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
Z Axis	<input checked="" type="checkbox"/>	6	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
A Axis	<input checked="" type="checkbox"/>	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
B Axis	<input checked="" type="checkbox"/>	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
C Axis	<input checked="" type="checkbox"/>	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
Spindle	<input checked="" type="checkbox"/>	14	16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1

OK Cancel Apply

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Relay Control

☒ Disable Spindle Relays

Clockwise (M3) Output # 1

CCW (M4) Output # 2

Output Signal #'s 1-6

Flood Mist Control

☐ Disable Flood/Mist relays Delay

Mist M7 Output # 1 0

Flood M8 Output # 1 0

Output Signal #'s 1-6

ModBus Spindle - Use Step/Dir as well

☐ Enabled Reg 64 64 - 127

Max ADC Count 16380

Motor Control

☒ Use Spindle Motor Output

☒ PWM Control

☐ Step/Dir Motor

PWMBase Freq. 300

Minimum PWM 5 %

General Parameters

CW Delay Spin UP 1 Seconds

CCW Delay Spin UP 1 Seconds

CW Delay Spind DOWN 1 Seconds

CCW Delay Spin DOWN 1 Seconds

☐ Immediate Relay off before delay

Special Functions

☐ Use Spindle Feedback in Sync Modes

☐ Closed Loop Spindle Control

P 0.25 I 1 D 0.3

☐ Spindle Speed Averaging

Special Options, Usually Off

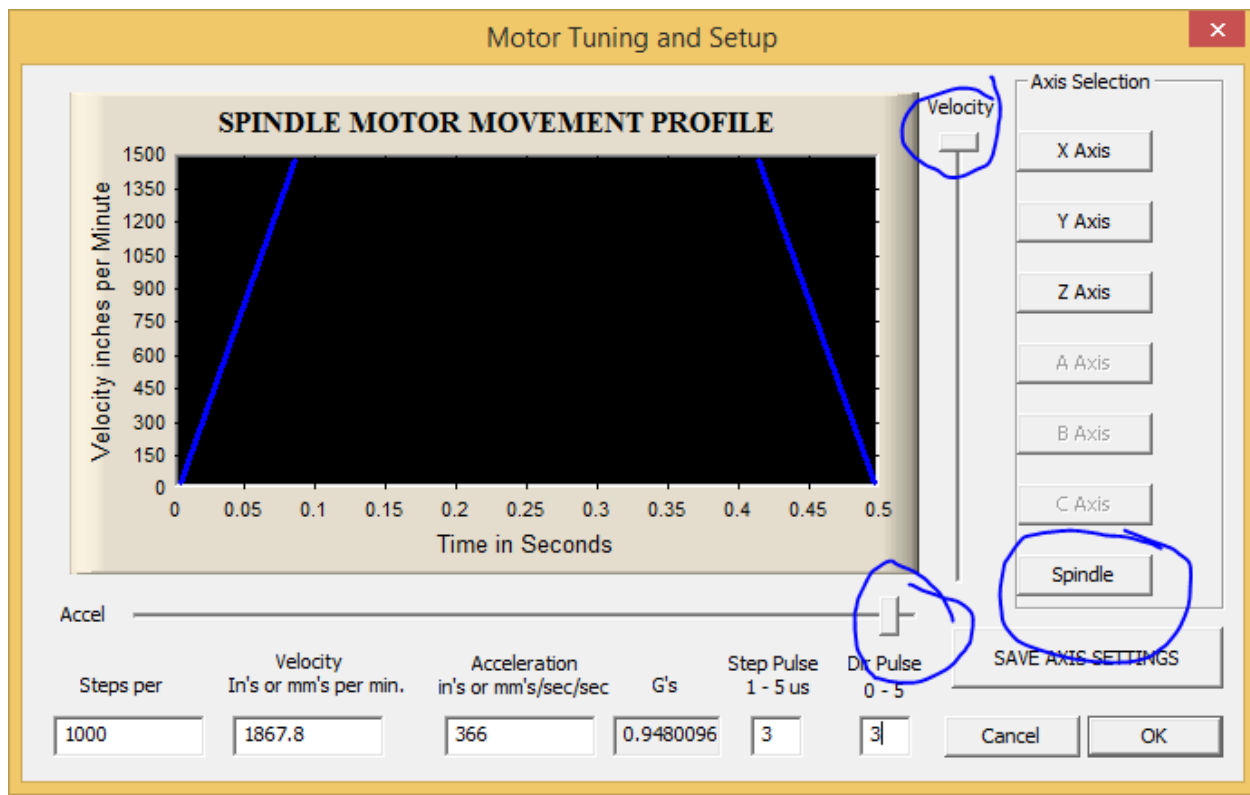
☐ HotWire Heat for Jog

☐ Laser Mode. freq I

☐ Torch Volts Control

☐ Torch Auto Off

OK Cancel Apply



The **Pulley Selection** window shows the following settings:

- Current Pulley:** Pulley Number 1
- Min Speed:** 0
- Max Speed:** 25000 (circled in blue)
- Ratio:** 1
- Reversed:** ☐

The **OK** button is located at the bottom right.

On the MDI screen, M3S25000 will start the spindle at full speed, you will get 10vdc on the analog output. M3S12500 will start the spindle at 50% of the speed, you will get +5vdc at the analog output terminal.

Notes:

- If using the Smooth Stepper, you need to go to the SS Plugin and configure spindle speed control to PWM at 300Hz.
- On the terminal for the pin used for step you will also get a 0-5vdc signal, which you can test with a multimeter to confirm mach3 is configured OK.