

# 2 Axis (X, Y) Stepping Motor Controller (Rev 1.0 May 2010)

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This is a 2 Axis (X,Y) CNC stepping motor controller/Driver. It built-in a spindle relay and all input is optical isolated from the outside providing safe (no feedback to your PC) and better response time. Support Mach2, Mach3, KCam. You can apply this card to a CNC machine or upgrade your old CNC machine to take advantage of new technology.

## Features:

- \* Optical isolation for data In/Out
- \* Relay control for spindle (or laser)
- \* Four step speed setting
- \* High current Output
- \* Big Heat sink support up to 2.5A

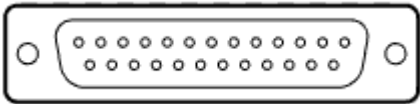


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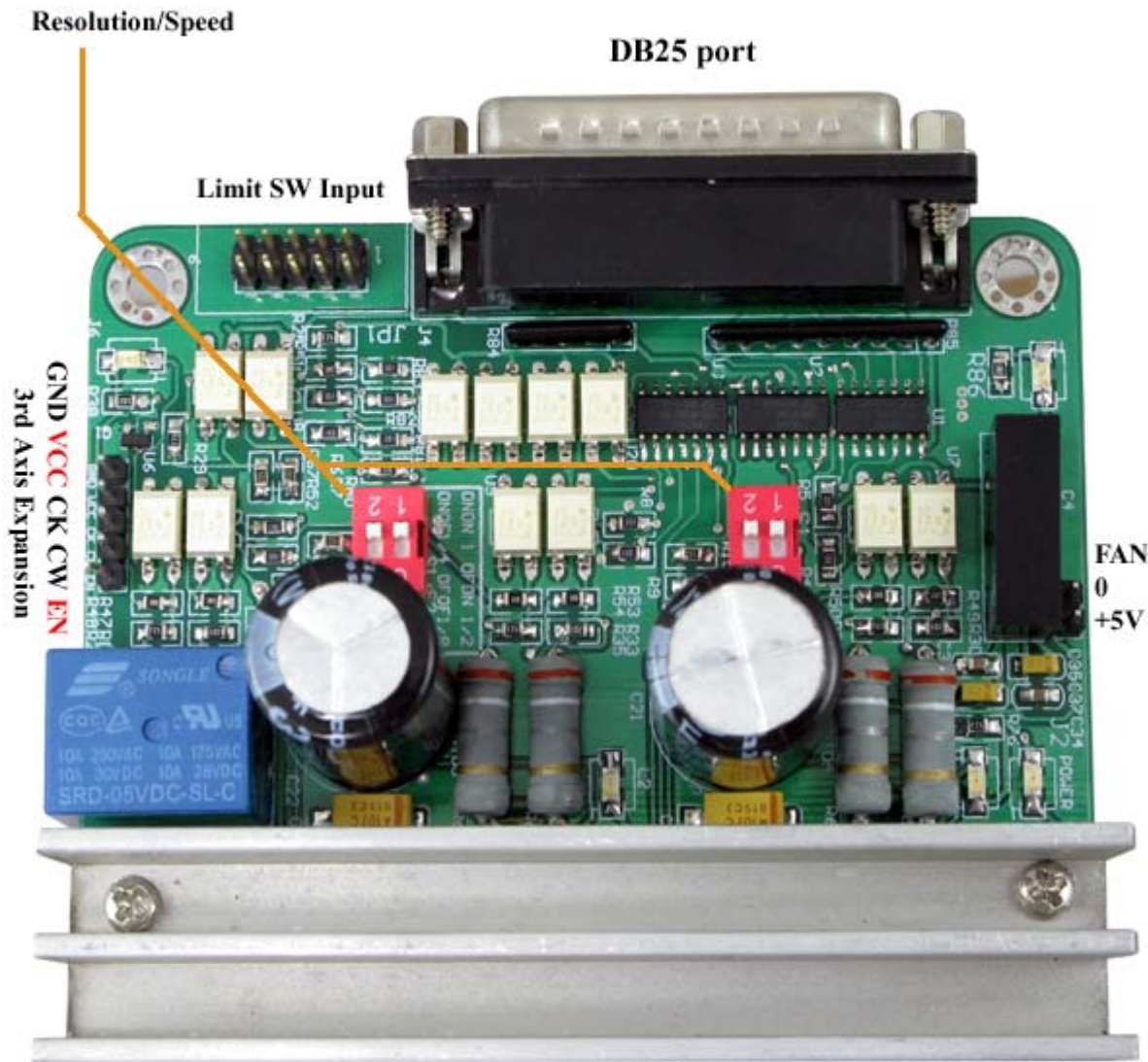
## Specification:

- \* In/Out Interface port: Parallel
- \* Built in Relay control for spindle
- \* Support 2/4 phases 4, 6, 8 wires stepping motor
- \* High speed optical isolation coupling
- \* Built in No. 3 Axis interface for expansion
- \* LED indicators for each Axis & Relay
- \* Current: 1.5A (2.5A peak)
- \* Resolution: 1/8, 1/4, 1/2, 1
- \* Power: Single DC 12 ~ 24V (no 5V needed)
- \* Control port: DB manual control interface
- \* CAD system support: March2, Mach3, KCam

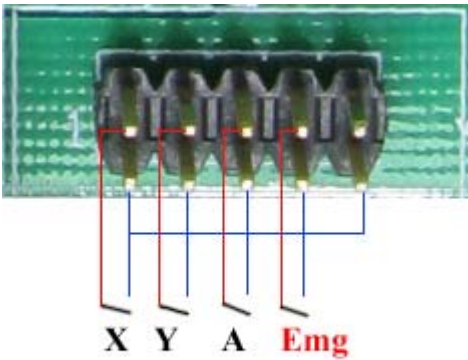
DB 25 Connector Pin layout



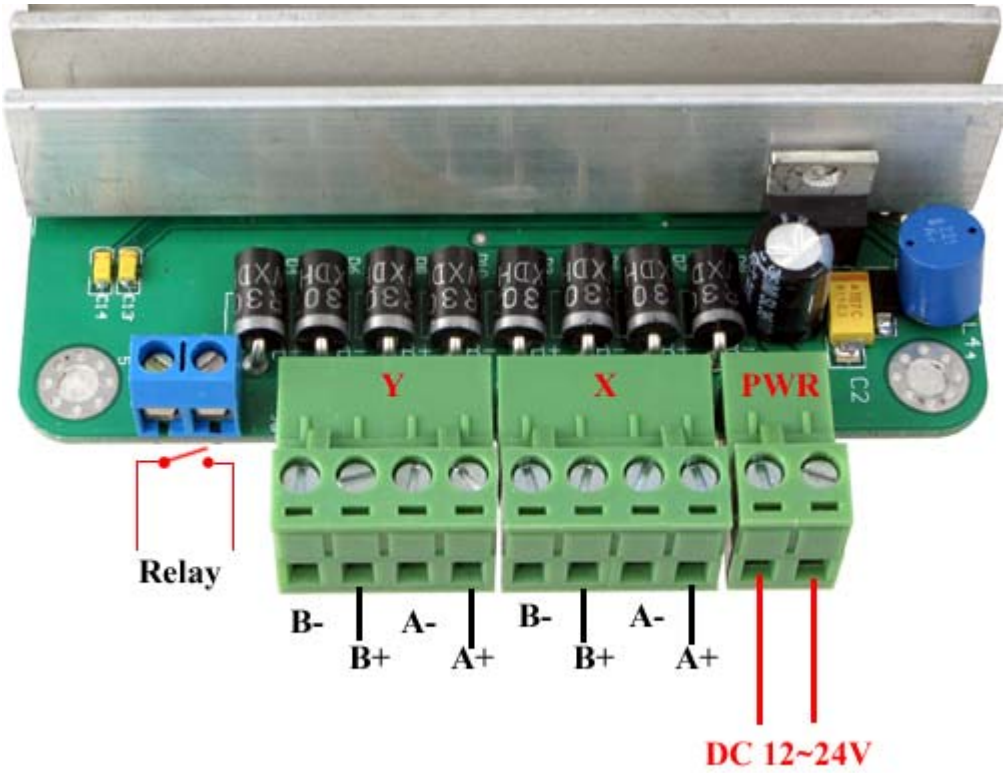
PIN1	PIN2	PIN3	PIN3	PIN5	PIN6	PIN7	PIN8	PIN9	PIN10
CKE	CKA	CWA	CKB	CWB					DIN1
E STEP	A STEP	A DIR	B STEP	B DIR					Limit1
PIN11	PIN12	PIN13	PIN14	PIN16	PIN17	PIN18-25			
DIN2	DIN3	DIN4	CWE	EN	RLY	GND			
Limit2	Limit3	Limit4	E DIR	Enable	Relay	Ground			



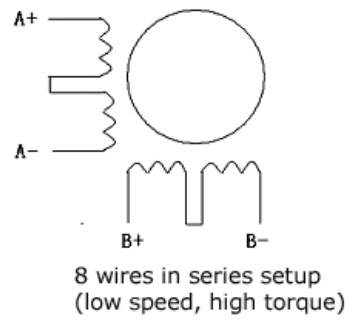
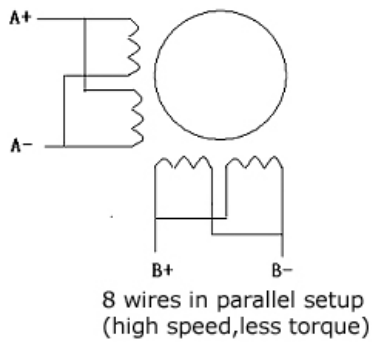
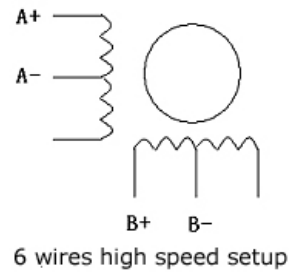
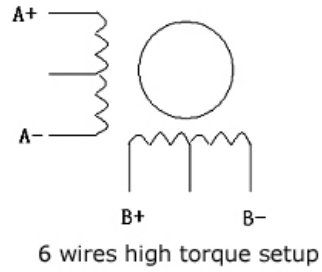
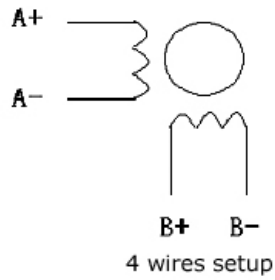
Limit Input connector



Motor, relay and power



2 phases,4 phases stepping motor connection diagram (current 2A max)

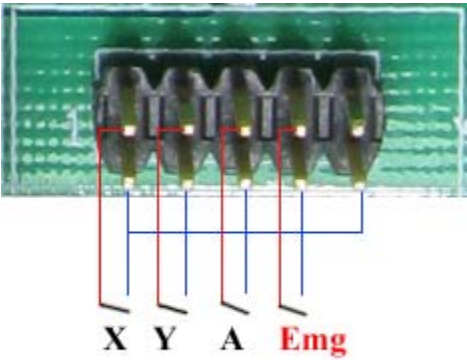


## Power

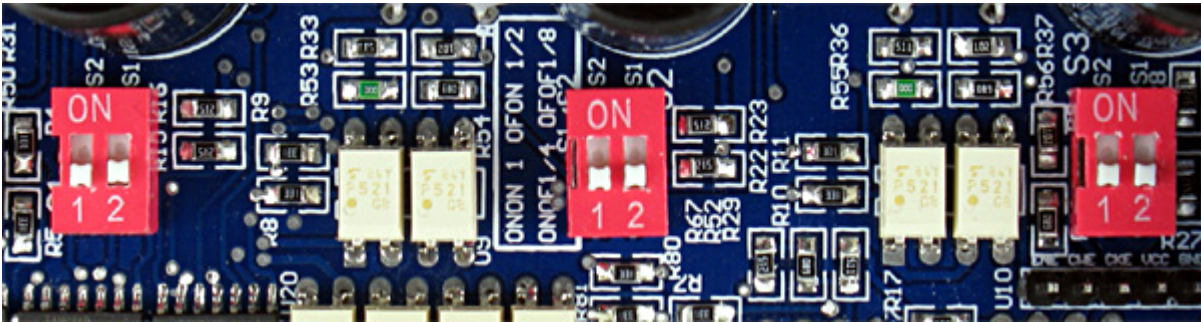
The controller can take DC 12~24V power input. The power supply should be able to provide at least 3A current in order to support smooth operation.

**Home Limit and Emergency Stop Input pin**

Note: All Limit Input are Active Low \*



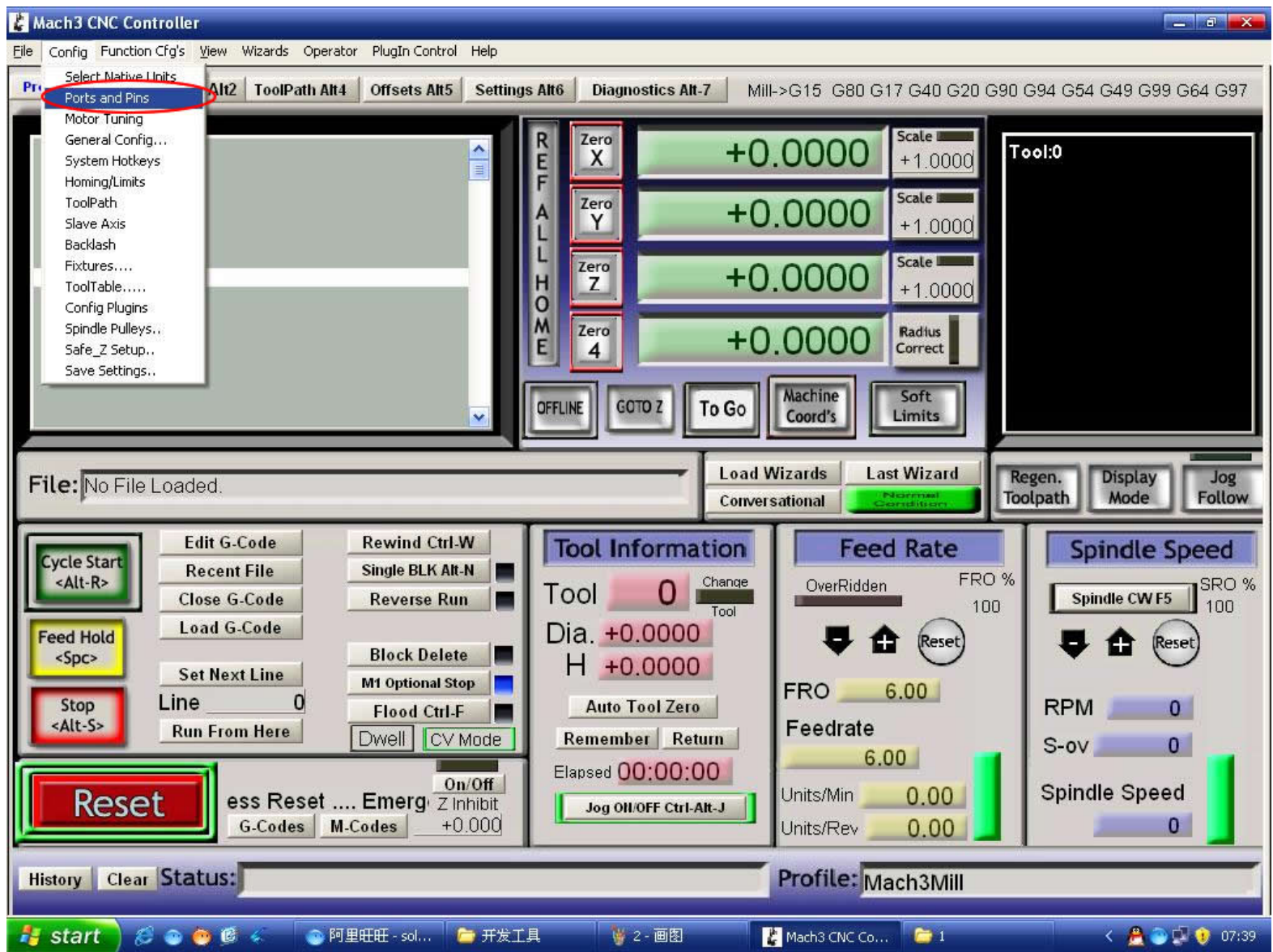
**Resolution/ Speed Setting for X,Y Stepping Motor**

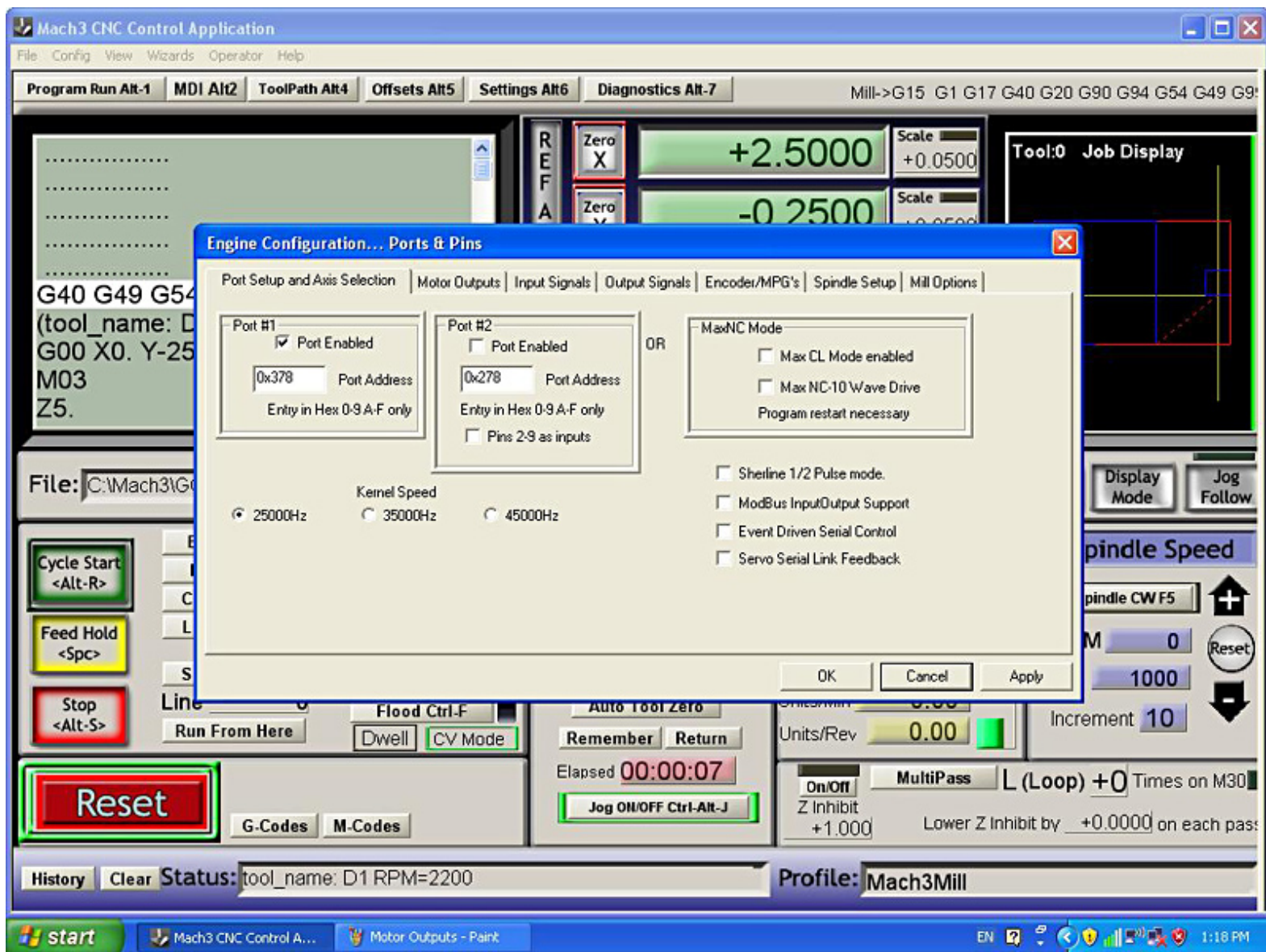


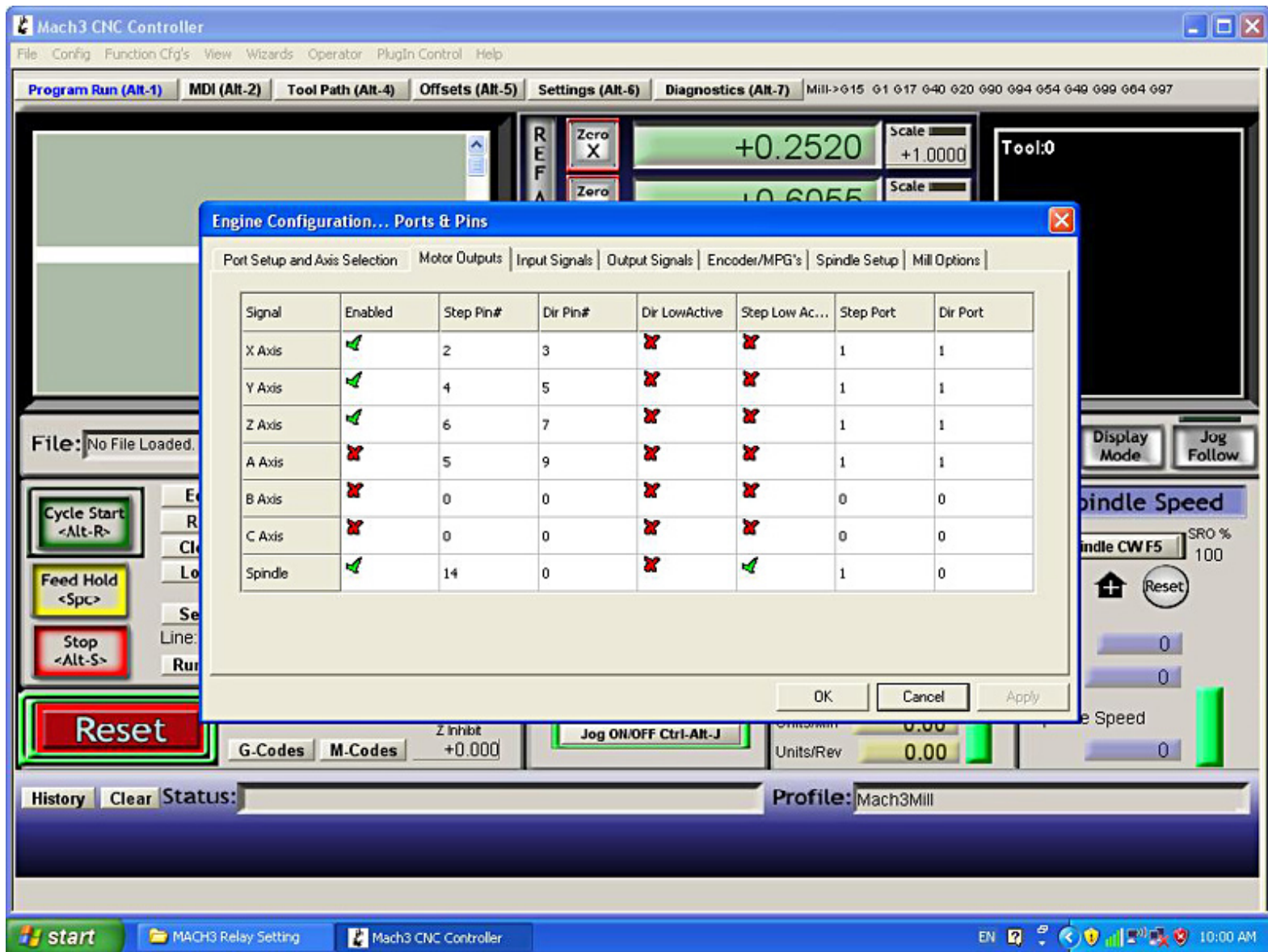
Full STEP	½ STEP	¼ STEP	1/8 STEP
1 - Off	1 – Off	1 - On	1 - On
2 - Off	2 - On	2 - Off	2 - On



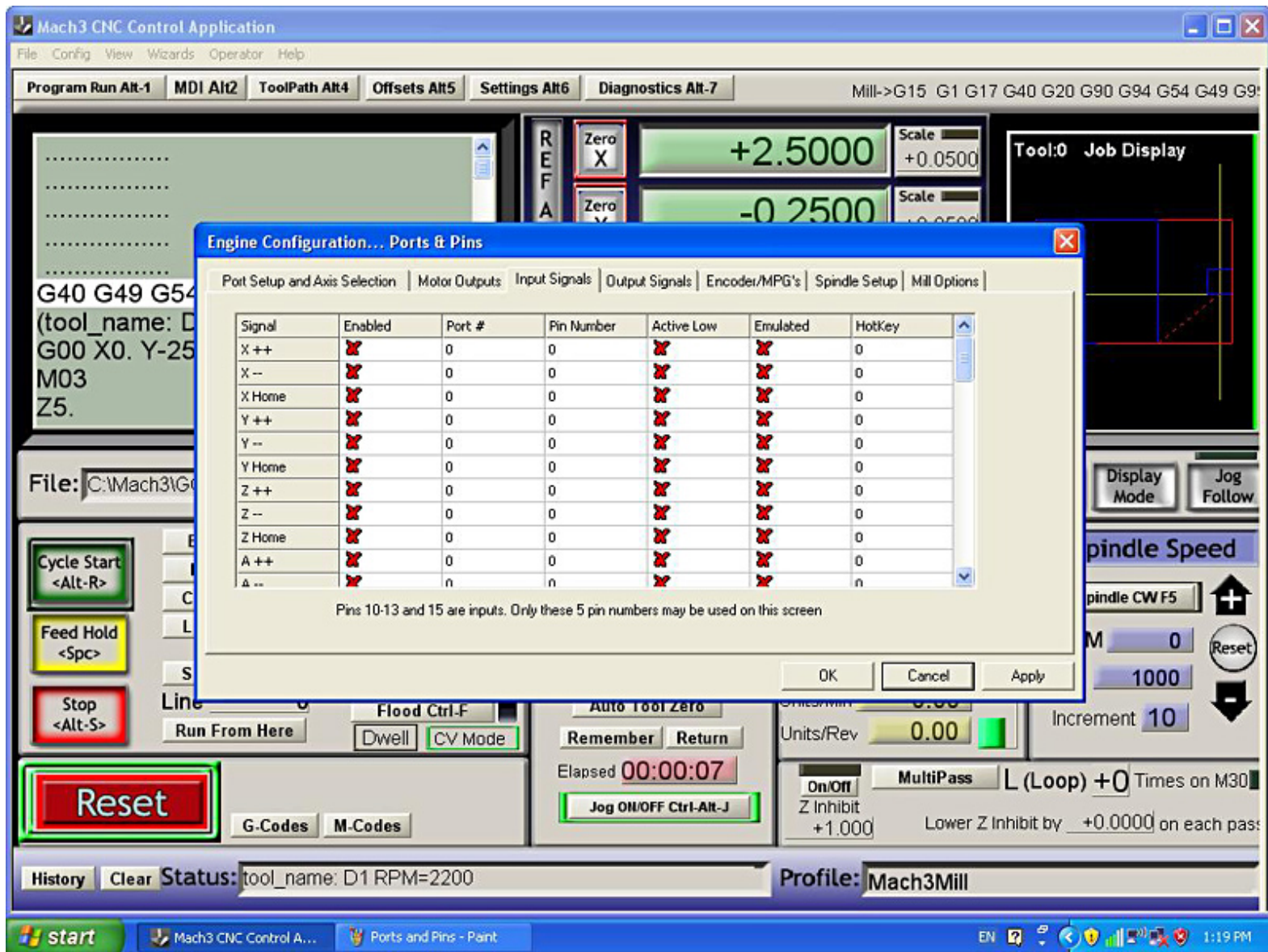
**MACH3 Setup. Note: some parameters are in default setting.**

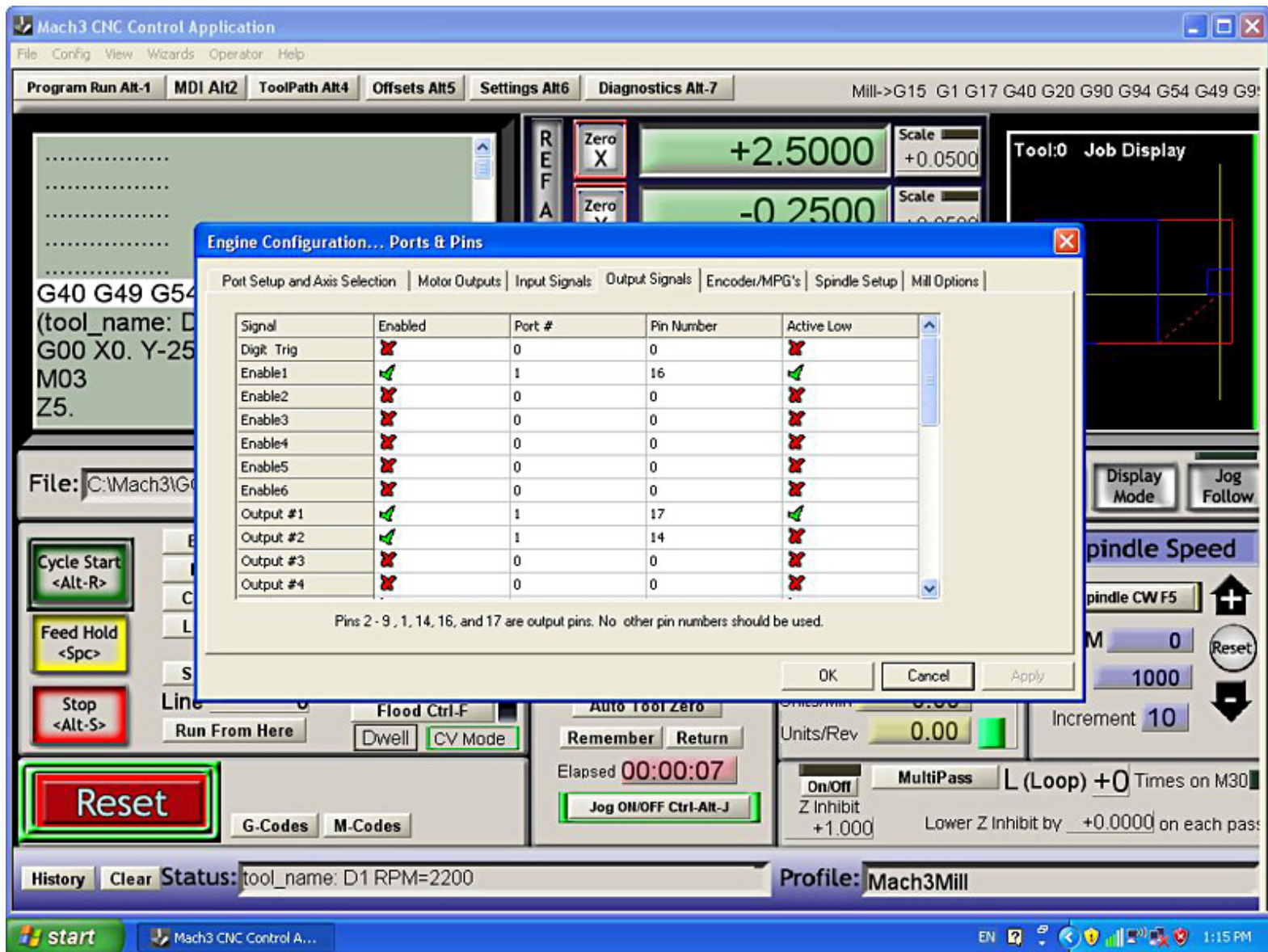




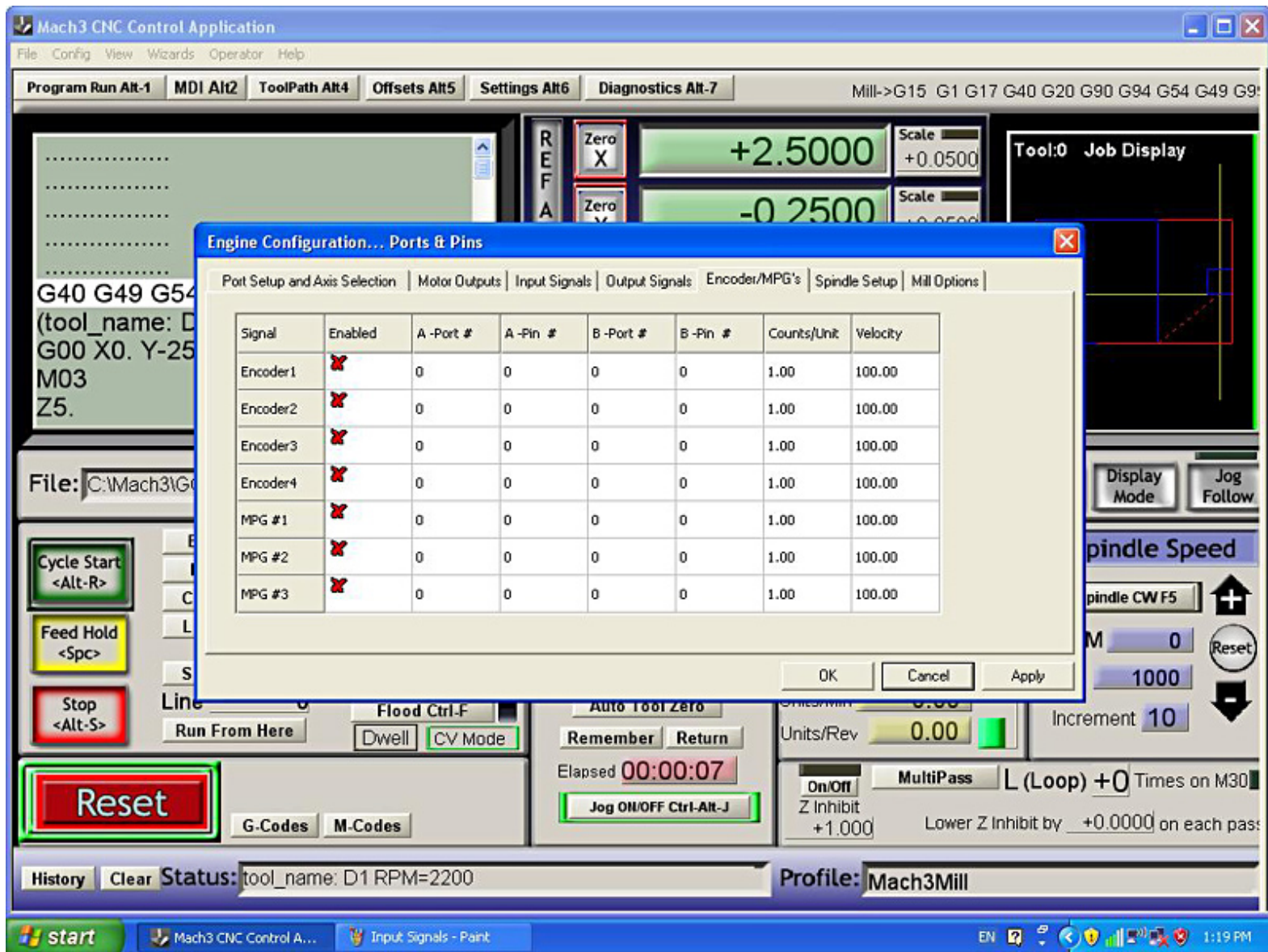


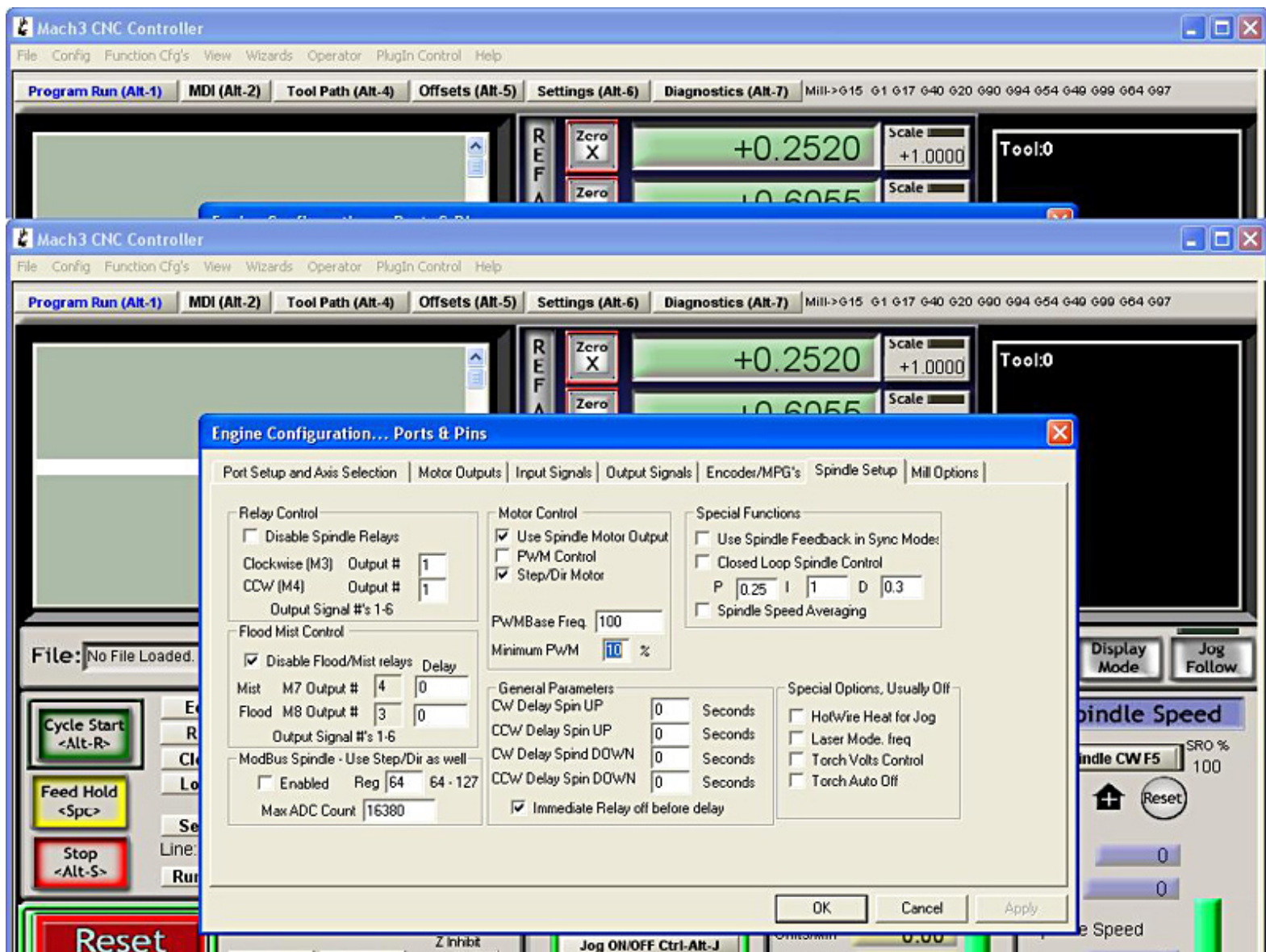




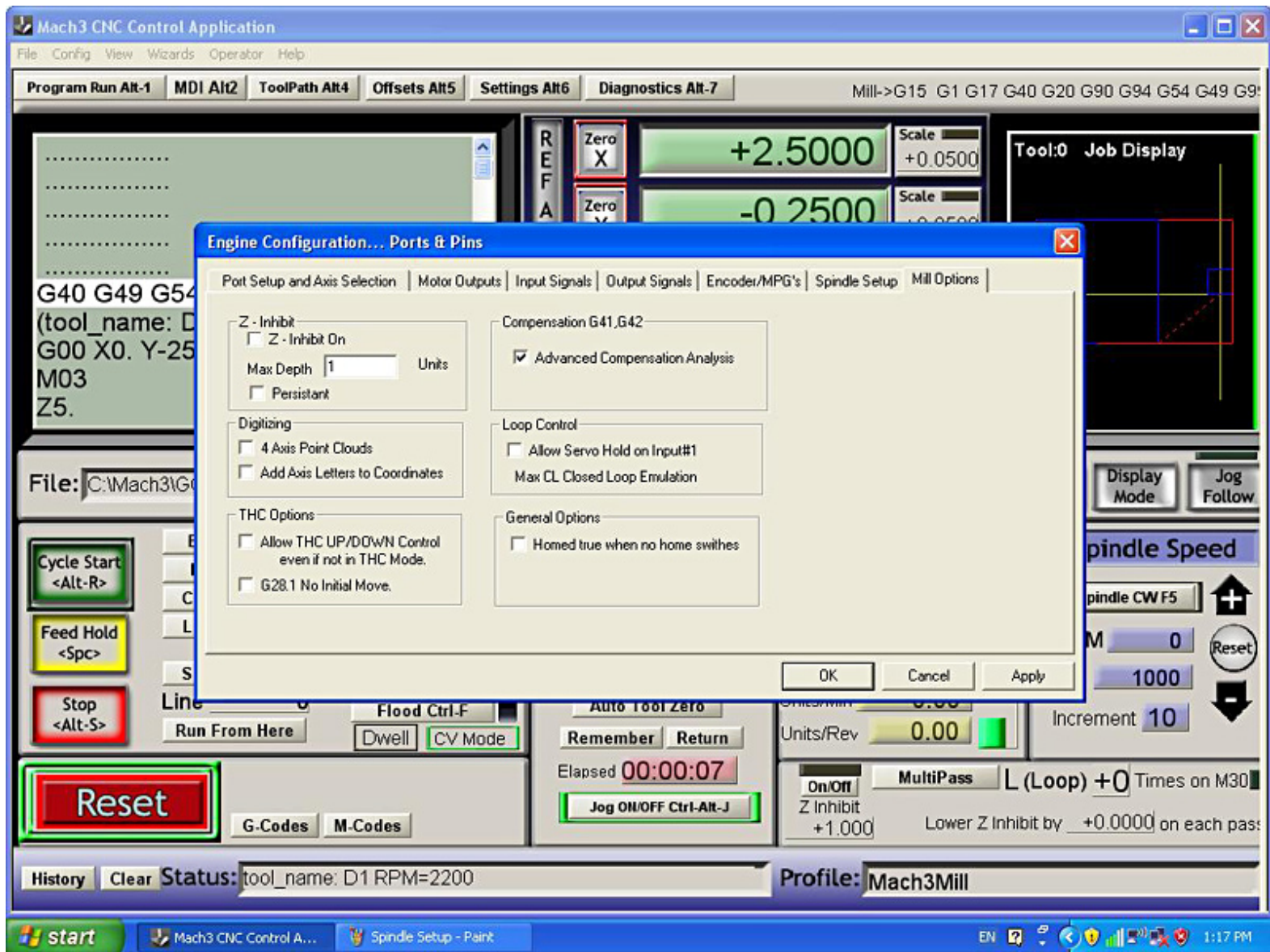












Please go to Mach3 website <http://www.machsupport.com/> to learn how to use Mach3. We don't support Mach3 or other 3<sup>rd</sup> software.

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