

# HY-JK02-M 5-axis interface board manual

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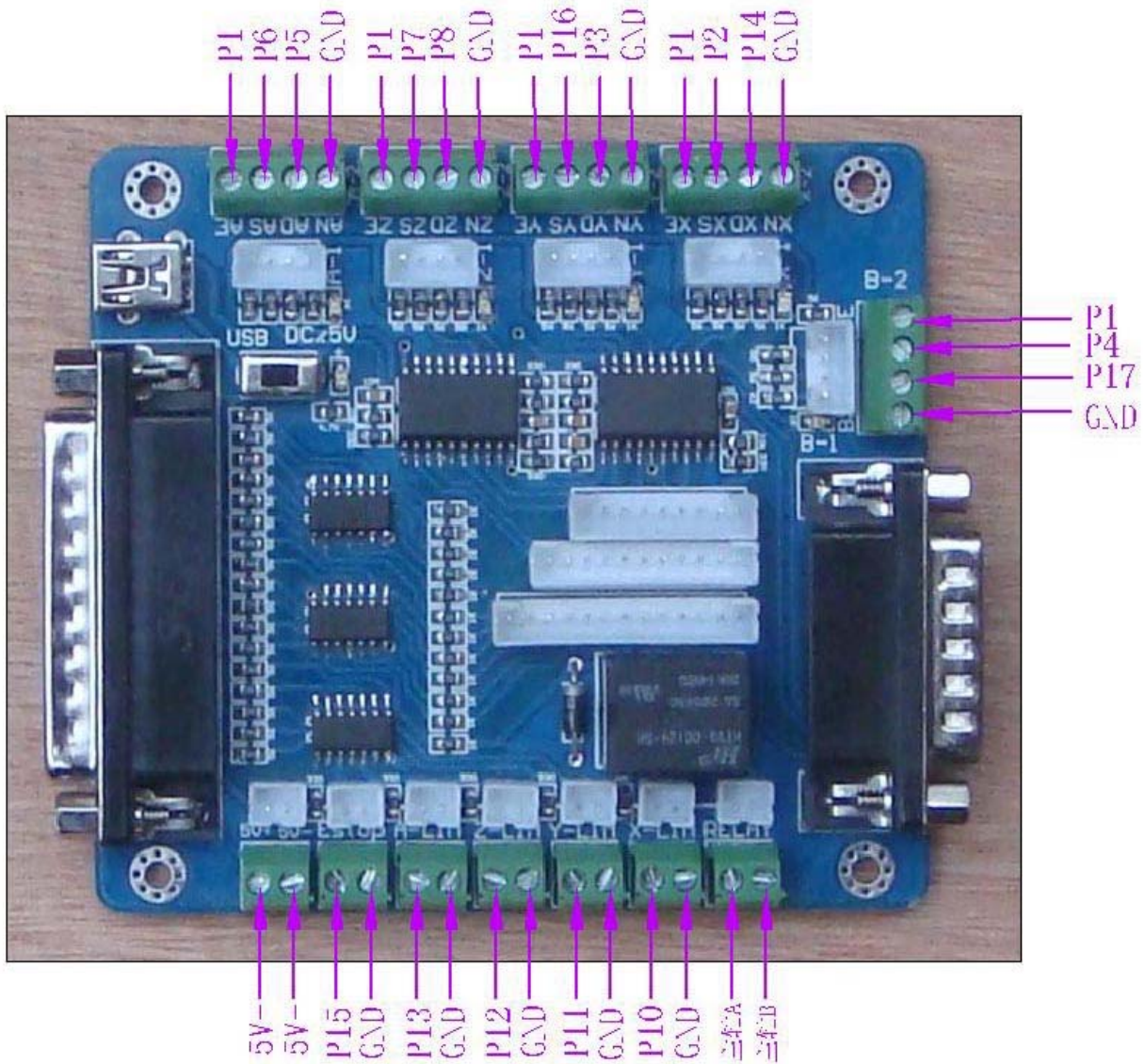
## Features: **Features**

- 1: The maximum matching 5-axis stepper motor driver
- 2: The two-stage signal processing, signal transmission smooth, powerful anti-jamming
- 3: 5 input interface to define the emergency stop, limit, points in the knife, etc.
- 4: relay output control interface, can be accessed by the spindle motor or the air pump, water pump, etc
- 5: five-axis job LED display, visual display products, working condition

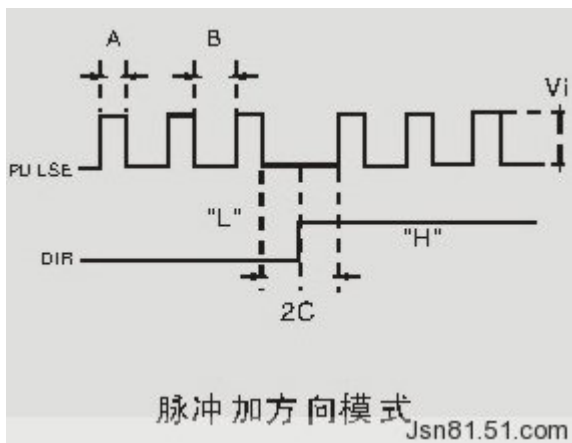
## Electrical performance ( $T_j = 25\text{ }^{\circ}\text{C}$ ambient temperature when):

Input Power	5V DC power supply or computer USB to take power
Work axis stepper	Received the highest 5-axis independent driving
Drive	Pulse + direction + enable signal.
Weight	About 200 grams.

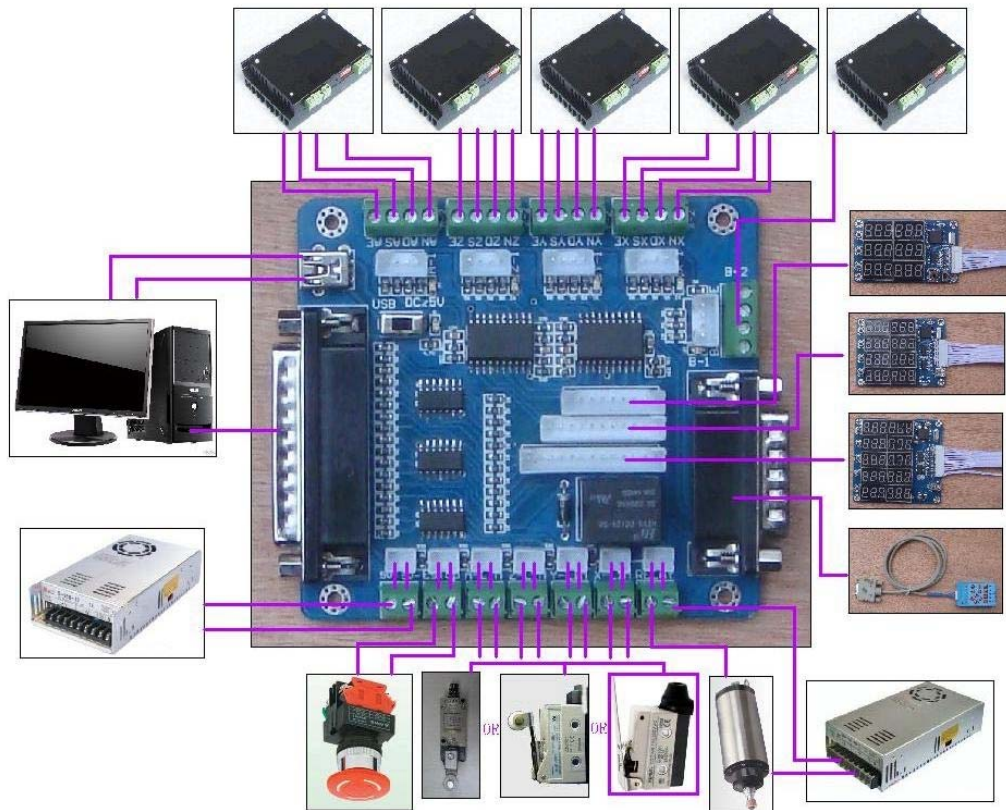
## Interface definition table:



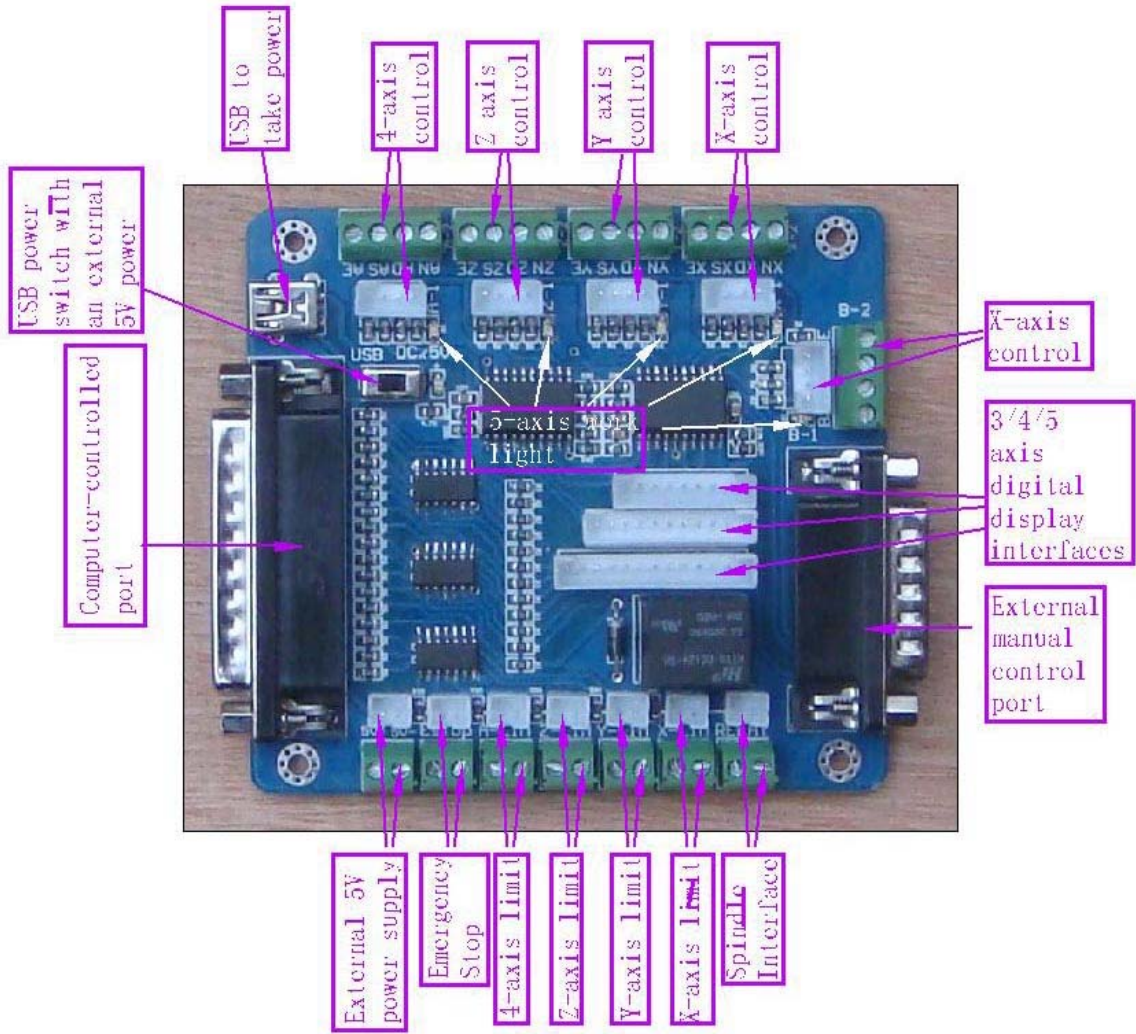
### Waveform and timing



### Power output interface function



Interface, detailed drawing marked





- In the test machine, note the following before
- 1, note that using the 5V power supply
  - 2, determine the stepper driver works (Model0)
  - 3, to determine the drive wiring step

## Second, "the definition of the pin

1 "is defined as parallel control:

PIN9	PIN1	PIN2	PIN14	PIN16	PIN3	PIN7	PIN8	PIN6	PIN5	PIN4	PIN17
Spindle motor	enable	X step	X dir	Y step	Y dir	Z step	Z dir	A step	A dir	B step	B dir

2 "hand control is defined as follows 1 ~ PIN15 computer-15P interfaces and benchmarks within the Digital ID)

P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15
B step	B dir	A dir	Z step	Y step	X step	X dir	enabled	5V/V DD	5V/G ND	A step	Z dir	Y dir	enabled	enabled

3 "The limit is defined as 1 to 5

X -Limit	Y- Limit	Z- Limit	A- Limit	急停
PLT-P10	PLT-P11	PLT-P12	PLT-P13	PLT-P15

5V 1A power supply, please take more than switching power supplies, power input received indicated on the map interface

Spindle motor control is controlled via the parallel port PIN1. Spindle motor voltage must comply with the supply voltage range.

Three "MACH software to use

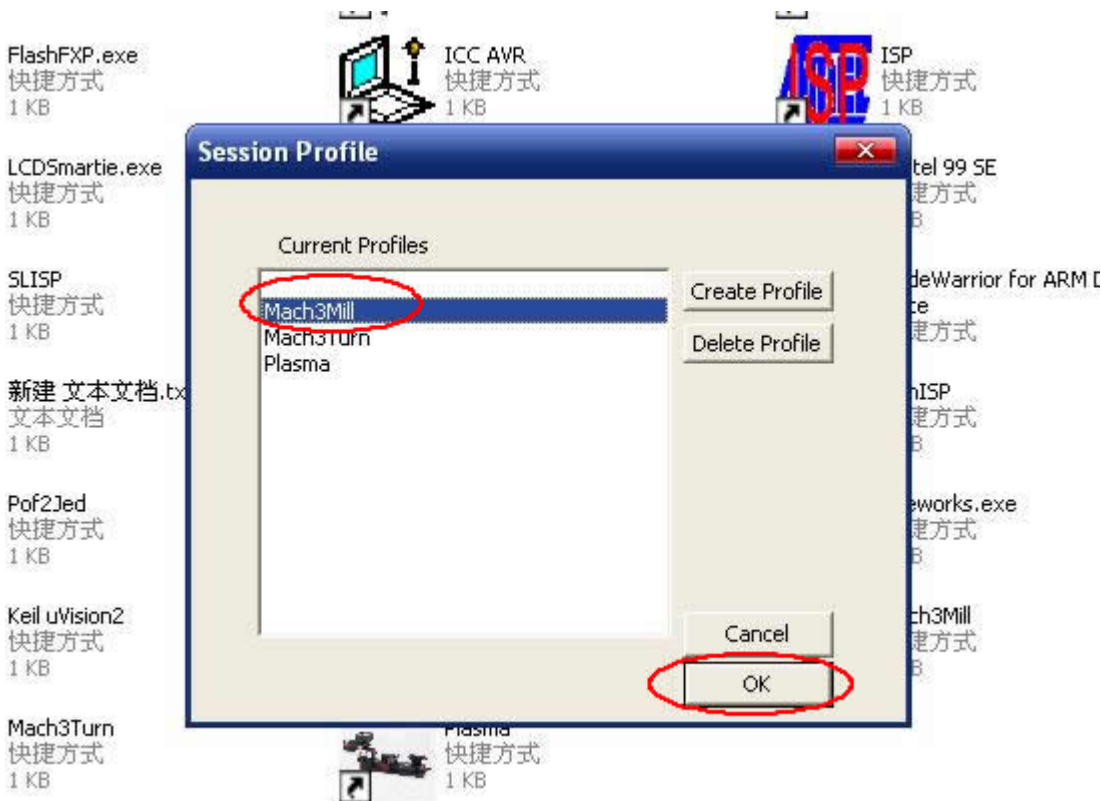


Figure 1

Figure 1, open the MACH3 software, then select OK now mach3MILL

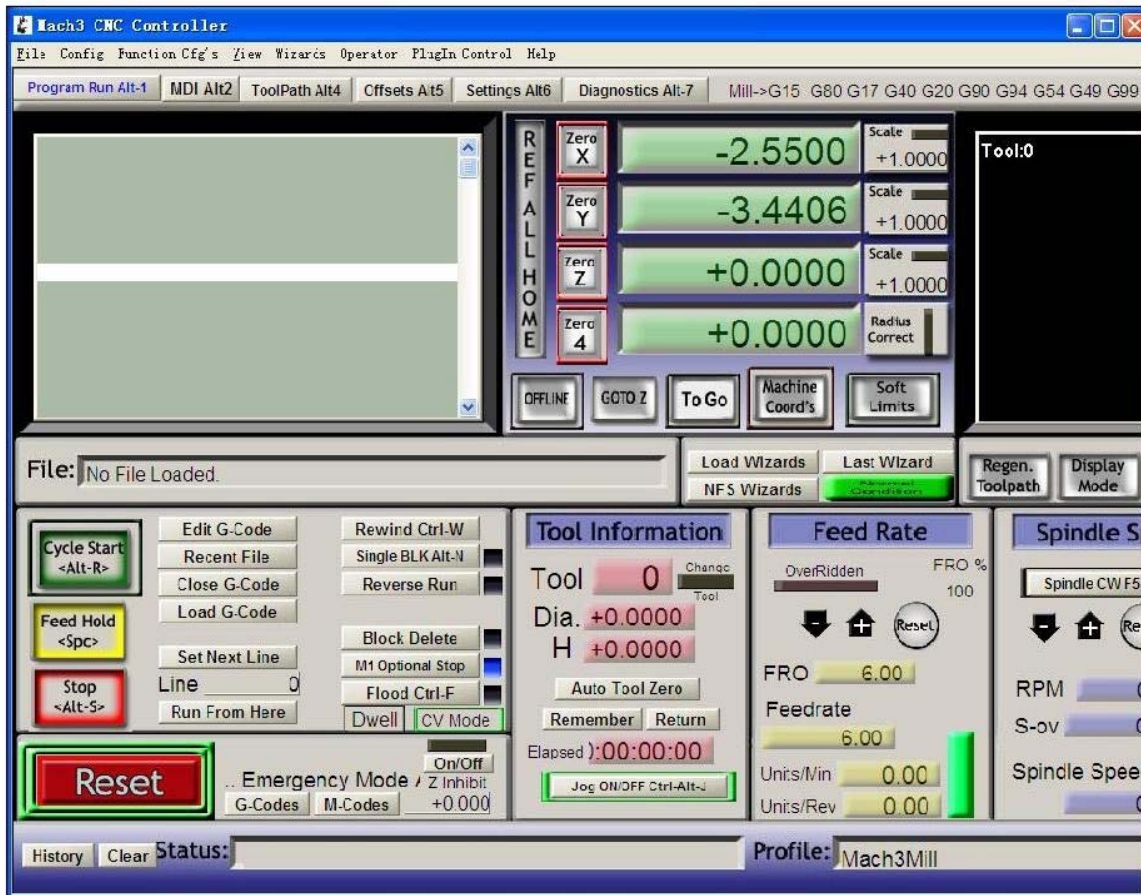


Figure 2

MACH3 open the interface shown in Figure 2, the action of commonly used button above, here we configure the MACH software.

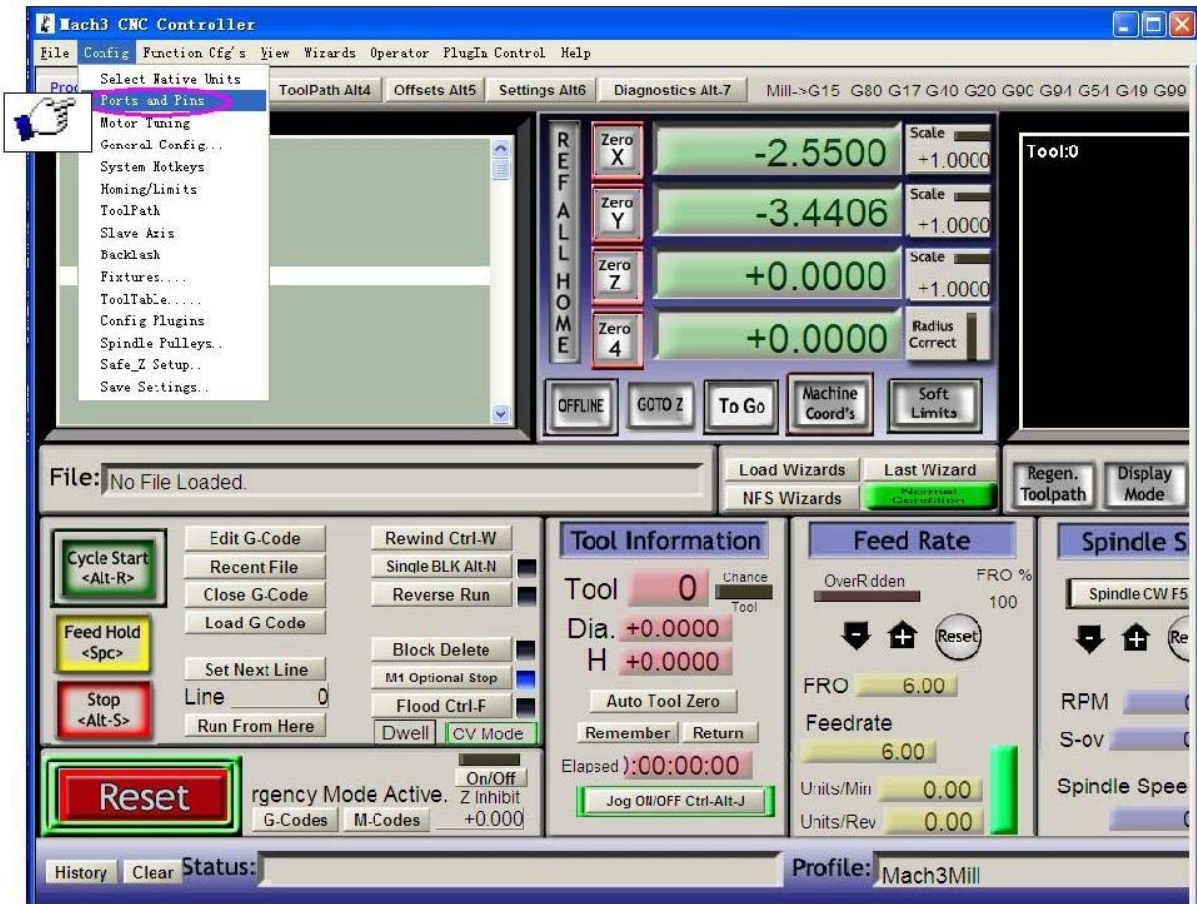


Figure 3

Figure 3, open the config menu PORT & PIN menu

Figure 4



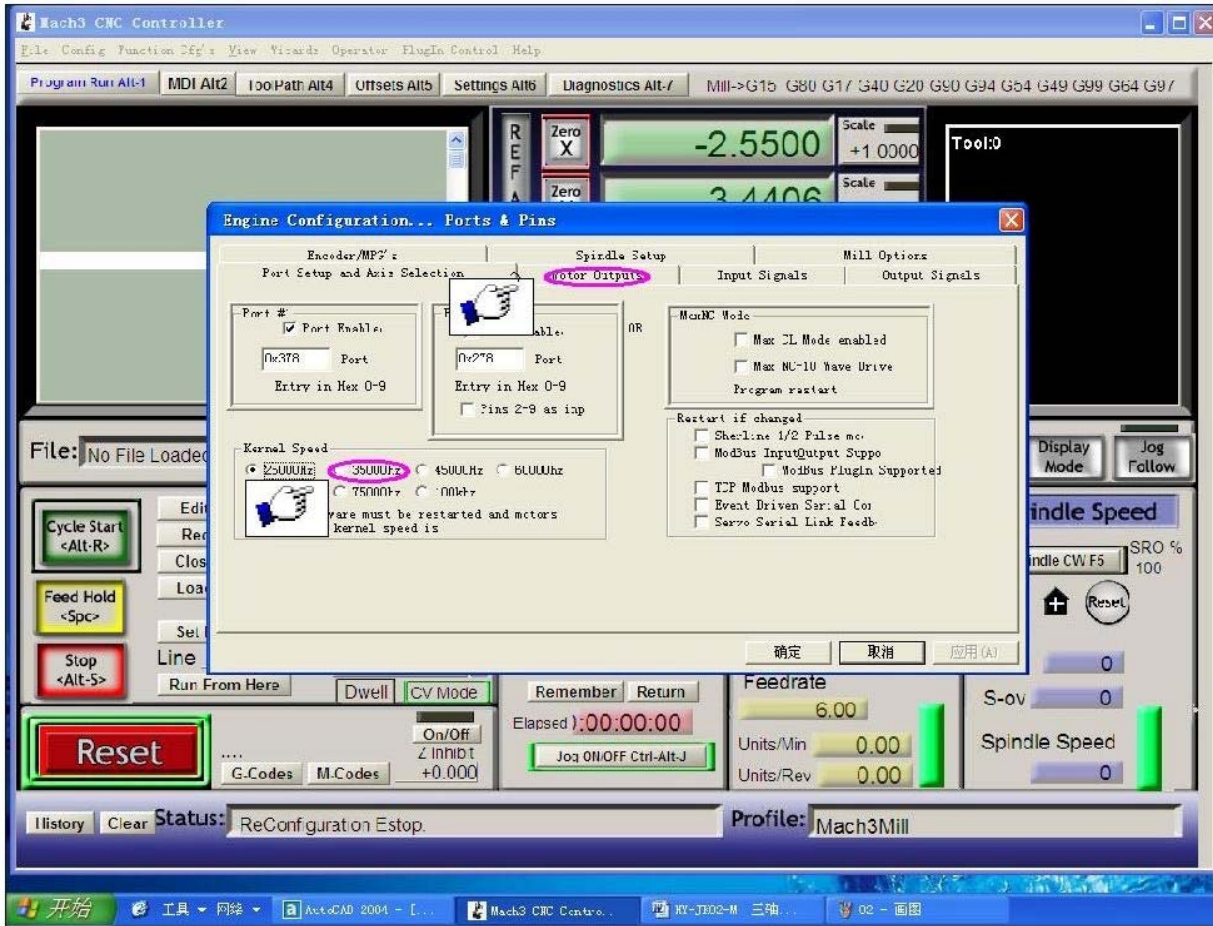


Figure 4

Place on lap 1 setting can set the fundamental frequency, the parameters of the motor rotation speed. After 2 laps to set the place selected, the configuration pin definitions, as shown in Figure 5

Engine Configuration... Ports & Pins

Encoder/MPG's		Spindle Setup		Mill Options			
Port Setup and Axis Selection		Motor Outputs		Input Signals		Output Signals	
Signal	Enabled	Step Pin#	Dir Pin#	Dir Low...	Step Lo...	Step Port	Dir Port
X Axis	<input checked="" type="checkbox"/>	2	14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
Y Axis	<input checked="" type="checkbox"/>	3	16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
Z Axis	<input checked="" type="checkbox"/>	7	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
A Axis	<input checked="" type="checkbox"/>	6	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
B Axis	<input checked="" type="checkbox"/>	4	17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1
C Axis	<input checked="" type="checkbox"/>	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
Spindle	<input checked="" type="checkbox"/>	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0

确定 取消 应用(A)

Figure 5

According to the definition of the board parallel port, follow the map on the circle to indicate the definition of modification of the software settings

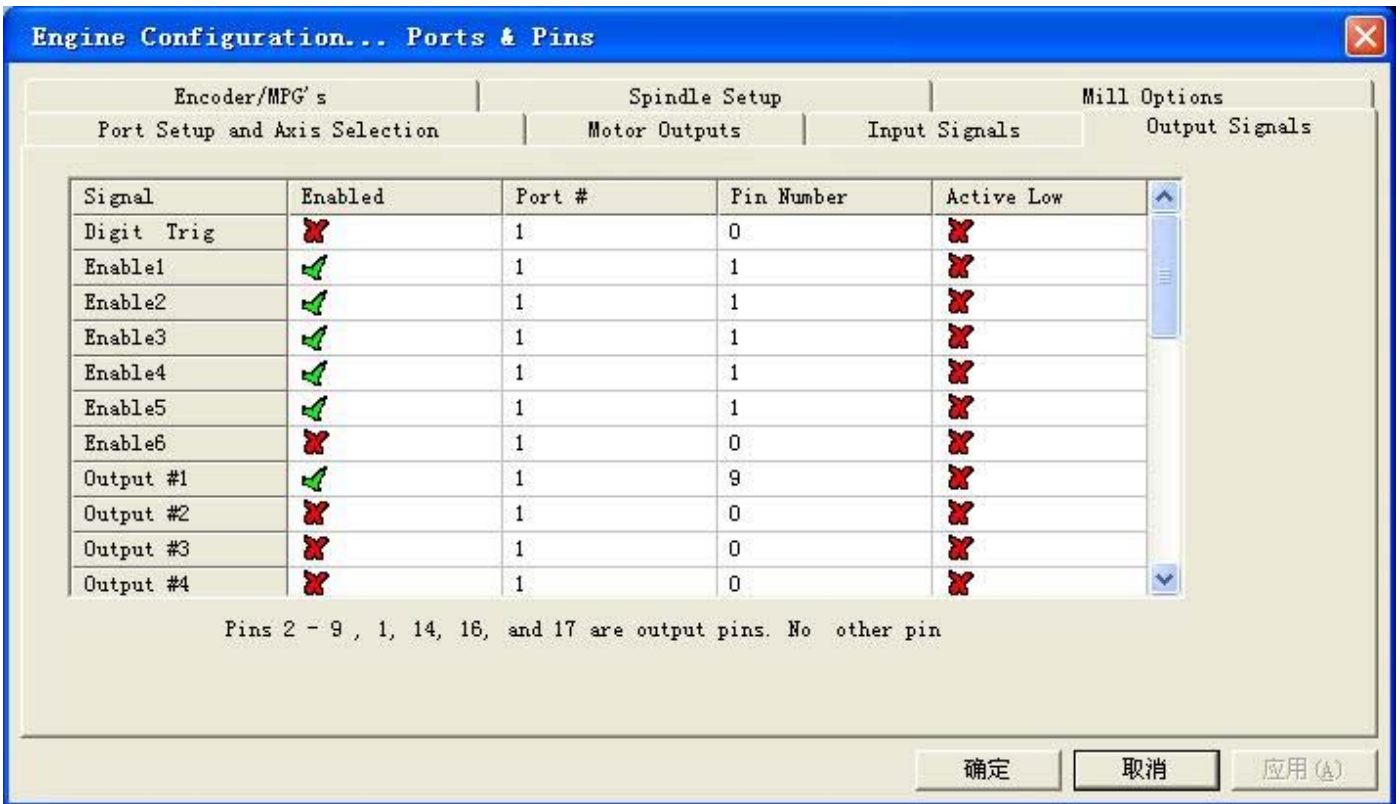
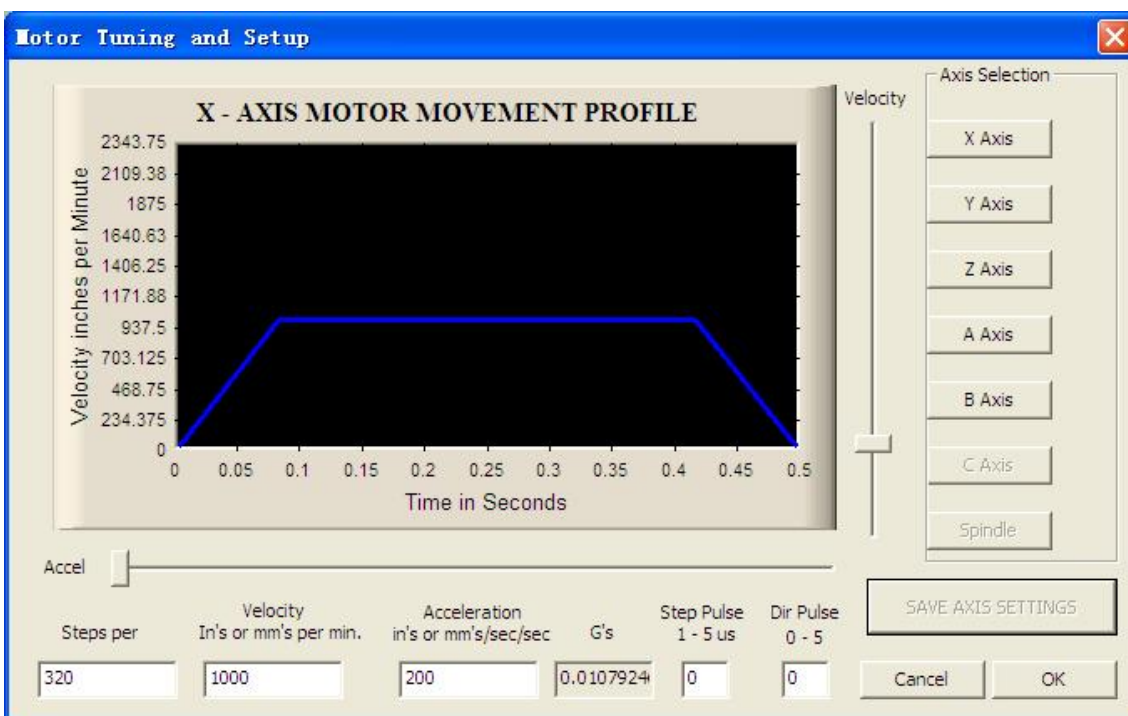


Figure 6

Then select the output signals in part, as shown in Figure 6, according to insiders of the settings, set the corresponding entry



Motor reference set parameters, MACH3 software manual calculation in detail and description



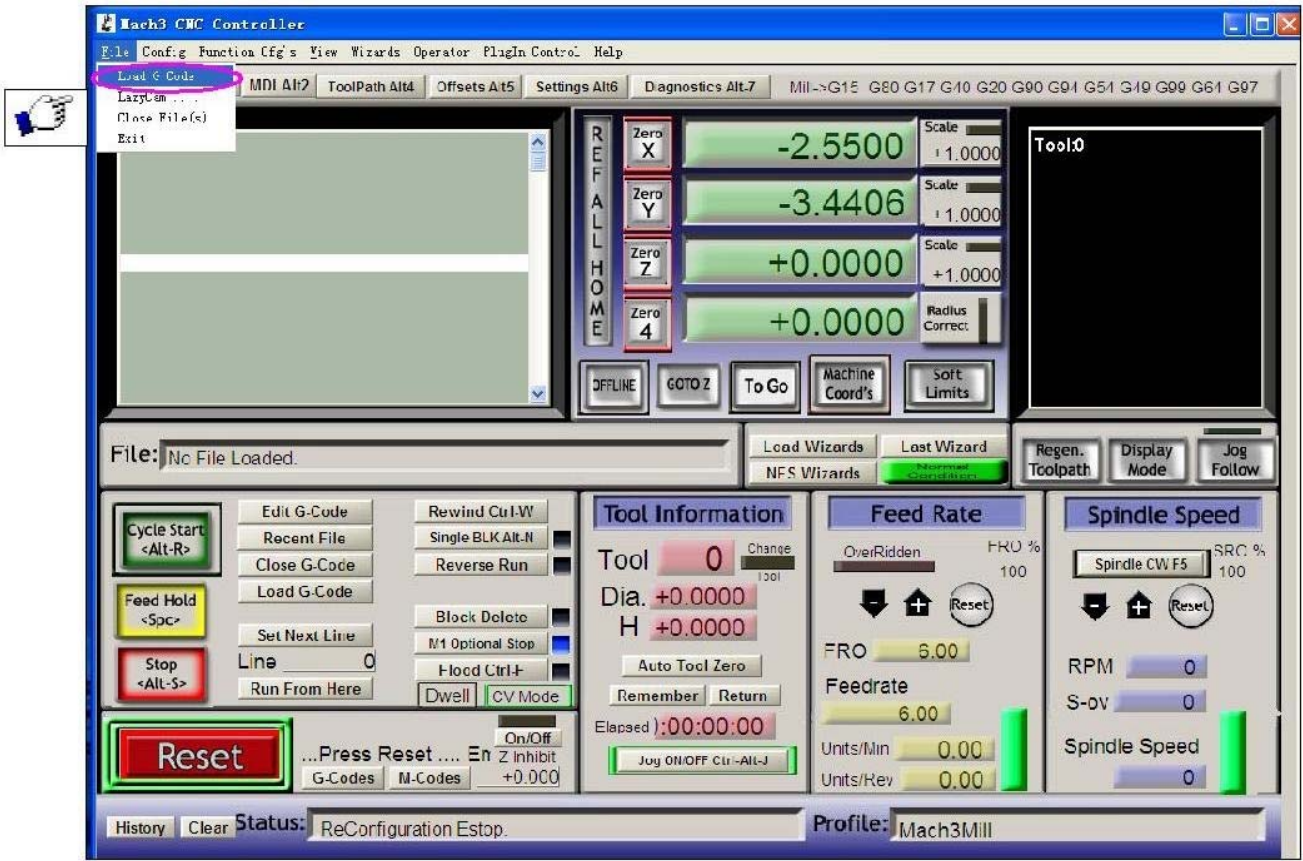


Figure 7

Ok all set, you can open the need to run the G code, as shown in Figure 7

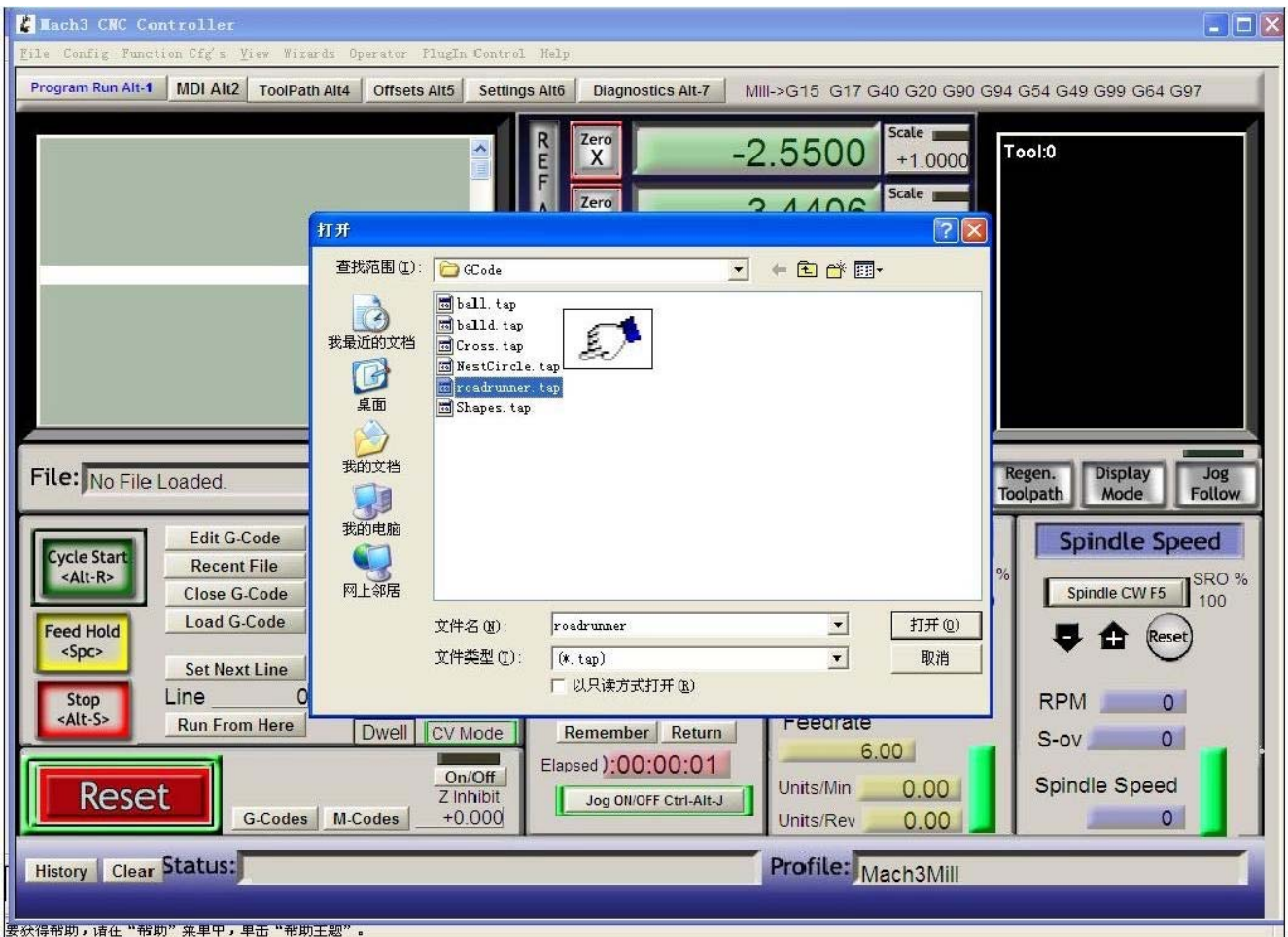


Figure 8

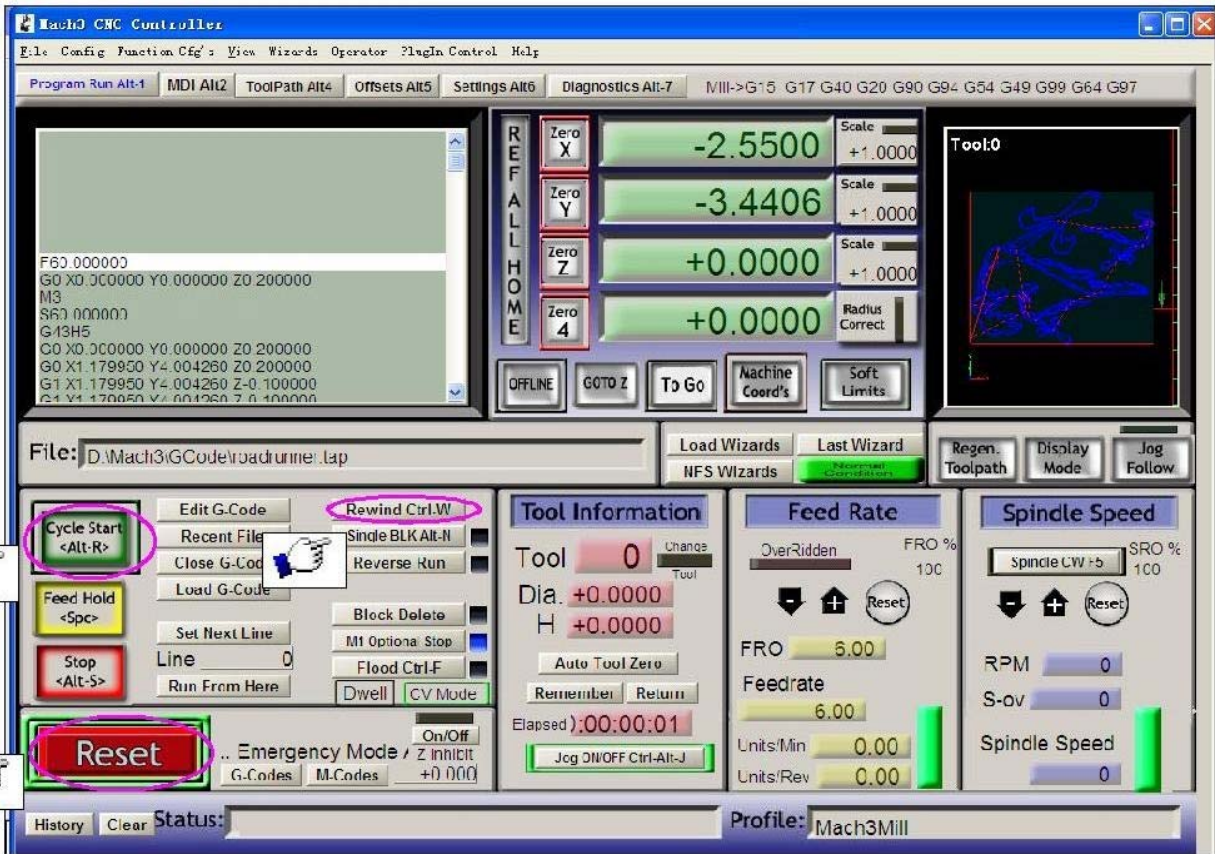


Figure 9

Open the G code, RESET can be seen flashing red, you can use mouse click the RESET make it stop flashing, then you can press the ring 2 position CYCLESTART run.