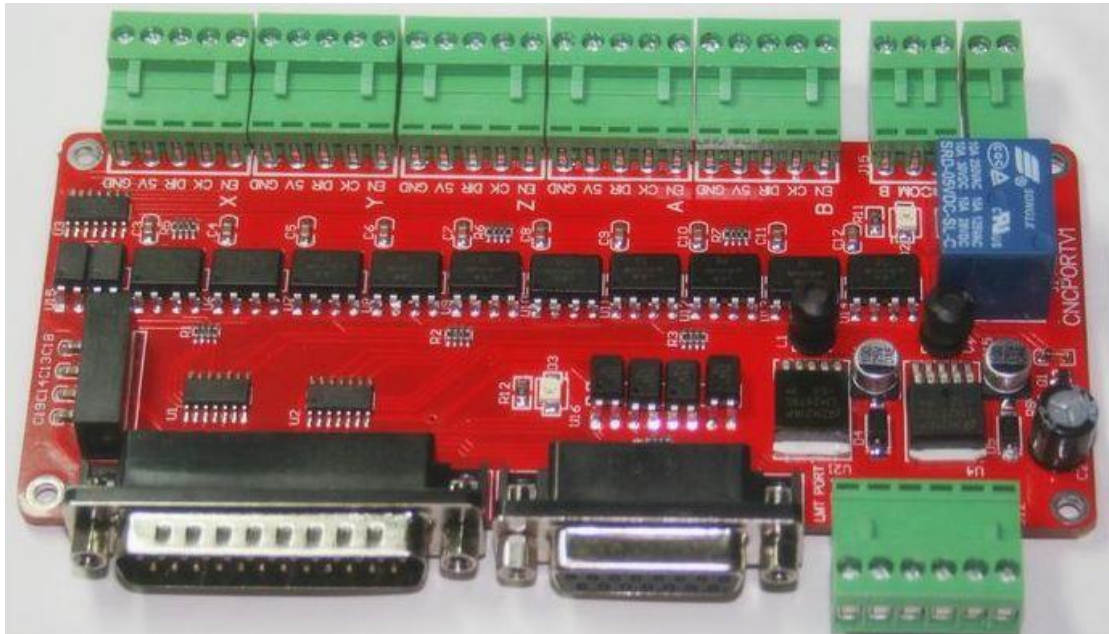




CNC MACH breakout board user manual V8 type



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Catalogue

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1、 Brief introduction :

- 1) It can connect with 5 stepper motor driver to control 5pcs stepper motor,and board with high speed optocoupler be safe work for controller
- 2) It is with 4 wire optocoupler limit port and can connect with normal mechanical switch,PNP 3 wires proximity switch and 2 wires proximity switch
- 3) with relay port can control the spindle turn on/off
- 4) the input voltage is 12-36VDC
- 5) it support mach3 and Ncstudio card connect
- 6)it can output 12VDC power supply

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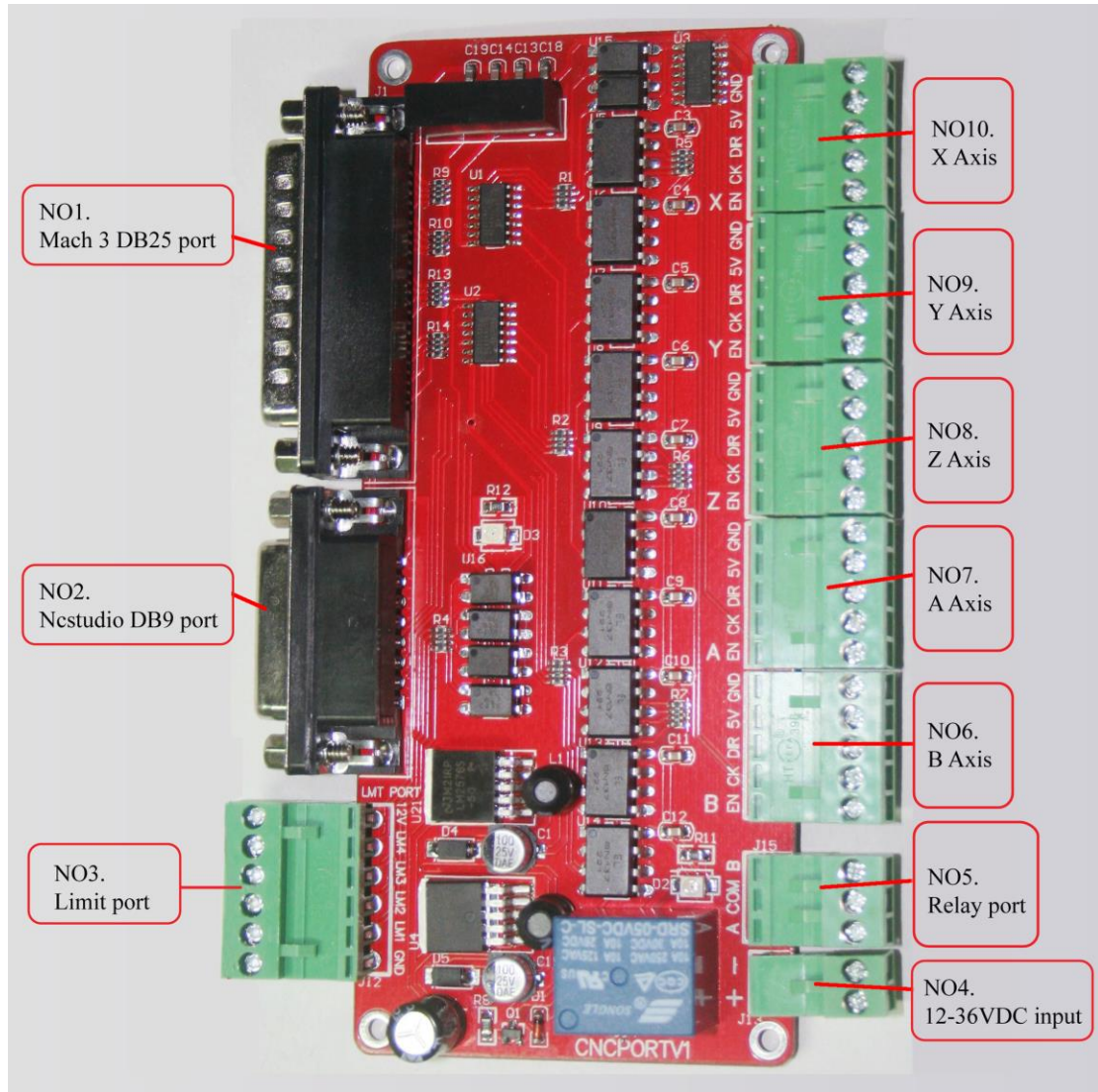
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2、 Drawing:



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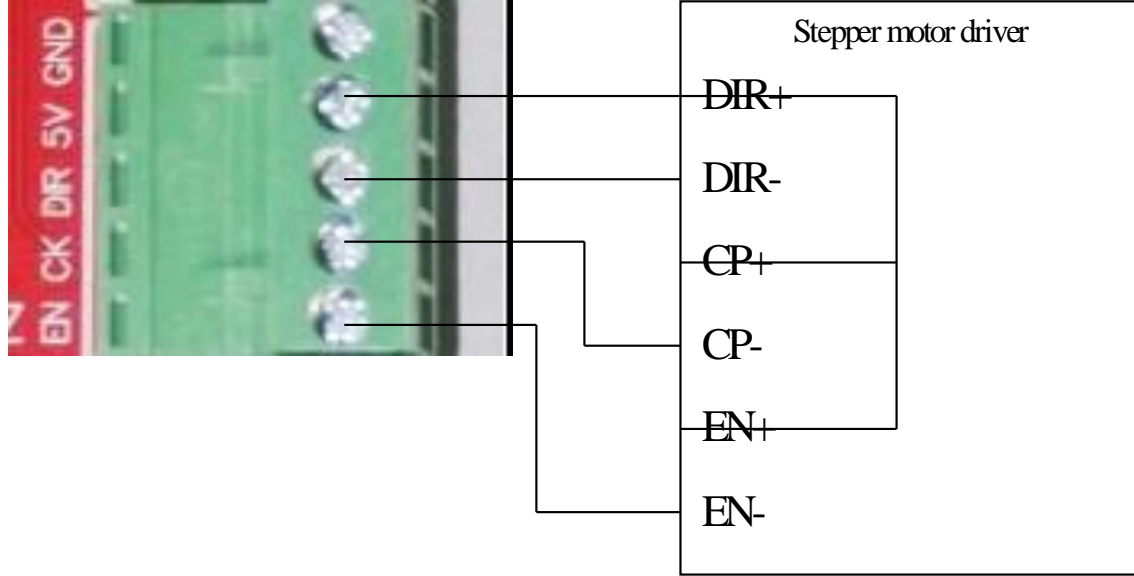
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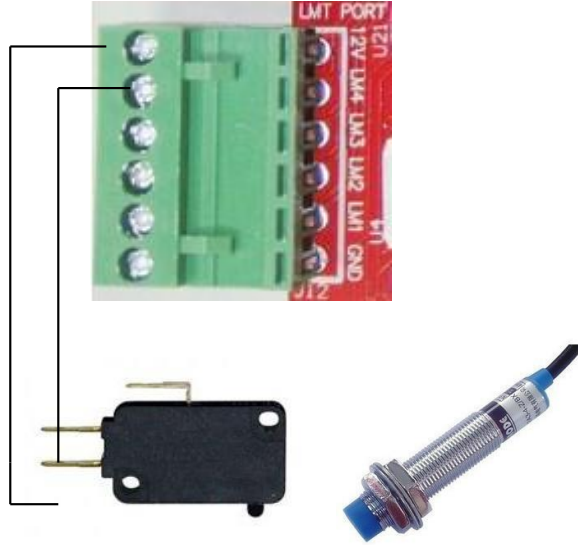
3、 Wiring:

3.1、 X、 Y、 Z、 A、 B axis wiring



3.2、 Limit and E-stop wiring

Breakout board's LMI-LM4 according to the DB25 port P10-P13



2 wire proximity switch same as mechanical limit switch connect

3 wire PNP wiring: VCC connect 12V, control pin connect LMT-4, and GND connect GND

3.3、 Relay port

The relay port only can simple turn on/off the spindle, A and COM or B and COM as a switch as NO/NC

3.4、 DB25 pins definition

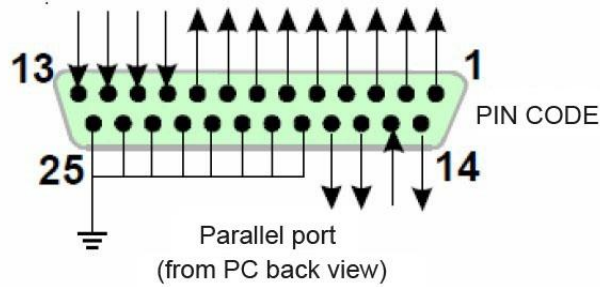


Fig 5.1

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PIN1	PIN2	PIN3	PIN4	PIN5	PIN6	PIN7	PIN8	PIN9	PIN10
All axis EN	X axis PU	X axis DIR	Y axis PU	Y axis DIR	Z axis PU	Z axis DIR	A axis PU	A axis DIR	Limit 1
PIN11	PIN12	PIN13	PIN16	PIN17	PIN14	PIN18~25			
Limit 2	Limit 3	E-STOP	B axis PU	B axis DIR	Relay port	GND			

6、Mach3 software setting and usage:

6.1、MACH3 open:

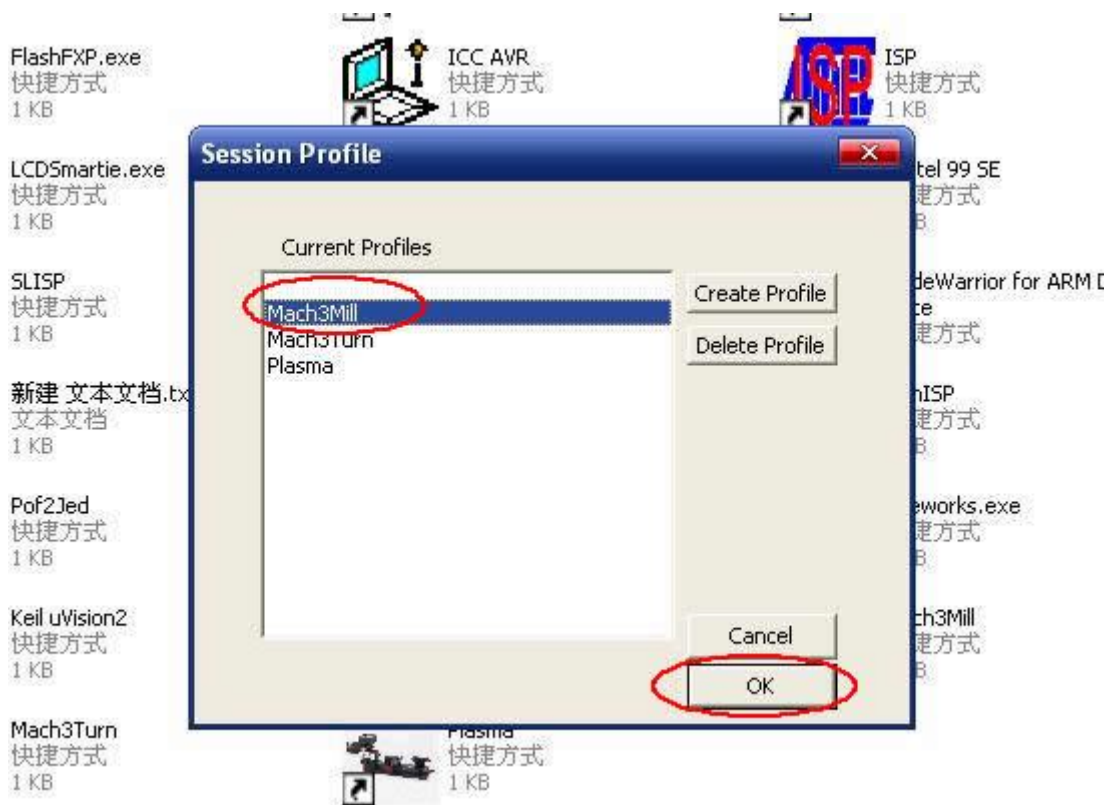



图1

When finish the install of MACH3,the desktop will be three artwork,click  as below:

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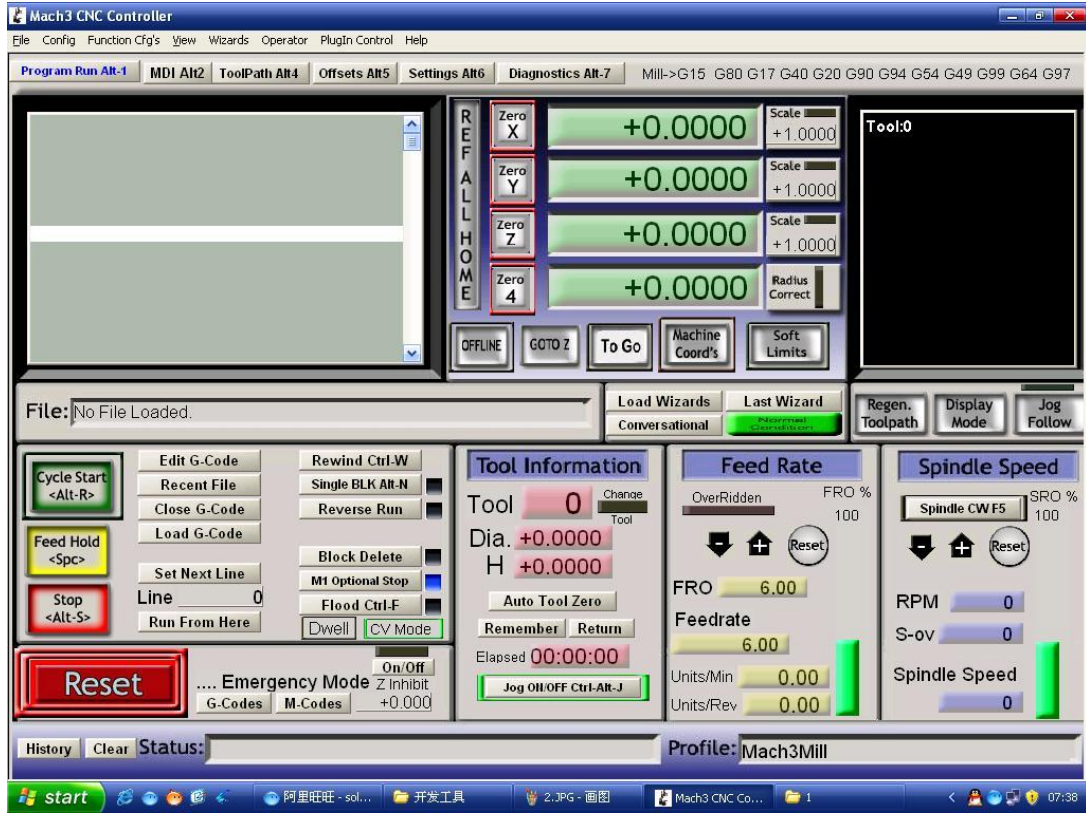


Fig 2 MACH3 opened interface

6.2、 Setting:

See Fig3, Open the PORT & PINS menu of config menu

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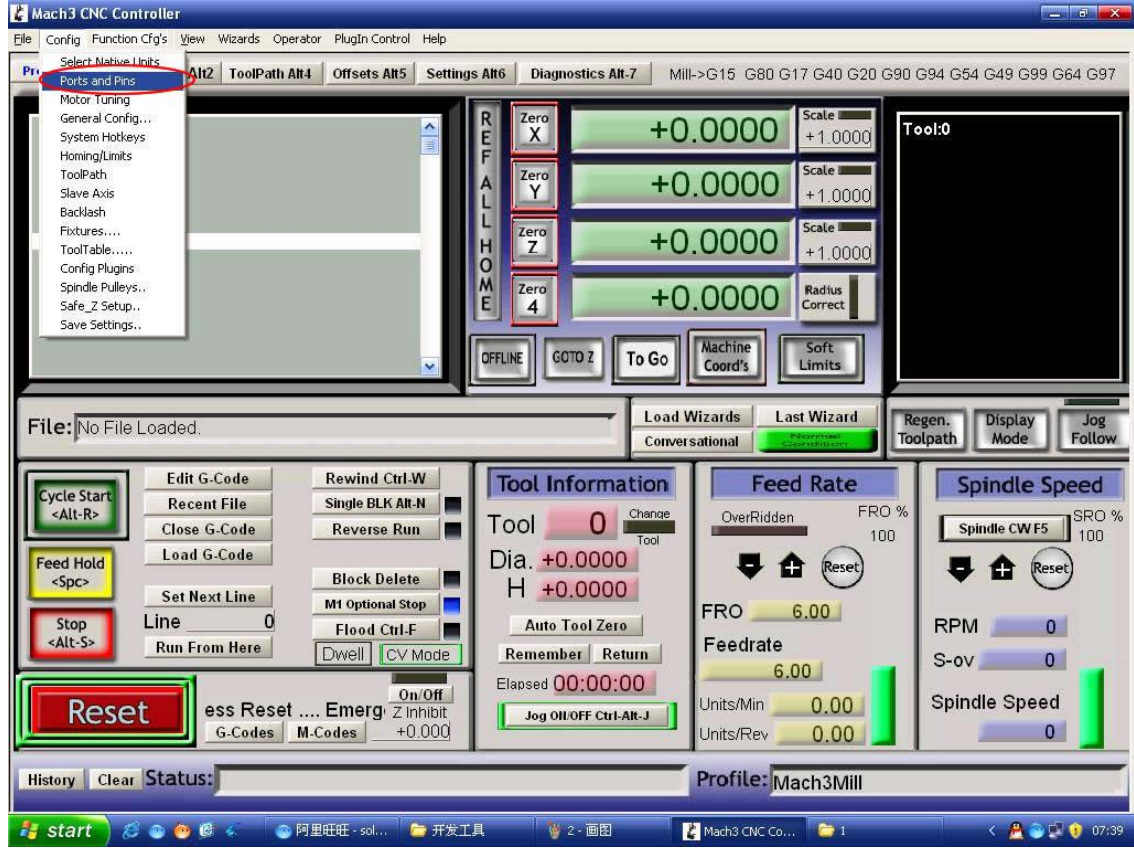


Fig 3

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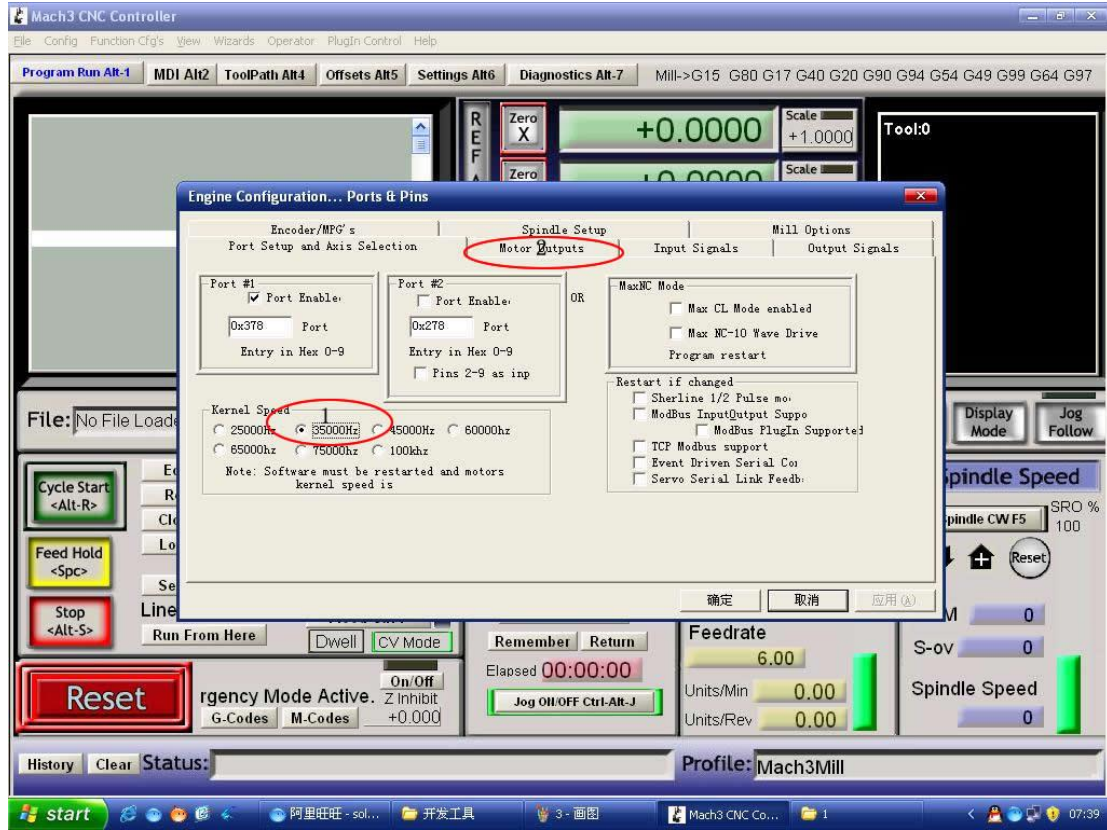
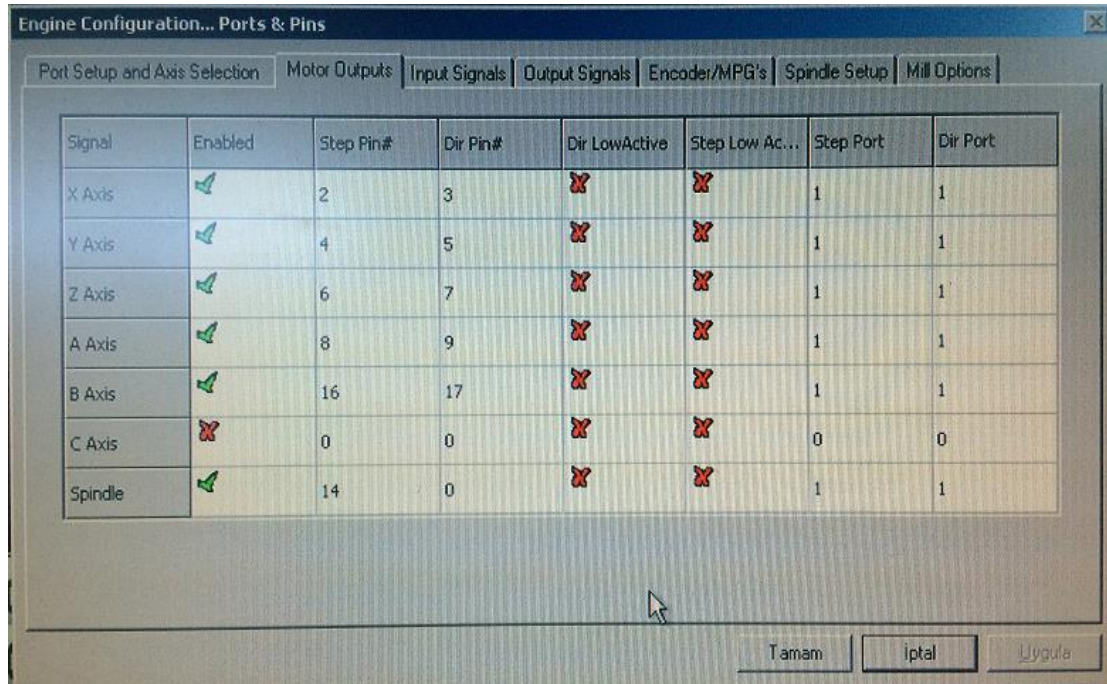


Fig 4

Set up the circle 1 of Fig4 for the frequency which influence the stepper motor speed, then set up the circle 2 as below Fig 5 for PIN

Note: for spindle open/close -> spindle enable, step pin 14, step low RED, dir low RED step port 1, dir port 1



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Fig 5

6.3. Limit port setting:

Click “input signal” to setting as below Fig 7

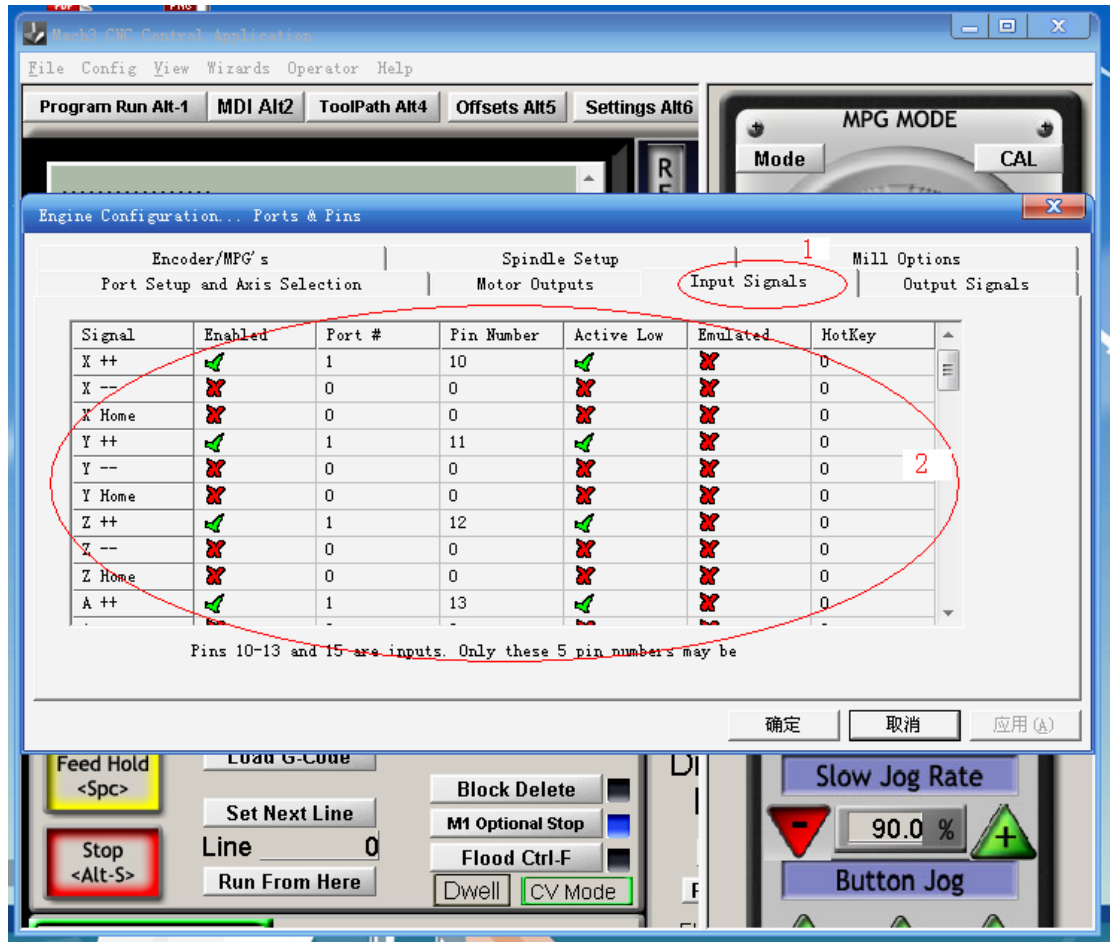


Fig 7,

Note: for change limit switches to home switches for REFERENCE instead of LIMIT please make X, Y, Z, A, home green then Port # 1, Pin number 10,11,12,13, Active Low is green at the same lines. instead of FIG7

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6.3、G-code run:

Mach3 software itself with test G-code as below Fig8

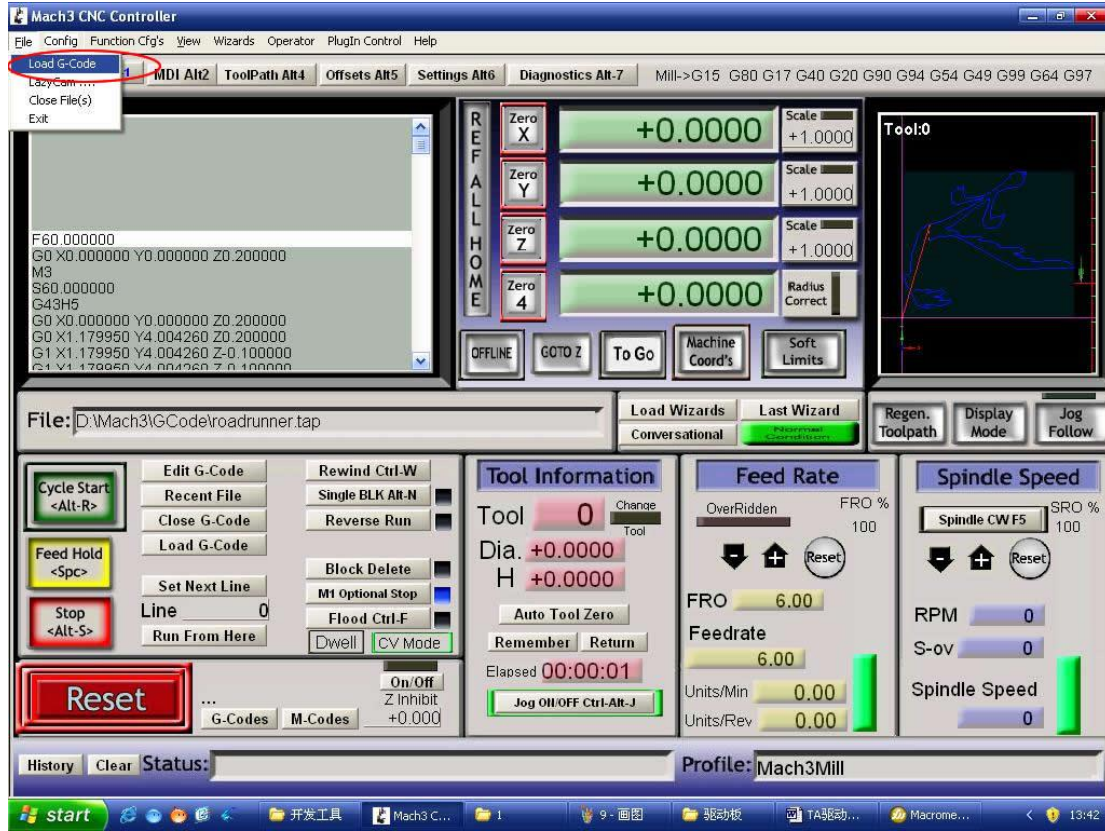


Fig 8

Find your G code,then open as Fig 9:

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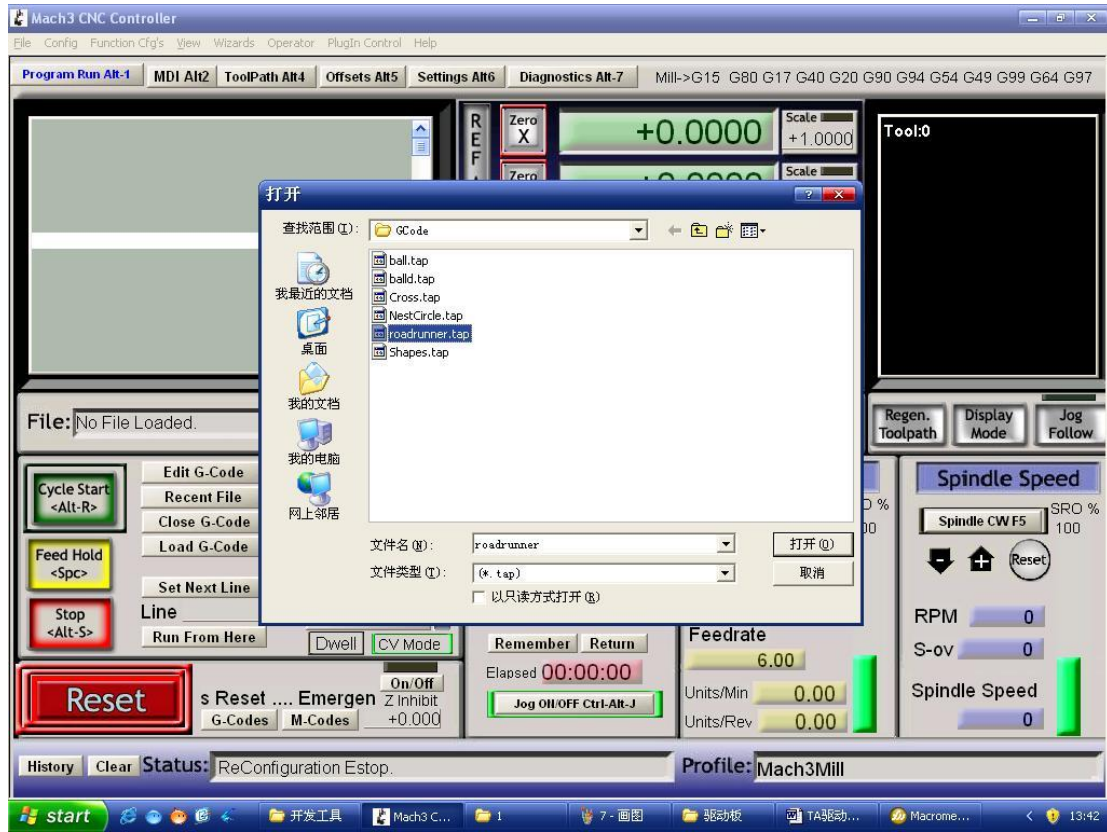
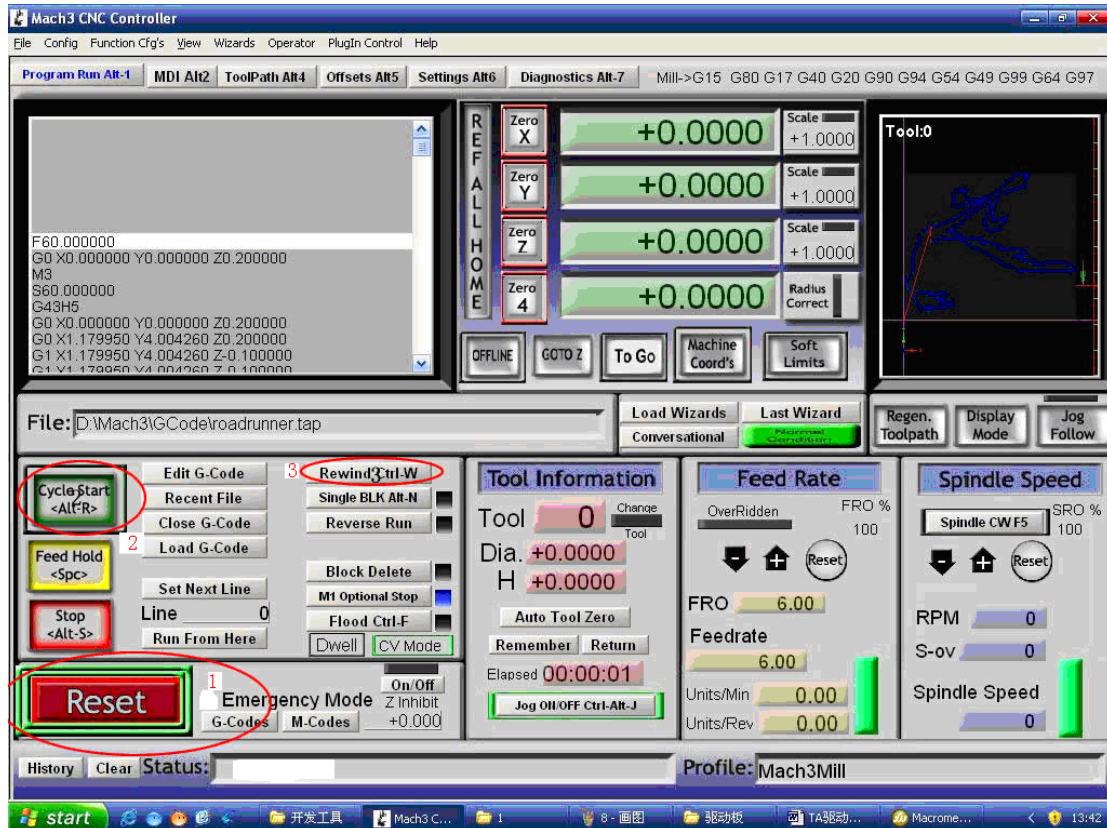


Fig 9



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Fig 10

You will see "RESET" flicker after open the G code,you can click it to stop flicker,then run the circle2 "CYCLESTART"

in addition if you need manual control,you can press the TAB of keyboard,the manual control interface as below Fig 11

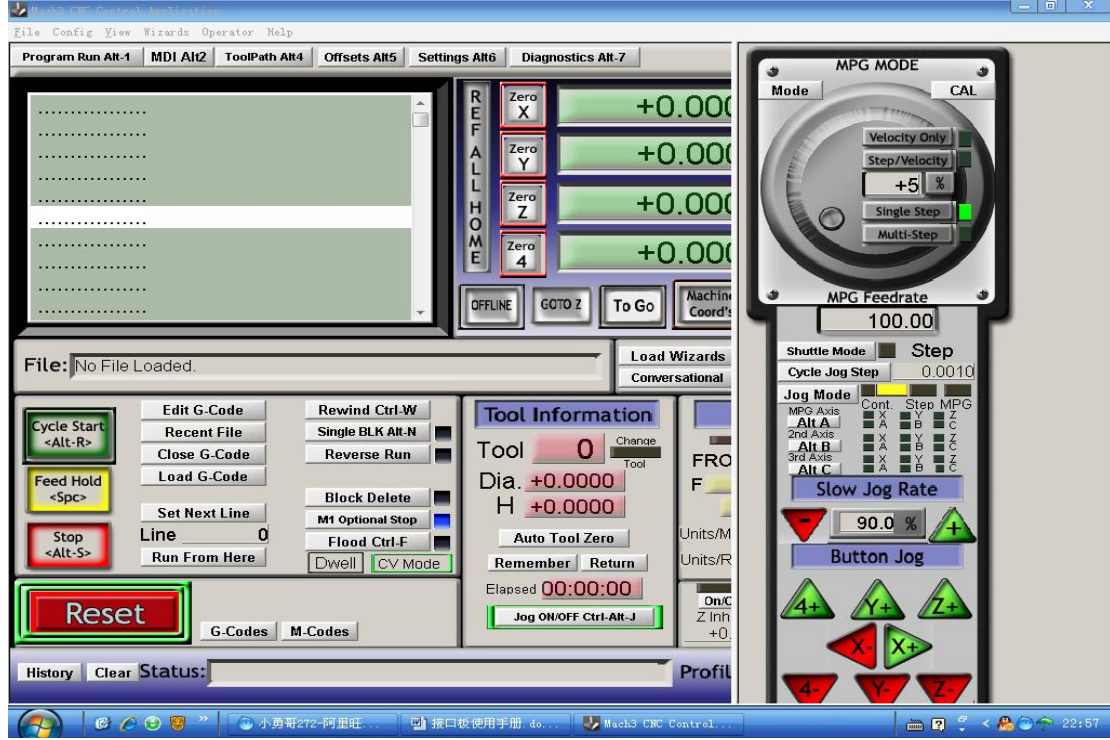


Fig 11

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