

Vitkovets CNC

Комплектуючі системи ЧПУ

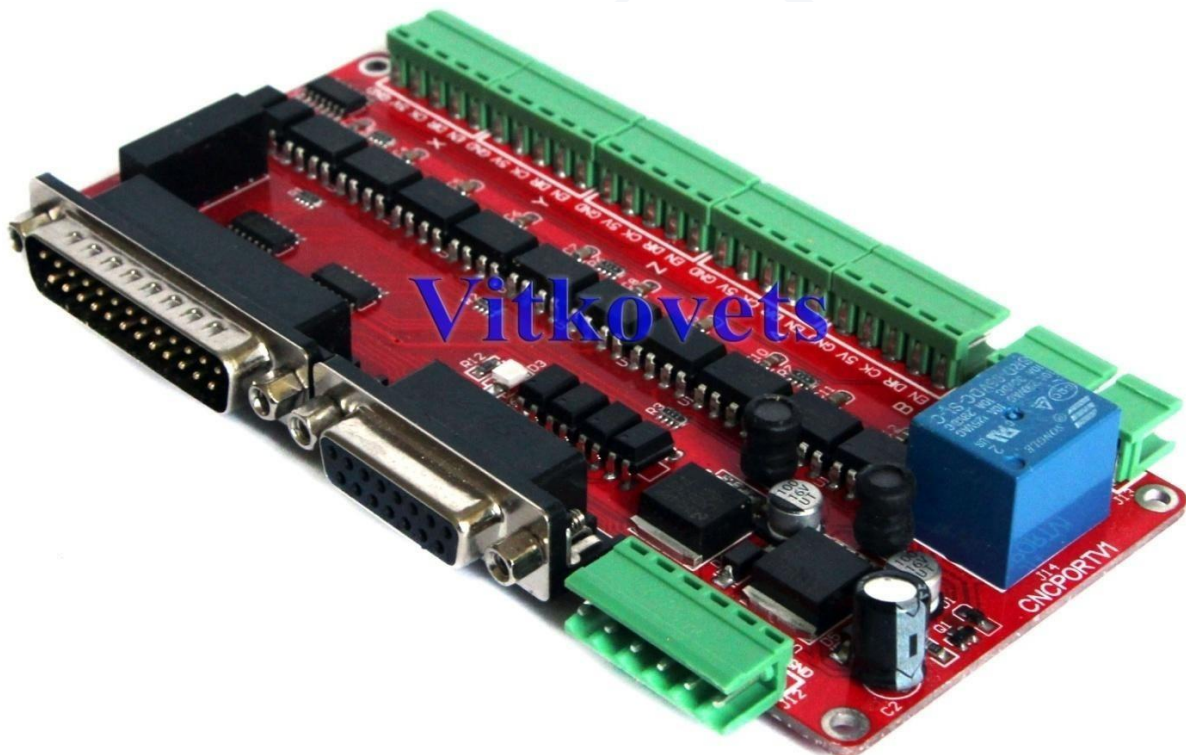
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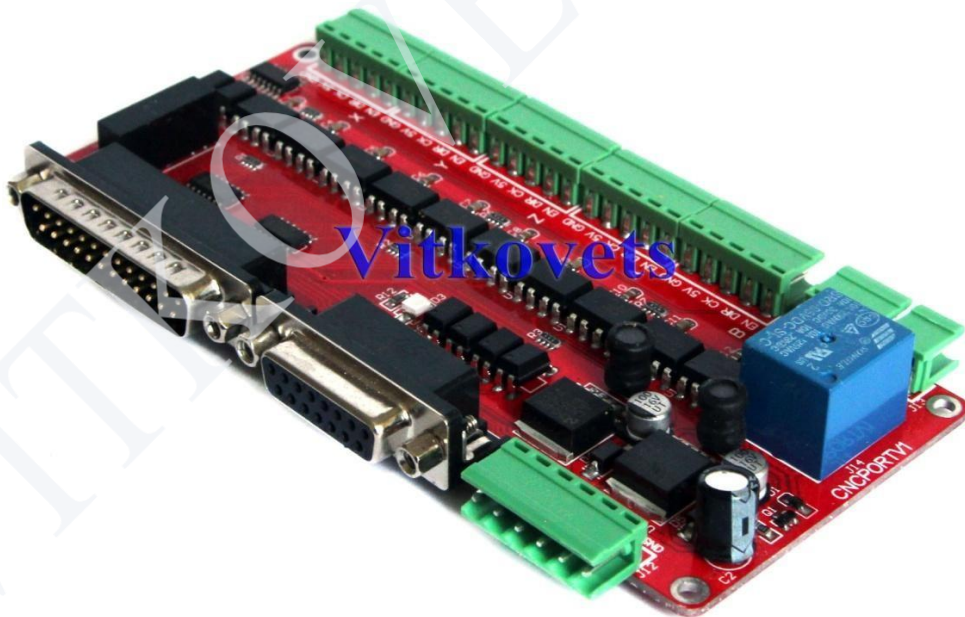
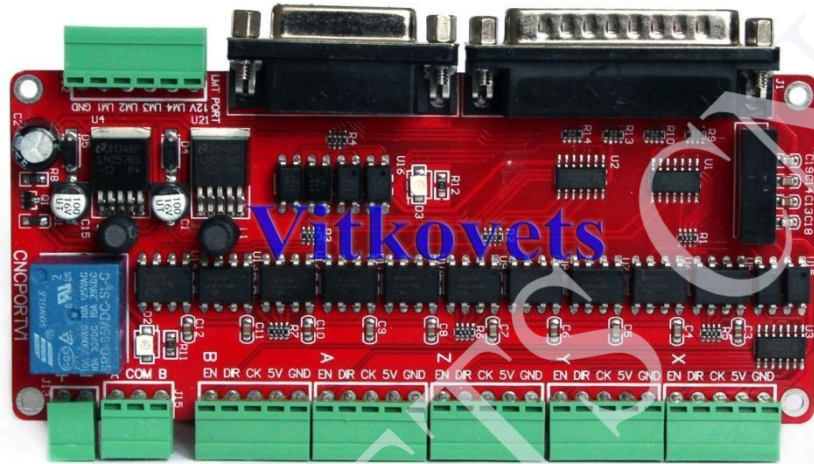
Тел: +380 (096)-665-71-06

+380 (098)-821-25-90

E-mail: cncprom@ukr.net

CNC MACH breakout board user manual





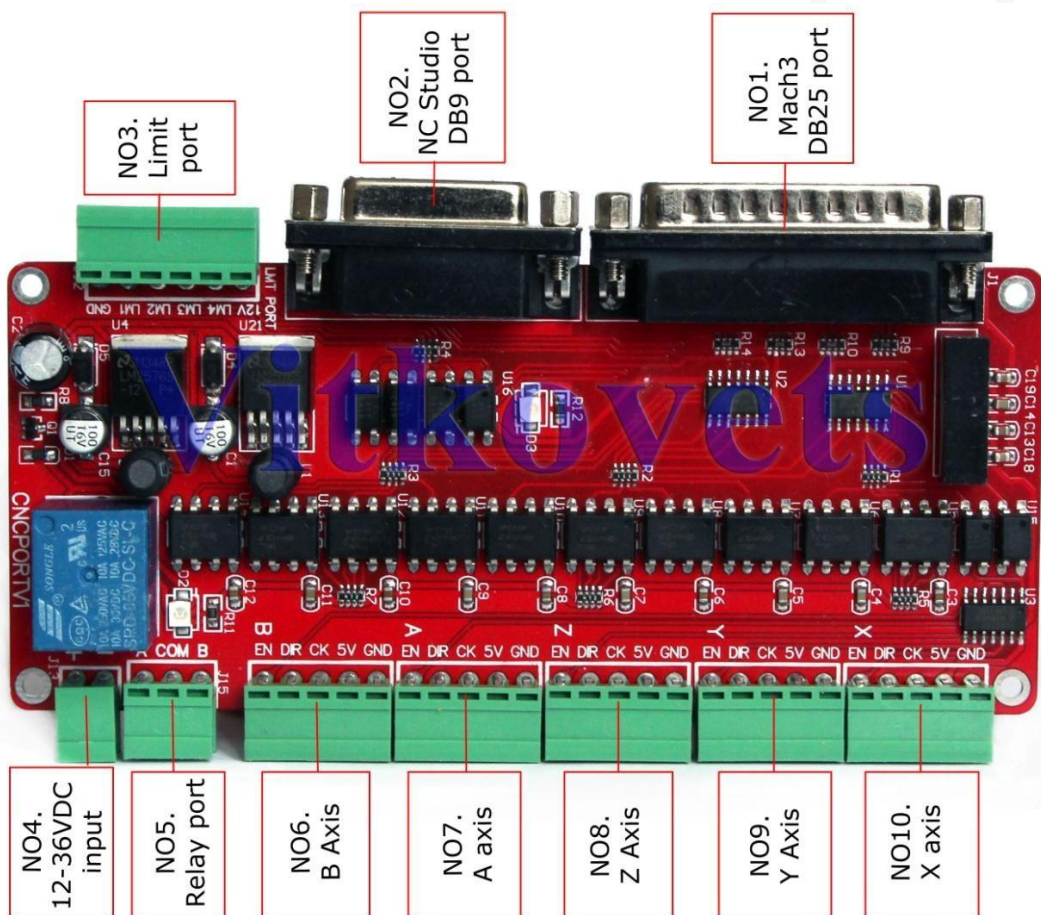
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1、 Brief introduction :

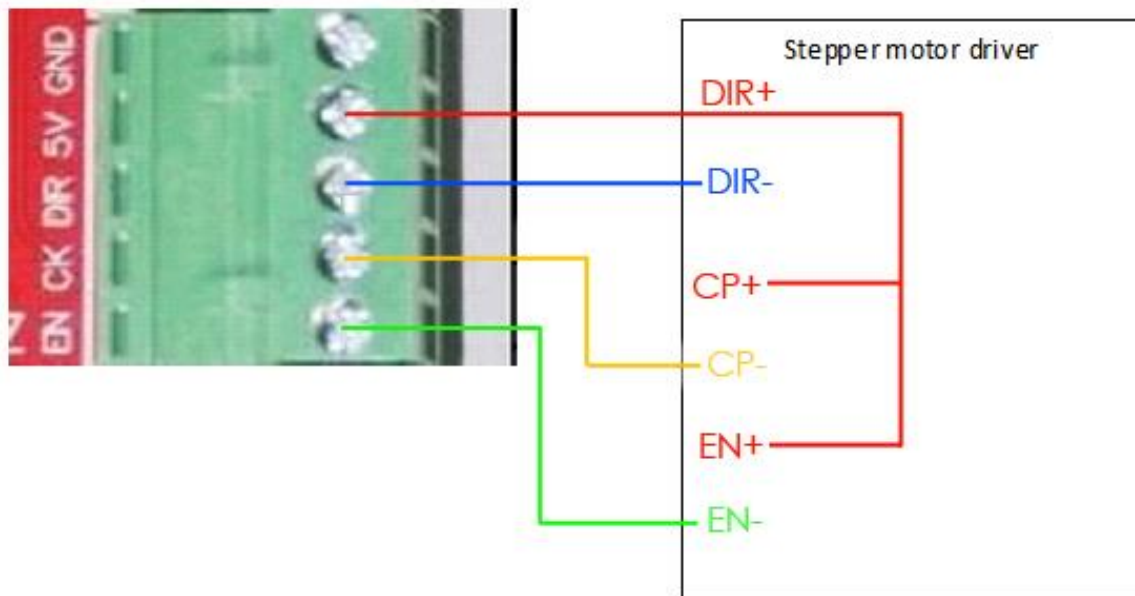
- 1) It can connect with 5 stepper motor driver to control 5pcs stepper motor, and board with high speed optocoupler be safe work for controller
- 2) It is with 4 wire optocoupler limit port and can connect with normal mechanical switch, PNP 3 wires proximity switch and 2 wires proximity switch
- 3) 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

2、 Drawing :



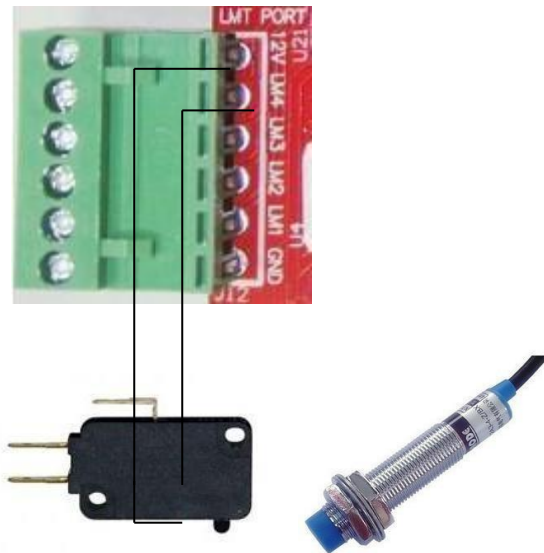
3、 Wiring :

、 X、 Y、 Z、 A、 B axis wiring



、 Limit and E-stop wiring

Breakout board's LM1-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 LM1-4,and GND connect GND

、 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

、 DB25 pins definition

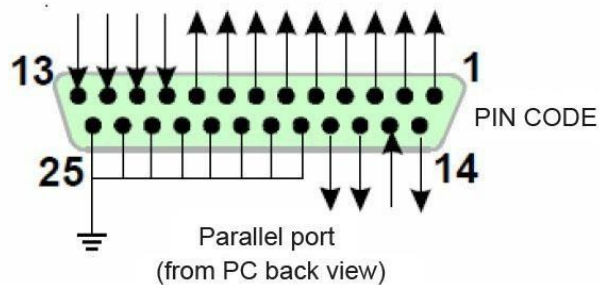


Fig 5.1

PIN1	PIN2	PIN3	PIN4	PIN5	PIN6	PIN7	PIN8	PIN9	PIN10
All axis EN	X axis STEP	X axis DIR	Y axis STEP	Y axis DIR	Z axis STEP	Z axis DIR	A axis STEP	A axis DIR	Limit 1
PIN11	PIN12	PIN13	PIN16	PIN17	PIN14	PIN18~25			
Limit 2	Limit 3	Limit 4	B axis STEP	B axis DIR	Relay port	GND			

6、Mach3 software setting and usage :

、MACH3 open :

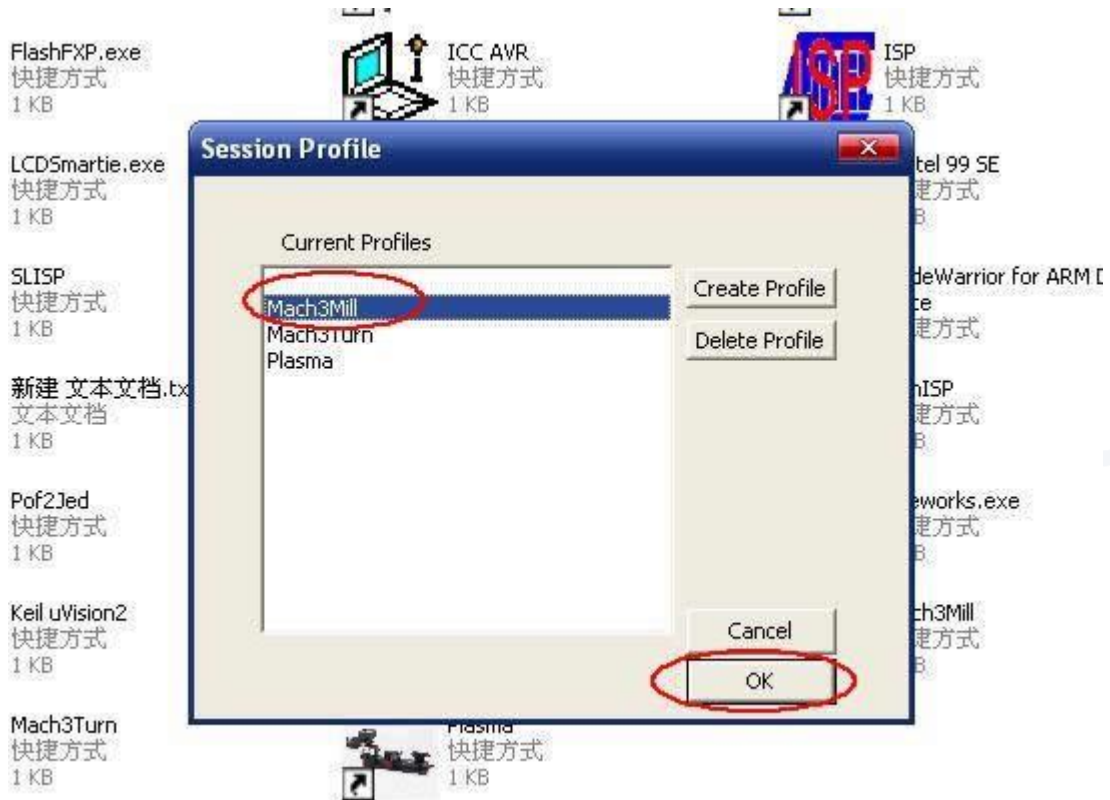



Fig 1



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

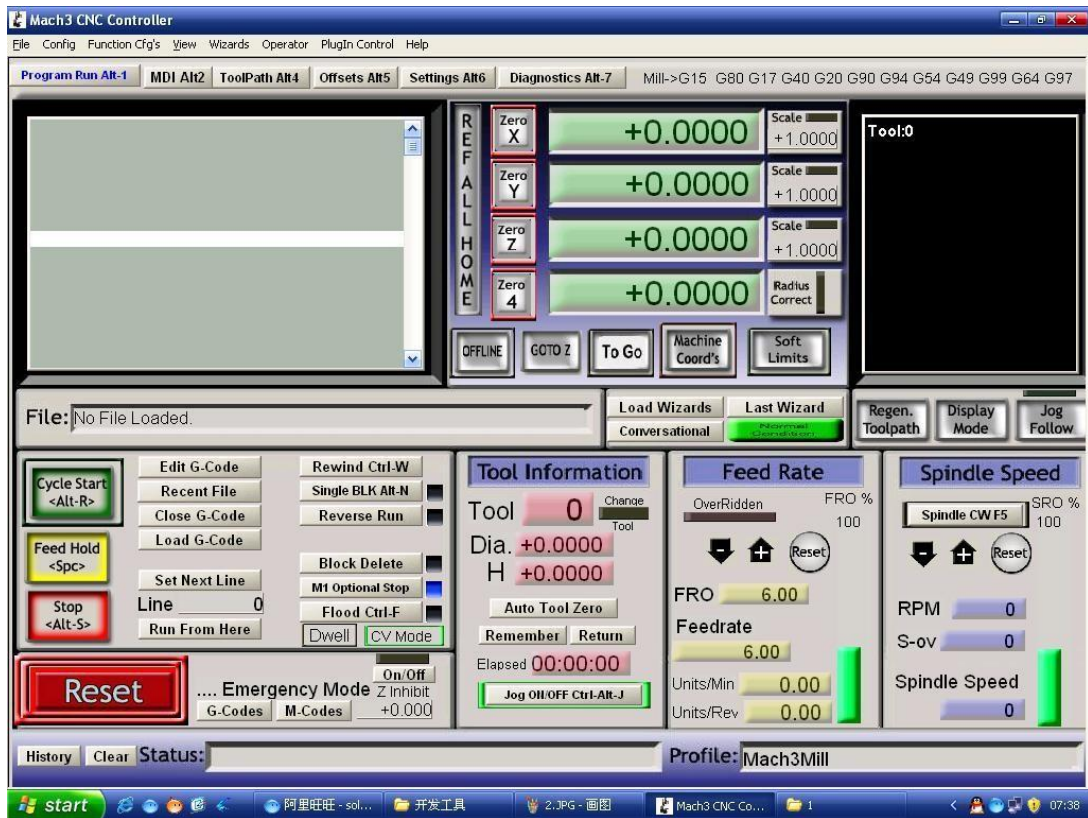


Fig 2 MACH3 opened interface

、 Setting :

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

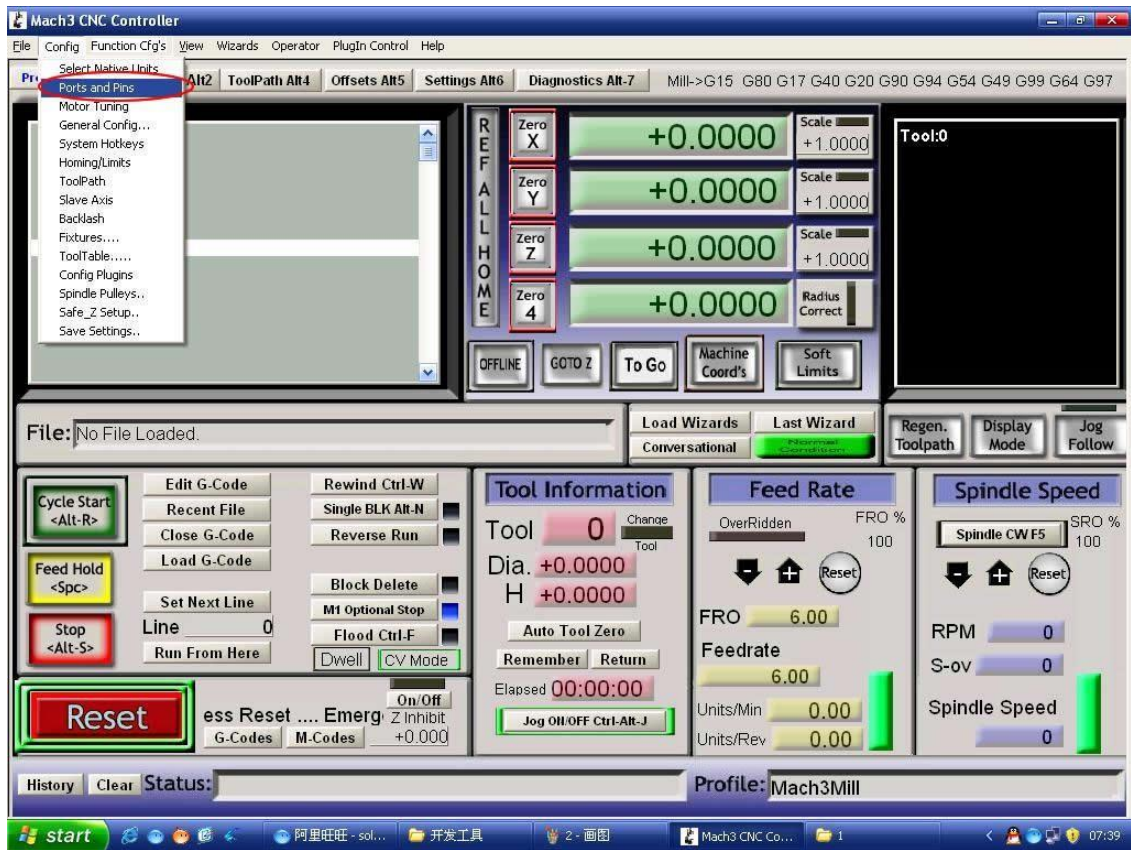


Fig 3

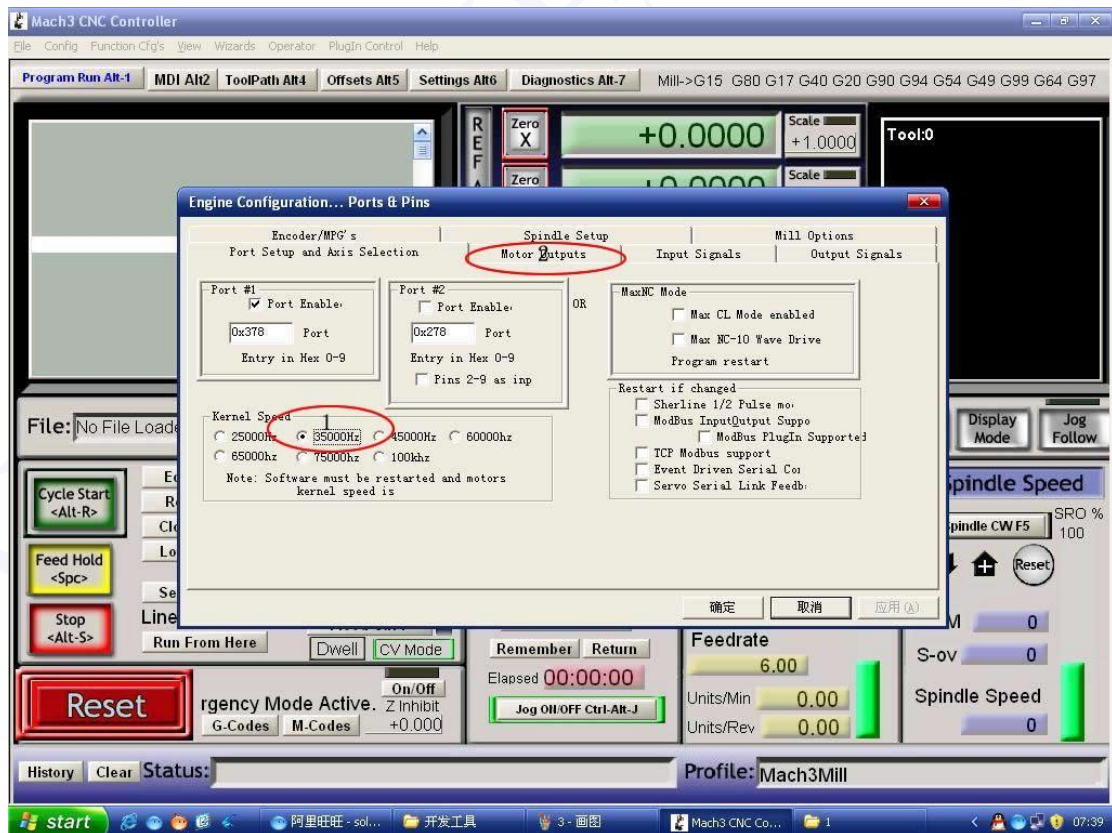


Fig 4

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

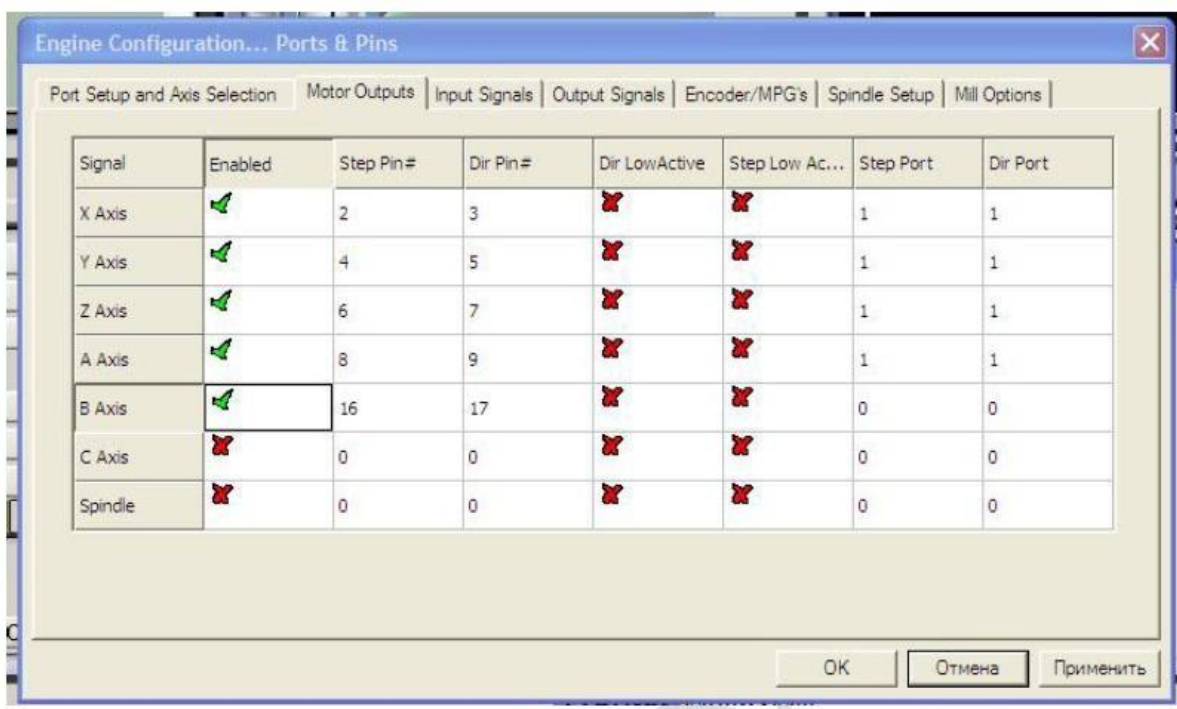
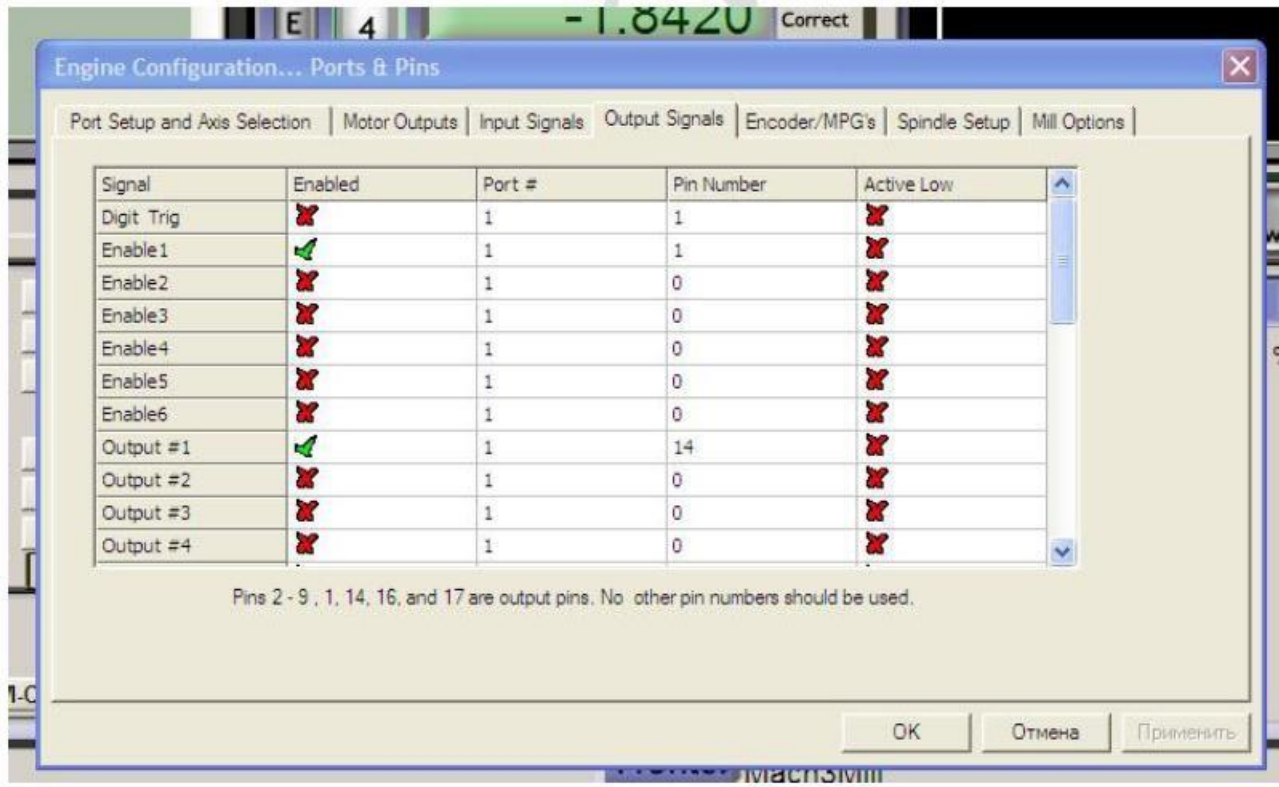


Fig 5



、 Limit port setting :

Click “input signal” to setting as below Fig 7

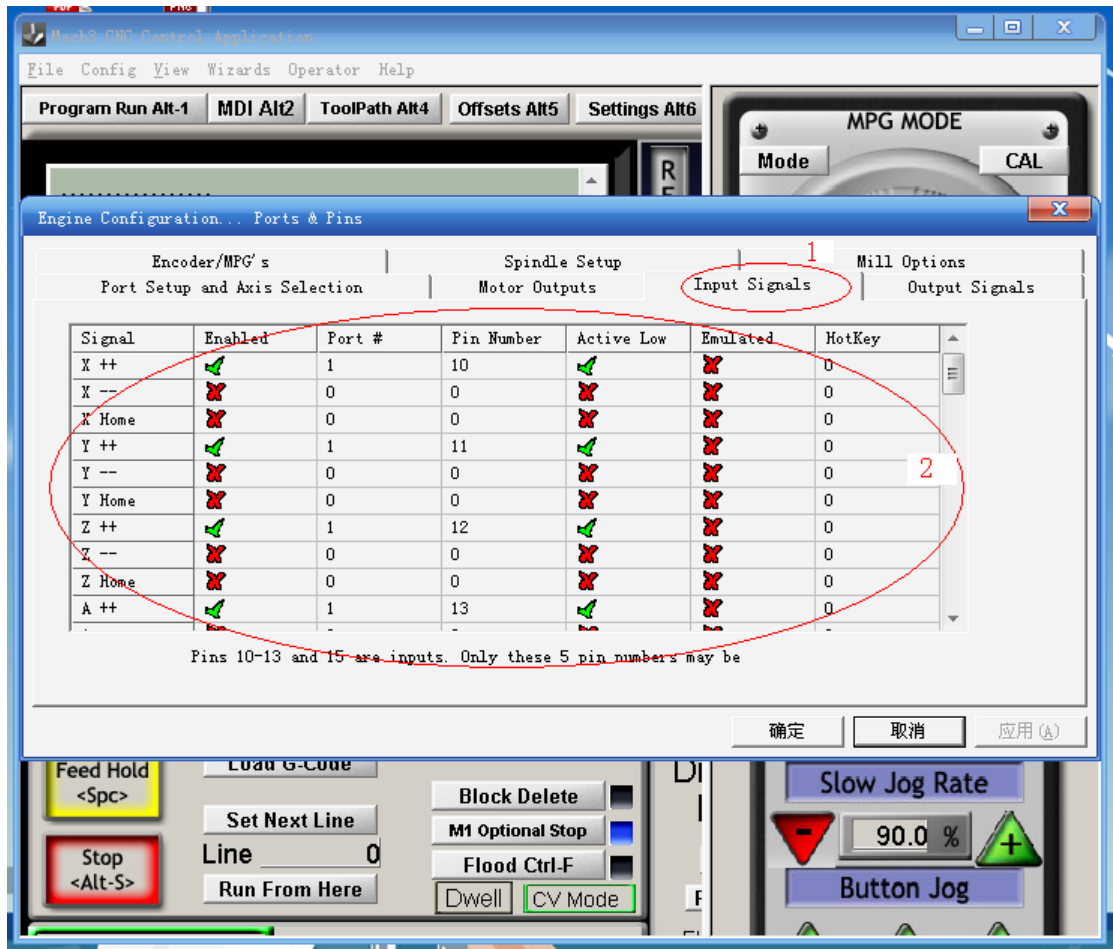


Fig 7

6.3、 G-code run :

Mach3 software itself with test G-code as below Fig8

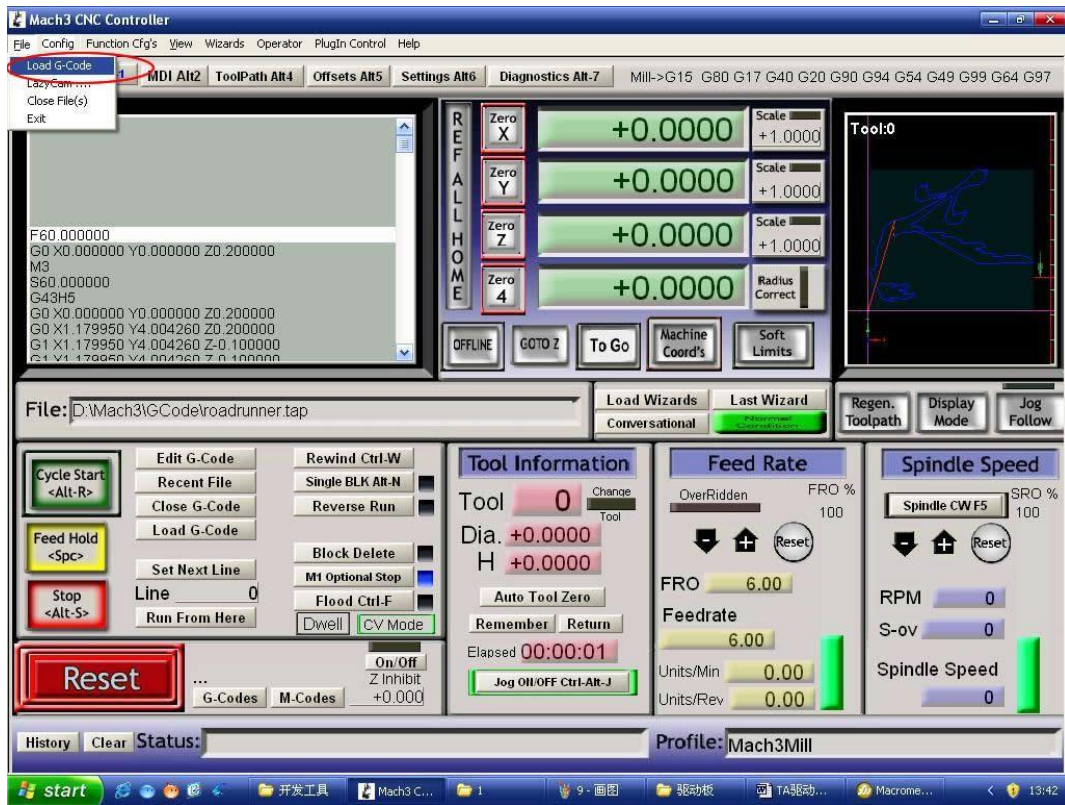


Fig 8

Find your G code, then open as Fig 9:

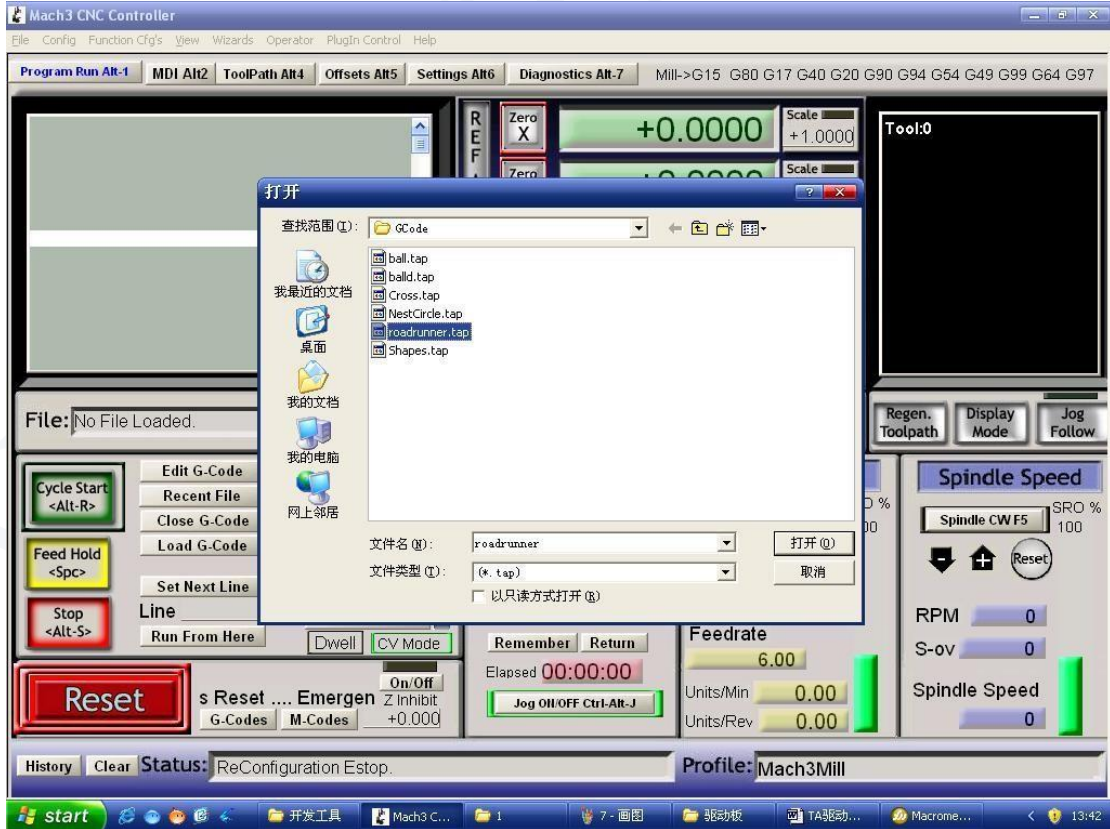


Fig 9

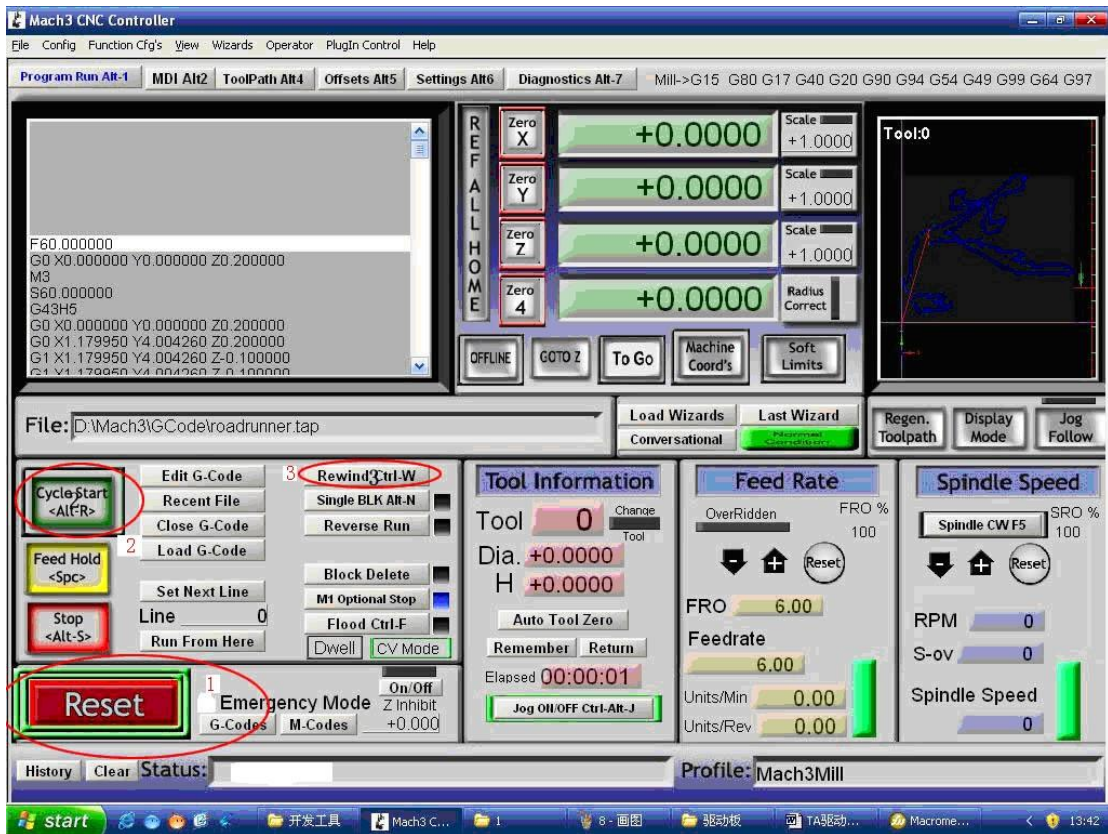


Fig 10

You will see "RESET" flicker after open the G code, you can click it to stop flicker, then run the circle 2 "CYCLESTART" in addition if you need manual control, you can press the TAB of keyboard, the manual control interface as below Fig 11

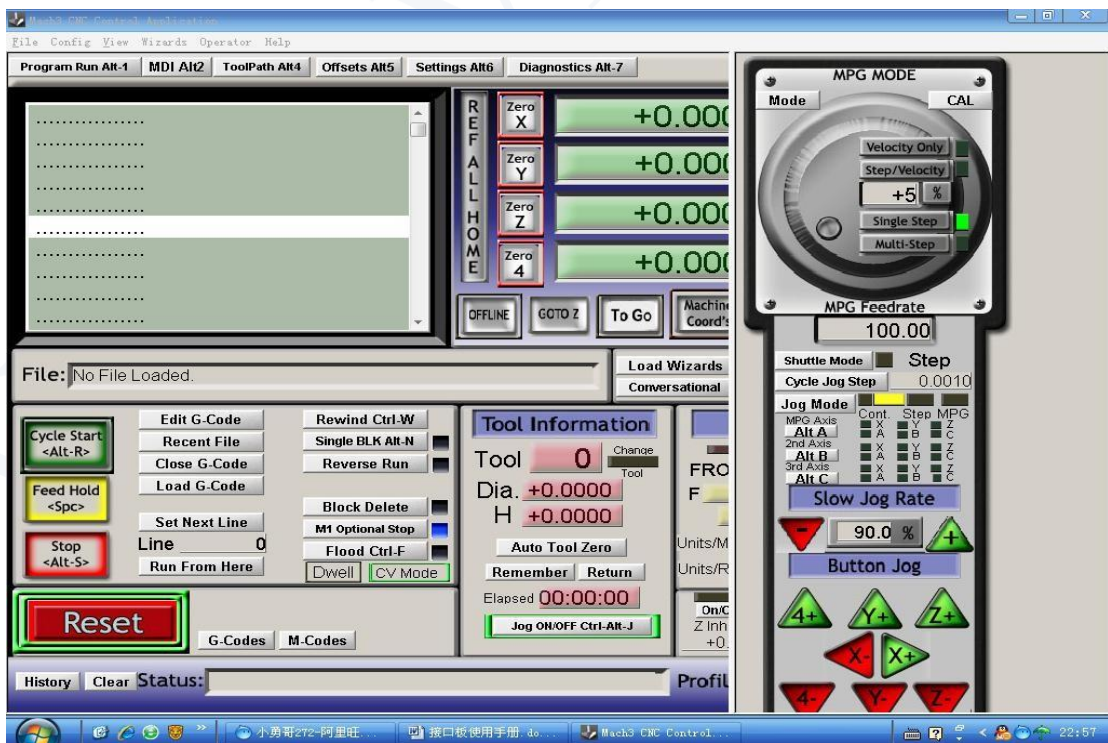


Fig 11