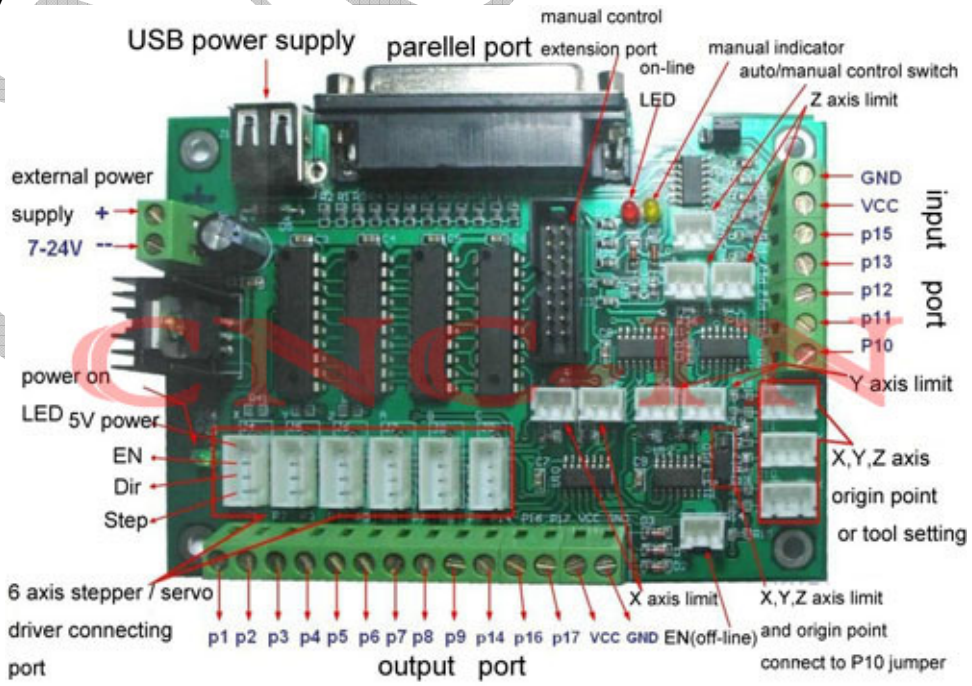
6 axis high-speed parallel CNC interface board Ver1.1

Features and functions:

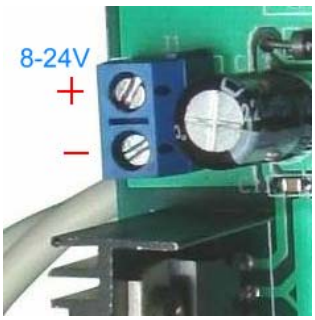
- ◎ supports directly the KCAM4, MACH ,NINOS etc and the parallel port host computer software
- ◎ can be used with the the optical isolated stepper motor whose wiring is standard common anode or common cathode
- ◎ Release all the 17 data transfer pins, it can support maximally 6 axis driver board
- ◎ The output adopts the data bus transceiver chip 74HC244 which has the signal regeneration function , the lode capacity can reach to ±25mA
- ◎ The input signal is shaping by the schmitt trigger
- ◎ 3-wire mechanical limit signal can connect directly to the logic wire, the logic wire will generate an EN control signal at the limit position to control the driver , and it just enable the movement which is far from the limit switch direction when it reaches to the limit position. It can connect the external tool and realize the 3 axis tooling setting operation by the EN control port
- ◎ can connect the external E-STOP button
- ◎ the PCB board adopts double-side wiring, the grounding copper wire is covered in large area of the board, which keeps the intergrity of all the signals
- ◎ can be isolated from the PC parallel port and realize the manual control of the stepper motor(the manual control board should be bought seperately
- ◎ the internal wire is very stable, flexible options of the power supply



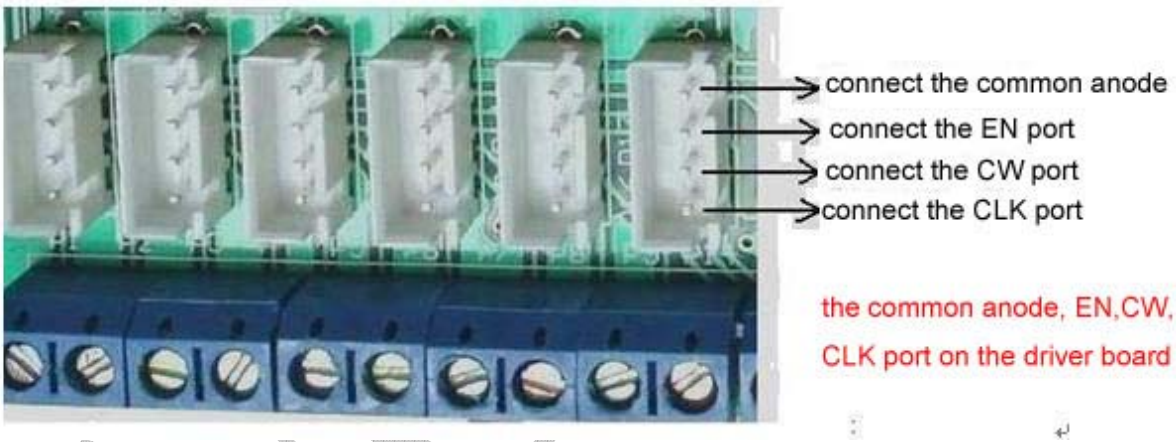
【wiring】

1.DB1can receive the control signal of the host computer by the connection of the electric cable and the PC via the LPT

2.J1 power input port（voltage 8-24V）, when the USB power port is short of the voltage, we can use this J1 port to connect an external power supply



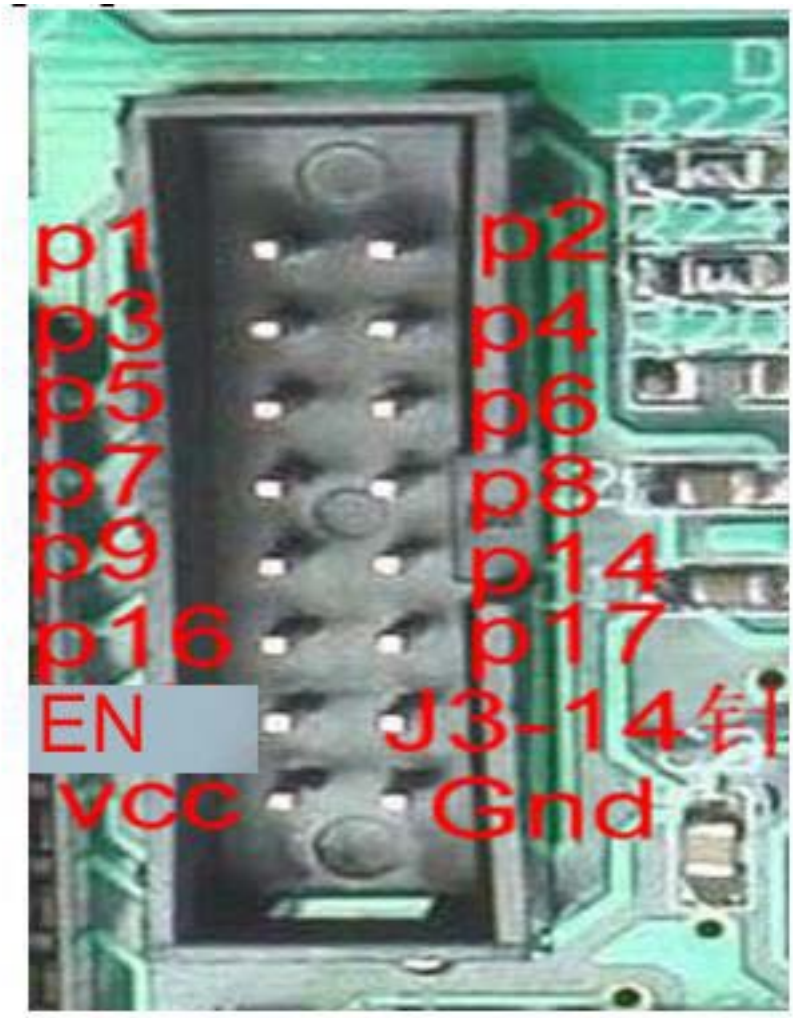
2. J4-J9 stepper control output poart



Pin definition: Pin 1 is the stepper CLK pulse, Pin 2 is the direction CW pulse, P3 is the EN(off-line) pulse, Pin 4 is +5VDC

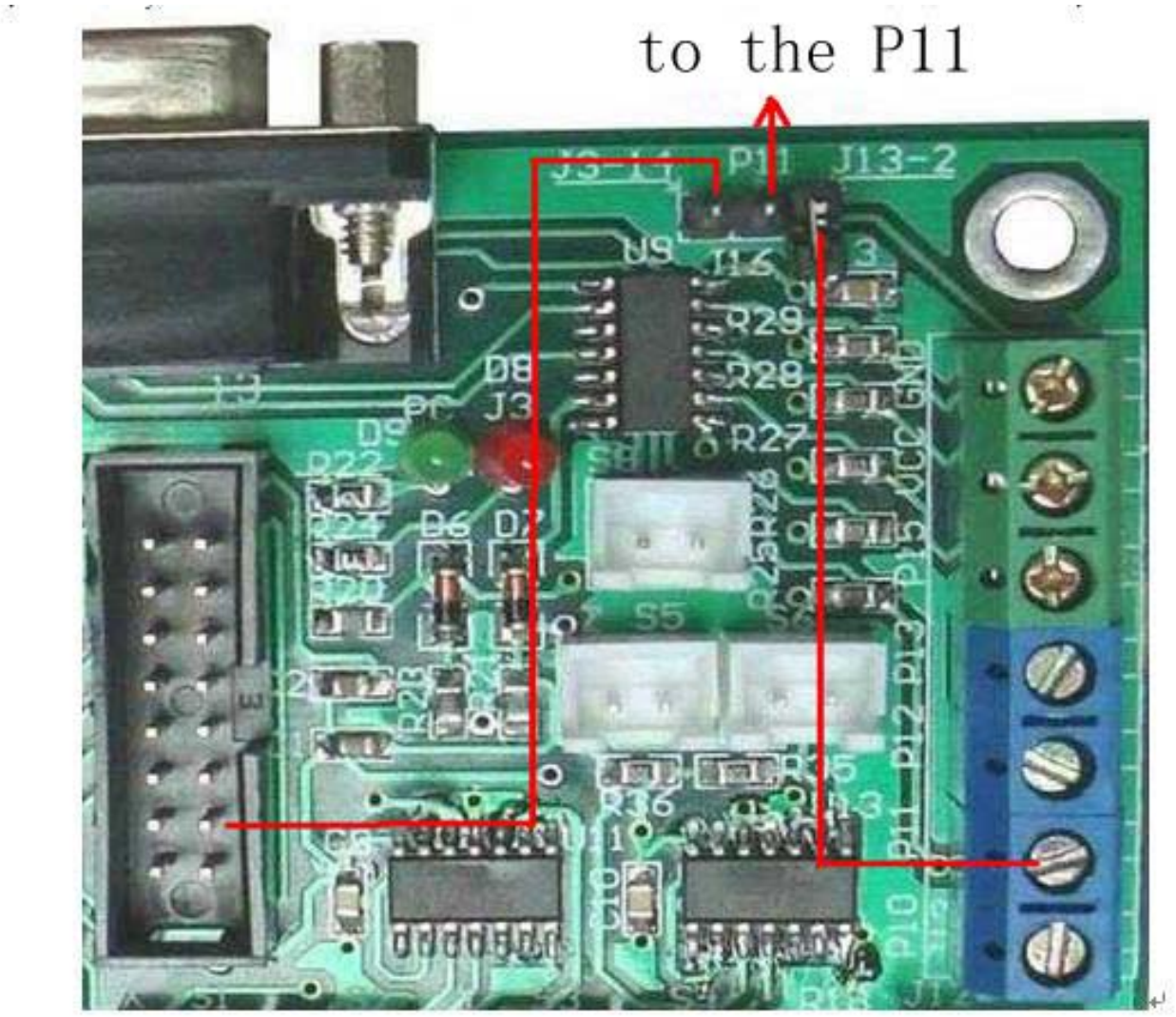
Signal definition	Correspond parallel pin	Interface board
X CLK step	1	J4
X CW dir	2	
Y CLK	3	J5
Y CW	4	
Z CLK	5	J6
Z CW	6	
A CLK	7	J7
A CW	8	
B CLK	9	J8
B CW	14	
C CLK	16	J9
C CW	17	

3. J3--Manual control input port

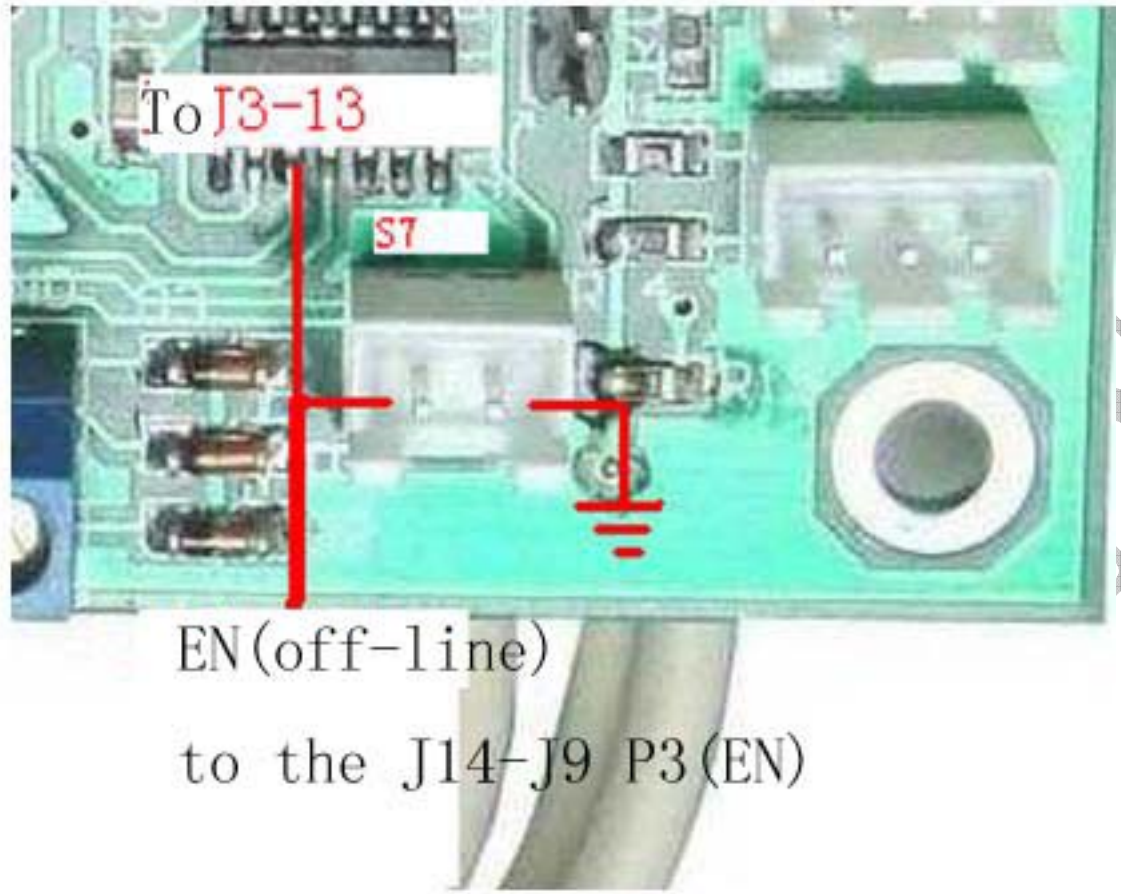


S8 is the connecting port to the PC parallel port or the manual control switch. Disconnection is the function of connection to the PC,close is the connection to the manual control switch. When S8 is short-circuit, it means the most of the Pins of DB1 are transferred to the J3.

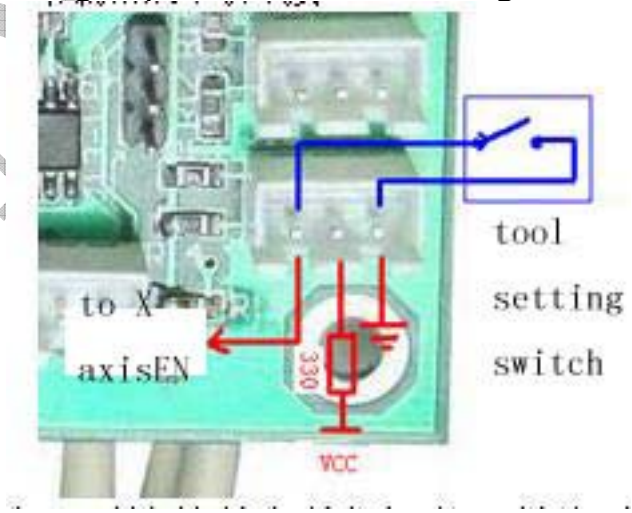
4.The choice of the connection of J16 and P11 can be chosen by the short-circuit button. J16 can be the E-stop input port.



5. S7 as the whole EN(off-line) switch , S7 closed , EN off (EN is low level) , S7 cut off , EN on.



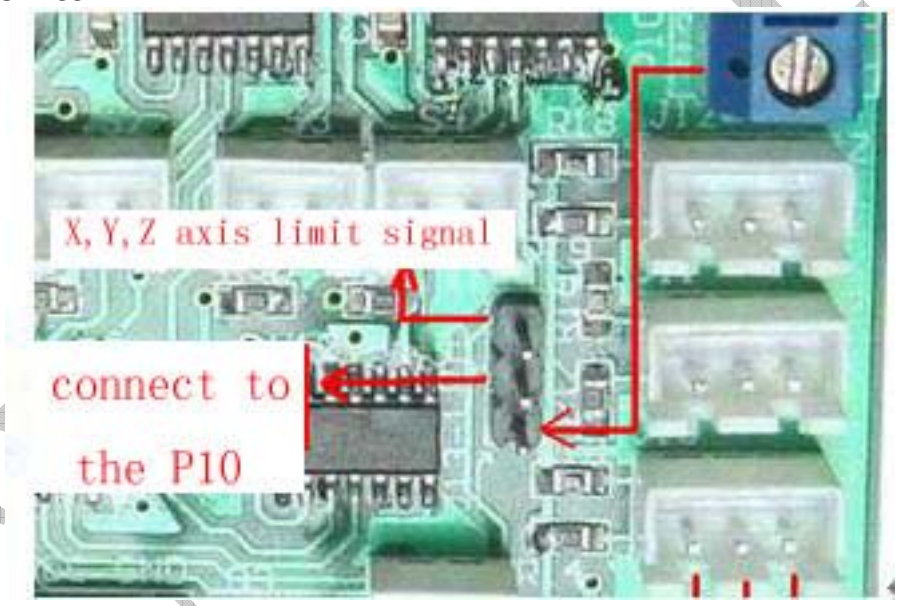
6. J10-J12 is X,Y,Z axis origin point or tool setting switch .



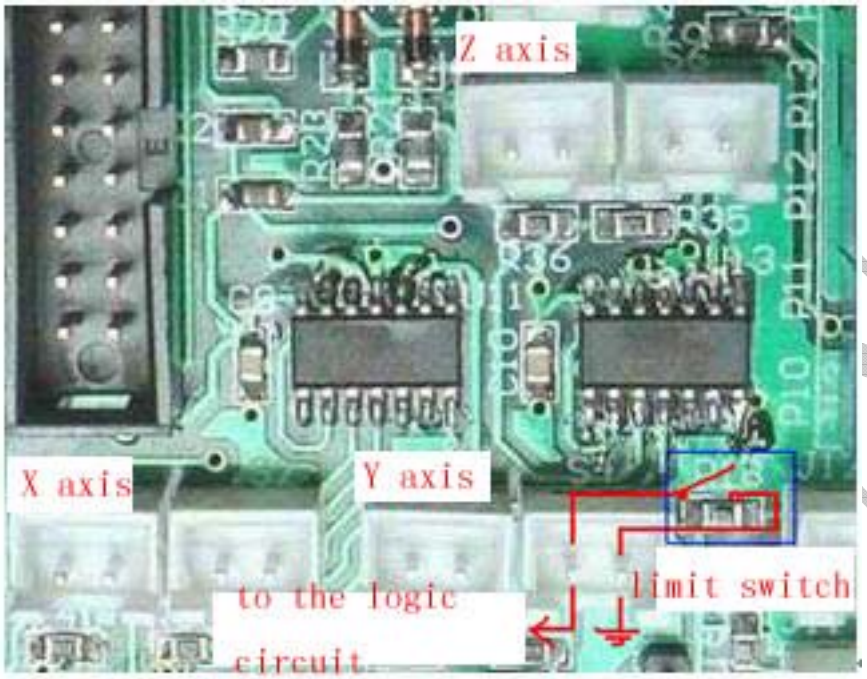
7. J13 is a 5-wire input port , it used for connecting other external equipments, the functions of the pin can be set up by the host computer software.

8.J14 parallel port P10 input signal connection jumper---P1-2 of the J14 closed , P10 connects to the P1of J13.

Short-circuit the P2-3 of J14, P10 connects to the X,Y,Z axis limit and tool setting switch .



9.S1-S6 limit switch port.

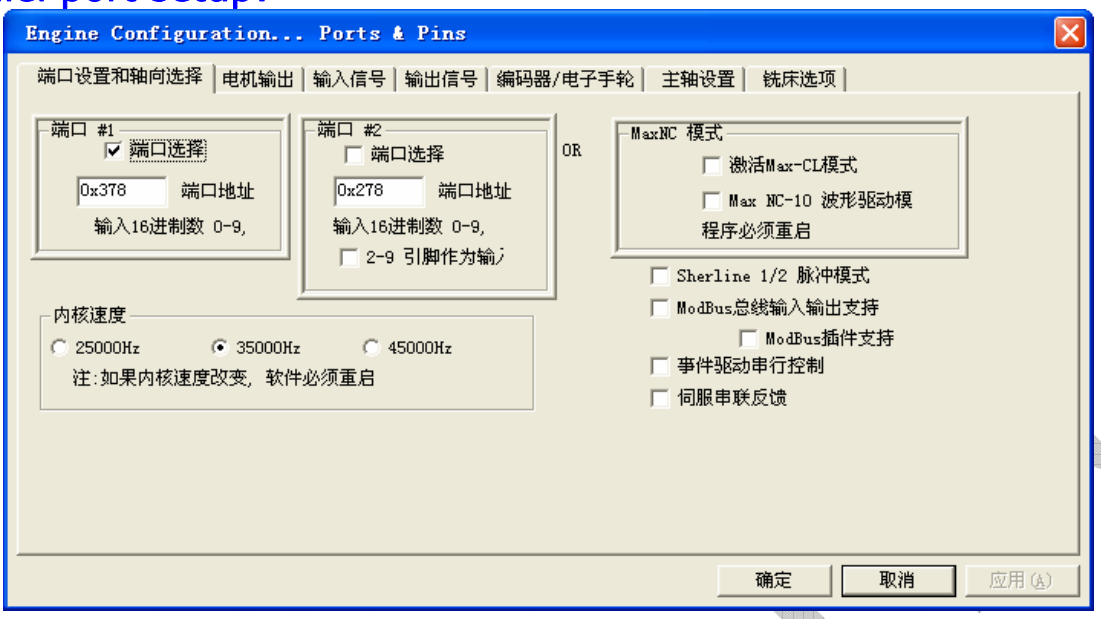


The limit switch connection: the limit switch is open normally, each axis has two switch.

10 In the application, the no-use parallel port input and output pins can be connected to the J2 and J13 ports for the extension use.

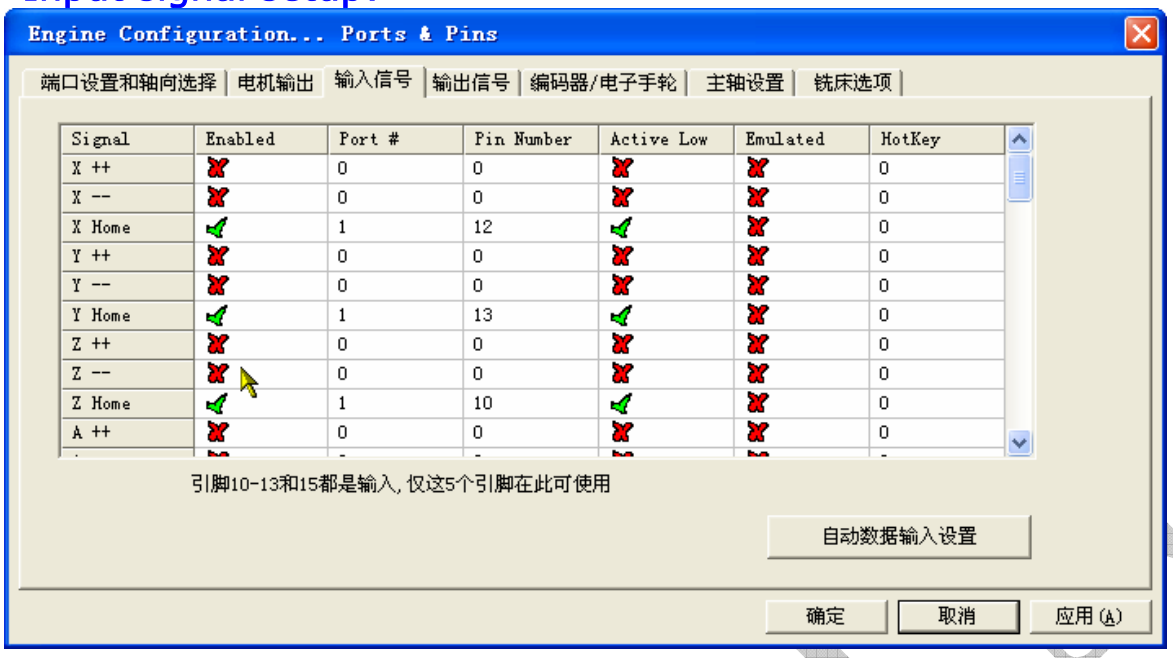
Setup of Mach 3

Parallel port setup:



Motor output setup:

Input signal setup:



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