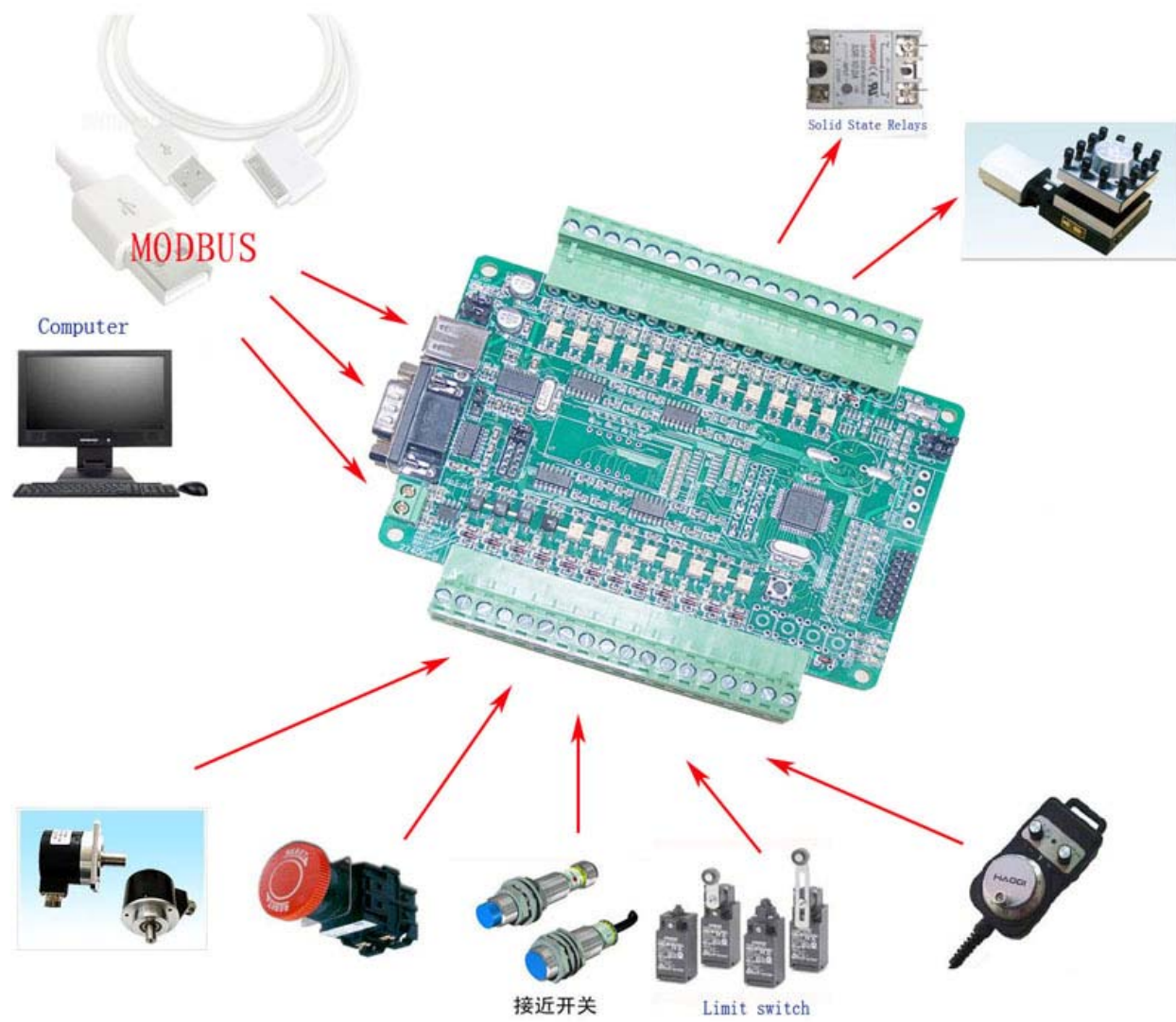


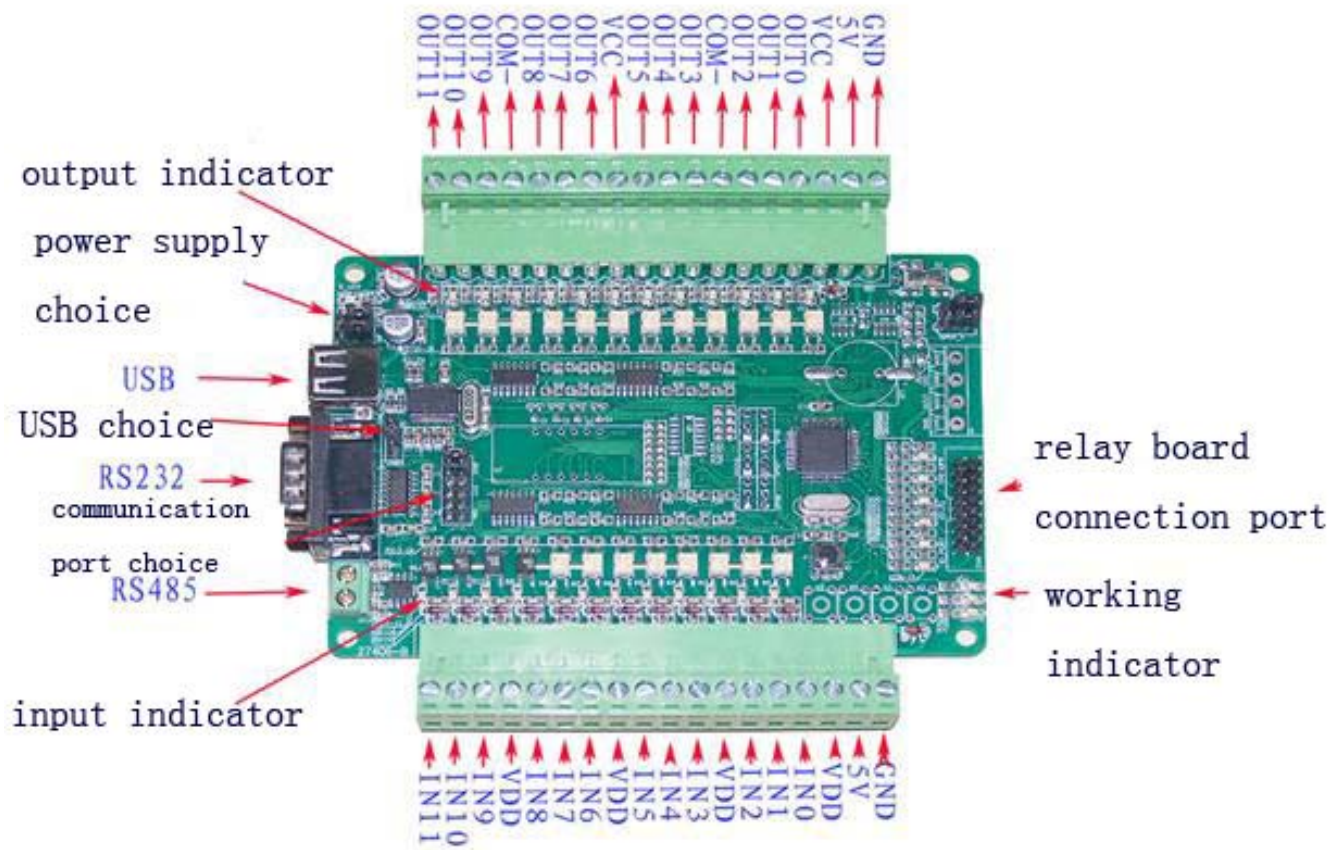
## CNC MACH 3 in&out-put port extension board MODIO\_I NEW



### Features:

- 1、 it is very easy to setup the extension IO input and output port especially for the Mach 3 control
- 2、 12-wires optical isolated input ( 4-wires are high-speed IO can connect the encoder)
- 3、 12-wires optical isolated output to control the external equipments
- 4、 The communication port is MODBUS slavestation , 1 RS232 communication port by setting up the jumper , this RS232 port can be used as RS485 or USB port

Connection port definition:



Jumper :

- 1、 power jumper

power supply  
choice



USB to RS232 power supply choice

JP1 JP2 L: external power supply R: USB power supply

- 2、 USB choice jumper



USB communication function EN

Up: Enable USB communication Down: Disable USB communication, USB just provide the power .

- 3、 communication port choice jumper



USB: use USB communication port

RS232: use RS232 communication port

RS485: use RS485 communication port

#### 4.Communication connecting port

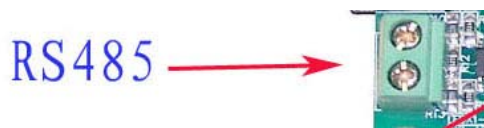
USB connector can supply the power to IO board , it corresponds to the PC communication port N



RS232 connector , uses DB9 serial port cable to connect the PC , it corresponds to the PC communication port

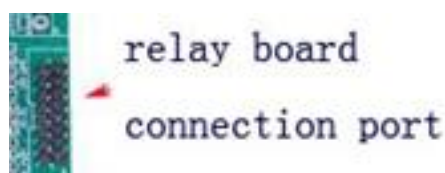


RS485 connector , it corresponds to the PC communication port COM0

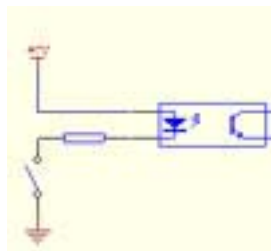
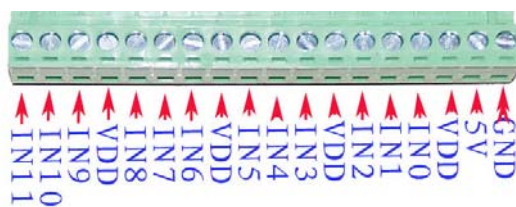


#### Relay connecting port

IO-PORT can be connected to the relay OI board , to change the output function to Relay



#### Input connecting port



Input port has 12 digits , IN0-IN11, GND is the ground connection on the board, VDD is the input coupling power supply port, when 5V, you can not connect it, but when larger than 5V, you have to put a current-limiting resistance . when 5V is the external power supply port and using USB power supply , please do not connect this , using the external power , the jumper must setup as external power supply.



By the input port, we can connect many kinds of the sensor and the switch , to realize a lot of functions.

connect to the mechanical switches



connect to the sensor

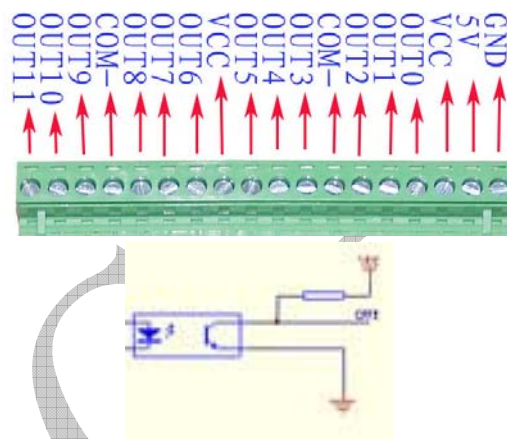
proximity sensor



optical sensor

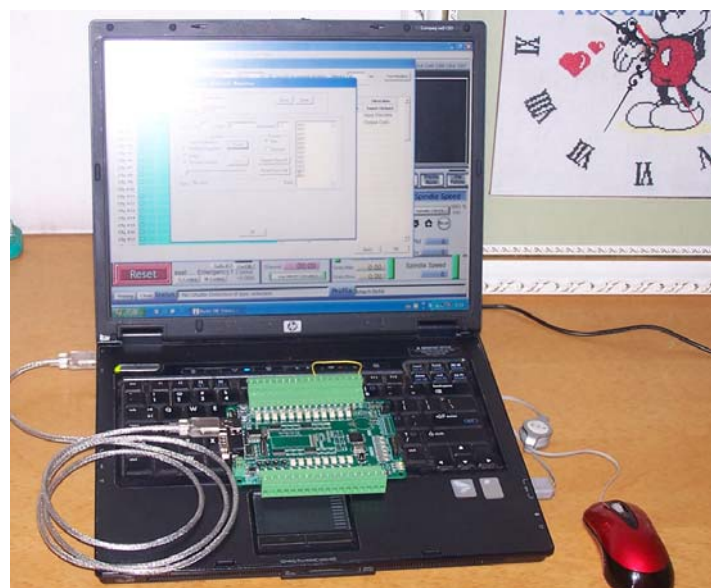


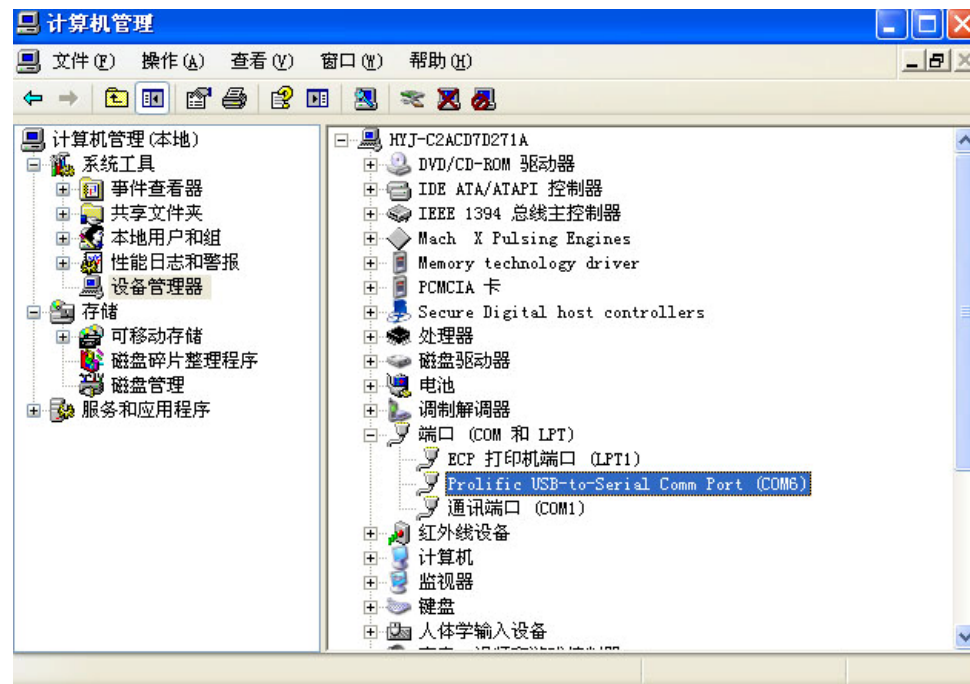
Output port



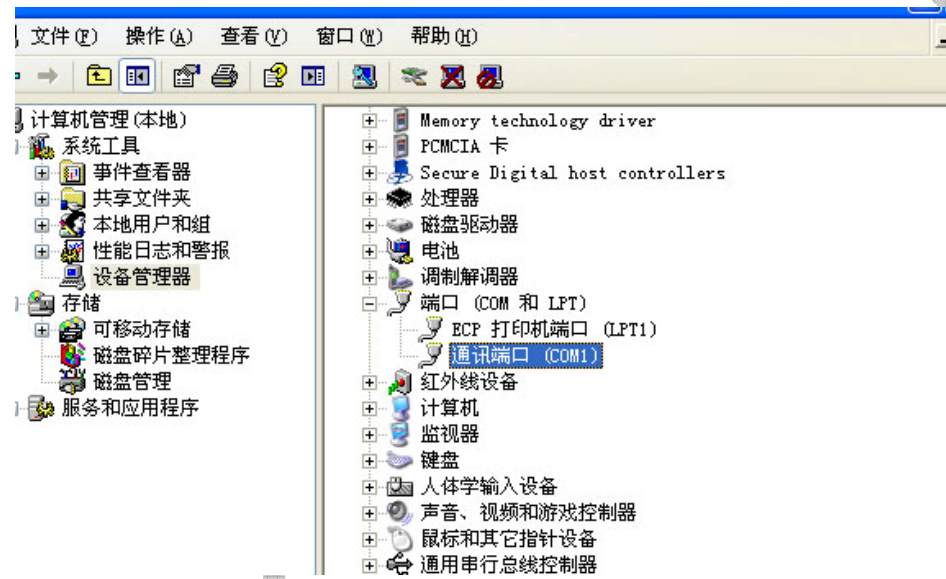
Input port 12-digit OI OC output, OUT0-OUT12. GND is the ground connection on the board, 5V is the external power supply input port, VCC is the input IO power supply port, if you want, you can not connect the VCC, COM- is the negative output OI.

Setup





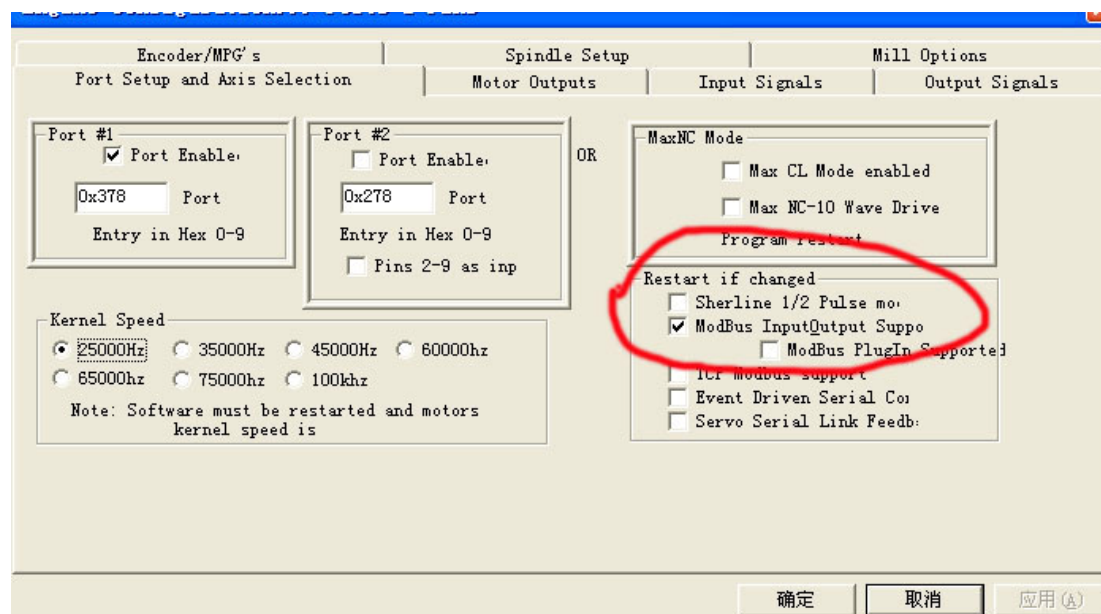
Use RS232 or RS482 communication , Mach 3 can control the COM1 by the MODBUS .



If use the RS485, you have to install a 232-485 port on the PC serial port. By using the RS485 , you can control the lathe in a long distance about 1200m.



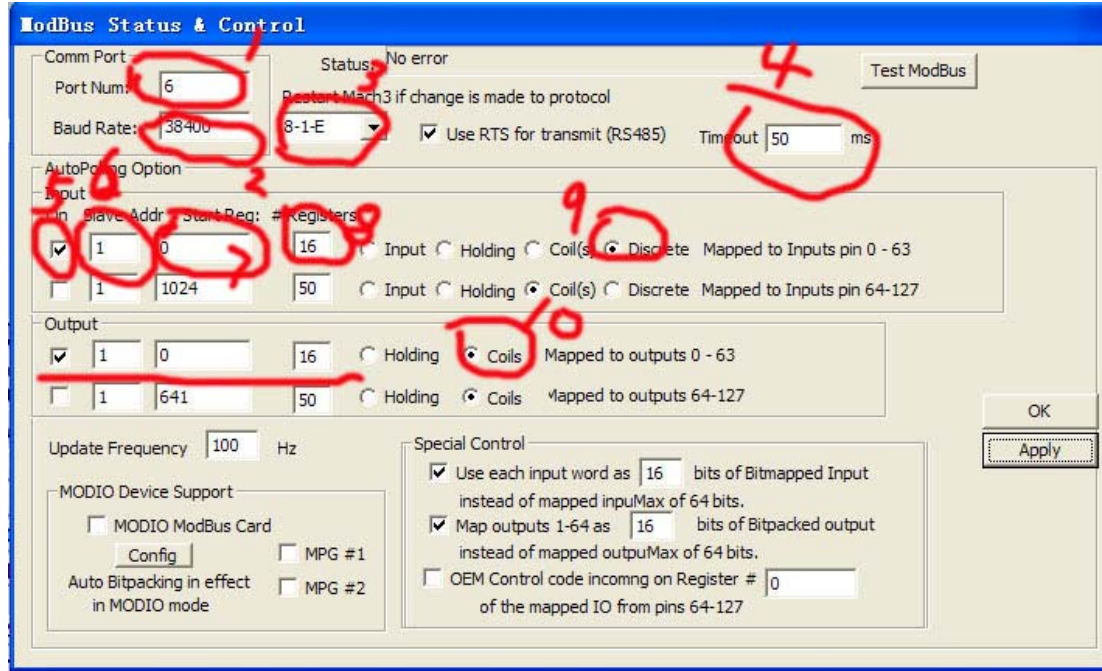
ModBus InputOutput Supported setup



when setup the MACH 3 in&out put port, choose ModBus InputOutput Supported .

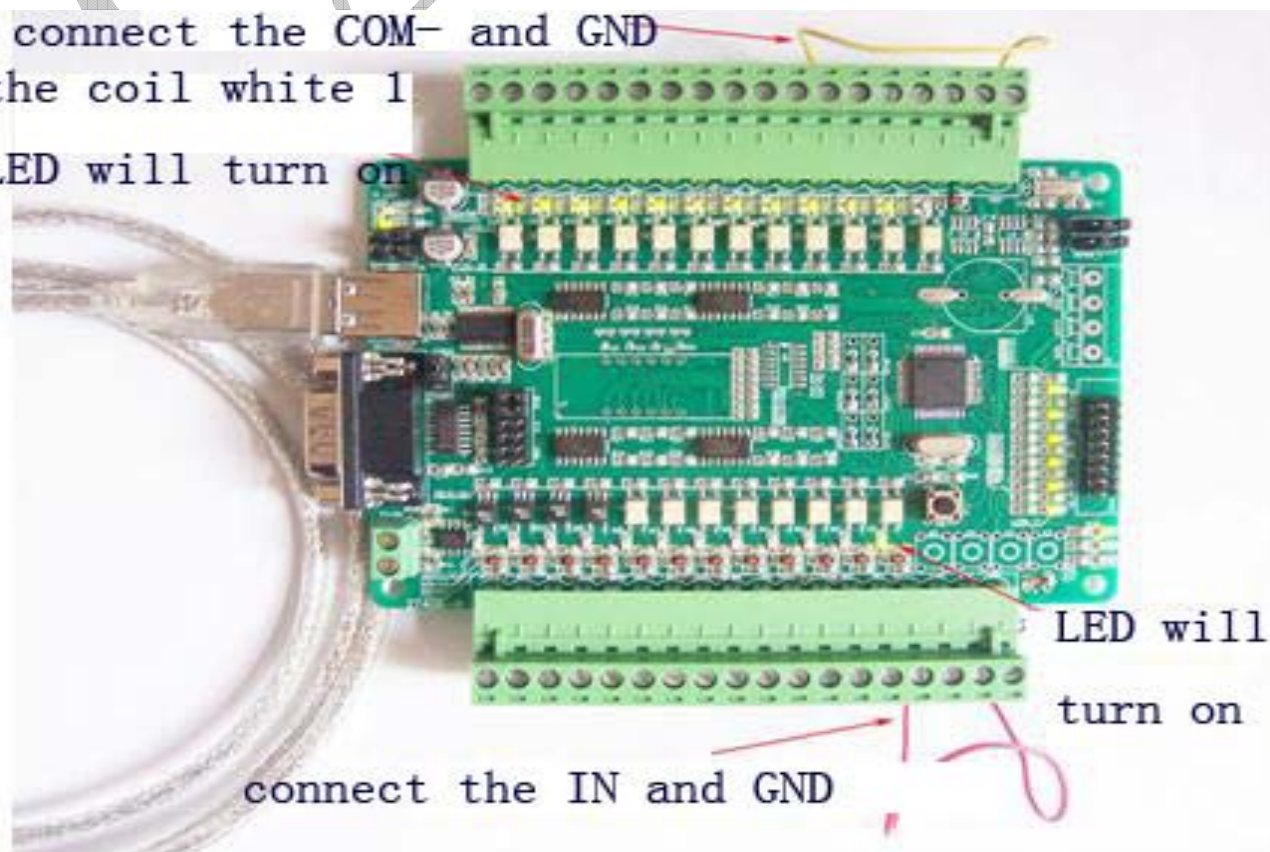


Function Cfg's->Setup serial ModBus control

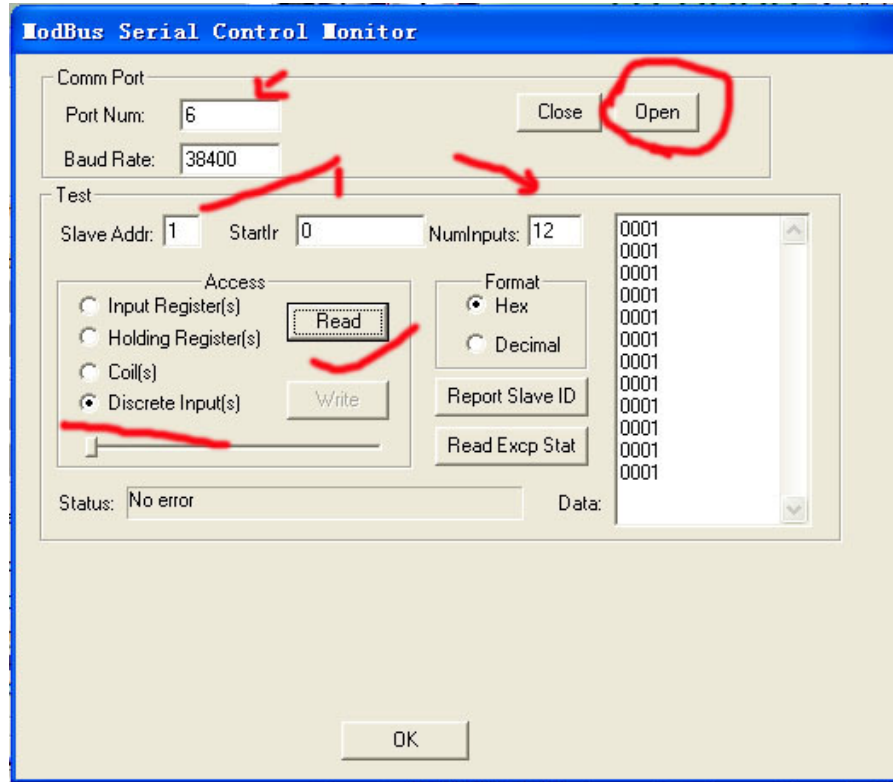


Here are the steps from 1 to 10, please setup step by step.

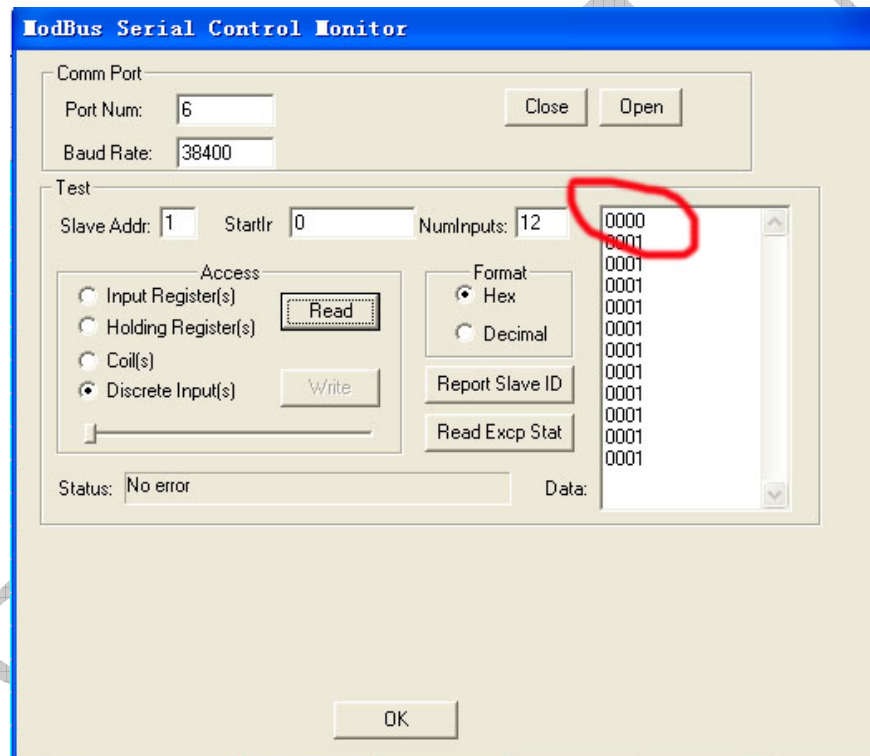
- 1、 Serial port number, the NO.1 port usually connects to the RS232 or the RS485. We can get the USB port NO. by seeing which USB equipment is the default Prolific USB-to-Serial Comm Port, the test port No. is 6.
- 2、 38400 data transfer frequency is 38400
- 3、 the transfer mode of the Serial port
- 4、 the time is between 50-100ms
- 5、 choose input
- 6、 ModBus equipment NO.
- 7、 ModBus beginning address
- 8、 input port NO.
- 9、 choose the discrete
- 10、 choose the coils output



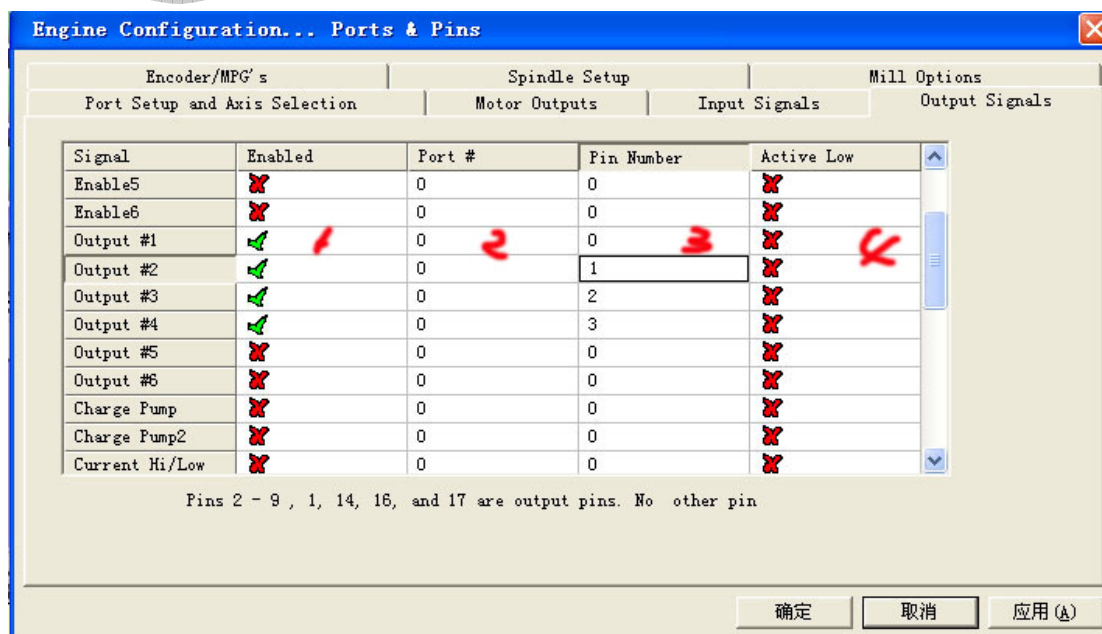
Choose Test ModBus, as belows



File the communication info and Open the serial port equipment. Read Discrelr Input --when do not connect the switch the data is 0001, when short-connect a switch , the data is 0000



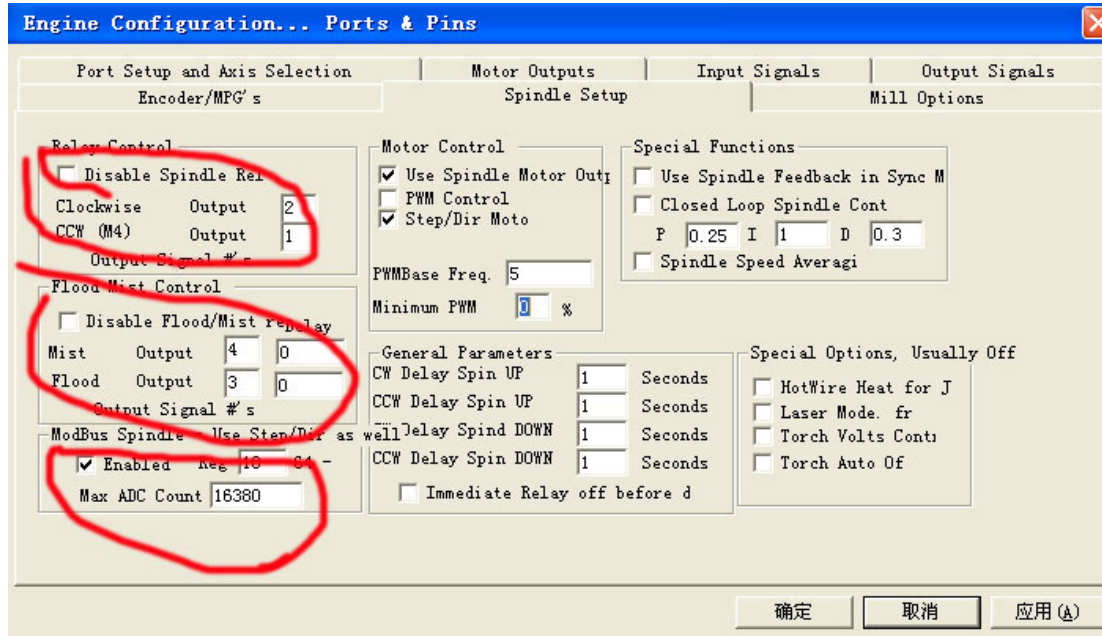
Write Coil, output LED will turn on



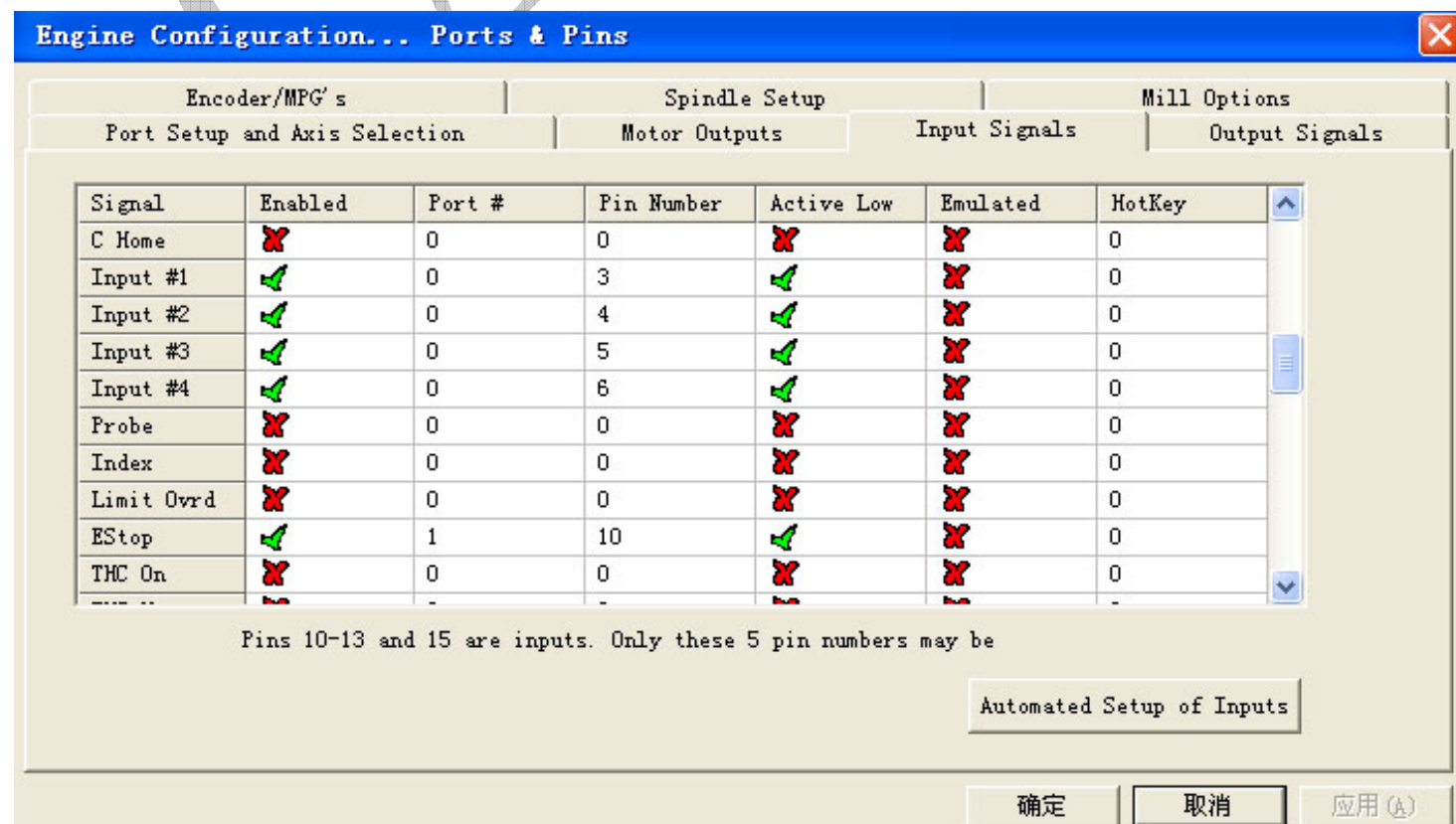
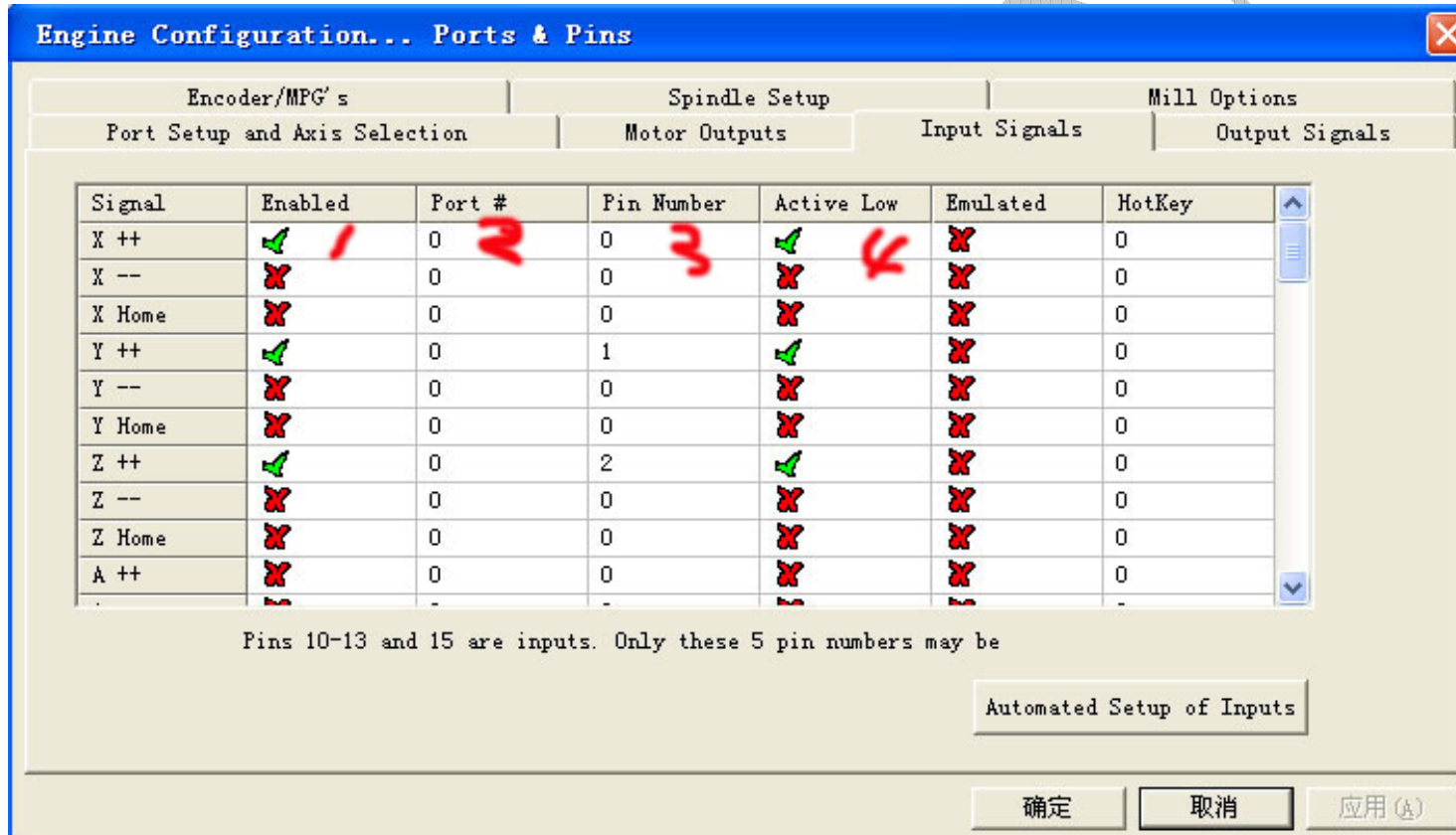
Setup the output function, the ModBus Port# is 0.



setup the main axis and the relay output

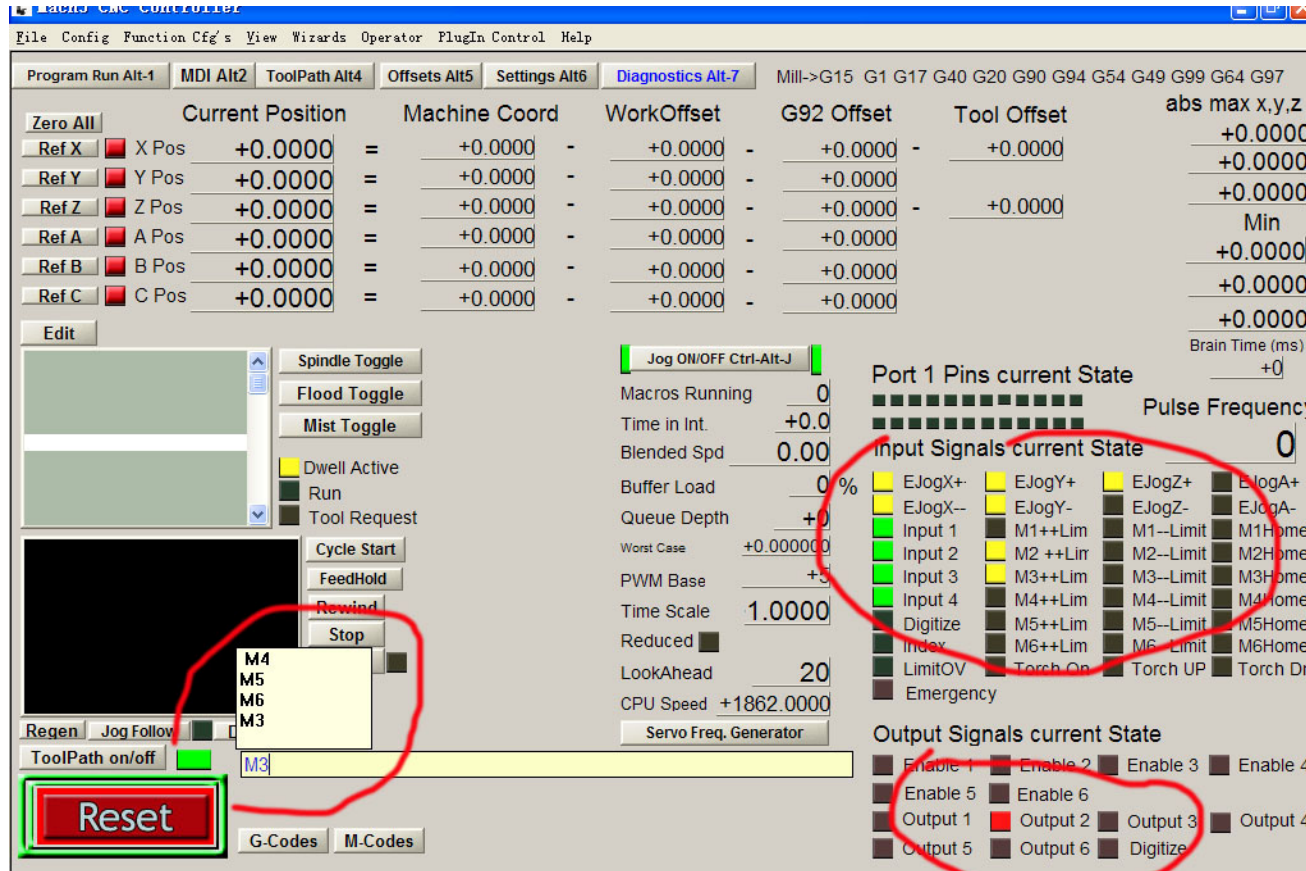


setup the input port function

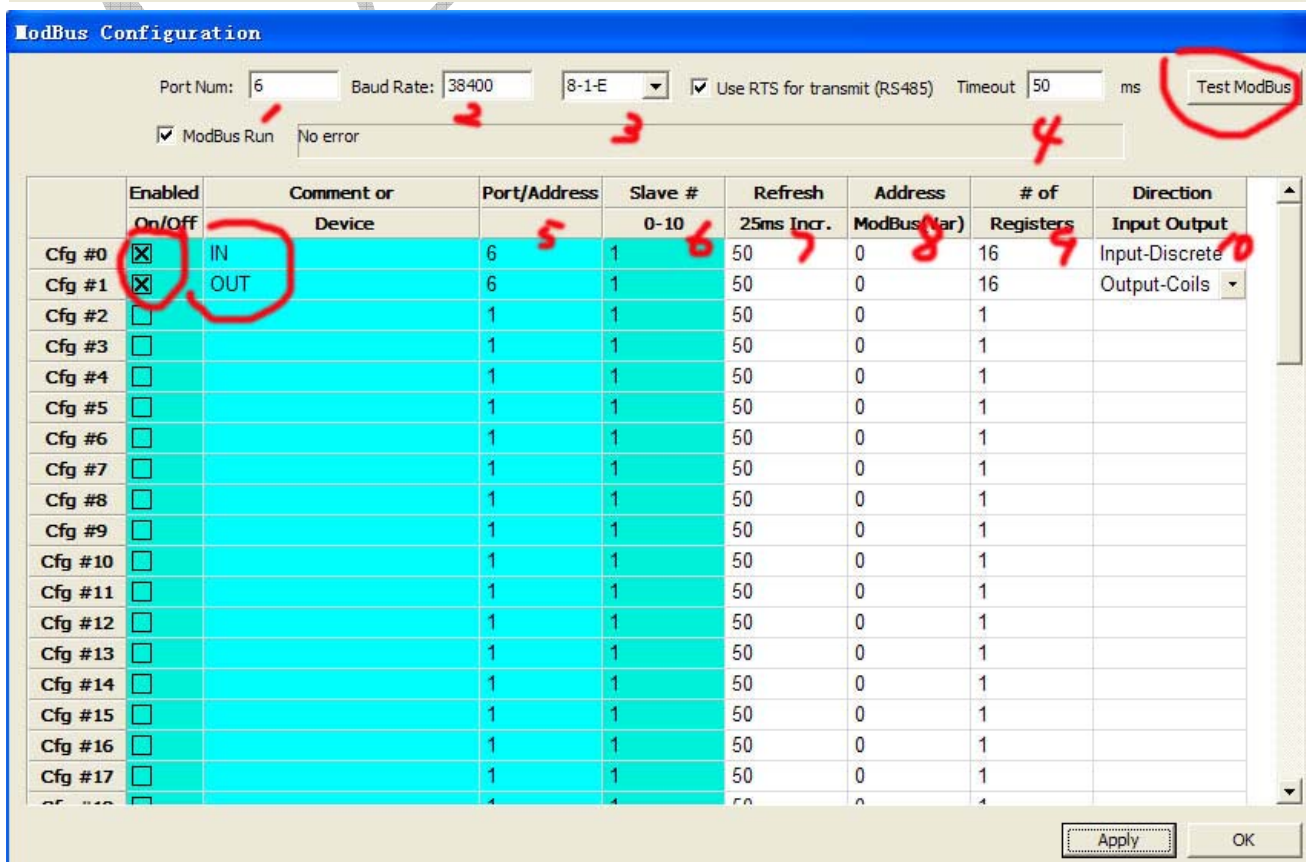
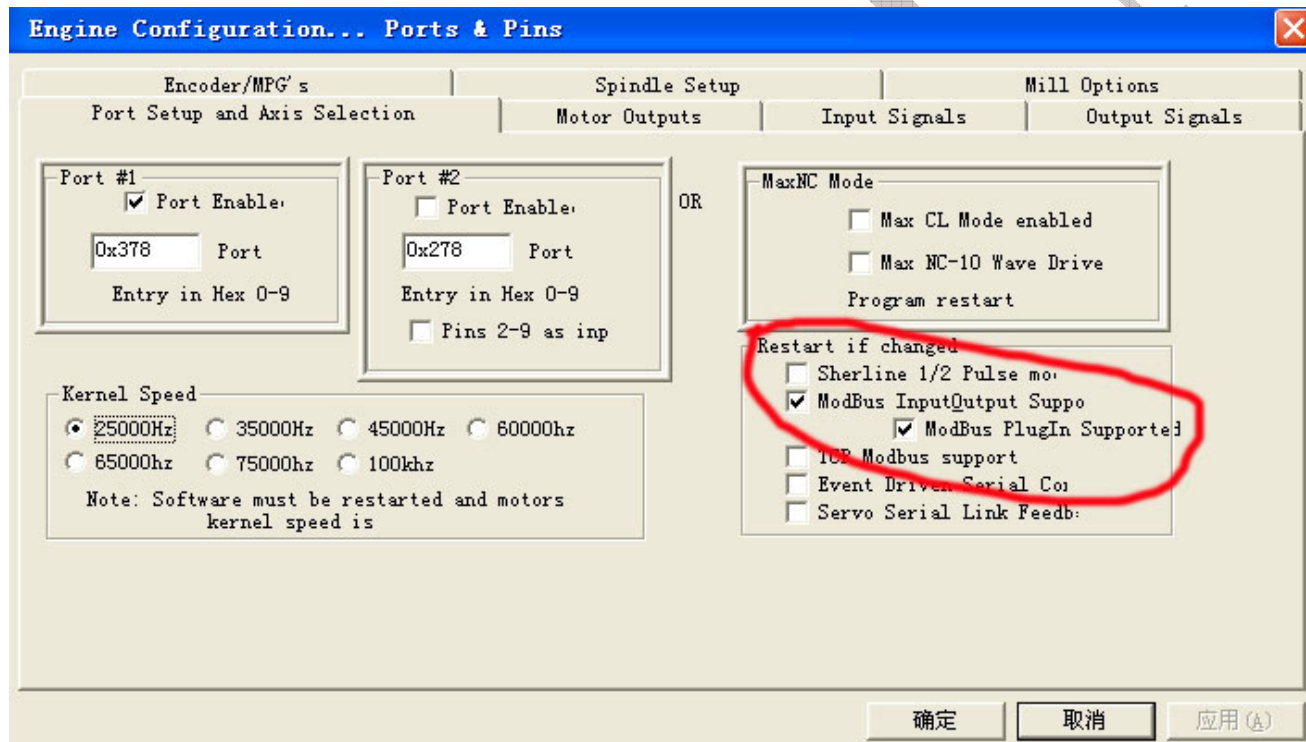


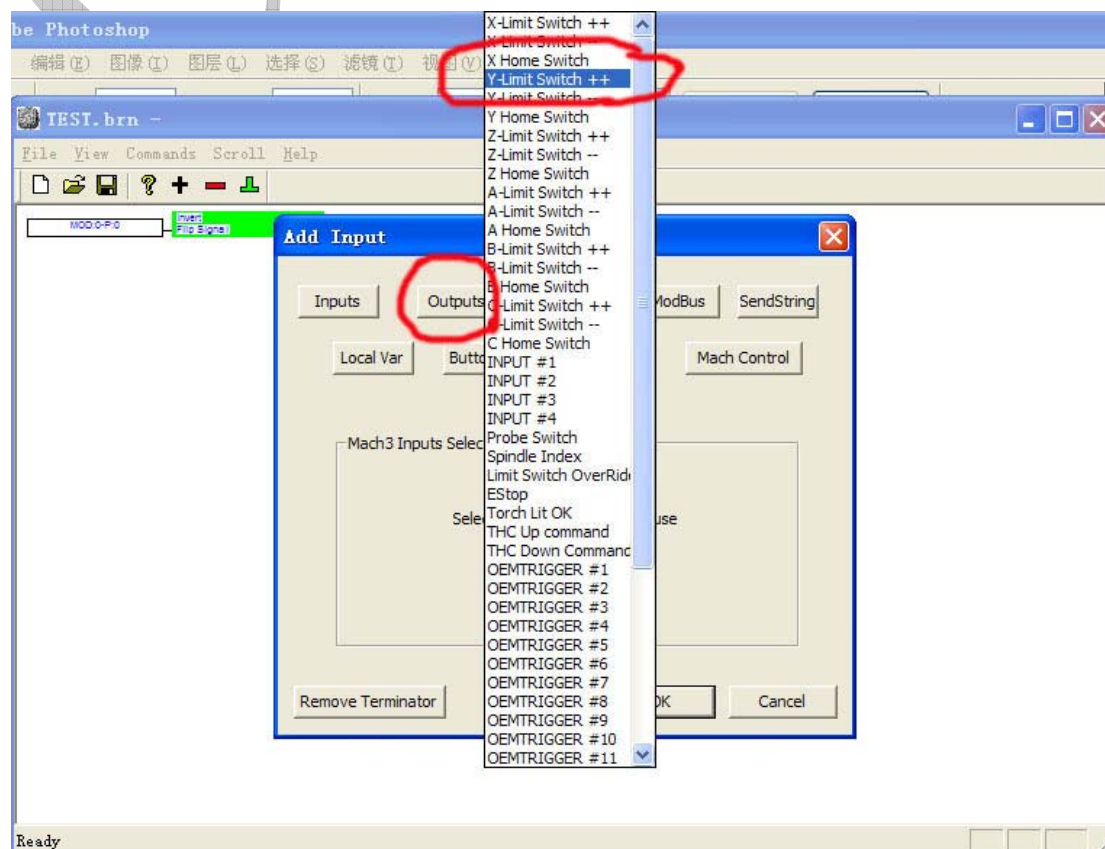
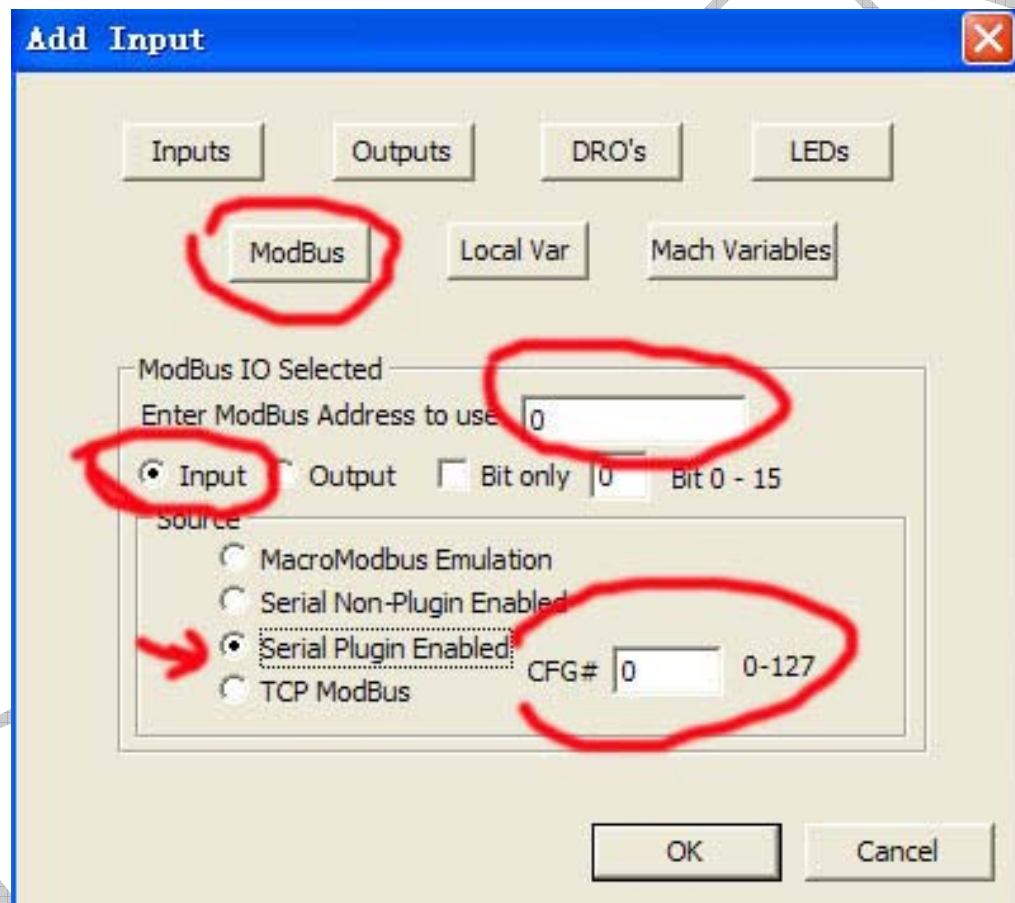
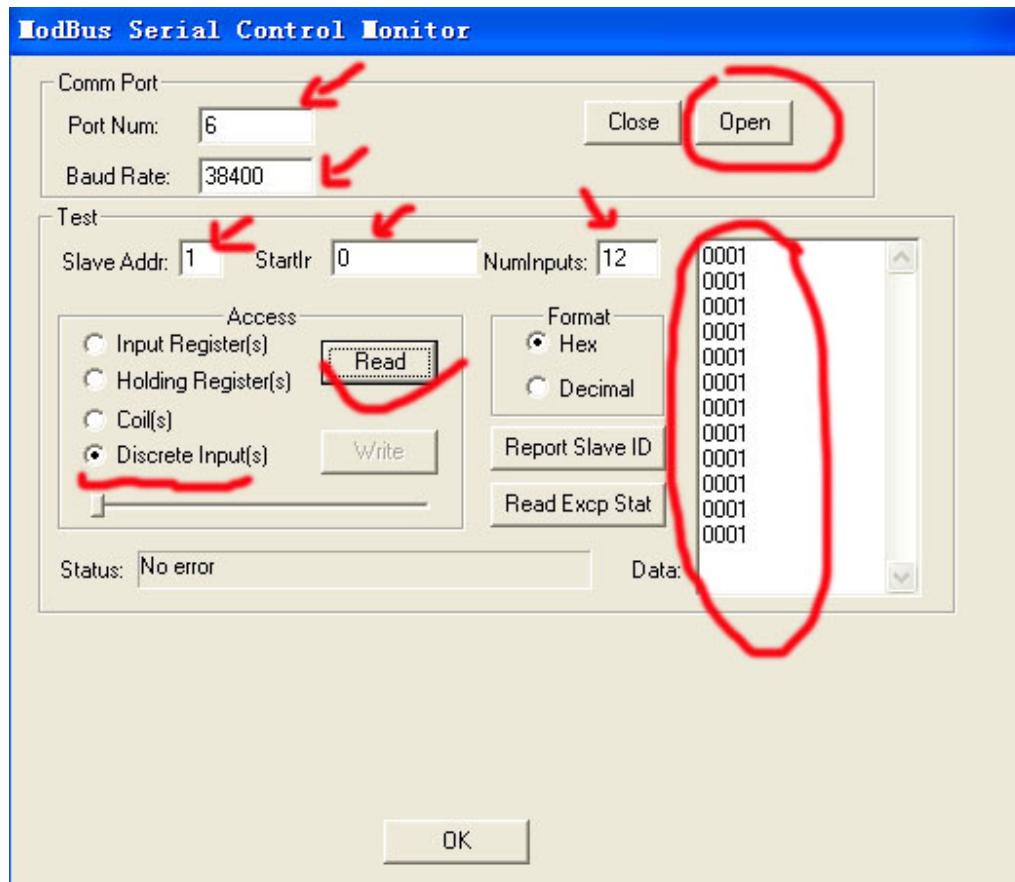


You can regulate the In&Out put port when click Alt and No.7

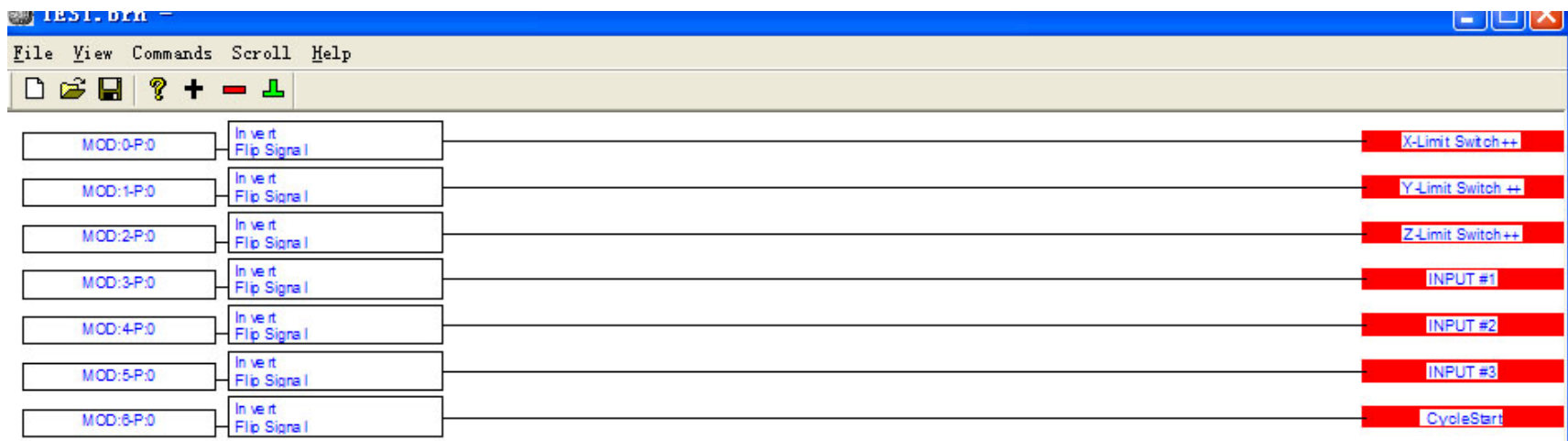


### ModBus PlugIn Supported SETUP









Brain Control

Loaded Brains

- ModIOMPG.brn
- TEST.brn

Enabled

Reload Brain

Reload All Brains

Enable All

Disable all

ViewBrain

Cancel

OK

