

Article : ELE1325-3S

CNC Router

Operation Instructions

BLUEELEPHANT COMPANY

**Top CNC Solution Professor**

High precision, Reasonable Price, Fine After-service

## **Thank you for buying our CNC Router.**

This technical instruction goes with machines, it is also the instructional document which makes sure you're correct using. Please read it carefully and keep it well. Please operate the machine according to this instruction, if any problems or questions, please contact us freely. In order to bring the superior function of our machine into play, and ensure the safety of the user, please read this instruction carefully before installation and operating. Then you can have acknowledge in details about what should be paid attention to, and the action and operation, inspection of the abnormality and daily maintenance rules etc. It is our target to make the customers satisfactory. Thank you for your cooperation.

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## **Our company**

We have always been devoting to the reseach and manufactur e of CNC engraving machines .We has R&D Production Depa rtment, Quality Control Department, and Sales &Sevice Department. Our products are widely used in woodworking, advertising, model, electric, CAD/CAM industry model, clothing, package, marking, laser sealing and so on.

We can offer you the high quality products with the competitiv e price. Our products have got CE, SGS, and ISO9000 certificate. Our main products are as follows: CNC ro uter, laser engraving and cutting machine, laser cutting machi ne, marble CNC router, plasma metal cutting machine, adverti sing CNC router and so on.

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## Technical date

Type : ELE13258-3S

Working table size: 1300\*2500\*300

The rotary (C-axis):200\*2000

The A –axis: +90° -- -90°

Voltage : AC380v3ph

Spindle power: 4.5KW HSD SPINDLE.

Spindle speed : 18000rpm

Traveling speed: 32m/min

Feed speed: 20m/min

# 1. Unpacking Inspection

Before works, all the transducers of CNC routers are inspected strictly and packaged carefully. However, damages may occur during transportation process due to various factors. Please check the following items before unpacking. Inform the distributor or us if any abnormality:

Make sure that the machine is not be damaged or distorted during the transportation process.

After open the package, check whether the spare parts are the same with the packing list. Check whether the specification you ordered fits the machine's nameplate (voltage and KVA)

Check whether there is any abnormality or foreign material in the machine.

## 2. Safety Notice

This chapter mainly introduces the machine usage notice; the user must read this carefully to avoid the suddenness.

2.1 The machine should put on the balanced table, adjust the fundus to make sure the machine can't shake and keep it horizontal.

2.2 Please use the appointed voltage according to the instruction, connect power and put through the grounding wire.

2.3 Please do not connect many electronic products on one outlet to avoid overburden.

2.4 The engraving machine is high speed working machine; the main spindle speed can reach to 24000RPM. So the operator should wear work clothes and hat, forbidden to wear gloves.

2.5 When the machine is working, the operator should keep distance with it. Forbidden to touch the cutter and other motorial parts.

2.6 Make sure the electric power is off when clean the machine. Do not clean it with the liquid or the spray, but the

- dry dust cloth and meanwhile with slushing oil.
- 2.7 When checking the machine faults, Please make sure the power is off.
- 2.8 Do not use this machine near water, for example: near the bathtub, the bison, and the launder of the kitchen, wet floor, or swimming pool and so on.
- 2.9 Do not put this machine on the unstable truck, shelf or tables. Otherwise it may fall down and cause the machine damage or the hurt of people.
- 2.10 Only the electric variety on the nameplate can be used in this machine. If you are not familiar with the electric variety in your place, please ask the vender or the local bureau of supplying electricity.
- 2.11 Triangle plug (ground wire) is available for this machine. This just for ground wire type plug use and this is the safety device. If you cannot use this kind of plug, please ask the electrician for help. But do not discard the safety device.
- 2.12 Do not put anything on the electrical power cable, and do not put the cable in the place that someone else can touch.

2.13 Do not make the receptacle or the branch wires afford over-voltage, or there may fire hazard and electric shock.

2.14 Please don't put anything into the aperture or put thing in the machine, or else may get an electronic shock, on fire or other danger caused by dangerous pressure or short circuit.,

2.15 In order to avoid getting an electric shock, please do not disassemble this machine. If it needs repairing, please take it to the qualified repairing center. Disassembly of this machine may bring the electric or some other dangers. The incorrect reassembly may cause electric shock in the future using (unless operation under the instruction of professional engineers).

2.16 Under the following conditions, you need to pull the plug out from the receptacle, and consign the repairing work to the qualified repairing center:

A. When the cable and the plug are broken.

B. If some liquid inflow the machine.

C. If this machine is rained or watered.

D. If operation is done as what the instruction says, but this machine cannot work, you can only adjust the

controlling part of this machine. Otherwise if you adjust other parts incorrectly, you may cause damage of this machine. As to the complex work, you had better ask the qualified worker for help, which can make the machine work orderly.

E. If this machine falls down to the floor from the high position or the body of the machine are broken.

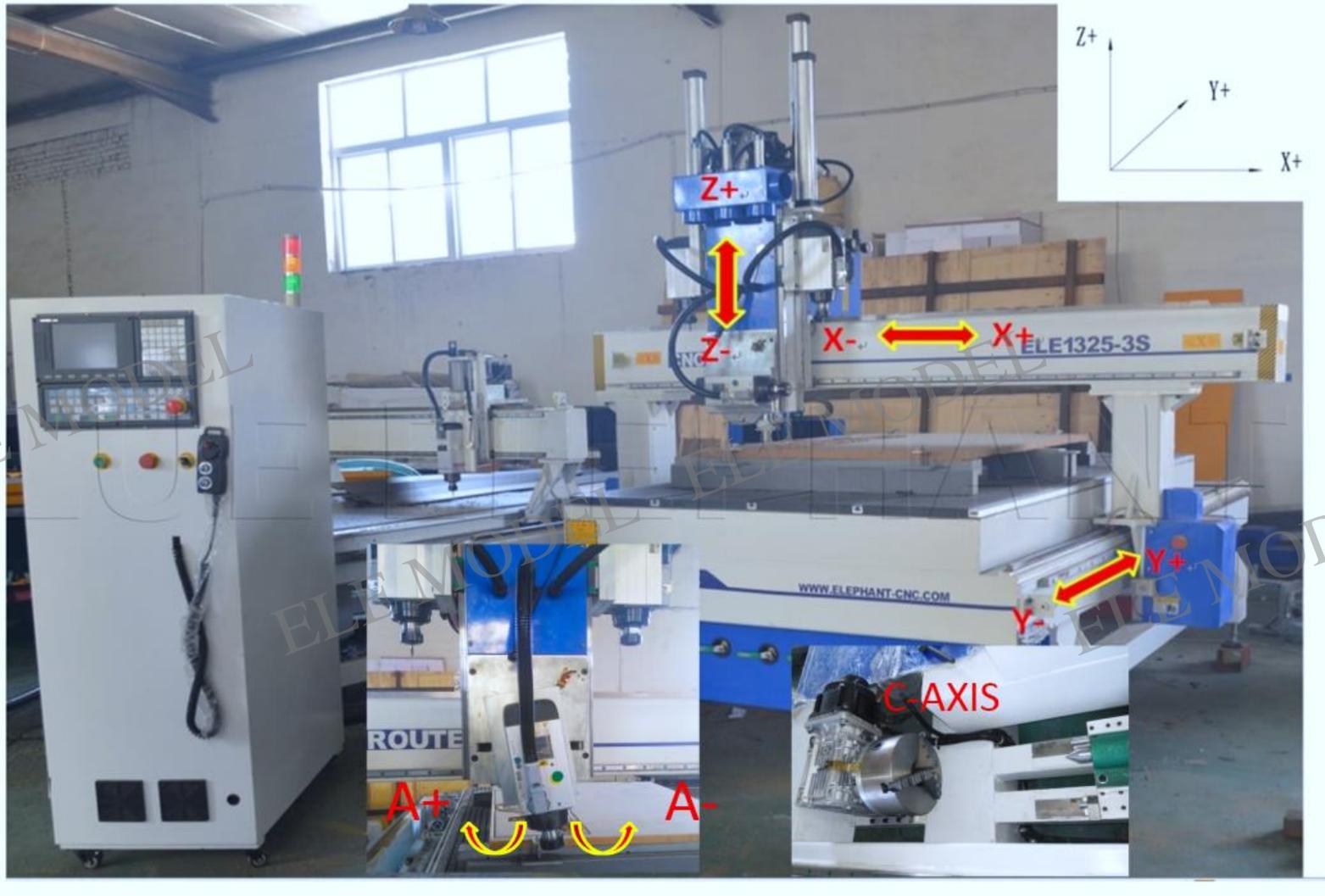
F. If obvious changes of the machine's function occur.

2. 17 Avoid using the machine when it thunders. Or it can cause faraway electric shock.

The transportation, installation and maintenance make the machine operate well.

### 3. Machine introduction and installation

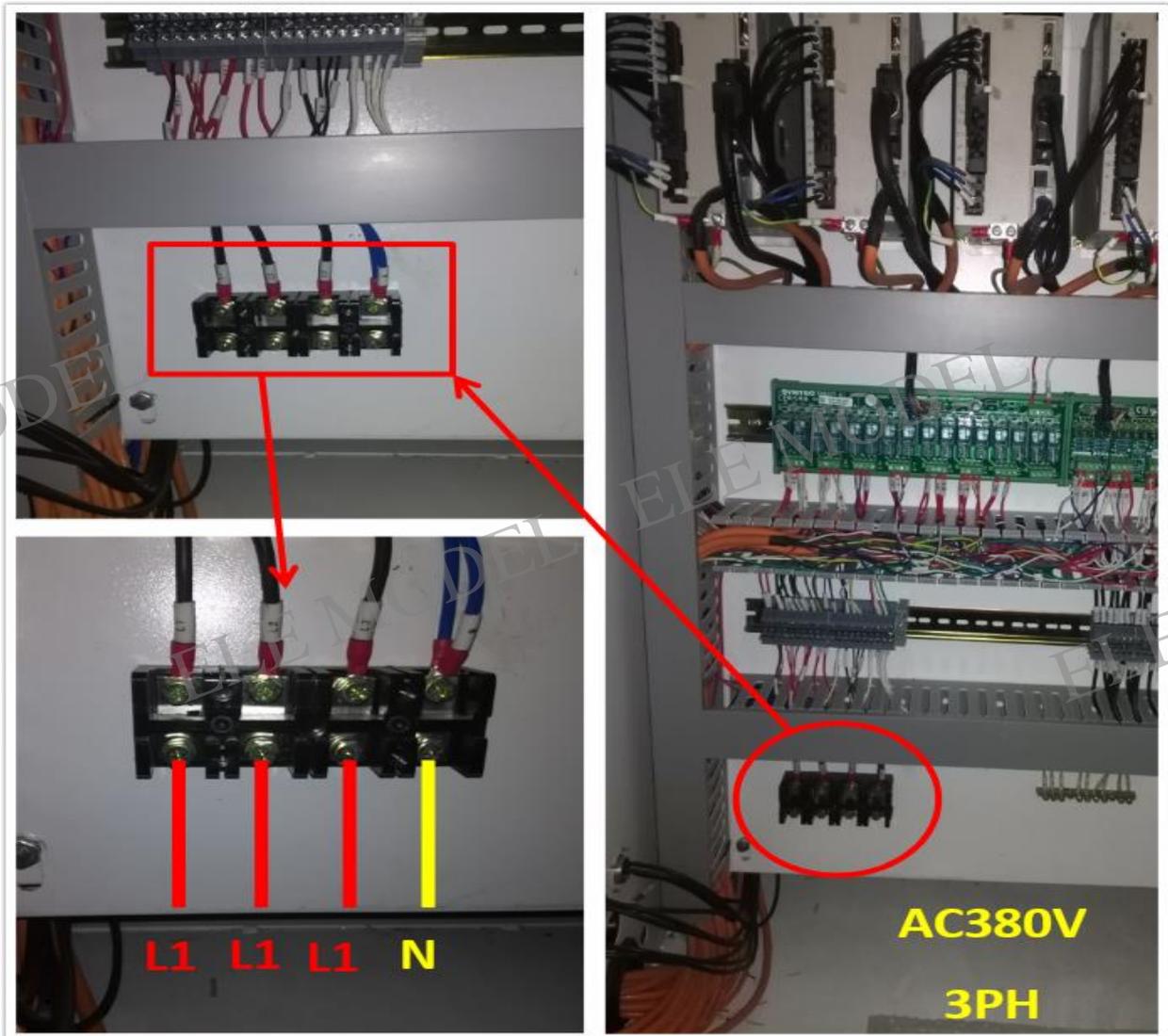
#### 3.1 Machine



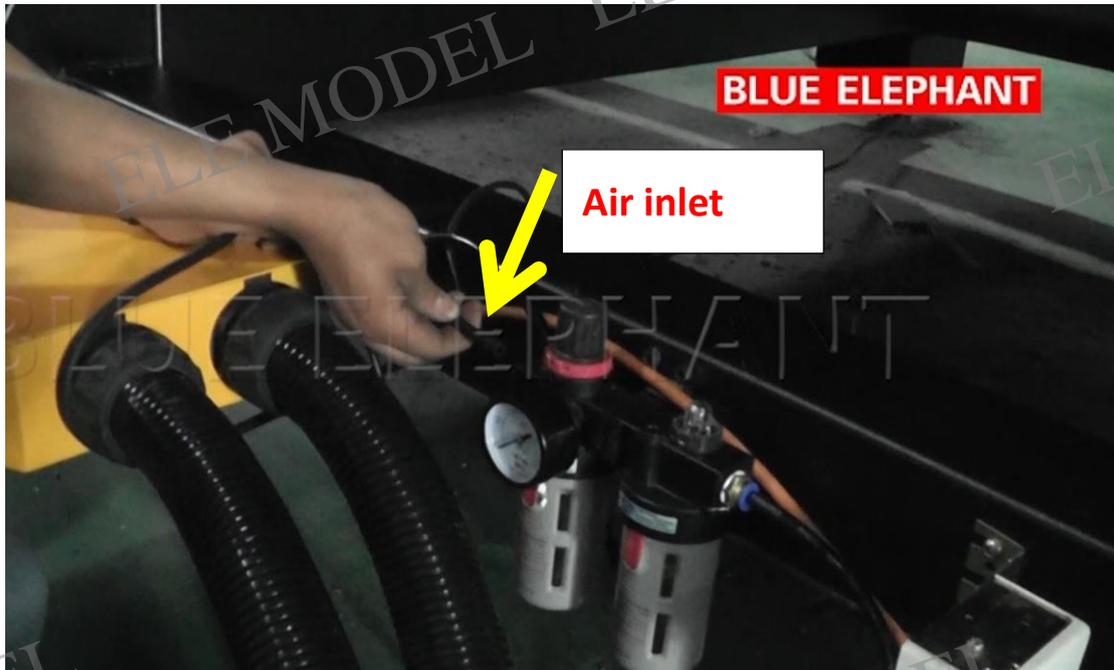
## 4. Machine installation

### 4.1 Power

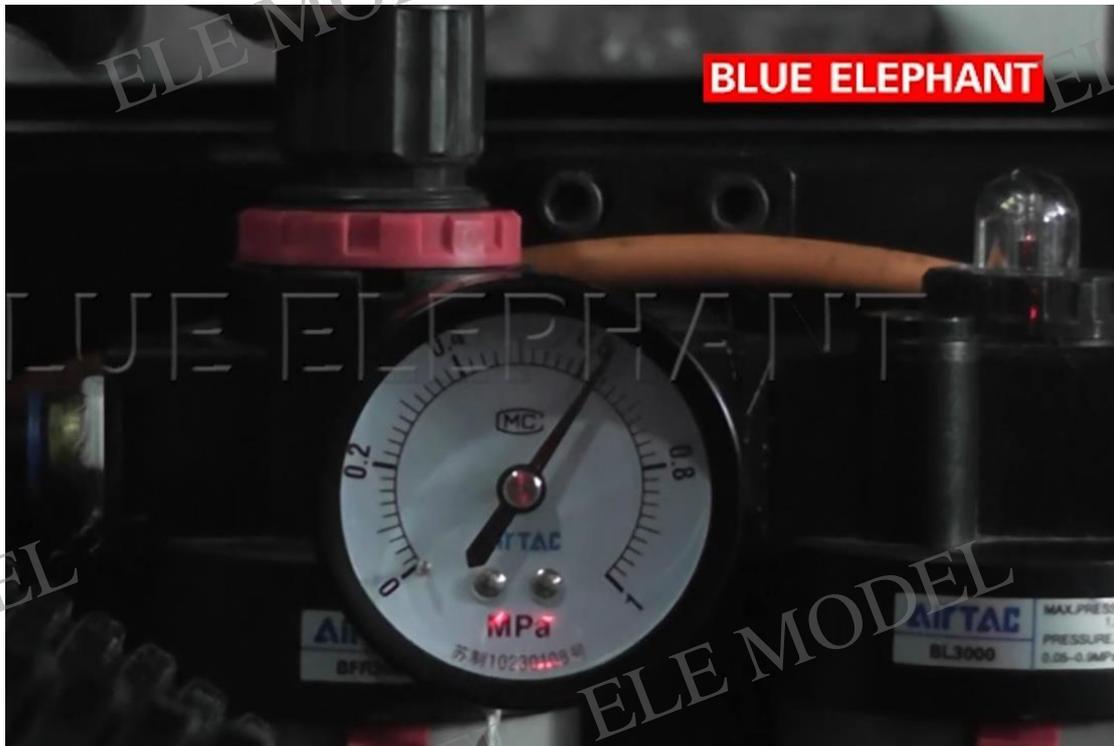
A, Main power supply



#### 4.2 Connect compressed air



Please the air pressure between 0.6-0.7Mpa



## 5. Operation



### 5.1 Power on

Step1: Turn on the main power

Step2: Release the **Emergency buttons(2)**.

Step3: Press the green button **Power on(1)**

## 5.2 Back to home

### HOME

Because tool and workpiece coordinate setting is based on Machine zero point, it is necessary to make sure where machine is zero (HOME). Therefore, when CNC restarts, return to reference point (search HOME) is very important. Otherwise, SYNTEC CNC controller will not be allowed to execute AUTO NC files.

After power on we need back to home .

a, Then you will see the key  ,light on .



: HOME . The light on mean machine need back to home .

b ,The screen show like this



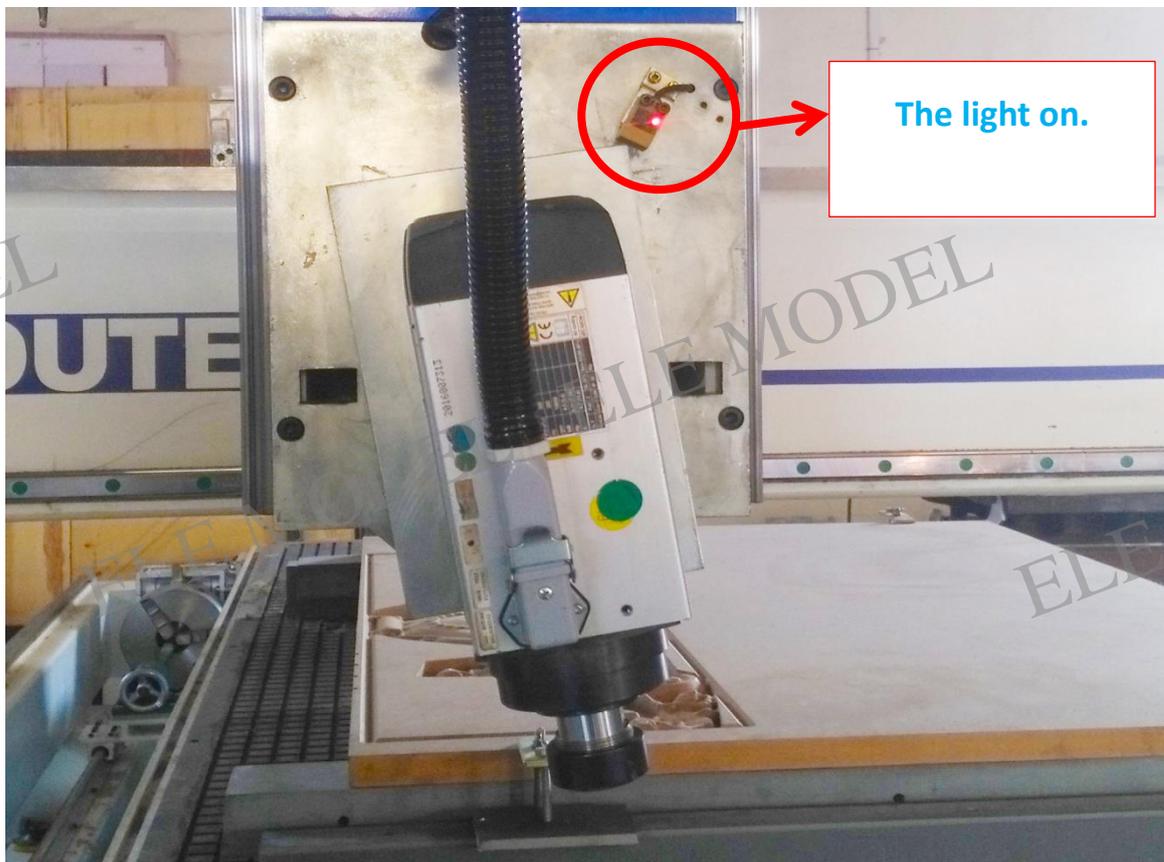
C, So now we need back to home.

Step1. First Z, press the key .

Step2. Second X axis, press the key .

Step3. Third Y axis, press the key .

Step4. The fourth axis A axis back to home ,we need change the mode JOG  OR  MPG. Then turn the A axis like this picture.

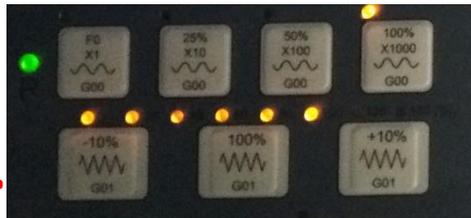
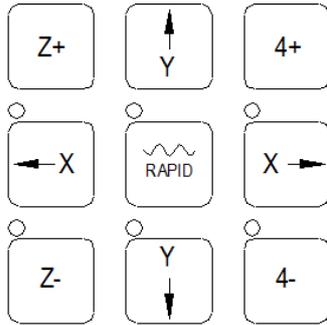


Then press the key , second press .

### 5.3 About JOG mode .

Press the key 

Then you can use the keys to control Machine.



Speed

### 5.4MPG mode

Press the key , then you can use MPG to control Machine.



## 5.5 Change axis by Manually



Please use change the mode to MPG  or JOG .

Please move Z axis up to here. Like the picture show the sensor light on.

**Attention:** please use low speed when z axis move up



Like this: the light on.

And, here is the tool select key.



F1: press F1, light on ,T1 will down ,and you can use T1. Press “CW” the spindle will turning .The other spindle will move up.

F2: press F2, light on.T2 will push out, and you cannot use T2,but you can Left and right swing the spindle . Press “CW” the spindle will turning.

**Attention: T2 only have three location  $90.520^{\circ}$  , $0^{\circ}$  , $-90.430^{\circ}$  .when the spindle push out ,you cannot cutting and engraving.**

F1: press F3, light on ,T3 will down ,and you can use T3. Press “CW” the spindle will turning .The other spindle will move up.

Change T2 and rotary axis .

1 , let T2 0°,T2 Vertical. like the picture show .



Then please do like this .

| Index | Item  | Value |
|-------|---|-------|
| 10    | *Serial alarm output type(0:A;1:B;2:Disable)  | 1     |
| 15    | the I/O board digital filter method           | 1     |
| 17    | *Control precision, BLU(1:10;2:1;3:0.1 micro) | 2     |
| 21    | *Port no. for X axis                          | 1     |
| 22    | *Port no. for Y axis                          | 2     |
| 23    | *Port no. for Z axis                          | 3     |
| 24    | *Port no. for 4th axis                        | 4     |
| 25    | *Port no. for 5th axis                        | 0     |
| 26    | *Port no. for 6th axis                        | 0     |
| 41    | X axis motor polarity                         | 0     |
| 42    | Y axis motor polarity                         | 0     |
| 43    | Z axis motor polarity                         | 1     |
| 44    | 4th axis motor polarity                       | 0     |
| 45    | 5th axis motor polarity                       | 0     |
| 46    | 6th axis motor polarity                       | 1     |
| 61    | X axis encoder resolution(En:p/rev;Sc:p/mm)   | 2500  |

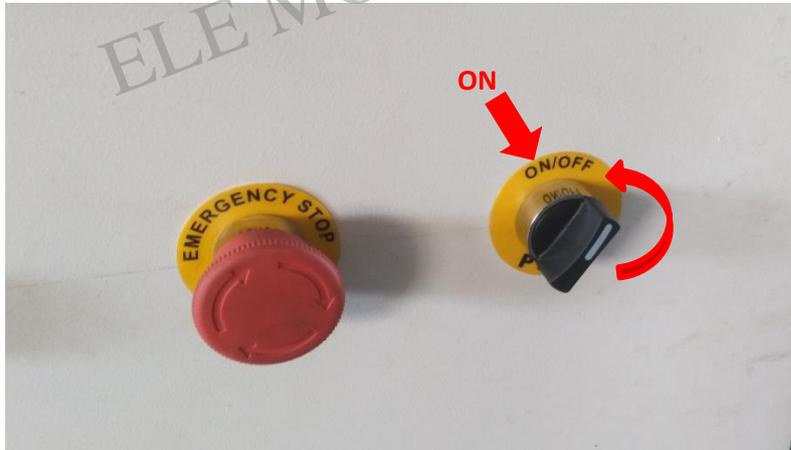
Not Ready MFC Alarm

All Parameter Service Param Setting Maker Param Setting Compensation Param Goto Param

Parameter 24: 4 → 0

Parameter 26 : 0 → 4

Then turn the switch on .



Next ,We need restart the machine Power off the machine ,then start .

Now we can use the rotary.

Attention :

Mode rotary

Parameter 24: 0

Parameter 26: 4

Switch : ON

Mode T2

Parameter 24: 4

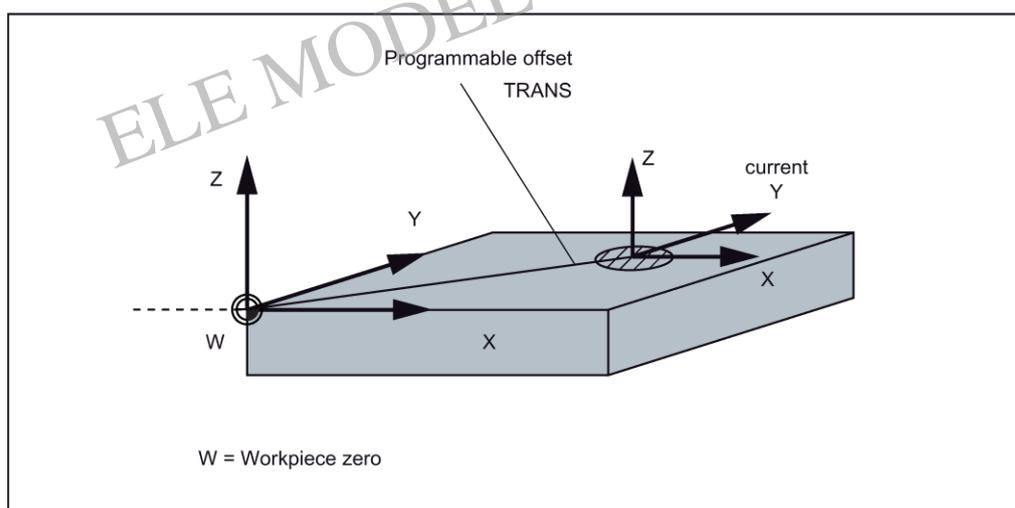
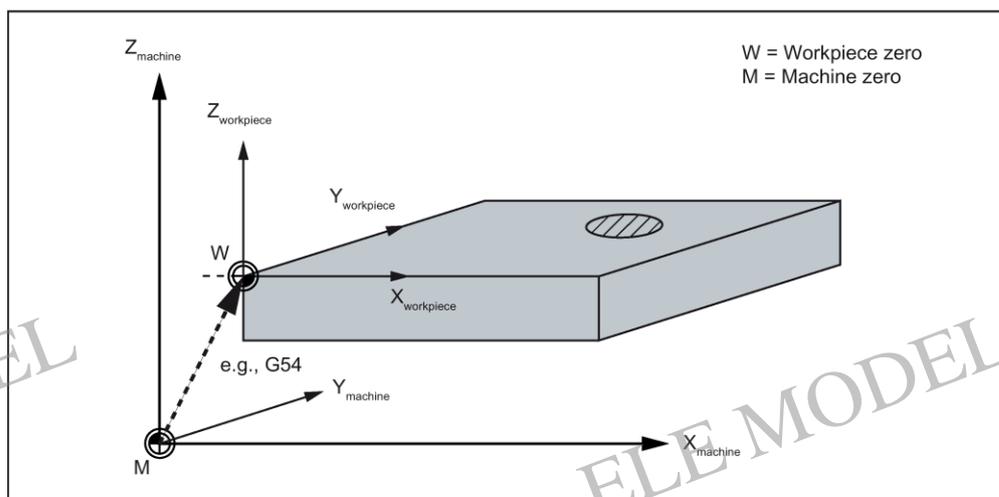
Parameter 26: 0

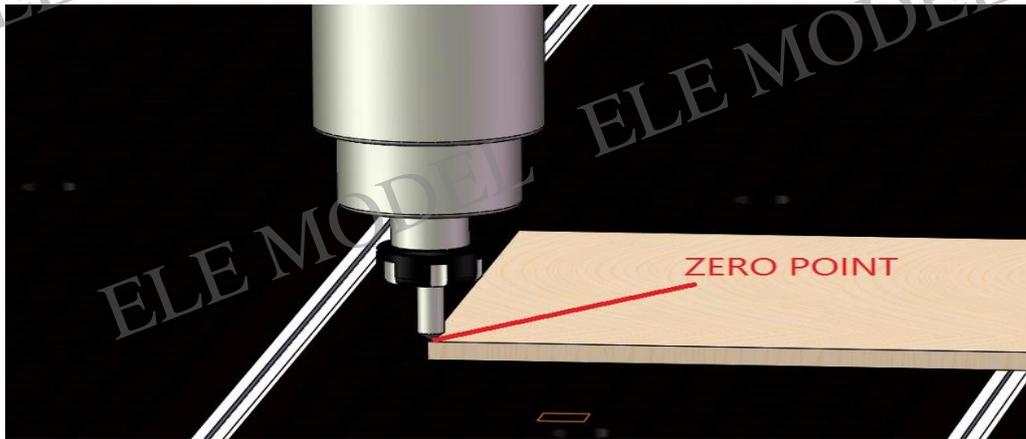
Switch : OFF

## 5.6 Set workpiece zero point

a, Please use MPG  or JOG  mode.

b, Move the tool to the surface of the workpiece.





c, Ok. Now, do not move the tool. We back to panel



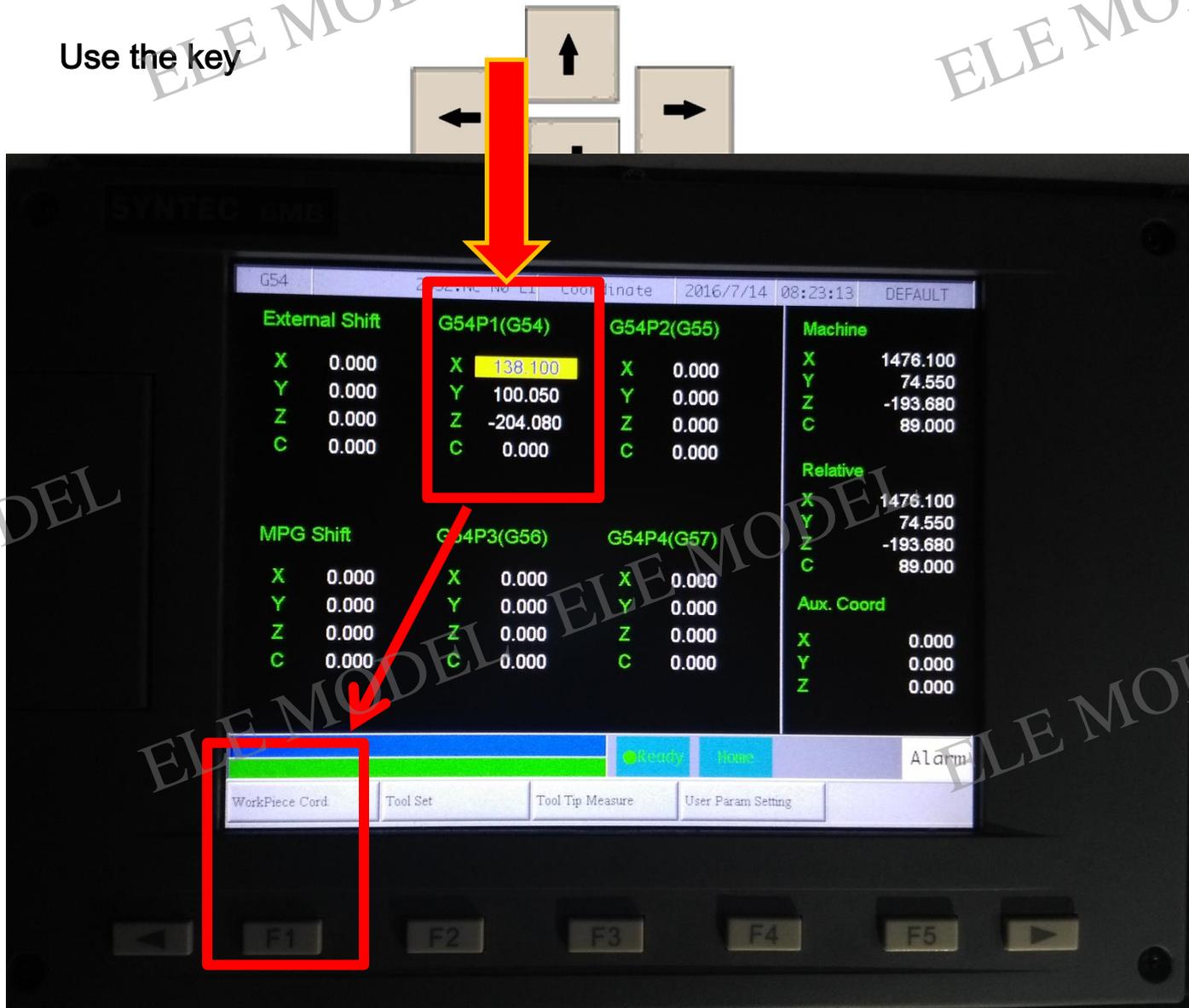
You will see.



Press F3: offset/setting.

Next.

Use the key



Press the key : F1 Workpiece Cord

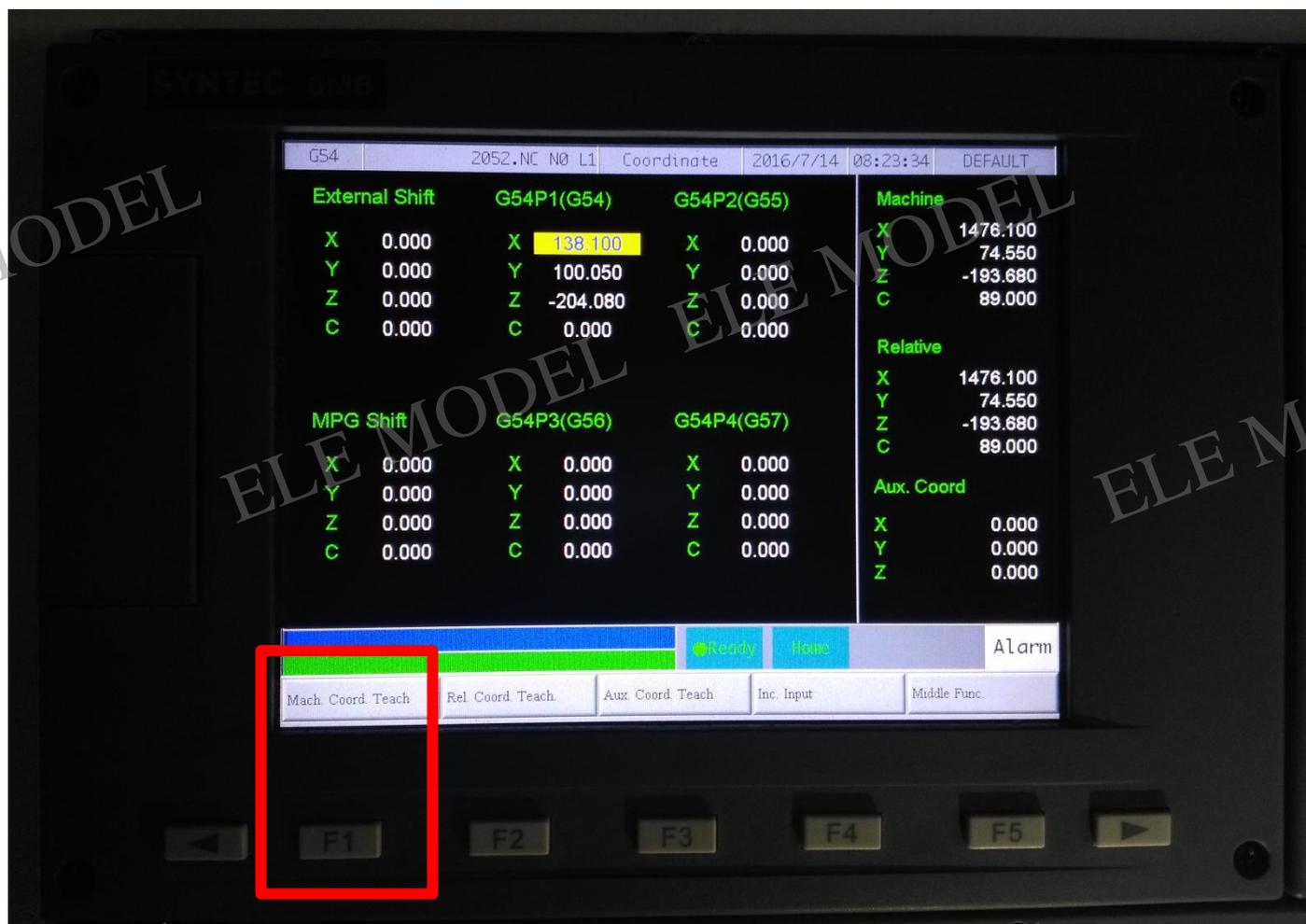
Then

You will see .

ELE MODEL

ELE MODEL ELE MODEL

ELE MOD



ELE MODEL

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ELE MOD

Press :F1 Mach Coord Teach

ELE MODEL

ELE MODEL ELE MODEL

ELE MOD



ELE MODEL

ELE MODEL ELE MODEL

ELE MOD

Do you want to **【Mach Coord Teach】** ?

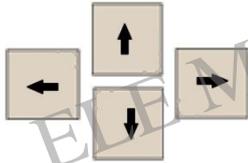
Please press: F1 Yes

So now, we have set X zero point .Y,Z,C axis the same steps.

ELE MODEL ELE MODEL

ELE MOD

**Attention:**



1. Direction keys

## 2. Offset/setting:

Offset/Setting

Function :User can set up the coordinate system and tool offsets with this

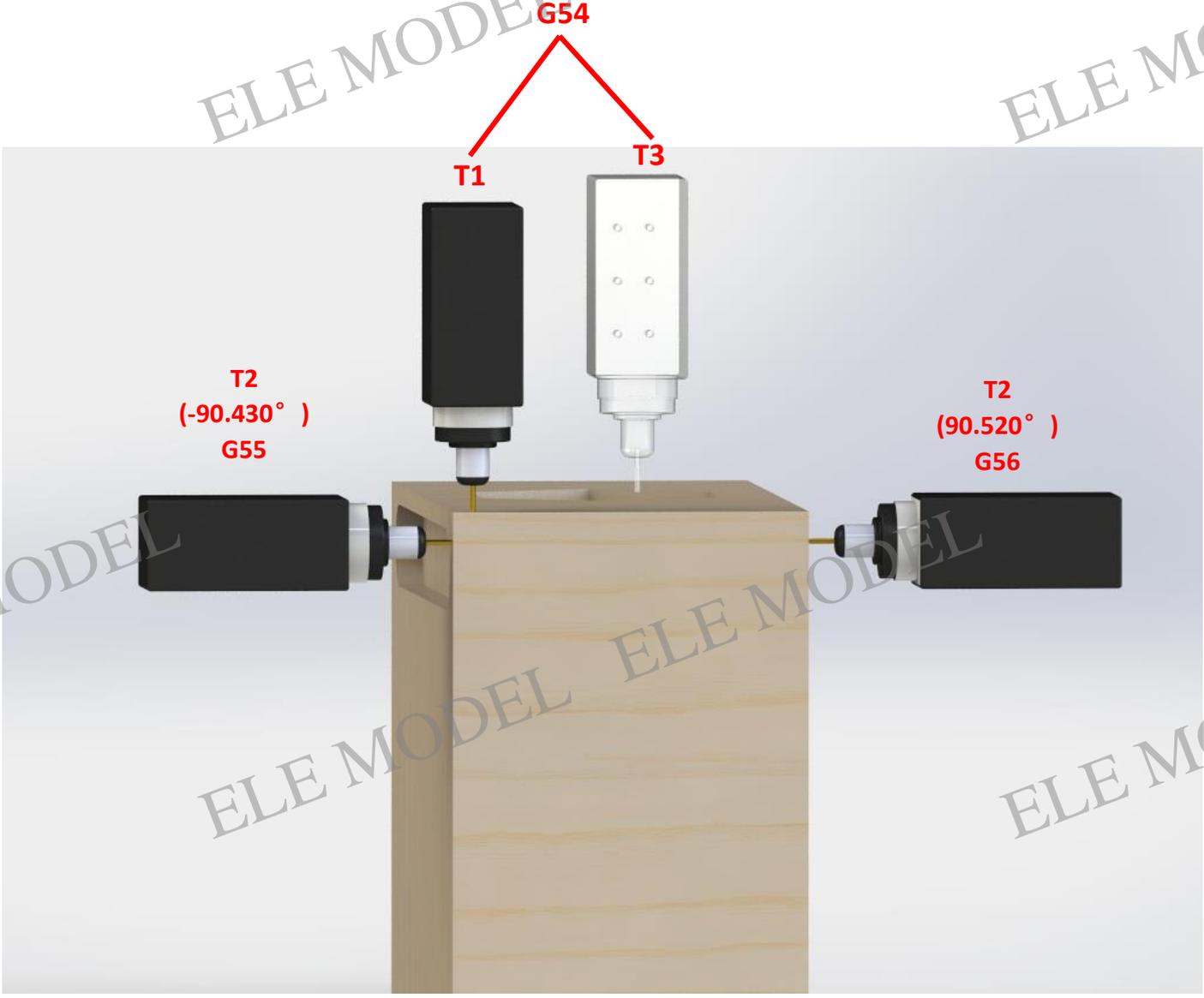
function. With the function key

【Offset/Setting】 can switch the page quickly to the Offset/Setting page.

This machine how to set the workpiece zero point .Here is the steps.

Attention here is just the T2 mode.

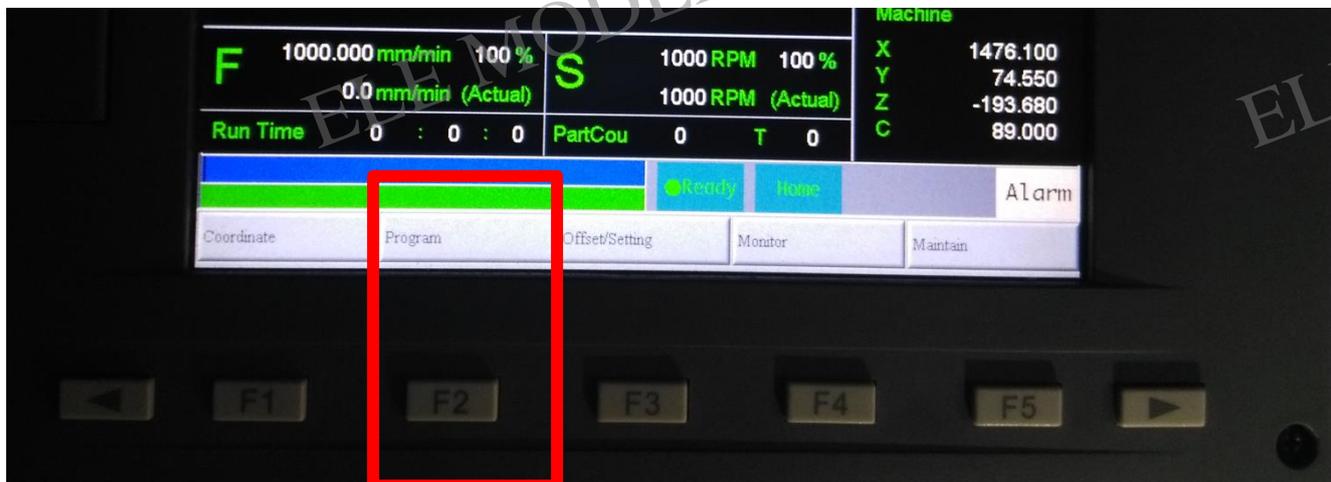
T1 T2 T3 have their Independent coordinate system.



## 5.7 File manager



You will see here.



Or here

ELE MODEL

ELE MODEL

ELE MODEL

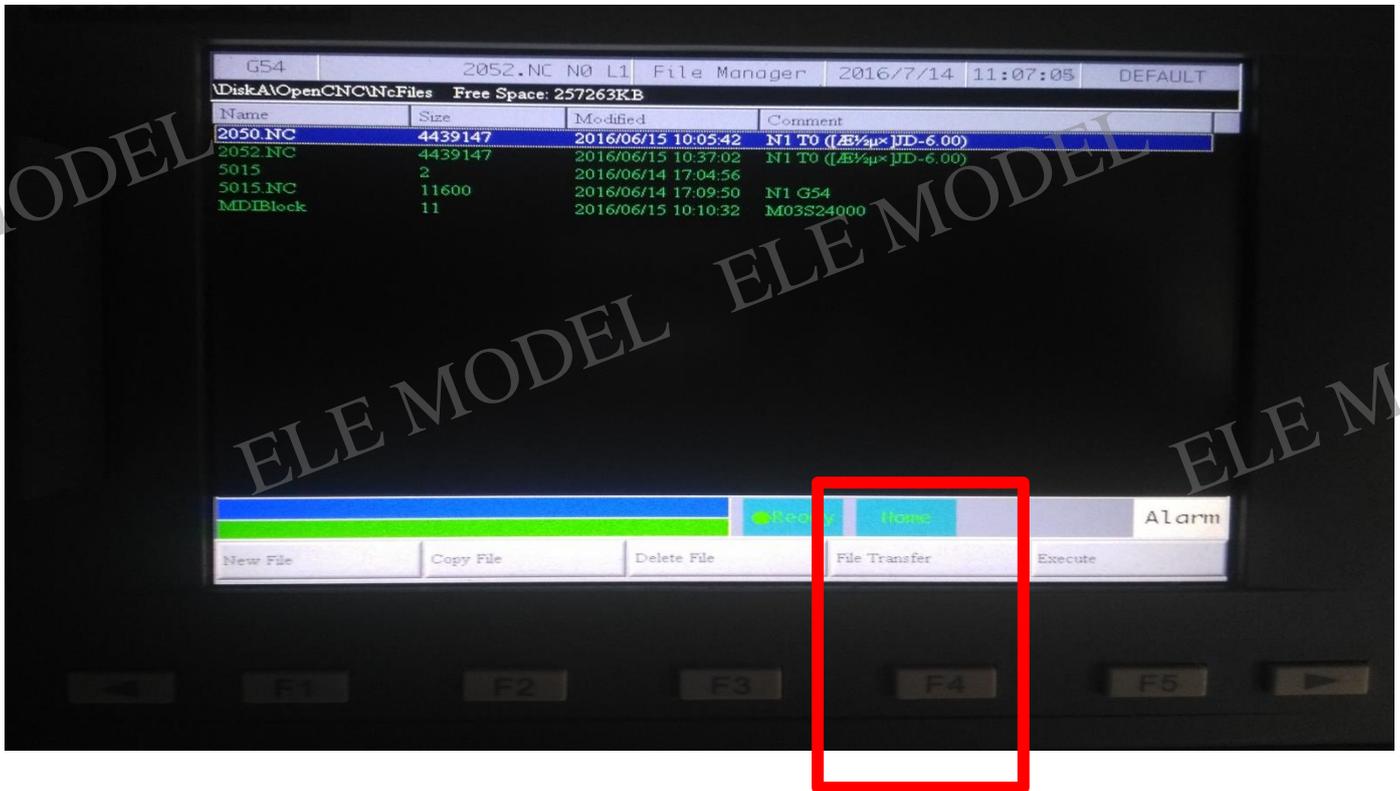


Press "F2 Program " or press "PROG FILE", Then you will see.

ELE MODEL

ELE MODEL

ELE MODEL

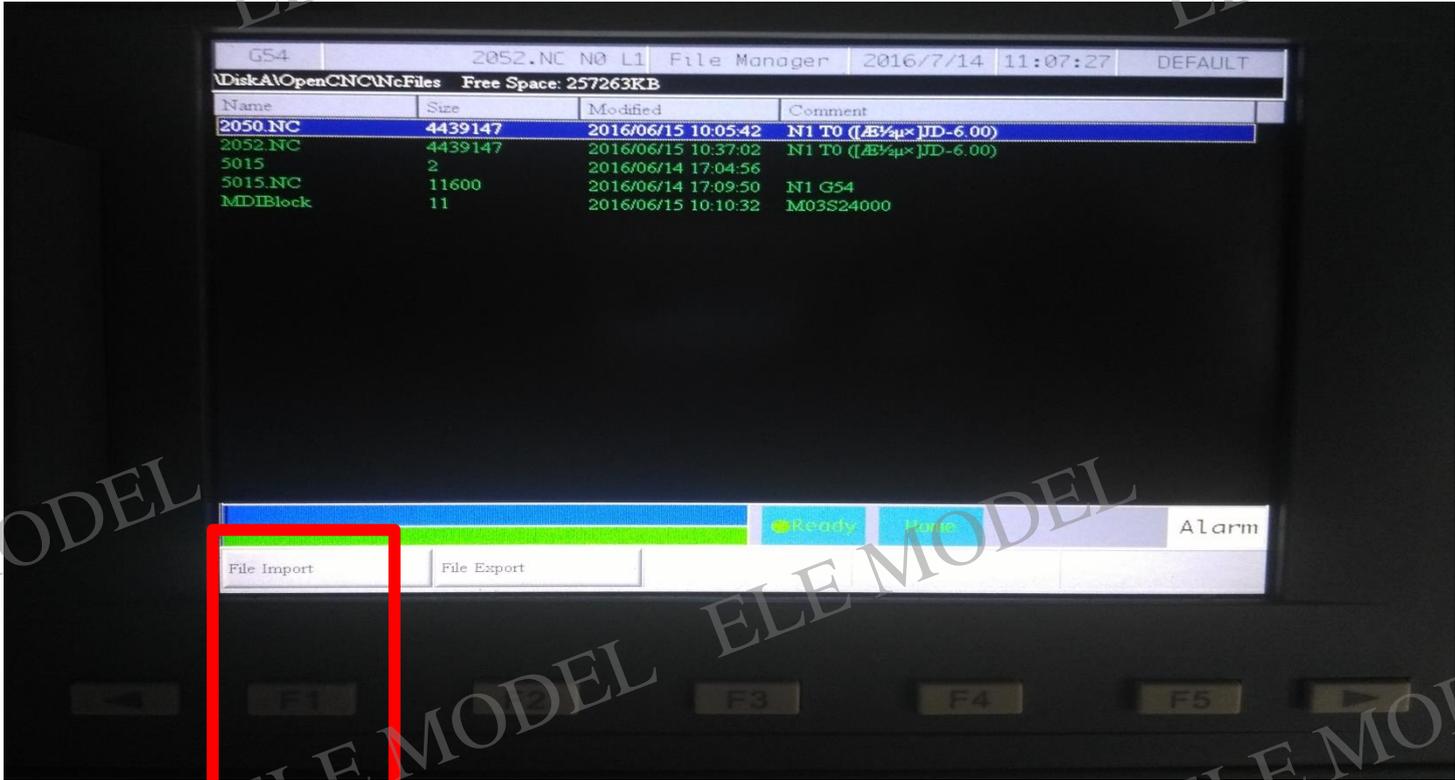


ELE MODEL

ELE MODEL

ELE MODEL

# F4 File Transfer



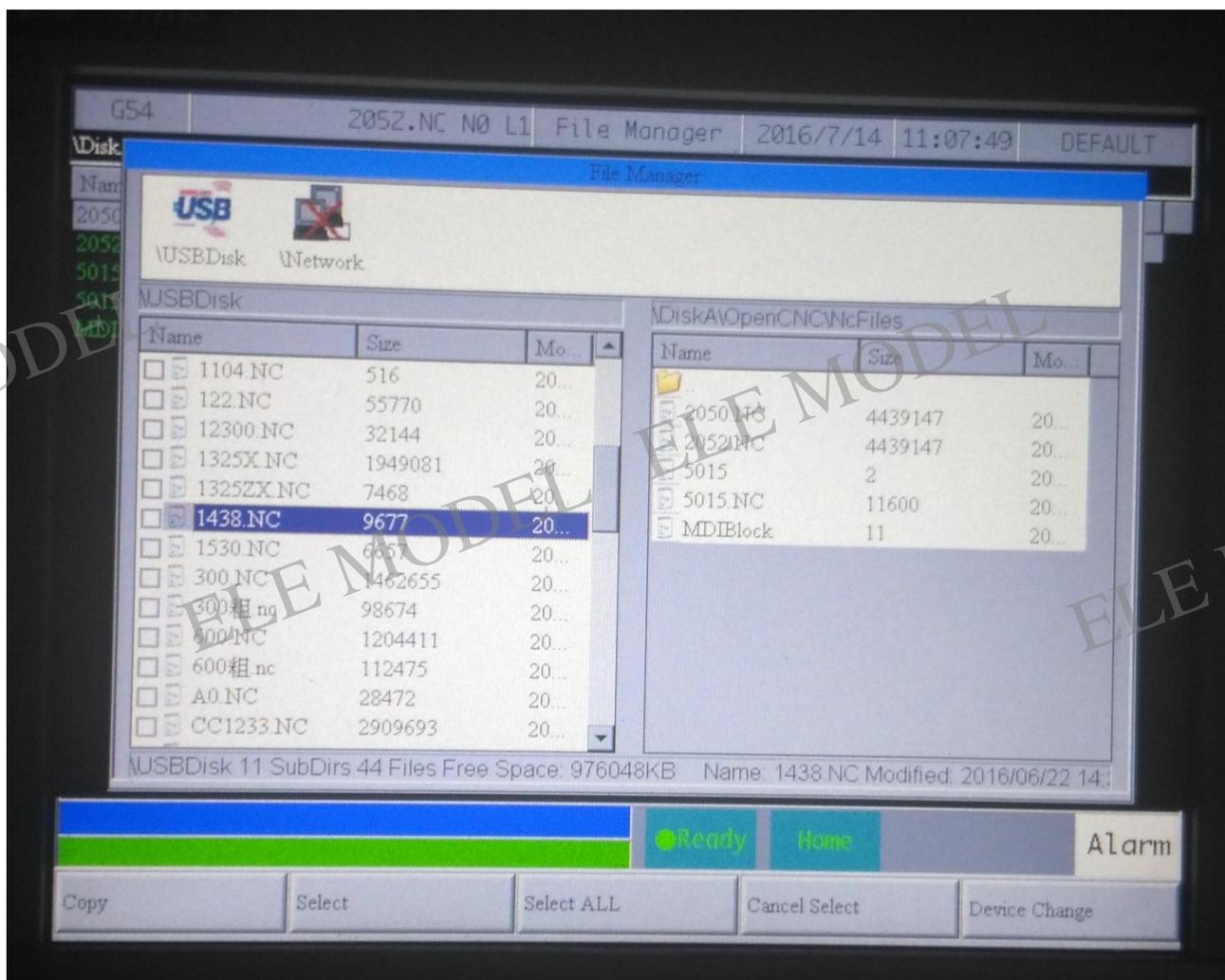
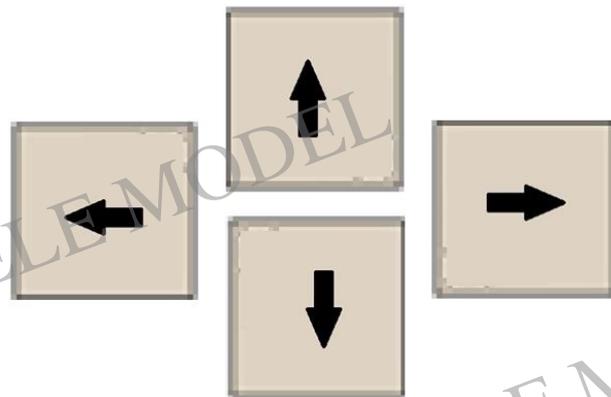
F1 File Import

ELE MODEL

ELE MODEL

ELE MODEL

ELE MODEL



Select then Copy.

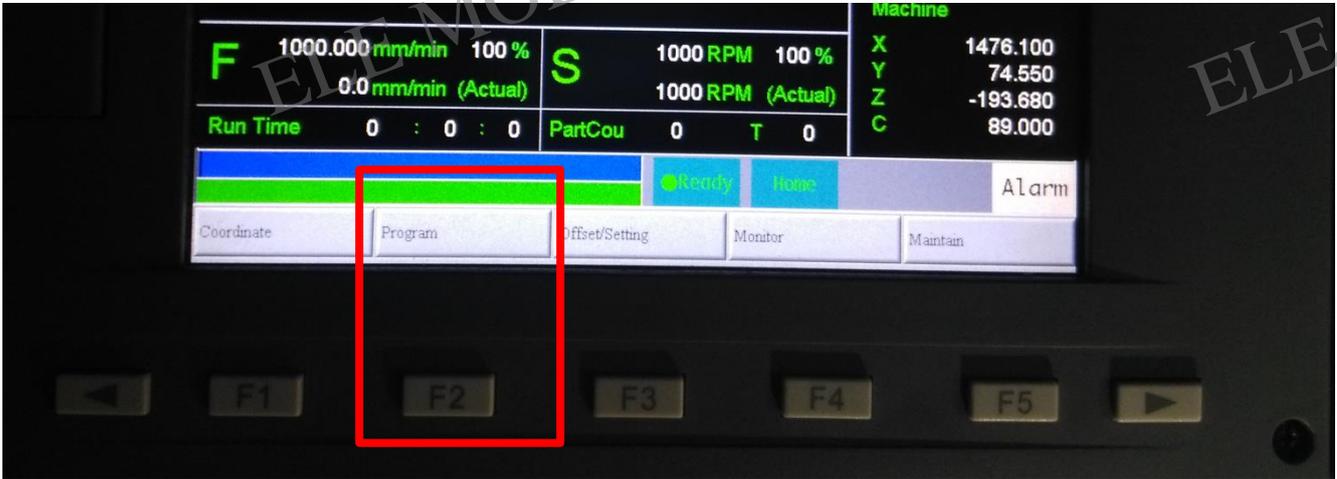
ELE MODEL

ELE MODEL

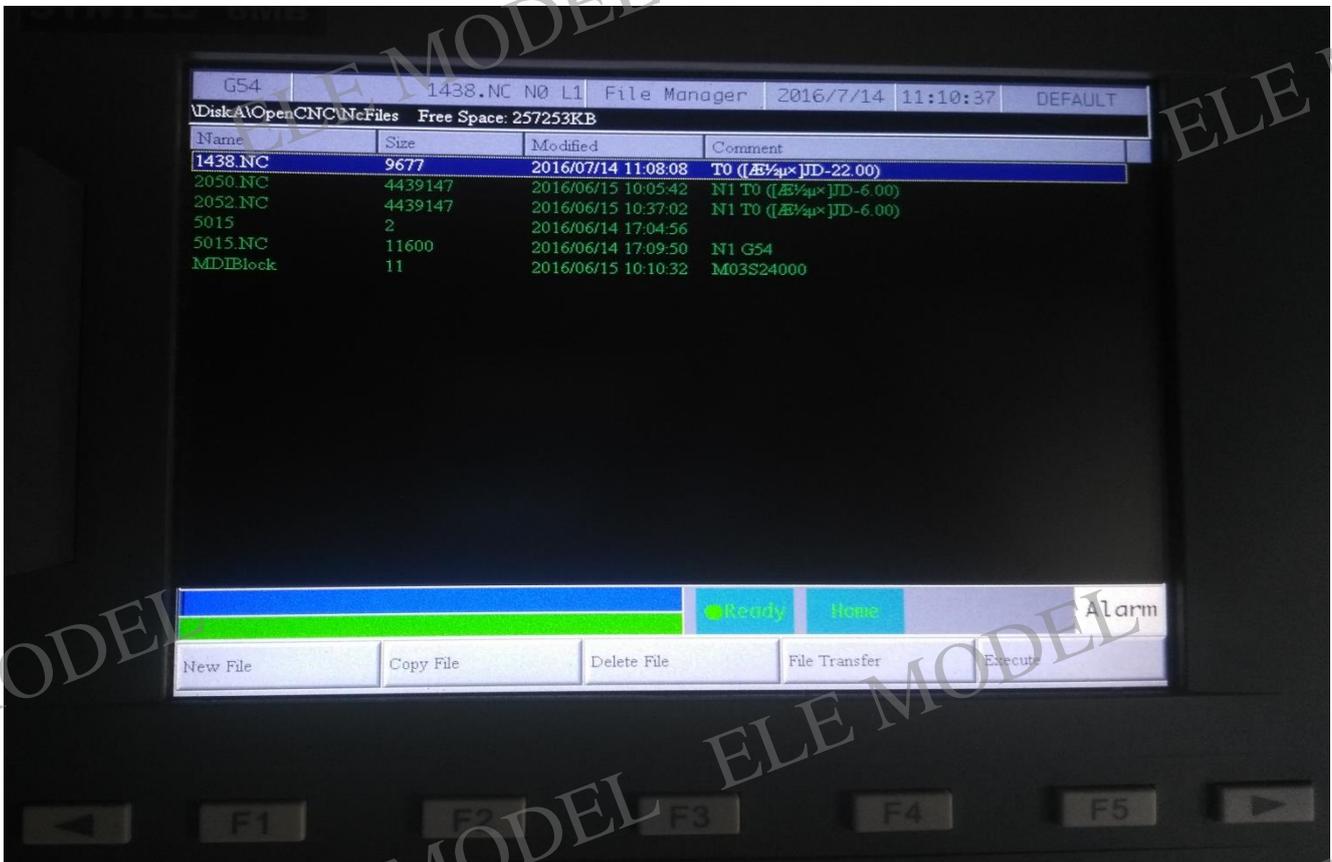
ELE MODEL

## 5.7 Execute and Auto run

Execute file



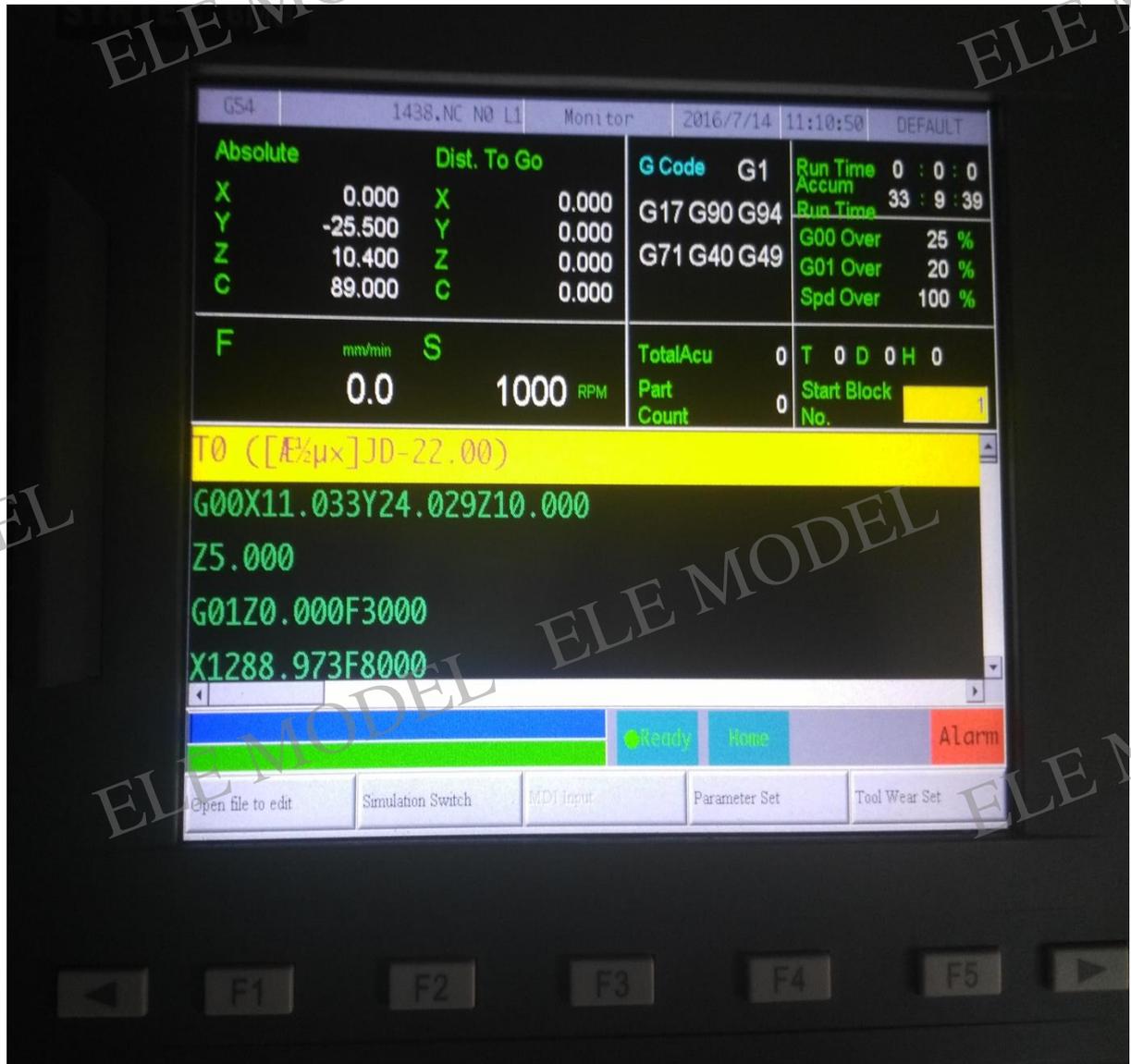
F2 Program ,then.



Select the file (like the picture the file have selected.)

Press the key F5 Execute

You will see like this



Press **F2 Simulation switch**, you will see.



Then auto run the program.

**Attention:**

1, Mark 3 it is the speed, please use low speed (about 30%) at first.

## 2 MPG Simulation



Enable this function under 「AUTO」 and 「MDI」 Mode, the percentage of moving speed is depend on the MPG turning speed. This function used to check NC file.



Press  or , then press , last press . then you can use the MPG to check the Nc file.



Step 1:press AUTO

Step 2: press Cycle start

The machine will work by AUTO .