



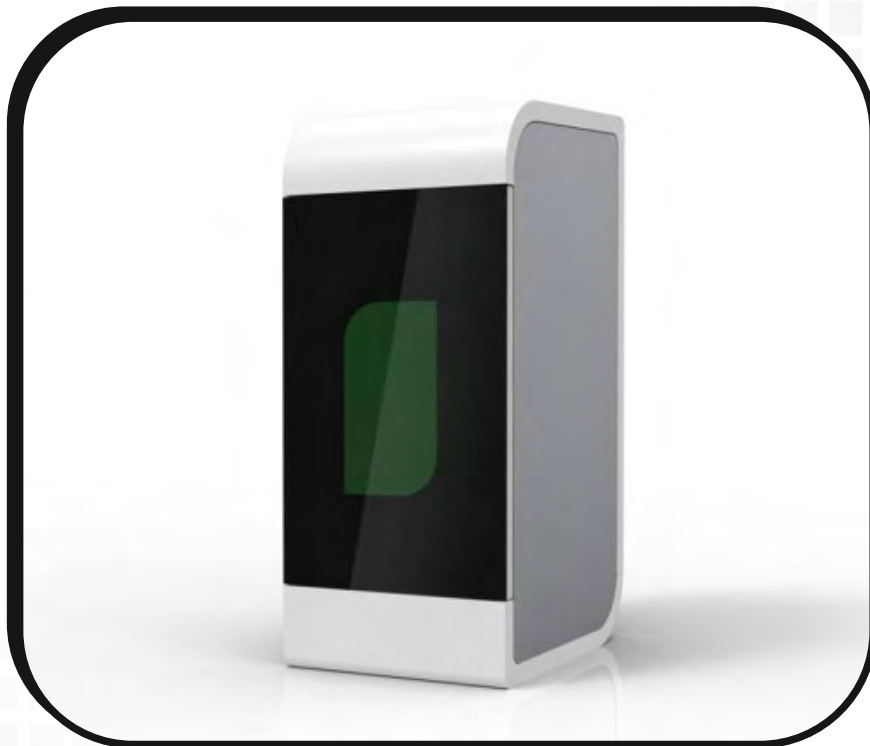
H. WINTER

HOLZTECHNIK
Leipzig

USER MANUAL

WINTER LASERMAX FIBER FL 30

Faser Lasermarkiermaschine



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Preface

Thanks for you using our products. We can provide you the perfect after-sale service and comprehensive solution. For quickly and efficiently using this equipment, please keep this manual and other attachment carefully.

This manual is only applied to the standard configurations of our products. For the special custom-made products, please read the attached instructions carefully.

This manual includes the description of the working principle, installation method, operation, transport, storage, maintenance and other instructions. If it is the first time using this machine, please read this manual carefully before installation.

For quick and efficient using this equipment, the user should meet conditions as below:

- I. Users should have some computer professional knowledge, can operate related editing and drawing software, such as Coreldraw, Photoshop, Auto-CAD and so on.
- II. The operator should have some optical knowledge and related electromechanical device's maintenance knowledge.
- III. Before starting the equipment, make sure this equipment's operation procedure is known well and do accordingly.

As a result of the product function is continuously updated, the product you receive may be different with the manual stated in some aspects. Here I express my sincere apology for it.

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ONE. Product Introduction

- Standard Voltage AC 220V 50HZ.
- Machine should be placed in dust-free and no radiation environment, room temperature is between 15 to 25 degrees.
- Adopts fiber laser source(fiber generator) to output laser, then through high-speed scanning galvanometer system to fulfill marking function
- The electro-optical conversion rate of fiber marking machine up to more than 70%, compare with diode pumped laser marking machine, fiber marker owns the higher beam quality.
- Maintenance-free time long
- Marking speed faster, with high-speed scanning galvanometer
- No consumables, low power consumption
- Air-cooled completely, don't need water chiller, energy consumption getting lower
- Not be affected by harsh environment and temperature change, can work with storage battery, car cigarette lighter in the condition of blackout.
- Products depreciation cost can be got lower heavily, so can fully meet customer volume-produce and steady production

TWO. Application Material

Mobile phone keypad, plastic translucent keys, electronic components, integrated circuits (IC), electrical appliances, communication products, sanitary ware, tools, accessories, knives, eyeglasses and clocks, jewelry, auto parts, luggage buckle, cooking utensils, stainless steel products and other industries.

Three. Accessories Included

- 1) Steel Ruler: a tool to measure the focal length
- 2) CD: includes operation software and user manual
- 3) Foot Switch: use this switch to control machine to fulfill repeated marking
- 4) Power Line
- 5) USB Data Cable: Connect computer and machine to make control machine more easier

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Notice : Accessories are different from each model. Please refer to the one received.

FOUR . Main Parts

4.1 Marking head



A Model

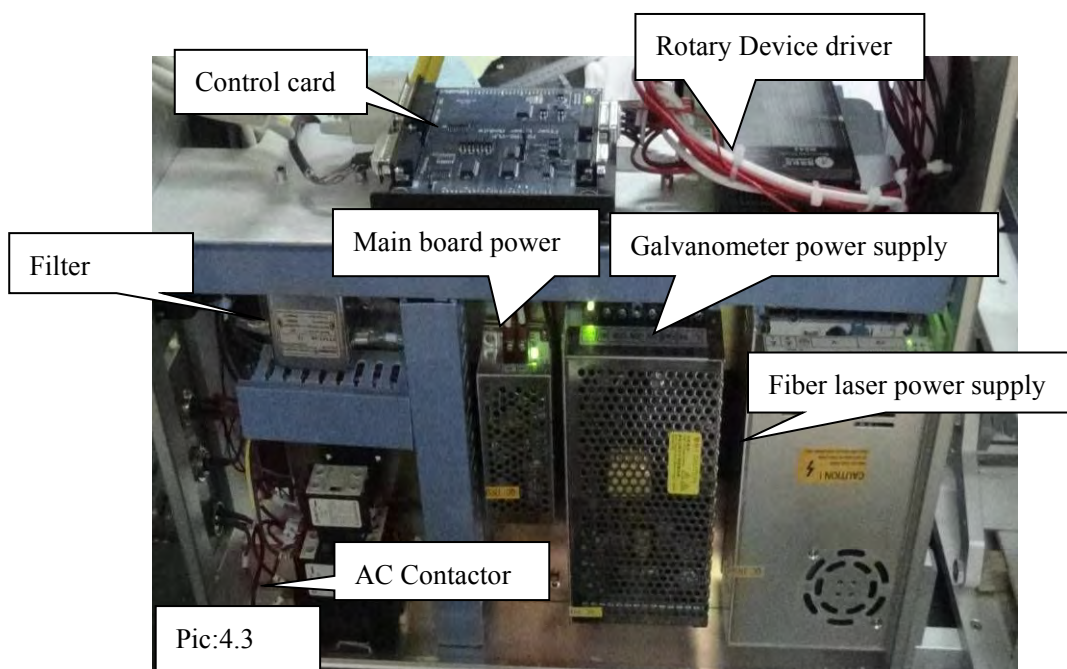


B Model

4.2 Control cabinet

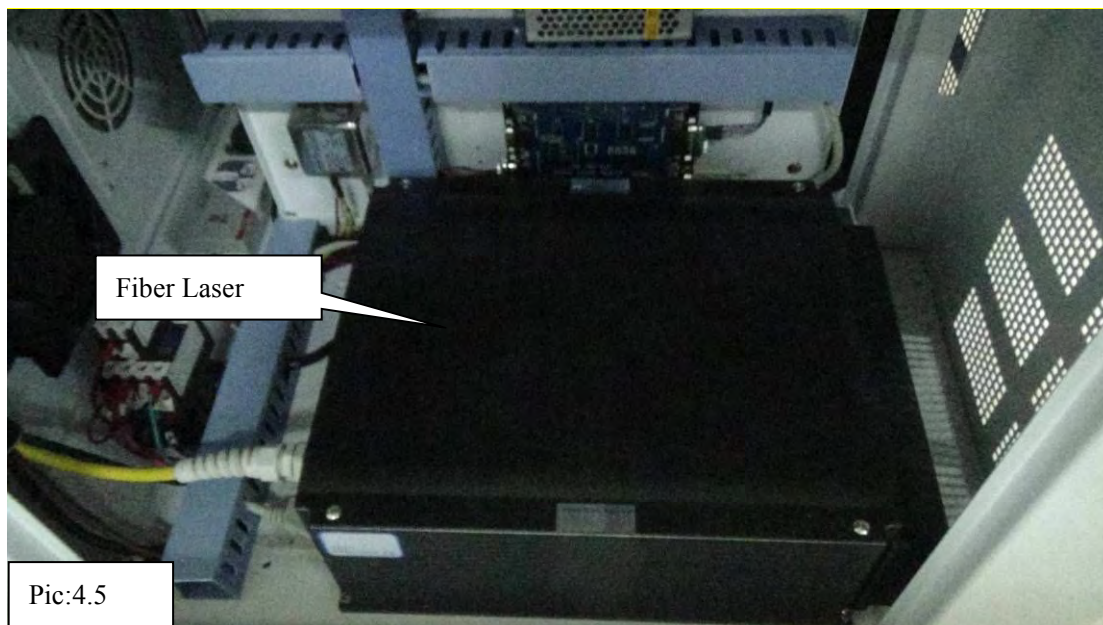
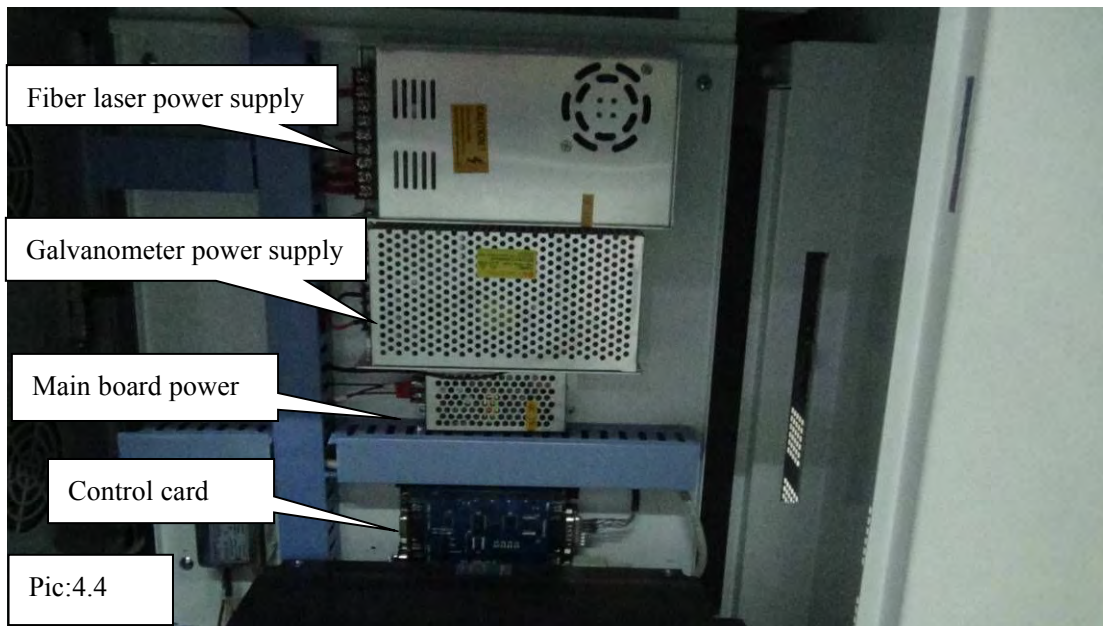
Control cabinet mainly consists of fiber module power supply, main board power, galvanometer power supply, control card, electrical relay, filter, terminal line, fiber laser

FP Model



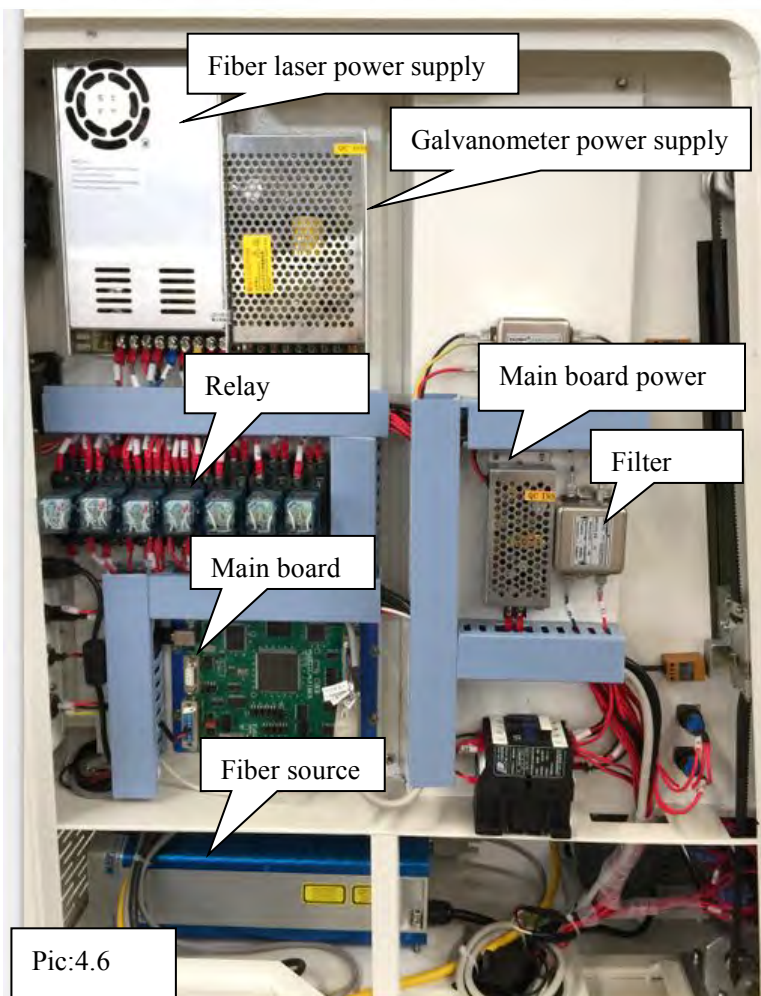
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FT Model



FC Model

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FIVE. Operation Introduction

5.1 Front operation interface

Mainly divided into front and back operation interface

Front operation interface mainly consists of Emergency stop button, fiber laser power supply and button.

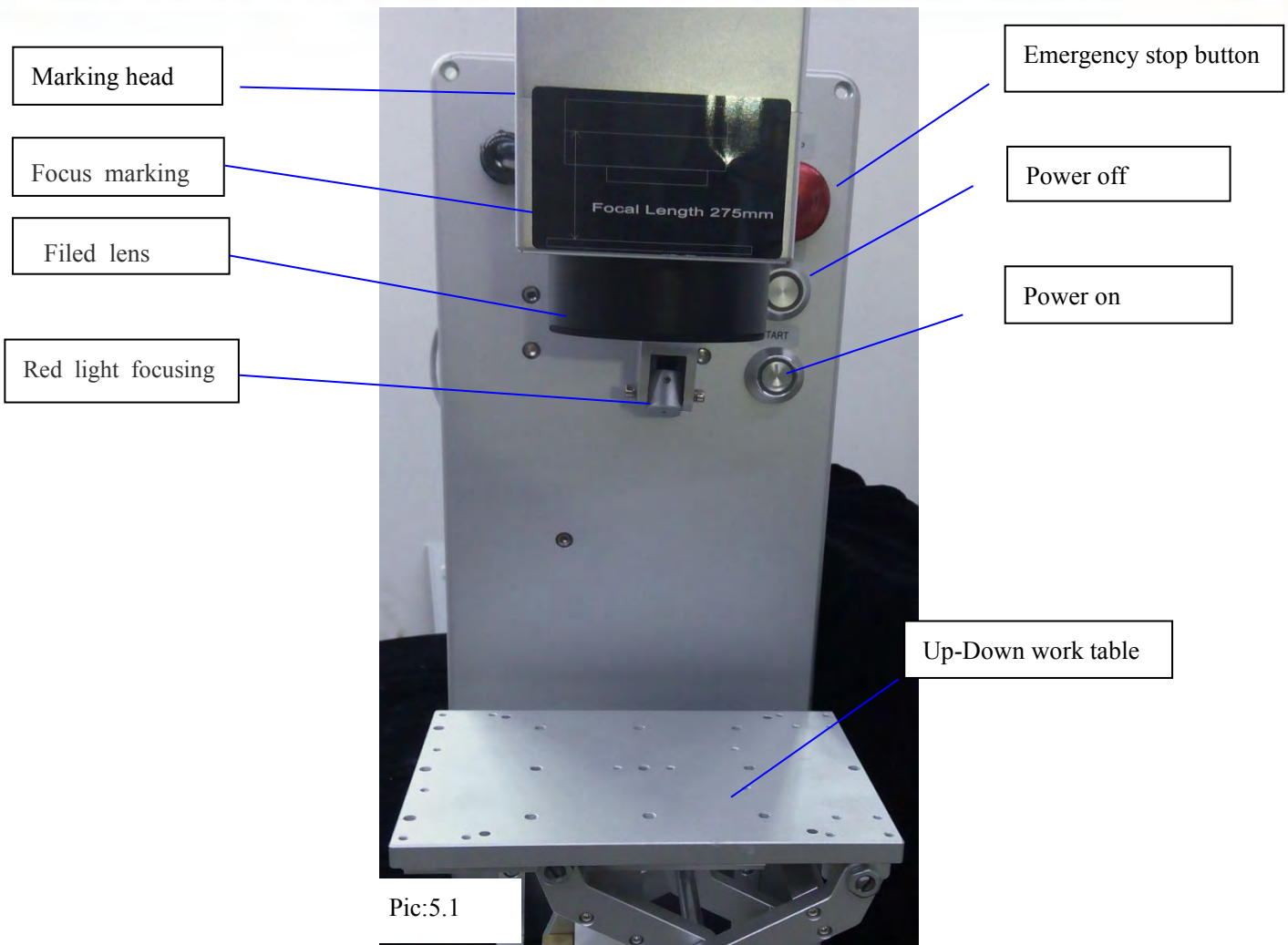
Emergency stop button: Keep open. There is an emergency or failure occurs by pressing, to cut off the main circuit

Power on : Open the laser power supply circuit. Shows at (Picture: 5.1) and (Picture: 5.3)

Power off : Closed the laser power supply circuit. Shows at (Picture: 5.1) and (Picture: 5.3)

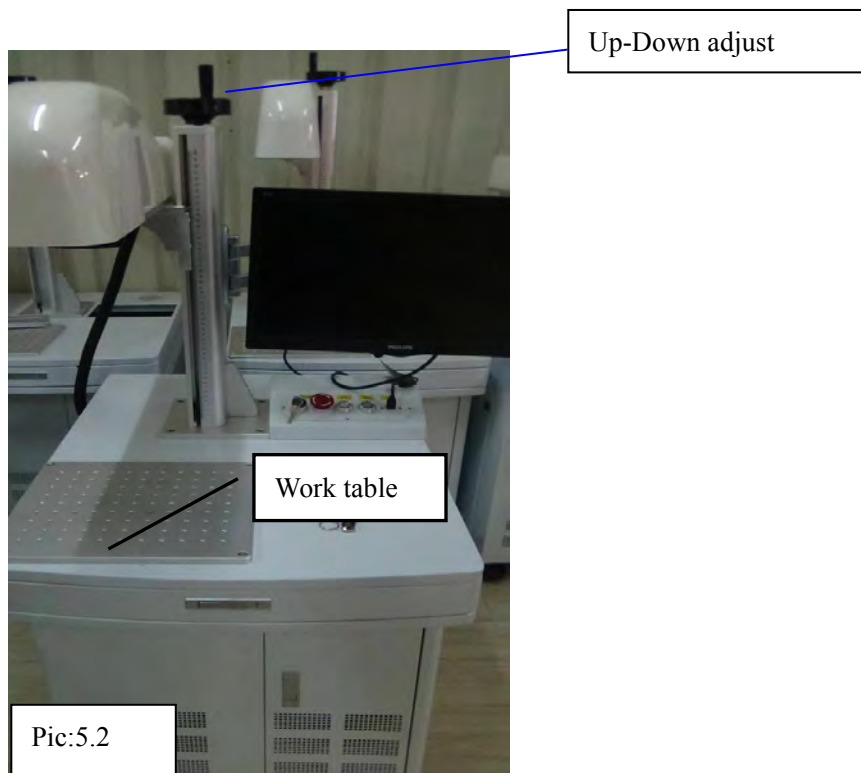
FP Mode

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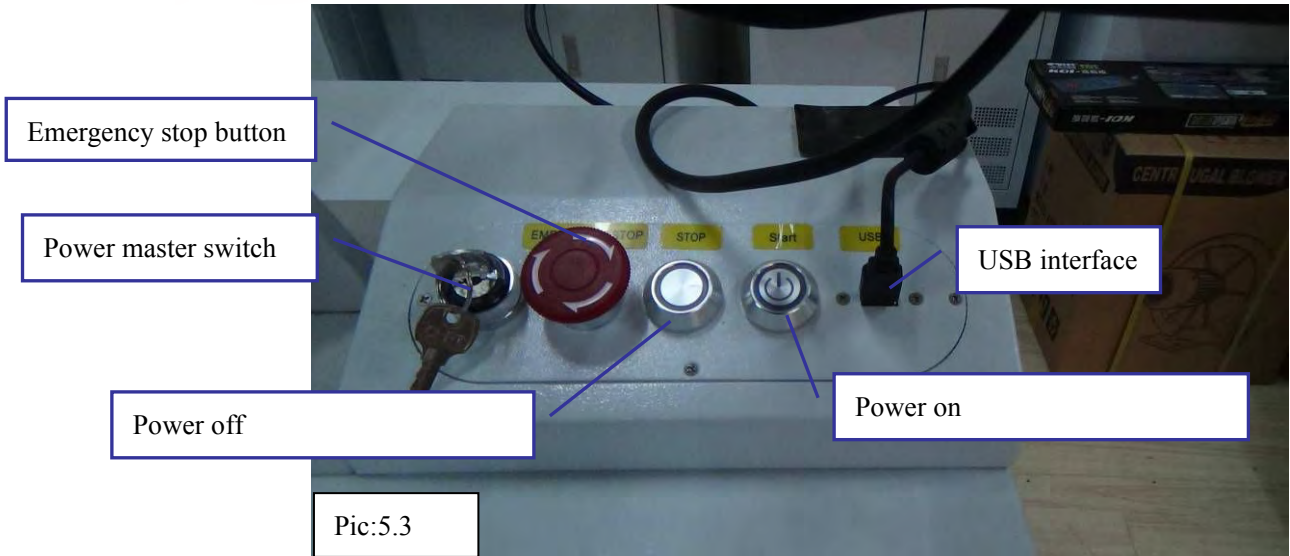
Pic:5.1

FT Mode

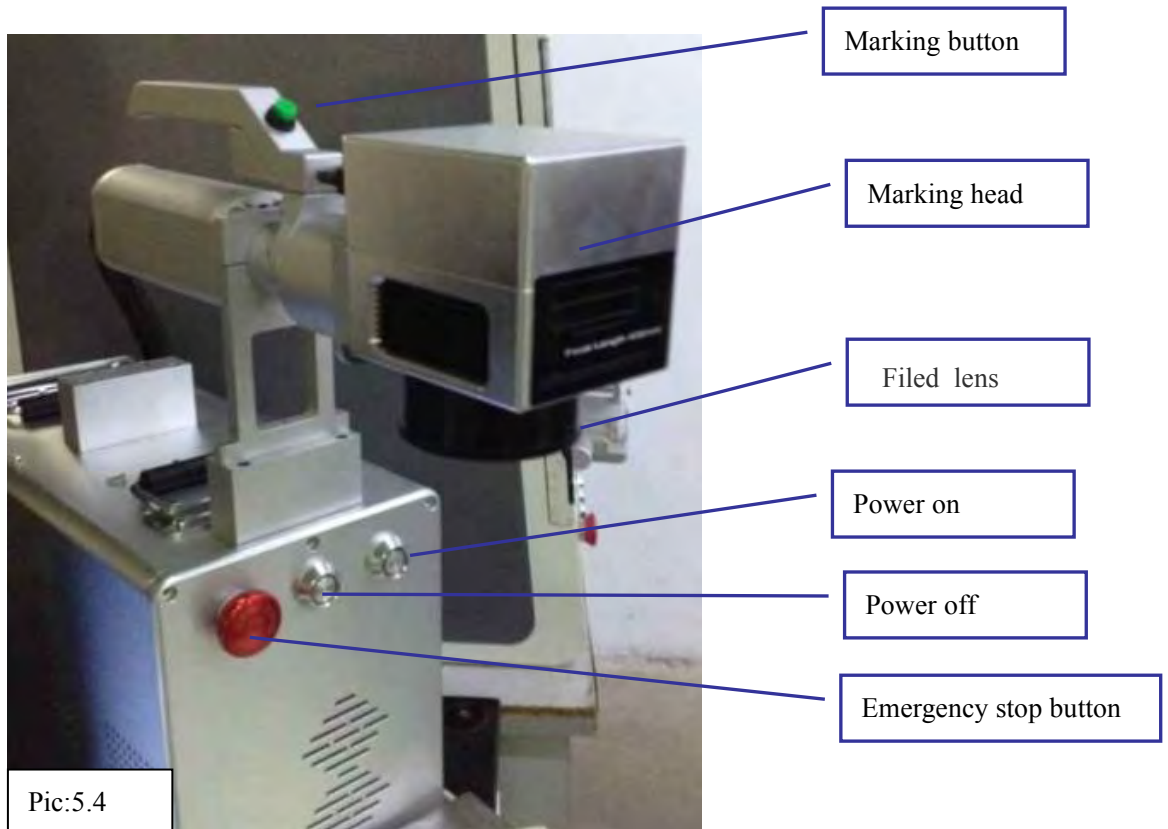


Pic:5.2

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FH Mode



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FC model



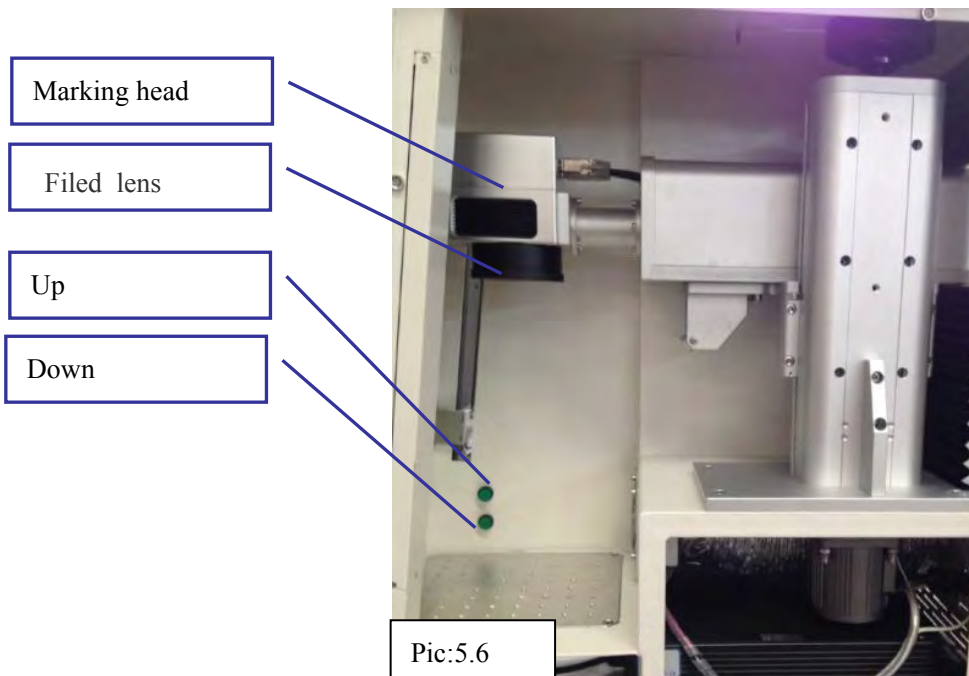
Emergency stop button

Start button

Door Up

Door down

Pic:5.5



Marking head

Filed lens

Up

Down

Pic:5.6

(2) Back operation interface consists of double mouth plug, three socket interface, 15 needle port, USB interface, power master switch, Master power input port, the radiator. shows at (Picture 5.7) and (Picture 5.8)

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5.2 Back operation interface

Double heads interface: connect the pedal switch;

USB interface: Connect the signal wire, receiving the computer output signal

Power master switch: Connect the whole machine circuit and directly control the galvanometer system circuit;

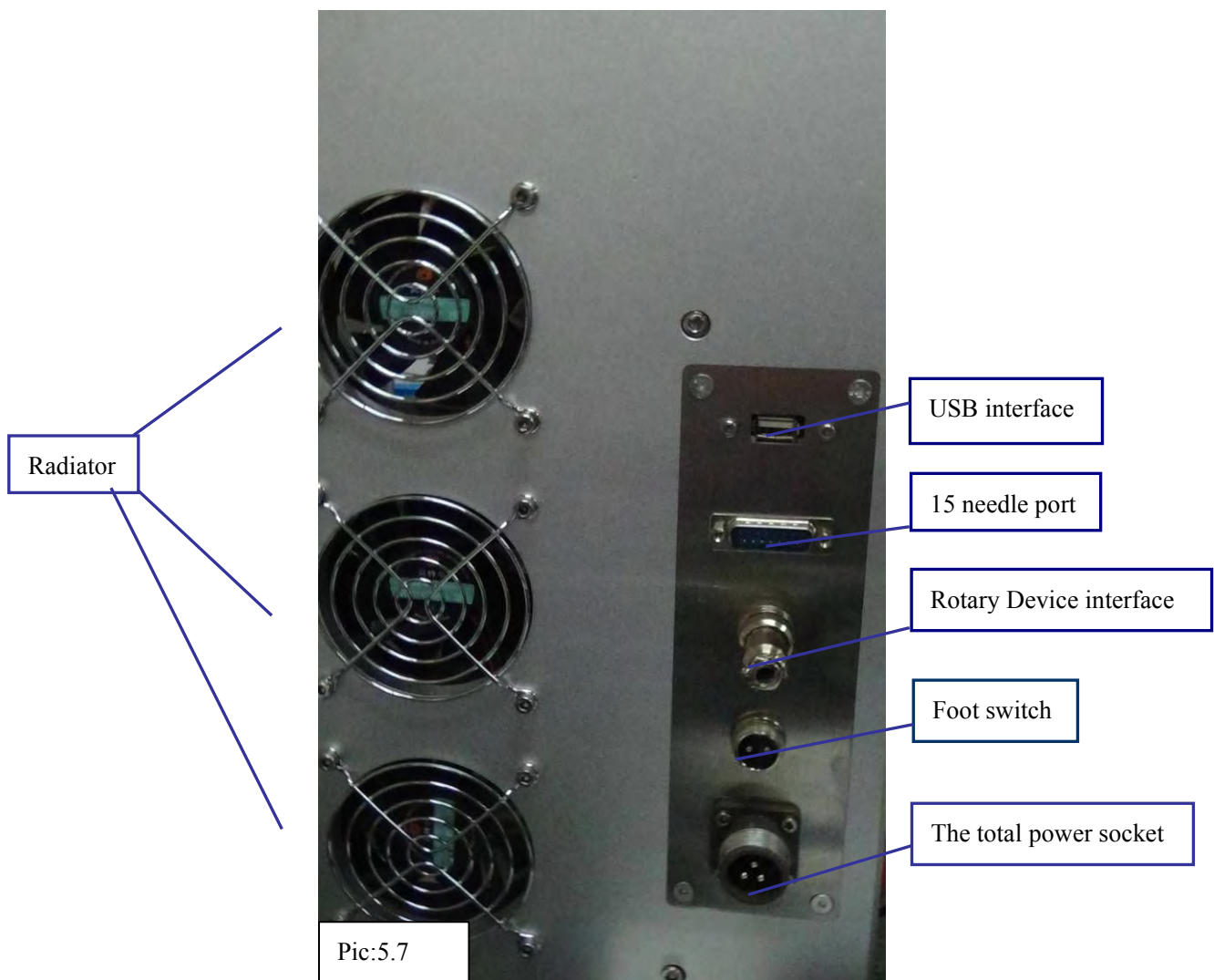
Master power input port: Connect the power cord to provide power supply for the host

Radiator: To disperse the heat generated by the host work, to cool the host

Three socket interface: Reservation

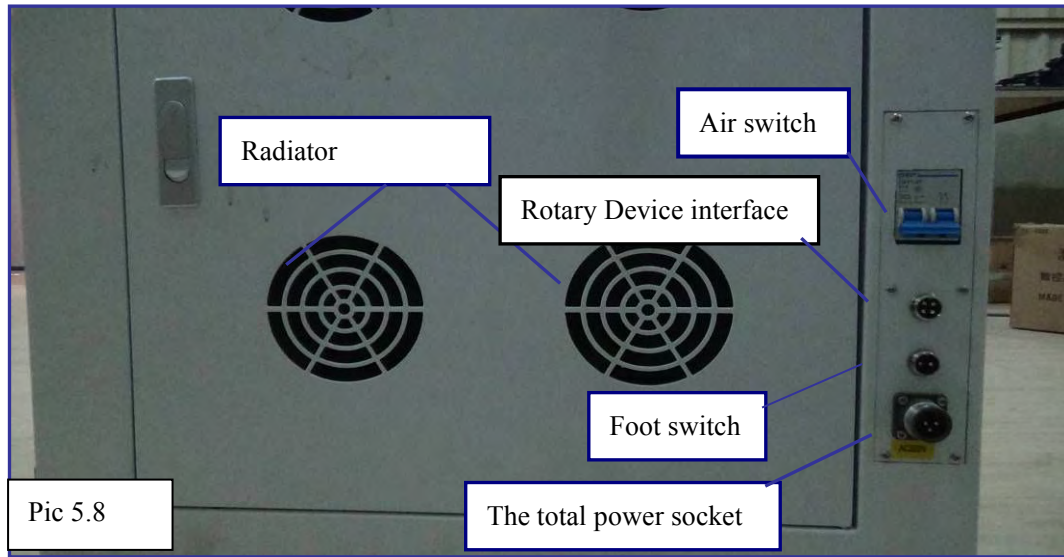
15 needle port: Reservation

FP Mode

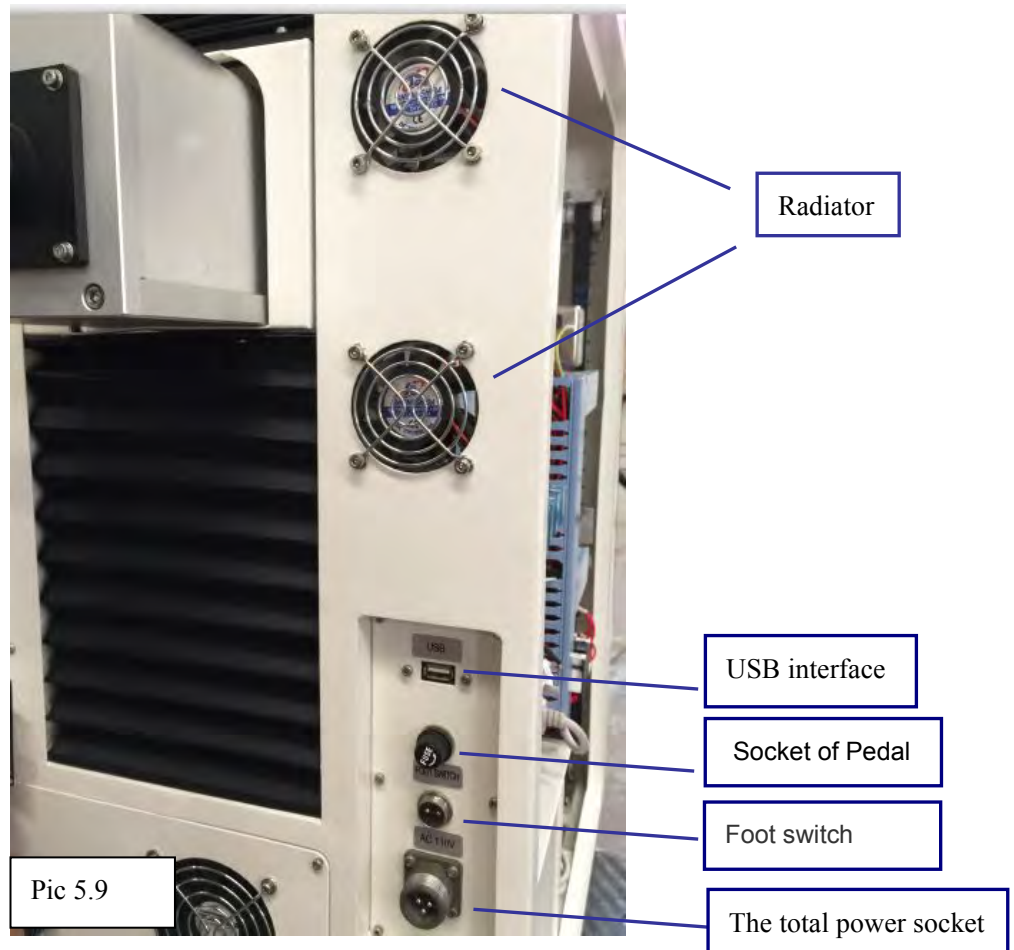


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FT Model



FC model

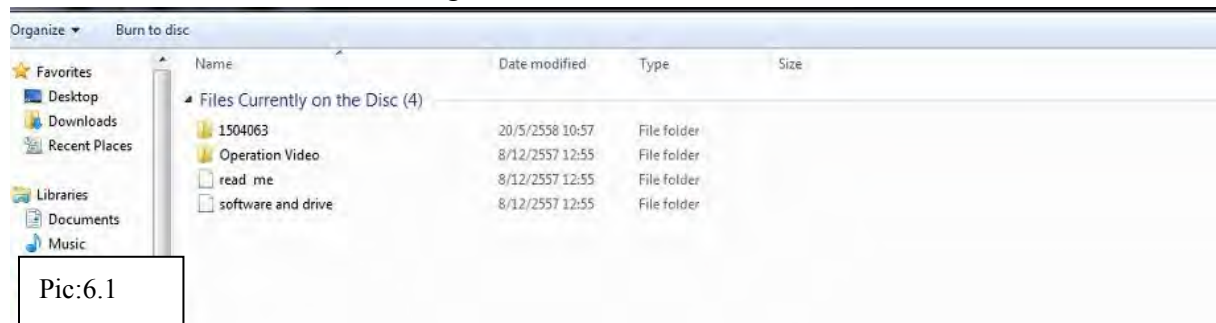


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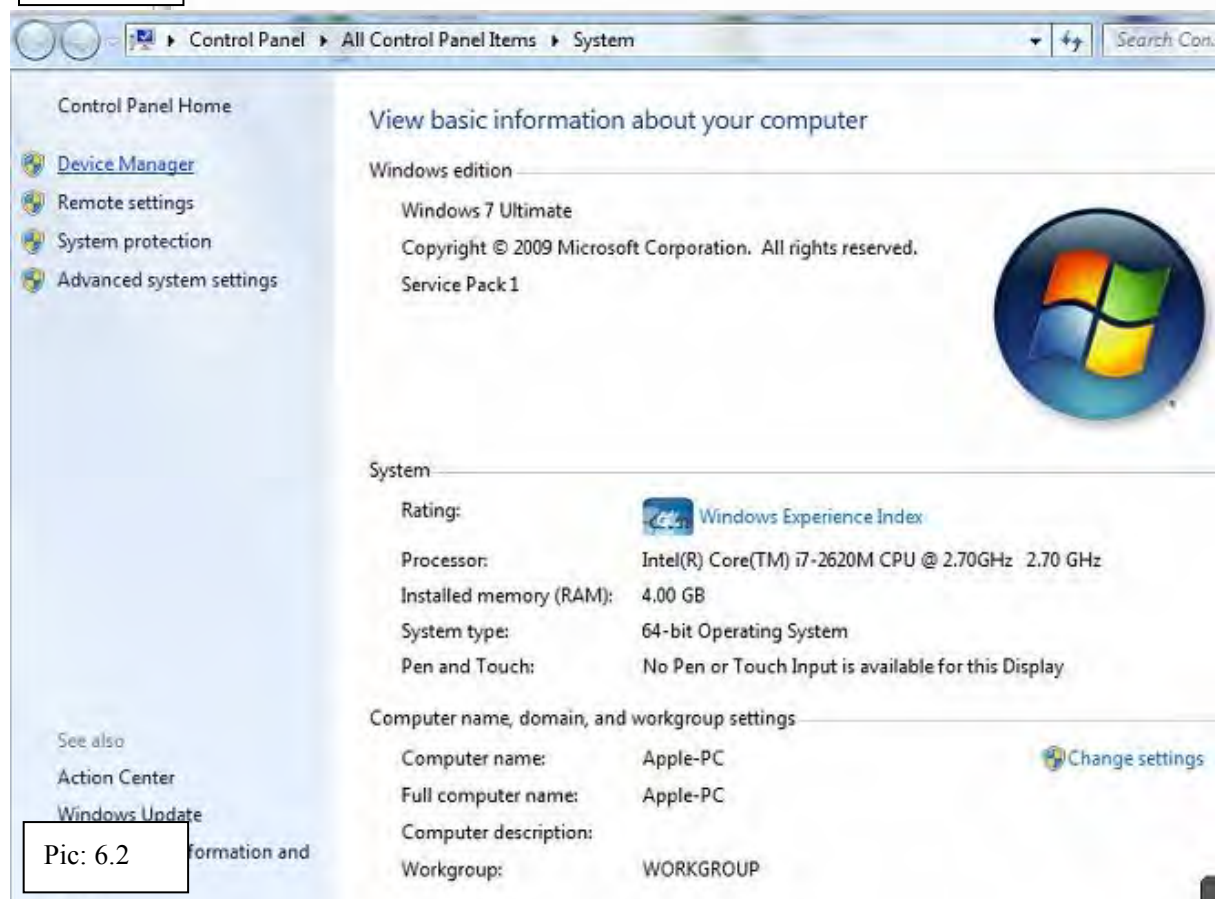
SIX. Software Installation Instructions

6.1 software installation

- 1) Open the computer and copy all the files from the U CD. As shown on Pic 6.1.
- 2) Usb interface of the machine connect with computer by USB data line
- 3) Plug in the soft dog(some machine no have), the computer will display "Found New Hardware", do not close this dialog box. As shown on Pic 6.1-6.10

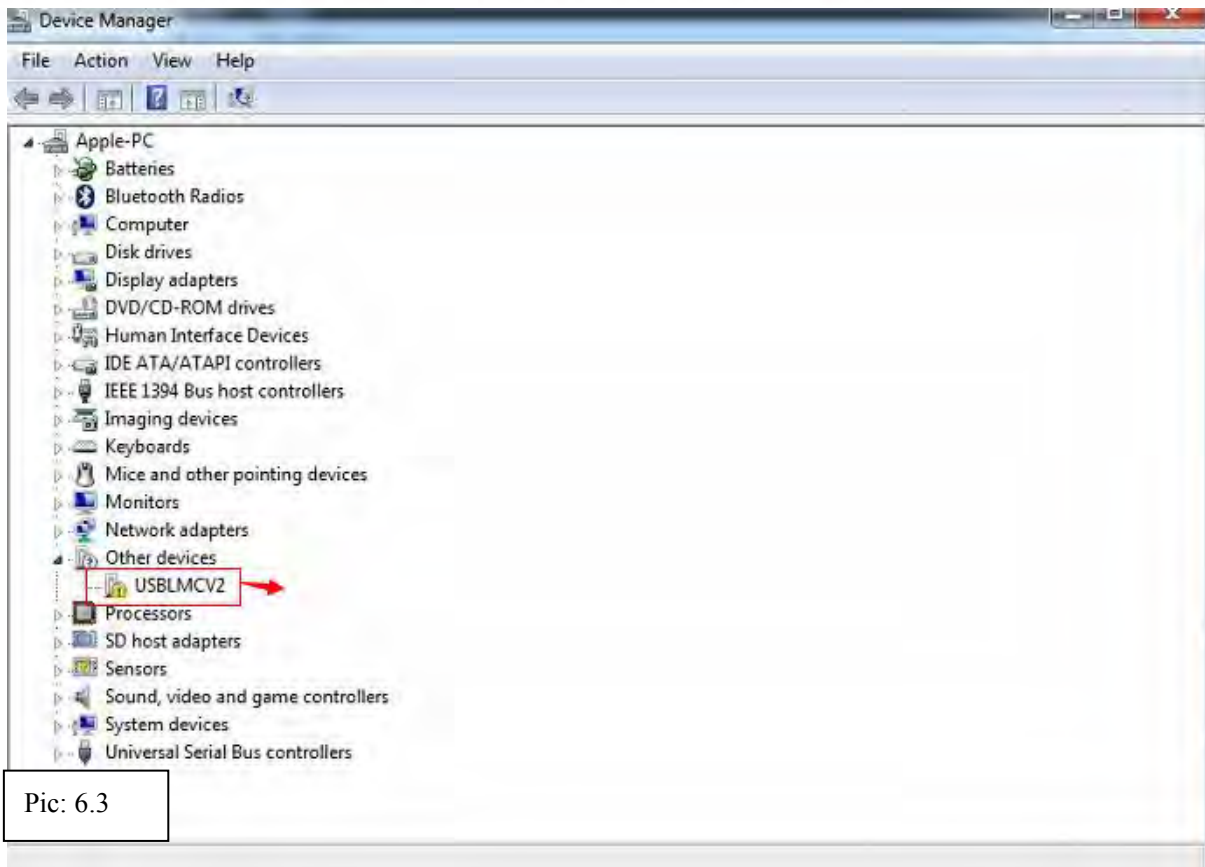


Pic:6.1

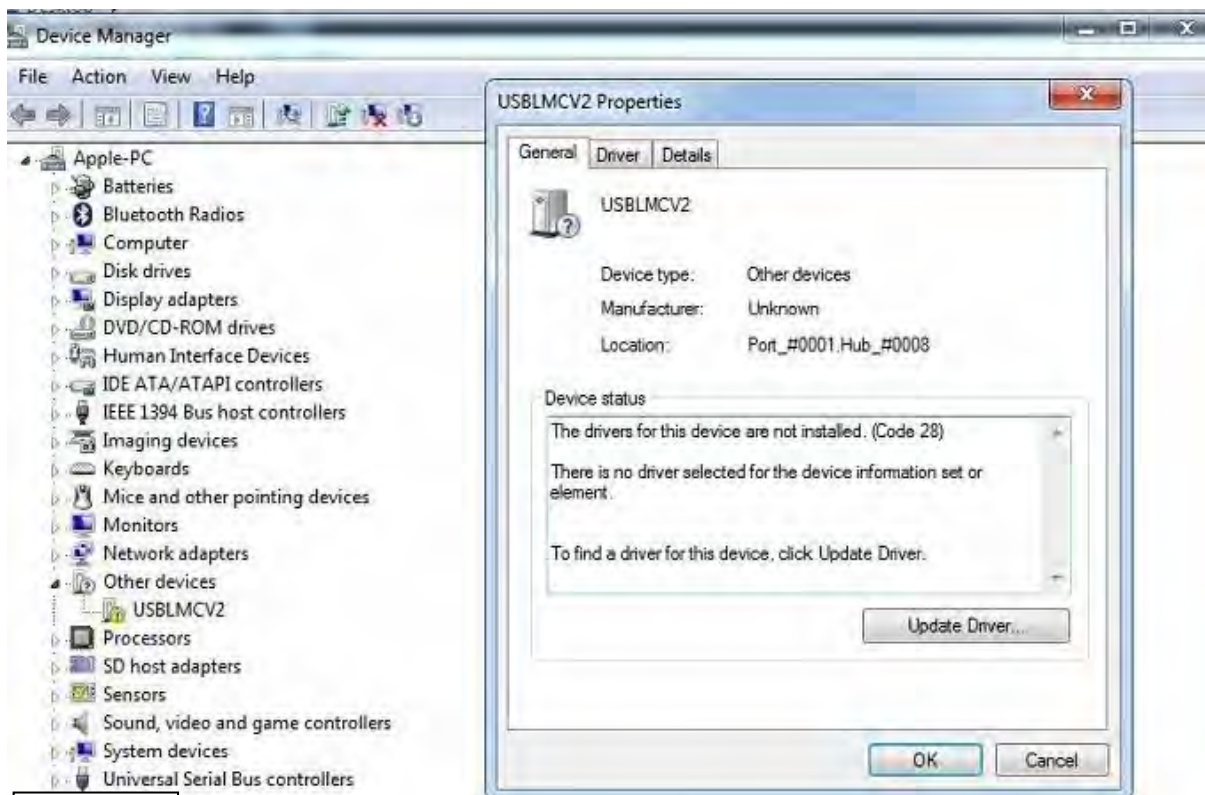


Pic: 6.2

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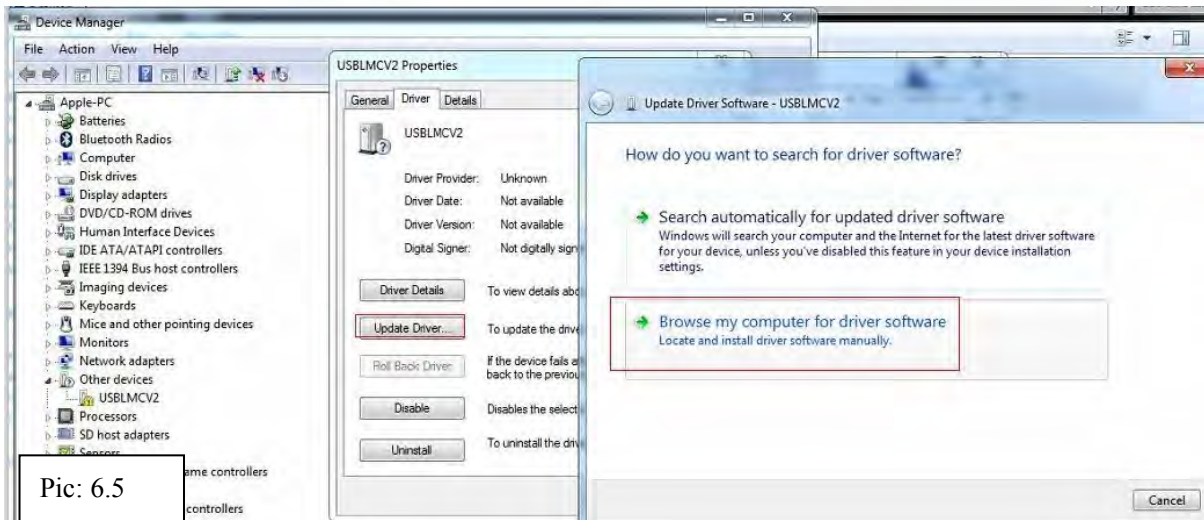


Pic: 6.3



Pic: 6.4

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Pic: 6.5



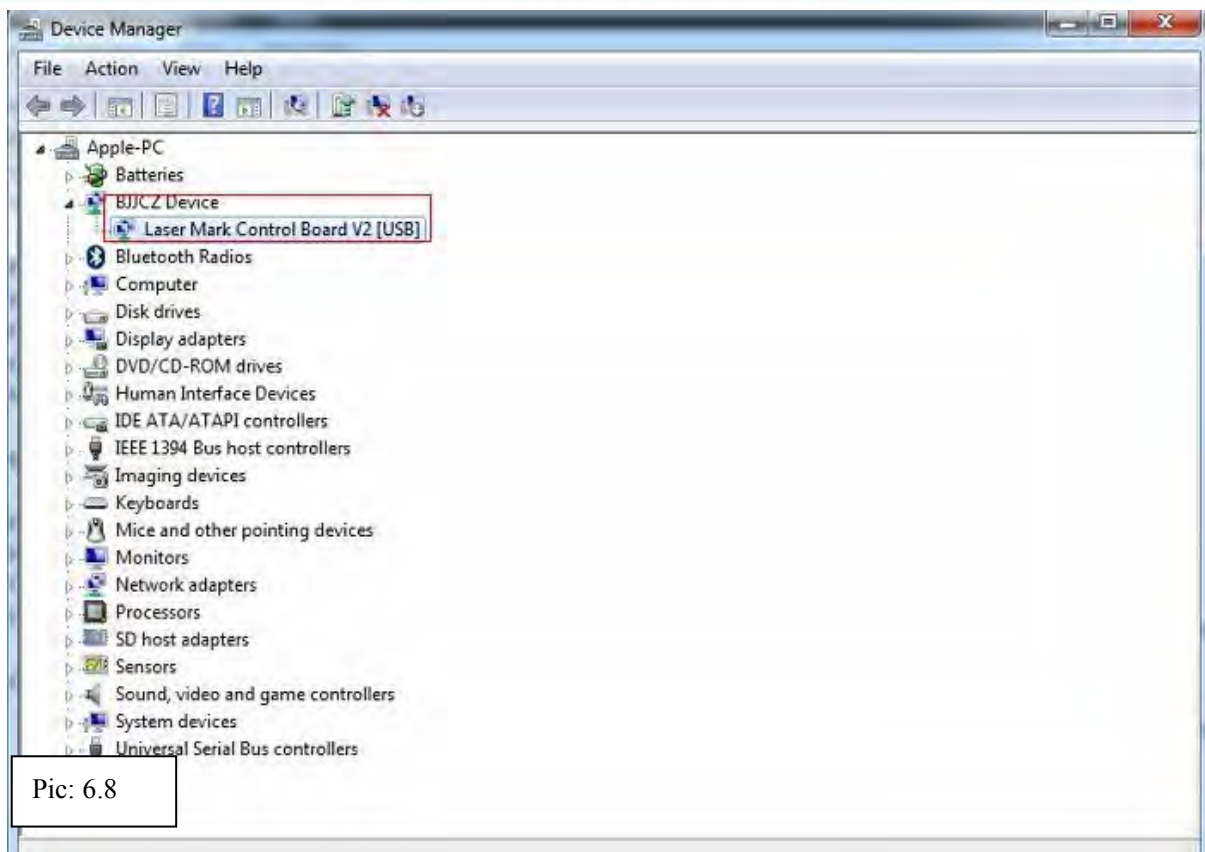
Pic: 6.6

Click the “Browse” and select the “software and drive ”and click it

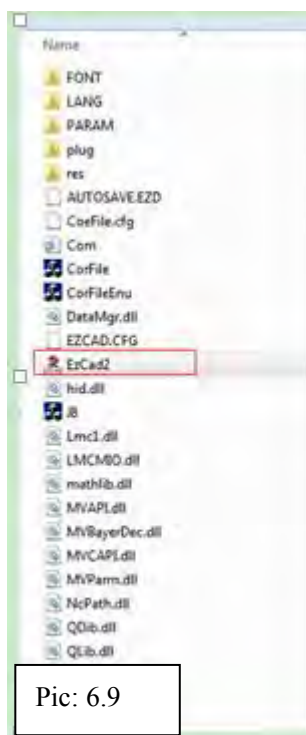


Pic: 6.7

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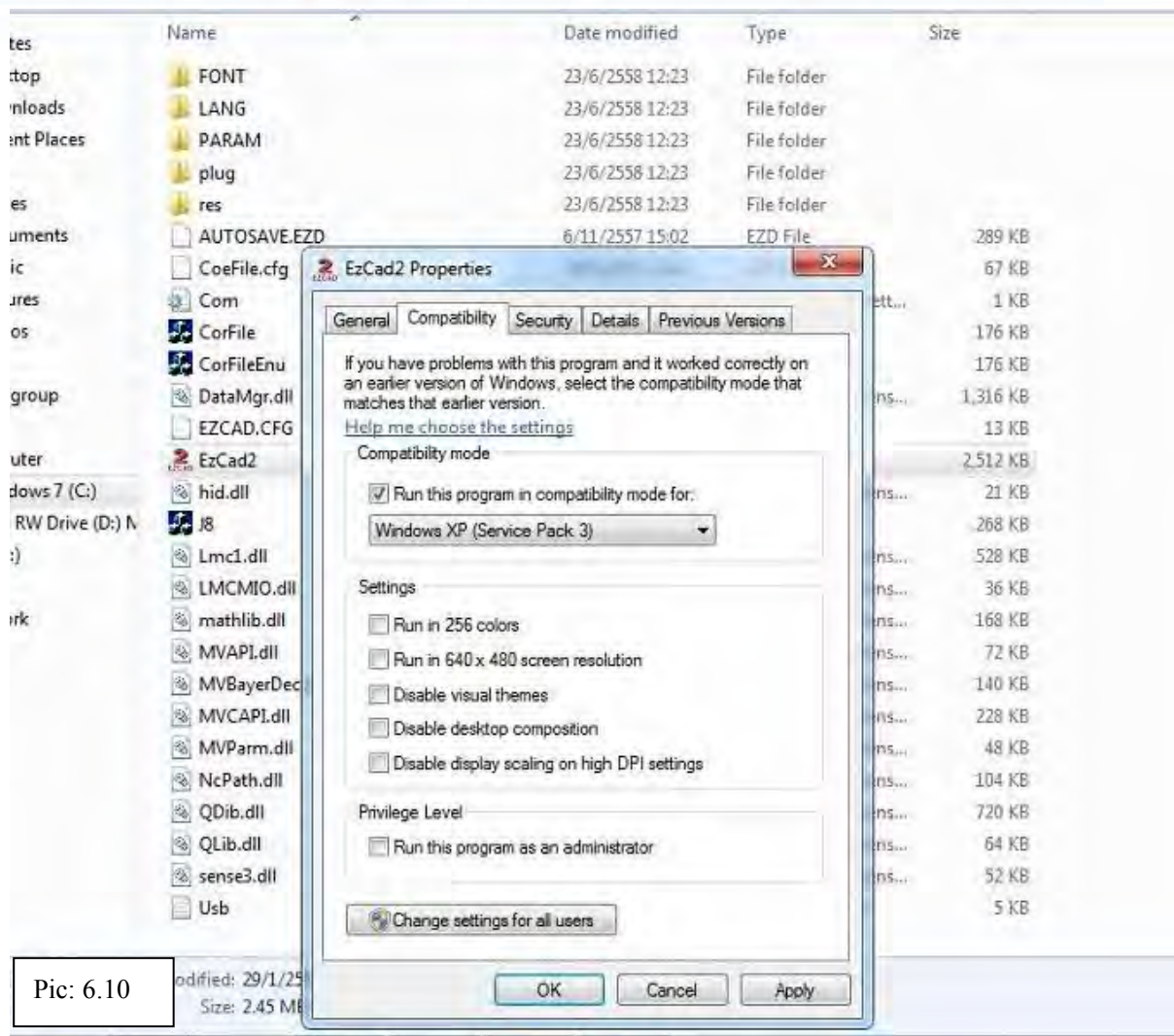


Pic: 6.8



Pic: 6.9

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Pic: 6.10

Select the “Ezcad 2” icon and click it by the right button of the mouse, and find the “compatibility” and operate it as shown on pic 6.10

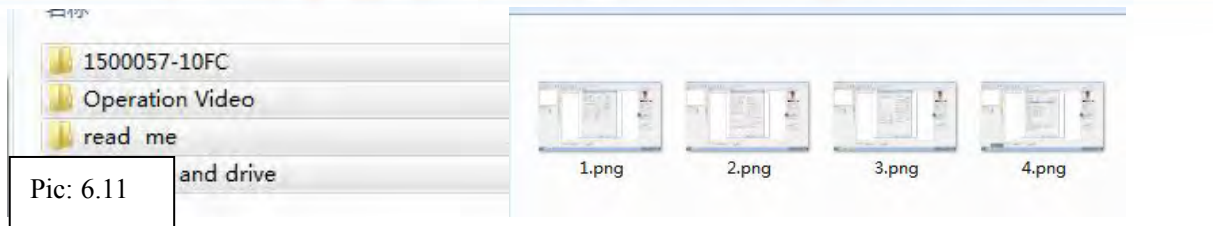
6.2 Change the parameters

There are four folders in the CD .You can change the parameters according to the four pictures as shown on pic 6.11.

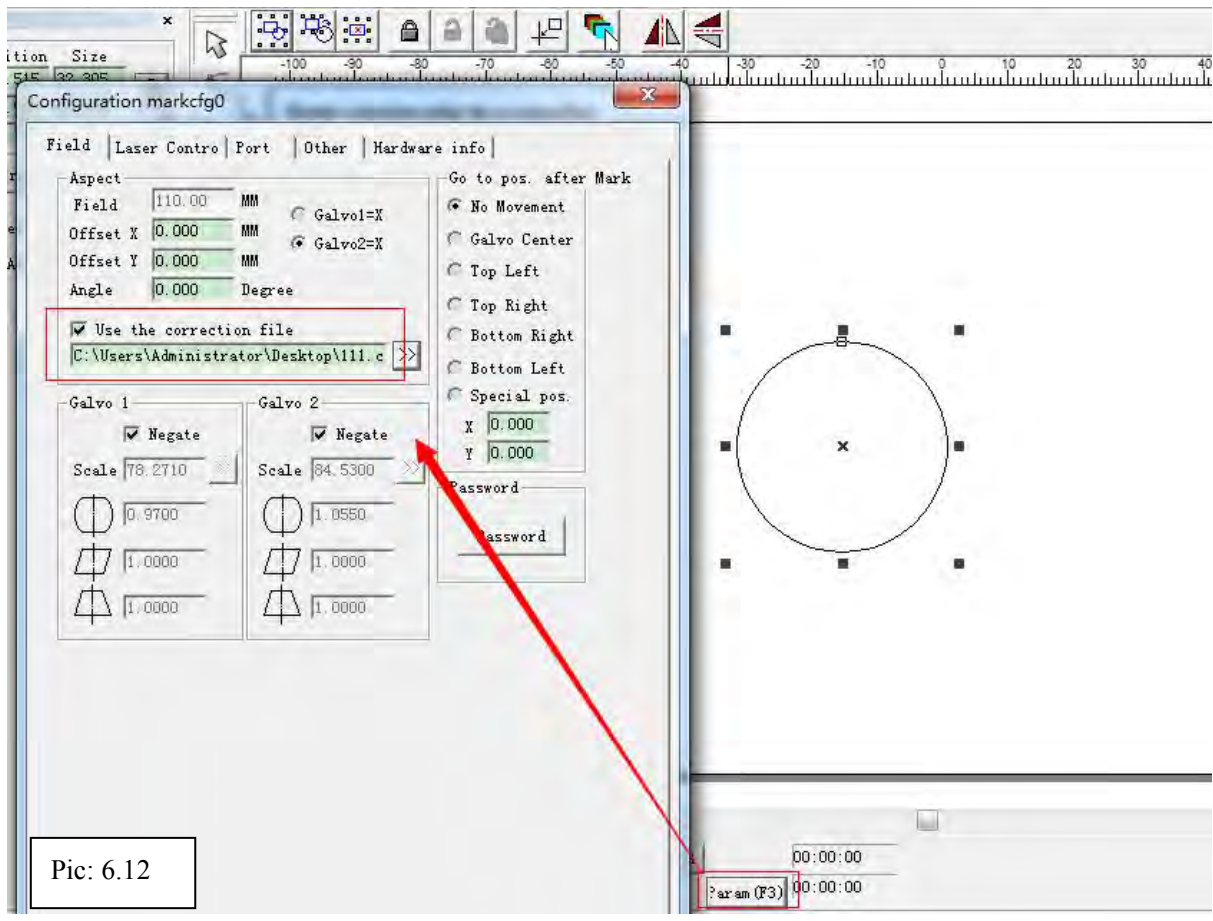
When change the different filed lens ,you should change the parameters as shown on pic 6.12.

You can find the “the correction file” in the first folder in the CD as shown on pic 6.13.

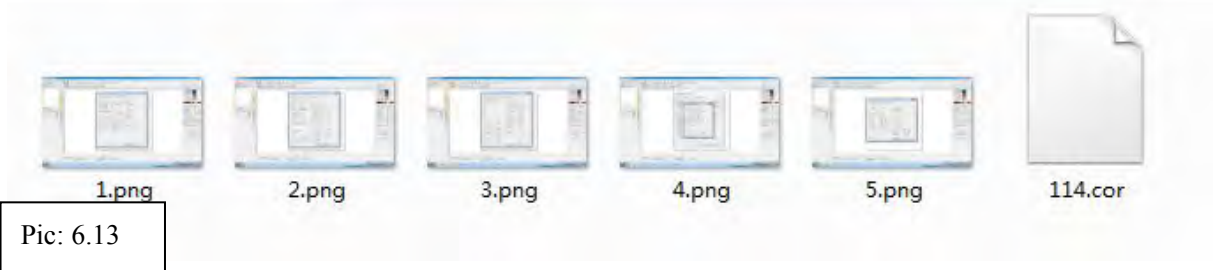
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Pic: 6.11



Pic: 6.12



Pic: 6.13

SEVEN. Operation step

Before operating the laser marking machine, open computer, plug in power line, connect the foot switch or rotary device.

- 1) Open the air switch which is at the back of the control box;

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- 2) Rotating the emergency stop button , Press the power on button;
- 3) Open software, Import a graphic or drawing a rectangle. Shows at Pic7.1

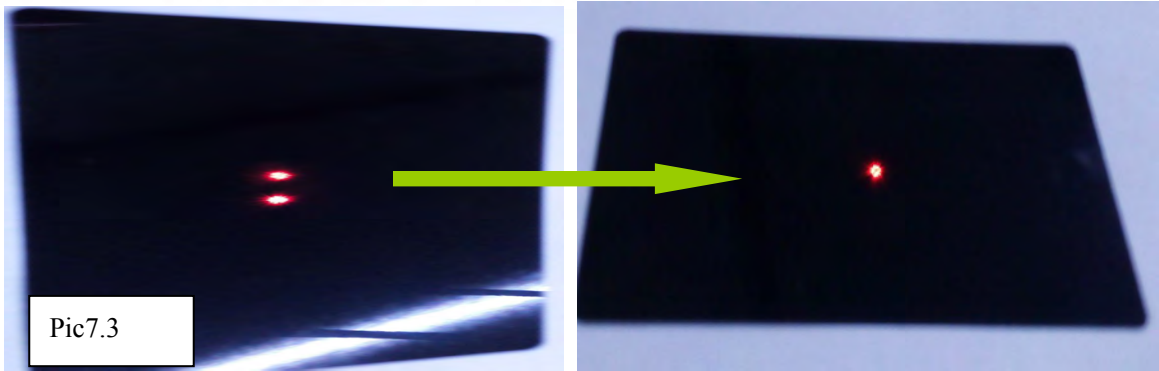


- 5) Change the marking parameters (eg, speed, frequency, power);
- Before changing the speed or power, you should click the check mark which is in the front of the "Use default param" . As pic 7.2 show.

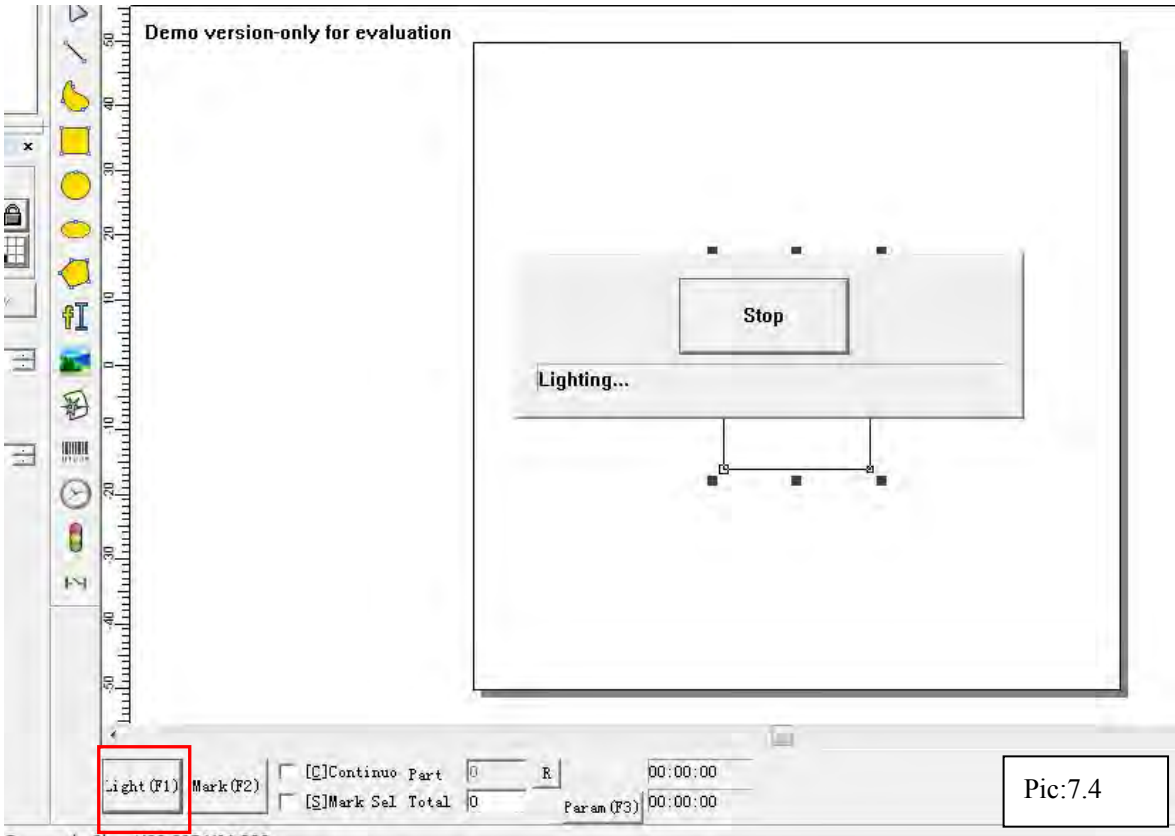


- 6) Adjust the focus length : there are two methods to adjust the focus length.
- One way is: put the rule on the worktable, then turning the handle or up and down worktable until meet the marking focus which is shown in the making head;
- Another way is easy to operate, there are two red points, one is from the making head the other one is installed in the machine. Make 2 red points together (2 red dots device should be adjusted ready before shipment. Please don't adjust them without permission), by adjusting the worktable or handle or press the up and down button. As pic 7.23 show.
- Make sure the focus is right you can use the steel ruler to check again.

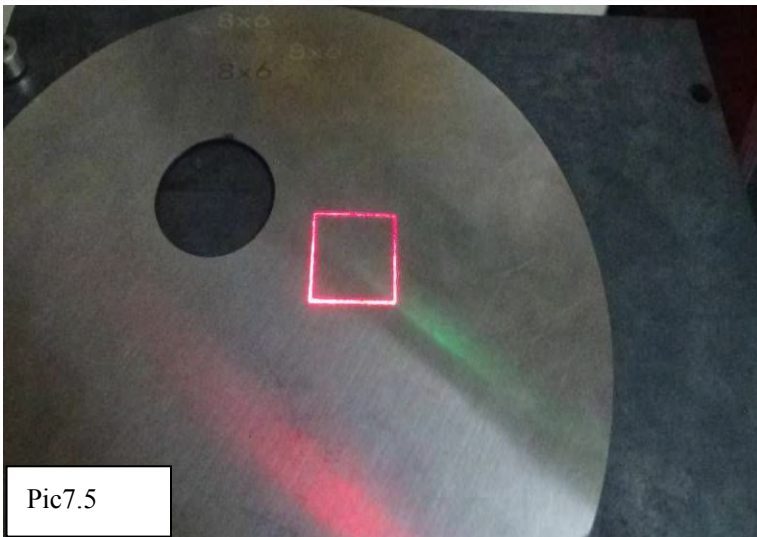
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7) Click "light" or "F1", machining table appear Indicating contour. As shown on Pic7.4 and Pic7.5

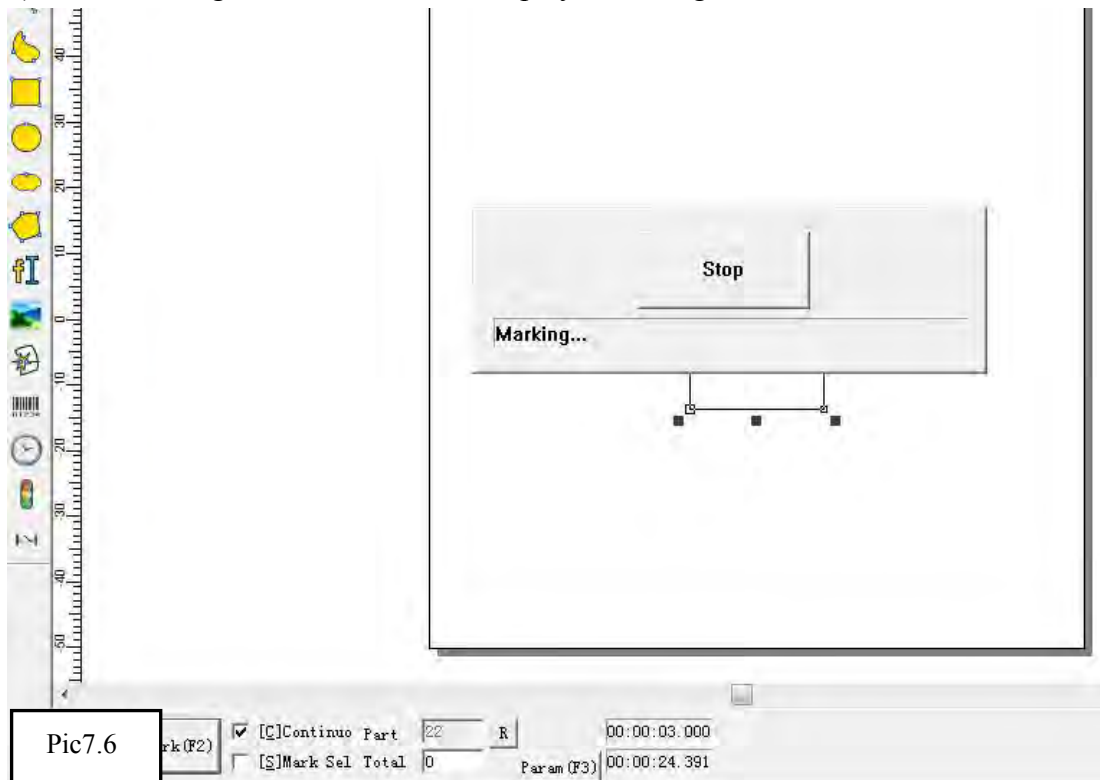


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Pic7.5

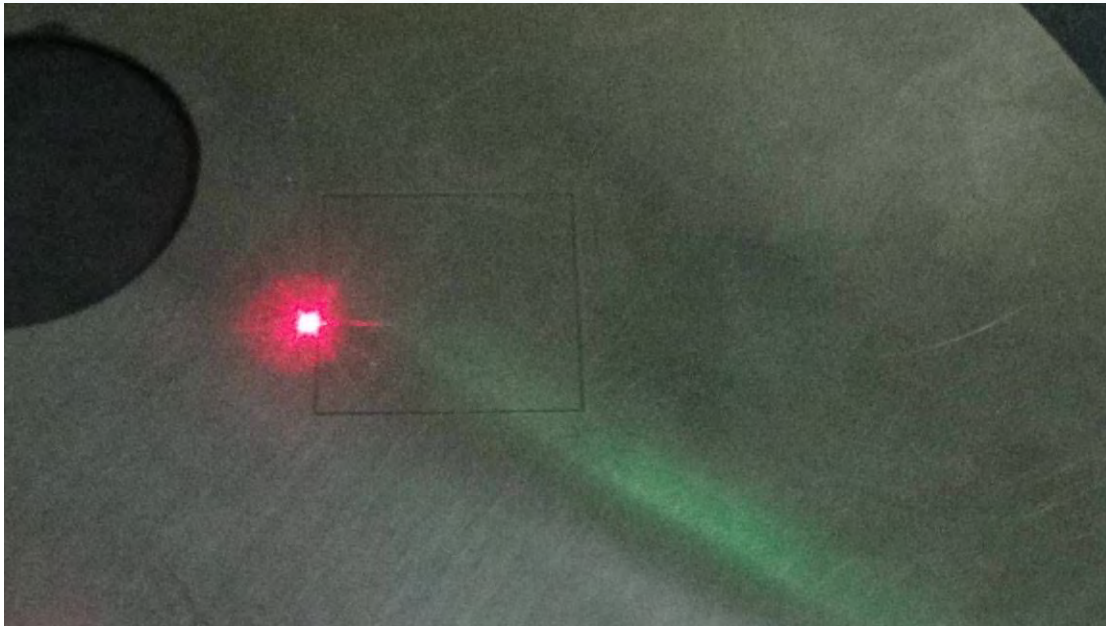
8) Click "Marking" or "F2" Screen will display "Marking". As shown on Pic 7.6



Pic7.6

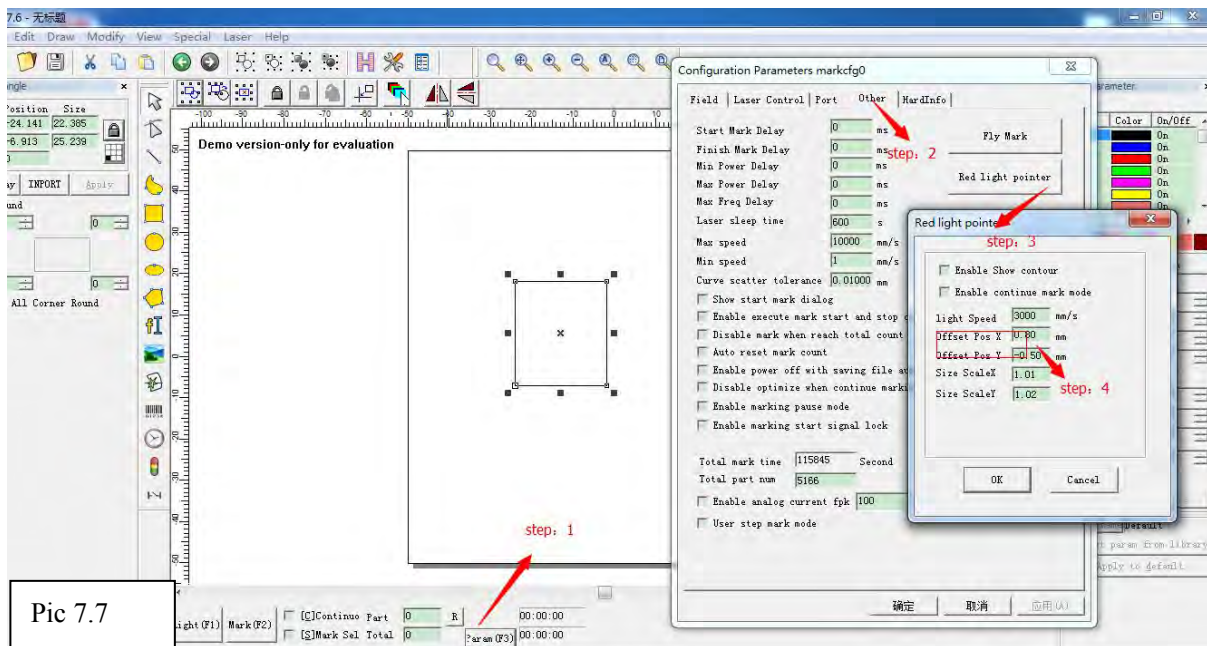
Marking is complete.

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9) check the position of the red dot

After finishing marking, you can click the “Red light” or “F1” again, and check the red dot indicate whether meet to the rectangle, if not, you should change the parameter until they meet. As shown on Pic 7.7



EIGHT. Equipment maintenance and common maintenance

8.1 Equipment maintenance

1. Before marking please check , whether soft-dog have connect with computer, signal line, power supply line whether connect stable.

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2. Before mark, please check whether laser head cover take down.(The cover is easy broken, when finished work put the cover on the head)

3. Maintenance

Galvanometer lens clean: Use lens paper or swab touch medical alcohol to clean. After alcohol evaporated completely, then can open light.

8.2 Common software fault handing

Fault phenomenon	Analysis method	Handing method
appear no soft-dog	1.soft-dog driver issue	install driver anew
	2 not plug soft-dog	Plug soft-dog
Show LMC hardware issue	1.not turn on the machine	Turn on the machine
	2.board card driver fault	install board card driver anew
	3.USB line issue	Change USB line
no process date, no files loaded.	Choose “choose process”, when red light and mark, no choose the files.	Choose the files need process
Can't open software	show operate system fault	Right hand button EZcad icon in compatibility choose Windows XP

8.3 Common hardware breakdown maintenance

Fault phenomenon	Analysis method	Handing method
No red light , no laser	1.whether take down laser head cover	Put cover down
	2.red light broken.	5Vpower supply have 5V, red light broken, no 5V power supply broken, change.
Working no red light	1.have red light, indicates normal.	Laser tube or laser power supply broken, need back test.
Work no red light	1.no red light, but can mark.	Red light broken or 5V power supply broken

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	2.no red light, can't mark, but have laser.	Board card broken.
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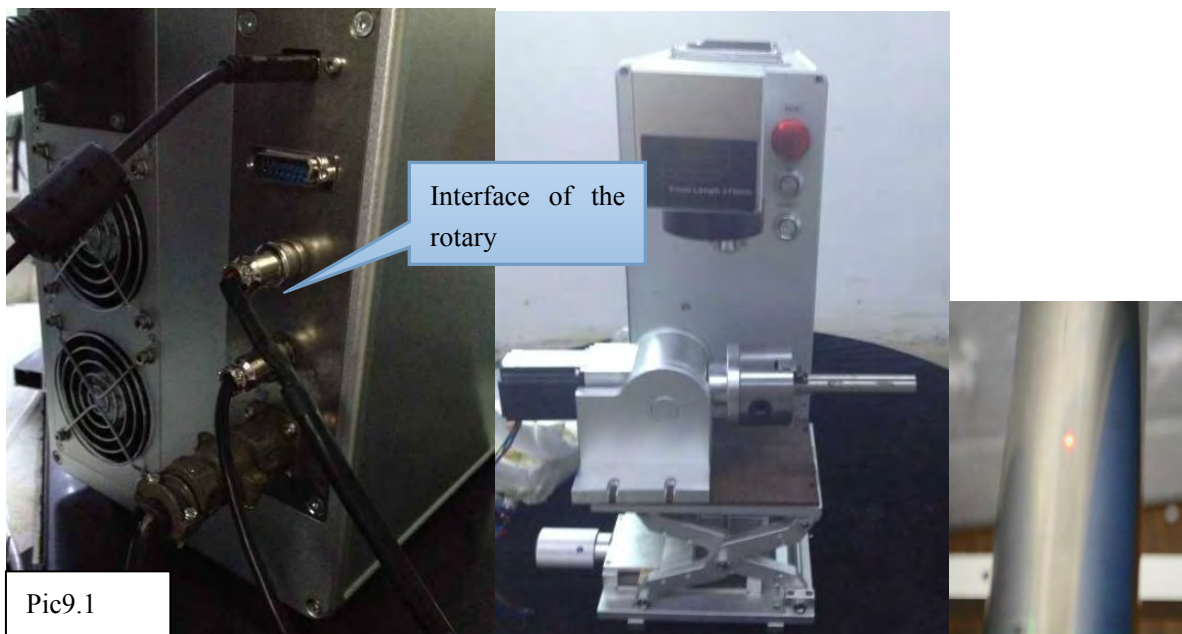
NIGH. Marking Machine Rotary Device using instruction

9.1 Rotary Device Installation

Step1: Put the rotary device on worktable, clamp the workpiece well, and connect the interface of rotary device as shown on pic 9.1;

Step2: Adjust the focal length by operating the up and down worktable ;

Step3: Power on the machine and open the software, check the red point whether the red point is in the middle of the workpiece



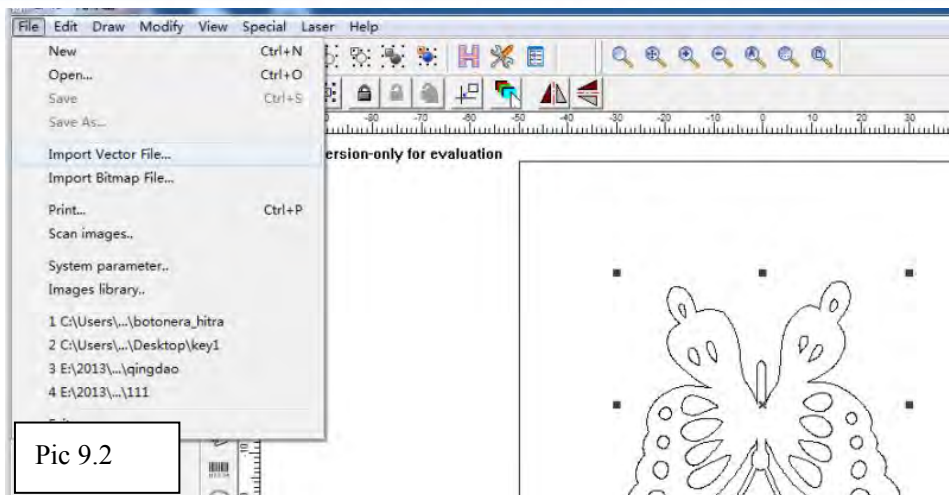
Note: Make sure the red dot in the middle of the workpiece and the workpiece should be horizontal.

9.2 Rotary mark

1) Marking vector graphic: the software supports dxf、 ai、 plt files

Click“File”---“Import vector file” as shown on pic 9.2 and set the power, speed

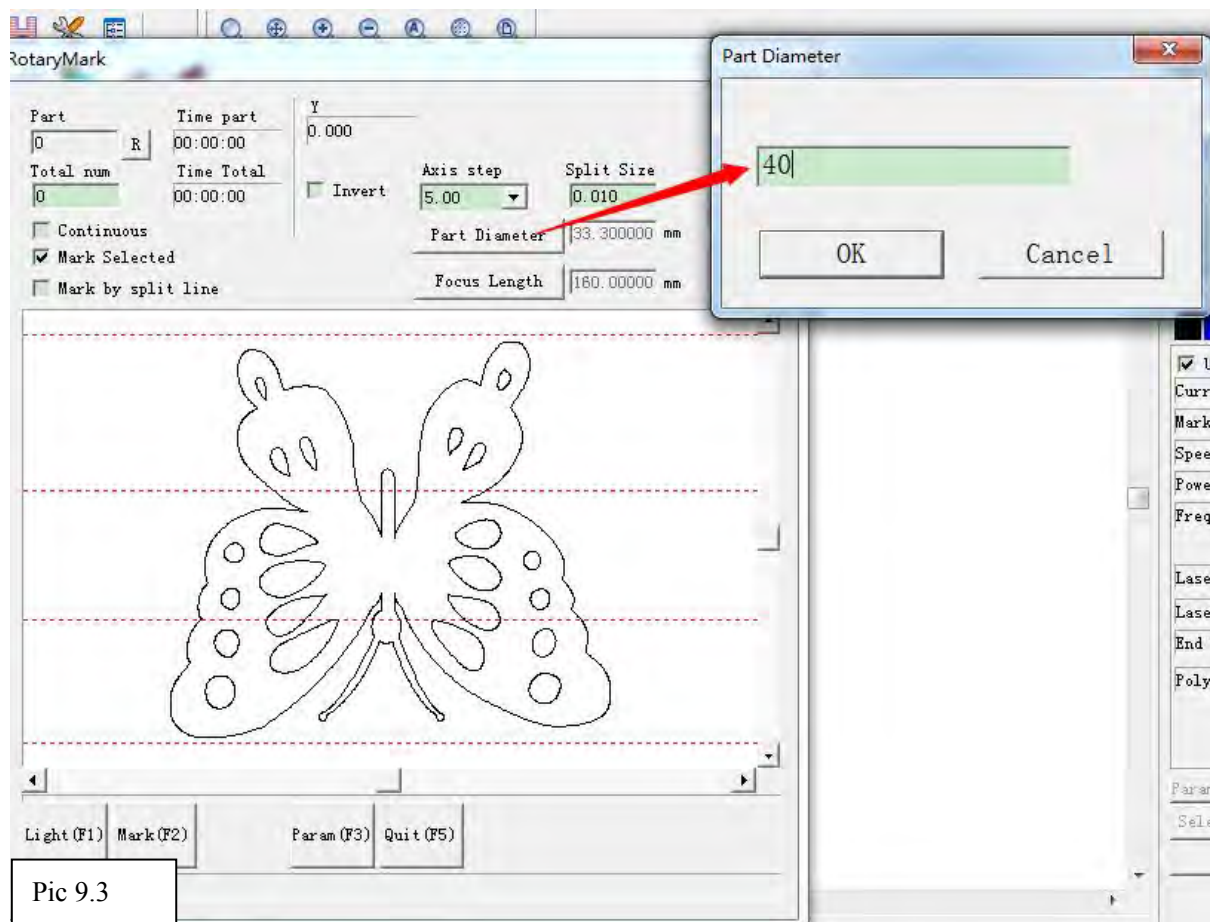
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Pic 9.2

2) Click “Laser”--- “Rotary Mark “ as shown on Pic 9.3
 Change the parameter as shown on Pic 9.3、 Pic9.4

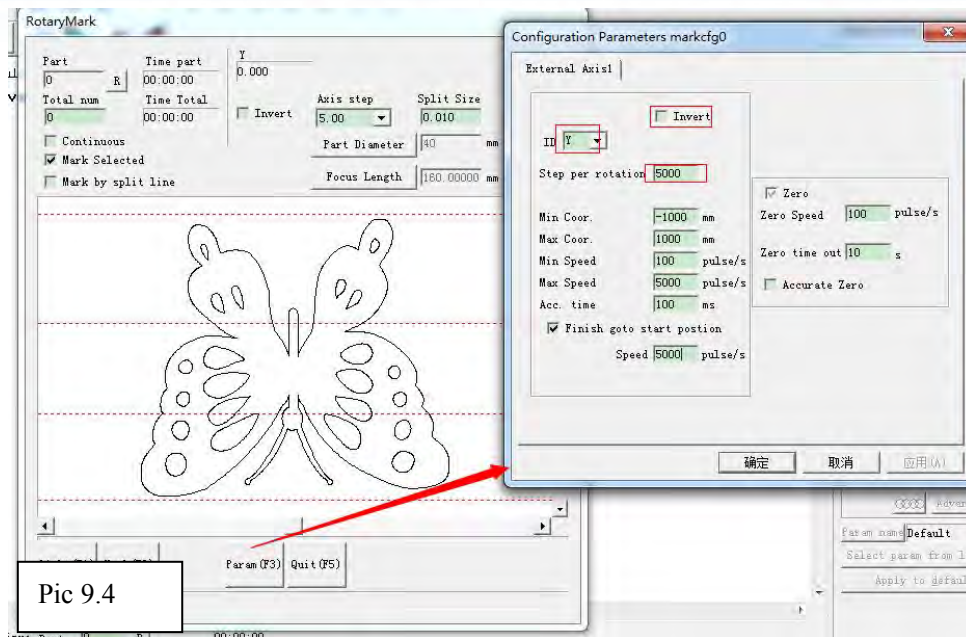
Step 1: Modification parameter: Fill in the “ Part Diameter”according to the workpiece ;



Pic 9.3

Step 2: Click “Parameter” and check “ID” and “Step per rotation” ; “ID” selects “Y”, and “Step per rotation” inputs 5000 (according to the step and drive) as shown on Pic 9.4

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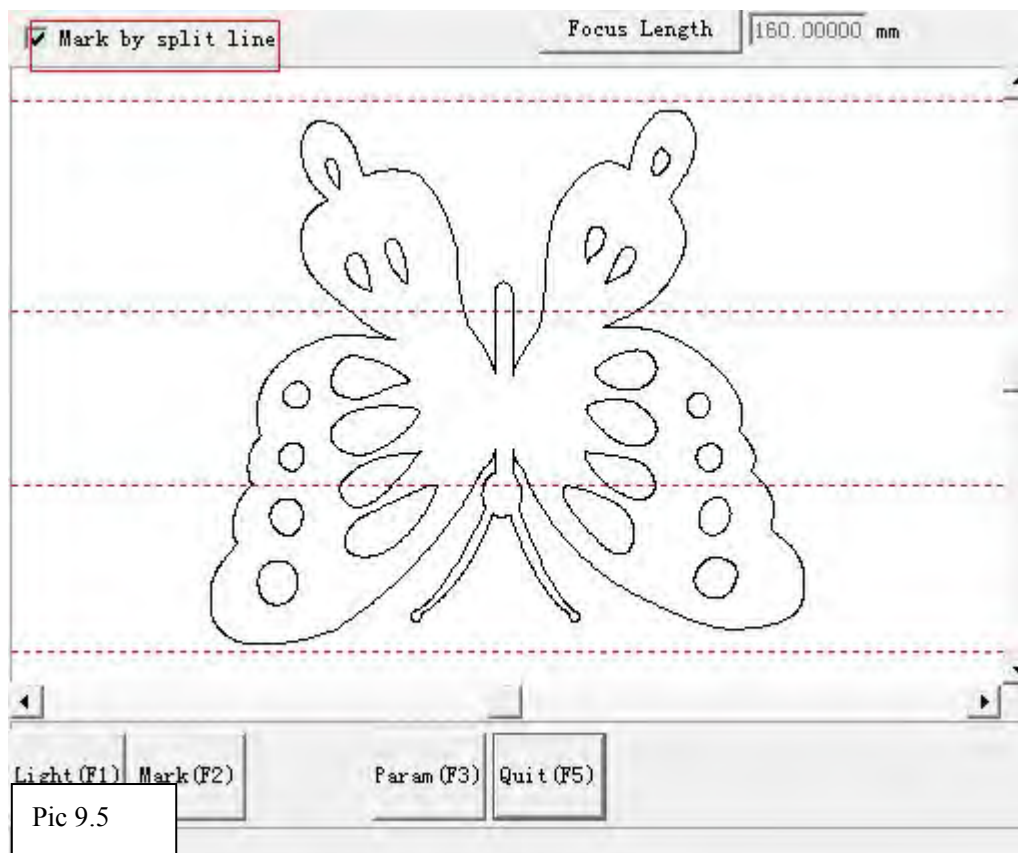
Pic 9.4

Step 3: Set the split line as shown on Pic 9.5.

Note: Add the split line: double click with left button of the mouse in the blank area ;

Delete the split line: select the split line and click it with right button of the mouse.

The more split lines the effects better.




Pic 9.5

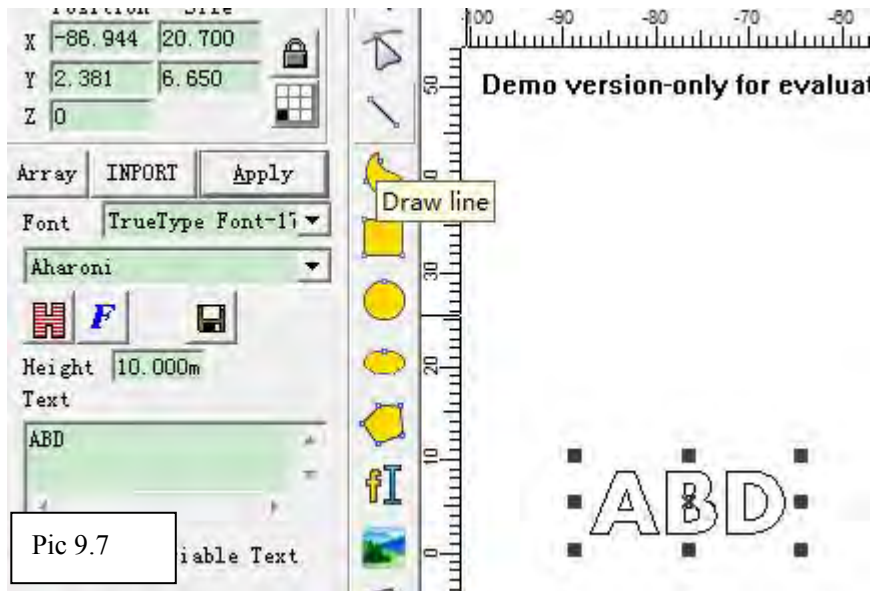
Step 4: Click the “Light F1” and check the marking area, then click “Mark F2”

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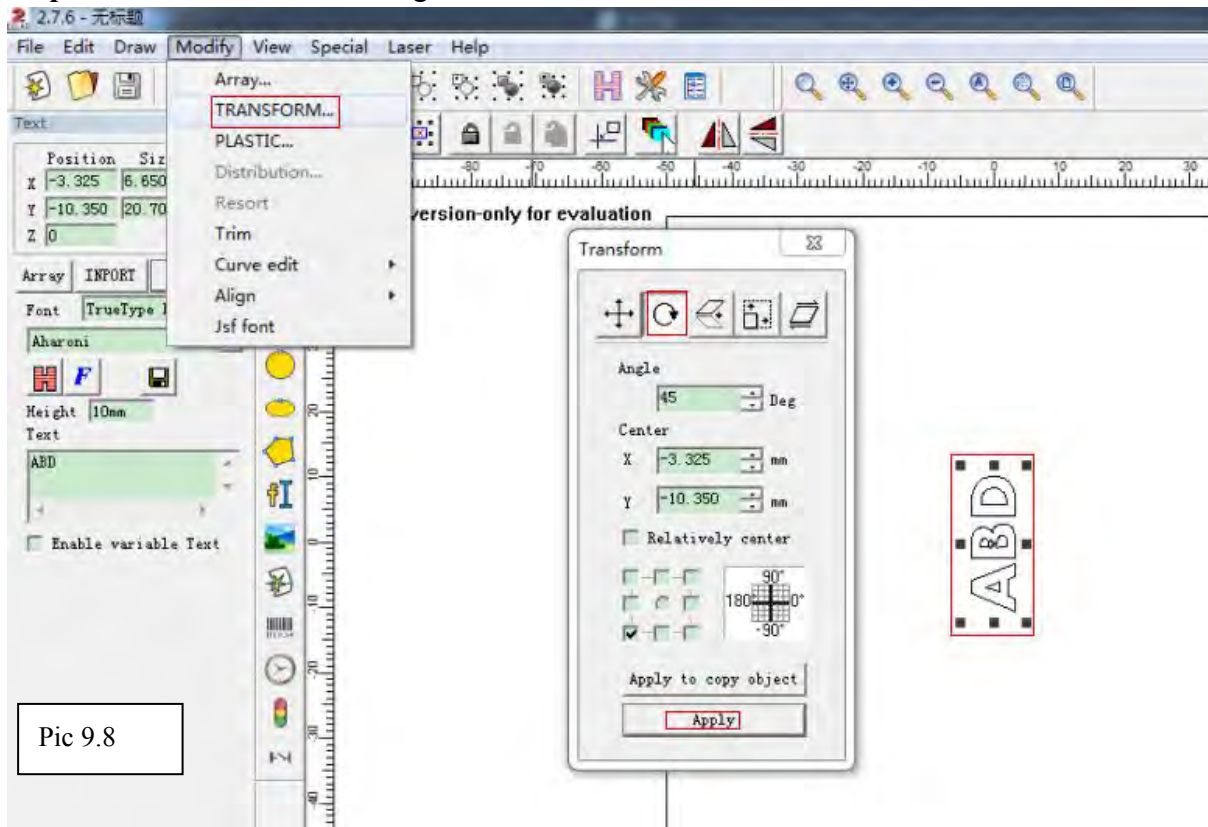
9.3 Rotate Text Marking

Rotate text marking is mainly used for marking text file types

Step1: Click  and input the letter in the “Text”, then check the size of the letters, at last click “Apply” as shown on Pic 9.7

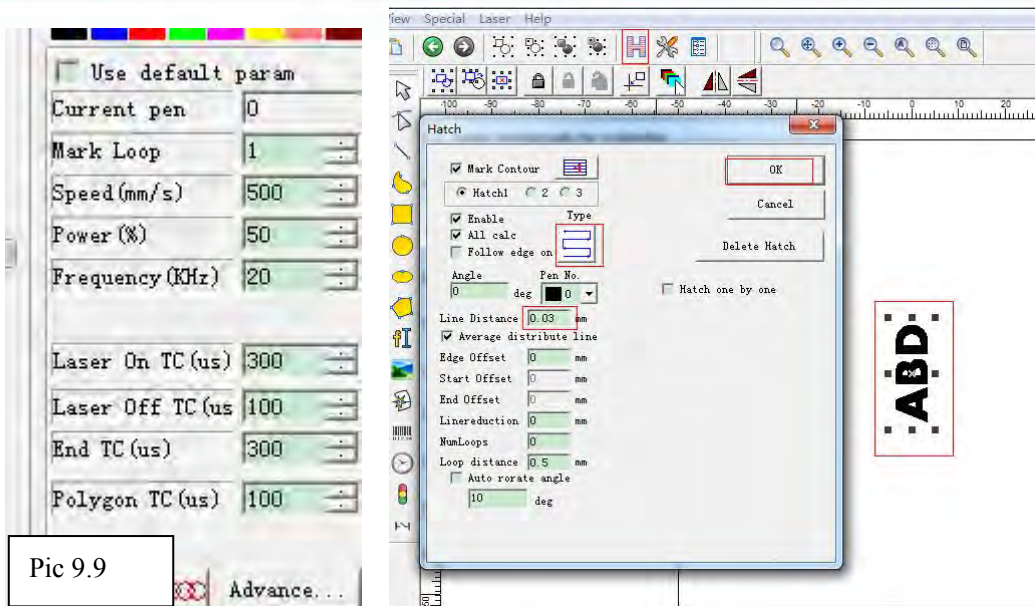


Step2: Rotated the letters 90 degree as shown on Pic9.8



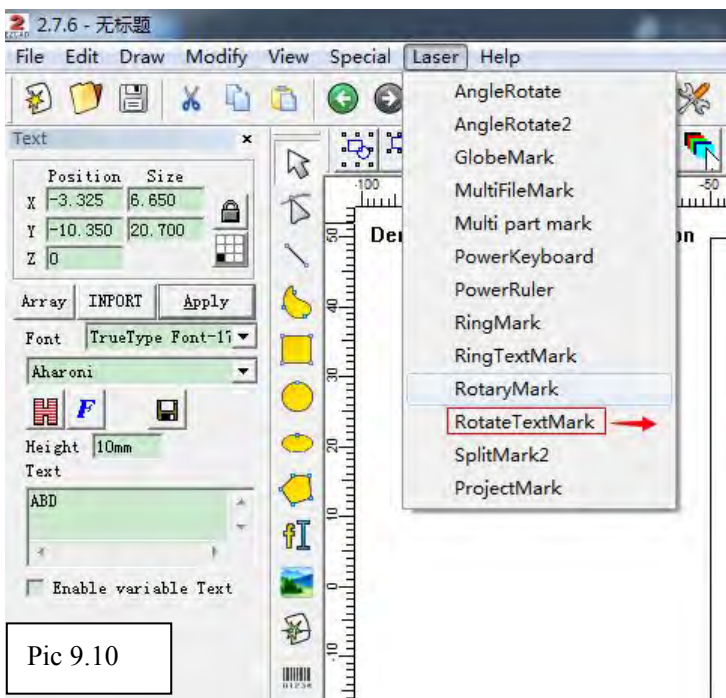
Step 3: change the power and speed and so on according to your requirement
As show on Pic 9.9

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Pic 9.9

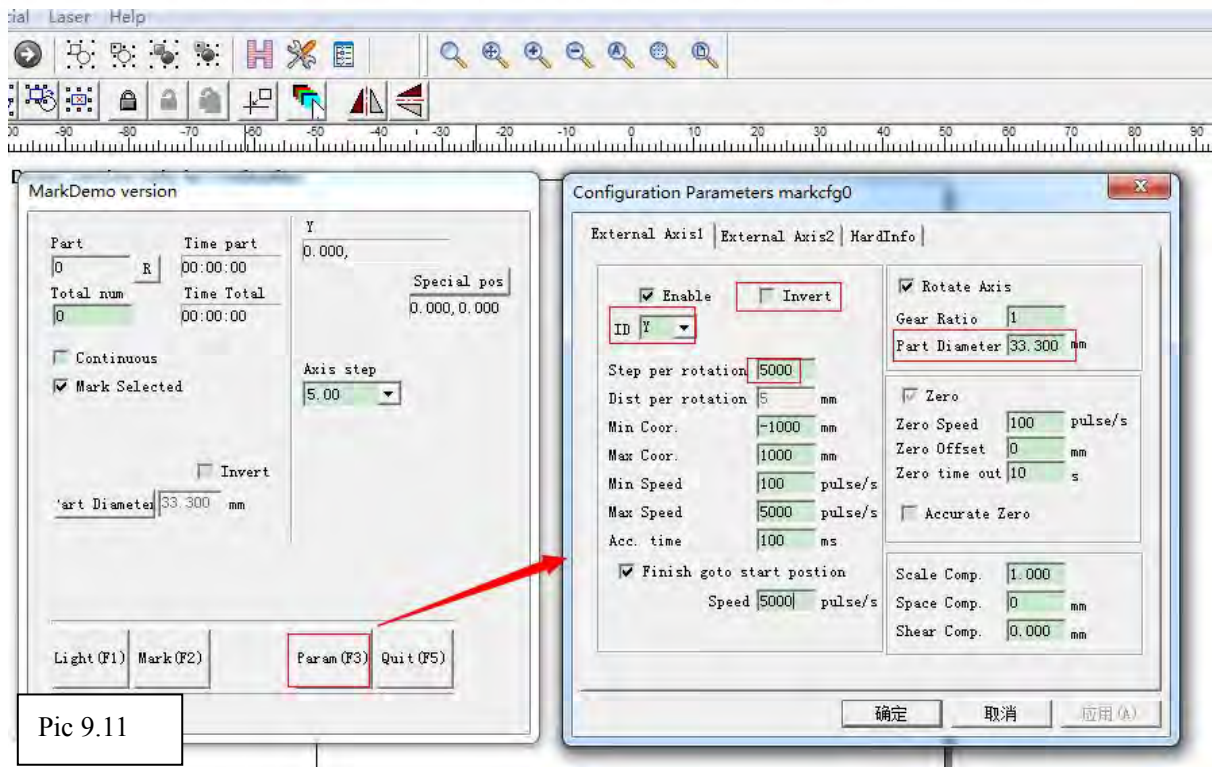
Step 4: Click “Laser” and select “Rotate TextMark” as show on 9.10



Pic 9.10

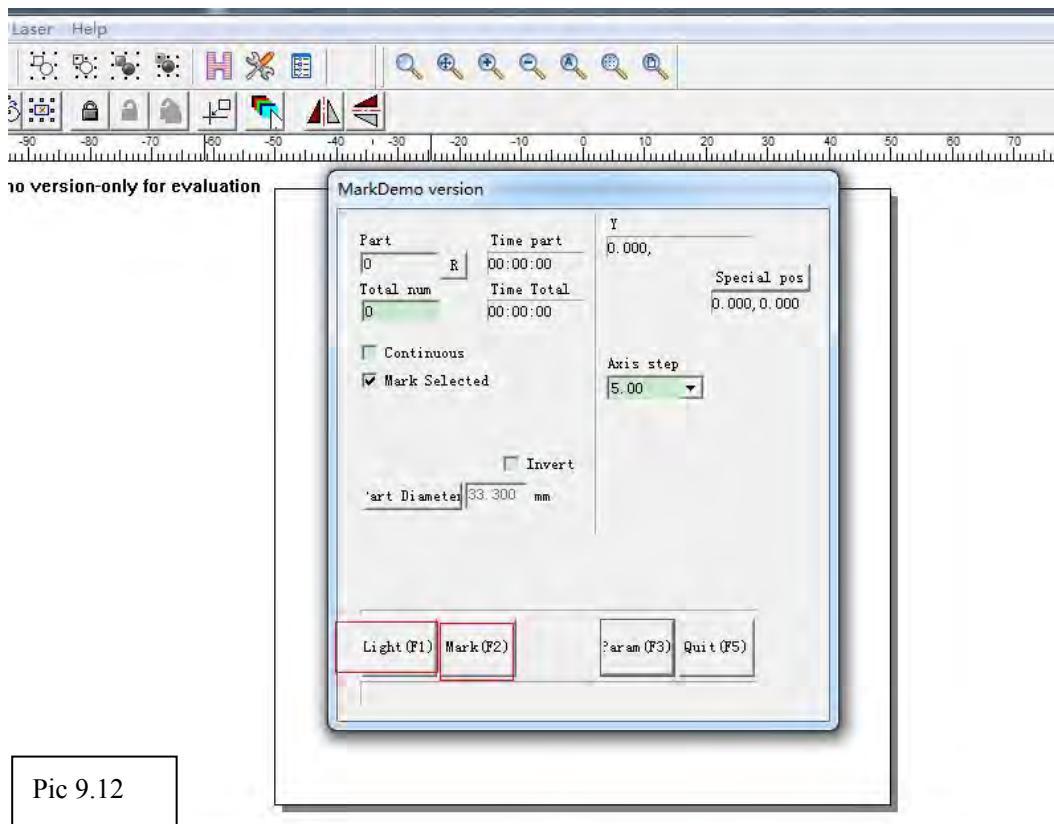
Step 5: Modify the parameter as show on Pic9.11

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Pic 9.11

Step6: First click “light F1” and check the marking area, at last click “Mark F2” as show on Pic9.12



Pic 9.12

Appendix 1:

Laser marking machine after-sales maintenance manual

First, thank you very much to buy the products of our company, in order to ensure the product after-sales service work, especially as follows:

General rules

1. During the guarantee period, we will provide you with the fittings for free, if the fittings are conformed to the warranty conditions.

2. Users must use our equipment to ensure the integrity, independence and the original of the device. For the following situations will not warranty the company, while its equipment or reputation damage caused economic losses caused to the Division I, we remain the right to pursue its legal responsibilities:

- (1) The environment is not suitable for using machine yet insist on using.
- (2) Without permission for equipment modification including adding reduction, remove the replacement parts, or the use of our company outside of components and peripheral equipment;
- (3) Failure to specification requirements operation, maintenance, or vandalism
- (4) Due to the equipment move transportation cause damage

3. On the condition of not affect product performance, we have the rights to change product specifications and naming ways without prior notice to.

4. Our only legal obligation on the sale of the product itself such as the quality and performance, do not assume other indirect obligations and responsibilities.

Detailed rules

1. The whole machine warranty period is 24 months which counted from the date shown in the equipment sign.

2. The warranty of laser module

- (1). RF laser tube and fiber laser module for 1 year
- (2). Standard CO2 laser tube for 4 months
- (3). Reci laser tube for 10 months

3. Consumable parts warranty

Such consumable parts are not in the period of warranty. Such as glass lens, belt, switch, gas mouth, anchor/wheel, buttons, press plate, etc.

Laser power supply, driver, motor have 1 year warranty.

4. Machine peripheral equipment:

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peripheral equipment warranty for one year, in the product labels to factory date, by the equipment manufacturer according to its standard warranty, we assist maintenance; Such as water chiller, Exhaust fan, air pump, water pump, etc.

Accessories maintenance freight regulations

1. We will provide you with the fittings for free repairment or change during the guarantee period if test for the quality of the product itself reason (Not man-made reason, environmental reason). But please kindly noted that all users are kindly required to return us the damaged fittings by courier with your charge before we send back the alternative fitting parts. And we charge your freight. If because some reasons, we can not receive the broken fittings in time, it will cancel the warranty qualification.

2. During warranty, if the fittings broken not because of machine quality, buyers need charge the freight and repairment cost.

3. After warranty period, the fittings which need repaired or changed should be in charge by you and charge the freight and repairment cost.

Door-to-door service policy

When you meet some problems with installing, using or adjusting, but our online-support can not solve it, we can offer Door to Door service. If you need our engineer(s) to assemble or maintain or adjust the machine in your area, you would like to be required to assist us to deal with the visa formality, traveling expenses prepaid and accommodation arrangement during the business trip and the service period before they dispatched.

And please kindly arrange the translating person for the service engineer during their service period. Otherwise, you also can arrange your engineer to come to visit our factory to get a long-term free technical training.

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Appendix 2 marking machine parameter

Materials	Marking effect	Filling	speed mm/s	power	frequency
Aluminum business card(yellow)	From light to dark	0.01-0.03	500	20-80	20
Aluminum nameplate	From white to black When the speed is 1500 sometimes is white 1500	0.01-0.03	1000	20-80	20
Plastics	clear	0.03	1000	20	20
Iron	From light to dark	0.01-0.03	0-1000	20-80	20
Stainless steel	Sometimes is black, Close to the material color	0.01-0.06	0-1500	20-80	20
leather	Best effect	0.01-0.06	300	60	25

Fiber Marking Machine 10W Parameters

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Fiber Marking Machine 20W Parameters

Materials	Marking effect	Filling	speed mm/s	power	frequency
Aluminum oxide block	Marking dark	0.01	300	50	250
Stainless steel block	Marking white	0.01	100	40	80
Stainless steel block	Marking white	Cross 0.05	1000	65	35
Foreign white copper sheet	Marking white	Cross 0.03	1000	100	50
Stainless steel block	Marking deep, marking dark	0.05	500	80	20
		0.01	200	40	80
		0.01	200	40	80
Stainless steel block	Marking dark	0.01	220	40	80
White lampshade	Marking dark	0.03	1200	90	25
Red button	Marking white	Cross 0.01	1300	65	35
White black lacquer buttons	Marking white	Cross 0.04	1000	65	35
Silver material	Marking white	Cross 0.05	1200	100	35
Stainless steel block	wire drawing	0.09	1000	70	35
		0.12	1000	70	35
		0.25	1000	70	35
Red copper	Marking deep, marking white	0.02	100	100	20
		0.02	1000	70	80
Red copper	Marking deep, marking red	0.01	100	100	20
		0.01	100	100	80
White plastic pipes	blace	0.03	1200	65	25
white background coating Blue lacquer	Marking white	0.03	800	85	40
Circuit board	Marking white	0.01	1000	95	32

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Aluminum molds	Marking white	Cross 0.05	100	95	45
Brass	Marking white	Cross 0.05	1000	80	40
Black hard plastic	Marking white	0.05	1500~2000	60~75	25~45
Iron	Marking white	Cross 0.05	1000	55	35
The new laser housing	Marking dark	0.01	100	100	20
Brass	Marking deep, marking dark	Cross 0.01	100	95	20
Aluminum Alloy	Marking deep, marking dark	Cross 0.01	200	100	30

Note: The parameter list for customer reference only, not for the actual processing parameters.

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Postscript

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