Fiber Laser Marking Machine

User Manual

Content

Introduction

Thank you for choosing us Dapeng Laser Technology Co., Ltd products. Hope we can do our best to satisfy your requirement.

With the operational belief that Professionalism lies in details since establishment, Dapeng Laser Technology Limited keeps as its developing goals that creating outstanding products to meet beyond customers' expectations; Insists on the quality guidance to pursue perfection with precision, and provides personalized products and services according to different needs of customers. With advanced equipment, superb technology, excellent product quality, after-sales service and rich management experience, Dapeng Laser Technology Limited has developed into a well-known manufacturing enterprise in laser series products in the Asia-Pacific region.

This equipment is a set of high-tech product which integrated optical, mechanical and electrical technology. In order to make you use and maintain the equipment better, exert its maximum performance and extend the lifespan, please read this manual carefully before using.

Please properly keep this manual for future reference and maintenance.

Attention

The items in the manual are manufactured by DP LASER. This manual is only suit for Fiber Laser Marking Machine.

A.Important Safety Sign

WARNING! LASER OUTPUT!

WARNING! HIGH VOLTAGE!

LASER DANGEROUS! DO NOT STARE DIRECTLY!

WARNING! KEEP GROUND WIRE CONNECTED!

B.This machine use the fourth kind Laser generator,the laser may cause accident as below:

a. Fire the inflammable material nearby.

b.In the process of laser marking,for different material,itmay cause other radiation,toxic substance,harmful gas,etc.

c.Direct laser exposure will cause body hurt.So the use place of this equipment must be equipped with fire fighting equipment, Do not put Inflammable and explosive material on the platform or around,and keep well ventilated. Non-professional operators are not allowed to approach the equipment.

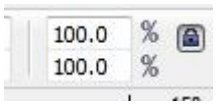
C.Do not put total reflection or diffuse reflection object on the equipment,to avoid laser reflect to body or inflammable material.

D.In the working process of the equipment,operator must monitor the working status anything abnormal occurs,cut off the power immediately.

E.The working environment should be dry, no pollution, no vibration, no high voltage, no strong magnetic, etc. interference and influence. Working environment temperature 10-35℃,humidity 30-85%RH (no frost).

A.CorlDRAW Export

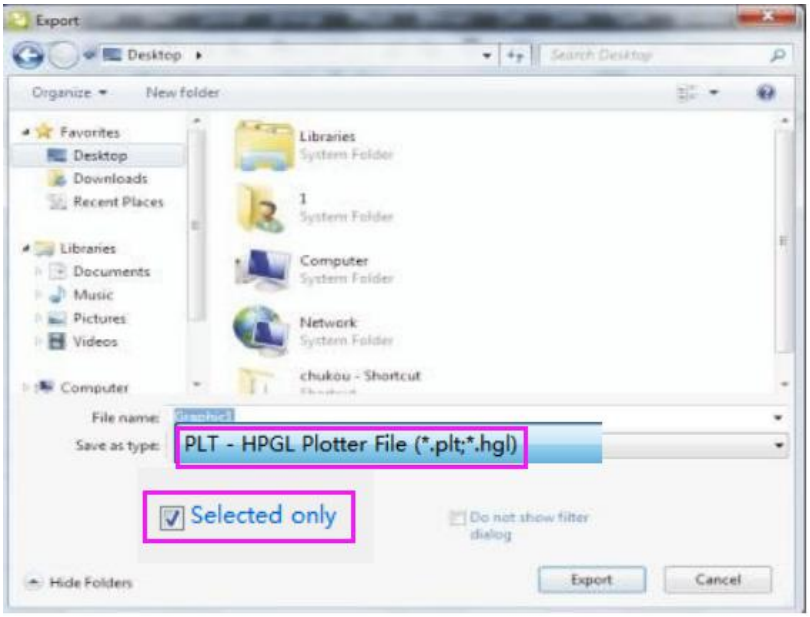
Open CorlDRAW file, select the diagram need to mark, input 10000% in the Scale bar, press Enter, (keep scale lock closed, it will amplify100 times automatically),



then click File-Export, it will pop up below dialogbox, select PLT format, click Just Selected",

click"Export"then"Confirm",as below.

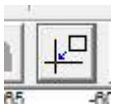
"

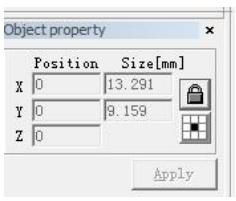


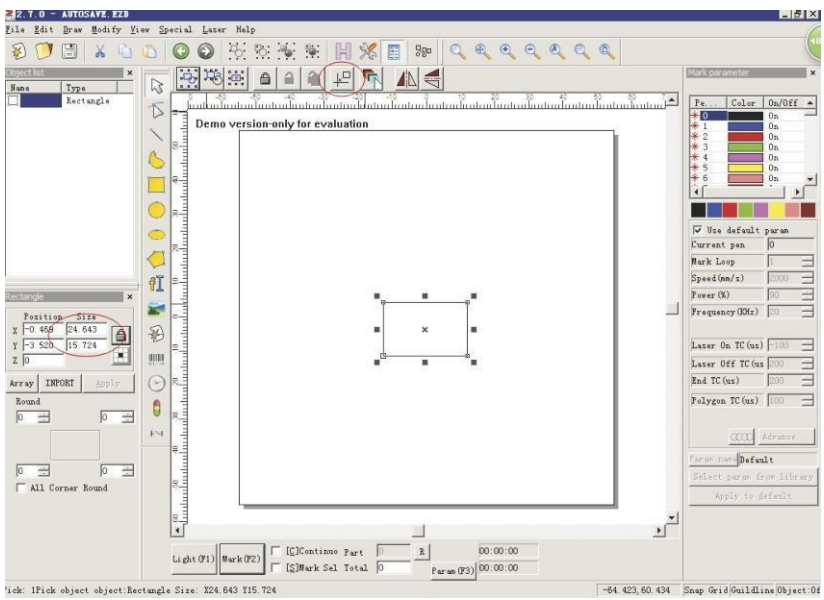
B.DP LASER Import

Twice click "EzCad2.exe" on the deskt 

."File" - "Import Vector File"
Choose the PLT file. Input shrink 10000% in the Scale bar or input the value directly.

Click "Put To Origin" 





Regular Item

A.Adjust the focus

a.Put the products under the centre of the lens.

b.Draw a small circle, hatch it, keep the focusing piece on the product.

c.Click “Continuous Mark”,then “Mark”.

d.Till see the strongest laser light on the focusing piece, it’s the best focus.

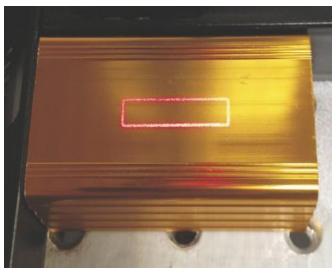
e.Press “Space” key to stop laser. Press “Delete” to delete the small circle.

f.Space laser, press the Delete key to delete the small.

B. Adjust the red light

Click “Red Light” Click “Light(F1)”

As shown in figure:



Change X/Y value in the software or move the moveable platform to adjust the red light position.

The light indicate the diagram’s size and position

C. Hatch

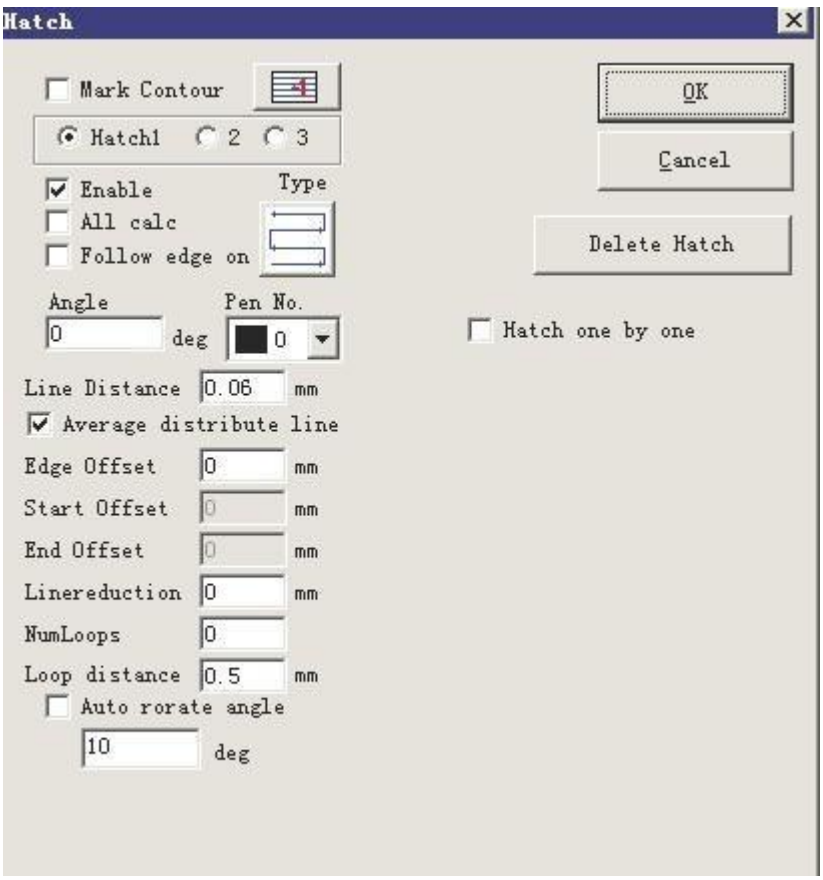
Select the diagram need to mark, will get below click , dialog box:

a.Click “ Mark Contour” it will mark the outline of the diagram.

b.Click “ Enable” , it can activate below parameters. Normally, the distance of line is “ 0.04-0.06” . The angle is hatch angle, like “ 0” degree is horizontal line hatch.

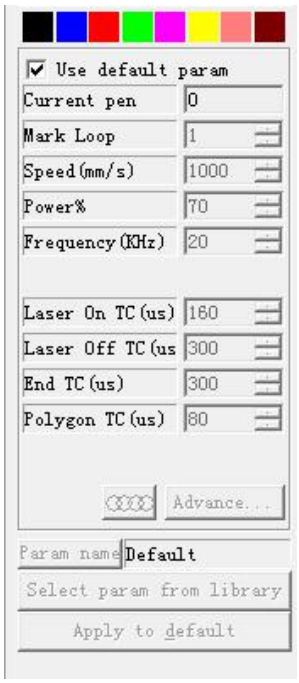
c.Before hatch, it is empty,

After hatch, it is with line.



D. Adjust parameters

Cancel the hook of "Default parameters" first, then can modify the value. As shown in figure.



a. "Mark Loop" is marking times. "1" is one time.

b. "Speed", normally the value is from 600 to 1500. Make the speed value higher, it will cost less time and the marking effect will be more shallow.

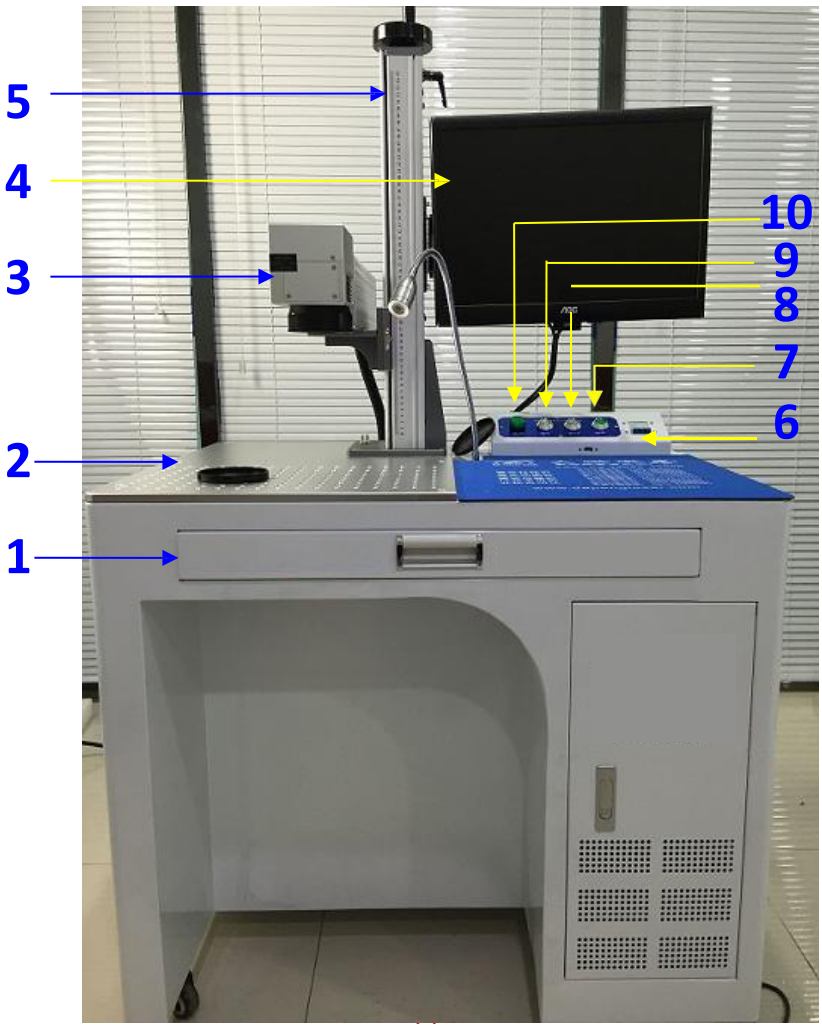
c. "Wattage": power of the light, biggest value is 100%. Make the power value higher, the light will be stronger, the marking effect will be deeper.

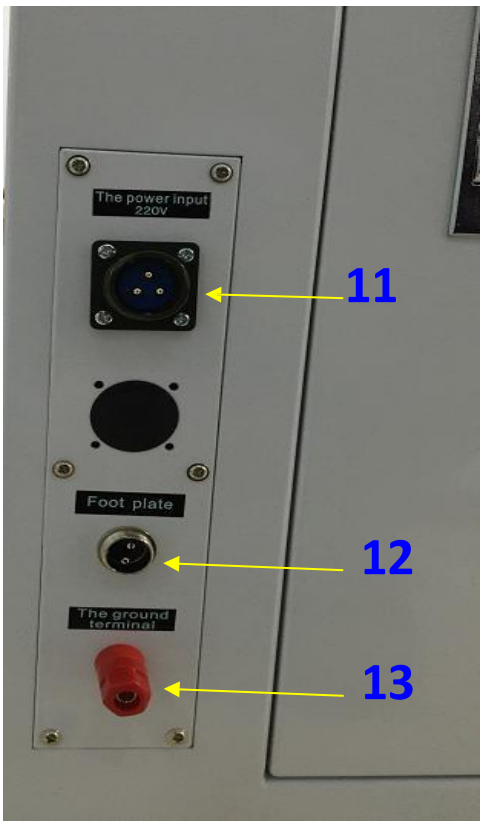
d. "Frequency": Make the value higher, the light will be weaker.

e. "Laser On TC" , "Laser off TC", "End TC" and "Polygon TC" are default parameter.
Do not suggest to modify.

f. After above operation, can start marking.

A. Panel Introduction



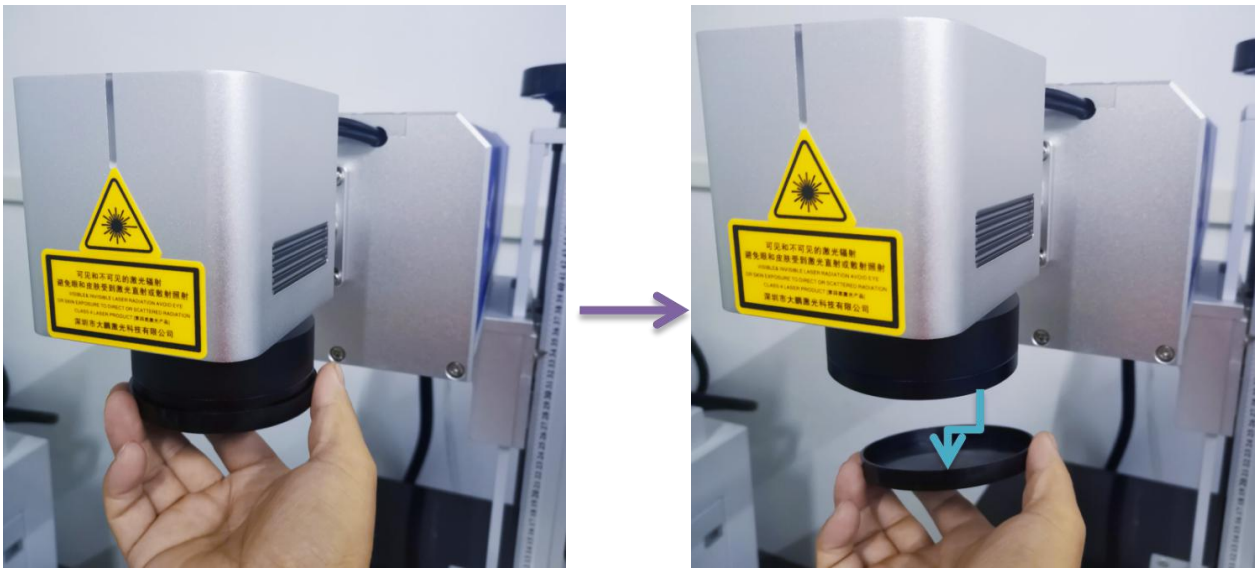


1.PC keyboard & Mouse
2. Workbench
3. Scan Head
4. PC Monitor
5. Stander
6.Main Switch
7. PC Switch
8.Laser Switch
9.Red Aiming Switch
10.Indicator
11.Power Input
12.Foot Switch
13.Ground Wire

B. How To Start

.Make sure the machine connect to 220V±10% power before you start it.

1. Take off the lens cap



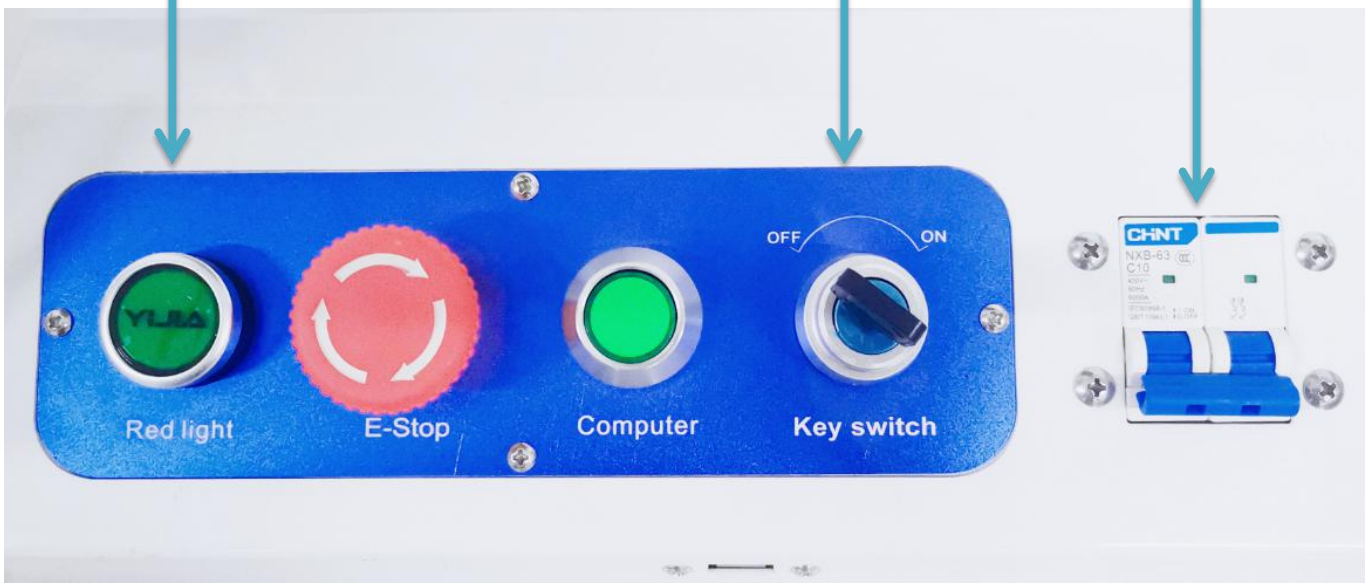
5.Red light 4.Computer 3.Key Switch 2.Main Switch

C. How does it end

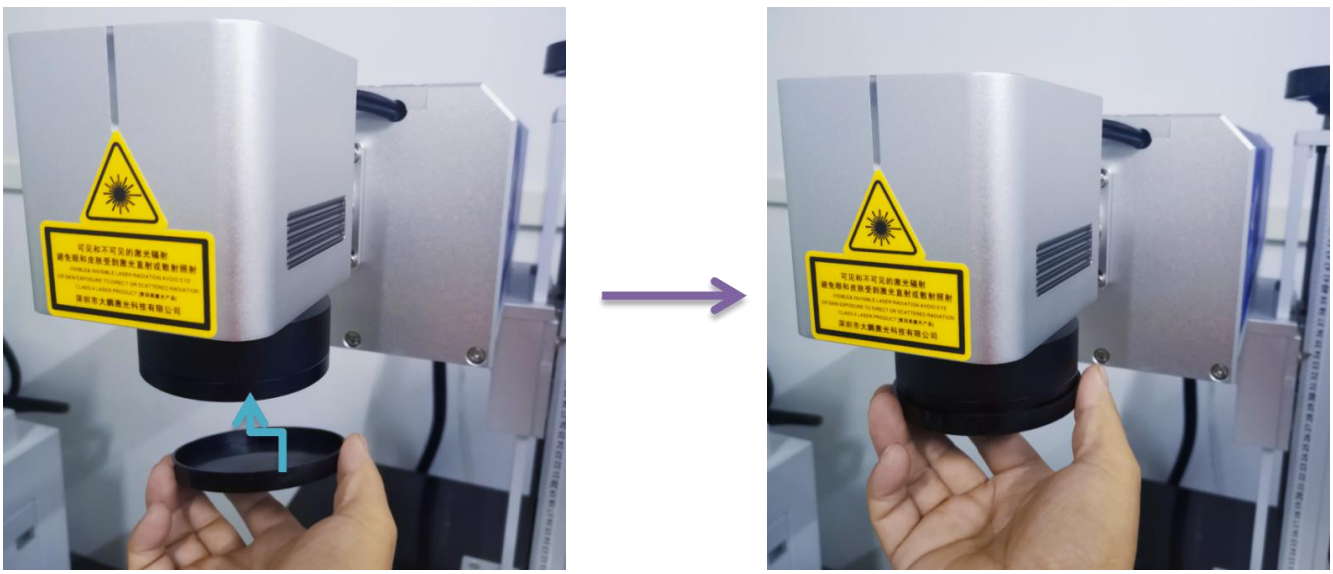
1.Off Red light

2.Off Key Switch

3.Off Main switch



4.Put the lens cap back on



Maintenance And Problem Analysis

A.Maintenance

a.In the daily work, need appointed operator to operate and maintain. Before operate, operator have to make measures to prevent fire and electricity. Making Production safety education to avoid accidentoccurs.

b.Before using this equipment, confirm the hardware connect correctly. Read this manual seriously. Master different parameters affect different marking technology. Setting suitable parameter can make a good effect and save marking time.

c.Keep the working environment dry and clean, make the laser generator airy and dissipate heat well. Clean the surface of heat dissipation channel regularly, to keep good heat dissipation.

d.Clean the lens, please use clean absorbent cotton to dip the mixture of ether and ethanol (ether 2 : ethanol 1), rub softly.

B. Problem Analysis

Common Problems	Possible Reason	Solution
No Laser Output	a. Power switch isn't on. b. Did not take off the cap of lens. c."Stop" switch is on. d.Key switch isn't on. e.Wrong focus. f.The main board and driver are not in stalled correctly.	a.Turn on Power switch. b.Take off the cap of lens. c.Turn off "Stop", restart key switch. d.Key switch on. e.Adjust the focus. f.Cut off the power, restart the computer, reinstall the main board and driver.
Laser Is Weak	a.the power parameter is low. b.Wrong focus. c .Graphicscolorlayer andpower parameters are inconsistent.	a.Make the power higher. b.Adjust the focus. c.Move the cursor to the blank of working area, click left mouse key. (cancel the selected diagram), click the color bar, then change the parameter.

Continuous Light	a. Wrong start order. b. Selected Continuous Mark. c. Wrong Mark Number. d. Wrong parameter in (F3). e. The main board and driver are not installed correctly.	a.Restart correctly. b.Cancel the hook of Continuous Mark c.Input the right Number. d.Set the parameter refer to the backup of IO page. e.Cut off the power, restart the computer, reinstall the main board and driver.
Lens Can't Move	a.Wrong parameter in (F3). b .The power cable of lens did not connect. c.The main board and driver are not installed correctly.	a.Set the parameter refer to the backup of IO page. b.Connect the power cable. c.Cut off the power, restart the computer, reinstall the main board and driver.
Bad Marking Effect	a.Wrong marking parameters b.Wrong Focus. c.The diagram is not good. d.Wrong parameter in (F3). e.The material is not suitable.	a.Adjust the marking parameters. b.Adjust the focus. c.Redo the diagram. d.Set the parameter refer to the backup of IO page. e.Change the material.
Wrong Size	a.Wrong diagram size. b.Wrong parameter in (F3). c.Wrong Focus.	a.Redo digram. b.Set the parameter refer to the backup of IO page or reset. c.Adjust the focus.
Diagram Deformation	a.The diagram is not good. b.Wrong parameter in (F3). c.The software or system get a problem	a.Redo the diagram. b.Set the parameter refer to the backup of IO page or reset. c.Reinstall the software or system.
Foot Switch Don't Work	a.Wrong parameter in (F3). b.The cable of foot switch didn't connect good.	a.Set the parameter refer to the backup of IO page or reset. b.Check the connector of foot switch.