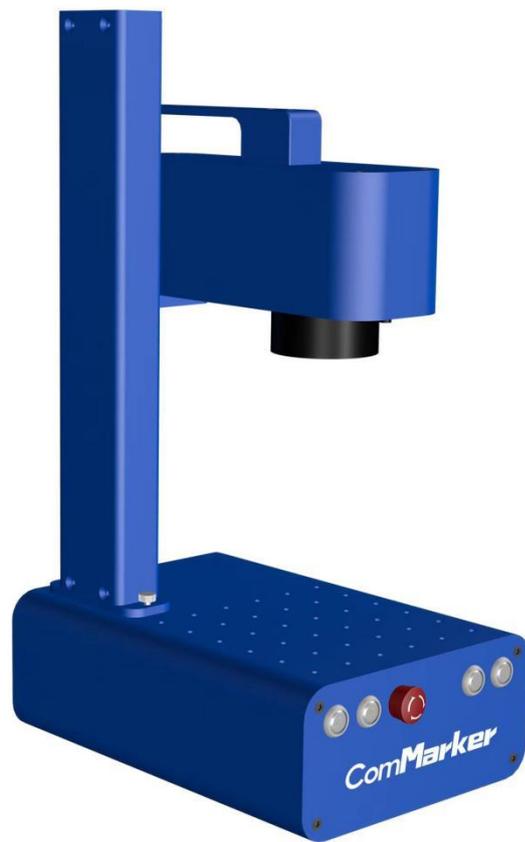


# ComMarker



Laser Marking Machine

Q1

Manual

## Security Statement



Before using the laser engraving machine, please read this safety guide carefully.

It mentions situations that require special attention and includes warnings of unsafe practices that can cause damage to your property or even endanger your personal safety.

### 1 Laser Safety

- The machines use Class IV lasers. The lasers are very powerful and can cause eye injuries and burn the skin. It is recommended to wear laser goggles when using the laser engraver.
- Avoid exposing your skin to Class IV laser beams, especially at close range
- Teens must be supervised by parents while using the machine.
- Do not touch the laser engraving beam while it is switched on.

### 2 Material Safety

- Do not engrave materials with unknown properties.
- Materials recommended:  
Wood, leather and other flammable materials

### 3 Use Safety

- It is forbidden to point the laser to people, animals or any combustible object, whether it is in working condition or not.
- Use this laser engraving device only in accordance with all applicable local and national laws and regulations.
- Use this device only in accordance with this instruction manual and engraving software manual.
- DO NOT leave this device unattended during operation. Cut off all power to the machine and contact either our customer service or repair service if anything seems to be working abnormally.
- Any untrained personnel who might be near the device must be informed the danger of the machine before operation

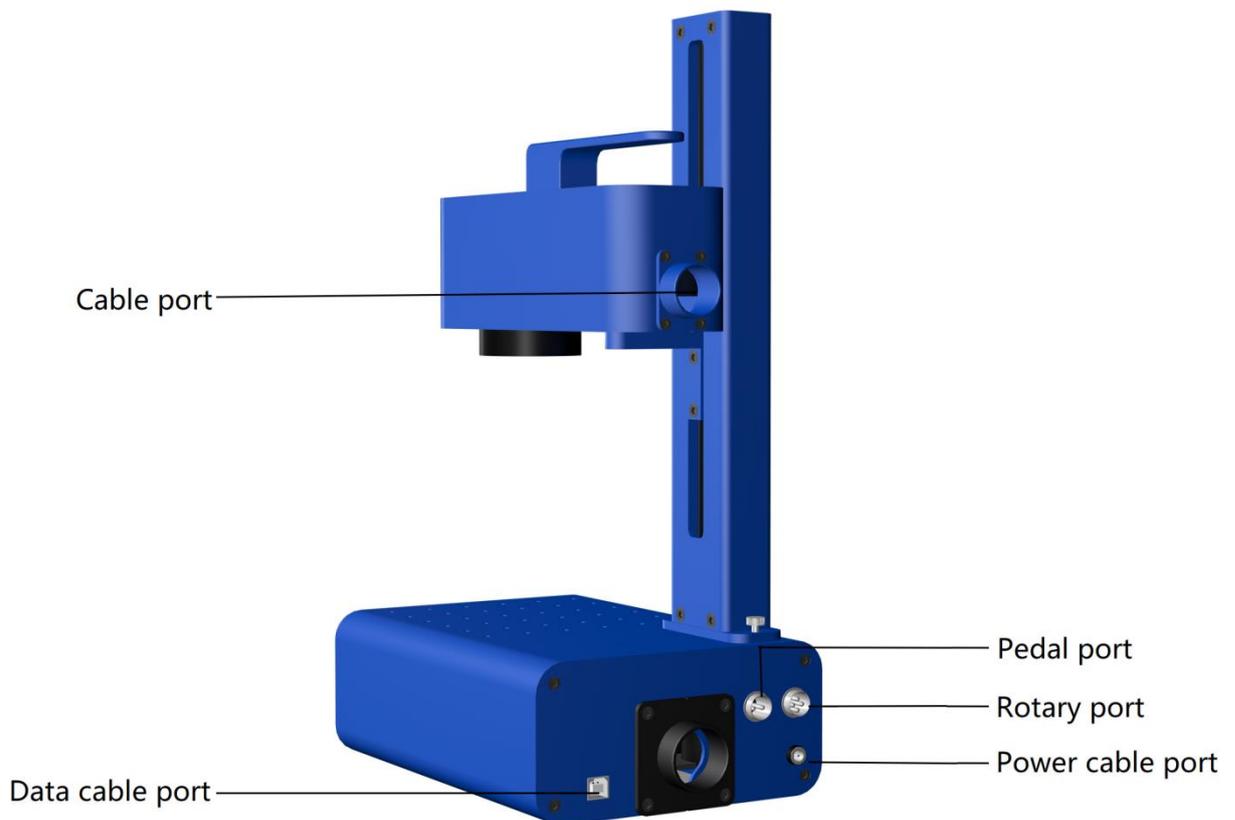
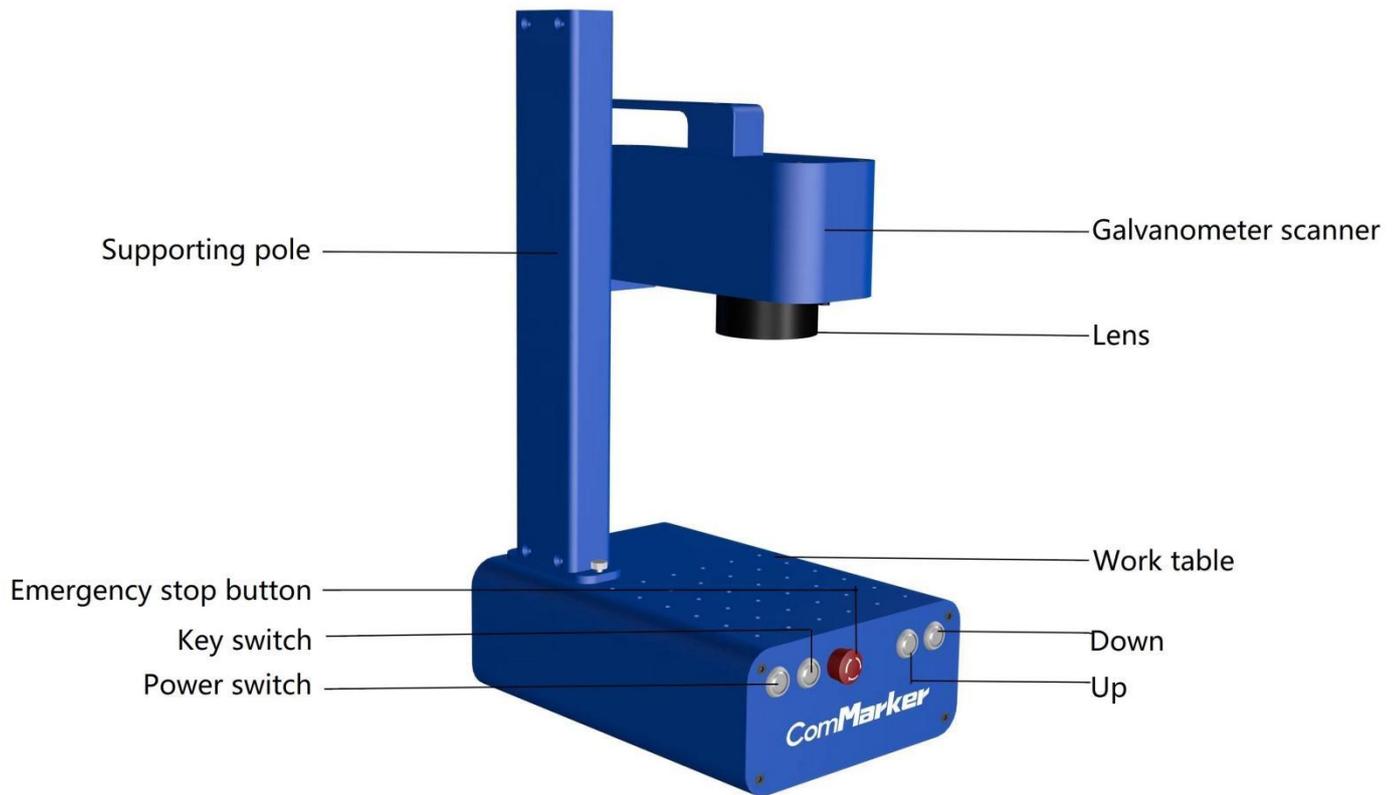
### 4 Electric Safety

- Only use this device with a compatible and stable power supply with less than 5% fluctuation in its voltage.
- Turn on the power to this device when it is well grounded.
- The area around this laser engraver device should be kept dry, well ventilated, and environmentally controlled to keep the ambient temperature between 40–95°F (5–35°C). The ambient humidity should not exceed 70%.

#### Note:

**Make sure to remove the plastic protective cover of the field lens before engraving to avoid damage to the field lens caused by laser burning.**

## Product Structure



## Assembly of Machine

1. Place the parts on the table



2. Fix the connection part with allen screw



3. Connect the motor wires properly



4. Put the motor into the main case



5. Fix the supporting pole



6. Intall the laser head with the screws



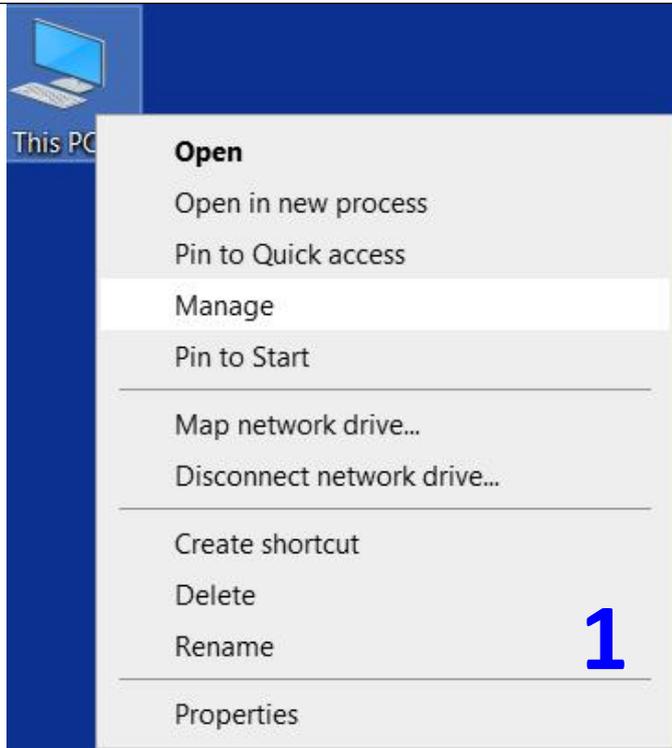
# Operation Instructions

## 1. Install the driver

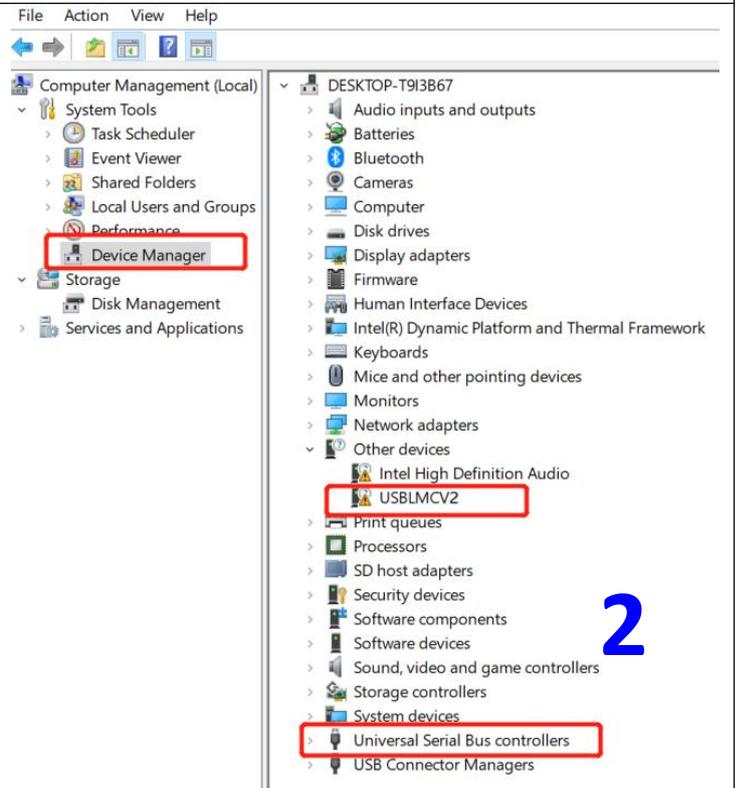
Note: please conduct the following operation before installing the driver

1)the machine power on; 2) Emergency button not pressed; 3) Key switch open; 4)Data cable connected

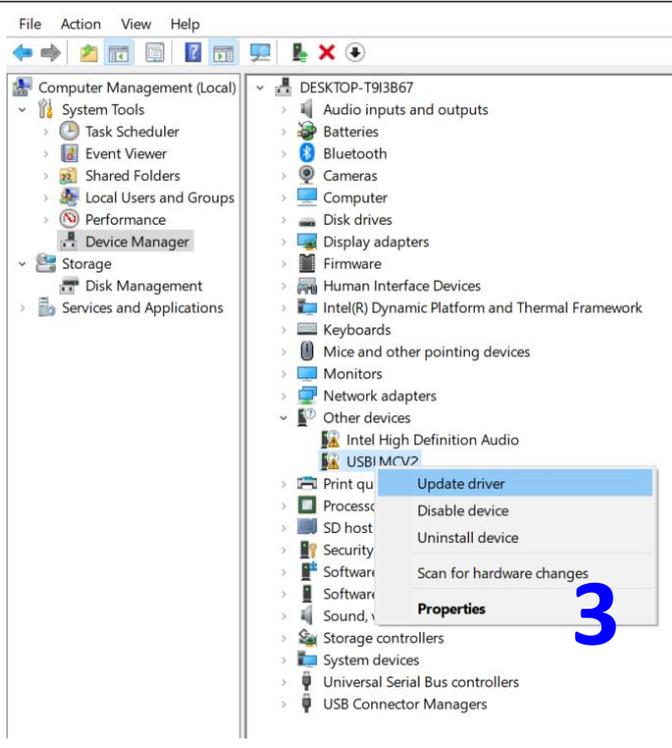
1.Right-click "this PC", click "Manage"



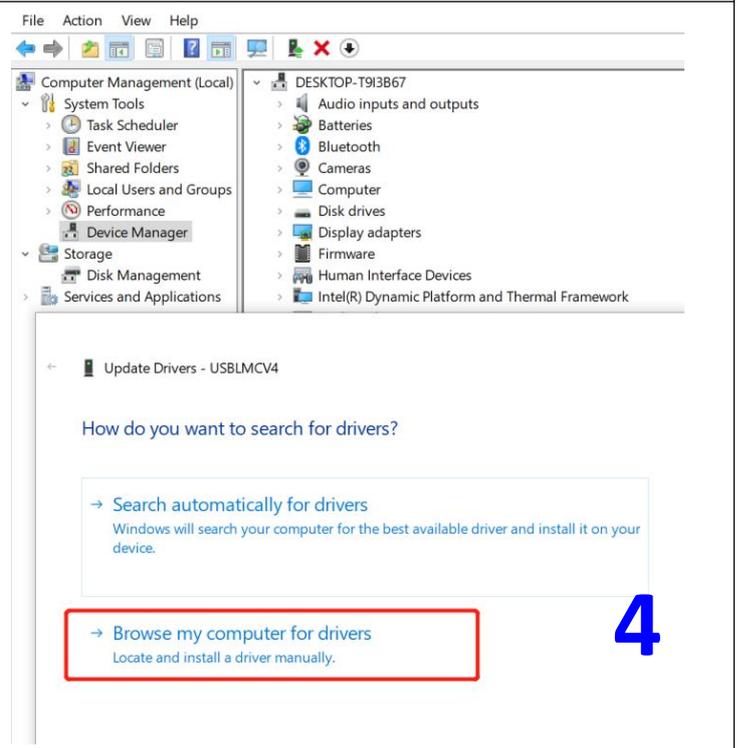
2.Click "Device Manager", find "USBLMCV2" or "Unknown Device" in "Other devices" or "Universal Serial Bus devices"



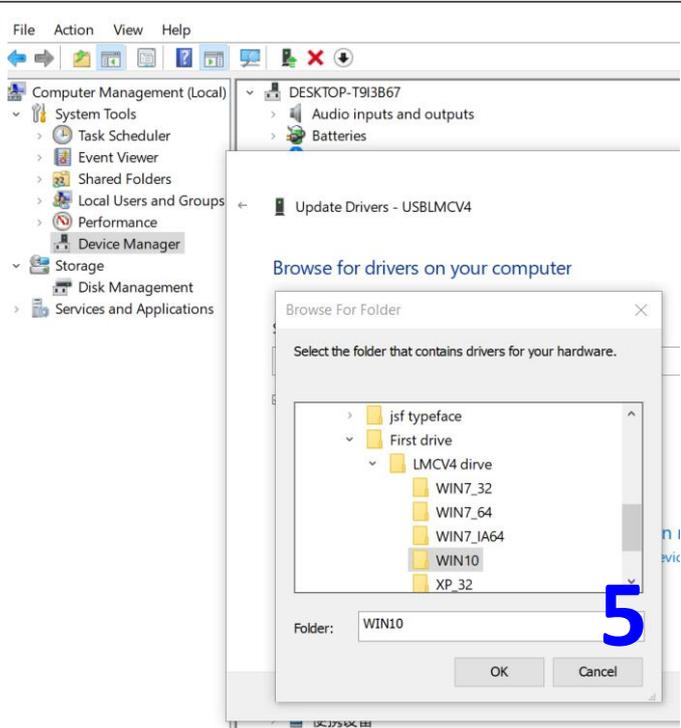
3.Right-click "Unknown device" or "USBLMCV2" and "Update driver"



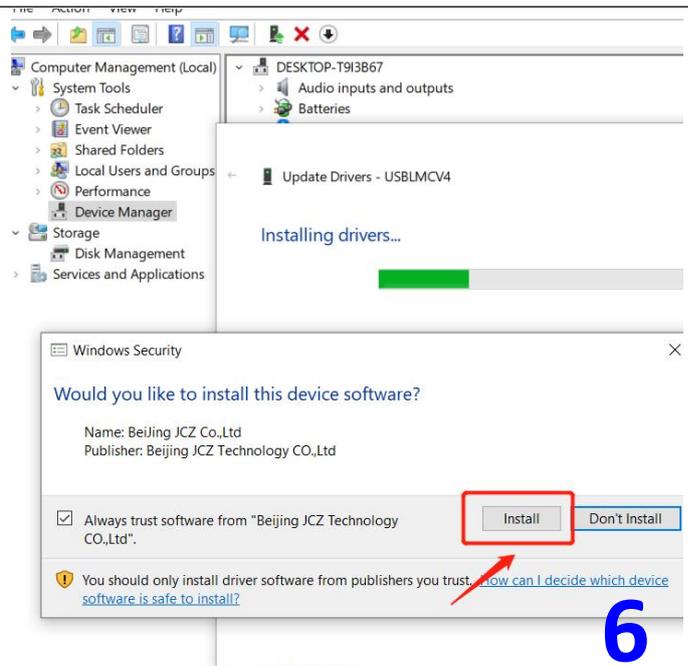
4.Select "Browse My Computer for Drivers"



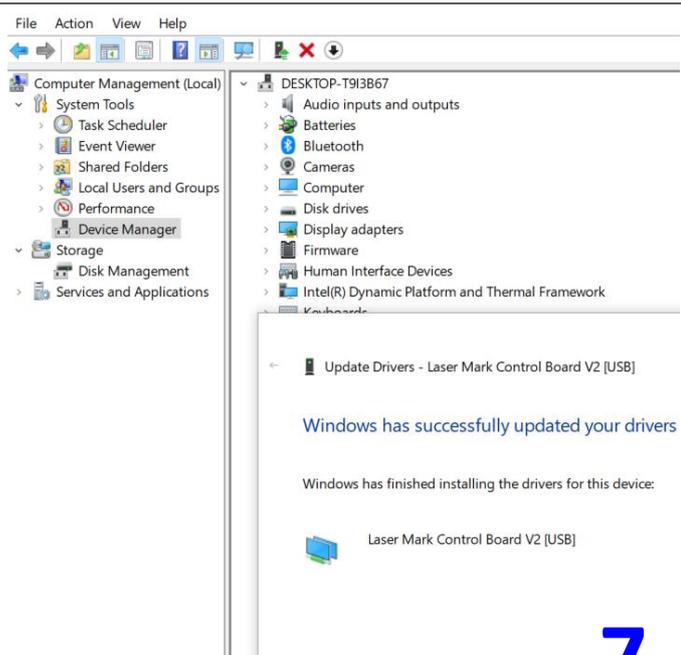
5. Find the corresponding file with window system in the USB drive, click OK



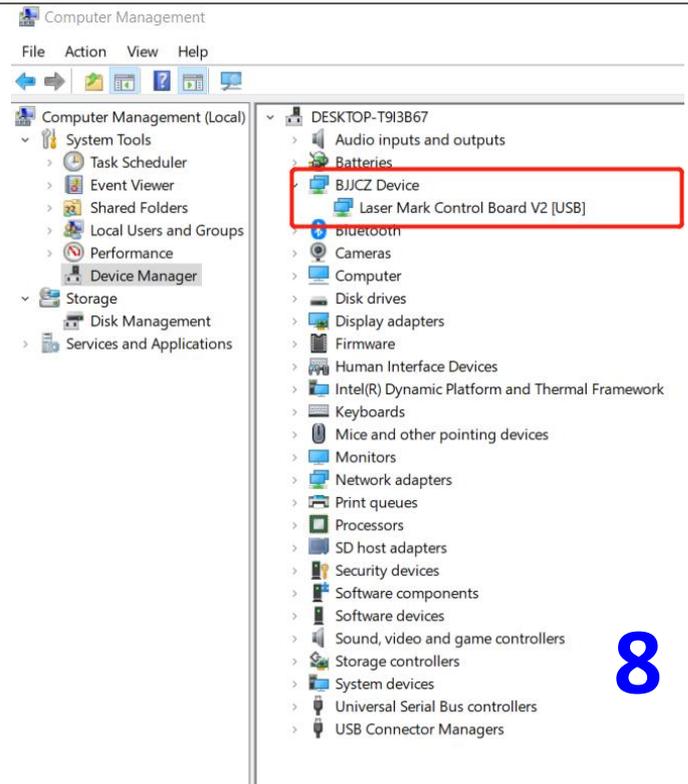
6. Click "Install"



7. Click "finish" if it is successful



8. It will display "BJCZ Device" in Device Manager

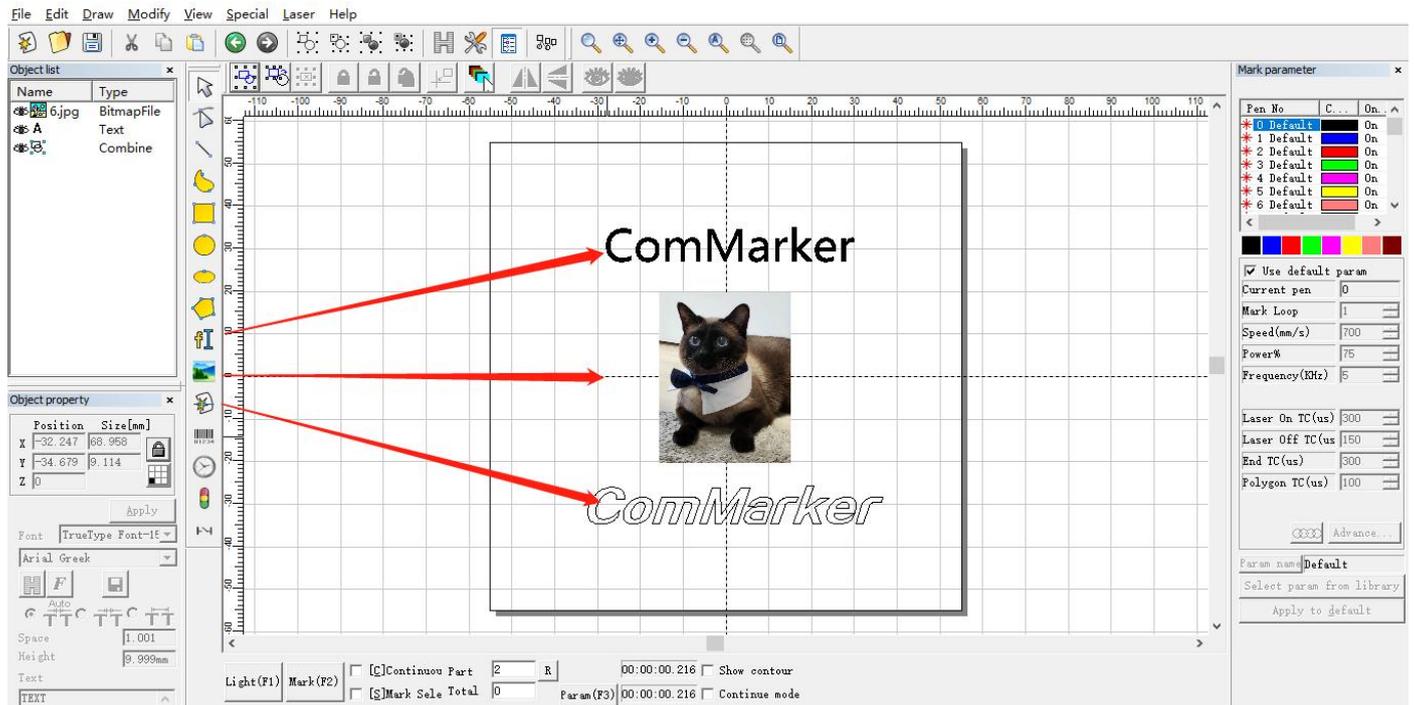


**Noted: \*It is recommended to copy and paste the files of the USB disk to the computer desktop or other computer disks.**

**\*If the driver installation is unsuccessful, please refer to FAQ 1**

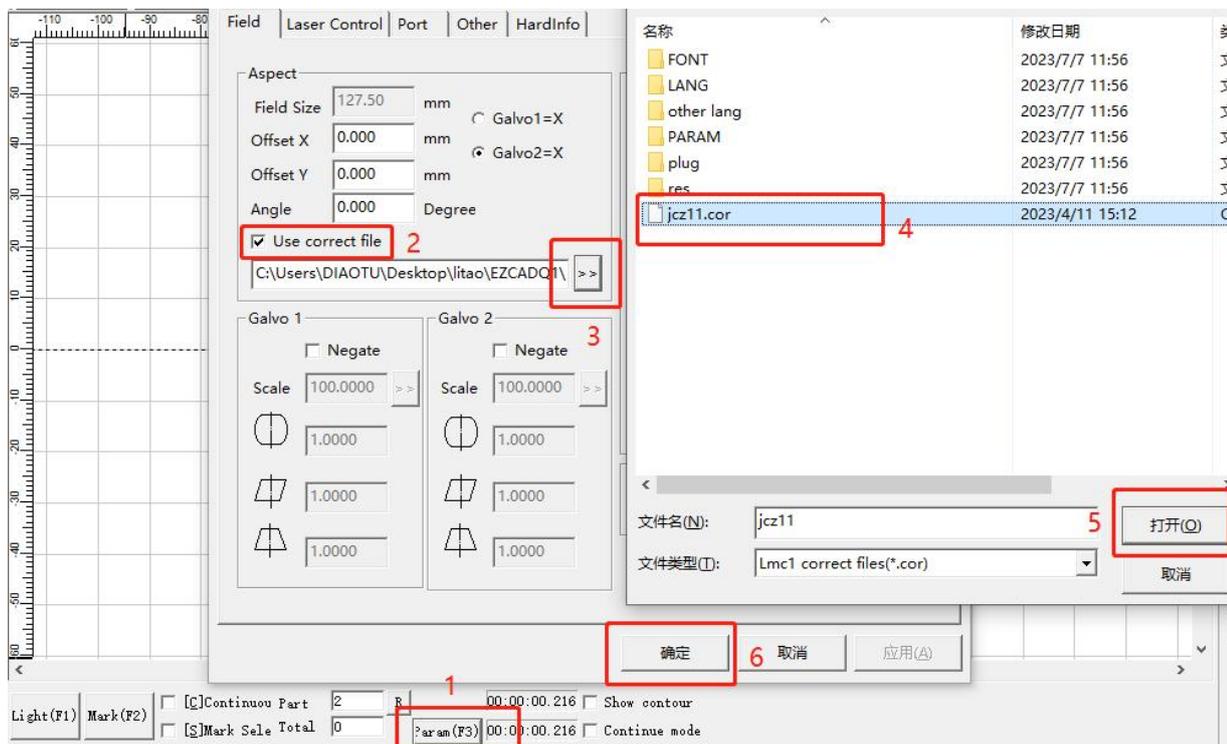
## 2. Open the software

Open the USB folder, open the "EZCAD for ComMarker Q1" folder, Open the software "EZCAD2". You can enter "text", import "picture" or "vector file" as shown in the figure below. It is recommended to select the text to test first.



## 3. Import the correction file

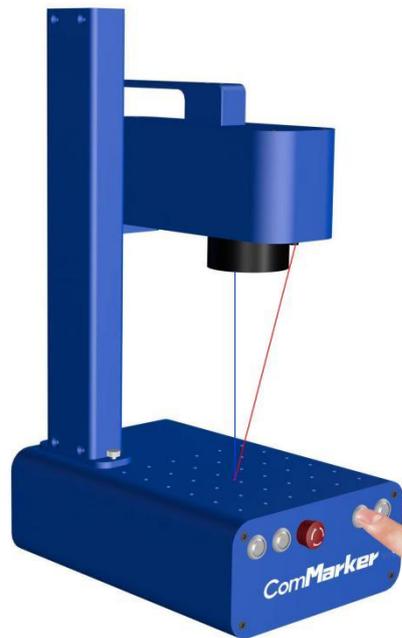
Select "Parameter (F3)", tick "Use Correct File", select the file ending with .cor in the USB flash drive (or have been copied to the computer disk), and click "OK (确认)".



#### 4. Adjust the focus

Press up or down button to lift or lower the laser head until the two light point overlap, which is the best focal point.

**Note: the blue light will not be emitted until the software is opened**

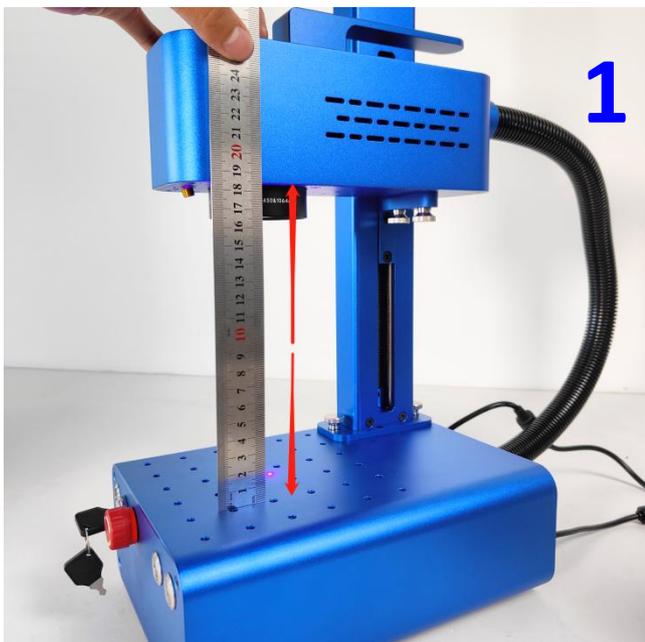


**Note: Before the machine is out of the factory, we have done focus light correction. At the position where the red light and blue light beam overlap, the laser emits the strongest light. However, due to transportation reasons, the focus point of machine you received may shift, and the focus point would not be the best focal length.**

***Please follow the steps below if the focus point is inaccurate:***

The suggested focal length of this machine is **198 mm** (from laser head edge to table surface)

1. lift up or down the laser head to the best focus point with the ruler.
2. At this time, loosen the screw of the red light to adjust the position of laser beam to make the red beam overlap with blue beam.



## 5. Marking test

Place the test engraving material on the machine. Click "Light (F1)", the area shown by the light is the marking area. Tick "Default Parameters". Click "Mark (F2)" to start marking.

The screenshot displays the software interface for a laser marking machine. The main workspace shows a grid with a dashed box representing the marking area, containing the word "TEXT". The interface includes a top toolbar, a left sidebar with tool icons, and a right sidebar titled "Mark parameter" with various settings. At the bottom, there is a control panel with buttons for "Light (F1)" and "Mark (F2)", and checkboxes for "Continuou Part" and "Mark Sele Total".

**1** Light (F1) **2** Mark (F2)

**3** Use default paran

Don't tick "Continuou Part"

Pen No	C...	On
0	Default	On
1	Default	On
2	Default	On
3	Default	On
4	Default	On
5	Default	On
6	Default	On

Current pen: 0  
Mark Loop: 1  
Speed(mm/s): 700  
Power%: 75  
Frequency(KHz): 5  
Laser On TC(us): 300  
Laser Off TC(us): 150  
End TC(us): 300  
Polygon TC(us): 100

Param name: Default  
Select param from library  
Apply to default

[C] Continou Part 2 R 00:00:00.216 Show contour  
[S] Mark Sele Total 0 Param(F3) 00:00:00.216 Continue mode

## Parameters

Voltage	100V - 240V
Working Area	11cm x 11cm
Wavelength	450nm
Marking Speed:	0- 4000mm/s
Accuracy	0.05mm
Graphic Format Supported:	AI/PLT/JPG/DXF.etc
System Supported	Window7/8/10/11
Cooling Type	Air Cooling
Output Power	10w
Dimension(L*W*H):	25.5*18.5*45cm
Weight (KG):	5kg

## Accessories



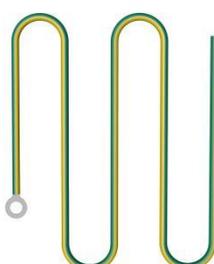
Manual



Power Adaptor



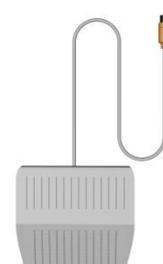
Data Cable



Ground Wire



Rotary Drive



Foot switch



Placing Helper



Allen Wrench



Ruler



Fixing Screws



OTG Adapter



USB Drive



Protective Shield



Goggles



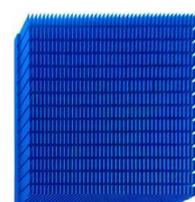
Non-woven



Cardboard



Wood



Cutting pad

## Parameters for marking a photo

### Note:

\*The following parameters are for reference only.

\*Please open the software in the file "Software for engraving photos" before everything.

Input the parameters as below, which is for Q1 10W marking on wood surface.

**Note:** After importing the picture, you can fine-tune the contrast and brightness of the picture to make the picture clearer, these parameters will affect the engraving effect.

The screenshot shows the EzCad2.9.4 for ComMarker software interface. The main window displays a grid with a photo of a bear's face centered within a rectangular frame. The software is running on a Windows operating system, as indicated by the taskbar at the bottom.

**Object list panel (left):**

- BitmapFile
- Position: X: -0.756, Y: -18.562, Z: 0; Size: 72.636, 40.864
- File name: C:\Users\Adam\Desktop >>
- Fixed DPI: 200
- Invert
- Gray
- Dither
- Scan Mode:  Bidirectional scan,  Drill Mode (1.1 ms),  Pixel power adjust

**Marking parameter panel (right):**

Pe...	Color	On/Off
*0	Blue	On
*1	Black	On
*2	Red	On
*3	Green	On
*4	Magenta	On
*5	Yellow	On
*6	Cyan	On

Use default param:   
Current pen: 0  
Loop Count: 1  
Speed (MM/Second): 700  
Power (%): 75  
Frequency (KHz): 5  
Start TC (US): 300  
Laser Off TC (US): 100  
End TC (US): 300  
Polygon TC (US): 100

Red (F1) Mark (F2) [C] Continuo Part 0 R 00:00:00  
[S] Mark Sel Total 0 Param (F3) 00:00:00

Select: 1select object Object:BitmapFile Size: X72.636 Y40.864 DPI=331 27.979, -56.467 Grid:Off Guildline: Object:O

# Lightburn Operation Tutorial (For MacOS)

## 1. Download and install Lightburn software from the website

Note: It is not compatible with our machine if your Lightburn version is lower than V1.4.00, please download a new version and reinstall.

And Lightburn is a paid software with 1 month free trial, you need to buy the licence key for Galvo version.

1. Download the software from the website:

<https://lightburnsoftware.com/pages/trial-version-tr-y-before-you-buy>

2. Find downloaded file Lightburn, and drag Lightburn icon to the Applications folder

The links below will let you download the different ve

[Windows 64-bit version](#)

[Windows 32-bit version](#)

[Mac OS version](#)

[Linux 64-bit version \(.run\) \(alternate .7z\)](#)

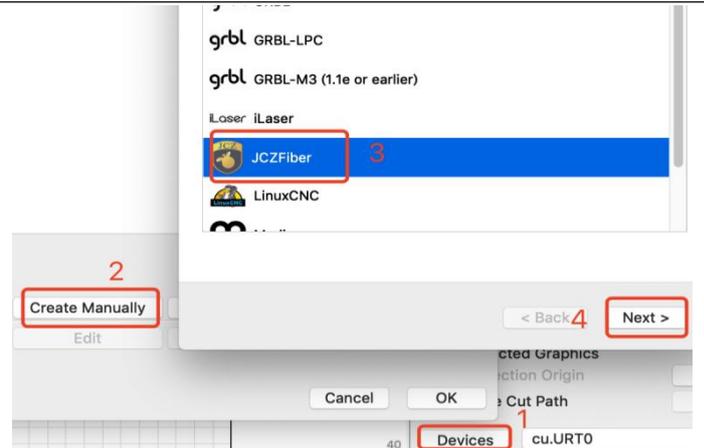


3. Copy the folder "EZCAD for ComMarker Q1" from the USB to the desktop

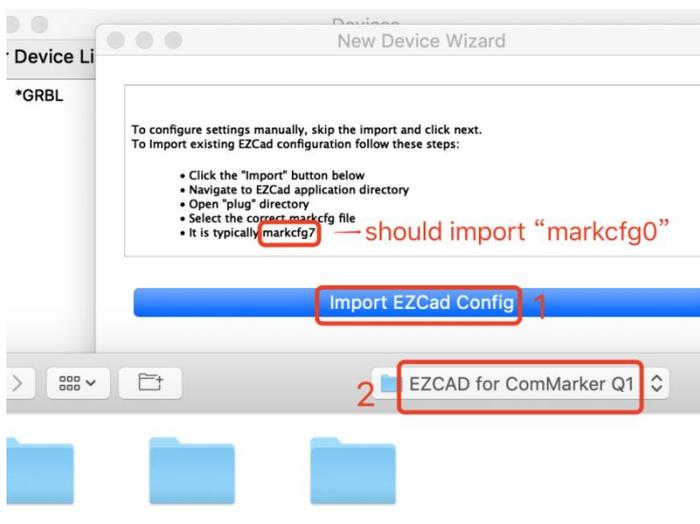


4. A device window will pop out if the software is open the first time, click "Create Manually", Select "JCZfiber"

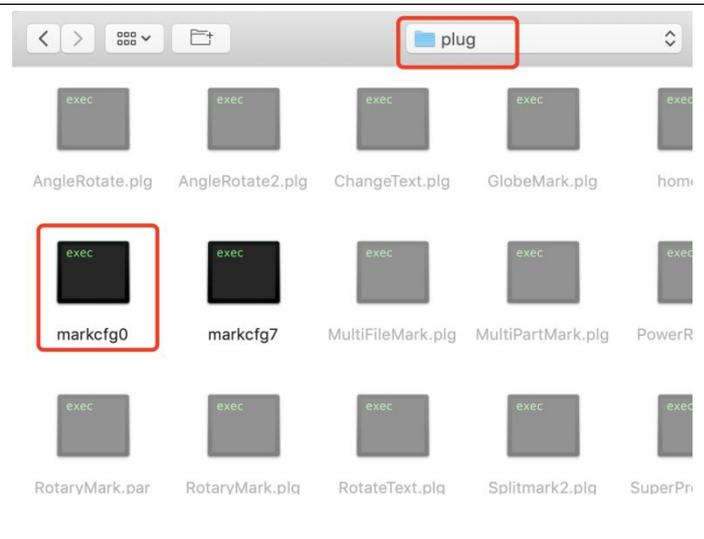
**Note: Make sure the machine is on and connected via USB**



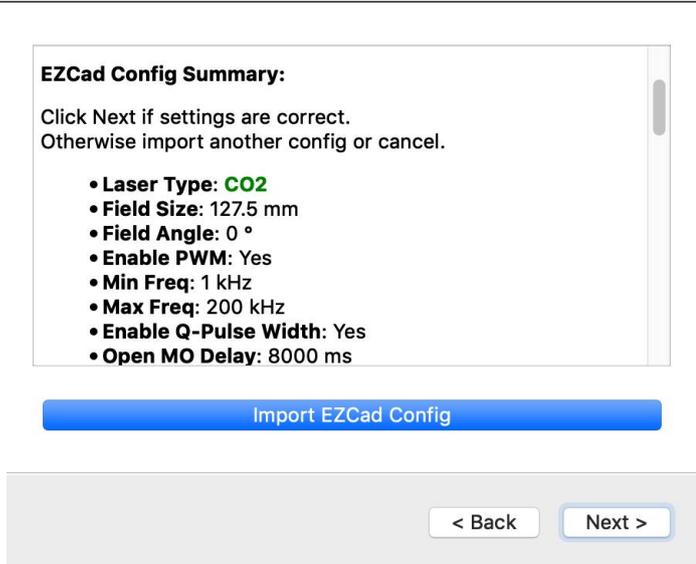
5. Import EZCAD Config and select the folder



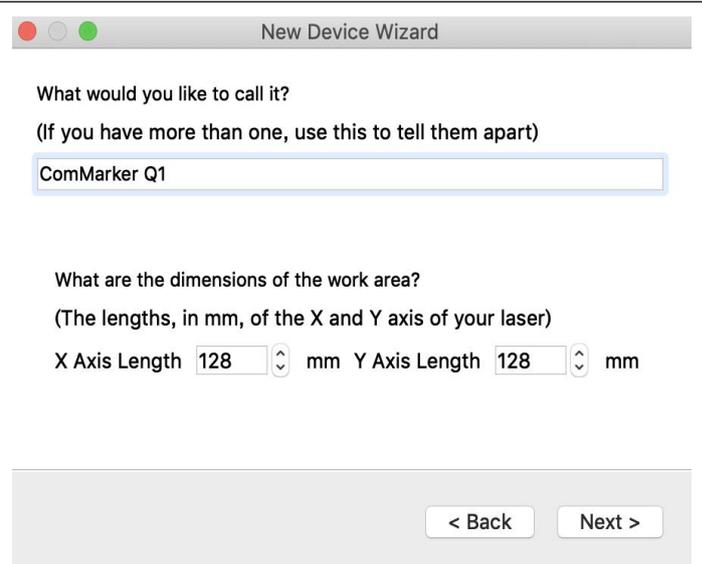
6. Select folder "110mm" ----> "Plug", and choose "markcfg0" and click "next"



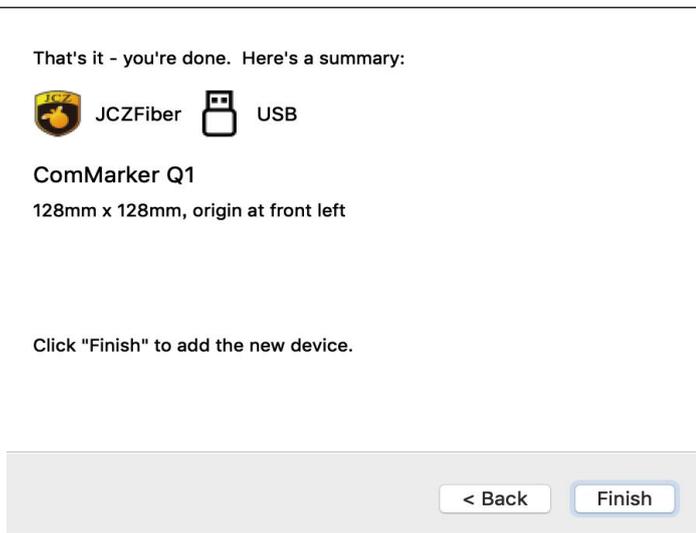
7. You can see the following window if everything goes right, and click “next”



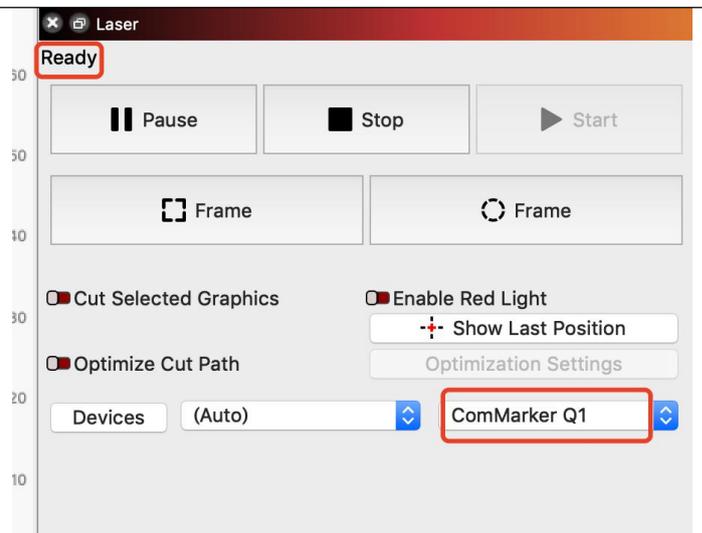
8. Change the name if necessary, and input the right X and Y Axis Length according to the lens. Click “next”



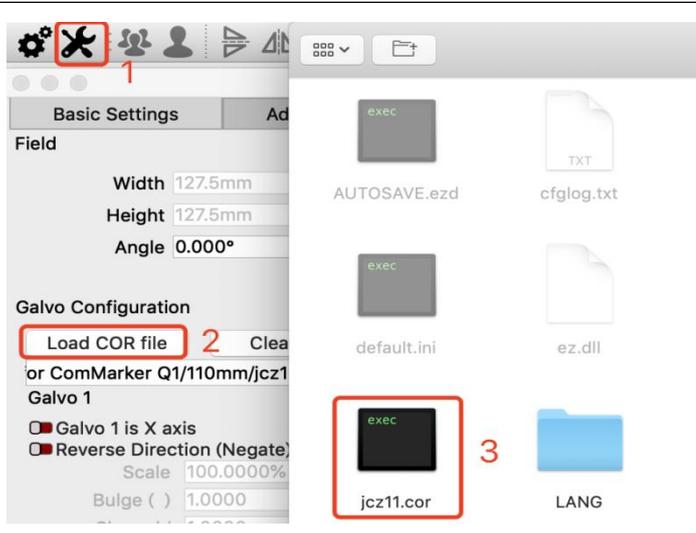
9. Click “finish” and it will in the device list



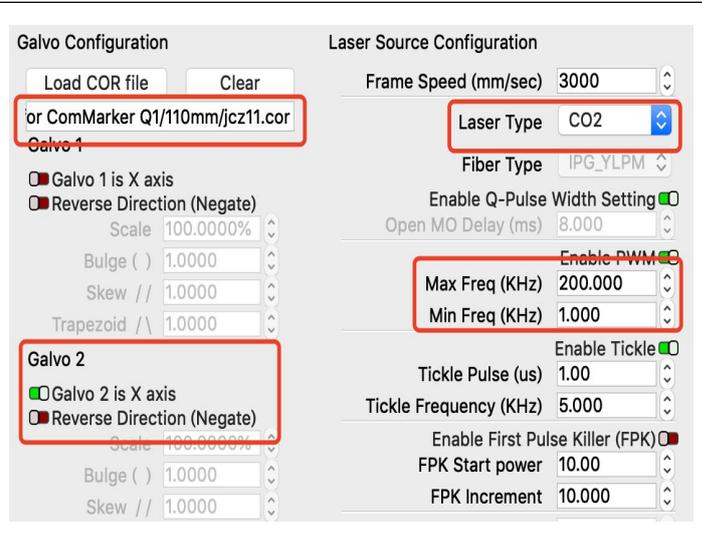
10. The status will change into “Ready” when the machine is on and connected via USB



11. Go to “Basic Settings” from “Device setting” button, click “Load COR file”, Select “EZCAD for ComMarker Q1”--->“110mm”, Choose file “JCZ11.cor”, Click “OK”

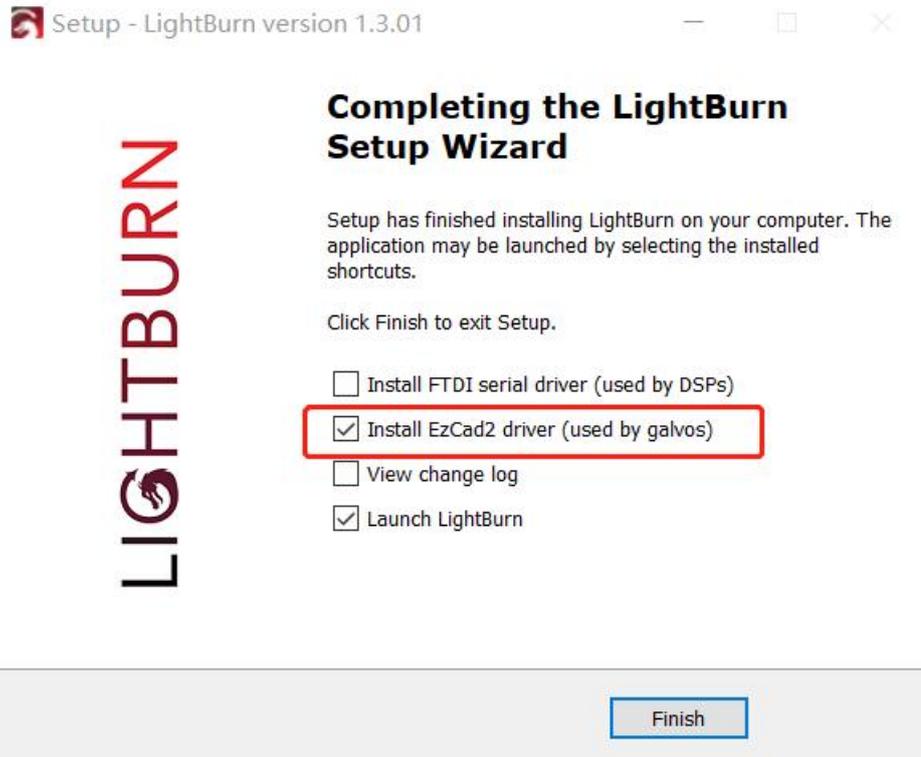


12. Change the setting of Freq “Min 1” and “Max 200”. Switch on “Galvo 2”. **Laser type:CO2.**And it is ready to control the machine with Lightburn software.



## Lightburn Operation Tutorial (For Window system)

Refer to the operation on MacOS, please don't forget to install the driver when installing Lightburn software as the following picture shows:



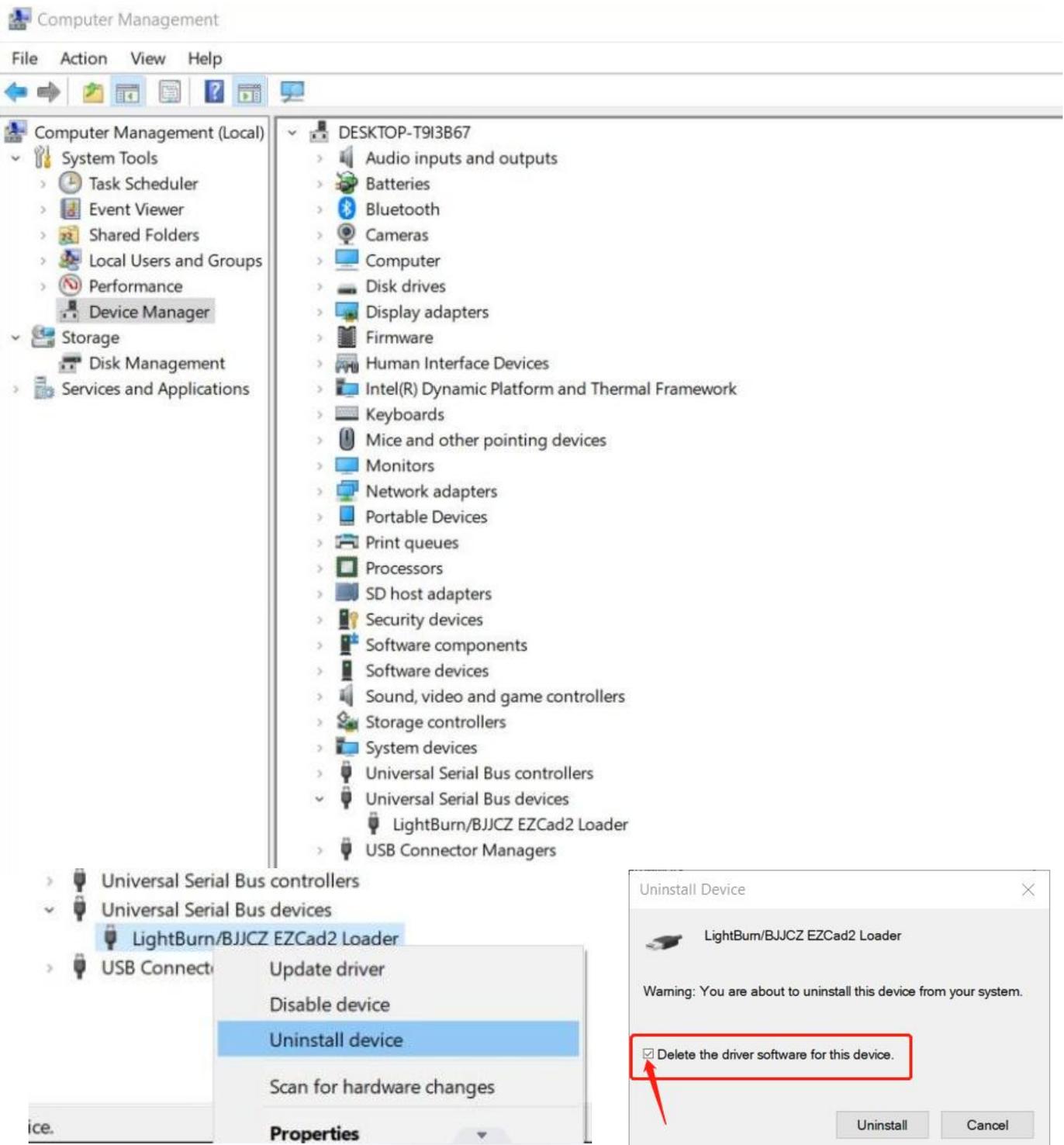
## FAQ

### Q1: The driver installation was unsuccessful?

- \*Please make sure to use the copyrighted window system, if not, please replace it with another computer
- \*Please try to replace a data cable, it is recommended to use a magnetic proof cable
- \*It may be a computer port problem or a computer board connection problem. The front USB ports of a desktop case are easily damaged. Please try with the port at the rear or try another computer
- \* Make sure the machine is on, keep the emergency button not pressed and data cable connected
- \*Please contact after-sales staff or email us

### Q2: The driver in the device manager is different from the instruction in this manual.

- \*It happens because another driver has been installed in the computer; it could be Lightburn driver or any other one which is for other laser machines. Please uninstalled the incorrect driver and **don't forget to delete the driver**.



### Q3: The USB flash drive is damaged and cannot be opened

\*Please visit ComMarker's official website to download the Q1 driver and software.

\*Contact after-sales team by email.

### Q4: The red light preview works which shows a rectangle, but there is no mark or the marks are very light

\*Please adjust the focal length; please refer to operation instruction step 4 for debugging methods.

\*Contact after-sales team by email.

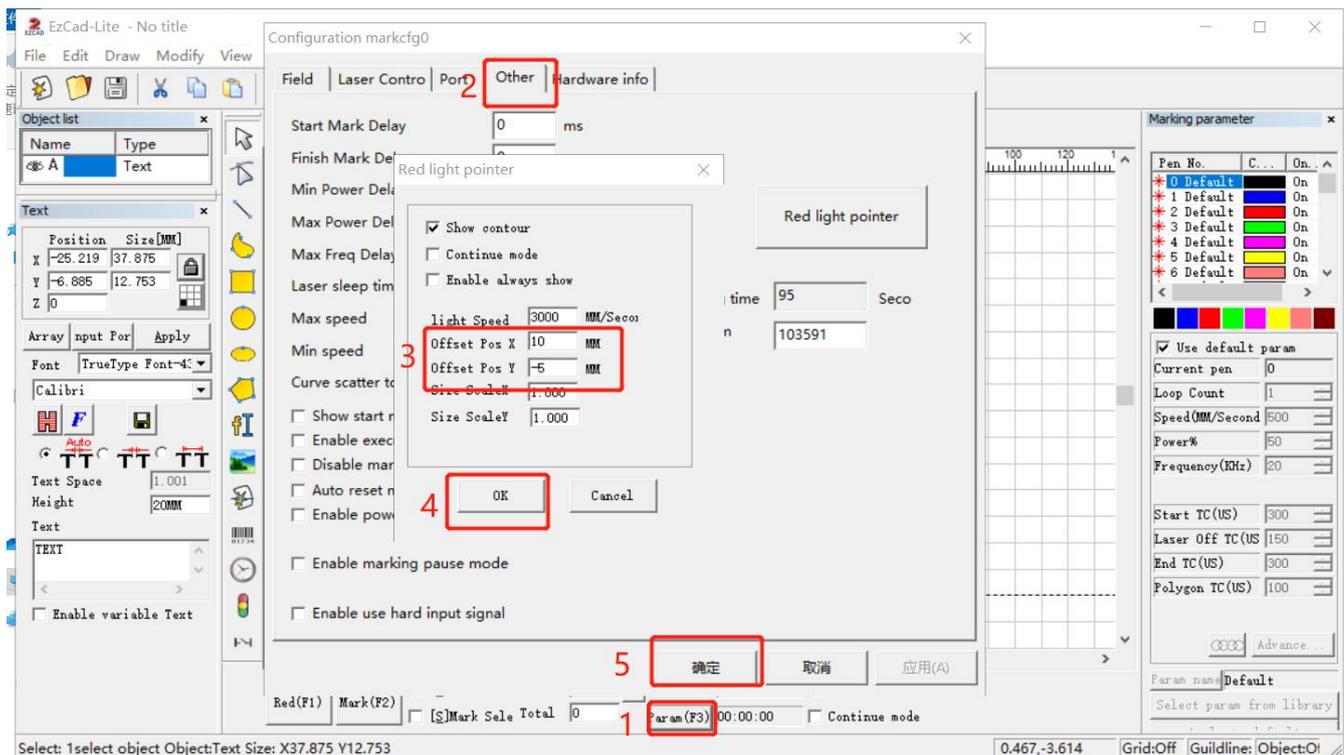
### Q5: Cannot find dongle, software will work at demo state, or Fail to open lmc driver

\*The machine is not powered on, or the machine is not connected to the computer. Please turn it on and make sure the data cable is connected to the computer.

### Q6. The size of preview and the engraving area is inconsistent with the size in the software, the red light preview is inconsistent with the actual engraving position, or preview and the mark are not horizontal or vertical but with angles.

\*Import the calibration file we include in the USB drive together with the machine, please refer to step 3 of the operating instructions. You can also ask for a new calibration file with the SN number with after-sales team by email.

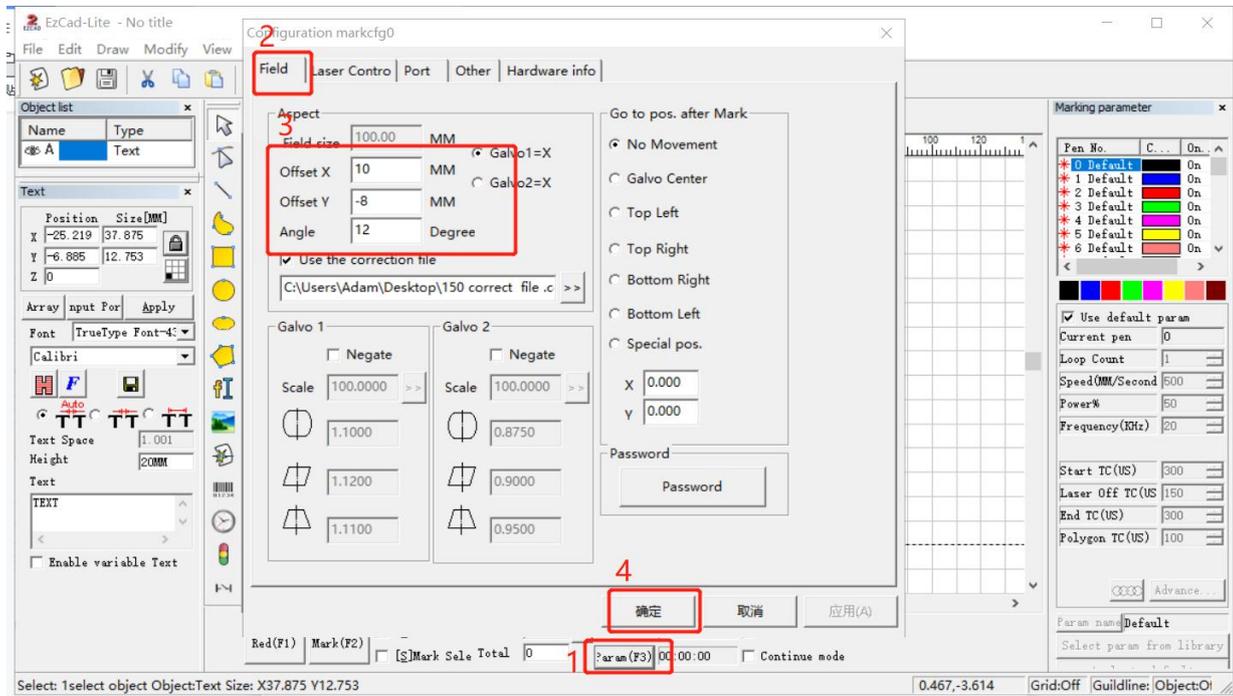
\*If the problem not solved, select "Parameter (F3)", select "Other "and "Red light pointer". Input numbers in "Offset X" and "Offset Y"according to the actual deviation number based on the measurement with a ruler. The number can be positive or negative. The red light will change in different directions at the positive and negative values.



\*If it still doesn't work, please contact after-sales team by email.

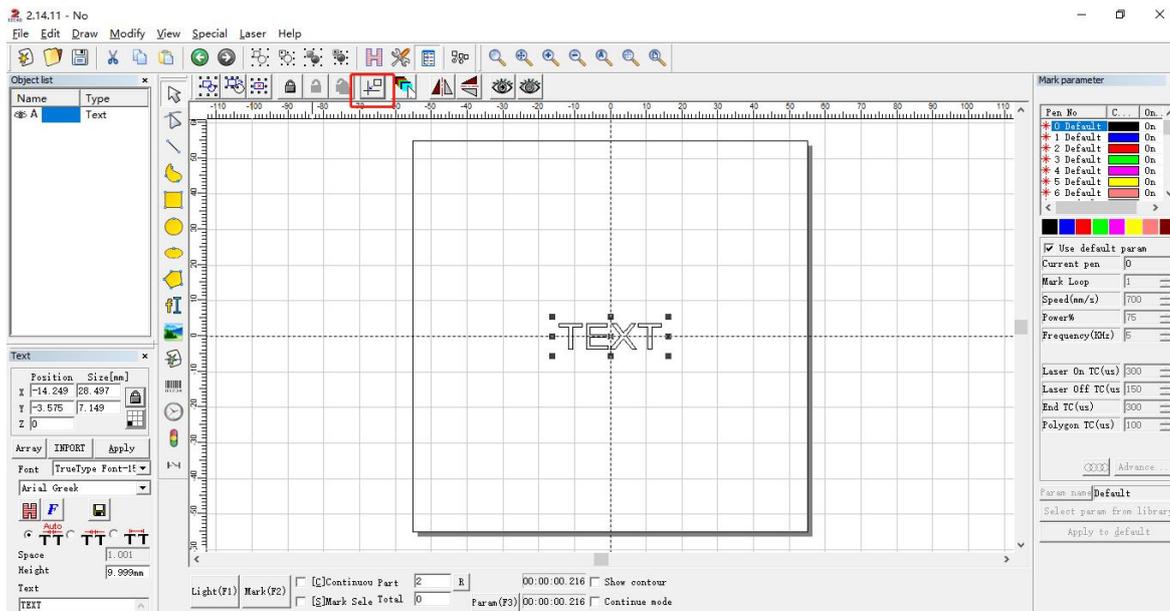
### Q7: How to change the physical marking area in the software?

\*Click "Parameter (F3)", select "Field". Input numbers in "Offset X", "Offset Y" or "Angle "according to the actual deviation number based on the measurement with a ruler. This function is important when you want to use a placing helper.



### Q8: Nothing displays on canvas board when importing text or picture

\*Please click the practical center button, the picture and text are in the center of the canvas.



### Q9: It is found that the laser becomes weaker and the engraving effect becomes worse.

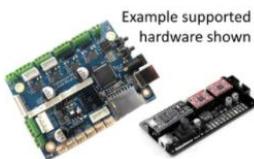
\* Clean the field lens with a clean cloth. Sometimes the lens is dirty by hand. Or it will cause field lens pollution if the lens cover isn't taken off when marking, which will eventually result in weaker laser and worse marking result.

\*If the field lens is polluted too seriously, a new replacement field lens might be needed.

\*Please contact after-sales staff or email us

### Q10: Which version of Lightburn software is right for ComMarker Q1?

\*Please buy "Add Galvo devices to existing license key" if you bought the software for gantry type. Please choose the "Lightburn- Galvo license key if you haven't bought any licence".



LightBurn Software - GCode License Key  
¥421.00



LightBurn Software - DSP License Key  
¥841.00



LightBurn Software - Add DSP devices to existing license  
¥421.00



LightBurn Software - Add Galvo devices to existing license key  
¥631.00



LightBurn Software - Galvo license key  
¥1,051.00



LightBurn Software - DSP + Galvo License key  
¥1,471.00



LightBurn Bridge Kit  
¥041.00 Sold out

Note: This manual will be continuously updated. Please download the latest e-version manual on our website.

# ComMarker

## Customer Service:

- For more video and supportive materials, please visit our official website at:  
[www.commarker.com](http://www.commarker.com)
- For Laser Engraver technical support and service please email:  
[support@commarker.com](mailto:support@commarker.com)

**Manufacturer: Hefei ComMarker Technology Co., LTD**