

3D Fiber Laser Marking Machine Manual



Shenzhen Scotle Technology Group Limited

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Website: www.scotle.com

Contents

1. Safety Information	2
2. Reference standards	4
3. Machine introduction	5
4. Packing list	6
5. Power on	6
6. Connections	8
7. Software installation	8
8. Focus setting	22
9. How to import Files and pictures	24
10. How to set up single marking and multiple times marking	25
11. How to set up marking range	26
12. Marking parameter settings	27
13. Rotary axis setting (if you bought a rotary axis)	30
14. Laser source parameter	34
15. precautionary note	35
16. Q&A	35

1. Safety Information

Laser marking machine is a Class 4 laser product with dangerous, invisible laser radiation. This product emits infrared laser radiation with a wavelength of 1064nm, which can cause damage to eyes and skin directly or indirectly exposed to such light intensity. This infrared radiation is invisible, and the laser beam can cause irreversible damage to the retina or cornea. Before operating the laser marking machine, be sure to wear appropriate and certified 1064nm near-infrared band laser protective glasses.



Important:

- ⊙ Never look directly at the fiber output connector, and make sure to wear appropriate protective goggles when using the laser to avoid injury.
- ⊙ Do not open the laser, because there are no product parts or accessories for users to use inside the laser.
- ⊙ When using this product, please use a properly grounded power supply and normal voltage.
- ⊙ Before starting the laser product, please ensure that the ambient temperature and humidity are within the specified range.
- ⊙ Do not expose the product to an overly humid environment.
- ⊙ The laser is cooled by air. Please ensure that the ambient air is dry and clean.
- ⊙ Operations or adjustments beyond the scope specified in this manual may cause dangerous radiation damage.
- ⊙ Keep the output galvanometer clean. After each use, please cover the protective cover. Do not touch the field lens with your hands, and do not use any solvent to clean the field lens. When necessary to clean and maintain the lens, be sure to use lens paper.

Warning:

- ⊙ Operations or adjustments beyond the scope specified in this manual may cause radiation damage.

As shown in the table below, all safety warning signs (not limited to those affixed to the body of the laser) during the operation of the laser marking machine are included:

Safety signs	Description
	<p>AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION VISIBLE AND INVISIBLE LASER RADIATION</p>
	<p>ALTERNATIVE LABEL FOR LASER APERTURE</p>

	<p>EMERGENCY STOP SWITCH FOR LASWER SOURCE</p>
	<p>DANGER! ELECTRIC WORDS MARKED WITH AN ELECTRICAL WARNING SYMBOL INDICATE A POTENTIAL PHYSICAL HAZARD.</p>
	<p>EXPLANATORY LABEL</p>

<p>Huizhou Yunsheng CNC Equipment Co., Ltd.</p>	
<p>Machine: Fiber Laser Machine</p>	
<p>Brand: Ovsuqu</p>	<p>Model NO. : FL-200W</p>
<p>Power:200W</p>	<p>Weight: 63KG</p>
<p>Origin:China</p>	<p>Mfg. year: 2024.5</p>
<p>Address: 5th Floor, Building A, Tianhai Innovation Technology Park, Xihu Village Committee, Qluchang Street, Huiyang District, Huizhou City, China</p>	
<p>TEL: +86 13244753448</p>	<p>TEL: +86 15820760539</p>

Product name: Fiber laser machine

Manufacturer: Shenzhen Scotle Technology Group Ltd.

Address: Y1-214, Bantian Creative Park, Longgang District,
Shenzhen City, Guangdong Province



Company: E-CrossStu GmbH

Address: Felix-Dahn-Str 4, 70597 Stuttgart

Mail: E-CrossStu@web.de

Phone: +49 69332967674



2. Reference standards

IEC 60825-1:2014

EN ISO 12100:2010; EN 60204-1:2018

EN ISO 11553-1:2020+A11:2020

EN ISO 12100:2010;

EN 60204-1:2018

EN ISO 11553-1:2020+A11:2020

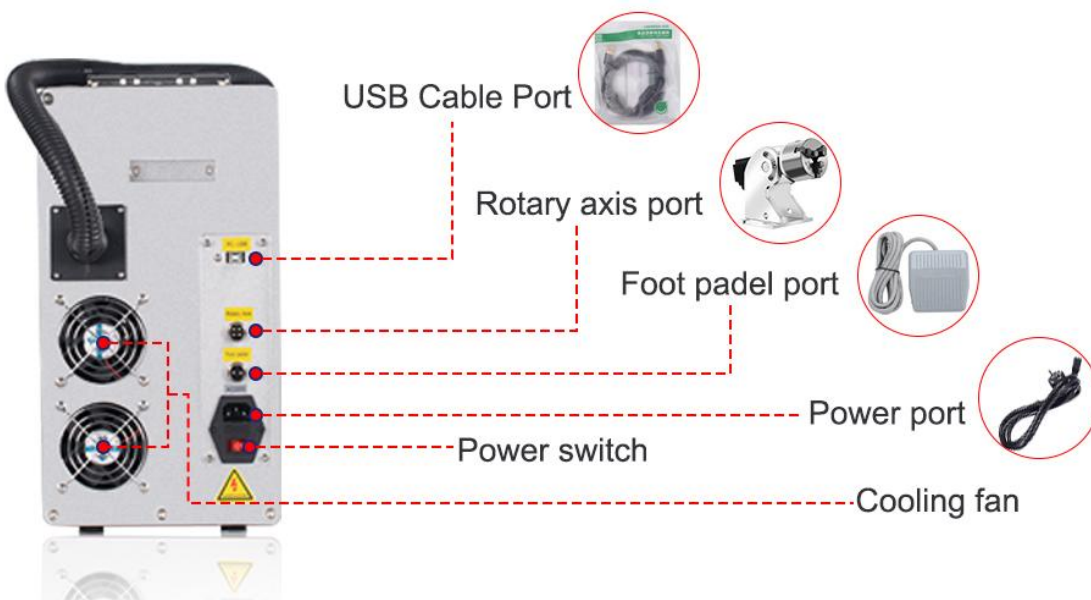
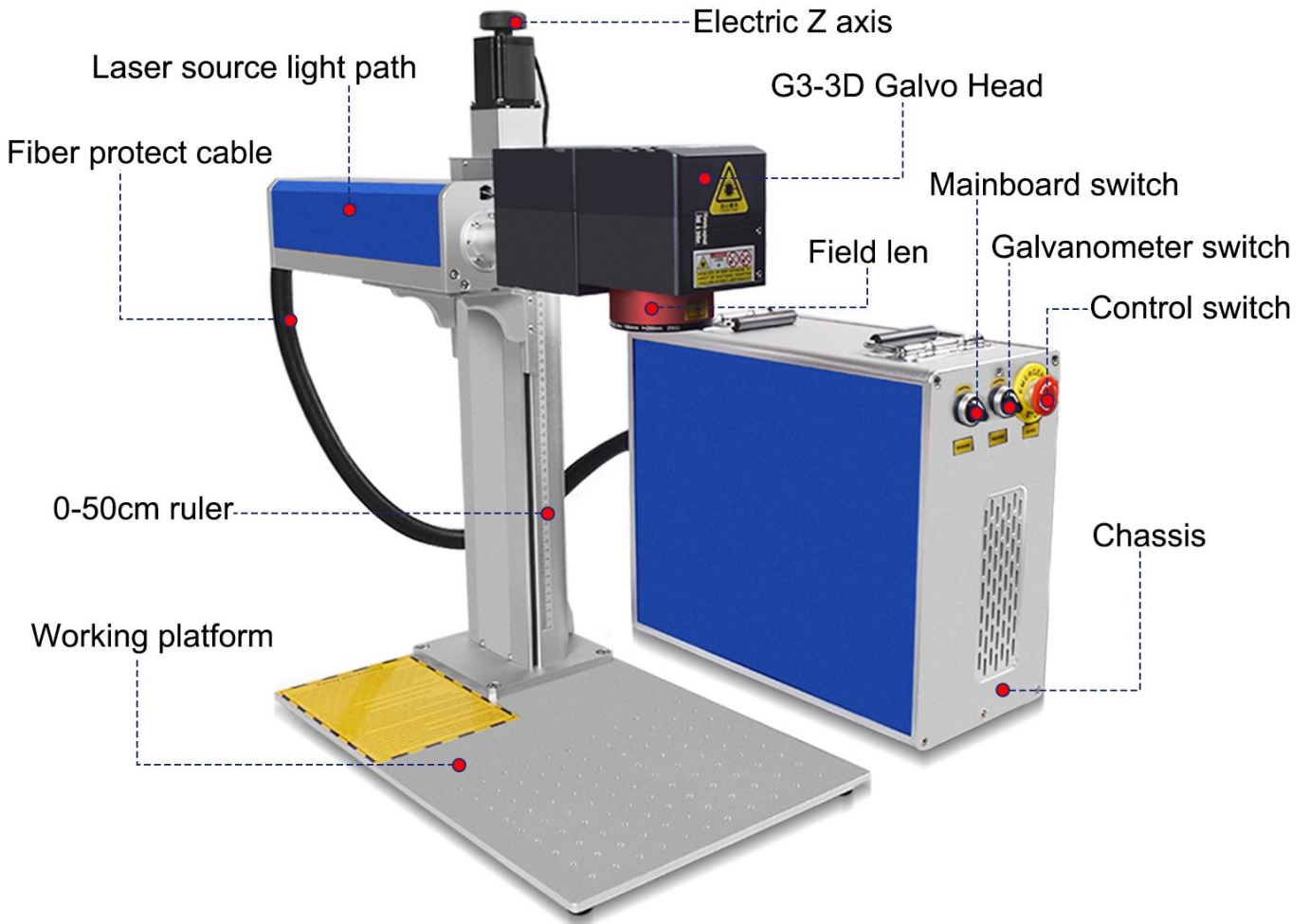
FDA number: 2320736-000

Please note:

© According to EU and national standards and requirements, lasers must be classified according to their output power and laser wavelength. All high-power MFSC series laser products belong to Class 4 products (according to EN 60825-1, Chapter 8)

3. Machine introduction

Product Details



4. Packing list

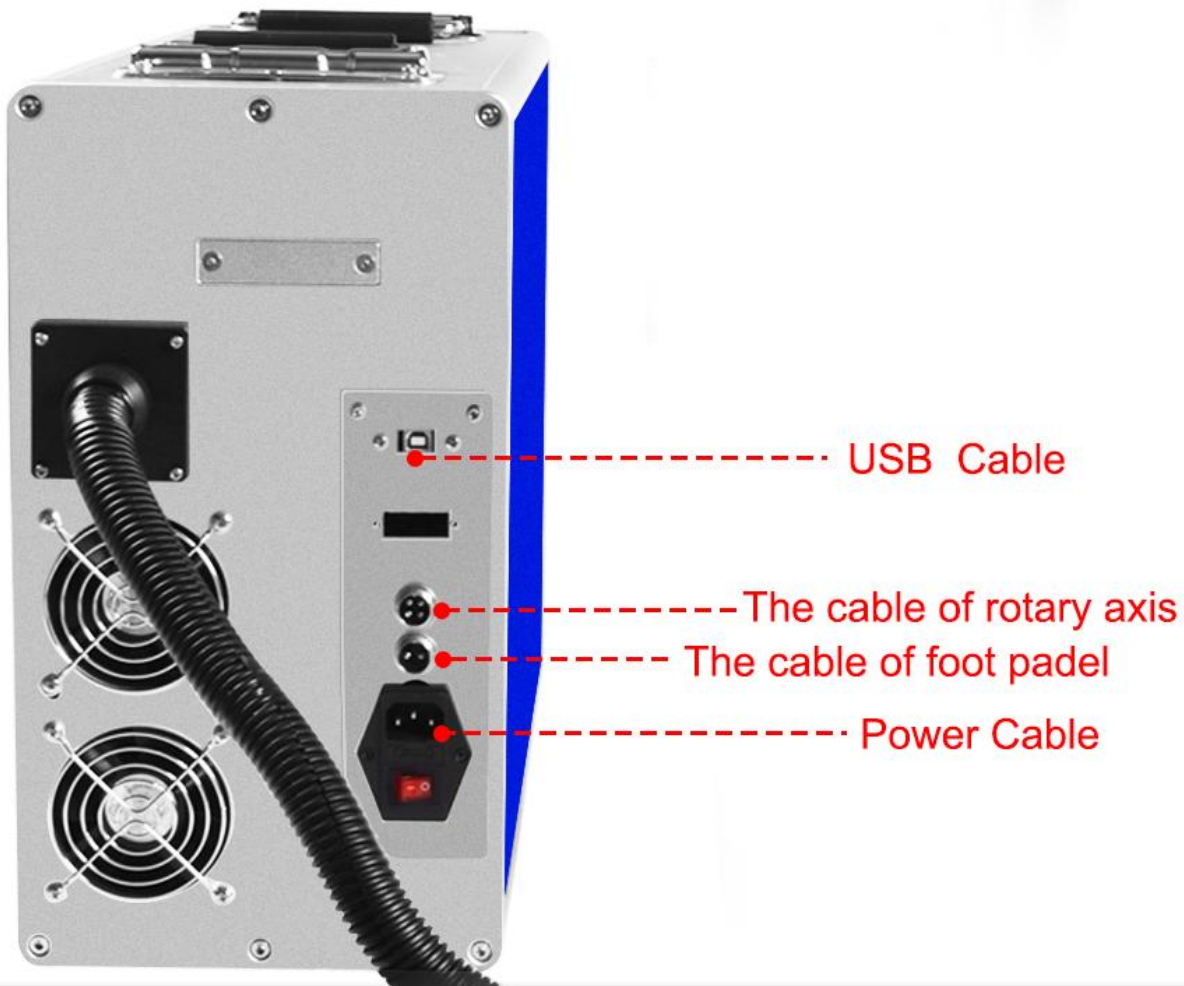
		
Fiber laser machine	Protective goggles	D80 Rotary axis (Optional)
		
Wrench&Position	Foot Switch	Power cable
		
U disk(with Software&manual)	Dongle(with serial code)	Date line(USB cable)

5. Power on

Turn on the following three switches:Laser switch-->Power switch-->Emergency switch (Keep popped up)



6. Connections



The power cable



The USB Cable




4 Pin rotary axis
cable




The cable of
foot pedal

7. Software installation










Note: Turn off the anti-virus software(if there are any) and firewall before downloading and then install the software .

Plug the silver USB disk  to your computer and copy the all of files to your desktop, so that you can unplug the USB disk.

Plug the red dongle USB drive  into your computer (please note that the dongle should remain plugged in when you use EZCAD3.0 software)

7.1 Software Activation

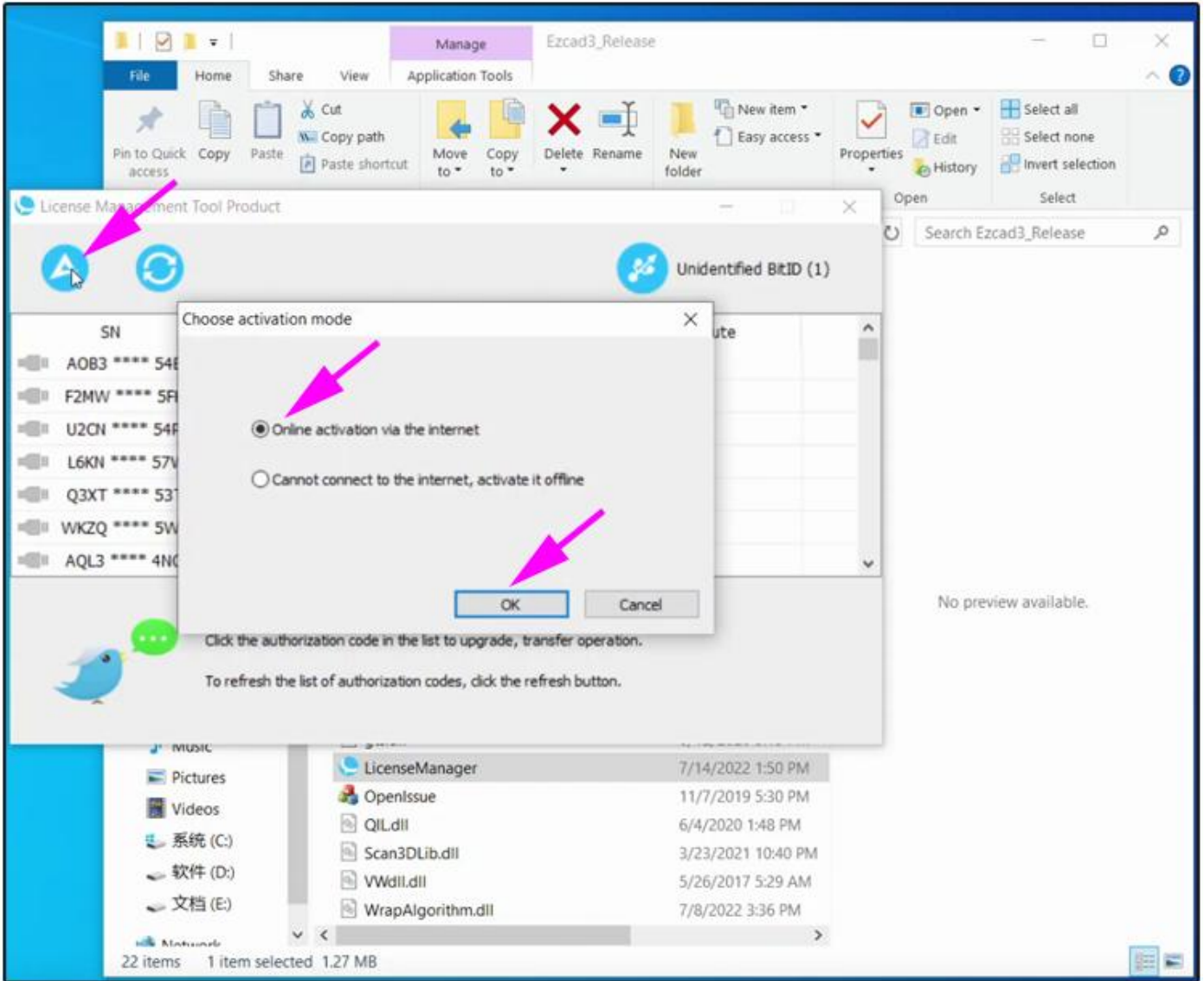
A. Click “ Ezcad3-Release “ File

 CalibrationWizardV1.15.6	2023/6/16 17:23	文件夹	
 Correction documents	2025/1/6 12:07	文件夹	
 DLC drive	2023/6/16 17:22	文件夹	
 Ezcad3_Release 	2023/6/16 17:22	文件夹	
 Ezcad3 license offline activated-new.pdf	2023/7/31 17:19	WPS PDF 文档	415 KB
 Focal length.txt	2025/1/6 11:54	文本文档	1 KB
 G3 Pro-DLC User manual- two axis.pdf	2023/7/31 16:30	WPS PDF 文档	579 KB
 MarkCfg0	2025/1/6 12:03	文件	8 KB

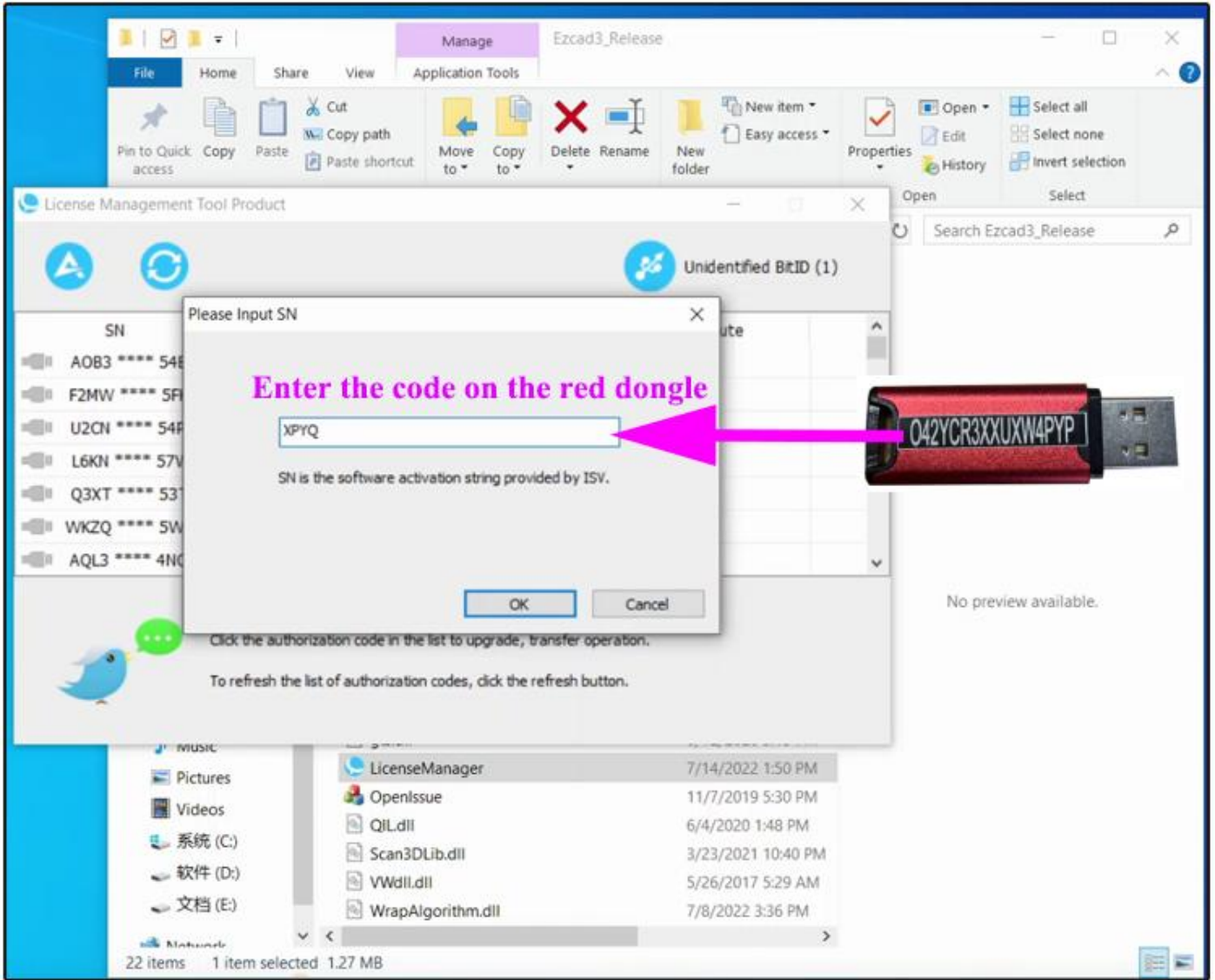
B. Click "LicenseManager.exe"

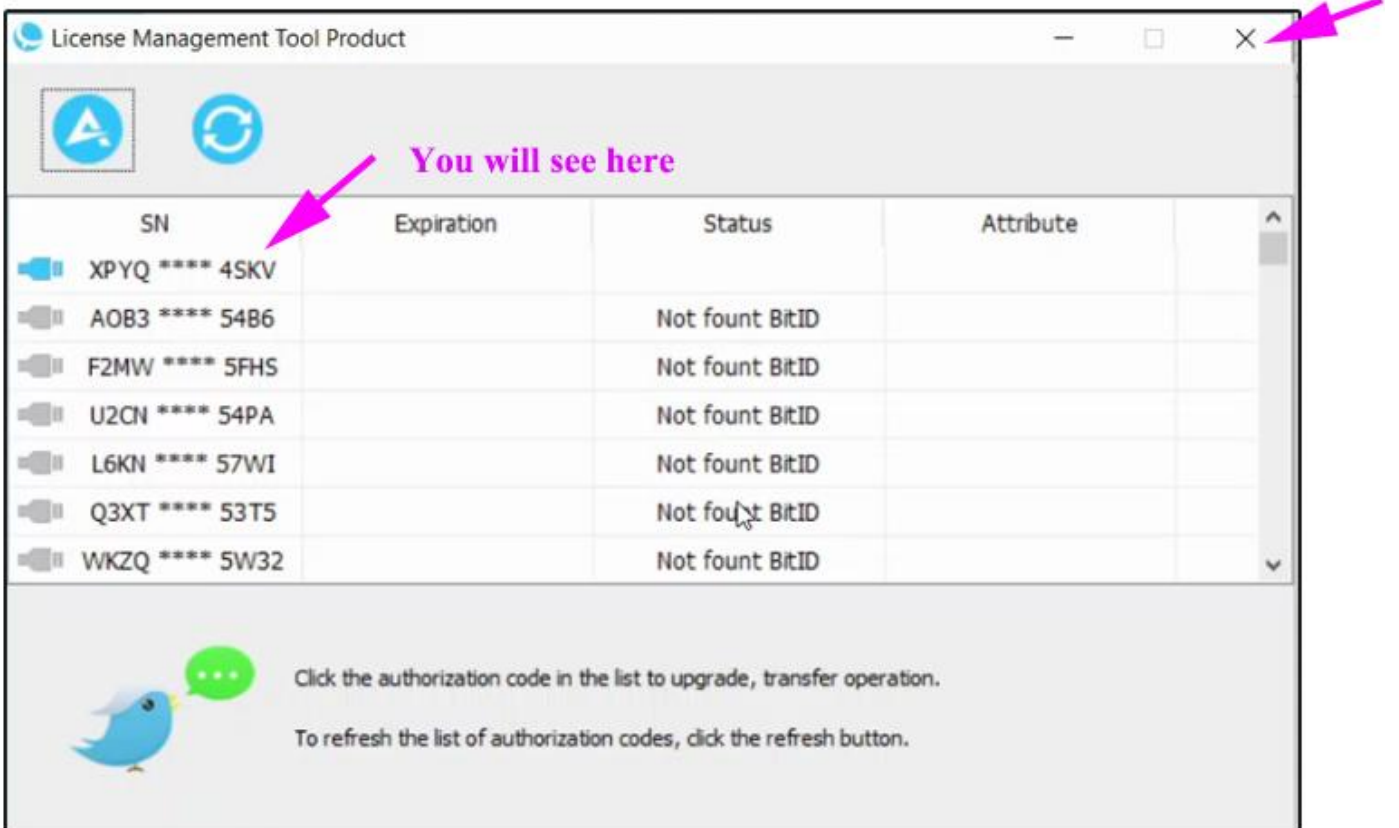
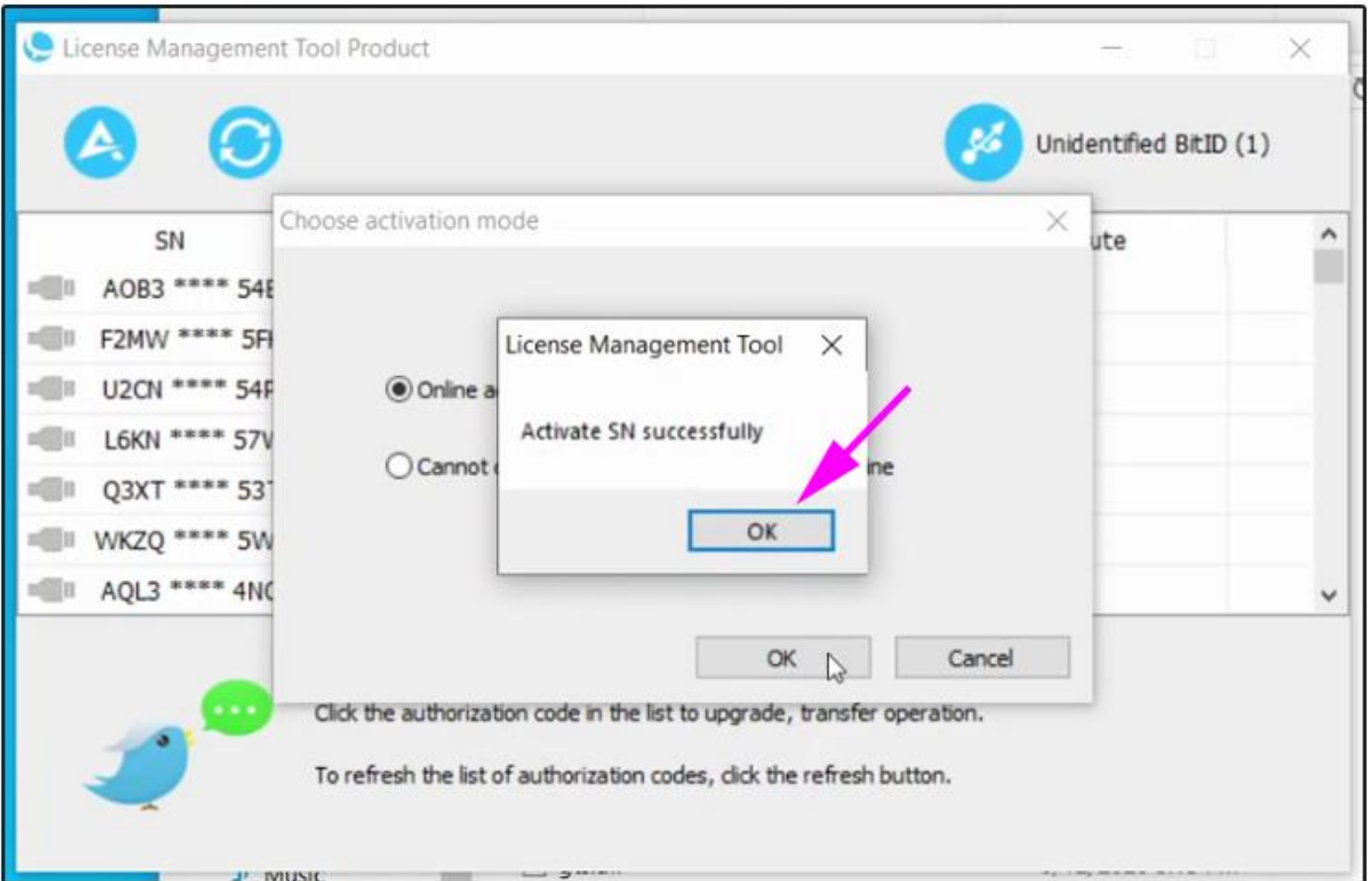
文件夹	CORFILE	2023/3/22 9:27	文件夹	
文件夹	FONT	2023/6/16 17:22	文件夹	
文件夹	LANG	2023/6/16 17:22	文件夹	
文件夹	PARAM	2024/12/5 10:24	文件夹	
文件夹	PLUG	2023/3/22 9:27	文件夹	
文件夹	RES	2023/6/16 17:23	文件夹	
应用程序扩展	CH365DLL64.dll	2015/6/15 17:29	应用程序扩展	25 KB
应用程序扩展	DfjzhControlerDll64.dll	2016/8/12 18:27	应用程序扩展	871 KB
应用程序扩展	dlc.dll	2022/11/11 15:02	应用程序扩展	520 KB
应用程序扩展	endpoint.dll	2019/10/21 10:52	应用程序扩展	498 KB
应用程序	Ezcad3.exe	2022/11/11 15:02	应用程序	1,832 KB
应用程序	Ezcad3_Multi.exe	2022/11/1 17:37	应用程序	1,800 KB
应用程序扩展	Ezcad3Kernel.dll	2022/11/11 15:00	应用程序扩展	6,788 KB
应用程序扩展	Ezcad3Motion.dll	2017/12/4 20:16	应用程序扩展	31 KB
应用程序扩展	gt_rn.dll	2020/6/16 11:13	应用程序扩展	738 KB
应用程序扩展	gts.dll	2020/6/12 15:13	应用程序扩展	1,738 KB
应用程序	LicenseManager.exe	2022/7/14 13:50	应用程序	1,309 KB
应用程序	OpenIssue.exe	2019/11/7 17:30	应用程序	99 KB
应用程序扩展	QIL.dll	2020/6/4 13:48	应用程序扩展	9,001 KB
应用程序扩展	Scan3DLib.dll	2021/3/23 22:40	应用程序扩展	27 KB
应用程序扩展	VWdll.dll	2017/5/26 5:29	应用程序扩展	379 KB
应用程序扩展	WrapAlgorithm.dll	2022/7/8 15:36	应用程序扩展	889 KB

C . Please choose " online activation via the internet "




D . Please enter the password on the encryption dongle

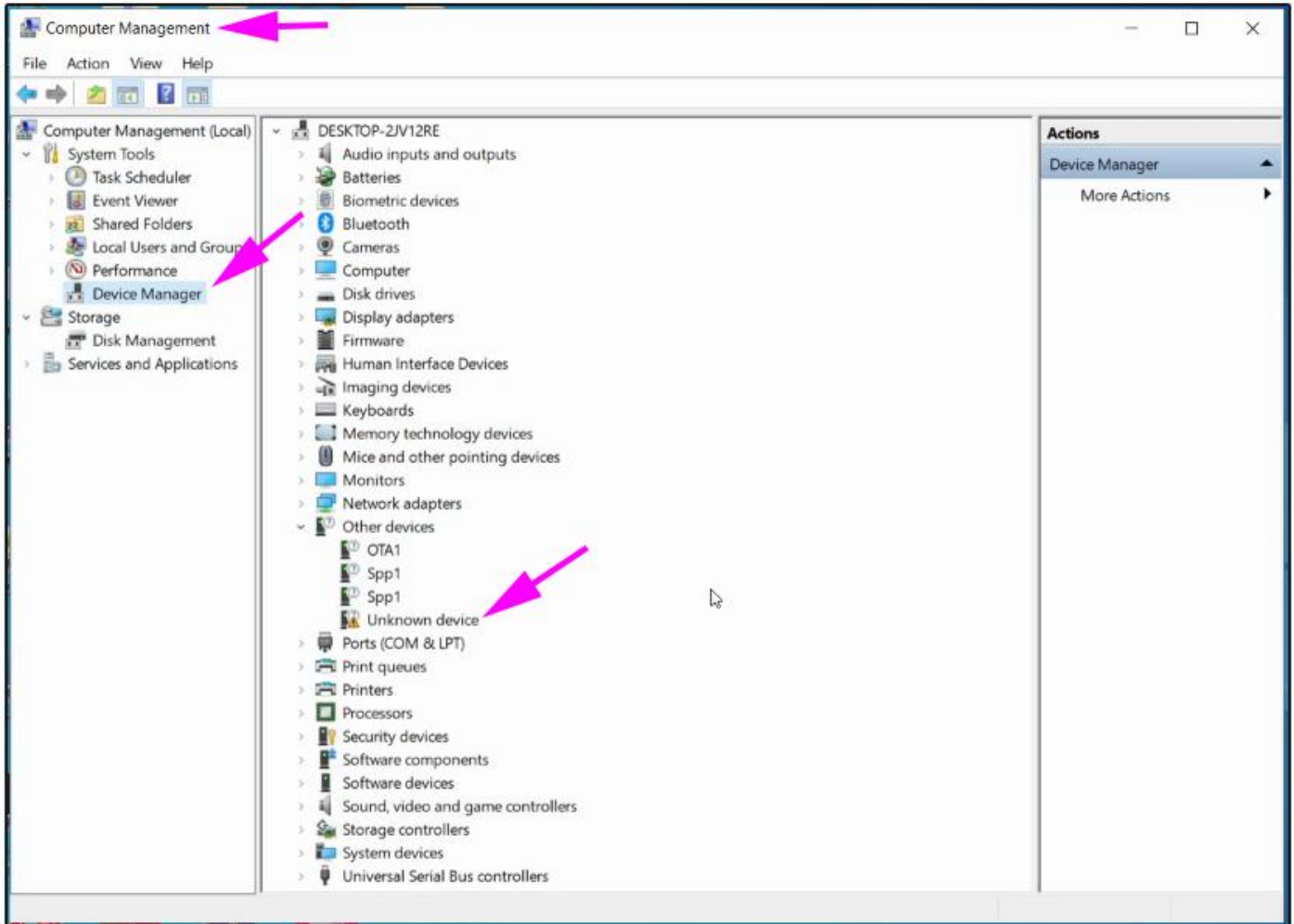


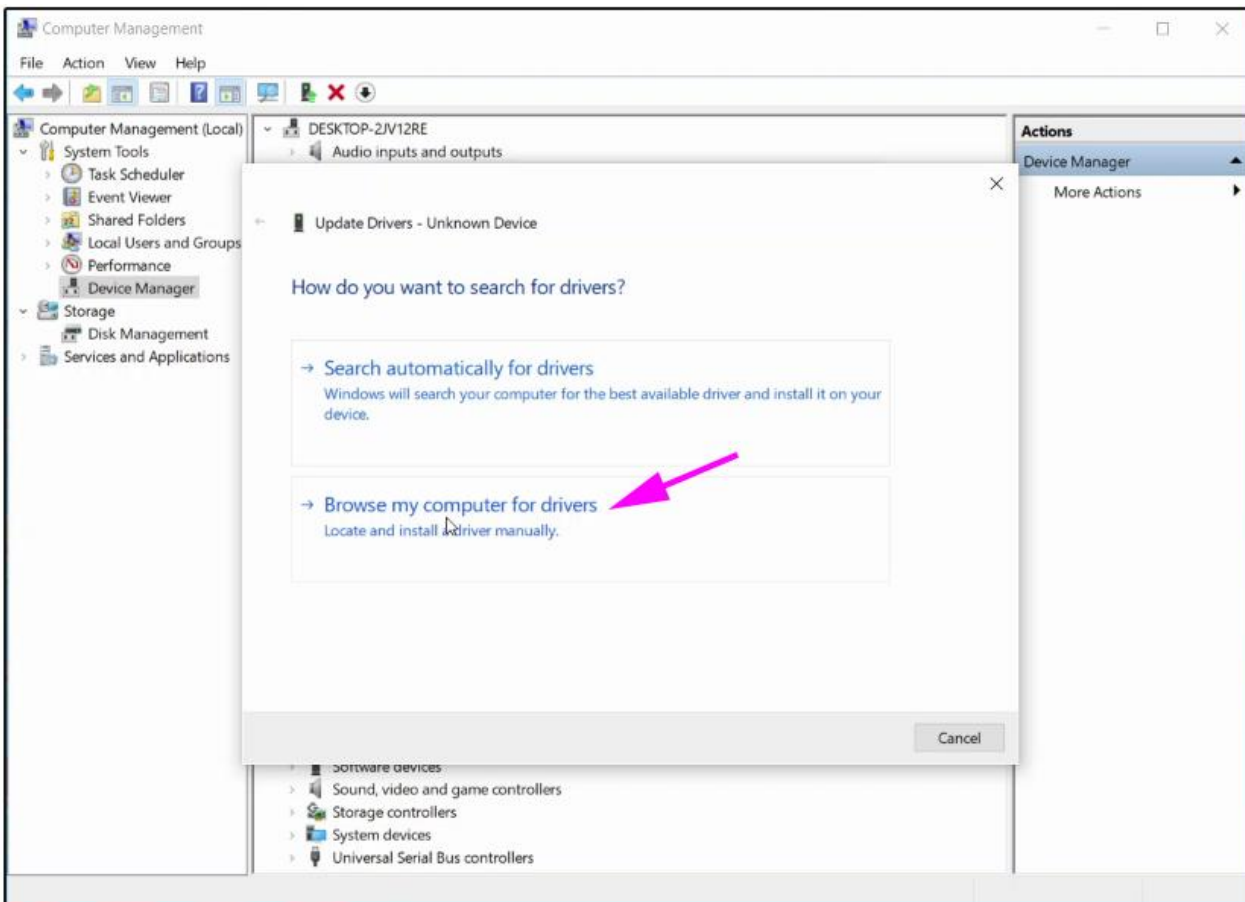
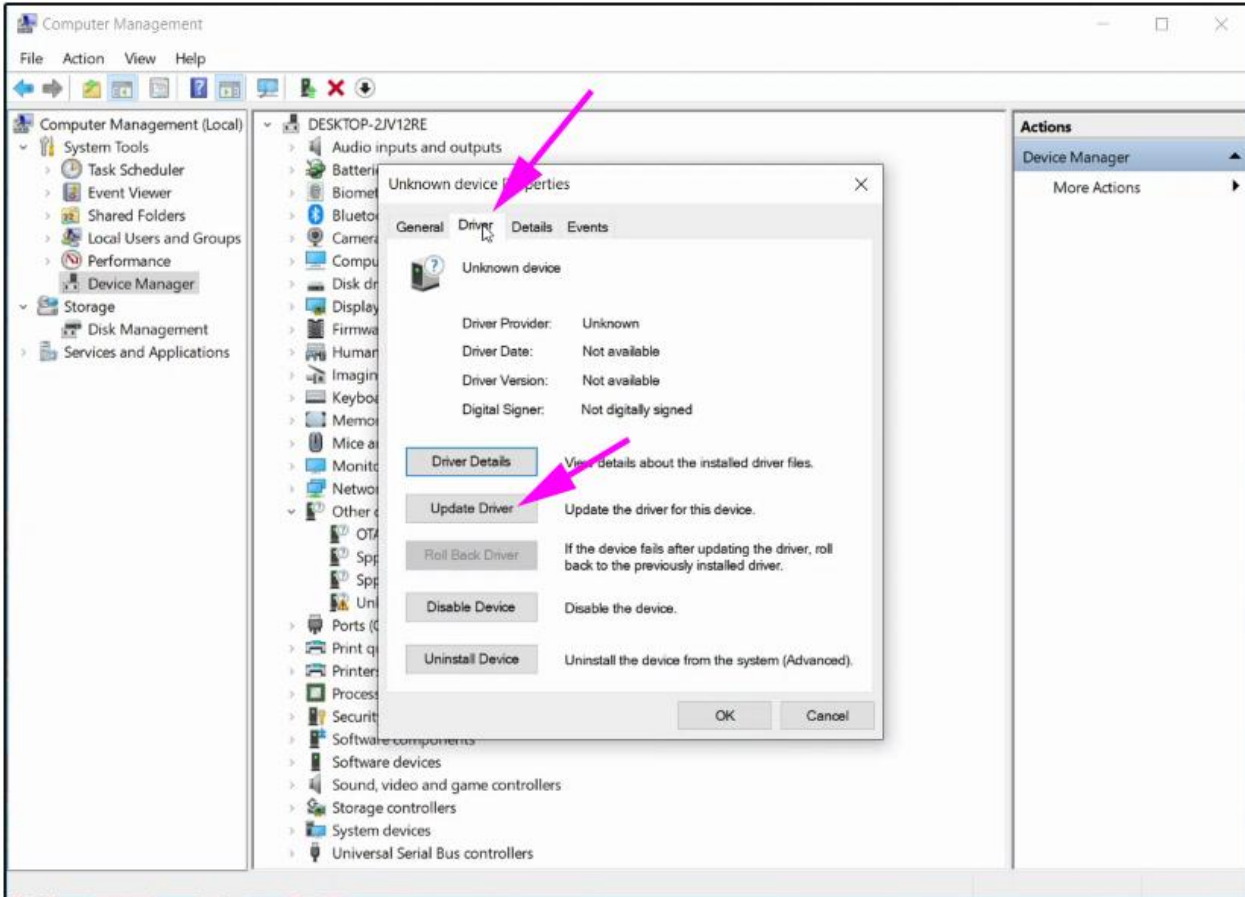


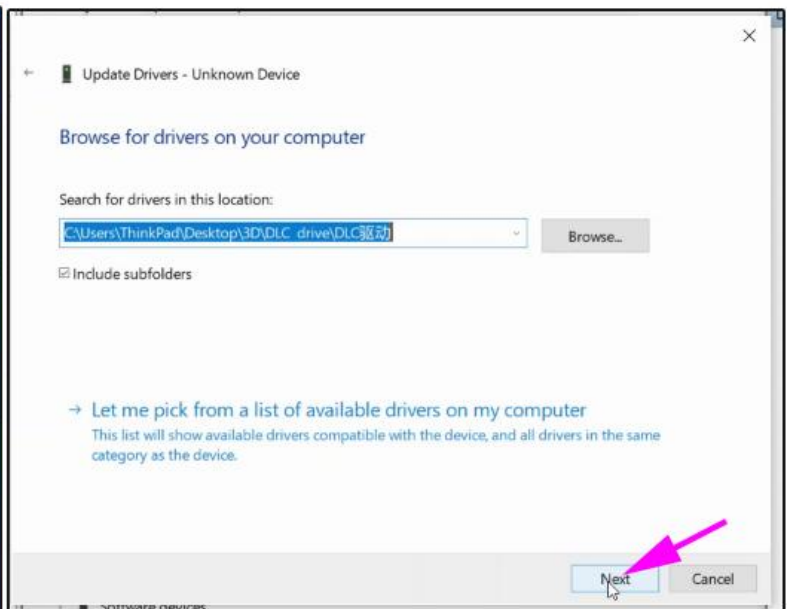
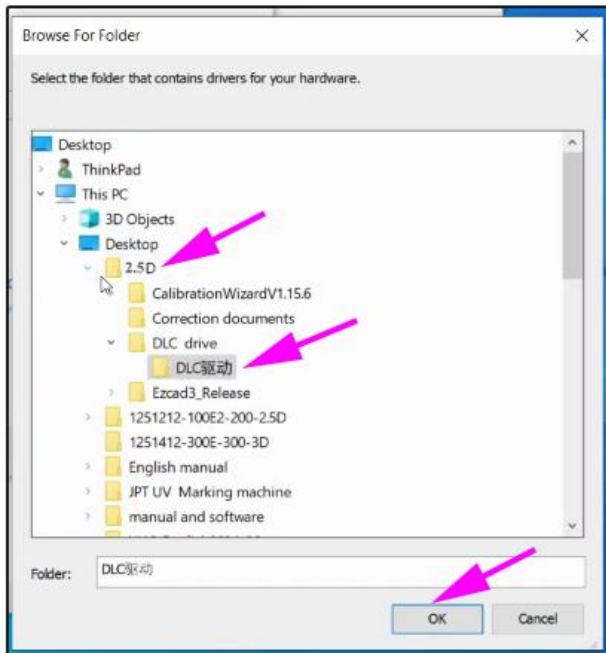
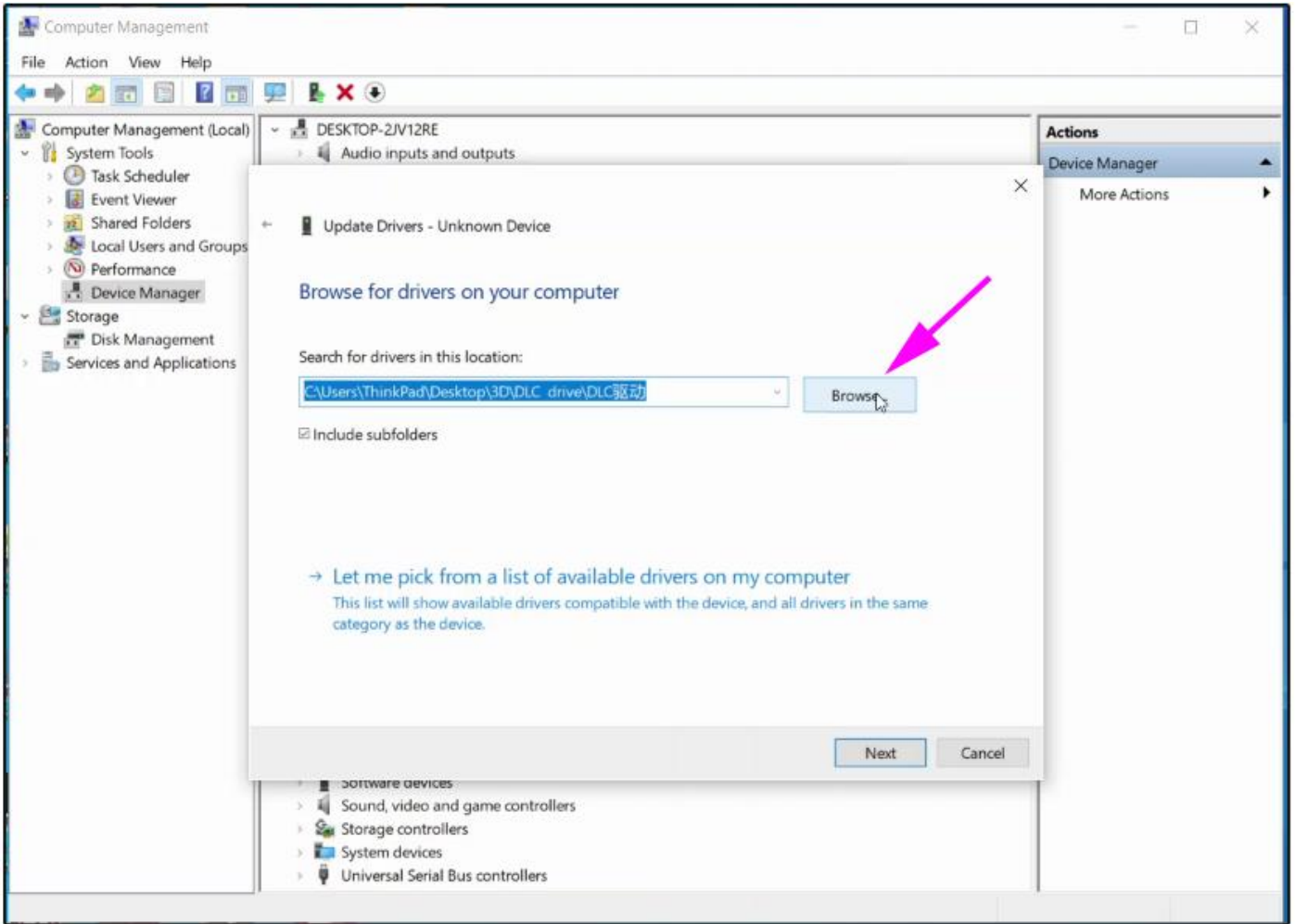
7.2 Install software driver

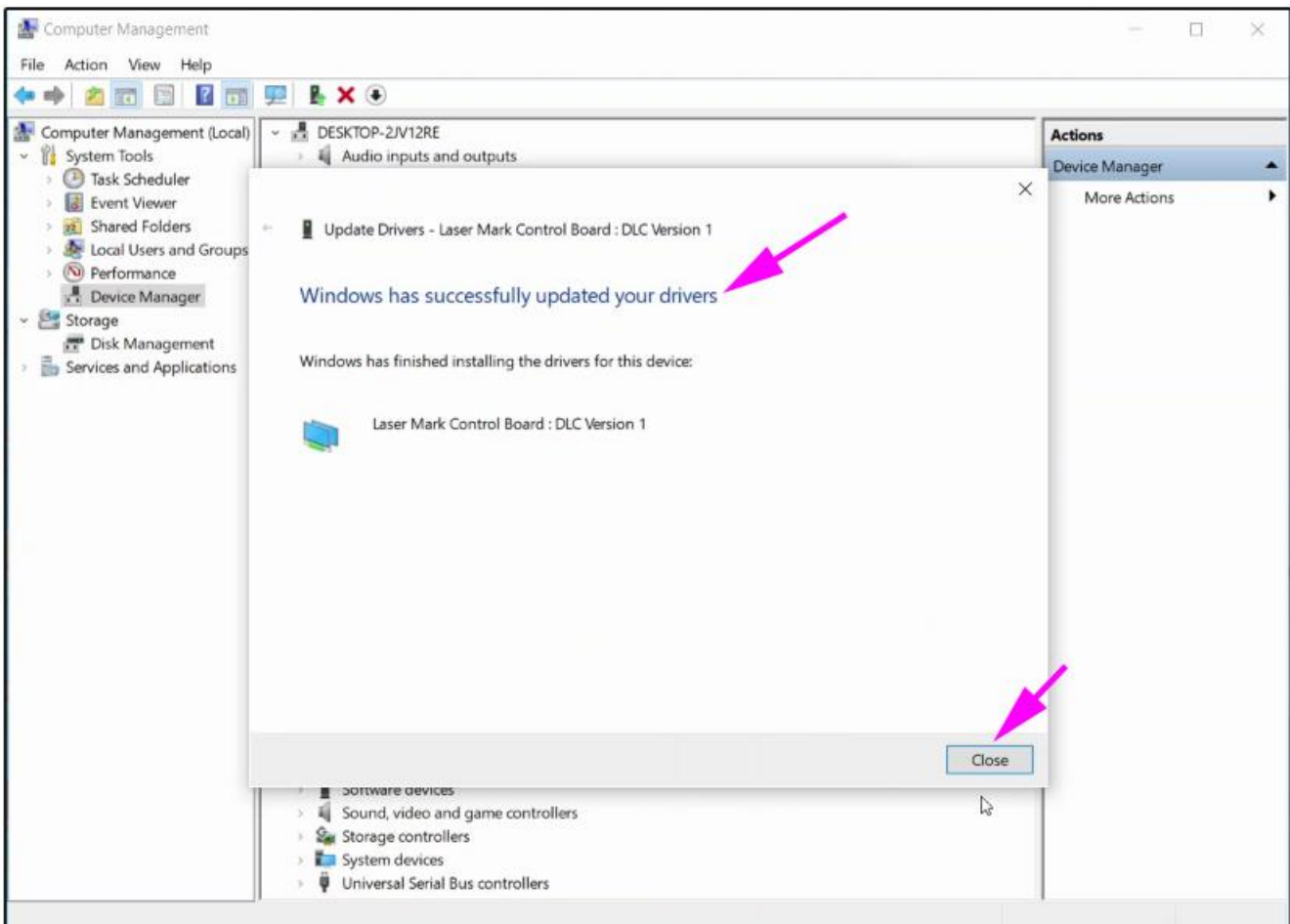
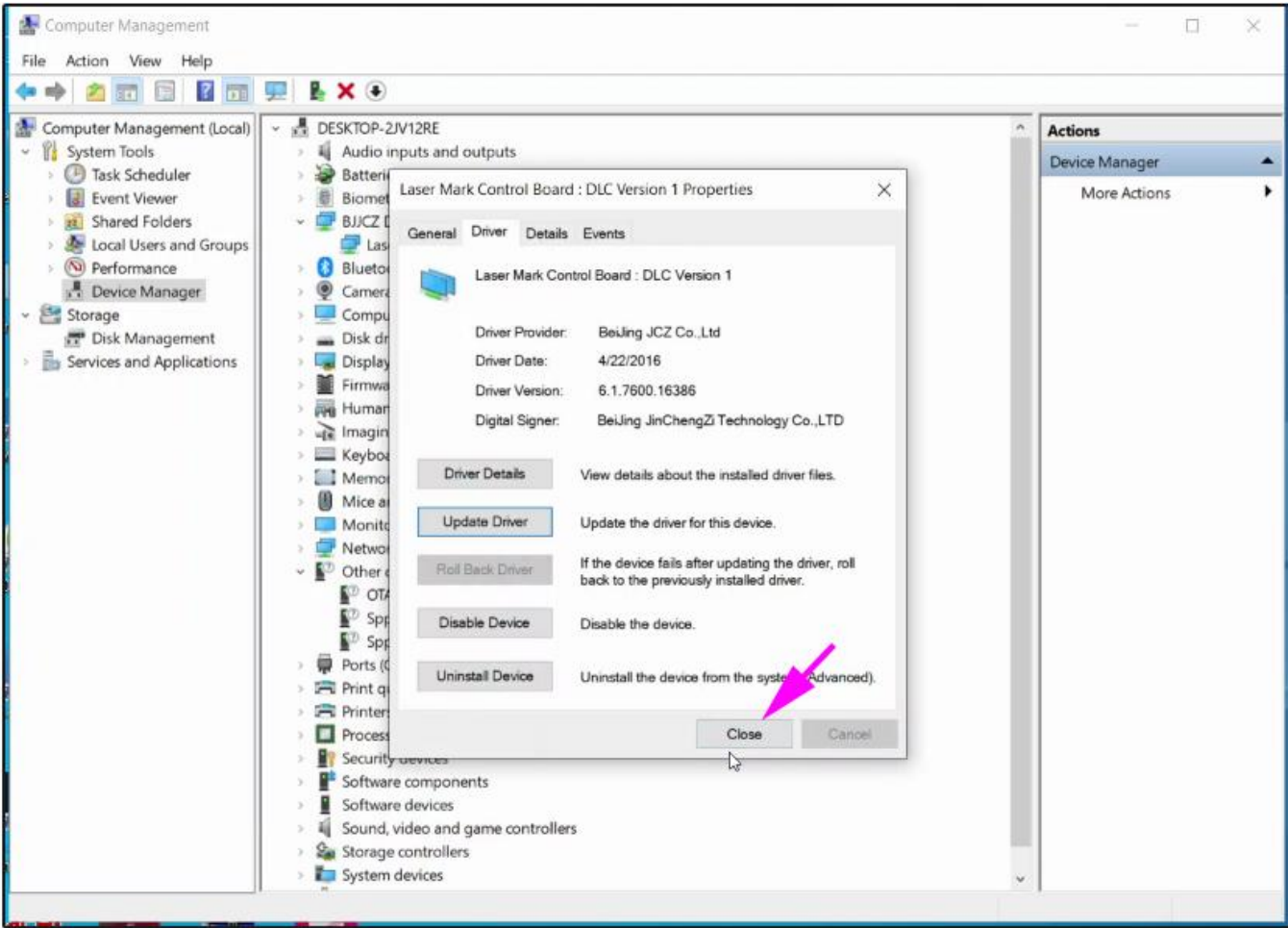


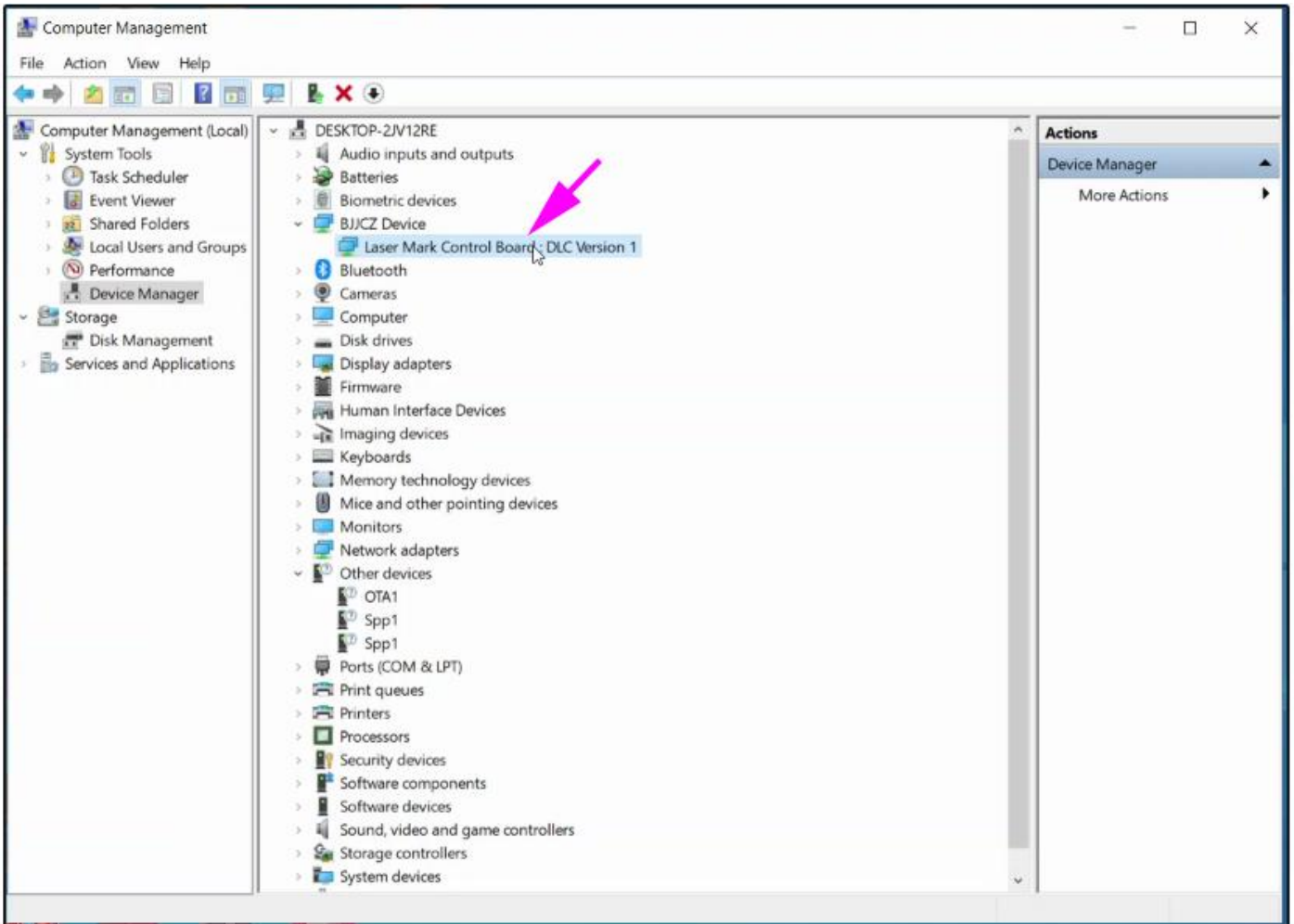
Right-click on "this PC" , choose "Computer Management", click "Device Manager", click "Unknow device":





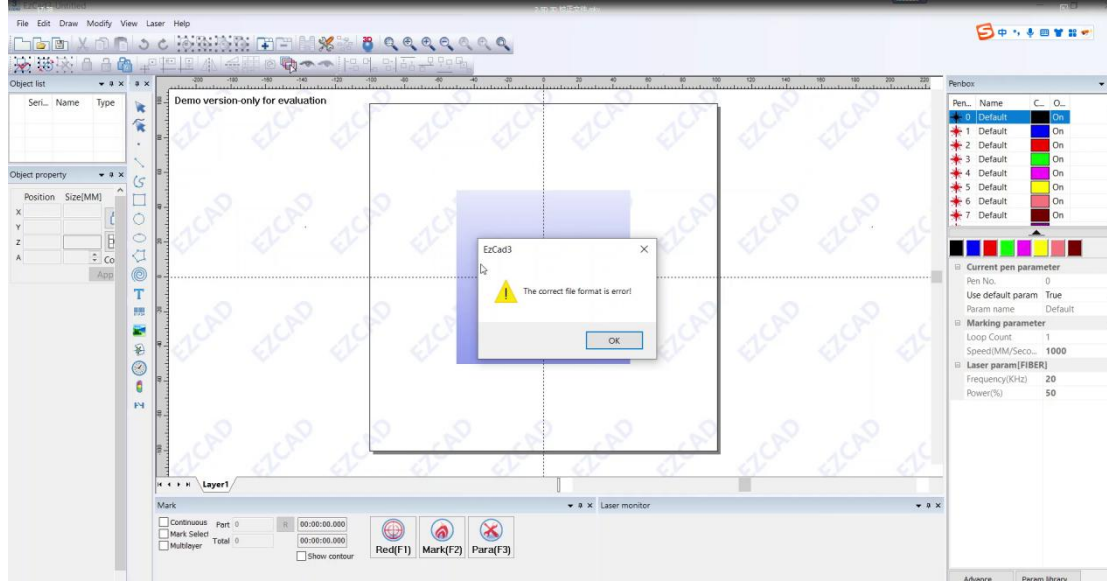






7.3 The Correct File Fomat Is Error (If your software interface occurred error , please follow the following instructions for operation)

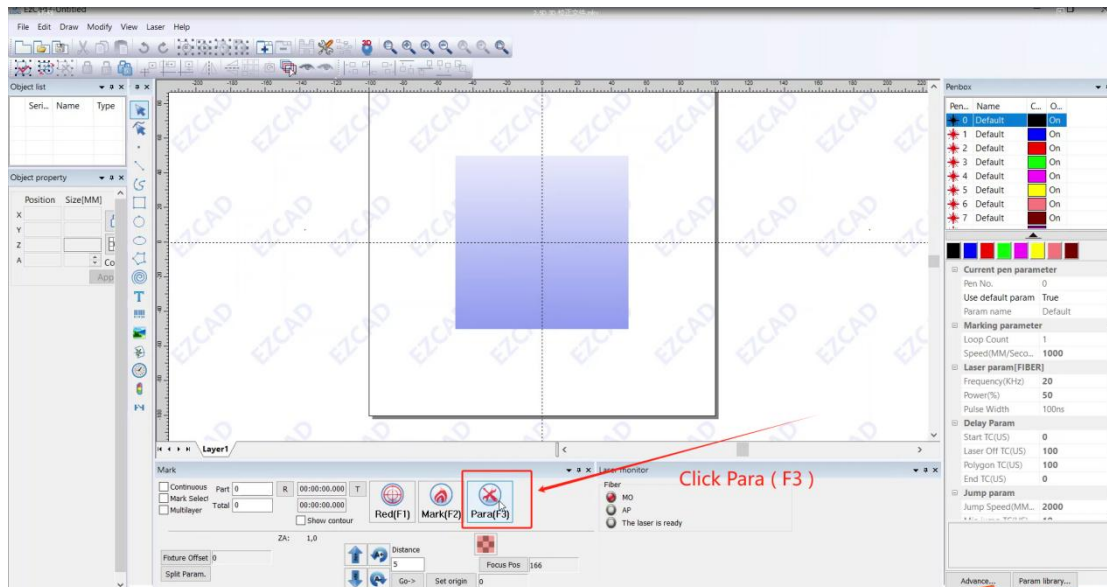
This is usually due to a problem with the calibration file. One is that the file save path is incorrect, and the other is that the file is damaged. We just need to reselect the calibration file here to ensure that the file path is correct. After confirming that there are no issues, click confirm and then reopen the software. Open the software like this, and the error will disappear.

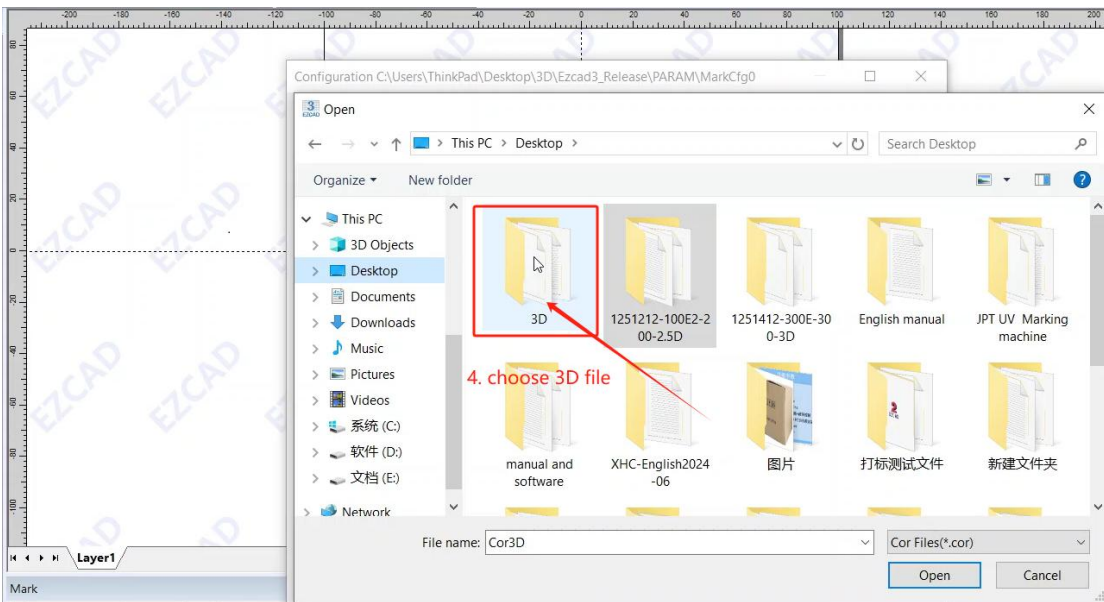
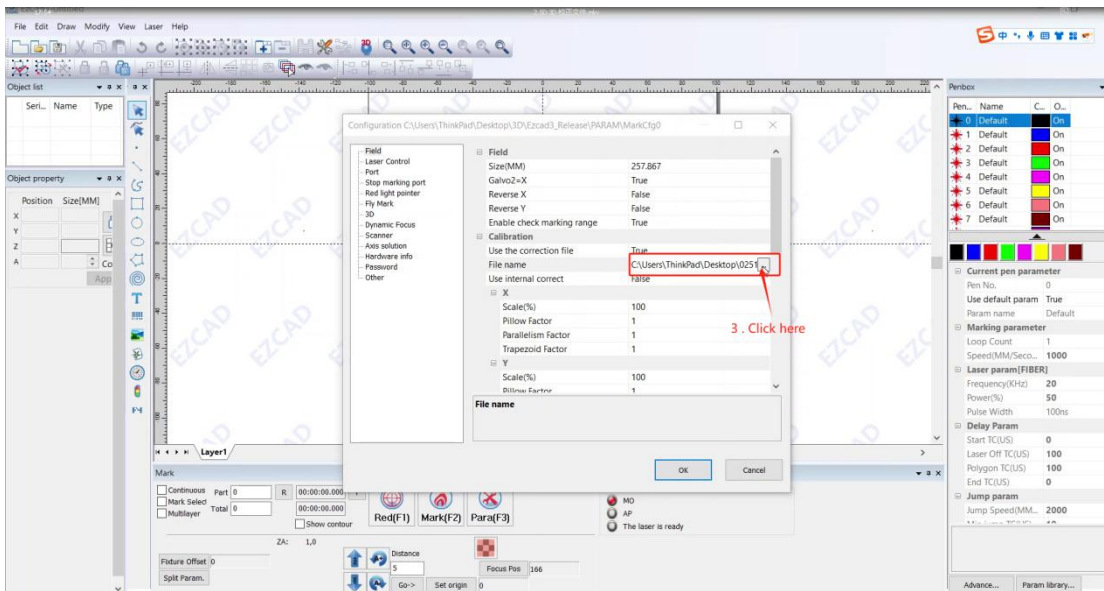
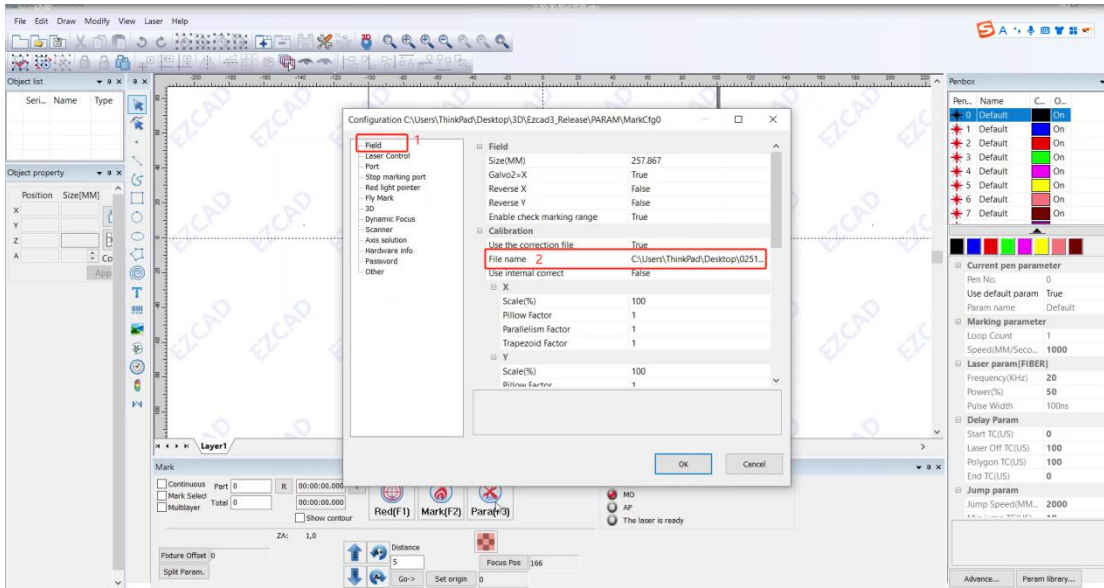


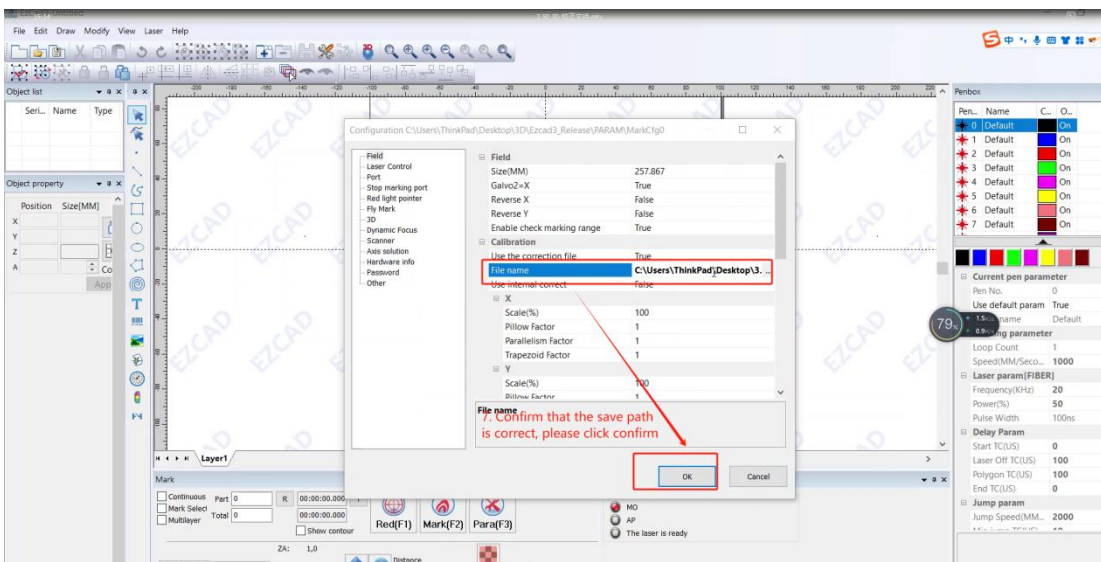
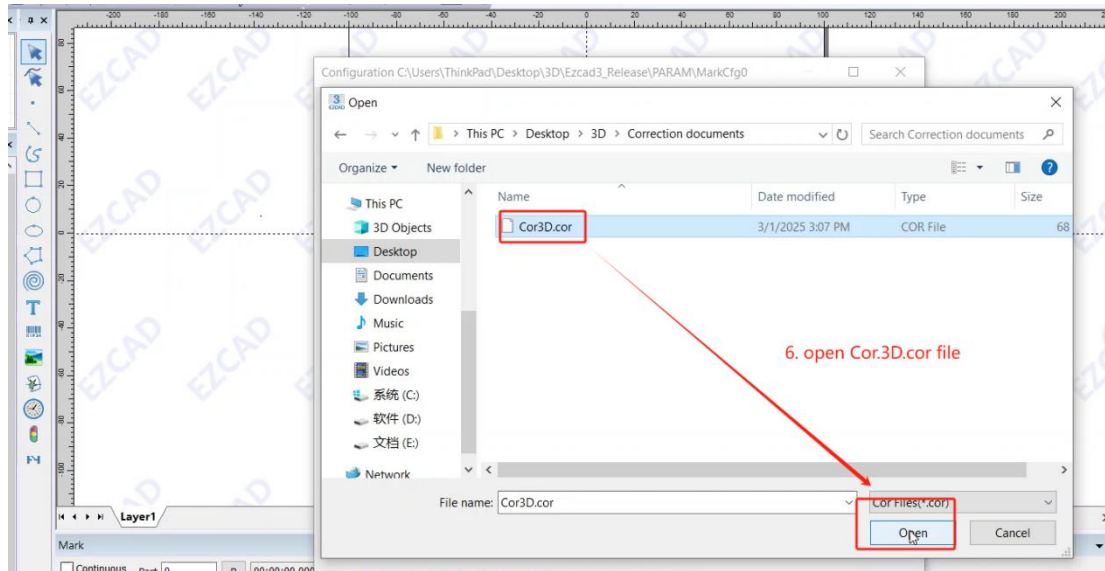
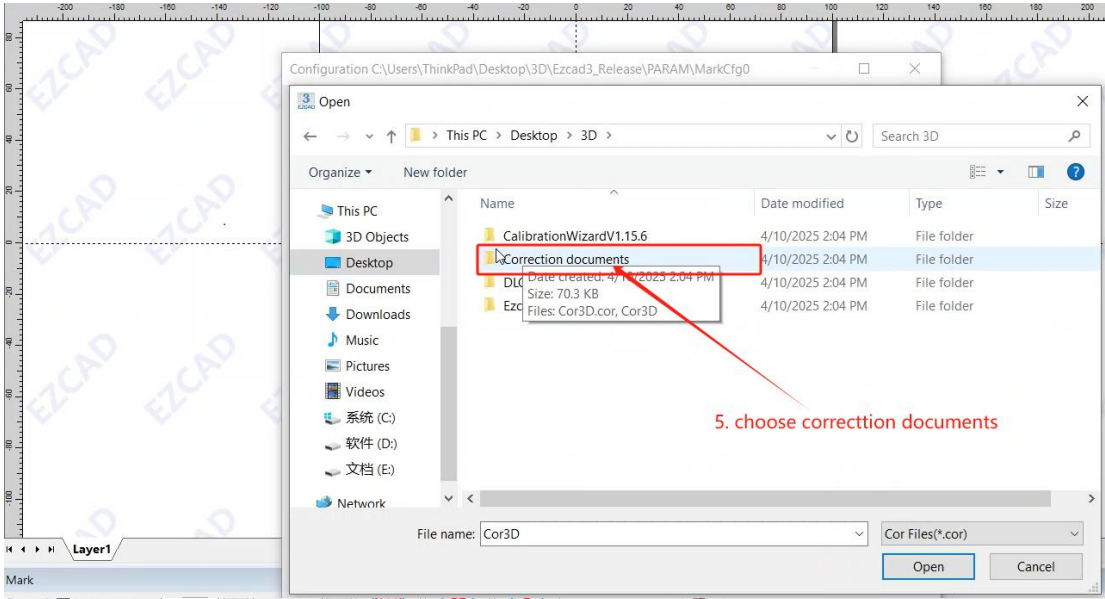
Open the “3D” folder from your PC desk:

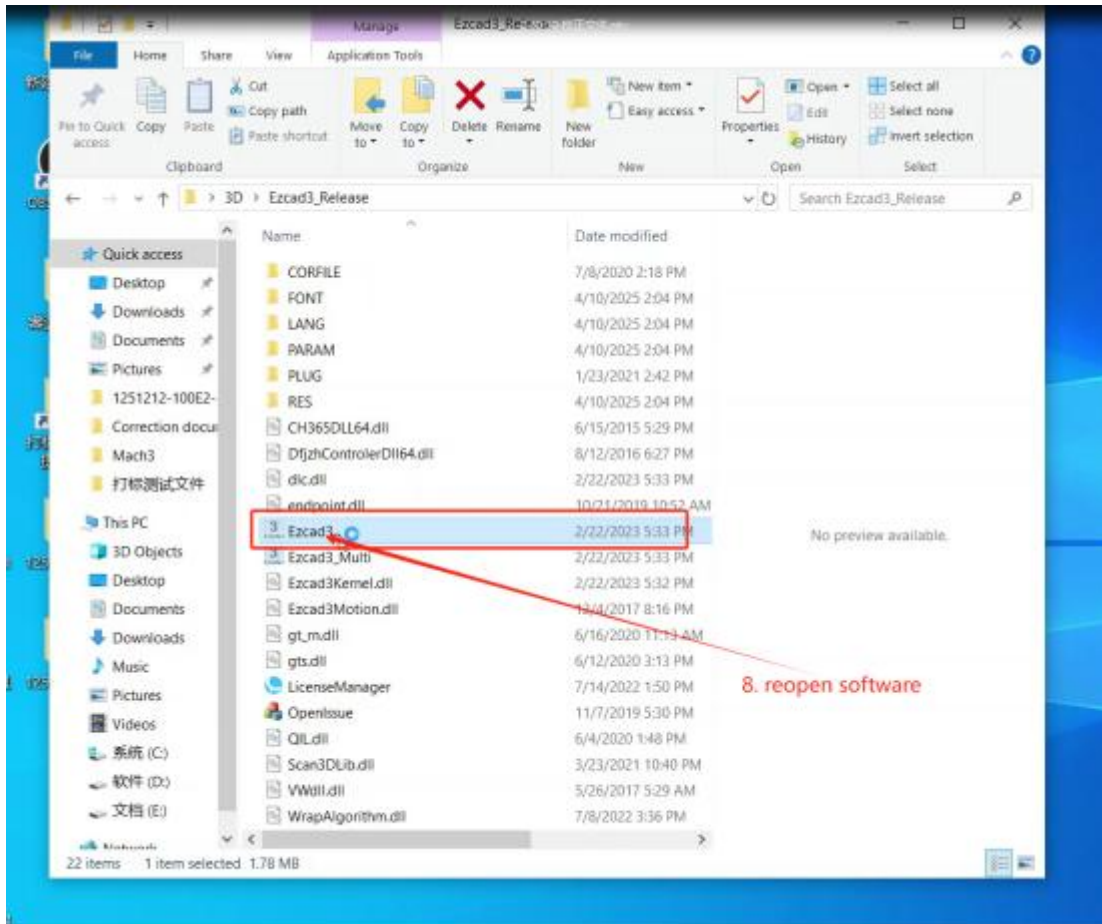
Click “ Para(F3)”

- 1--->Click “File”
- 2.--->Click “File name”
- 3.--->Click “File Path”
- 4.---->choose 3D file
- 5.---->choose “correction documents”
- 6.---->Open“Cor3D.cor”file
- 7.---->Confirm that the save path is correct, please click confirm “OK”
- 8.---->Finally, reopen software









For the introduction of the software page, please read the "software Manual"

Refer to these videos:



<https://youtu.be/-C9nzYb9MnE> (Software Activation)

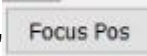
<https://youtu.be/x8RNYQVQ5qw> (Install software driver)

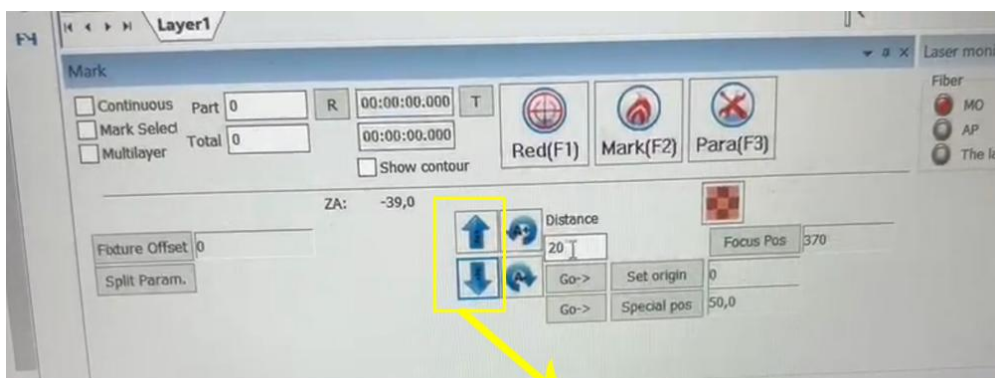
<https://youtu.be/Xxj9-3O341c> (Correct File Fomat Is Error)

8. Focus setting

When you turn on the machine and complete the software installation, you will see two red light spots on your work table. When the two red lights overlap, it is the best focal length.

Click Up  or Down  on the EZCAD3.0 software page, fill in the distance you want to travel each time on the right, and then check the position of the two red lights each time until they overlap.

Finally, click "Focus Pos"  to confirm that this point is the best focal length, click "OK".



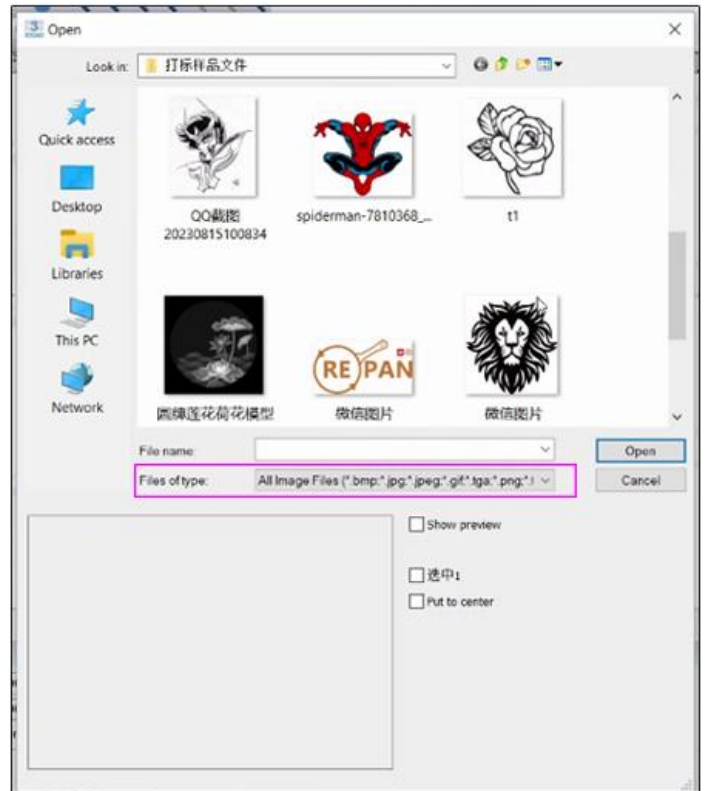
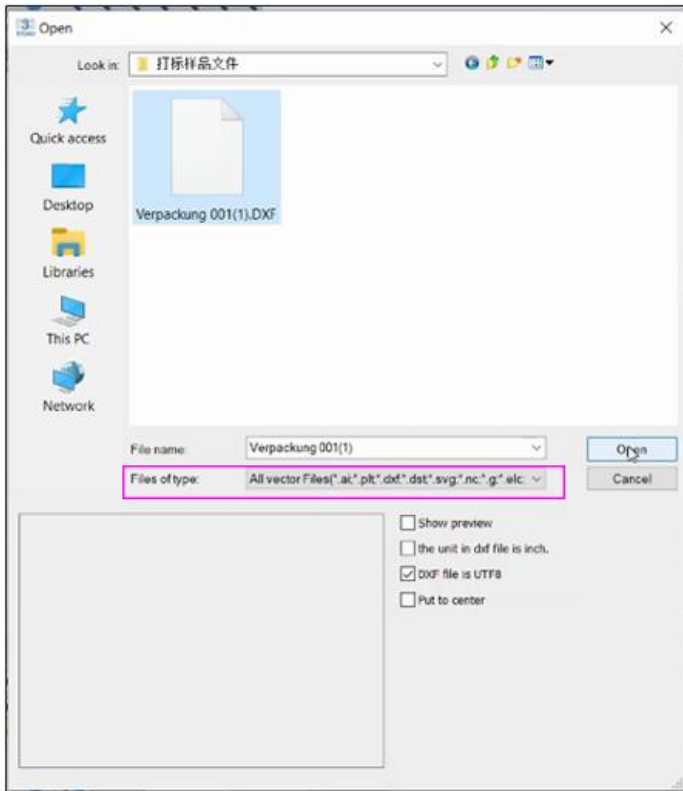
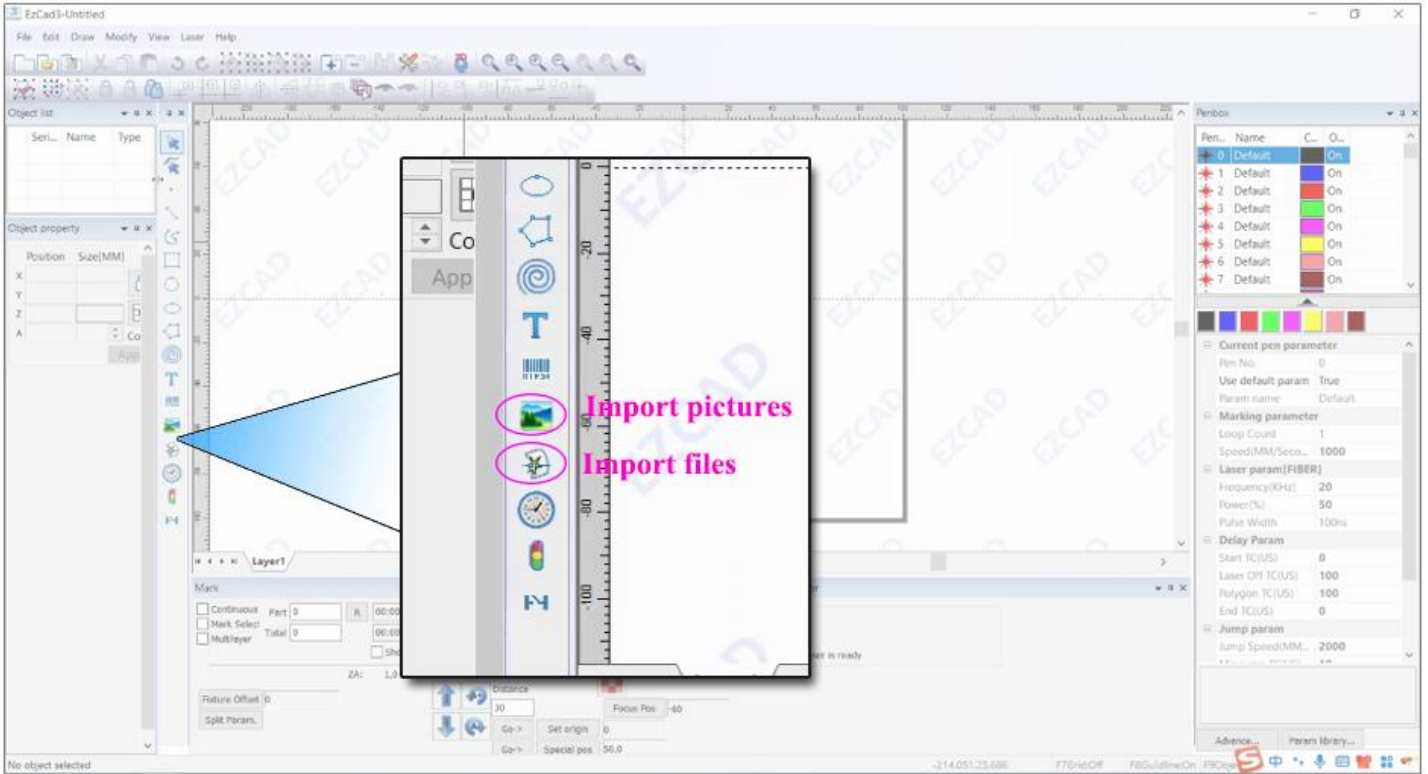
Adjust the up and down buttons
to align the two red lights



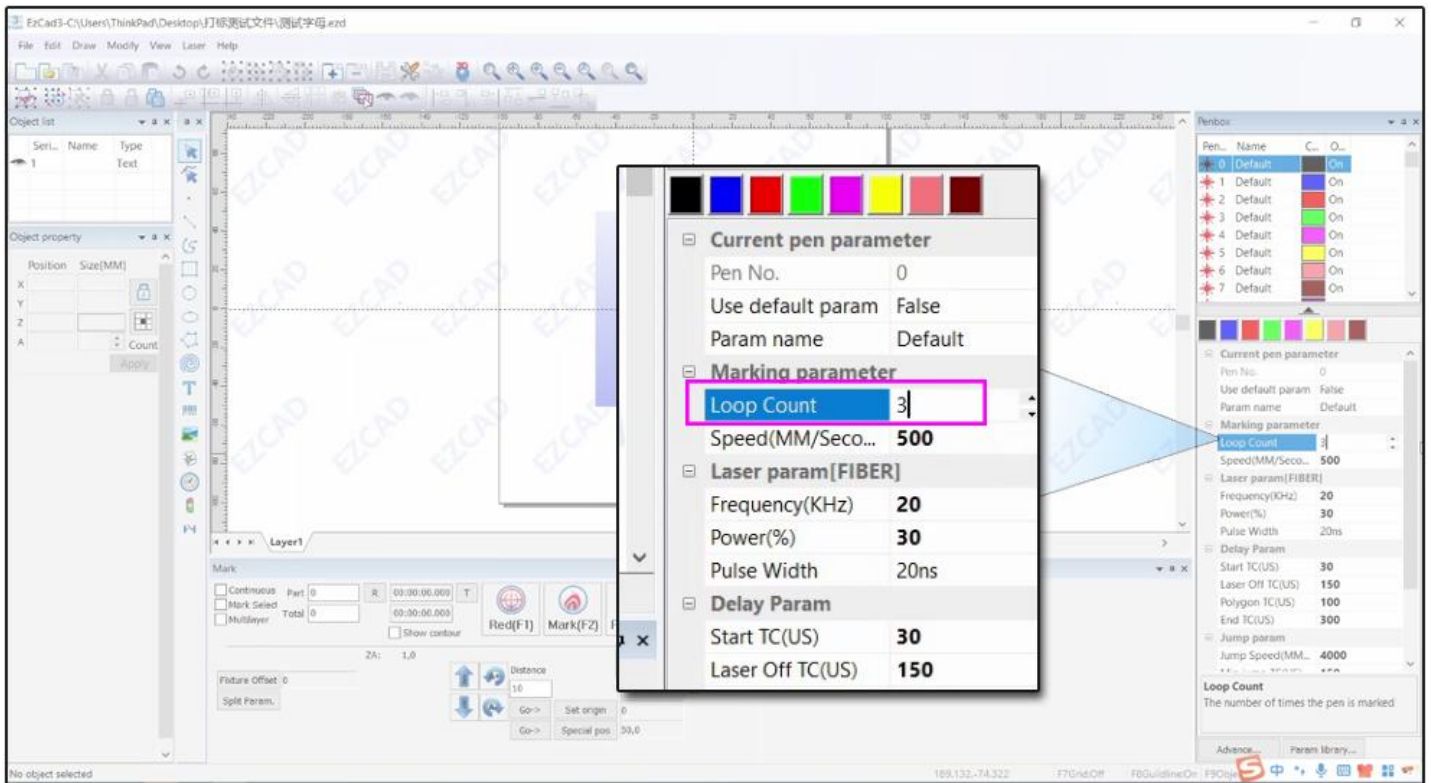
Refer to this video:

https://youtu.be/j_suuyFahPo (Video with adjustable focus)

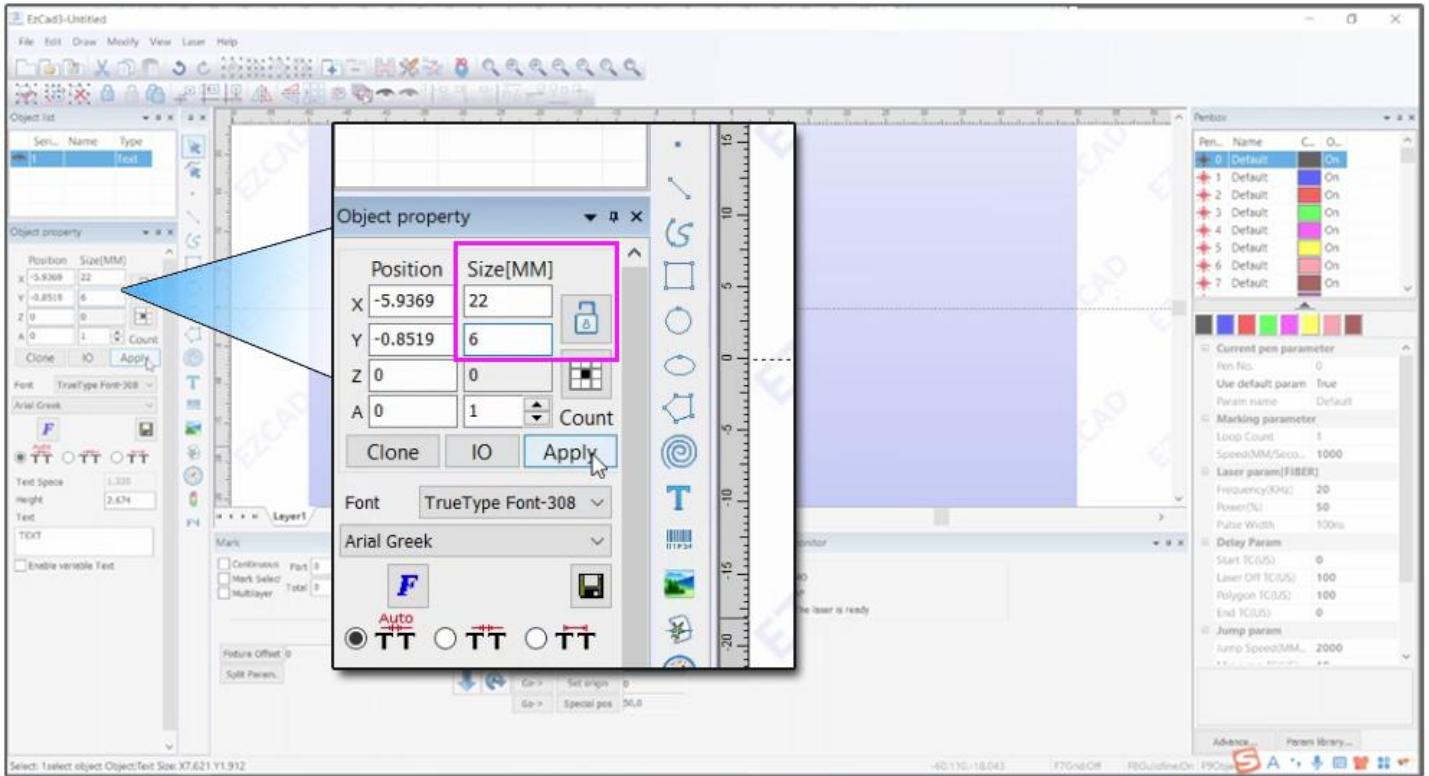
9. How to import Files and pictures



10. How to set up single marking and multiple times marking



11. How to set up marking range













For more information about EZCAD3.0 software, Refer to “EZCAD3 manual” in the folder.










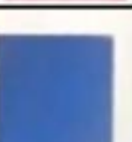
- 📁 CalibrationWizardV1.15.6
- 📁 Correction documents
- 📁 DLC drive
- 📁 Ezcad3_Release
- 📄 Ezcad3 license offline activated-new.pdf
- 📄 Focal length.txt
- 📄 G3 Pro-DLC User manual- two axis.pdf
- 📄 MarkCfg0
- 📄 **EZCAD3 manual-20211208(1).pdf**

12. Marking parameter settings

Product Model	60W	100W	200W	300W		
Material	Aluminum/Stainless Steel/Copper			Aluminum	Stainless Steel	Copper
Speed	2000	1500	800	2000	1000	800
Power	70	60	80	50	60	70
Frequency	35	70	240	200	200	200
Pulse	500	400	200	150	200	350
Laser on TC						
Other	Default					

Cutting Parameter Material: Silver/Gold (Within 3MM)			
Product Model	100W	200W	300W
Power	90	90	80
Frequency	67	130	190
Pulse	500	500	500
Space Line	0.1-0.2MM		
Other	Default		

JPT 60W 175X175MM Color marking on stainless (Reference)					
Color	Speed (mm/s)	Power(%)	Frequency (KHz)	Q Pulse width	Line spacing (mm)
	1200	82	500	2	0.001
	1500	35	360	45	0.002
	1500	30	350	13	0.001
	1500	60	600	4	0.001
	2500	30	800	10	0.002
	1200	82	500	2	0.002
	2000	31	400	60	0.001
	1000	50	1300	2	0.01
	1000	29	360	45	0.002
	1800	90	200	4	0.002

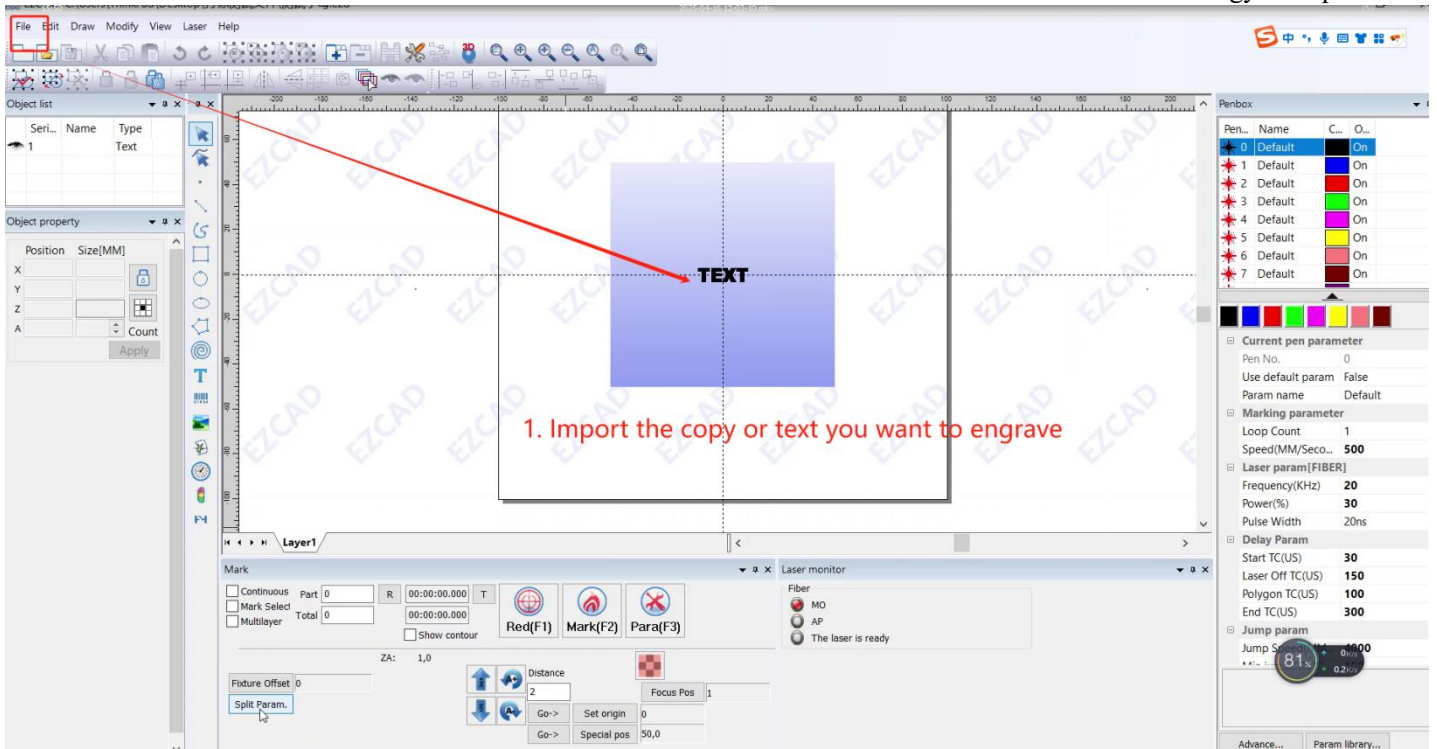
JPT 100W 175X175MM Color marking on stainless (Reference)					
Color	Speed (mm/s)	Power(%)	Frequency (KHz)	Q Pulse width	Line spacing (mm)
	1200	82	500	2	0.001
	2000	18	400	100	0.002
	1500	30	350	13	0.001
	1500	60	600	4	0.001
	1200	82	500	2	0.002
	2300	25	600	10	0.003
	2000	19	400	60	0.001
	2000	28	400	60	0.001
	800	13	360	45	0.002
	2000	100	200	4	0.002

13. Rotary axis setting (if you bought a rotary axis)

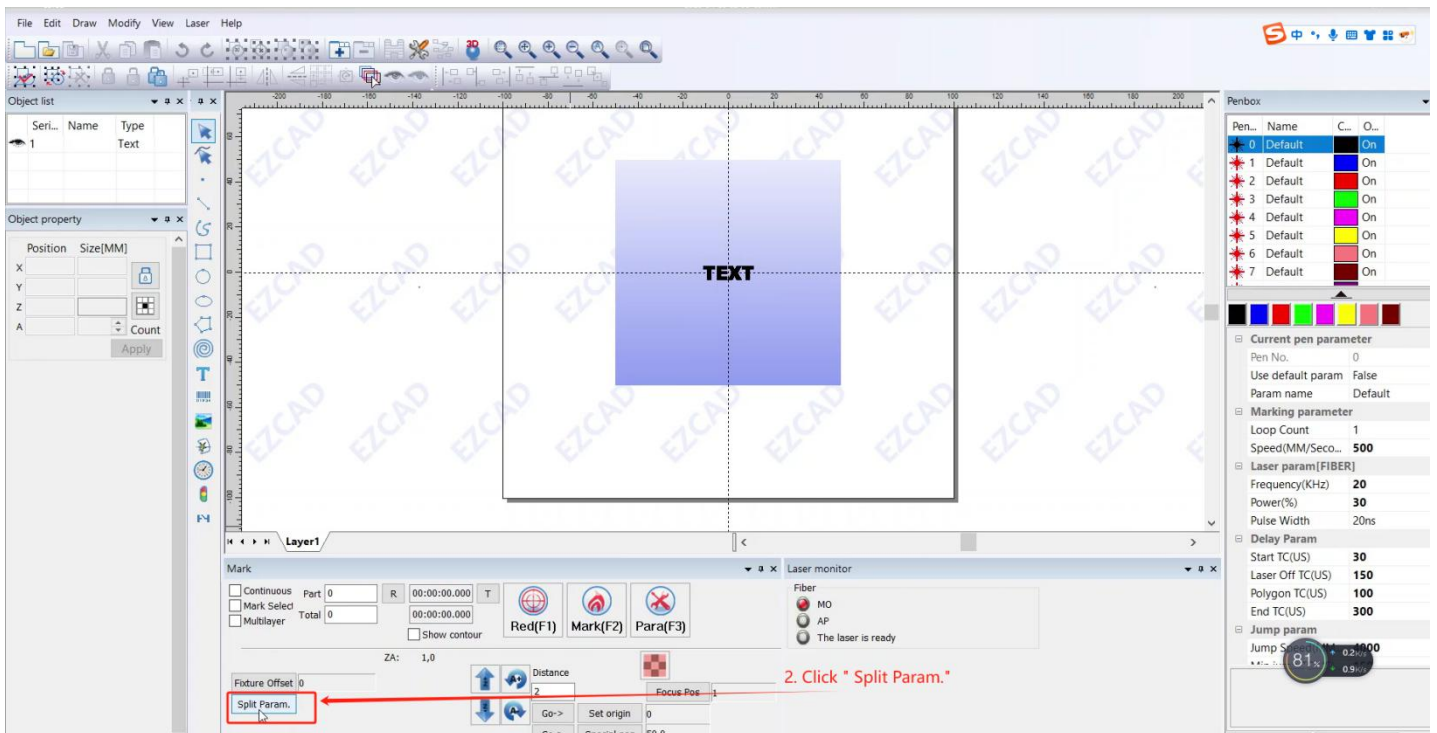
Please note: First, turn off the power, then plug in the rotating shaft, and finally turn on the power again.

1. Import the copy or text you want to mark

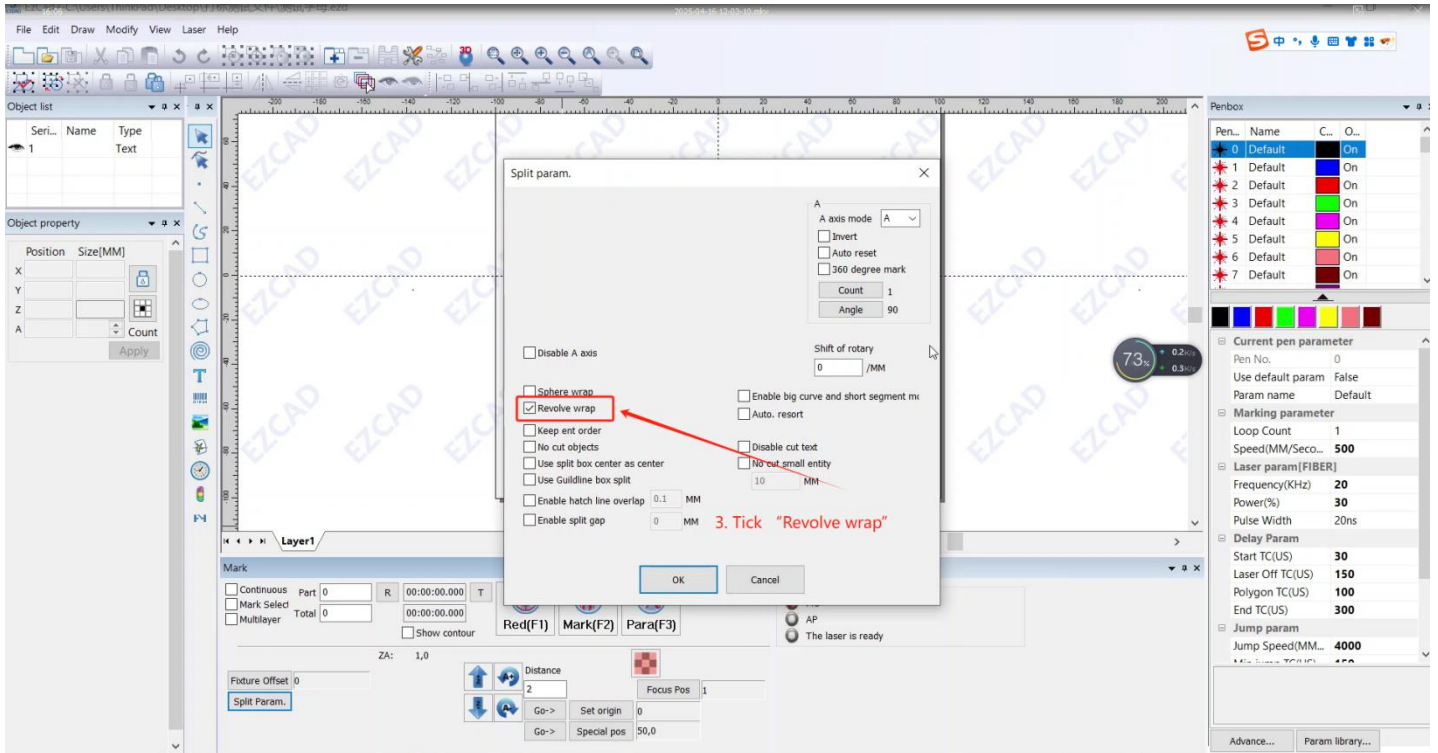




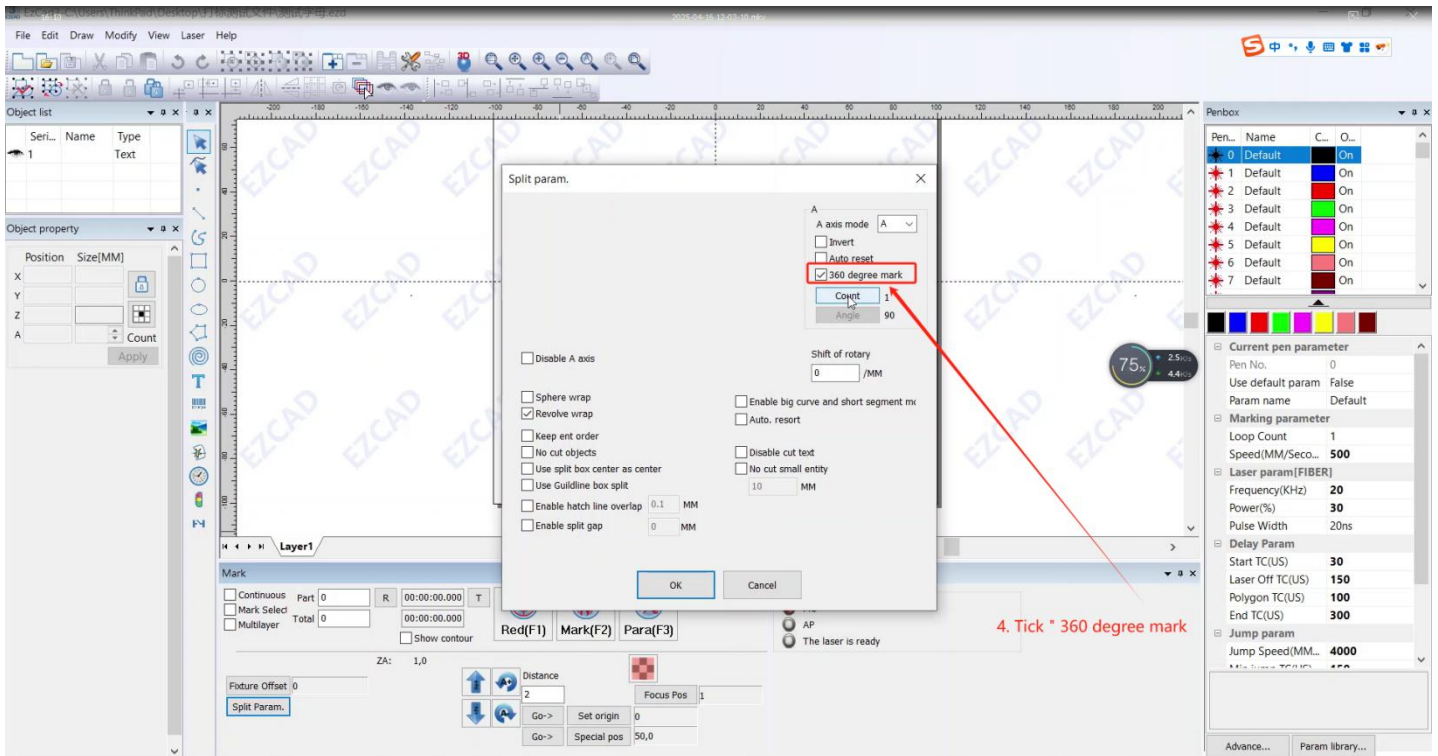
2. Click "Split Param."



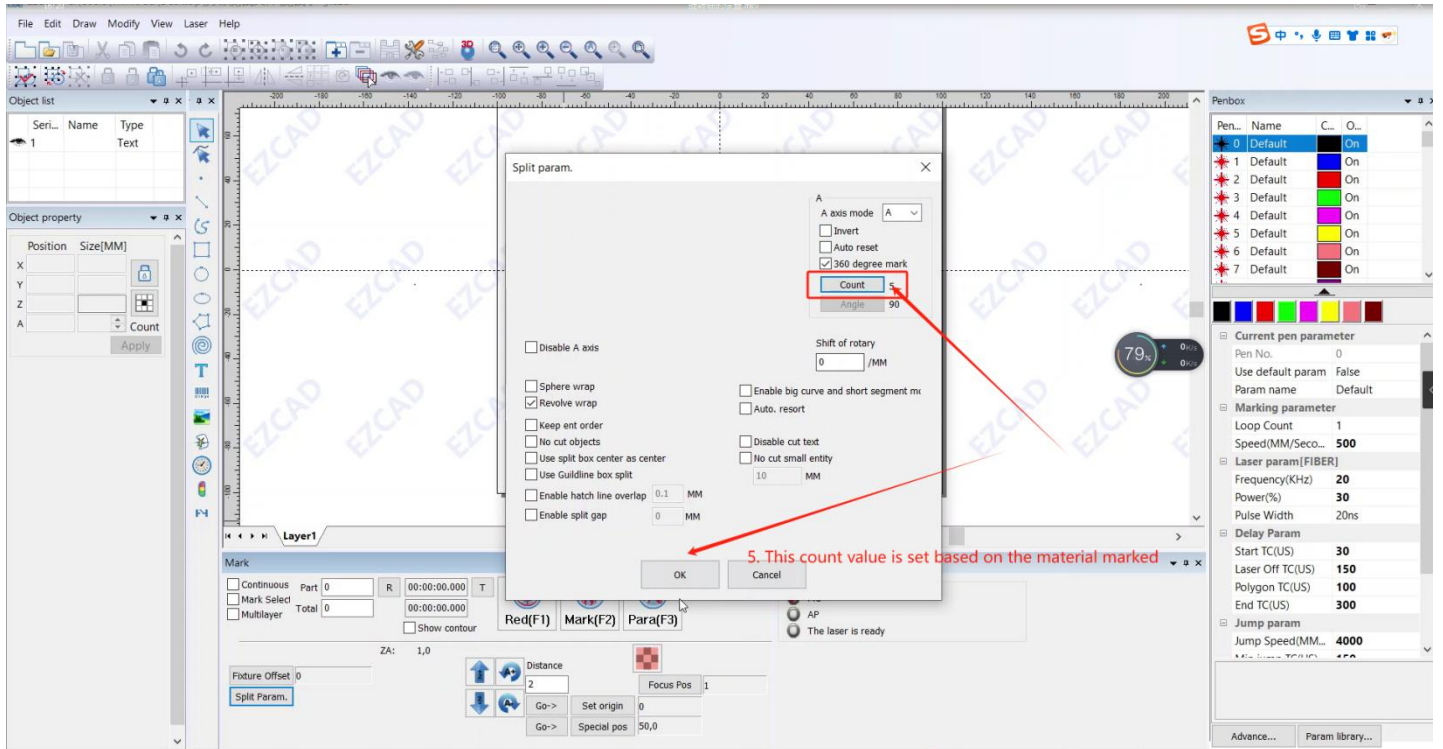
3. Tick "Revolve wrap"



4. Tick "360 degree mark"



5. This count value is set based on the material marked



14. Laser source parameter

Product Model		YDFLP-E-300-M7-M-R	YDFLP-E2-200-M7-M-R	YDFLP-E2-100-M7-M-R	YDFLP-E2-60-M7-M-R
M ²		< 1.6	< 1.6	< 1.6	< 1.5
Armored Cable Length	m	5	5	3	3
Nominal Average Output Power	W	> 300	> 200	> 100	> 60
Maximum Pulse Energy	mJ	1.5	1.5	1.5	2
Pulse Repetition Rate Range	kHz	1 ~ 4000	1 ~ 4000	1 ~ 4000	1 ~ 4000
Pulse Duration	ns	2 ~ 500	2 ~ 500	2 ~ 500	2 ~ 500
Galvo Scanner		SINO-GALVO SG7110C	SINO-GALVO SG7110	SINO-GALVO SG7110	SINO-GALVO SG7110
Marking Speed		5000mm/s	5000mm/s	5000mm/s	5000mm/s
Positioning speed		10000mm/s	8000mm/s	8000mm/s	8000mm/s
Output Power Stability	%	< 5	< 5	< 5	< 5
Cooling Method		Air Cooled	Air Cooled	Air Cooled	Air Cooled
Supply DC Voltage (VDC)	V	48	48	24	24
Power Consumption	W	> 1400	< 830	< 440	< 330
Environmental Supply Current	A	> 27	> 14.6	> 18	> 13
Central Emission Wavelength	nm	1064	1064	1064	1064
Emission Bandwidth@3dB	nm	< 15	< 15	< 15	< 15
Polarization Orientation		Random	Random	Random	Random
Anti-high Reflection		Yes	Yes	Yes	Yes
Output Beam Diameter	mm	7.0±1.0	7.±1.0	7±0.5	7±0.5
Output Power Tuning Range	%	0 ~ 100	0 ~ 100	0 ~ 100	0 ~ 100
Operation Temperature	°C	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40
Storage Temperature	°C	-10 ~ 60	-10 ~ 60	-10 ~ 60	-10 ~ 60
N.W	kg	25.3	10.5	8.5	4.1
Size(L×W×H)	mm	483 × 351 × 133	340 × 265 × 100	336 × 255 × 90	205 × 253.3 × 75

15. precautionary note

This device has an output wavelength of 1064nm (invisible light) and an average output power of over 200W. It is classified as a Class IV laser, which not only poses great harm to the eyes but also burns the skin. Its reflected and scattered light may also cause harm to the human body. Therefore, please wear OD4+grade laser protective goggles throughout use.

The irradiance that may incident on the surface of the goggles is 0.01W/m². Do not directly observe the laser output head. It is recommended to wear laser protective goggles throughout the operation!

We prepare this protective goggles for the device, Optical density test results:

wavelength (nm)	optical density
1064	>6



When you don't need this device to work, be sure to keep the laser switch off and inform children to stay away from the device, avoid accidental contact with the danger laser .

16. Q&A

Q: What should I do if the U-Disk is not found in the package?

A: This is because the customs took out the U disk during customs clearance.

Please contact customer service in time and leave your email. We will send you the U-Disk Files.

Q: If the computer prompts that file has a virus when I install the JCZ software, what should I do?

A: You must close all anti-virus software on your computer before installing the software.

Q: When I install the Ezcad software, it shows "Ezcad-Lite work only with UsbLmc- Lite, use Ezcad!" What should I do?

A: This is because your computer version cannot match the software.
Please contact us if you encounter this problem.

Q: I bought a machine with a 300x300mm field lens, can I change other size field lens?

A: Because 3D machines belongs to customized machines, the field lens needs to be debugged simultaneously with the galvanometer. If you want to replace the field lens with another size, you need to choose a different size field lens when placing your order. Our technicians will help you debug, and we do not recommend customers to purchase additional field lenses by themselves.

Q: Can the 3D machine be compatible with Lightburn?

A: No. Because the 3D machine is EZCAD 3 software, it does not support lightburn.

Q: Can machines do deep/ relief engraving ?

A: Yes. 3D machine can do marking for large-scale surface, flat surface, 3D surface, steps, cone surface, slope surface, and other objects.