

ComMarker



Laser Marking Machine

B5

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 type 4 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 Type 4 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:
Metal, including stainless steel, aluminum, bronze, brass, alloy, etc,
Plastics including PP, PE ABS etc.

3 Use Safety

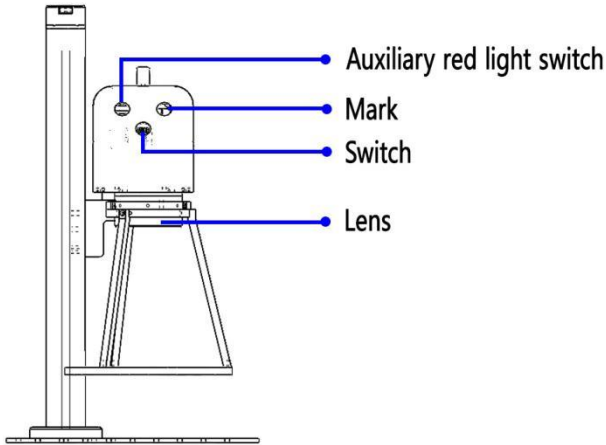
- Use the engraver only in horizontal position and ensure that it has been securely fixed to prevent fires caused by accidental shifting or dropping from the workbench during work.
- It is forbidden to point the laser to people, animals or any combustible object, whether it is in working condition or 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

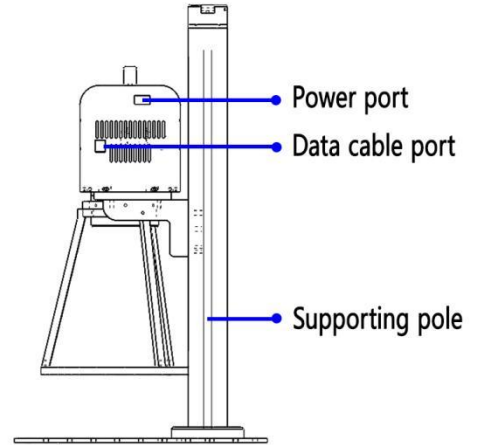
- Only use this device with a compatible and stable power supply with less than 5% fluctuation in its voltage.
- Turn on the power to this device when it is well grounded.
- ONLY use this device with one hand at a time. The laser is powered by an extremely high voltage connection and placing two hands on the machine at one time during operation has the potential to create a closed circuit with the human body, resulting in electrical shock.
- 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%.

Product Structure

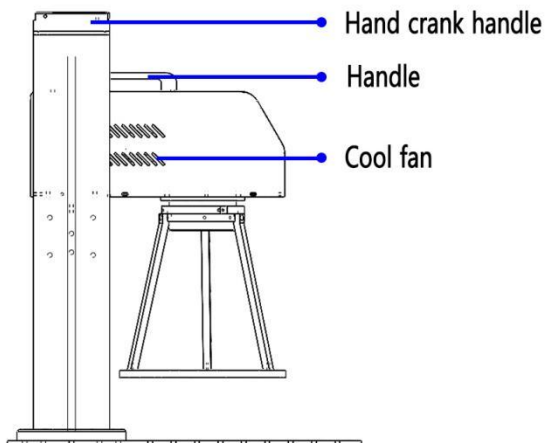
01



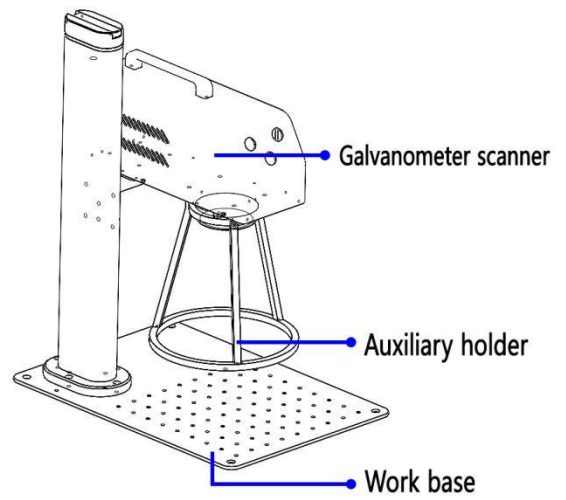
02



03



04



Assembly of Machine

1. Place the parts on the table



2. Fasten the supporting pole with the screws



3. Put the laser head on the supporting shelf and fasten the screws to fix the laser head

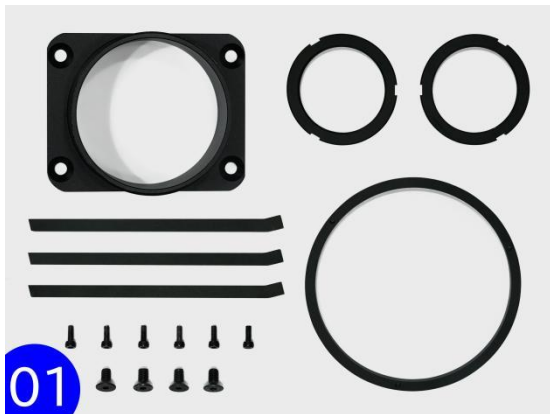


4. Connect the laser machine with the computer, and switch on the machine



Assembly of Auxiliary Holder

1. Place the parts on the table



3. Fix the metal bar and the small ring with screws



5. Screw the other small ring on the fixing collar



7. Adjust the height of the auxiliary holder according to the focus length



07

2. Connect the metal bar and the big ring with the screws



4. Fasten the fixing collar onto the laser head with the screws



6. Screw the assembled part on as below



8. Fasten the small ring to fix the auxiliary holder with the right focus



08

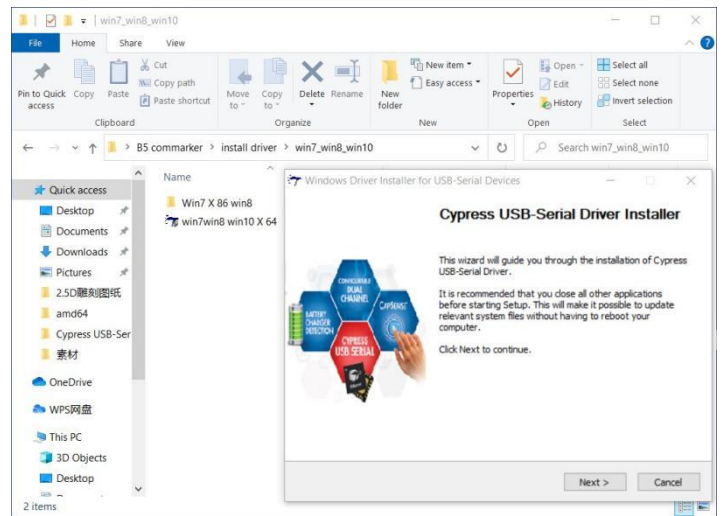
Operation Instructions

1. Install the driver

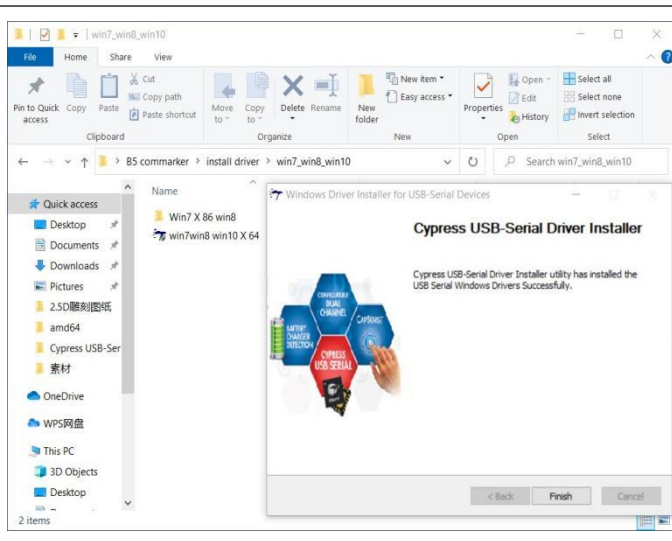
1. Connect the machine with data cable, connect the power cable. Switch on



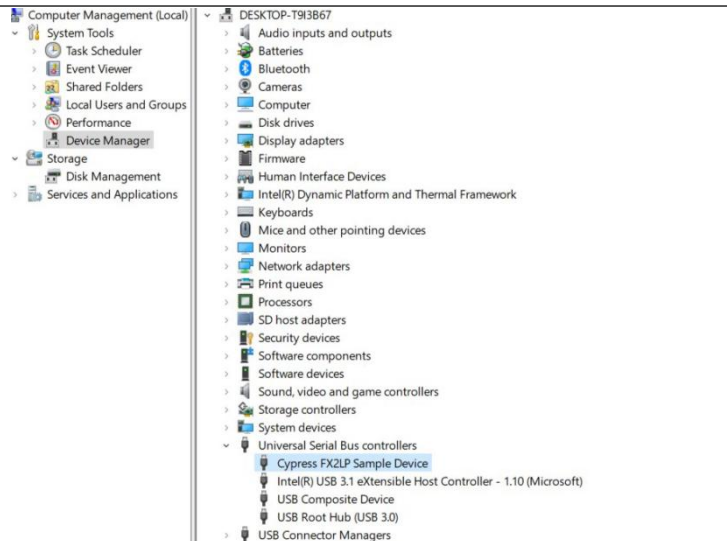
2. Plug the USB drive into computer. Open the file "B5ComMarker"--> "install driver", install the driver



3. Click "finish" if it is successful



4. it will display "Cypress FX2LP Sample Device" in Device Manager--> Universal Serial bus controllers



Noted: *It is recommended to copy and paste the files in the USB drive to the computer desktop or other computer disks.
*If the driver installation is unsuccessful, please refer to FAQ 1

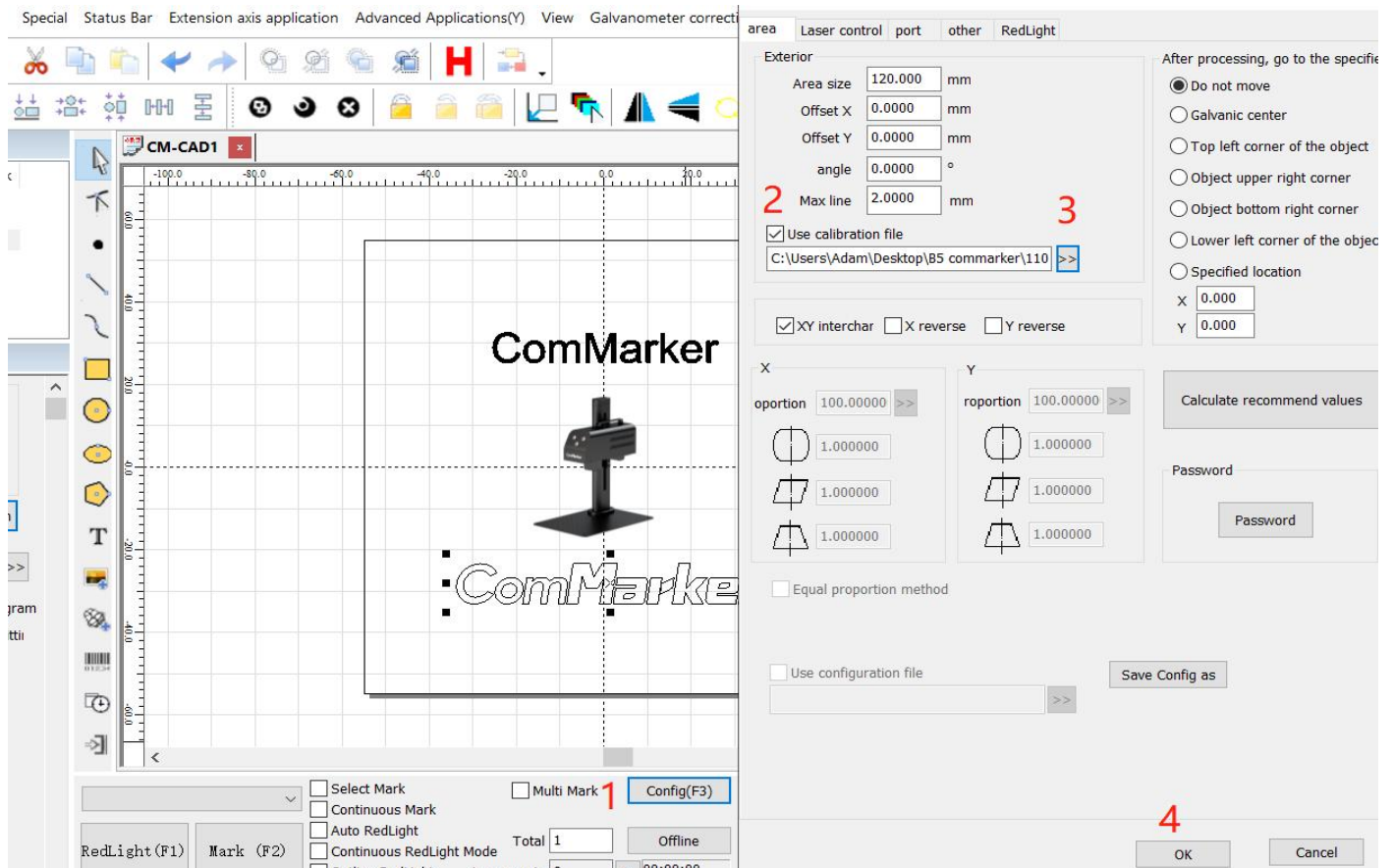
2. Open the software

Open the folder " B5 ComMarker" and open "ComMarker B-series" in the folder "Software"

名称	修改日期	类型	大小
Autosave	2022/11/8 17:09	文件夹	
config	2022/11/8 17:09	文件夹	
ErrorReport	2022/11/8 17:09	文件夹	
Font	2022/11/8 17:09	文件夹	
fpga	2022/11/9 9:22	文件夹	
help	2022/11/8 17:09	文件夹	
ImgLib	2022/11/9 9:22	文件夹	
Lang	2022/11/8 17:09	文件夹	
Log	2022/11/14 13:14	文件夹	
res	2022/11/9 9:20	文件夹	
calib.dll	2022/4/27 11:40	应用程序扩展	449 KB
ComMarker B-series	2022/11/9 9:20	应用程序	2,402 KB
crashrpt_lang	2022/4/27 11:40	配置设置	6 KB
CrashRpt1403.dll	2022/4/27 11:40	应用程序扩展	135 KB
CrashRpt1403	2022/4/27 11:40	应用程序	0.2 KB

3. Import the correction file

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



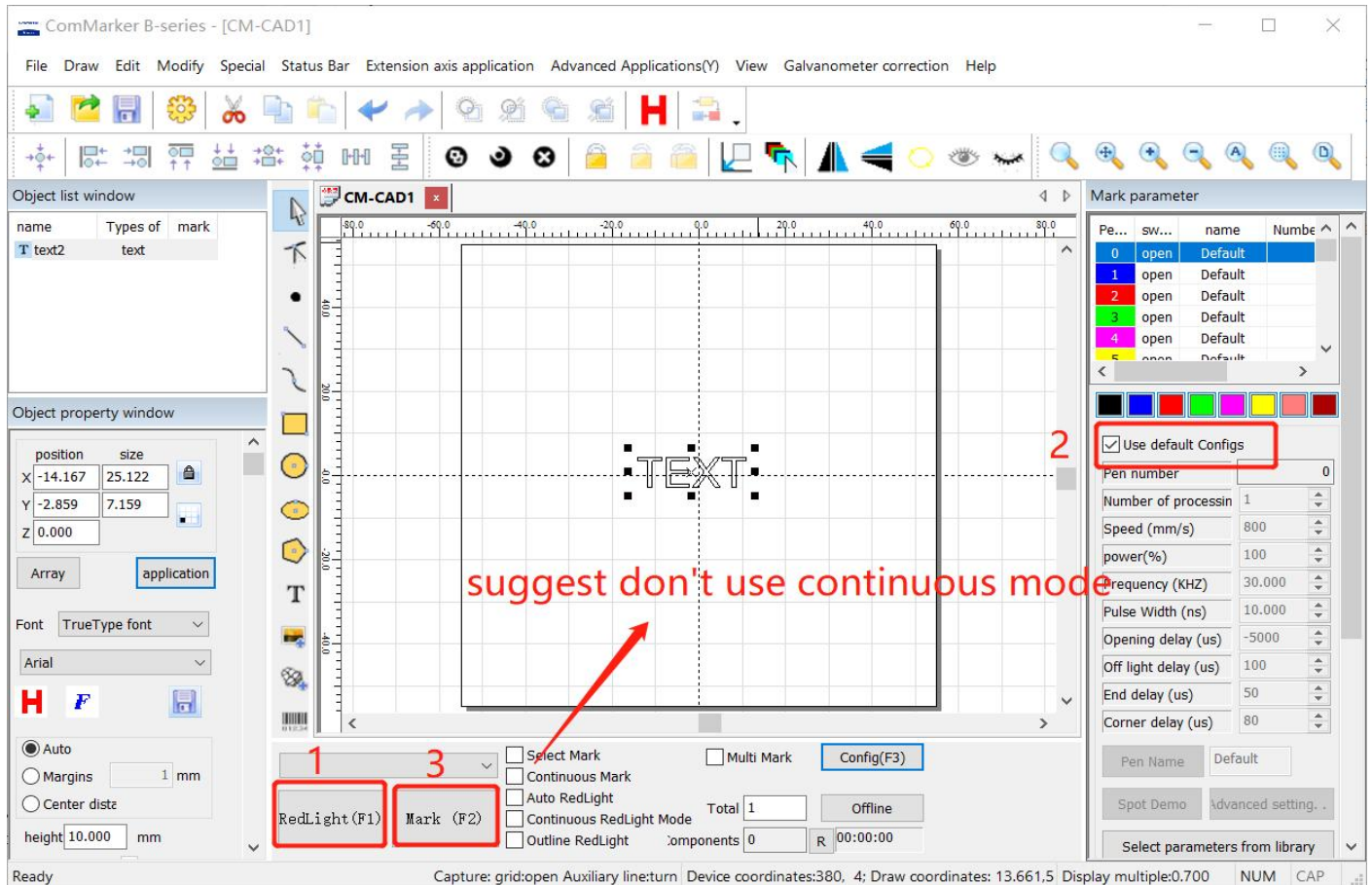
4. Adjust the focus

Turn the hand crank handle to lift or lower the laser head until two red light points overlap, which is the best focal point
Note: Before the machine is out of the factory, we have done red light correction. At the position where the red light spots are focused, the laser emits the strongest light. However, due to transportation reasons, the focus point of the red lights you received may shift, and the focus point would not be the best focal length. Please refer to FAQ 2 at the back of this manual for debugging.



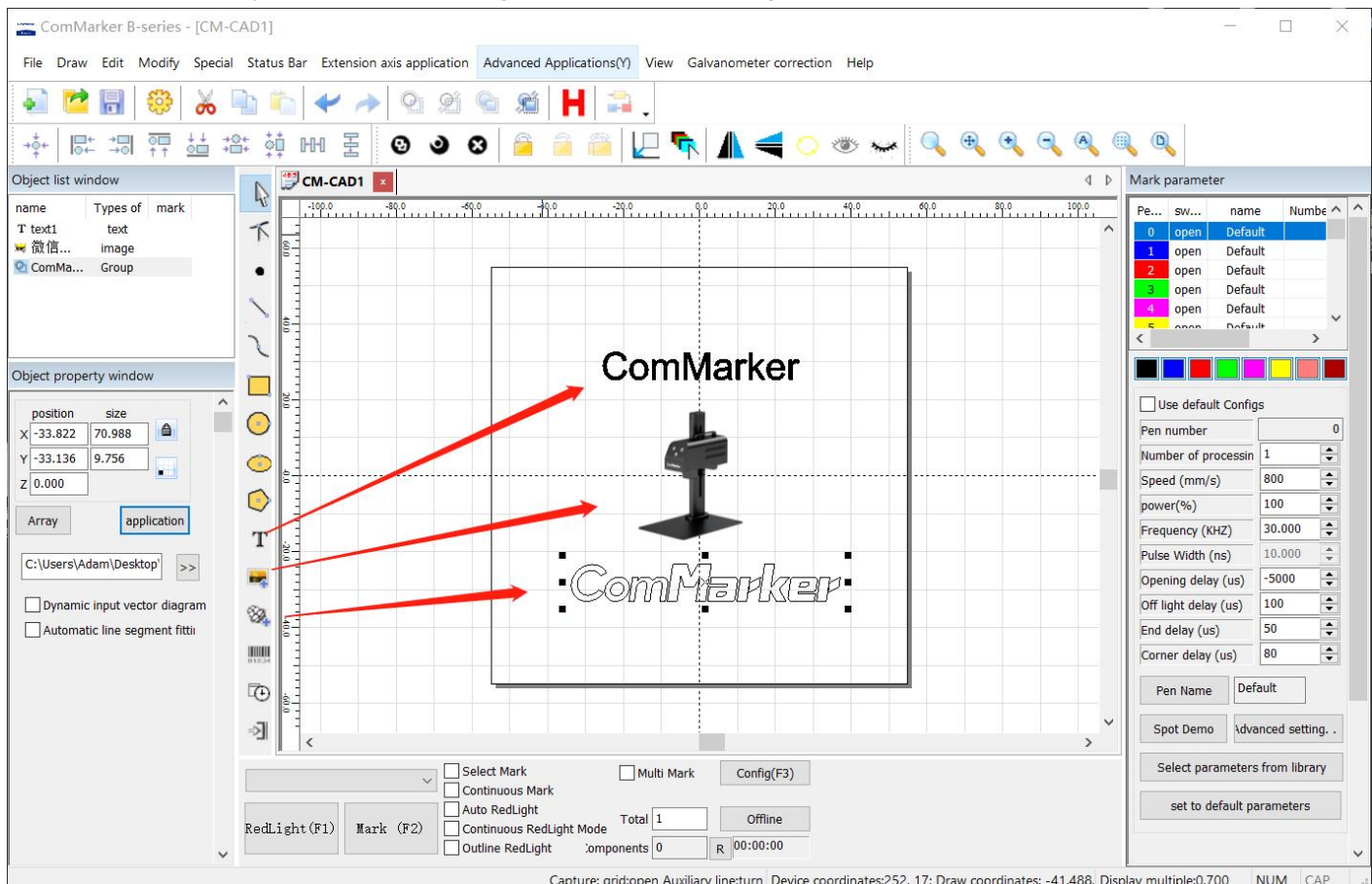
5. Marking test

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



6. Edit the engraving content

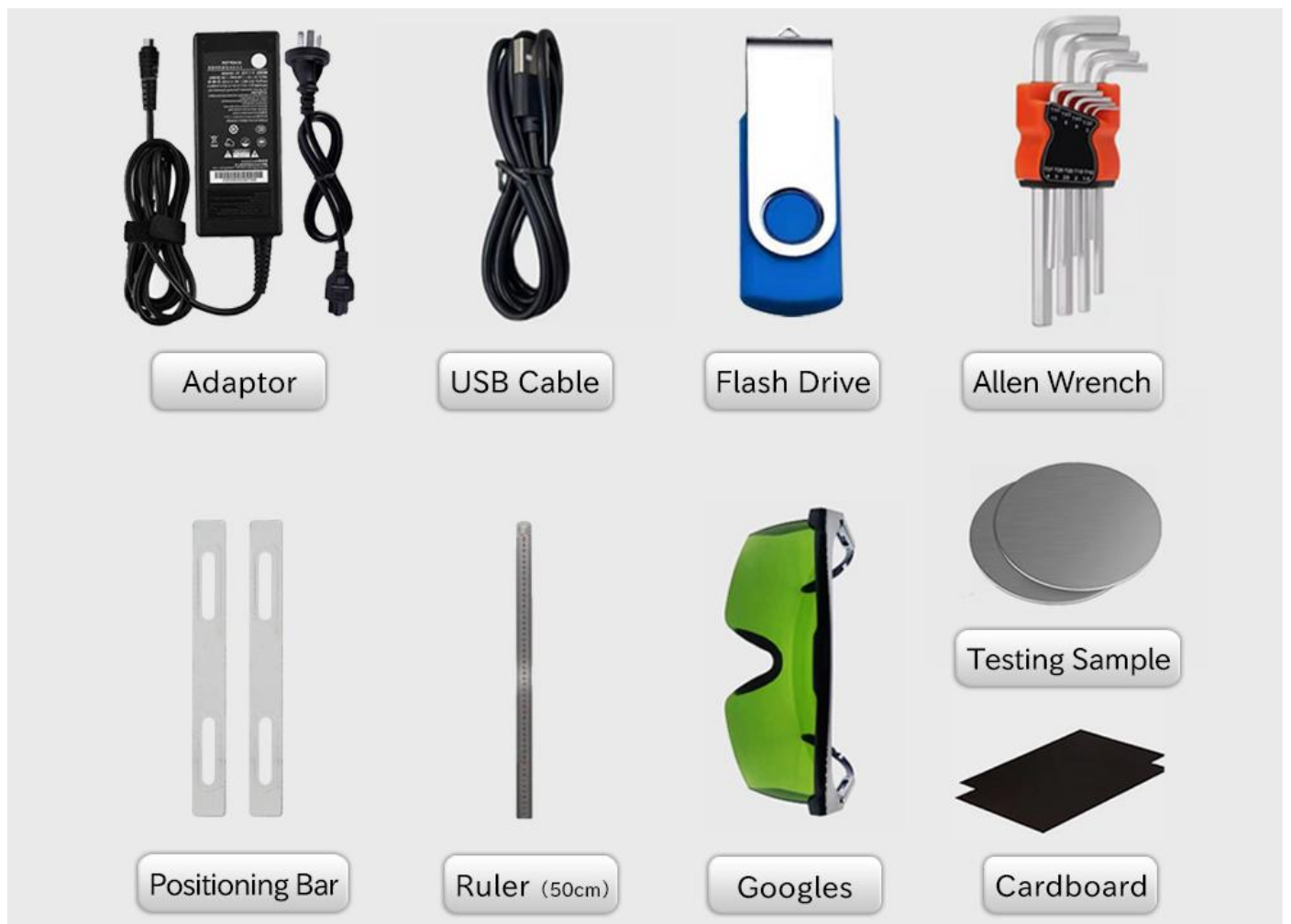
You can enter "text", "picture" or "vector diagram" as shown in the figure below.



Parameters

Voltage	100V - 240V
Laser Type:	End-pump
Working Area	11cm x 11cm
Wavelength	1064nm
Marking Speed:	0- 10000mm/min
Accuracy	0.01mm
Graphic Format Supported:	AI/PLT/JPG/DXF
System Supported	Window7/8/10
Cooling Type	Air Cooling
Output Power	2w
Dimension(L*W*H):	47x38x27cm
Weight (KG):	5.8kg

Accessories



FAQ

Q1: The driver installation was unsuccessful?

- *Make sure the machine is on and data cable connected with computer, otherwise there will be indication in computer device manager
- *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
- *The driver port might be occupied when the computer is connected with another machine or device, please disconnect the other device before you try ComMarker laser machine.

Q2: The machine does not engrave when everything seems to be all right including the red light preview?

- *The focus length is inaccurate because the focus point suggested by the auxiliary light is not right, please refer to Q3 to adjust the focus
- *Please tick default parameters of speed and power on the software, it works for most of metal and plastics
- *Some flammable material including wood, paper or bamboo and transparent materials can not be engraved by the machine
- *It is supposed to work with our prepared software with default parameters, however it may stop functioning if you accidentally change the following setting of laser control on the software. It only works when you choose "Fiber"

The screenshot shows the 'Configuration Config[default]' window with the 'Laser control' tab selected. The 'Laser type' is set to 'Fiber'. Under the 'PWM' section, 'Enable PWM signal output' is checked, with 'Max PWM signal' at 200.000 KHZ and 'Min PWM signal' at 20.000 KHZ. The 'Power mapping' button is highlighted with a red box. Other settings include 'Enable pre-ionization' checked, 'Pulse Width' at 1 Microsecond, and 'Pulse frequency' at 5.000 KHZ. The 'Switch' section has 'Enable the first pulse suppress' checked at 20 us. The 'Fiber' section shows 'Type' as 'IPG-YLP' and 'Turn on the MO' at 8 ms. The 'SPI' section has 'Waveform' at 0, 'SPI First pulse' at 1, and 'Standby power' at 1.0. The 'Analog output' section has 'Enable current output' unchecked. The 'Test laser' button is visible at the bottom right.

Q3: The overlapping position of the double red light is not the best focal length

The measuring focal length of this machine is _____ mm , and the measuring distance is the length from the bottom line of the laser head to the surface of the engraving material. This parameter is measured manually, and each device has different focal lengths due to changes in laser sources and field lenses.

Please operate as the following steps:

1.Place the stainless steel test plate on the machine table



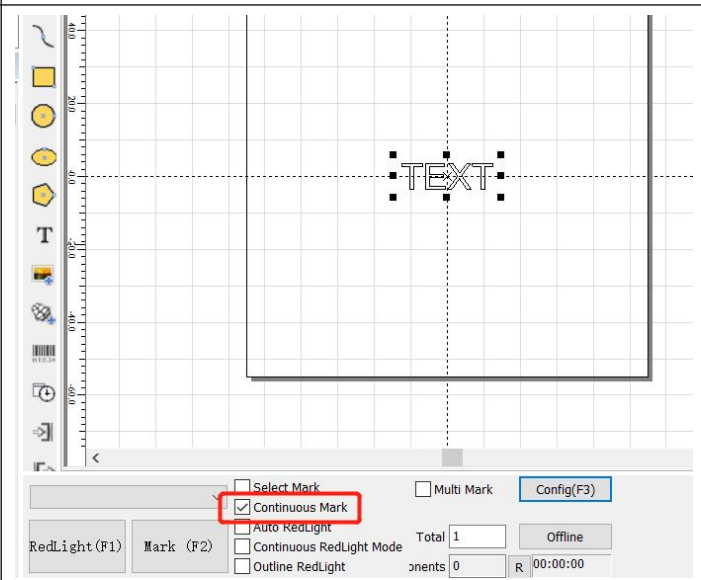
2.lift up or down the laser head to the best focus point according to the number in handwriting above



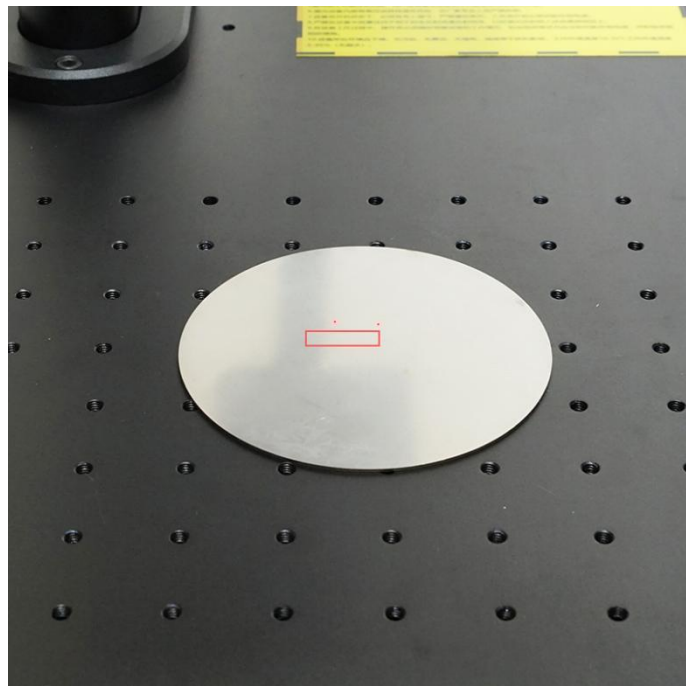
3.Turn on the machine, connect the computer with the machine



4.Import the "TEXT" for testing , select the default parameters, and tick the "continuous part" button.



5. Press "Red light" and ensure it marks on the test material. Click "Mark", and the laser would be continuously marking



6. Meanwhile, lift or lower the laser head and observe the obvious change of intensity of the laser beam. Stop when it engraves with the strongest laser



7. At this time, loosen the screws for the two beams of the auxiliary red light



8. Manually adjust the relative position of the red light dots to make them overlap. And tighten the screws



Q4: No board was connected code: -5

*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

Q5: The USB flash drive is damaged and cannot be opened?

*Please visit Commarker's official website to download the B5 driver and software.

*Contact after-sales staff to ask for calibration file which is correlate with SN number.



Q6. The size of preview and the mark is inconsistent with the software display?

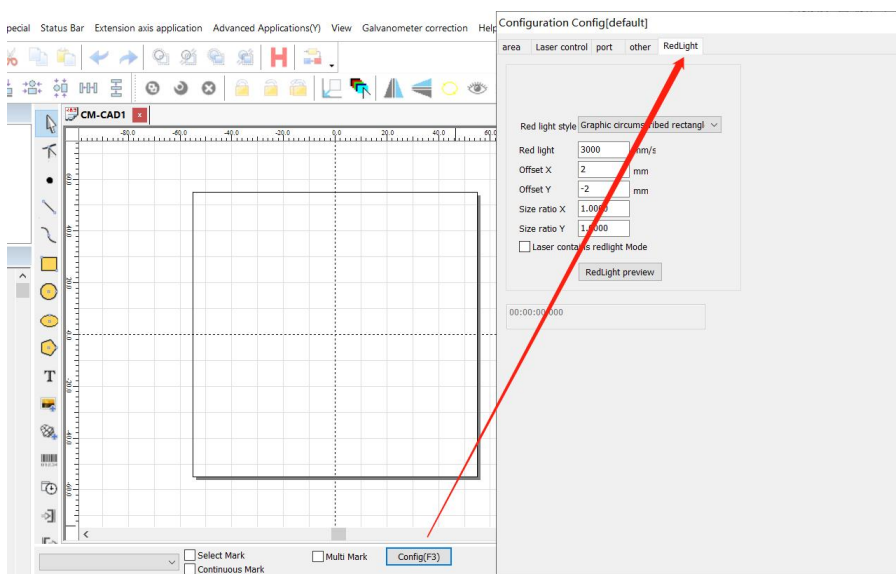
*Import the calibration file ending with “.cor”, please refer to step 3 of the operating instructions. Make sure the folder of the calibration file unchanged in the computer.

Q7. The red light preview area is not consistent with engraving area

*Import the calibration file ending with “.cor”, please refer to step 3 of the operating instructions.

*If the problem not solved, select "Config (F3)", select "Red Light". Input numbers in "Offset X" ,"Offset Y" according to the actual deviation number based on the measurement with a ruler. Refer to the following picture

*If it still doesn't work, please contact after-sales staff or email us



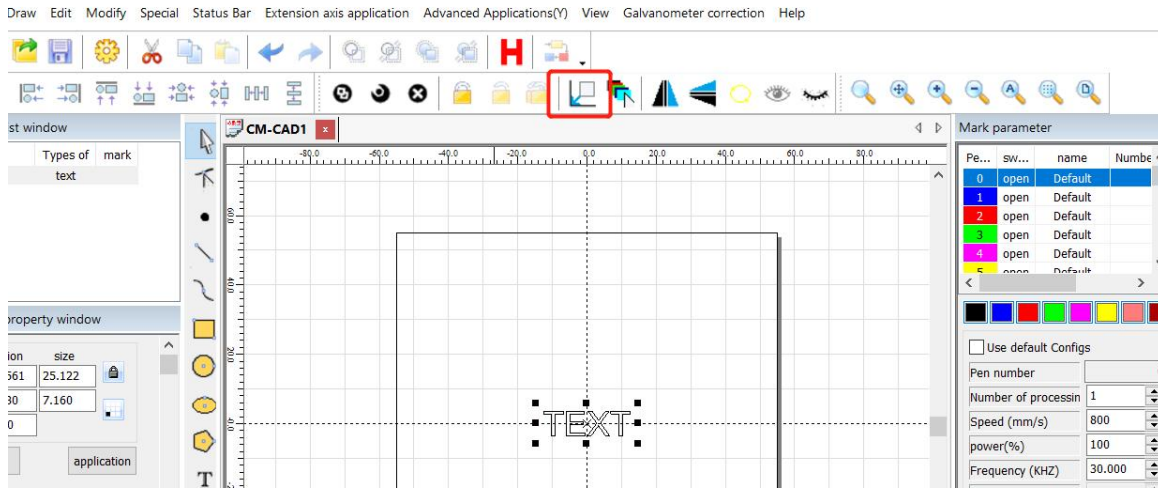
Q8: The preview and the shape of the mark is deformed

*Import the calibration file, please refer to step 3 of the operating instructions

*If it still doesn't work, please contact after-sales staff or email us

Q9: 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



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
- For Laser Engraver technical support and service please email:
support@commarker.com

Manufacturer: Shanghai Diaotool Co., Ltd.

You Tube



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