

Micro Engraving Machine

Model: DK-8-KZ IMG / DK-8-KZ LINE / DK-5 PRO-5 / JZ-5

User's Manual

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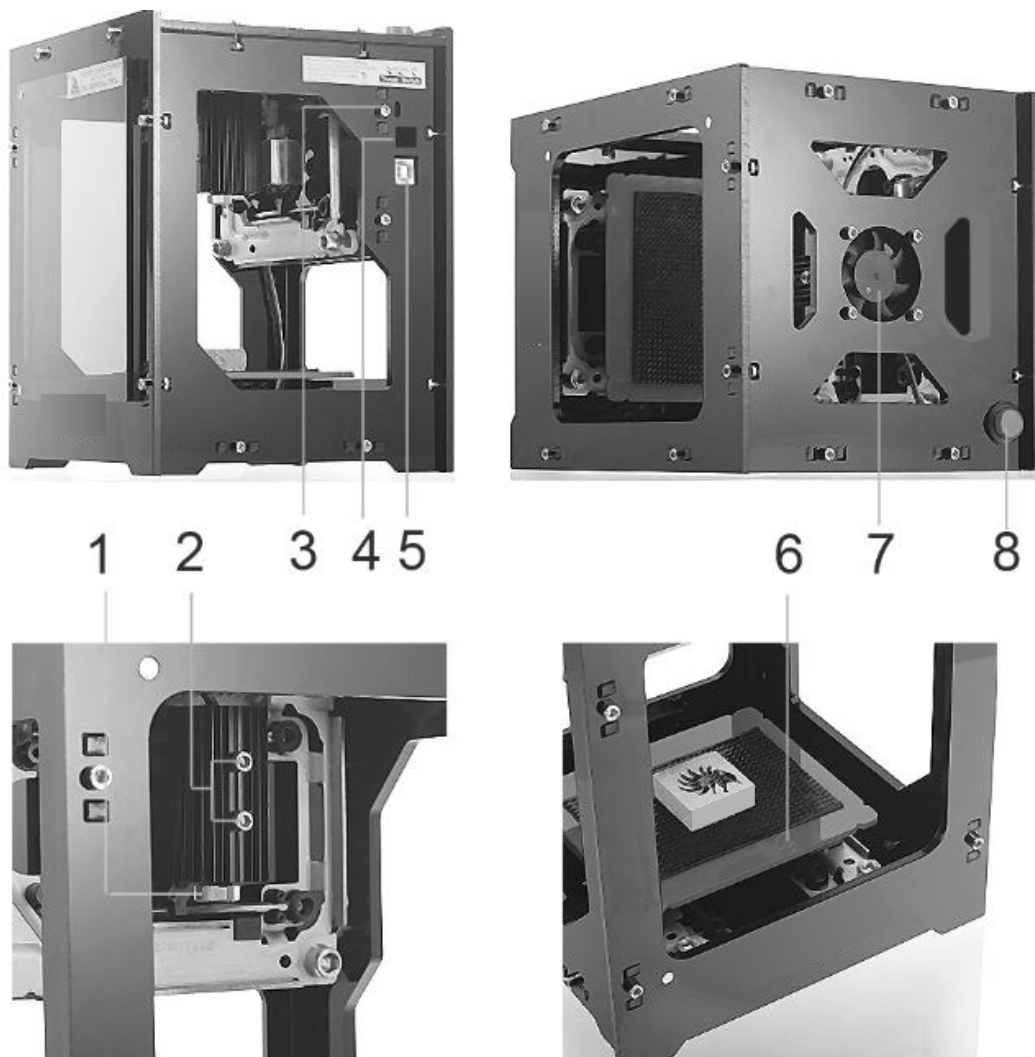
The laser engraver printer machine printer is a basic engraving machine, It is designed for windows. The machine powered by a 5V2A power adapter. The model supports parallel control and supports automatic recognition of 2pin laser and 4pin laser. These extensions provide more application scenarios for users.

Technical Parameter

Caving Space:	490x490px, Point distance=0.075mm,36.75x36.75 mm
Communication Interface:	USB2.0
Image Size:	490x490 px
Supported image formats :	JPG , BMP (24 bit only) , TIFF , PNG (32 bit or less) , PCX (8 bit and 24 bit RLE) , PCD
Supported System:	Win Xp SP3 \Win 7 \ Win 8 \ Win 10
Engrave Mode:	Bitmap carving
Software Language:	English\German\Japanese\French\Italian\Chinese
Every work time:	unlimited
	NOTE: Do not work long time in the high temperature environment
Laser can replace:	yes
Input Voltage:	5V 2A USB Power Adapter
Laser safety temperature:	25℃ - 55℃
Certificate:	CE,FCC,FDA
Objective engraving material:	"Smooth, Organic, opaque, Non- flame- retardant material For example: Wood, Gray cardboard, bamboo, Leather etc.
Unsuitable engraving material:	" Those material unable to burn &focus" For example: Pure metal(without coating), transparent plastic, White paper(Astigmatic),PP plastic etc. (NOTE: Pure white wood or paper does not focus well on energy due to astigmatism. Poor engraving may result.)

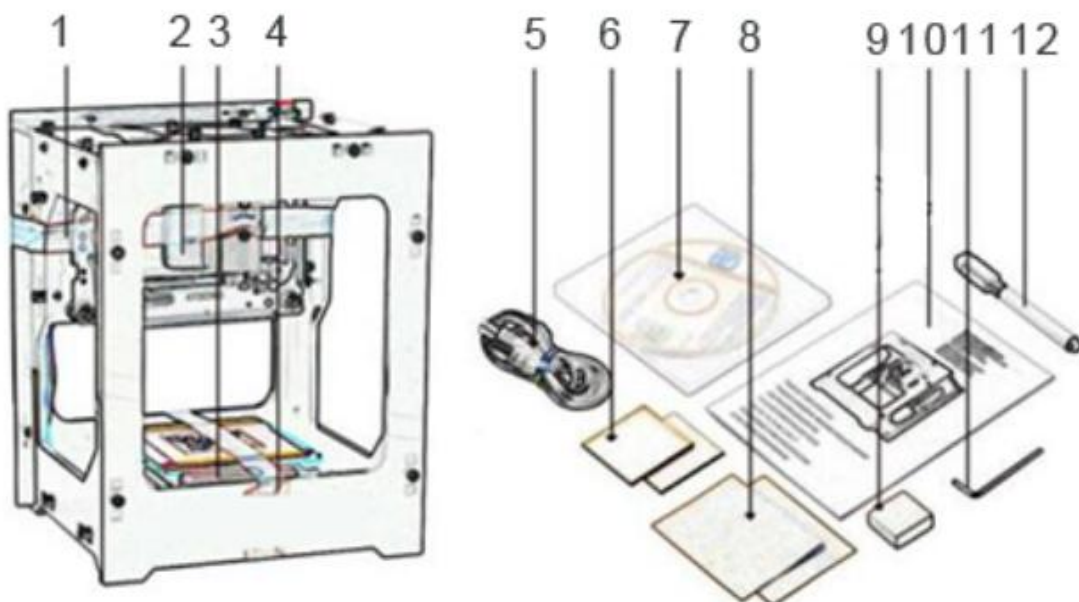
Features

1	Focusing head	Different thickness objects need to adjust the focal length
2	Set Screws	Fix the laser stand on the radiator
3	Signal Light	Red: Power, Blue: data
4	Power	DC 5V2A
5	USB Port	Data
6	Object plate	Carving object weight <300g. Put a silicone pad and fix it with a rubber band
7	Cooling Fan	Cooling down the laser energy(heat)
8	ON/OFF Button	Emergency stop



Packing List

1 - 4	wrapping tape and pearl cotton	Remove all the tape and pearl cotton to start the machine
5	Data Calbe x 1 Power Cable x 1	Power and transmit data
6	Wood slice x 2	Test sample
7	CD x 1	drive, software, etc.
8	gray cardboard x 2	Test sample
9	Wood brick x 1	test sample
10	User manual x 1	Standard Operation instruction
11	L wrench x 1	For de-cap the machine cover to replace Laser head.
12	Whiteboard pen x 1	To black the surface of transparent material before engraving



Unpack \Turn on\Prepare the machine!

Remove the tape and EPE used for packaging and fixing machines, There is a pearl cotton pad below the bottom plate and behind the radiator. Please note

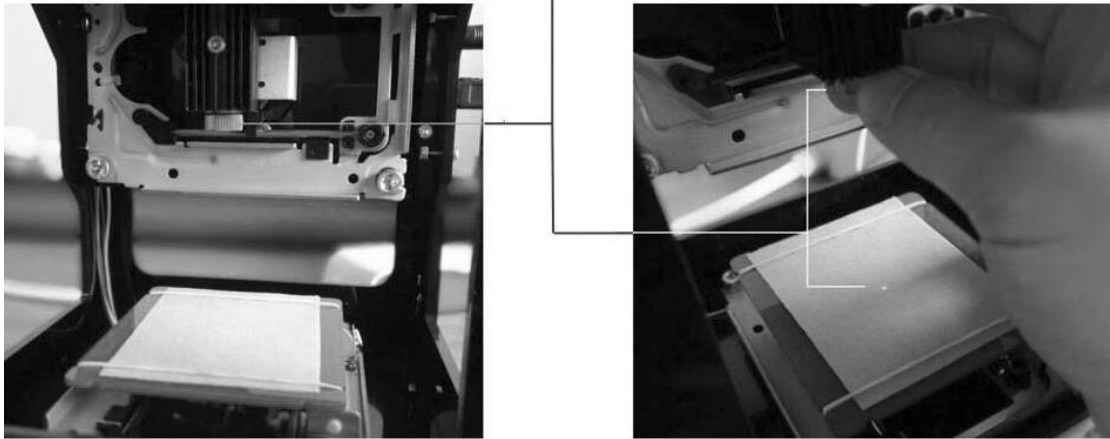
Turn on power switch and top ON/OFF switch, Connect the Power cable to DC5V2A power adapter and Connect data cable to computer., At this point the machine will go into preparation.

We will use the gray cardboard to carve as an example to explain, please follow the instructions to do your operation. If you are working for the first time, you can ignore this step, because factory default settings the focal length of the gray cardboard, there is no need to do any adjustment. If you need to carve the object in different thickness, you need to place the object in the engraving platform and adjust the focus manually, when in the first operation, it is recommended to use a gray cardboard (in the package list) to carve;

The method of adjust the focal length as follow:

1: Fixed the surface of the carved objects at the level of the bearing table, Pick up the focusing mirror (sent in random, just to be used as focus),rotate the focus head manually, shown in figure:

Adjusting the focuses of the lens



2: Observe the light down to the surface in the smallest point of the object ,
when the rotation to the smallest point, indicating that the focal length has
been adjusted, note that the smaller the focus adjustment, the image
engraving effect is more fine, if the focal length is not adjusted, there may be
no image to be carve;

Download Software!

1. Login URL: neje.club/dkz.htm (Note all lowercase)

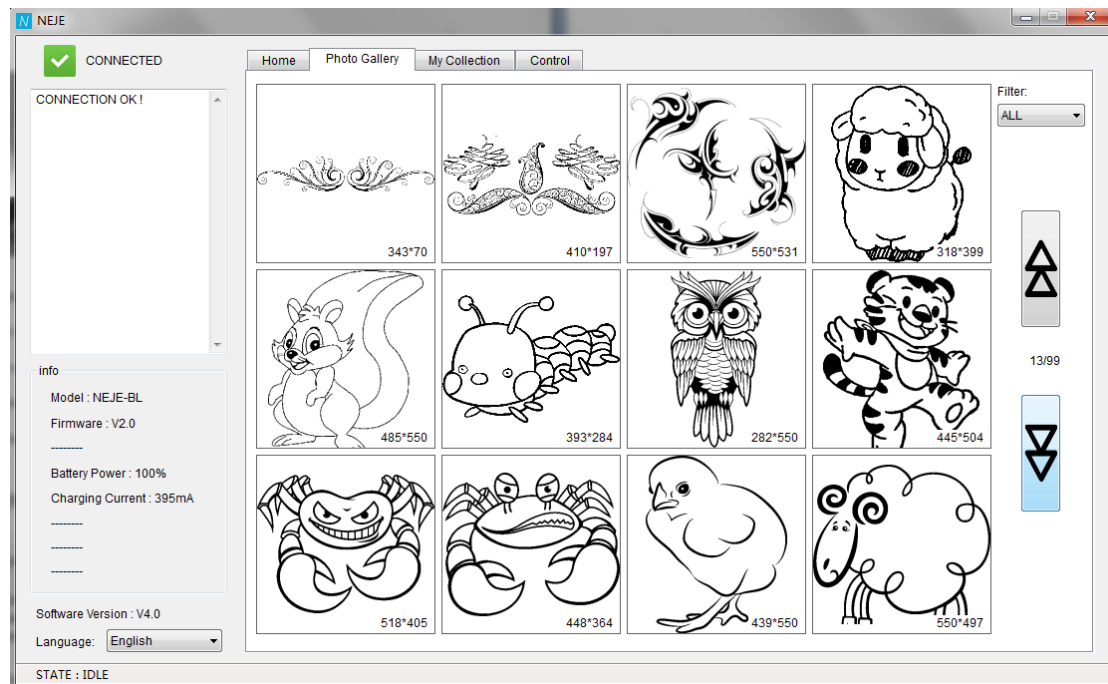
Windows software provides more professional operation, Windows needs to
install drivers, if your computer does not have .net framework4.0 installed, you
still need to install, Please use the computer to login in the above website to
download.

How to use windows software?

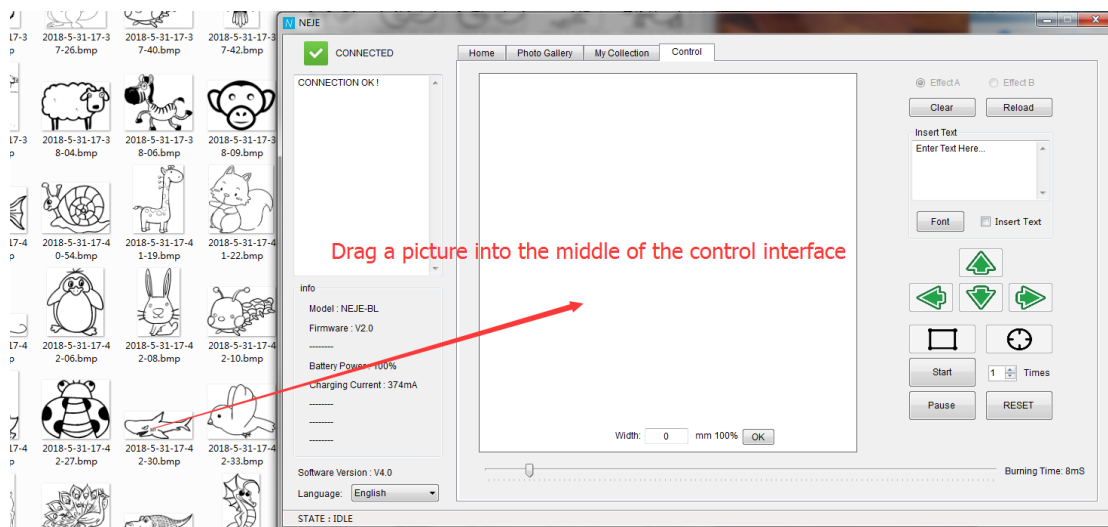
NOTE: Before running the windows software, make sure that the driver is installed and that it supports the Microsoft .net framework4.0 operating environment

1. Select picture or text

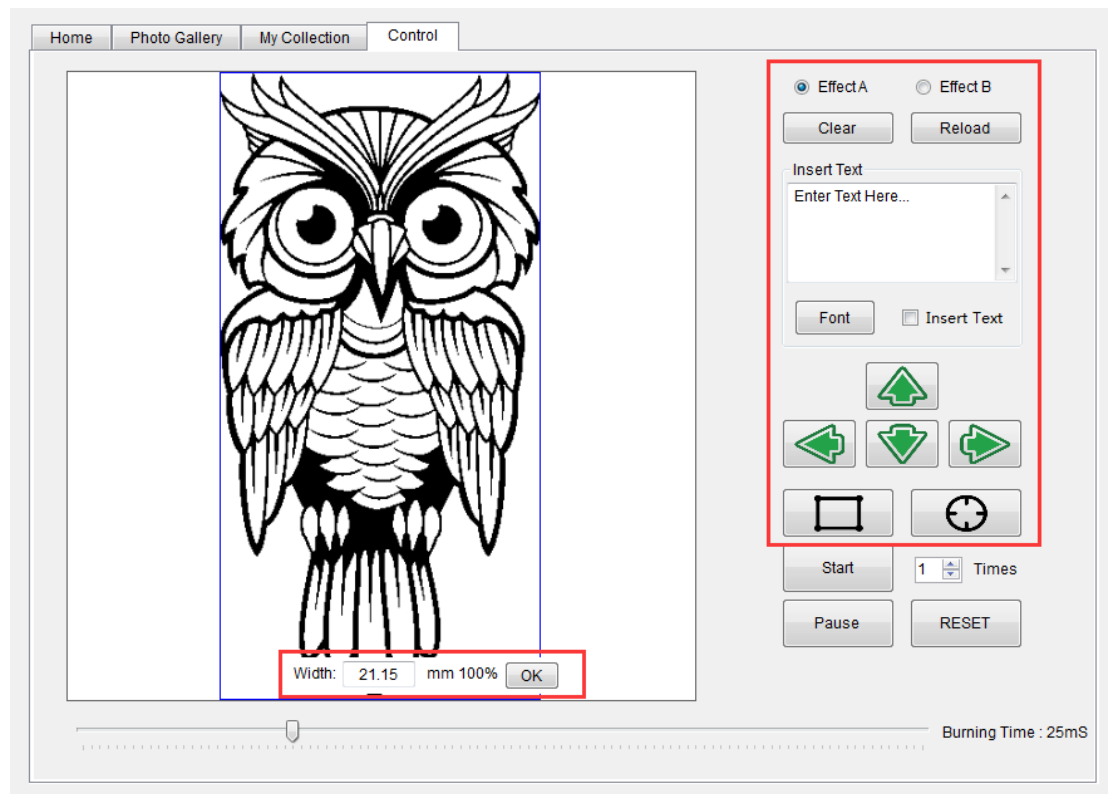
Choose a picture from "Photo Gallery"



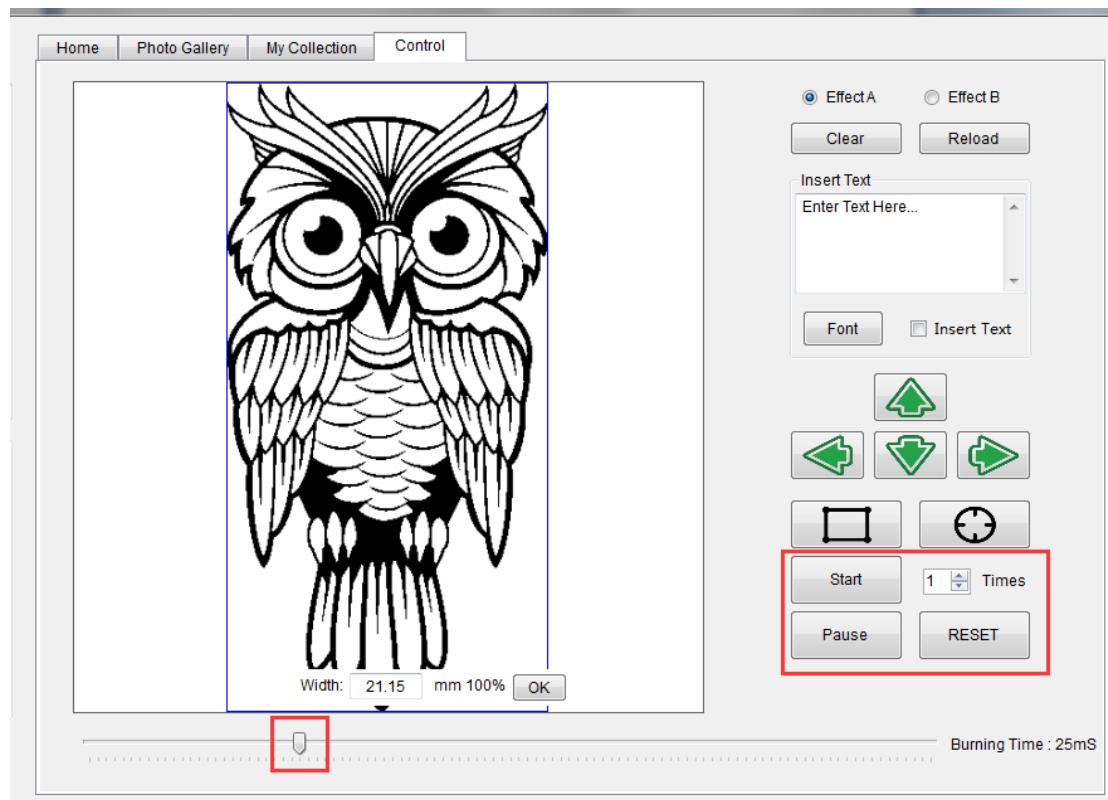
OR Drag a picture into the middle of the control interface.



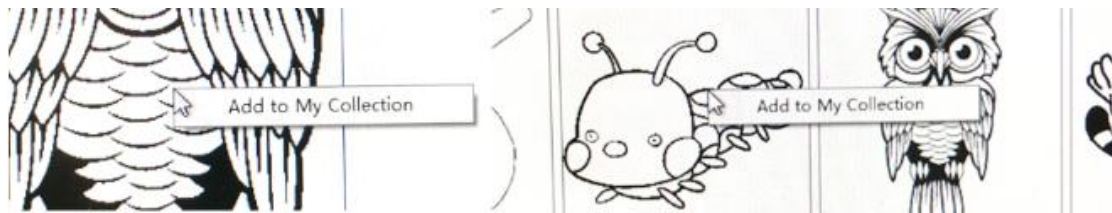
2. Edit image size, insert text, position engraving area



3. Set burning time and control engraving.



When you browse the photo gallery or edit your favorite pictures, you can click the right mouse button to bookmark "My Collection".



Now, Let's start your first work.

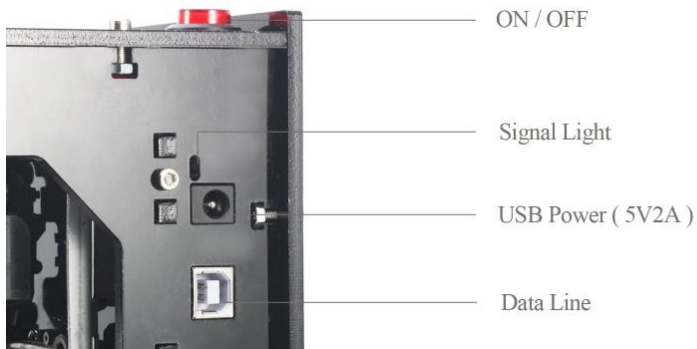
Trouble shooting!

1-- Unable to connect to Software how to deal with this situation? If you cannot connect please follow the steps below to check

a. Whether the machine is get ready ?

1. The top ON/OFF switch is turned on?
2. Is the USB power connect to 5V2A power adapter?

The machine will automatically detect after start up.



b. Whether the usb data line is good contact?

Ensure that the computer usb interface is good, and the data transmission interface is normal. If the contact is poor, the machine may not be able to connect to the computer. If you can not determine the usb line problem, you can find a similar D port printer data line to replace.

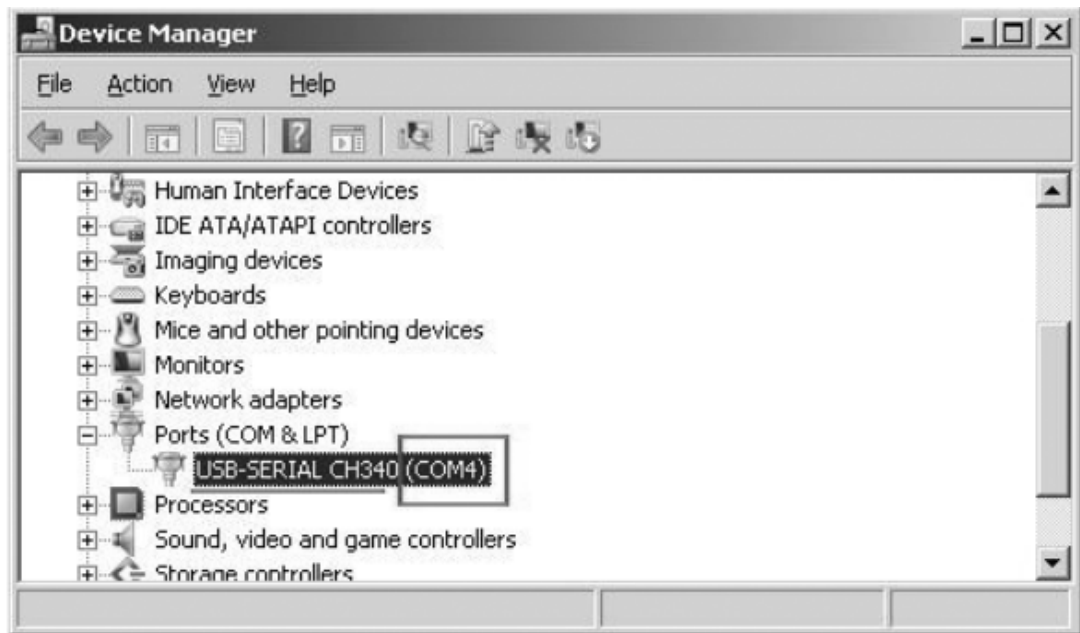
as shown below



c. Is the driver installed ?

Check whether the computer device manager has ch340 port

as shown below



d. Whether to open the software repeatedly ?

If you repeatedly open the software, please close the software and open 1 software.

If all of the above have been tried or cannot be solved, please restart the computer and machine, try again, or contact sales customer service, we will fully serve for you.

2-- The machine works, but it doesn't carved out

Mainly root cause to below few aspects:

A. If the material is suitable for carving. Like the stone, pure metal, transparent, light, adding flame retardant materials of plastics are not suitable for carving. And if material is white, since there is some degree of astigmatism, figure carving effect might not be good either.

B. If the object is placed flat enough. If the surface of the object is uneven, or there're a lot of voids, this material is not suitable for engraving

C. If the object is well fixed. If the object has not been fixed by the rubber band or silica gel pad, it is very easy to make the engraving picture position deviated during engraving.

D. If the focus is well adjusted. The essence of the engraving machine is to focus the image by heat treatment, so you must well focus the laser to produce enough burning power.

E. If ignition timing is set properly. If the ignition time is too fast, it may cause un-complete burning in such a short time.

F. laser tube may burn out. There's life span for the laser tube, if it had been overload used, poor PM or even careless operation may finally lead to laser tubes burned.

3-- Why does the machine keep hitting a straight line?

The chassis is driven by a stepper motor. If the weight of the load is too heavy, the motor will not be able to complete the drive. Please reduce the weight of the engraving object.

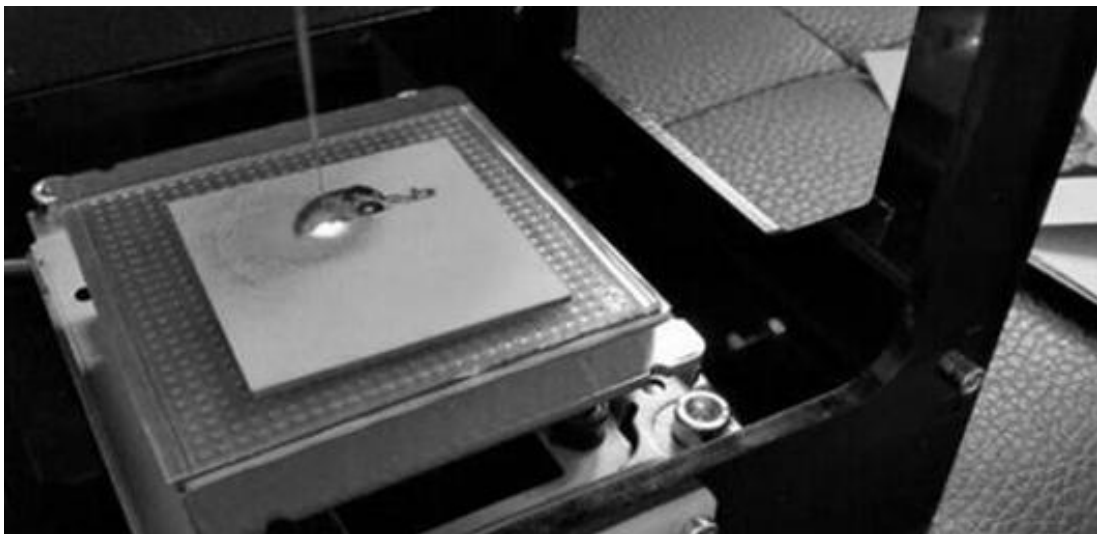
4--The machine driver is broken, what should I do?

The product parts can be found at the official website www.nejetool.com, please make sure you have practical ability to replace it on your own. Or you should go to repair centre.

5--How to fix the engraved objects?

3options

1. Use the rubber band (sent in random);
2. Place the silicone pad on the bottom plate and place the object directly on the silicone pad (recommended) as shown below (the black silicone pad sent in random):



3. The user designs the card slot on his own.

6—How to do when it can not focus on?

There are 4 potential reasons listed as below:

- A. Object has been placed beyond the scope of the machine can focus. Normally, the laser tube focus range is around 5cm diameter on in the bottom plate .
- B. The object is transparent, unable to focus. In this case, you can use the whiteboard pen to turn the object surface to black to support focusing. Then wipe it up after curving.



C. If the material is a little transparent, you can use gray cardboard to cover on the object's surface to support the focus adjustment.

D. Laser tube light attenuation, poor spot may also lead to non focus

7--How many pictures can the machine store?

It can store only one picture that last sent to the machine;

8---How to choose engraving position?

Firstly, place the object to the middle of the bottom board.

The software provides 3 positioning tools:

10-1. any Point positioning,

10-2. Box positioning, can preview the engraving position in advance. Together with the direction key control, the control of any position can be realized.

9---How to set the depth of carving?

The depth of carving is determined by two factors:

1. Whether the focal length is fine;

2. Set the burning time (the longer time, the greater the depth, the slower the time)

11---What to do if the focusing glasses is rickety and loosen?

The lenses are fixed by the spring with which during caving, there'll be enough power to support the stability lenses. And such level of rickety will not influent to the carving quality .And in order to ensure the focusing process can be relatively simple, focusing ring slot has been designed with specific tolerance and margin. If you accidentally drop the lenses, you can re-spring it in.

12--- If you want to have a high quality level of engraving effect?

The effect of engraving is determined by many comprehensive factors:

A. The properties of material itself

B. focal length

C. ignition time

D. If operate conform to the imaging principle: If the object has been placed flat enough, does it affect machine work?

etc.

About laser head

Solid laser head

There's life span for the laser head , and laser type normally are CO2, Multimode high power laser, small solid-state laser, Our DK-BL uses Nichia blue 405nm single-mode laser diode, the official service life is 10000 hours, the normal use in about 3 months -1 years, but it's also closely related to how you use it .(main factors include : The temperature, time intensity, current, voltage, anti static treatment, adverse rate etc.)The laser module quality control technology

Laser module quality control process

The laser modules used by Our DK-BL is the best one that with constant current drive modules, along with a stable cooling system. And every single-mode module has being through 3 hours aging tested. and are well packaged before outgoing. So the machine that every user received had PASS a serial of reliability test. but even so, there may be 0.05% chance that the machine you receive may have the laser durability problem. In this case, please confirm within 3 days, and feed back to the dealer, we can arrange replacement for you for free.

What about the laser head life?

There's service life for all laser products, the laser tube official life is 100,000 hours, but the actual life will depends on actual usage. In general, 3 Month - 1 year, or may be many years.

How to maintain a laser head?

To protect the laser' life, we suggest not use the machine more than 30 Minutes /time.

How to judge the laser head burned?

- 1.When the machine is working, the light was significantly weakened.
- 2.When the machine is working, the light scattered, unable to focus and the light weakened.
- 3.The burning time, Carving material, focal length all ok, but can't burn out the object.

Where to buy a new laser head for the machine?

Buy from the seller or buy from www.nejetool.com at replacements page.

How to replace the laser head?

- Step1: use the L wrench Screw the screws on the back of the machine and open the back of panel.
- Step2: use the L wrench Screw the screws on the radiator. and replace the laser tube.

Why the laser head focusing lens slightly twisted?

In order to ensure that the focusing lens and the optical port directly to the manual and flexible focus, and not designed very tight, but the middle of the support spring enough to support the focus lens in the course of the movement does not appear any shaking.

Caution

1.Our machine certified to CE\FCC \FDA certification, the radiation values far below the EU and the United States standards, You may rest assured to use



2.Our machine laser energy is not that huge enough to damage you if hand or other part of body stay in the curving scope accidentally during curving, but, you'd better be careful since it's abnormal operation of machine. We can't assure it's no harm definitely.

3.Do not take out the laser head, and exposure to body!



4.Do not use in where the children can touch!

5.Keep away from flammable and explosive materials!

6.There's an emergency pause button designed on the top of machine that can be used in an emergency!

Maintenance

- To ensure that the motor drive clean.
- If you don't use it for a long time, wrap it up as best as possible and avoid dust affecting machine performance.
- Put it in a safe place to avoid dropping.
- ESD-proof for the machine to prevent ESD destroy the laser.
- Can add appropriate amount of butter lubrication screw. If not used for a long time.



Engraving machine is a kind of electrical product, should be operated in a standard and safe manner to prevent safety issue occur.

For your safety concern, Please read this User Manual carefully before operating. And always keep this Manual ready.

You can also login in to www.nejetool.com via your computer or Scan below code via phone to get more products and service.

Manufacturer: Shenzhen Zhi Xin Jie Technology Co., Ltd | Tel:86-186 0302 1351 | QQ: 867819731 | CE / FDA