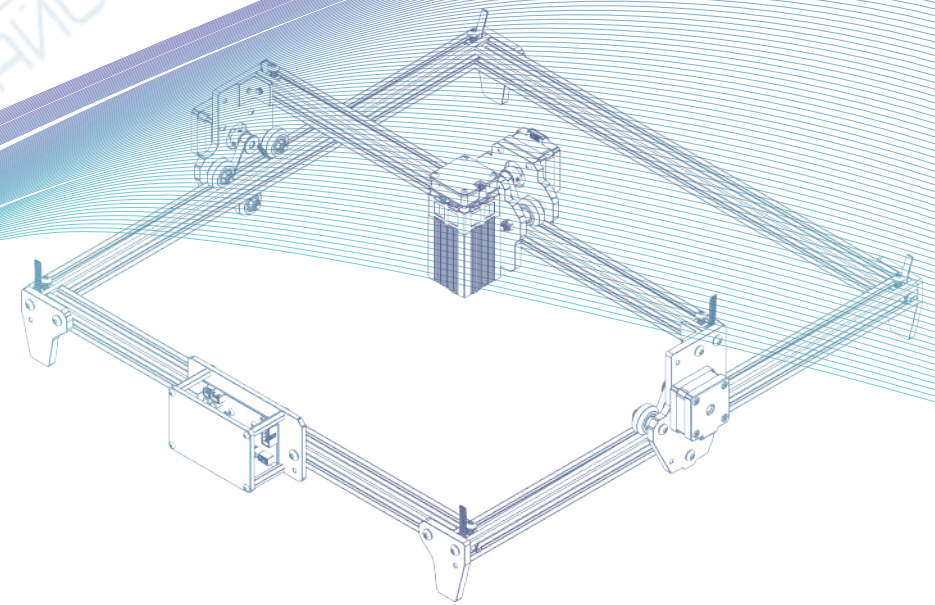


PRODUCT MANUAL

BURN DOWN ETERNITY

Laser Engraver



TEL: +0086-0755-23987110

Http: www.twotrees3d.com

E-mail: service@twotrees3d.com

Facebook: <https://www.facebook.com/twotrees3d>

Address: Room 402, Building 11, No.9 Qilin Road, Nankeng Community,
Bantian Street, Longgang District, Shenzhen, Guangdong, China, 518000

Note: The picture is for reference only, the actual product shall prevail



LETTER FROM TWOTREES 致客户的一封信

Dear Customers,

Thank you for choosing us.

It's customer-oriented idea, continuous innovation and pursuit of excellence that enable everybody to have wonderful experience in using process.

We believe that this manual will be helpful.

Hope you enjoy the good time with TwoTrees.

If you have any problems, please feel free to contact us via:

Website: www.twotrees3d.com

Facebook: <https://www.facebook.com/groups/twotrees3Dprinter/>

For general inquiry: info@twotrees3d.com For technical support: service@twotrees3d.com

We will contact you within 24 hours.

Sincerely yours,

TwoTrees Team

亲爱的客户：

感谢您选择了我们品牌。

我们一直以客户为导向，不断创新，追求卓越，使每个人都能在使用过程中拥有丰富的体验。

希望您能享受与俩棵树相伴的好时光。

如果您有任何问题，请随时与我们各购买平台的客服联系。

其他联系渠道有：

网站: www.twotrees3d.com

售后邮箱: service@twotrees3d.com

咨询邮箱: info@twotrees3d.com

我们将在24小时内联系上您。

祝您生活愉快！

俩棵树团队

PRECAUTIONS 注意事项

Please follow the instruction, due to misuse will be at your own risk.
请按照说明进行操作, 滥用风险自负。

1. Avoid looking steadily at the laser, which may damage your eyes.
避免长时间直视激光, 可能导致视力受损。
2. Avoid touching directly during the machine working.
避免在运作时用肢体接触机器。
3. You can place a metal plate under the engraved or cut object to prevent your table being burned through.
雕刻前你可以找一块金属平板放在雕刻或切割的物体下方, 防止桌面受损。
4. Avoid combustible object or gas.
避免可燃物体或气体。
5. Keep it away from children or pregnant women.
远离儿童或孕妇。
6. Do Not take apart the laser without instructions.
请勿擅自拆解激光器。
7. Do Not use it on material that reflects the light.
请勿在会反射光的材料上使用。
8. Wear goggles while taking off the laser cover.
使用时如取下激光罩需戴上护目镜。
9. Turn off the power when not use.
不使用时请关闭电源。

SAFETY GUIDELINES 安全指导

Warning: Laser engraving machine cannot directly carve or cut material that reflects the light; may cause injury.

警告: 激光雕刻机不能直接作用于镜面物体, 这可能会对操作员造成伤害或激光灼伤。

The product has a high engraving speed and is not recommended for industrial cutting. And the laser head is a consumable.

该产品雕刻速度快, 不建议用于工业加工。而且激光头是消耗品。

Do not operate the laser head directly with your hands. Please wear goggles.

在机器上工作时, 不建议直接看激光头。请勿直接用手操作激光头。

The laser diode is a sensitive component, please prevent static damage. (This product has an electrostatic protection design, but there is still a possibility of damage).

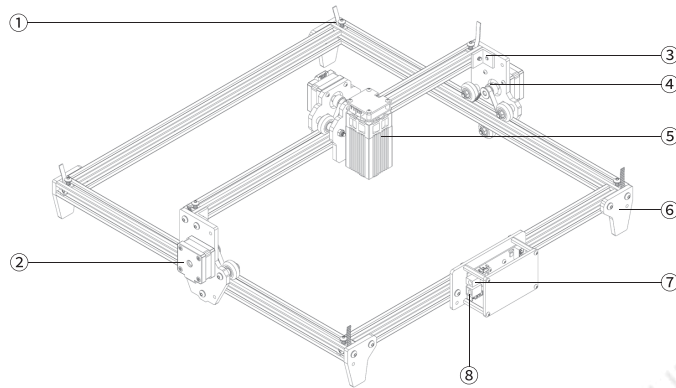
激光二极管是一个敏感组件, 请注意避免静电损坏 (本产品有静电保护设计, 但有损坏的可能)

CONTENTS 目录

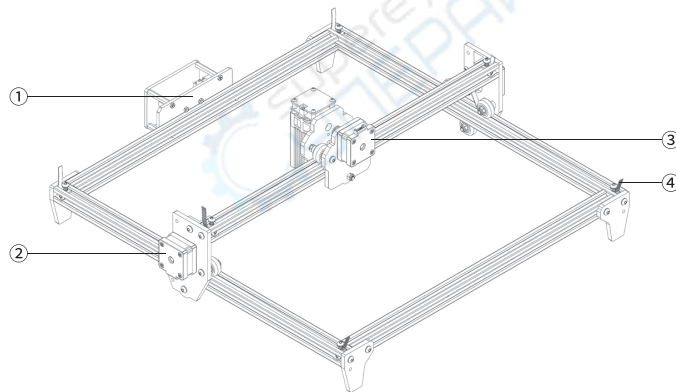
About your machine 关于机器	01
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ABOUT YOUR MACHINE 关于机器

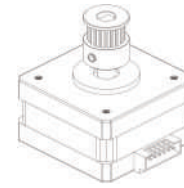
1. Belt hold-down plate 皮带压板
2. Y1 Motor Y1电机
3. Right-angle bracket 直角支架
4. Synchronous wheel 同步轮
5. Laser module 激光模组
6. Foot pad 垫脚
7. Power interface 电源接口
8. USB-PC interface USB-PC 接口



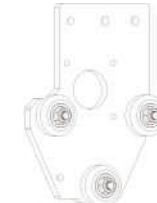
1. Motherboard unit 主板组件
2. Y2 Motor Y2电机
3. X-axis motor X轴电机
4. Synchronous belt 同步带



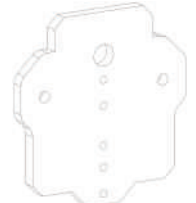
PART LIST 配件表



Motor X3
电机



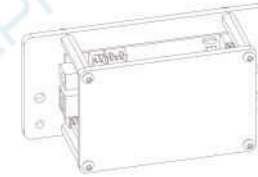
Y1 block (left) X1
Y1滑车(左)



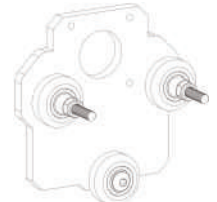
Mounting plate of laser X1
激光器安装板



Y2 block (right) X1
Y2滑车(右)



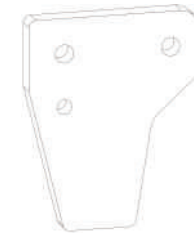
Motherboard unit X1
主板部件



X-axis block X1
X轴滑车



Laser module X1
激光模组



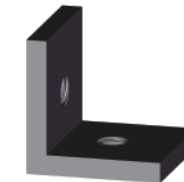
Foot pad X4
垫脚



450mm profile X2
型材



495mm profile X3
型材



Right-angle bracket X2
直角支架



M5*8 Screw and Belt
hold-down plate X6
M5*8螺丝与皮带压板

MAIN PARAMETERS 机器参数

Model 型号	TT
Machine Size 机器尺寸	550*540*180 mm
Machine Weight 机器重量	2.4 kg
Engraving Size 雕刻范围	380*380 mm
Laser Wavelength 激光波长	445±5 nm
Engraving Method 雕刻方式	USB Connect PC USB联机
Engraving Accuracy 雕刻精度	0.1 mm
Engraving Speed 雕刻速度	8000mm / min
Software Support System 软件支持系统	Mac, Windows
Material 机器材质	Aluminum Profile + Plastic Parts 铝型材+塑料件
Electrical Requirement 电源	12V 4A DC
Motherboard 控制板	LKS Motherboarded主板 (8bit)
Laser Power 激光功率	DB-5500/DB-2500mW (Optional可选)
File Format 软件识别文件格式	NC,BMP,JPG,PNG,GCODE,ETC
Supported Software 支持软件	LaserGRBL (Windows系统), Lightburn (Common通用)
Power Type 电源类型	USA / EU Plug 国标 / 欧标 / 美标 (Optional可选)
Software Support Languages 软件支持语言	Chinese, English, Italian, French, German 中文、英文、意大利语、法文、德语
Working Environment 工作环境	RHTemperature 5-40°C, Humidity 20-60%RH 温度5-40℃，湿度20-60%
Engraving Materials 雕刻材质	Wood, Plastic, Paper, Leather, Sponge Paper, Alumina 木板、塑料、纸质、皮革、海绵纸、氧化铝
Engraving Mode 雕刻模式	Image carving / Text carving / Scanning carving / Contour carving / Pixel carving 图形雕刻、文件雕刻、扫描雕刻、轮廓雕刻、像素雕刻



M5*20 X12



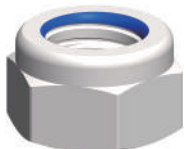
M5*12 X8



M3*10 X14



Synchronous belt X3
同步带



Self-locking nut X2
自锁螺母



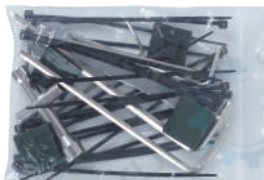
USB Cable X1
USB数据线



Wires X1
线材



Laser Goggles X1
激光护目镜



Tool bag X1
工具包



Power Supply X1
电源

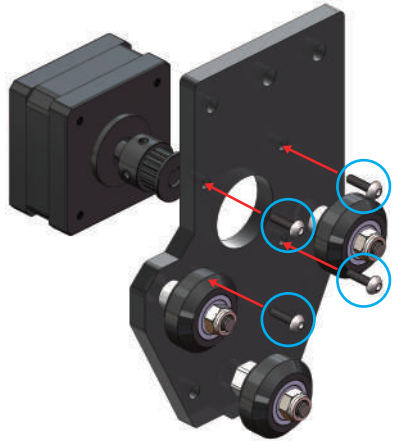
ASSEMBLY 机器组装

1. Install the motor of the left block 组装左侧滑车的电机

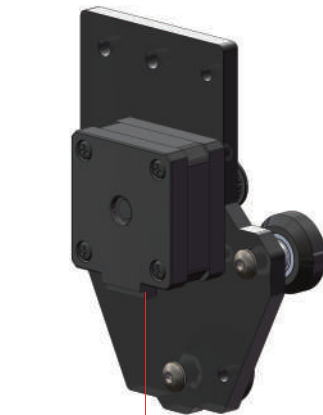
Y1 Block (left) 滑车(左) x1Pcs

Motor 电机 x1Pcs

M3*10 screw 螺丝 x4Pcs



After assembly 组装后效果



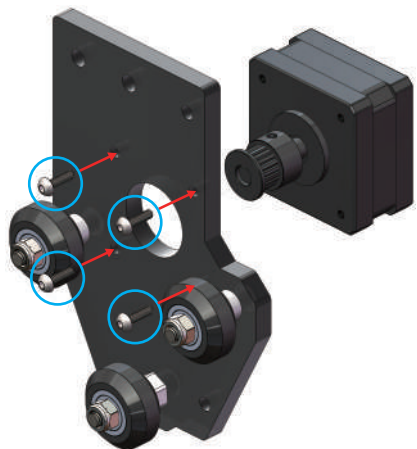
Note: The position of the motor port
注意：安装后电机的接口在图中所示的位置

2. Install the motor of the right block 组装右侧滑车的电机

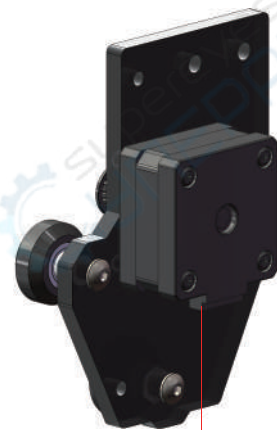
Y2 Block (right) 滑车(右) x1Pcs

Motor 电机 x1Pcs

M3*10 Screw 螺丝 x4Pcs



After assembly 组装后效果



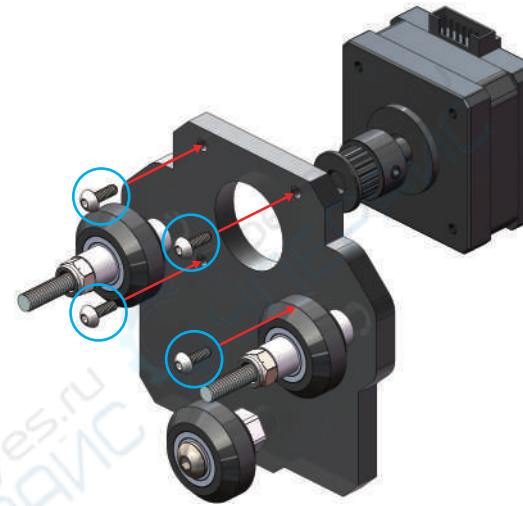
Note: The position of the motor port
注意：安装后电机的接口在图中所示的位置

3. Install the motor of X-axis block 组装X轴滑车的电机

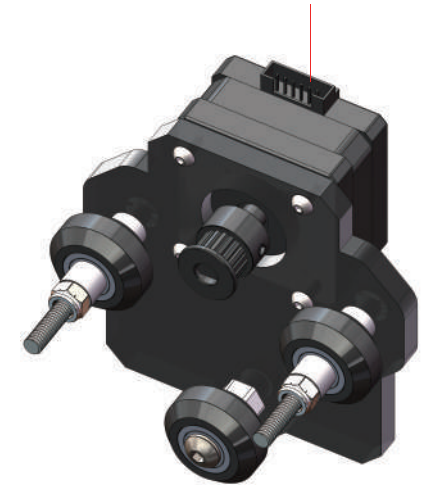
X-axis block X轴滑车 x1Pcs

Motor 电机 x1Pcs

M3*10 Screw 螺丝 x4Pcs



Note: The position of the motor port
注意：安装后电机的接口在图中所示的位置



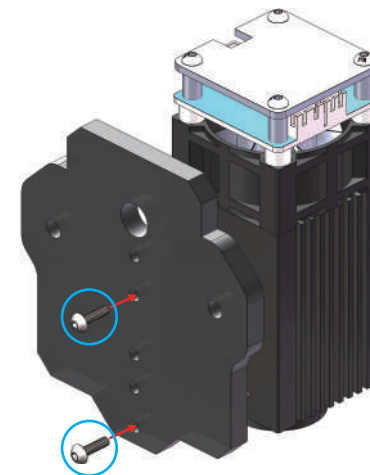
After assembly 组装后效果

4. Install the laser module 组装激光模组

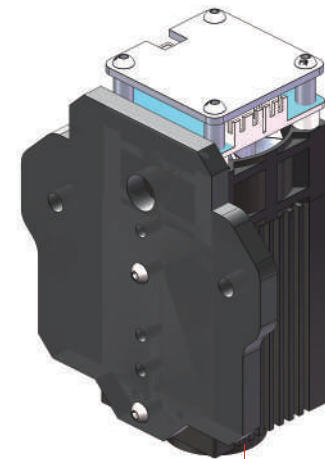
Laser module 激光模组 x1Pcs

Mounting plate of laser 激光器安装板 x1Pcs

M3*10 screw 螺丝 x2Pcs



Pay attention to the mounting holes
注意安装孔位



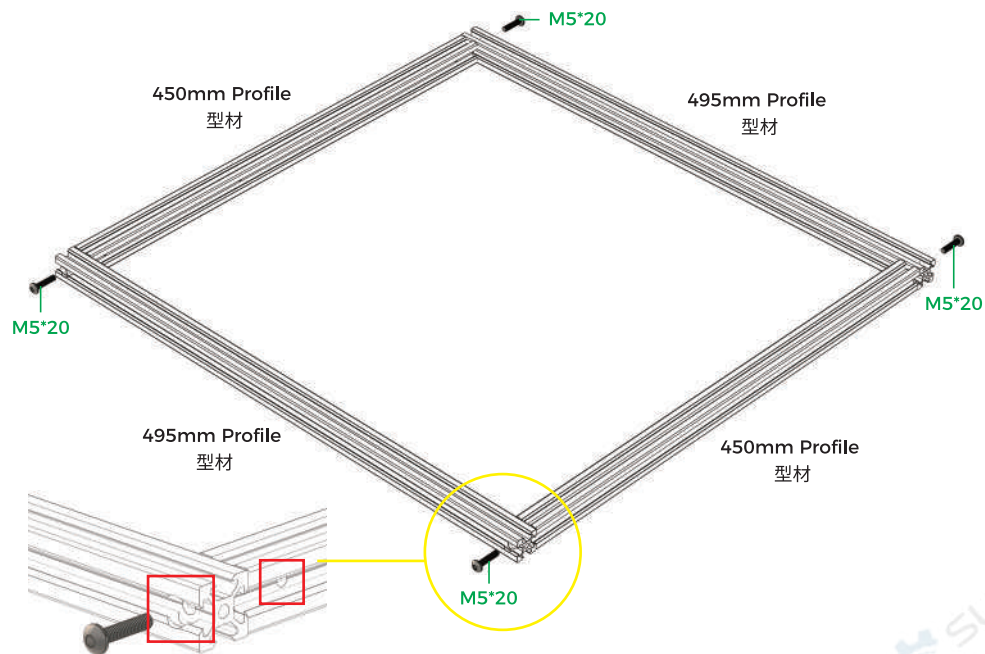
Note: The position of the knob of the laser module
注意：安装后激光模组的旋钮在图中所示的位置

5. Install the frames 组装框架

450mm Profile 型材 x2Pcs

495mm Profile 型材 x2Pcs

M5*20 Screw 螺丝 x4Pcs



Profile threaded hole facing outward, Pay attention to the mounting holes.
型材螺纹孔朝外, 注意安装孔位

6. Install the foot pad 组装垫脚

Foot pad 垫脚 x4 Pcs

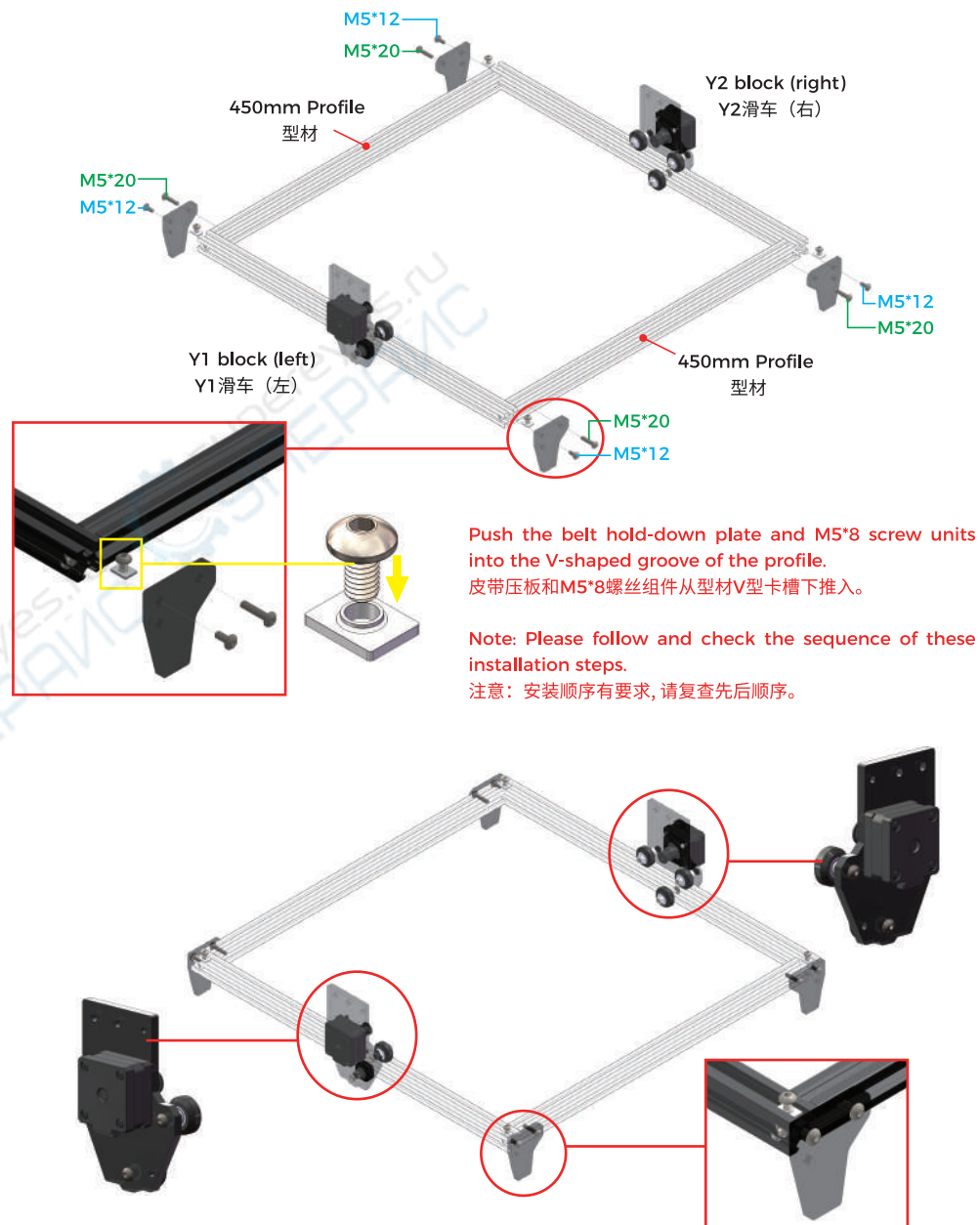
M5*12 Screw 螺丝 x4 Pcs

M5*20 Screw 螺丝 x4 Pcs

M5*8 Screw and Belt hold-down plate M5*8 螺丝与皮带压板 x4 Pcs

1. Install Y1 block and Y2 block into the profile groove according to the direction shown in the figure. After installation, the motor faces outside;
2. Push the hold-down plate and M5*8 screw under the V-shaped groove of the profile.
3. Tighten the foot pads on the profile frames by screws.

1. 按照图中所示方向, 将Y1滑车和Y2滑车安装进型材槽中, 安装完后电机位于外侧;
2. 皮带压板和M5*8螺丝组件从型材V型卡槽下推入。
3. 通过螺丝将垫脚锁紧在型材框架上。



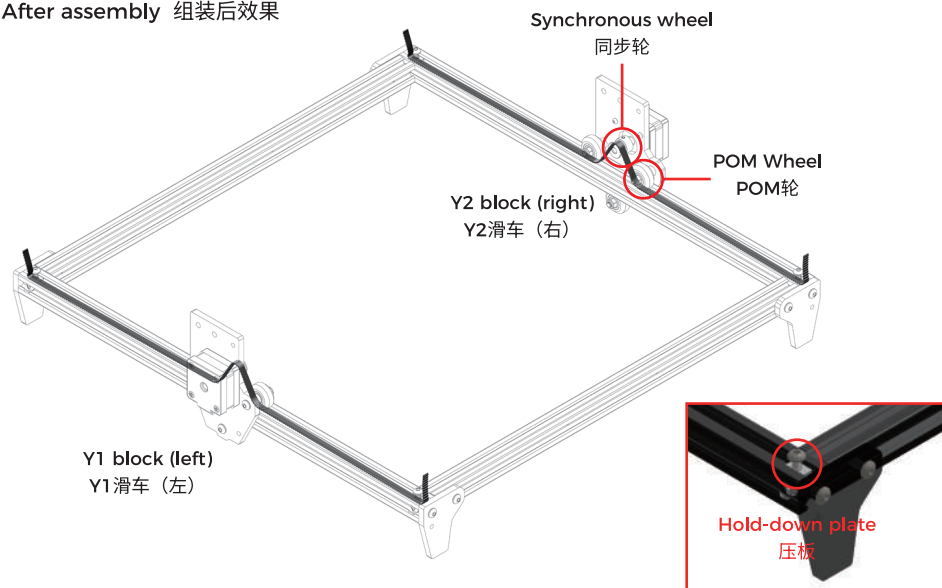
After assembly 组装后效果

Note: Y1 motor and Y2 motor should be installed to face outside. If it is difficult to push the components in, please refer to the operation steps on page 16 to adjust the eccentric nut.
注意: Y1电机与Y2电机安装方向要正确, 电机处于外面。出现组件推入困难或移动可以查看16页操作步骤调节偏心螺母。

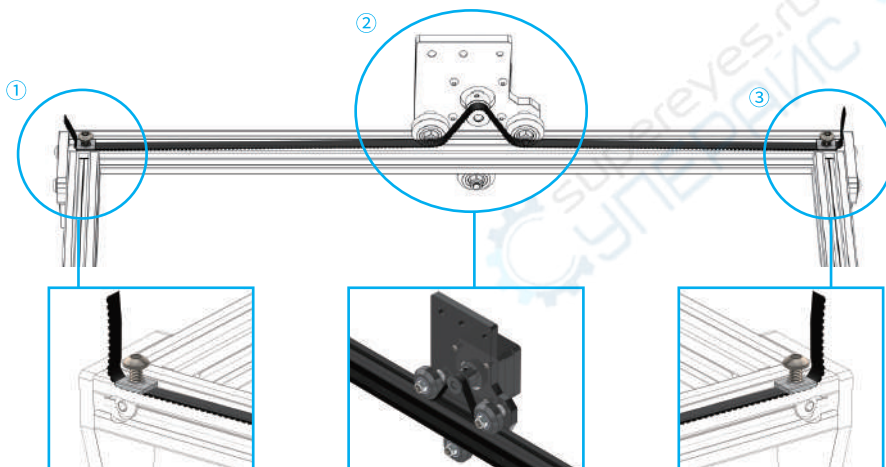
7. Install the Y-axis synchronous belts 组装Y轴同步带

Synchronous belt 同步带 x 2Pcs

After assembly 组装后效果



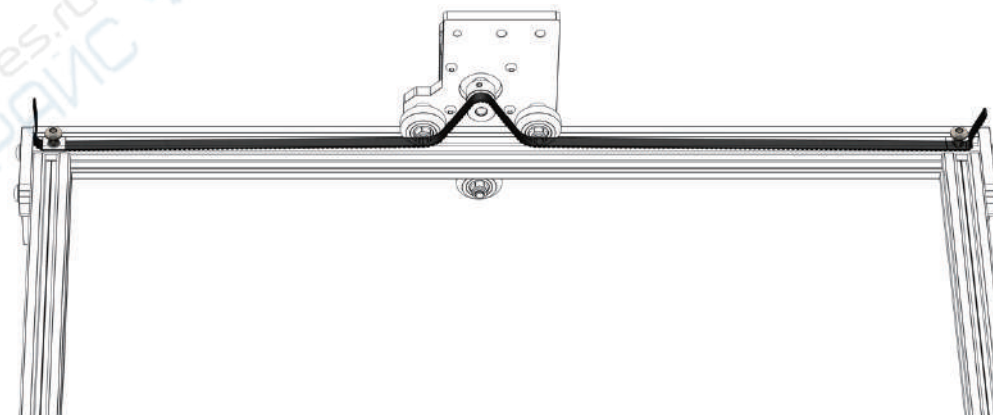
- ① Pass the synchronous belt through the hold-down plate at the end of the profile. By tightening the screws on the hold-down plate to fix the synchronous belt. Note: The tooth of the synchronous belt faces the profile.
同步带齿型面向型材。将同步带从型材末端的压板下方穿出。通过拧紧压板上的螺丝压紧同步带，将同步带固定好。



The assembly of synchronous belt of Y2 right block
Y2滑车 (右) 同步带安装示意图

- ② Pass through the first POM wheel and over the synchronous wheel, the teeth of the synchronous belt mesh with the synchronous wheel, and then pass through the other POM wheel.
 - ③ Pull and pass the belt through another hold-down plate. Tighten and fix the belt at the other end of the profile by tightening the screw .
 - ④ Push the block to check whether it can slide smoothly on the profile.
- ② 从第一个 POM 轮下方穿出，绕过同步轮上方并与同步轮的齿啮合，最后再从另一个 POM 轮子下方穿出。
③ 将同步带拉至另一边的压板下穿出，拉紧同步带，通过拧紧螺丝将同步带固定好。
④ 推动滑车，检测是否正常在型材上能顺畅滑动。

Note: the installation steps of synchronous belts on both sides are the same.
注：两边的同步带安装步骤是一样的



The assembly of synchronous belt of Y1 left block
Y1滑车 (左) 同步带安装示意图

8. Install the X-axis 组装X轴

Profile 型材495mm x1Pcs

X-axis block X轴滑车 x1Pcs

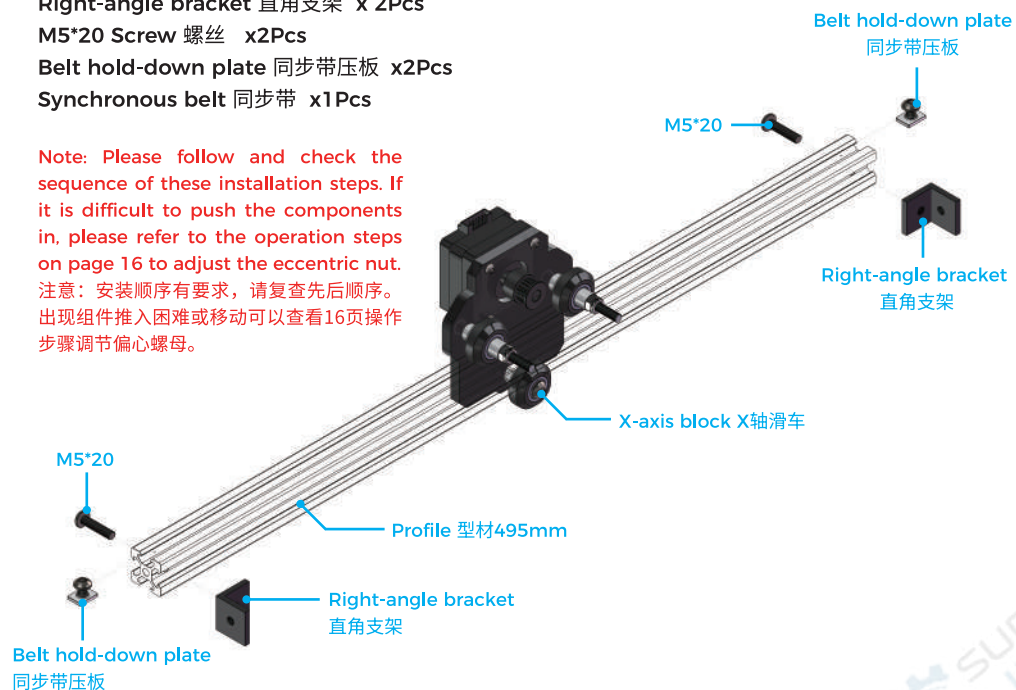
Right-angle bracket 直角支架 x 2Pcs

M5*20 Screw 螺丝 x2Pcs

Belt hold-down plate 同步带压板 x2Pcs

Synchronous belt 同步带 x1Pcs

Note: Please follow and check the sequence of these installation steps. If it is difficult to push the components in, please refer to the operation steps on page 16 to adjust the eccentric nut.
注意：安装顺序有要求，请复查先后顺序。出现组件推入困难或移动可以查看16页操作步骤调节偏心螺母。



Install the X-axis synchronous belts 组装X轴同步带

Shown as picture 同步带安装如图中所示

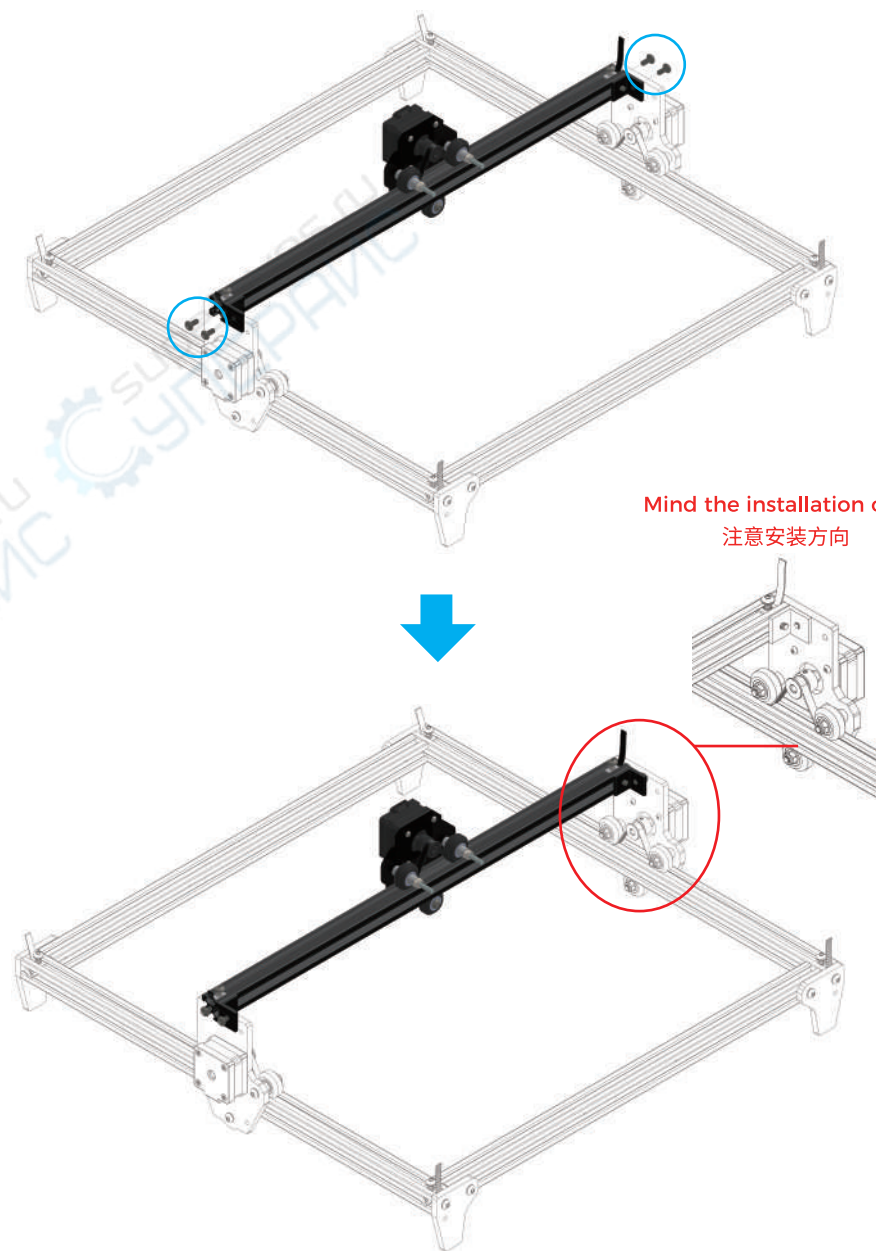


After assembly 组装后效果

Pay attention to the mounting holes
注意安装孔位

9. Install the X-axis unit 组装X轴组件

M5*12 Screw 螺丝 x 4Pcs



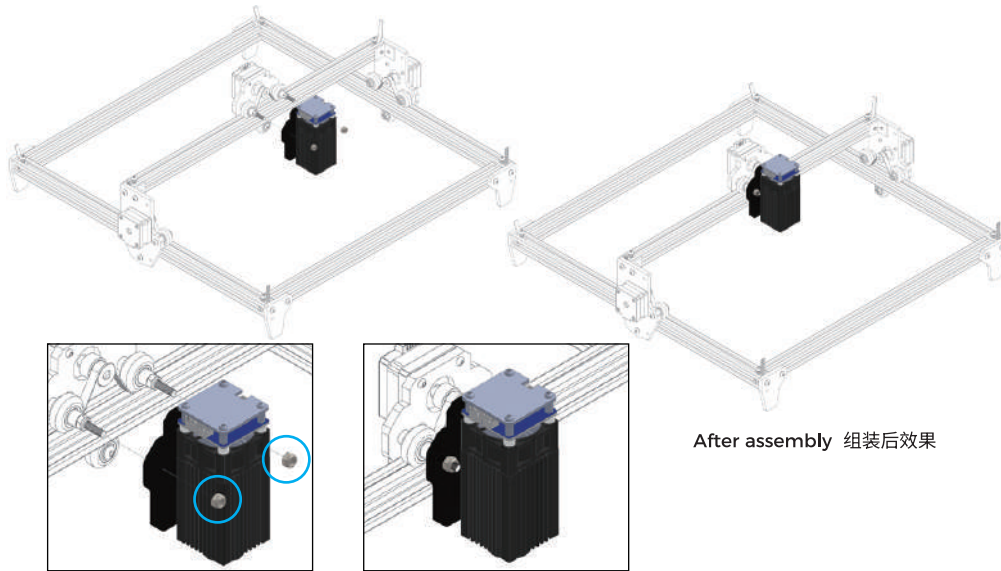
Mind the installation order
注意安装方向

After assembly 组装后效果

10. Install the laser module 组装激光模组

Laser module 激光模组 x1Pcs

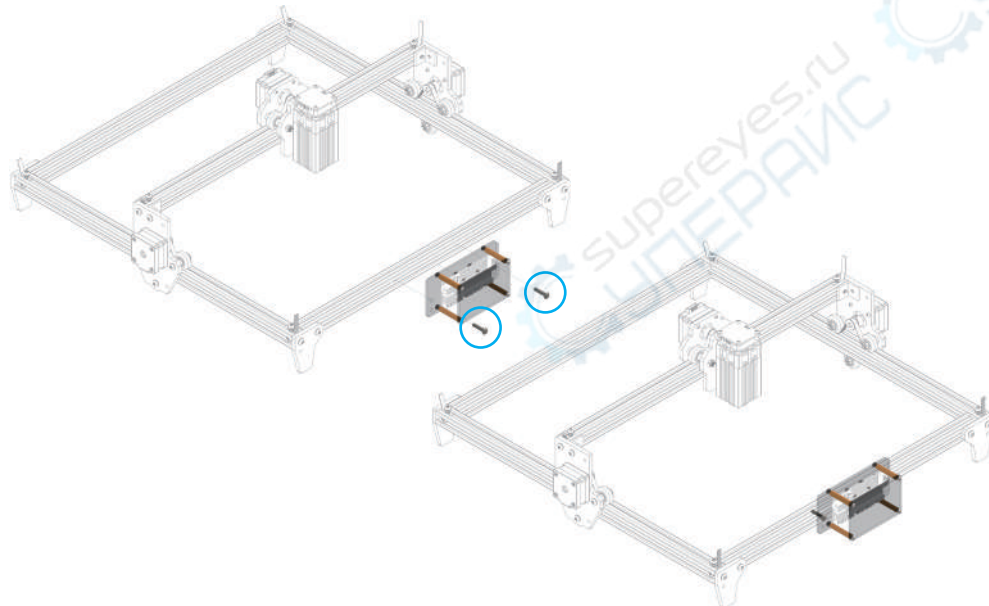
Self-locking nut 自锁螺母 x2Pcs



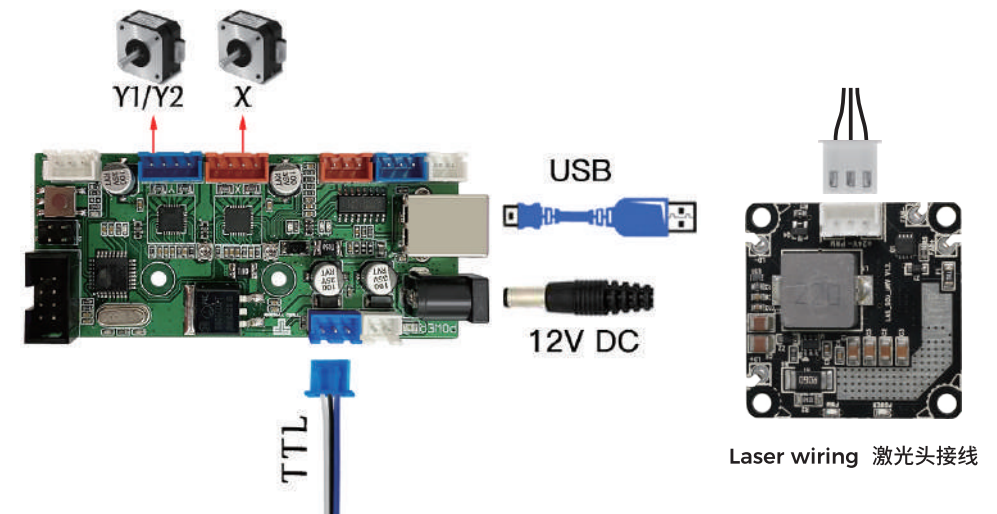
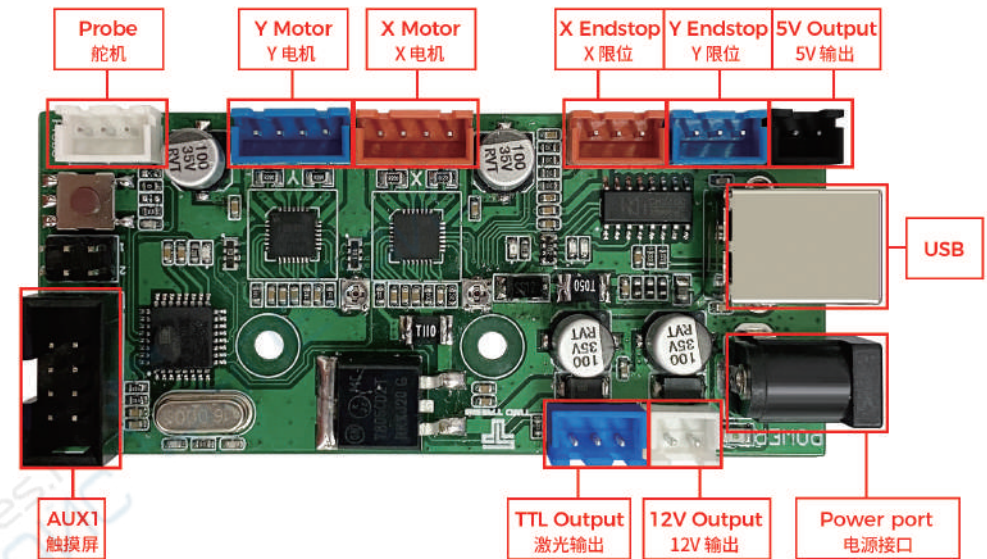
11. Install the motherboard unit 组装主板部件

Motherboard unit 主板部件 x1Pcs

M5*20 Screw 螺丝 x2Pcs

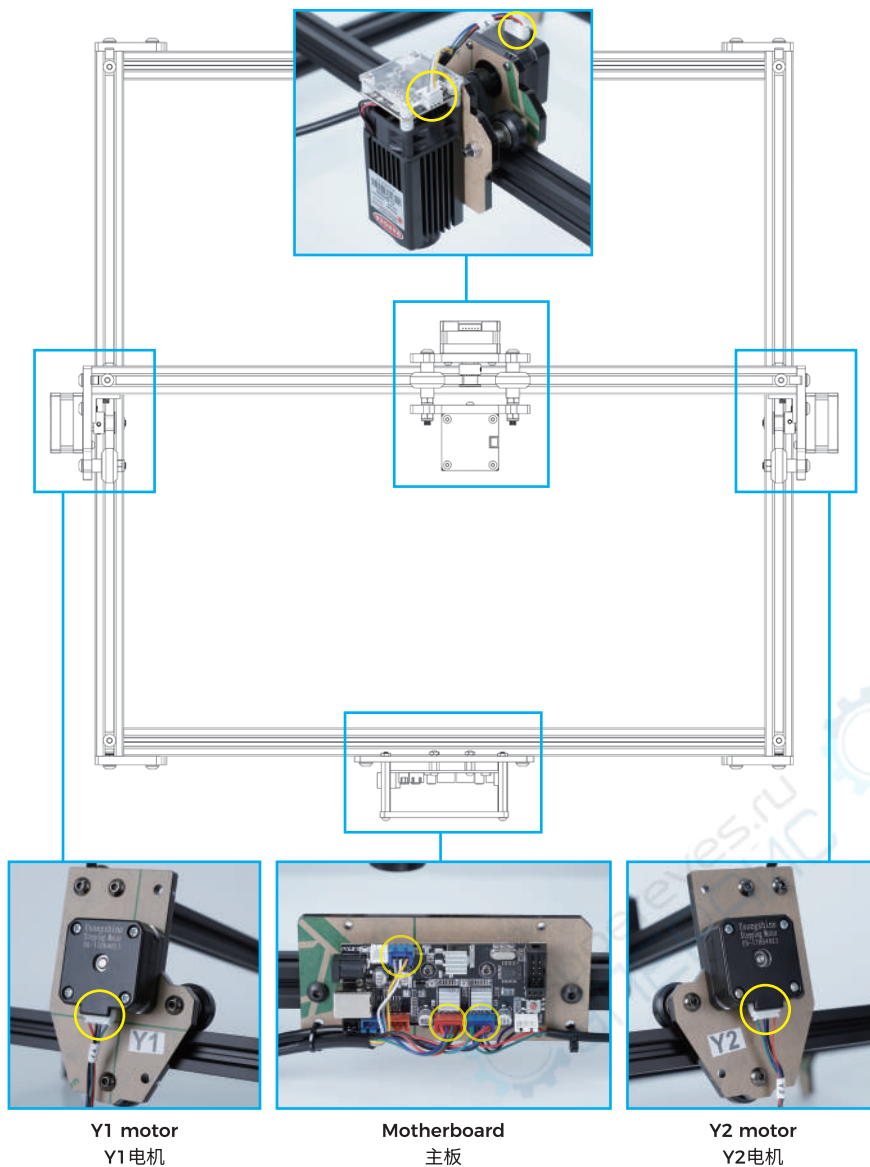


WIRING DESCRIPTION 接线说明



Note: The picture is for reference only, the actual product shall prevail
注：图片仅供参考，以实物为准

Laser module and X-axis motor
激光模组与X轴电机



When wiring the mainboard, you can choose to remove the front bezel of the mainboard for wiring.
主板接线时,可选择拆下主板前挡板进行接线。

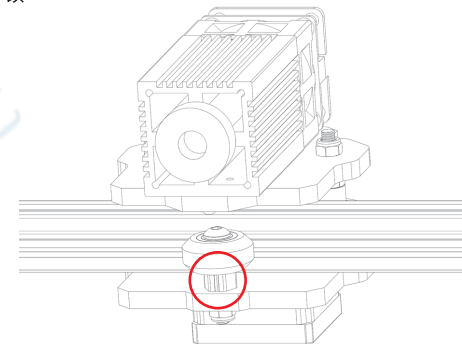
ADJUSTMENT 机器调整

1. Check that the POM wheel of the X-axis fits the profiles, ensuring smooth movement without jamming.

检查X轴滑车Pom轮贴合型材,移动顺畅没有卡顿

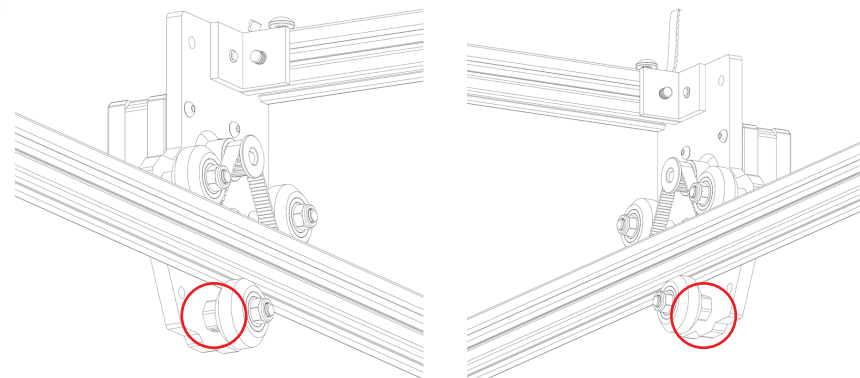


Adjustment with an open-end wrench
使用开口扳手进行调整



2. Check that the POM wheels of the Y1Y2 block fit the profiles, ensuring smooth movement without jamming.

检查Y1Y2滑车Pom轮贴合型材,移动顺畅没有卡顿



- Note: ① It is the most appropriate position to feel a little friction between the POM wheel and the profile when rotating the POM wheel.
② If the wheel is hovering and rotating, it does not fit the profile the eccentric nut can be adjusted clockwise from the screw head with a wrench
③ When the pulley is difficult to push into the profile, use an open-end wrench to adjust the eccentric nut. Do not push blindly, it will cause wheel damage.

注: ①转动Pom轮,感受到Pom轮与型材之间有一点点摩擦力时为最佳。

②如果出现轮子悬空转动没有贴合型材 可以从螺丝头方向顺时针用扳手调节偏心螺母。

③滑车推入型材困难时,请使用开口扳手调整偏心螺母,切勿盲目推入会导致轮子损坏。

ADJUSTMENT 机器调整



Focus adjustment before engraving:

Before engraving, it is necessary to adjust the focus. The focus is on the surface of the engraved object, and the distance between the laser module and the engraved object is from 25 to 75.

Adjustment method:

The software controls the emission of the laser. Rotate the knob at the bottom of the laser module to adjust the focus.

雕刻前焦点调整:

进行雕刻前, 需要进行焦点调整, 焦点是需要在被雕刻物体表面, 激光模组与被雕刻物体保证在 $25 \leq \text{焦点} \leq 75$ 的距离

调整方式:

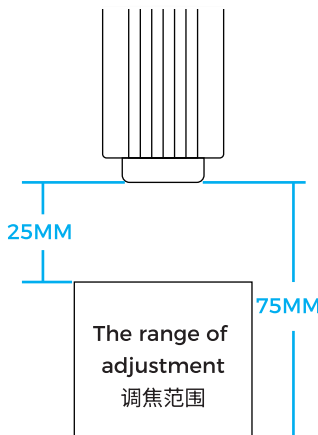
软件控制激光模组出光, 旋转激光模组底部的旋钮调整焦点。

Note:

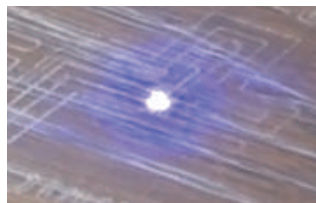
1. Be careful of high temperature and wear goggles.
2. The knob of the laser module shall not be loose.
3. Ensure that it is within the focusing range.

注意:

1. 小心高温, 佩戴好护目镜
2. 激光模组旋钮不可松动
3. 保证在可调焦的范围内



Laser focus error/激光聚焦错误



Laser focus is correct/激光聚焦正确

By adjusting the knob, you can observe light spot changes from large to small, and become brighter and brighter.

Focus error (picture above): unclear and rough line score.

The focus is correct (picture below): the score of the engraving line is fine.

调节激光器旋钮, 可以观察到光斑从大到小的变化, 光点也会越来越亮
聚焦错误(上图), 雕刻不清晰线条刻痕较粗
聚焦正确(下图), 正常雕刻线条刻痕较细



After the board score is enlarged
木板刻痕放大效果

GRBL INTRODUCTION 入门使用教程

1. Software Downloading

LaserGRBL is one of the most popular DIY laser engraving software, which can be downloaded in LaserGRBL website <http://lasergrbl.com/download/> (The installation package is also available on the TF card from the manufacturer or USB flash disk).

Brief introduction:

LaserGRBL is easy to use. However, LaserGRBL only supports Windows system (Win XP/Win 7 / Win 8 / XP/Win 10).

For Mac users, you can also choose LightBurn, which is also an impressive engraving software, but it's not free. And this software also supports Windows system.

Note: The engraving machine needs to be connected with the computer during engraving, and the software of the engraving machine cannot be turned off.

2. Software Installation

Double click the software installation package to start the software installation and click "Next" until the installation is complete.

1. 软件下载

LaserGRBL是最流行的DIY激光雕刻软件之一, 可以在LaserGRBL网站:<http://lasergrbl.com/download/>下载。(厂家附送的TF卡或U盘中也有安装包)

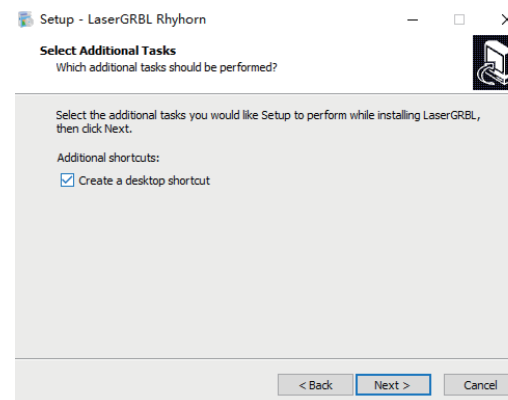
简介: LaserGRBL是一款开源、容易上手且功能强大的软件, 不过遗憾的是LaserGRBL软件只支持Windows系统 (Win XP / Win 7 / Win 8 / XP / Win 10)

当然对于Mac用户, 可以选择LightBurn。LightBurn也是一款非常优秀的雕刻机软件, 不过这个软件是付费的。这款软件也支持Windows系统。

注意: 雕刻过程中, 雕刻机需要和计算机保持连接, 且不能关闭软件。

2. 软件安装

双击软件安装包, 开始软件安装, 一直点击“下一步”直到安装完成。

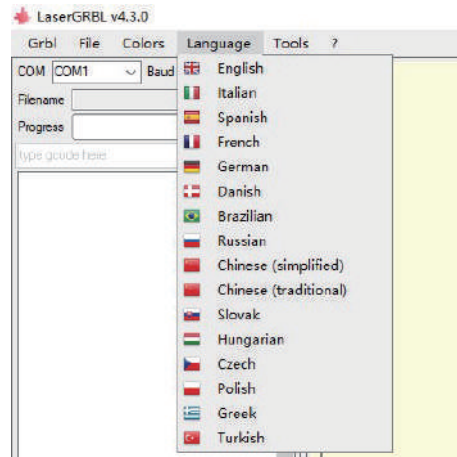


3. Language

Click "Language" on the menu at the top to select the language you need.

3. 语言切换

点击软件界面上方的菜单“language”，进入下拉菜单选择对应的语言。



4. Load Engraving File

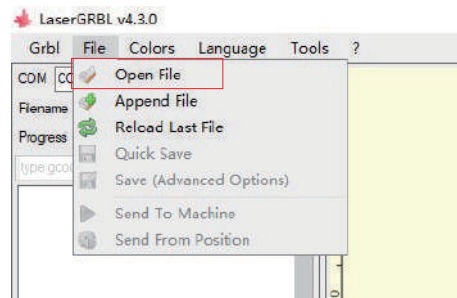
Click "File" and "Open File" in turn, as shown in figure 8.1, and then select the graph you want to engrave.

LaserGRBL supports files in the formats of NC, BMP, JPG, PNG etc.

4. 生成GCODE文件

点击软件界面上方的菜单“文件”，进入下拉菜单选择“打开文件”。进入图片文件选择界面，选择需要雕刻的文件，并点击“打开”。

(目前LaserGRBL支持NC、BMP、JPG、PNG等格式的文件)



5. Set picture parameters, engraving mode and engraving quality.

1. LaserGRBL can adjust the sharpness, brightness, contrast, highlight and other properties of the target graph. We can preview window effect during adjustment, and adjust the effect to your satisfaction.

2. In the engraving mode, "Line-to-line Tracking" and "1Bit Shaking" can usually be chosen; "1Bit Shaking" is more suitable for carving grayscale graph. Please Choose "Vector Diagram" or "Center Line" if you need cutting.

3. Engraving quality essentially refers to the line width of laser scanning. This parameter mainly depends on the size of the laser spot of the engraving machine.

Note: The recommended engraving quality range is 12-15. Different materials have different reactions to laser irradiation, so the specific value depends on the specific engraving material.

4. At the bottom of the preview window, the graph can also be rotated, mirrored, cut and so on. After completing the above settings, click next to enter the settings of engraving speed, engraving energy, and engraving size.

5. 设定图片参数、雕刻模式、雕刻质量

1. LaserGRBL可以调整目标图片的锐度、亮度、对比度、高光等属性。调整时预览窗口效果，调整到自己满意的效果。

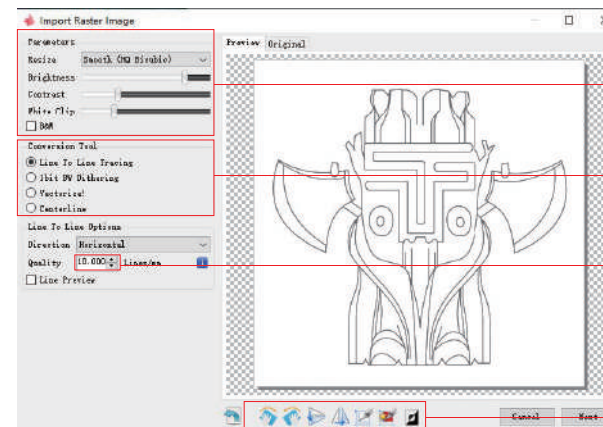
2. 雕刻模式通常选择“线到线跟踪”和“1bit抖动”。“1bit抖动”更适合雕刻灰度图形。如果要进行切割，请选择“矢量图”或者“中心线”的雕刻模式。

3. 雕刻质量本质上是指激光扫描的线宽，这个参数主要依赖于雕刻机激光斑点的大小。

建议使用的雕刻质量范围为12-15，不同的材质对于激光照射的反应不同，因此具体数值还取决于具体的雕刻材质。

4. 在预览窗口的下方还可以对图像进行旋转、镜像、剪切等操作。

在完成以上设置后，点击下一步进入雕刻速度、雕刻能量和雕刻尺寸的设置。



Color adjustment;
intensity adjustment
图片调色；明暗度调整

Choose engraving mode
雕刻模式选择

Quality: 12-15 (recommended)
质量：12-15（建议）

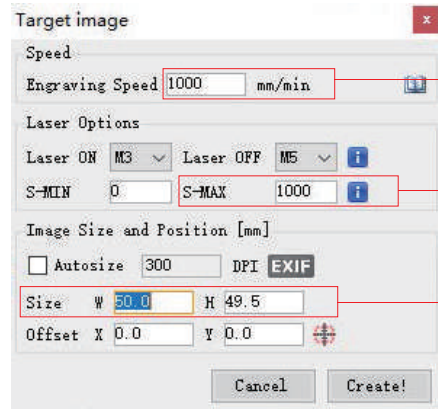
Direction adjustment;
pattern cutting
方向调整；图形裁剪

6. Set engraving speed, engraving energy, and engraving size

1. The recommended engraving speed is 1000, which is considered to be a relative appropriate value after repeated experiments. Of course, you can increase or decrease this speed according to your preference. A faster engraving speed will save time but lead to the decline in the engraving effect. Slower speed is the opposite.
2. In laser mode, there are two instructions: M3 and M4. M4 instruction is recommended for engraving in "1bit jitter" mode, and M3 instruction is recommended for other cases. If you have only M3 instruction on the laser, please check whether the laser mode is used in the GRBL configuration. Please refer to the official instructions of LaserGRBL for GRBL configuration.
3. Choice of engraving energy. Choose it according to different materials.
4. Finally, set the size and click the "Create" button to complete the setting of all engraving parameters.

6. 设定雕刻速度、雕刻能量和雕刻尺寸

1. 雕刻速度建议使用1000, 这是经过反复实验认为雕刻效果比较合适的一个值。当然您可以根据自己的喜好增大或降低这个速度, 更快的速度将节省雕刻时间, 但可能会带来雕刻效果的下降, 更慢的速度则与之相反。
2. 在激光模式中, 打开激光有两个指令, M3和M4; 用“1bit抖动”模式雕刻时建议使用M4指令, 其他情况建议使用M3指令。如果您的激光只有M3指令能打开, 请检查GRBL配置里面是否启用了激光模式, 关于GRBL配置的说明请参考LaserGRBL的官方说明。
3. 雕刻能量的选择根据不同的材质选择不同的能量。
4. 最后设置好您想要雕刻的尺寸大小, 点击“创建”按钮就完成了所有雕刻参数的设置。



The default engraving speed is 1000 and can be adjusted as required
默认1000雕刻速度, 根据需求调整

Set the energy value. Improper energy will affect the engraving effect
能量值设定, 能量不合适会影响雕刻效果

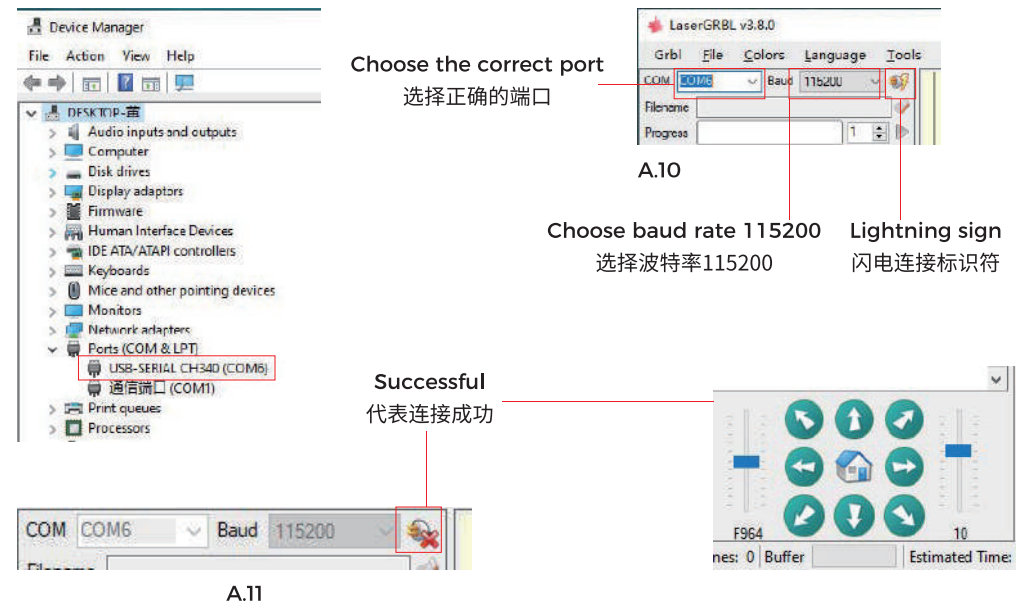
Enter the size of the graph you want to engrave
输入自己想要雕刻的图形大小

CONNECT PC 机器连接PC端使用

1. Connect the machine with the computer installed with LaserGRBL software with USB data cable.
2. Plug in the power.
3. Open LaserGRBL on the computer.
4. Select the specific port number and baud rate—115200 (Figure A.10)
5. Click the lightning sign. When the lightning sign changes to the red "X" and the direction sign is lit, it indicates that the connection is successful. (Figure A.11)

Generally, the COM port does not need to be selected manually, unless multiple serial port devices are connected to the computer, you can find the port of the machine in the device manager of the windows system (as shown in Figure A.09). A simpler way is to try the displayed port number one by one.

1. 用USB数据线, 将激光雕刻机与安装有LaserGRBL软件的电脑连接。
 2. 给激光雕刻机插上电源。
 3. 在电脑上打开LaserGRBL软件。
 4. 在软件中选择正确的端口号及波特率——115200。(图示A.10)
 5. 点击软件中的闪电连接标识, 当闪电标识变为红色的X标识并且方向标被点亮则表示连接成功。(图示A.11)
- 一般情况下, COM口不用手动去选择。但是如果你有多个串口设备连接到计算机时需要手动去选择。可在Windows系统中的设备管理器中找到激光雕刻机的端口(图示A.09), 更简单的办法是把显示出来的端口号挨个试一遍。



Choose the correct port
选择正确的端口

A.10

Choose baud rate 115200
选择波特率115200

Lightning sign
闪电连接标识符

Successful
代表连接成功

A.11

Note:

If you cannot find the correct port in the "Ports", you may need to

Method 1: Click "Tools" in the menu to install CH340 driver (This function is not available in some software versions):

Method 2: Copy the "CH340ser. Exe" file in the TF Card (USB flash disk) to the computer and install it.

提示:如端口栏没有出现正确的端口:

方法1:点击菜单栏“Tools” 安装CH340 驱动(软件部分版本无此功能);

方法2:拷贝TF卡(U盘)中的“CH340SER.EXE”文件至电脑,并安装。

1. After the laser head has been used for a period of time, it is necessary to clean the lens of the light outlet under the laser head to ensure normal cutting ability
2. Wiping the lens must be done after the machine is powered off, otherwise the laser will hurt people
3. After wiping the lens, please dry it naturally for about 3-5 minutes and wait for the lens to dry before powering it on, otherwise the light will cause the lens to break
4. You can watch the video tutorial by scanning the QR code of the manual

1. 激光头使用一段时间后,需清洁激光头下方出光口镜片,保证切割能力正常
2. 擦拭镜头必须在机器断电后进行,否则激光伤人
3. 擦拭镜头后请自然风干约3-5分钟等待镜头干燥后再通电使用,否则出光会导致镜片破裂
4. 可通过扫描说明书二维码观看视频教程

TEST BEFORE USE 机器测试

1. Turn on the machine, and connect it to the computer.

2. Movement test:

Control the machine to move up, down, left and right on the software, to check whether the direction and distance are right.(Fig. A01)

3. Laser emission test:

Software import custom icons, then click to sent out laser(weak laser). Wear goggles and observe whether the laser module emits blue light. (Fig. A02)

4. Test the files in the TF card:

Note: laser will generate heat and glare, which may cause harm. Please follow the instructions to avoid injury.

1. 打开电源开关,雕刻机连接电脑,启动机器

2. 移动测试:

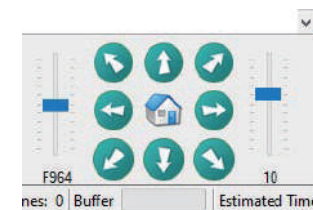
在软件上控制机器上下左右移动,查看移动方向是否正确,检查移动距离是否正确(图A01)

3. 出光测试

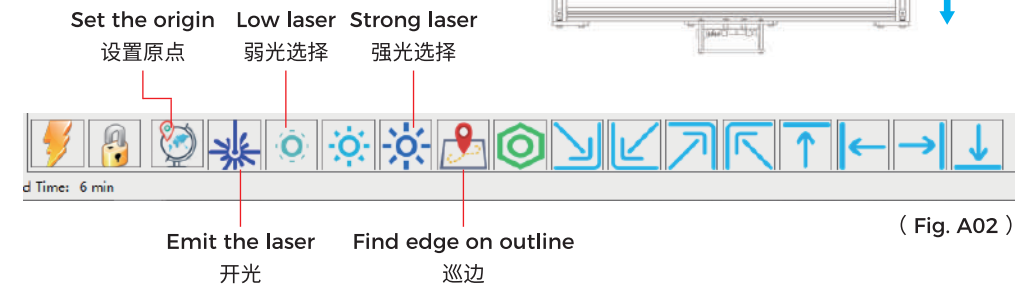
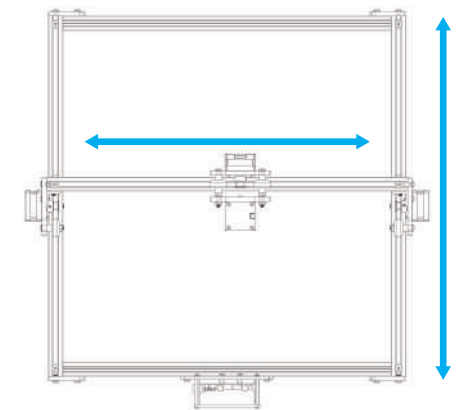
软件导入自定义图标,点击出光(弱光)。佩戴好防护眼镜观察激光模组是否发射蓝光。(图A02)

4. 调用TF卡中的测试文件进行雕刻测试

注:激光聚焦会产生热量和眩光,这些可能会对人、动物和物体造成伤害。请按照说明进行操作,避免误伤。



(Fig. A01)



(Fig. A02)

AFTER-SALES SERVICE 售后服务

The guarantee period is 12 months from the date of purchase.

1. Missing/Damaged/Defective Parts

Within 7 days of the date of receipt, we will replace any parts for free of charge including shipping fees.

After 7 days of the date of receipt, we will replace any parts for free of charge. But you need to pay the shipping fees.

2. Customer Damaged Parts: You need to pay for the cost of the parts and the shipping fees.

3. Courier company loss, missing, damaged, and defective parts.

a. Lost or damaged shipments must be reported to the carrier within the carrier's claim window, and you need to inform us within 7 days of the date of receipt.

b. For any parts lost or damaged during shipping, you need to take photos or video and send them to us.

c. Once the Carrier dispute is settled, please provide us with all communications with the carrier. It is the customer's responsibility to keep us up to date with ALL communication with the carrier.

d. For Missing Parts, you need to fill out a Service Ticket.

e. For Damaged Parts, you need to fill out a Service Ticket and send us the photos or video.

f. If the part is one of the LCD Panel, Power Supply or Mainboard, you need to ship the part back to us and we will send a new one.

保修期为自购买之日起12个月内。

1. 缺少／损坏／有缺陷的部件：

签收日期后的7天内，我们将免费更换任何部件，包括运费；

签收日期后的7天后，我们将免费更换任何部件。但客户需要支付运费。

2. 客户损坏部件：客户应支付部件成本和运输费用。

3. 快递公司责任：丢失、损坏或有缺陷的部件。

a. 对于丢失或损坏的货物的索赔必须在承运人的索赔窗口内向承运人报告，客户需要在签收日期后的7天内通知我们。

b. 对于在运输过程中丢失或损坏的任何部件，客户应拍摄照片或视频并将信息发送给我们。

c. 一旦承运人争议解决，请向我们提供与承运人的所有通讯。客户有责任让我们及时了解与承运人的所有通讯。

d. 对于缺失零件，客户应填写服务单。

e. 对于损坏的部件，客户应填写服务票，并将照片或视频发送给我们。

f. 如果部件是LCD面板，电源或主板，客户应将部件运回给我们，我们将发送新部件。