AlgoLaser ALSEC1.0

QUICK START GUIDE

Smart Enclosure for Laser Engraving

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https://algolaser.com/support/

Please read this manual before use and keep it properly for future reference.

ENGRAVING

HAPPINESS

Thanks for choosing AlgoLaser!

We are so glad that it's you that gives it a home.

We have packed everything we have explored in laser engraving machines into the neatest form to help you harvest engraving happiness, obtain the greatest yield and realize your dream.

Juston Tan

The Founder of AlgoLaser

Aftersale Policy

- **12-Months Limited Warranty**
  We provide 12 months warranty for every product from the date of purchase against defects in materials and workmanship. And we will offer repair or replacement service according to the product condition. Please note that this warranty does not cover damaged product caused by misuse or abuse.
- **Return or Exchange Policy**
  For detailed policy, please refer to the return and exchange policy on the platform you purchased from.
- **Misdelivery & Missing Parts**
  If you receive an incorrect product or discover missing parts after receiving the product, please contact our customer service. AlgoLaser will cover the shipping cost of the incorrect product or send the replacement parts.
- **Troubleshooting Support**
  AlgoLaser offers online troubleshooting guides that helps you to solve problems step-by-step. Please reach algolaser.com to get tutorial videos, FAQs, and tech support from professional engineers.

Aftersale Support

1. Please go to http://algolaser.com/support/ to submit your inquiry. To help engineer make faster judgment and provide effective solutions, please provide related pictures and videos within the inquiry.

2. Information needed:

Machine Model	Laser Module	Purchase Channel
Delivery Date	Computer System	Software
Problem Description, Video & Photo		

3. After submmitting, our engineer will reply you within 24 hours.

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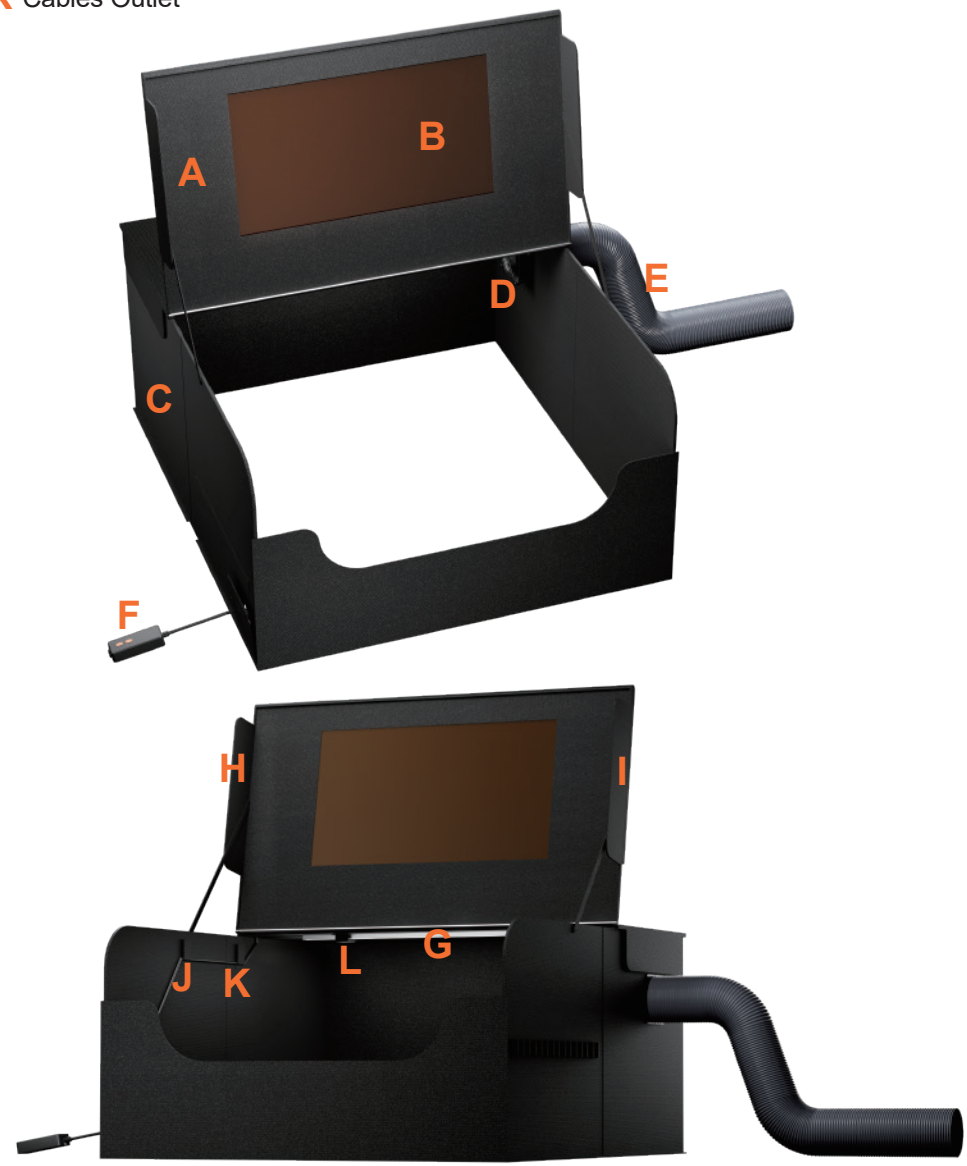
1. Description of Materials

A Enclosure Cover **B** Translucent Orange Window **C** Case Body

D Exhaust Fan **E** Exhaust Pipe **F** Controller **G** Light Tube

H.I.J.K.L.M.N.O.Q Hoop and Loop Tape **P** Air Intake Mesh

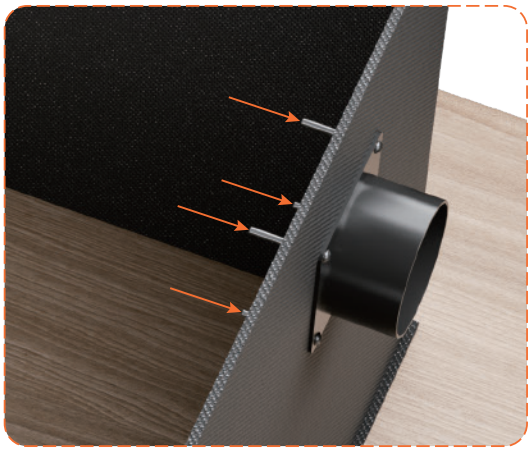
R Cables Outlet

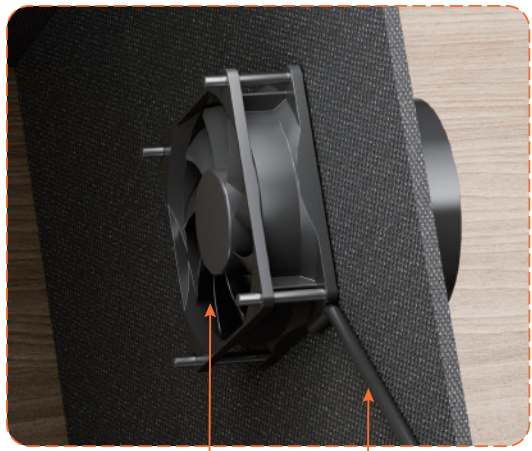


2. Assembly Steps

- Place the case body on a tabletop and unfold it as shown. Make sure that the left and right vertical panels are upright.

- Attach the Exhaust Flange to the right side of the Exhaust Port using four hexagon socket head cap screws. Install the exhaust fan and fan mesh on the inside. Tighten the four hexagonal socket head cap screws and four hexagonal nuts on the outside using a 2.5mm Allen Wrench (a hexagonal open-end wrench).





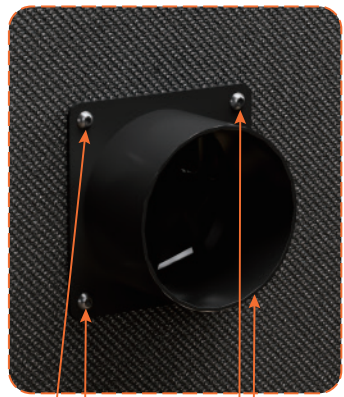
Exhaust Fan

Pay attention to the direction of the cable.

Fan Mesh

four hexagonal nuts

a hexagonal open-end wrench

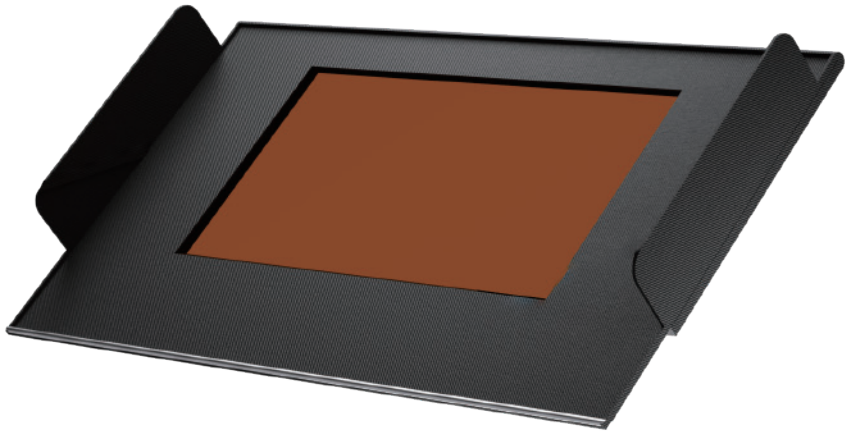


The outer side is tightened with a 2.5mm Allen wrench.

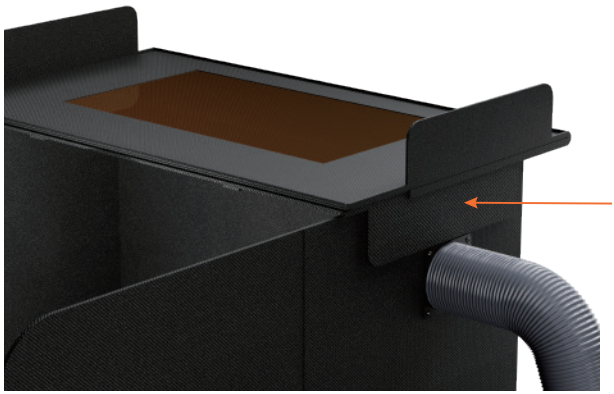
M2.5 Allen Wrench

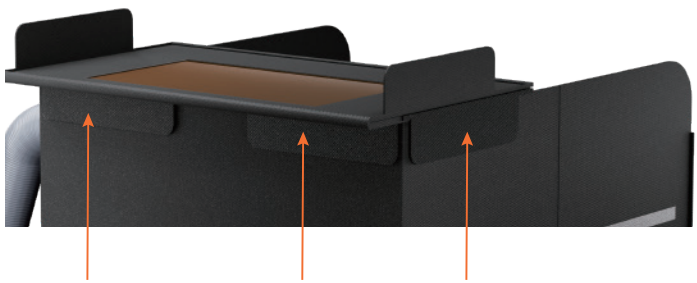
- Straighten the Exhaust Pipe (the initial state is folded), smooth the mouth of the pipe with fingers, insert it into the band, connect the Exhaust Flange, and use a screwdriver to tighten the screws on the band to complete the installation of the Exhaust Pipe.

- Fold the Enclosure Cover into the following shape:

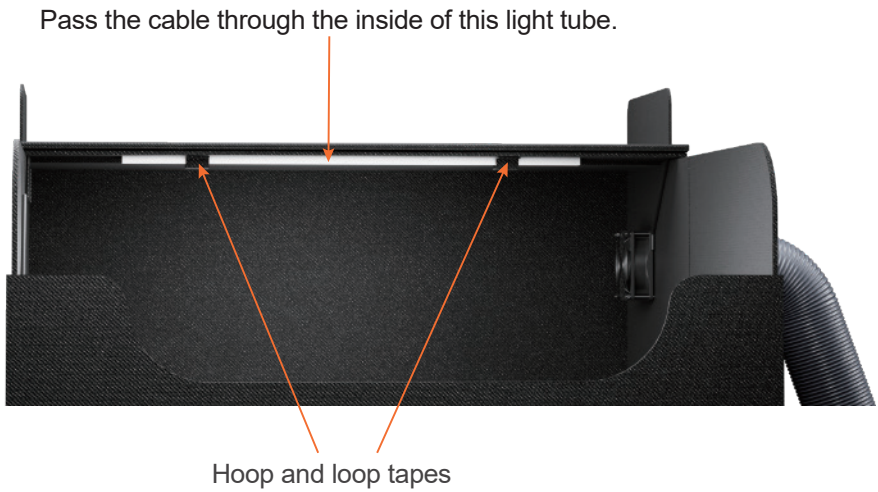


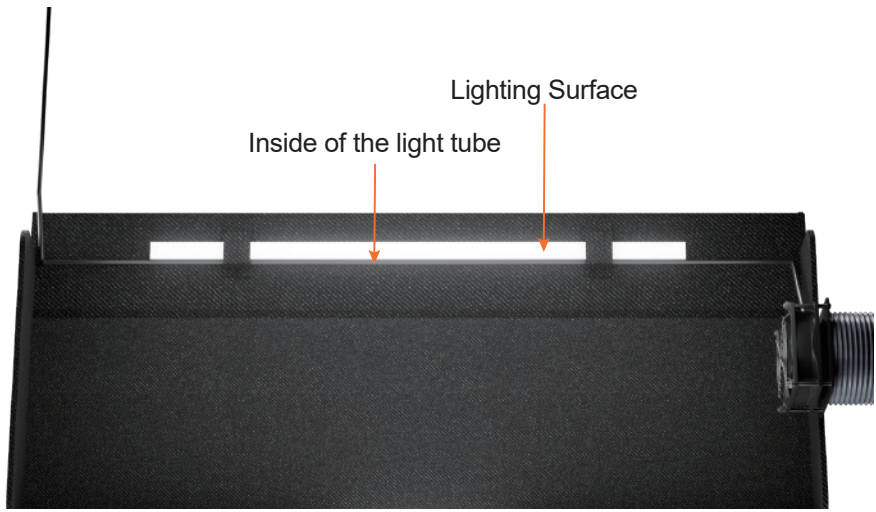
- Right and rear hook and loop tapes on the corresponding position of the box, and pay attention to the position of the edges to be aligned.



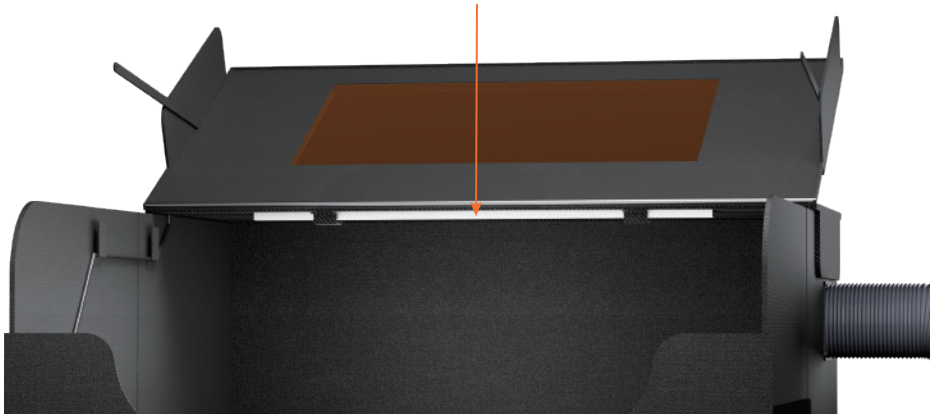


- Straighten the Exhaust Fan cable from right to left and place it together with the light tube in the middle of the 2 hook-and-loop tapes on the bottom of the Enclosure Cover, with the light tube centered on the left and right, and the Exhaust Fan cable stuffed inside the light tube and cannot be placed under the light tube so as not to block the light. Finally, attach the tapes.

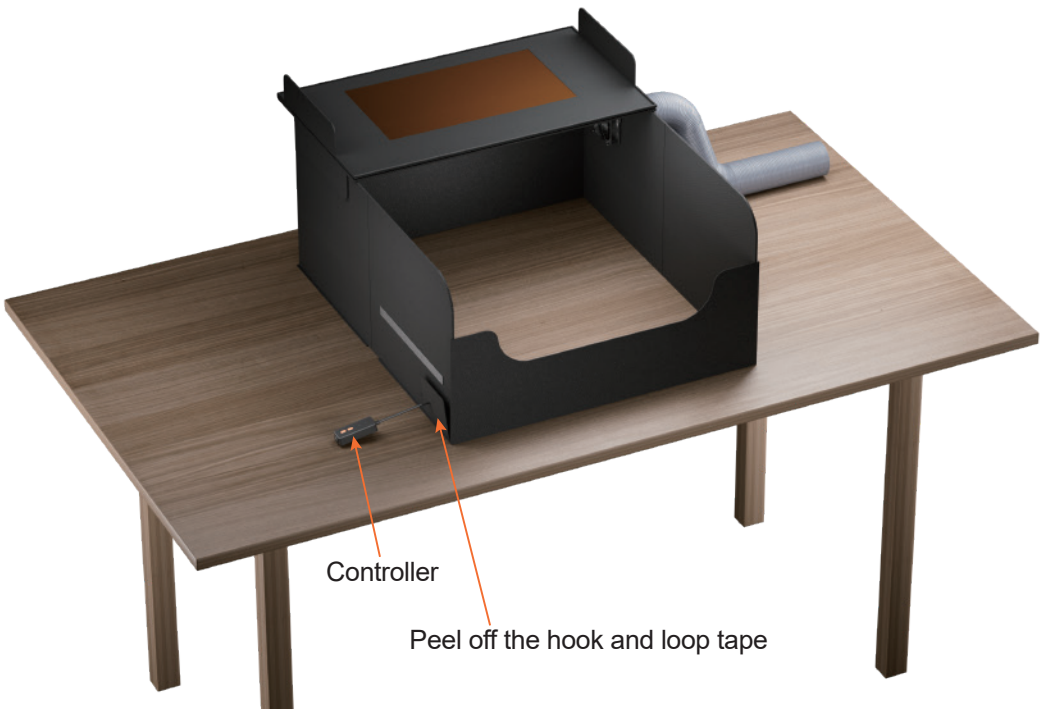




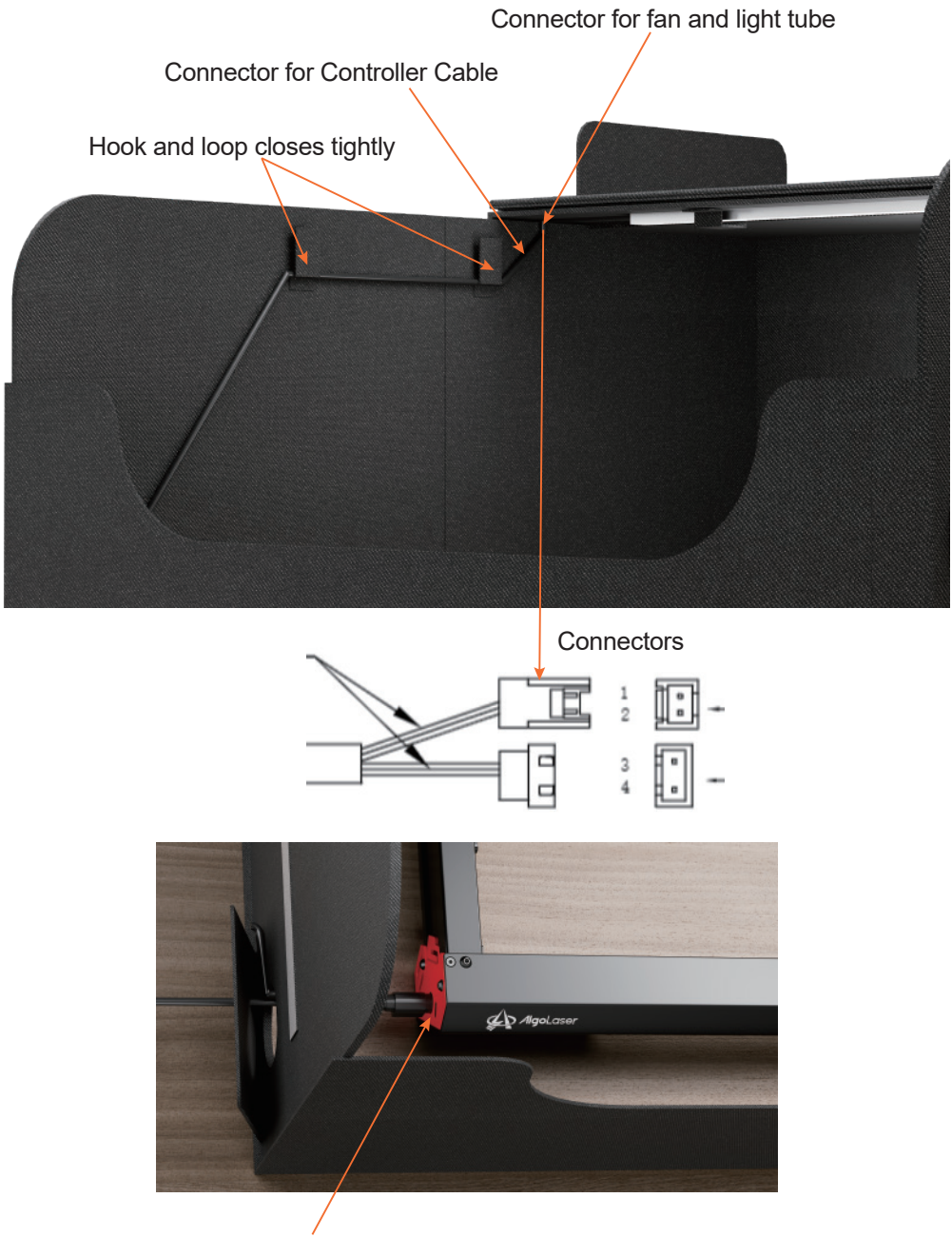
Position the light symmetrically from side to side in the center of the two hook-and-loop strips.



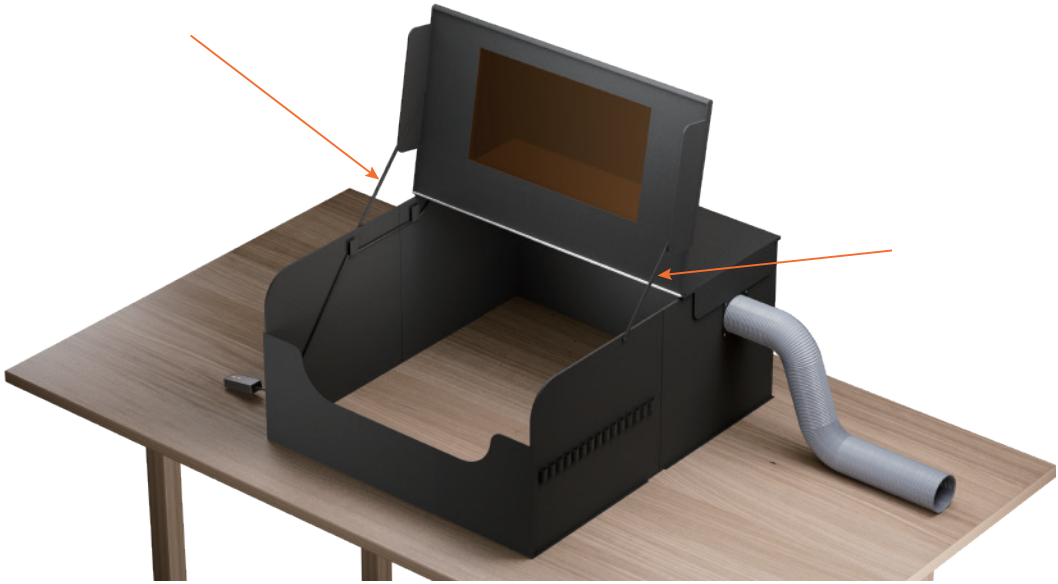
- Peel off the hook and loop tape on the left side and feed it through the cable connector on the control box.



- The long cable end connects to the LED light tube connector and the exhaust fan connector, and the power control connector connects to the laser engraver control output port or the Smart HUB control output port.



- Snap the buckles on the two straps of the cover plate together with the buckles on the left and right sides of the case to complete the assembly of the Enclosure.

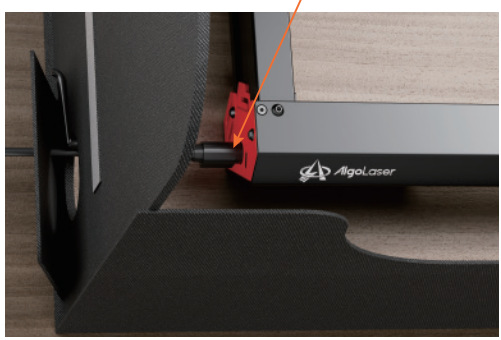


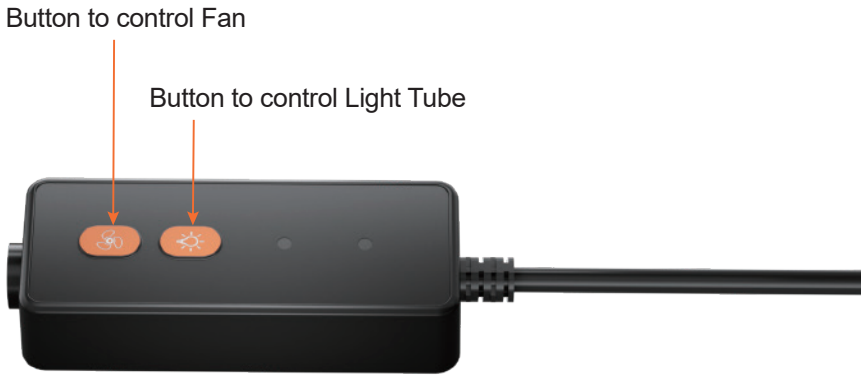
3. How to Use ALSEC1.0

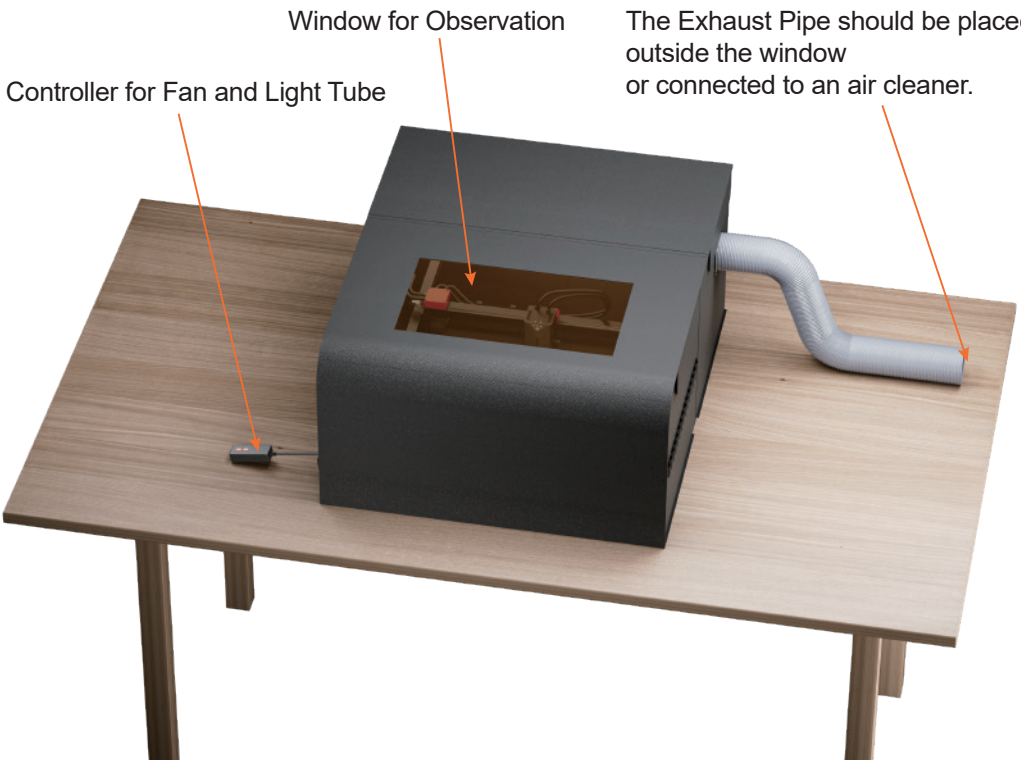
- Position the engraver in the case, keeping it as centered as possible.
- Connect the RS-485 cable from the Enclosure's control box to the corresponding port on the left side of the DIY KIT's control box. The control box buttons can operate the LED light tube and exhaust fan, turning them on and off.

  The computer software can also be used to control them by sending the appropriate commands.
  Refer to the <Commanding Instruction> for detailed control commands.

RS-485 Port on Alpha's Control Box




Button to control Fan
Button to control Light Tube


Window for Observation
The Exhaust Pipe should be placed
outside the window
or connected to an air cleaner.
Controller for Fan and Light Tube

4. Software Setup Instructions for Using the Enclosure

4.1 Explanation of Enclosure Status

Indicator	Indicator Status	Meaning	Note
LIGHT Indicator(Green)	Green light on	Light tube turns on	
FAN Indicator(Blue)	Blue light on	Fan turns on	
Firmware Upgrade	Green and Blue lights on	Upgrading in progress	
	Green and Blue lights off	Upgrade ended.	
	Blue light flashing	Upgrade is failed.	
Power supply voltage input detection	Green light flashing	Abnormal Power Voltage	For example, a 12V voltage input.

4.2 Instruction for Software Operation

4.2.1 Firmware supported version of different machines:

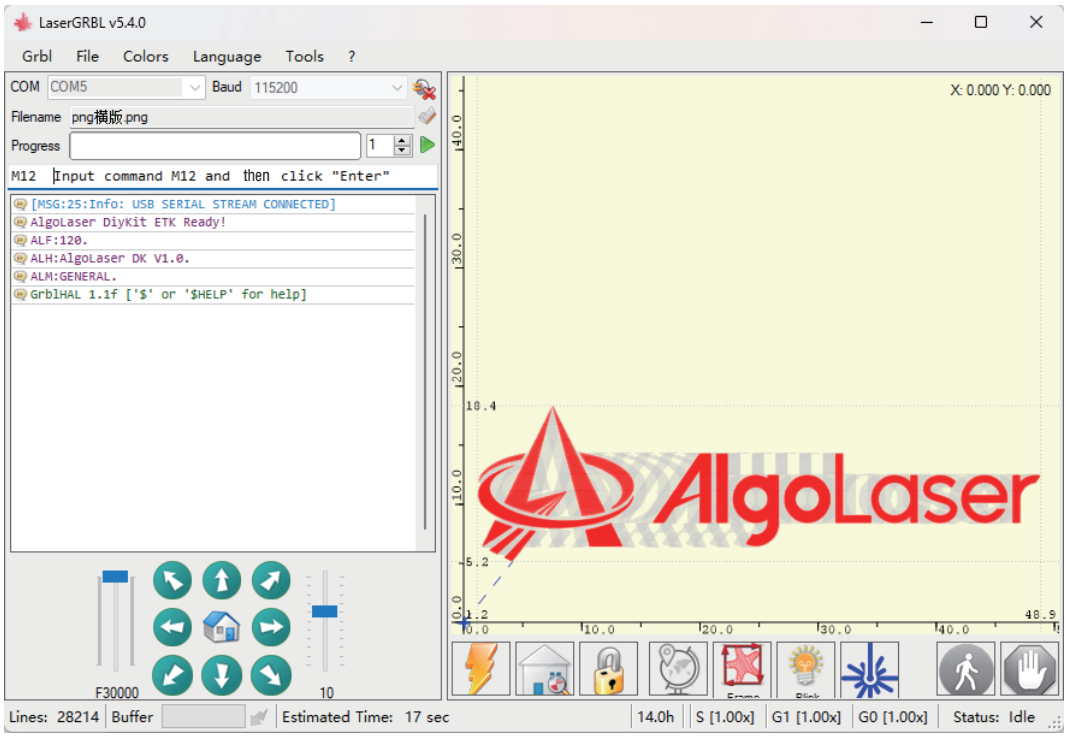
Alpha: Firmware > 116 Version
Delta: Firmware > 125 Version
DIY-KIT: Firmware > 120 Version
(If the machine's firmware version does not match the version description above, the Enclosure control commands cannot be used.)

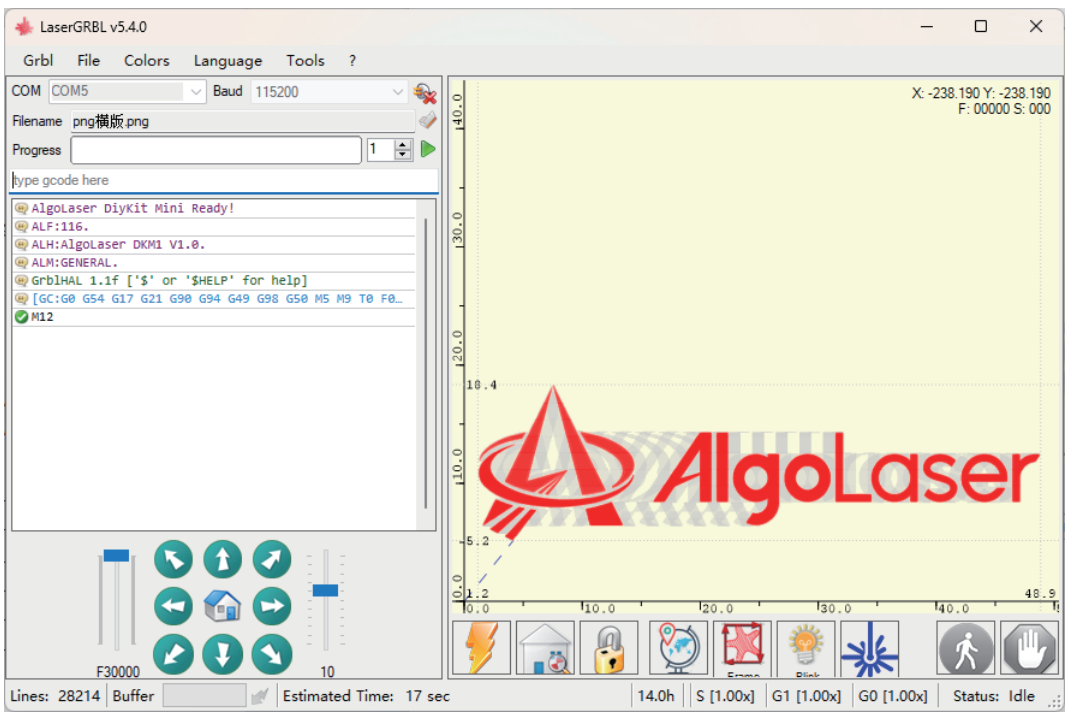
Function	Command
Light on	M12
Light off	M13
Fan on	M14
Fan off	M15

4.2.2 How to control the Enclosure with LaserGRBL

Open laserGRBL, type M12 in the command field, and then click the Enter button. If the command window shows M12 and the check mark is green, it means that the "M12 turn on light" command was successfully sent and the light tube is currently on.

Other control commands are consistent with the above operation.

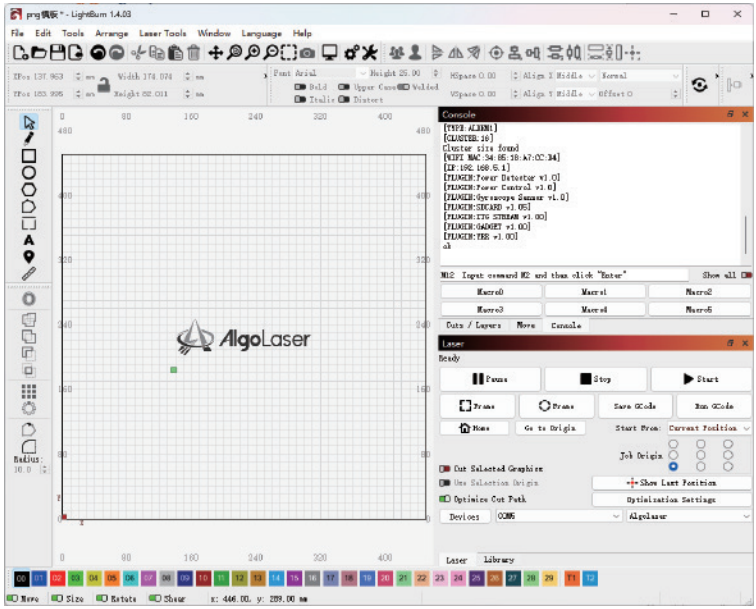

LaserGRBL v5.4.0
Grbl File Colors Language Tools ?
COM COM5 Baud 115200
Filename png横版.png
Progress 1
M12 Input command M12 and then click "Enter"
[MSG:25:Info: USB SERIAL STREAM CONNECTED]
AlgoLaser DiyKit ETK Ready!
ALF:120.
ALH:AlgoLaser DK V1.0.
ALM:GENERAL.
GrblHAL 1.1f ['$' or '$HELP' for help]
X: 0.000 Y: 0.000
AlgoLaser
F30000
10
Lines: 28214 Buffer Estimated Time: 17 sec
14.0h S [1.00x] G1 [1.00x] G0 [1.00x] Status: Idle

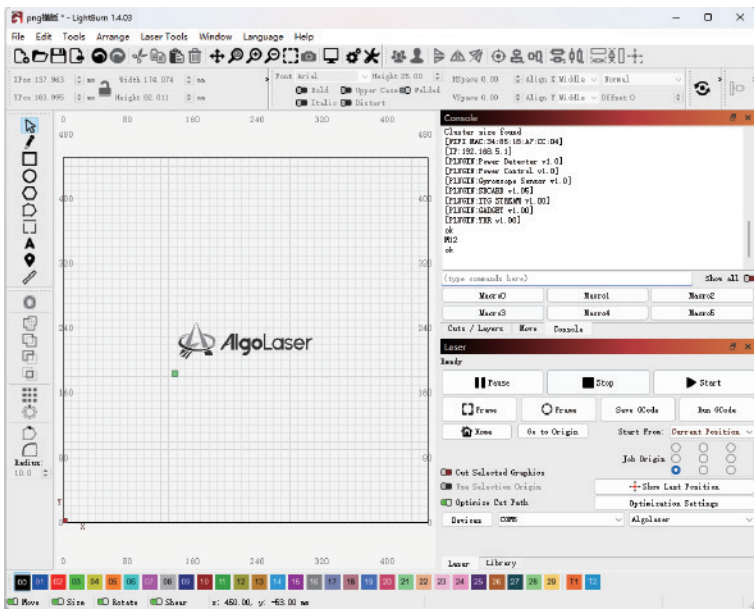

LaserGRBL v5.4.0
Grbl File Colors Language Tools ?
COM COM5 Baud 115200
Filename png横版.png
Progress 1
type gcode here
AlgoLaser DiyKit Mini Ready!
ALF:116.
ALH:AlgoLaser DKM1 V1.0.
ALM:GENERAL.
GrblHAL 1.1f ['$' or '$HELP' for help]
[GC:G0 G54 G17 G21 G90 G94 G49 G98 G50 M5 M9 T0 F0…
M12
X: -238.190 Y: -238.190
F: 00000 S: 000
AlgoLaser
F30000
10
Lines: 28214 Buffer Estimated Time: 17 sec
14.0h S [1.00x] G1 [1.00x] G0 [1.00x] Status: Idle

4.2.3 How to control the Enclosure with LightBurn

Open LightBurn, type M12 in the command field in the Console window, and then click the Enter button. If the Console window shows ‘ok’, it means that the "M12 turn on light" command was successfully sent and the light tube is currently on.

Other control commands are consistent with the above operation





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