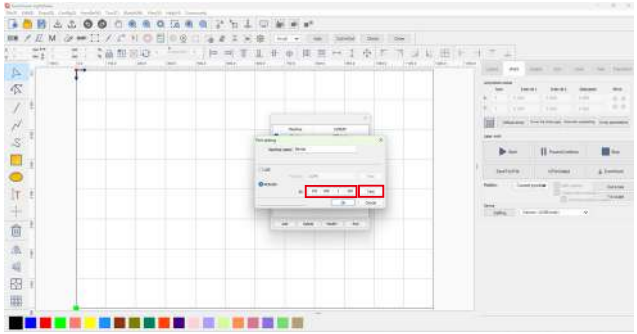
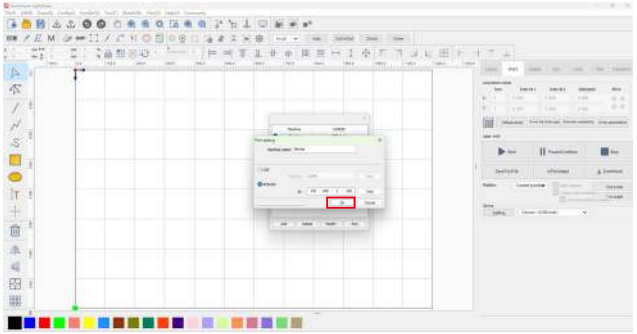
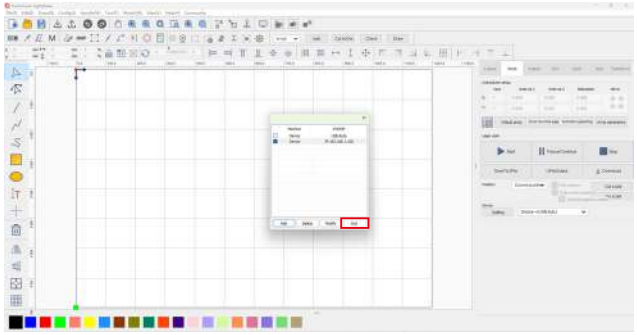
2.2.6 Select the【Network】 Work communication port and confirm or enter the IP address that consistent with the IP address of the machine operation panel.



2.2.7 Click 【Test】 Test . When the Test Success window pops up, click【OK】 Ok .



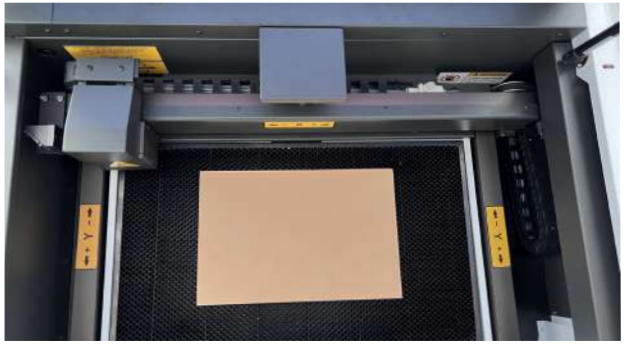
2.2.8 In the end, just click 【Exit】 Exit .



2.2.9 After completing the above operations, download and transfer the processed files to the device for testing. If the transfer is successful, it can be used normally.

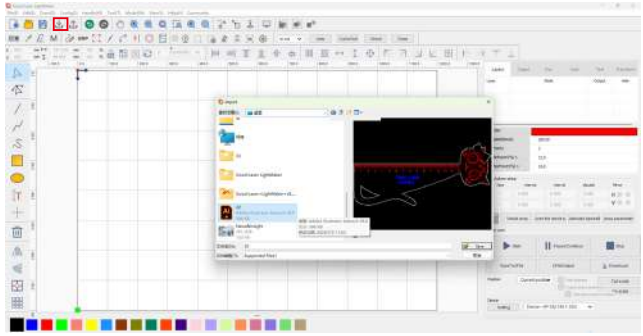
3. Laser processing

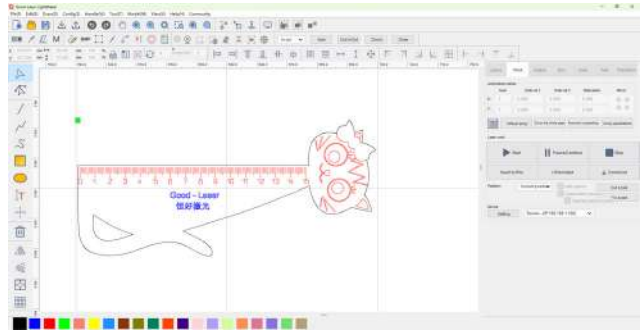
Place the material to be processed on the workbench area of the equipment and close the cover.



2. Open the LightMaker software on your computer and import the drawn design drawings.

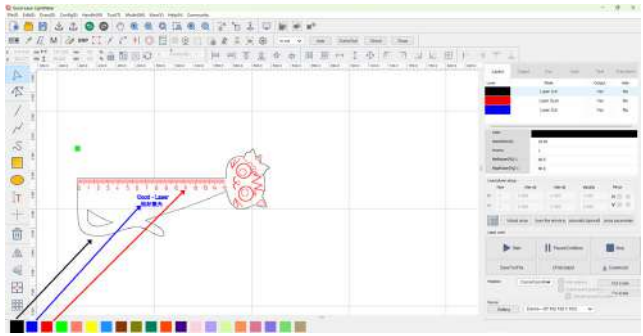
   Here are two ways to import files to be cut/engrave: click the icon【 】to import the filed directly. Or click click the function button one by one as File(F)---Import.





3. Set different color blocks for different processing techniques to distinguish the graphics. Click to select the corresponding graphics, move the mouse to the color block bar and select the corresponding setting and color.

   For example, you can set the graphics that need to be laser cut to black, the graphics that need to be laser cut (not cut through) to red, and the graphics that need to be laser scanned (engraved) to blue.



4. Double click the corresponding color layer on the top left of the page, and set the processing parameters of different layers in turn in the layer parameter dialog box that pops up.

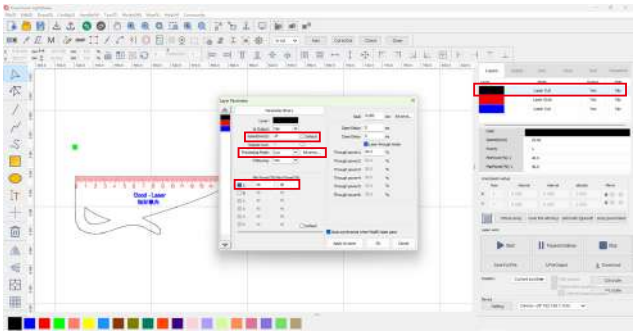
In this case, it is using 3mm basswood plywood. First, set the parameters of the black layer, set the speed as "20" --- the processing method as "Cut" --- the minimum power as "25" --- the maximum power as "30".

Set the parameters of the blue layer, set the speed to "300" - the processing method as "Cut" - the power to 20.

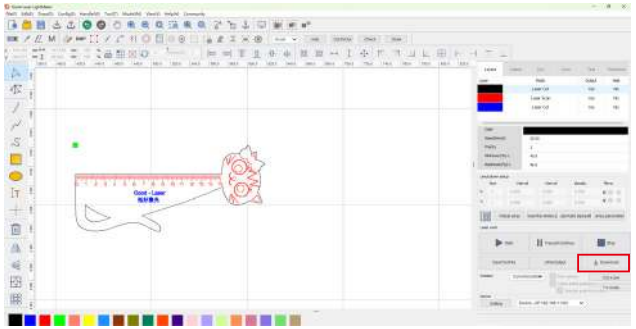
Set the parameters of the red layer, set the speed as "200" - the processing method as "laser cutting" - the minimum power as "12" - the maximum power as "15".

Since the laser focal length will affect the processing effect, the black layer needs to be processed last. If there are both cutting and engraving steps in the same file, it is usually necessary to put the cutting step to the last processing.

The layer order in the upper right corner is the final machine processing step order. Select a layer directly and pull it up and down to change the processing order of the different color layer.



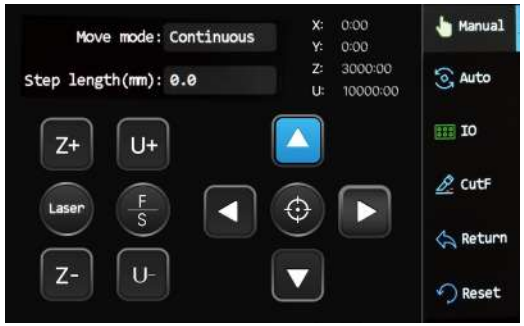
5. After setting the processing parameters, click【Download】 to transfer the file to the machine for processing.



When you hear a “Bi” sound from the machine panel, it means that the file has been successfully transferred to the machine.

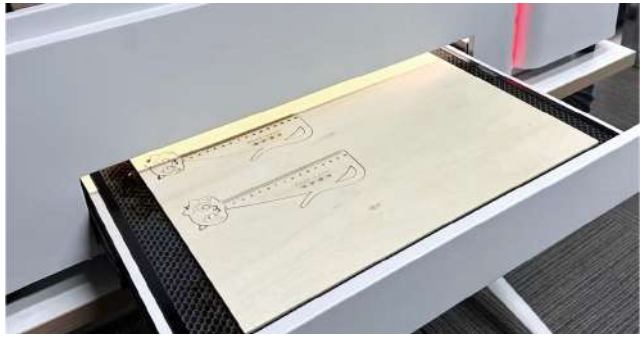
Go to the machine panel for the other steps. click the 【Manual】 manual button in the upper right corner---You can click the up, down, left, and right buttons to move the laser head to the appropriate position above the material---Click the 【Position】 button to determine the starting point of the laser processing.

Then click the 【Auto】 Auto button to enter the operation interface---Click 【Focus】 for automatic focus-–After automatic focus is completed, click 【Frame】 to confirm the processing range-–After confirmation, click【Start】 to start processing.



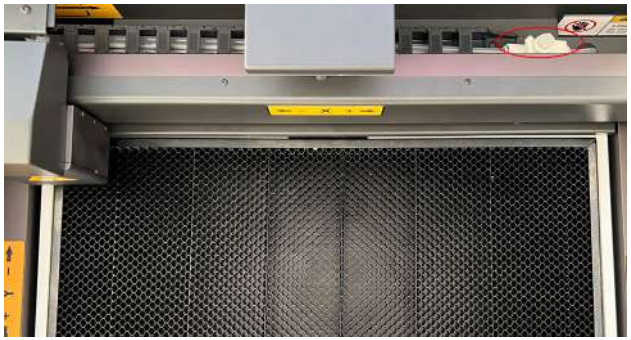
Please always remember to close the top lid and push the drawer in before: Click the start processing. Otherwise, the machine will not start working properly. Note: For more panel button functions, please refer to 《How to use the operate panel》 on the page 40.

6. After processing is completed, the processing platform can be pressed to pop up and the workpiece can be taken out.



4. Air blow valve adjustment

On the upper of the X-axis, there is a special gray valve for adjusting the air volume and blowing size, which is used to adjust the air output when processing different materials.



1. Adjustment method: Just pinch the top cover and lift it up, loosen the valve, and rotate the top cover clockwise to the left to reduce the air volume at the air outlet next to the laser head, and rotate it. Counterclockwise to the right to increase the air volume at the air outlet.

   When the air volume is adjusted to the appropriate size, press the small round top cover down to tighten the regulating valve.

Reduce the output air volume

Tips

1. If process wood materials, make sure to adjust the air output volume to the maximum, so as to avoid the blackening or yellowing of the cutting and engraving edges to the greatest extent.

2. When cutting acrylic or other plastic materials, reduce the air volume appropriately according to the thickness of the material to avoid jagged or uneven cutting edges.

More features

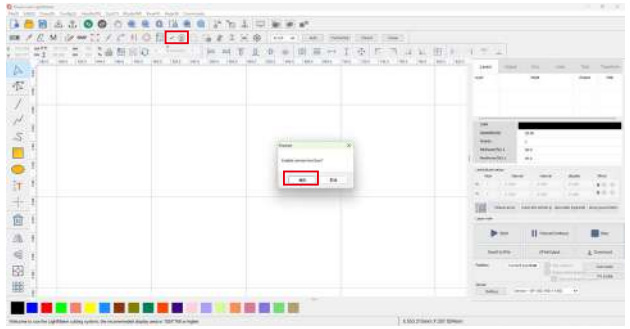
Light 530 has a built-in CCD camera, which can realize contour extraction and multi-position positioning functions combine with LightMaker software.

1. What you draw is what you get

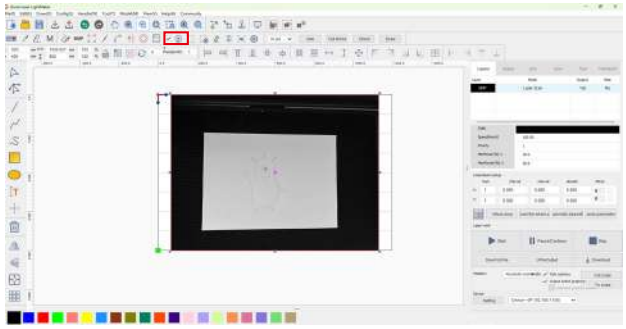
The CCD camera's image contour extraction and Multi-Points fixed processing function.

Use the USB extension cable included in the package to connect both ends of the machine CCD camera cable and the computer.Place the finished painting on the workbench in the center of the camera and connect the camera's USB cable to the computer.

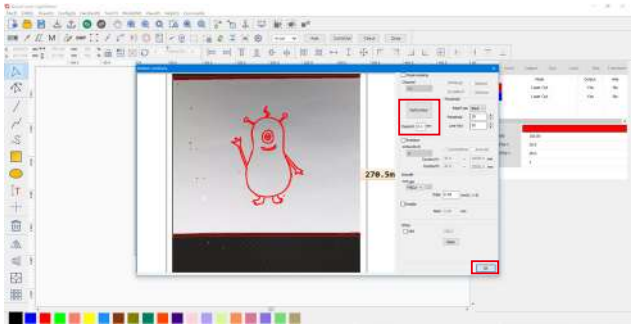
2. Open the LightMaker software on your computer, turn on the "CCD camera function by selecting the icon ", and click 【OK】 in the pop-up dialog box.



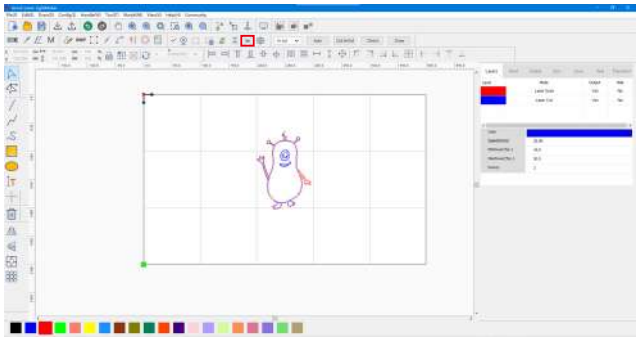
3. After the camera is turned on, the camera screen will appear. Click the camera icon to take a photo.



4. Click the 【Get Contour】 function --- adjust the value in the pop-up “Auto Edge Raise” dialog box to completely extract the image outline --- click 【Outline Extraction】 --- and after 【OK】 --- the outline will be extracted to the canvas.



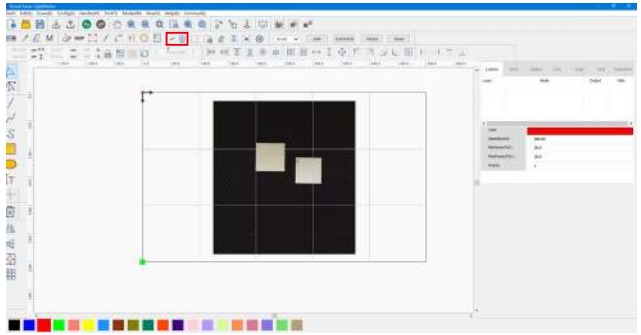
5. Click the 【Background switch】 function, delete the background of the photo, and you can get the extracted vector graphics.



6. After get the clean full contour lines, the rest of steps are the same as to start cutting or engraving process that consistent with the laser processing steps in 《Laser processing》 section on page 25.

3. Multi-Points fixed engraving

Place the material that needs to be processed on the workbench, and click the camera icon in the LightMaker software main page to take a photo.

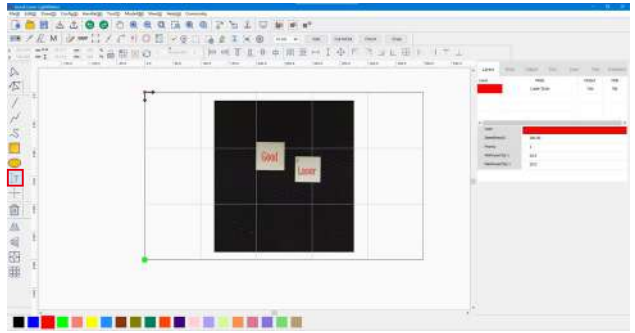


2. Use text tools or graphic tools to add text or graphics you would like to add to the appropriate location of the material;

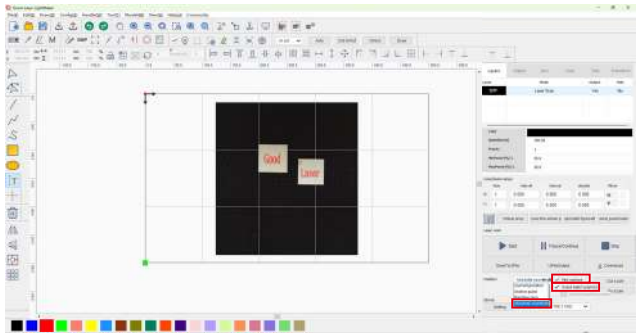
Note

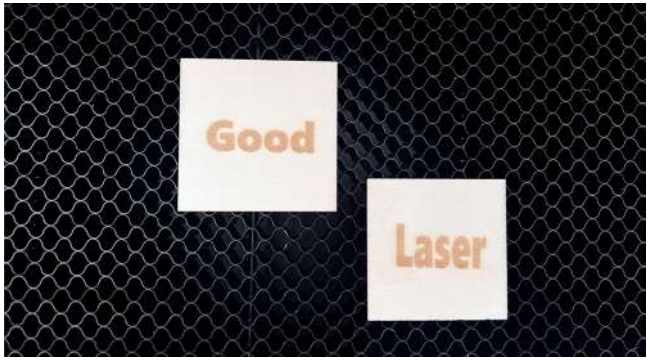
【Text tool】

Graphic tools indicates to import graphics files directly or import the file you want to engrave,resize it according to the material size and drag and drop it over the material surface.



3. Set the processing method and processing parameters for each graphic, change the graphic positioning position in the lower right corner of the interface to "Absolute coordinates", select both "Output selected graphic" and "Selected graphic positioning", select the processing graphic, and download the file to the machine click 【Start】 on the machine operate panel to complete multi-position fixed processing.



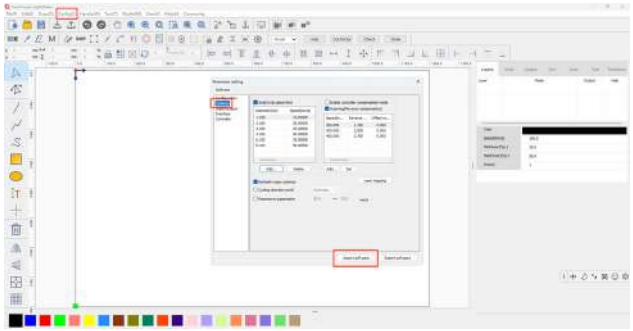


Engraving optimization parameter setting/import

If the engraving effect is scattered, as shown in the following figure.

This means you need to reset the engraving optimization parameters. Generally, when the machine is connected to a new computer, you also need to re-import the optimization parameters to ensure the correct engraving effect.

The steps to import engraving optimization parameters are in the LightMaker's main page to click Config(s) --- System Setting --- Optimize --- import soft para --- select the file in the USB drive named 《Scan optimization parameter》 --- Open then close the settings page.

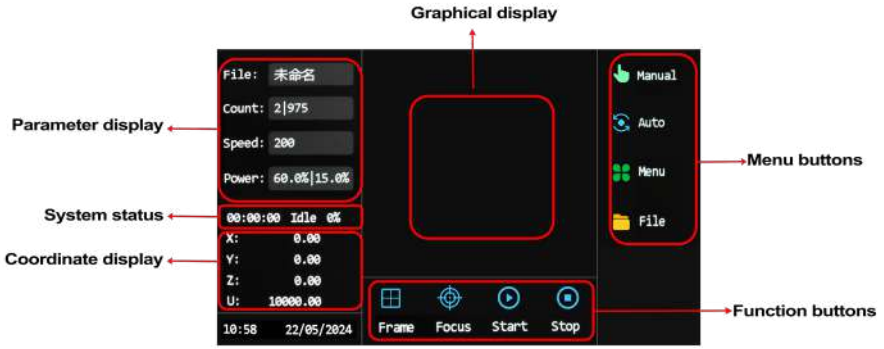


The correct engraving effect without glint is as follow.

How to use the operate panel

Main interface

After the machine is powered on, the system will automatically reset, the operation panel will open and display the main interface.



1. Graphic display area

This area is used for file preview display and drawing the processed file image during processing.

2. Parameter display area

This area is for display the current processing file name, piece value (number of current file pieces | total number of all files), speed value and power value.

3. System status area

The system status (idle, paused, completed, running, feeding), processing time and processing progress are displayed respectively.

4. Coordinate display area

Display the X, Y, Z, and U axis coordinate values respectively.

5. Menu buttons area

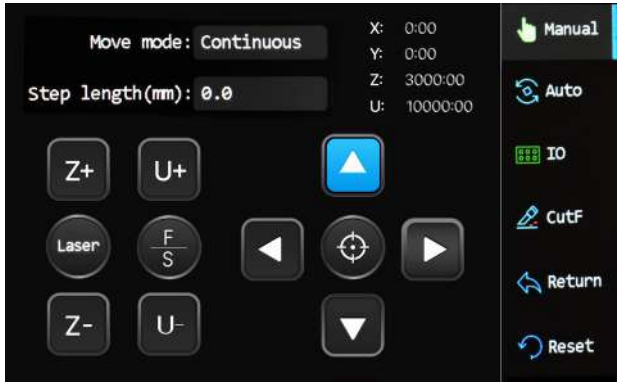
manual	Manual: Enter the manual function interface.
Auto	Auto: Enter the automatic function interface. The system is in this interface by default after power-on.
Menu	Menu: Enter the menu interface.
File	File: Enter the file management interface.

6. Function buttons area

Frame	Move frame: Perform a move frame operation on the current processing file to confirm the processing area range.
Focus	Focus: Auto focus.
Start	Start: Start processing.
Stop	Stop: Stop processing.

Manual interface

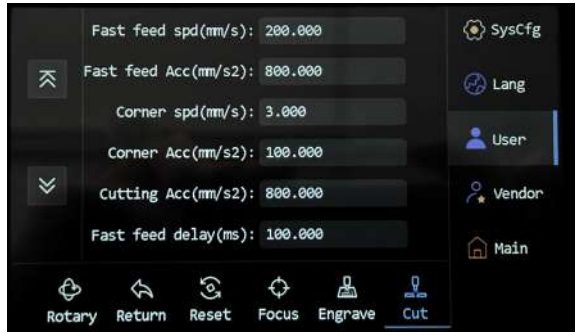
This interface is mainly used for manual debugging, including moving the laser head, spot shooting, positioning, IO diagnosis, cutting frame, returning to the original position and system reset. Press the "Auto" key to return to the main interface.



Laser	Laser: Press this button to start the laser beam, and release it to turn it off. Usually, the Laser button is only used when calibrating the laser lens.
Z+ Z-	Z+: Control the Z axis to rise Z -: Control the Z axis to descend.
F S	F/S: The axis movement speed can be switched. When F is blue, it is fast movement, and when it is switched to S, it is slow movement.
U+ U-	U+： Control the rotation axis to rotate forward U-: Control the rotation axis to rotate reverse.
▲ ▼ ◀ ▶	Direction buttons: Control the moving direction of the laser head.
⊕	Positioning: Set the starting working position of the laser head.
IO	IO: You can enter the IO diagnostic interface to perform fault diagnosis and debugging on device components.
Cutf	Cut fram: Enter the cut border setting interface, and there are three border modes to choose from: light on, light off, and four-corner dotting. After selecting a mode, press the "cut border" button to start, and press the "stop" button to stop.
Return	Return: After selecting the return position, press the "Return" key to return, and the relevant movement status will be displayed at the bottom of the interface. Press the "Stop" key to stop the movement.
Reset	Reset: Click the “Reset” button to reset the system.

Menu interface

The menu functions include system settings, language settings, user parameters and manufacturer parameters submenus. The buttons at the bottom of the interface represent the function settings corresponding to each submenu.



Syscfg	System: Set the IP address of the device, view system information, etc.
Lang	Language: Set the language of the operation panel.
User	User: View and set cutting parameters, engraving parameters, focus parameters, reset parameters and return parameters.
Vendor	Manufacturer: View and set feed parameters, rotation parameters, Z-axis control, speed parameters, system configuration, machine parameters, axis parameters, and laser parameters.

File interface

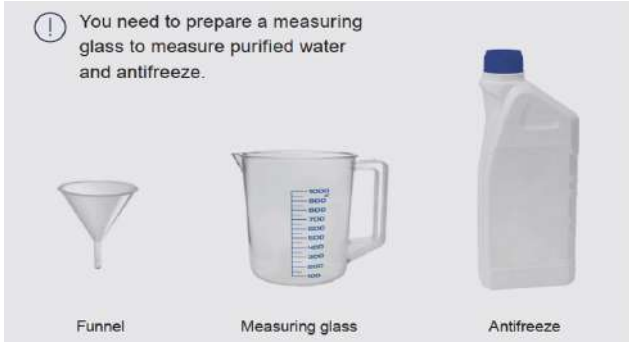
The file function can preview and display memory files, and perform operations such as file selection.

Memory	Memory: Switch to the file interface and read the file.
Udisk	USB drive： Switch to the file interface and read the file.
Copy	Copy: Copy the selected file to a USB drive.
De1	Delete: Delete the selected file.

Light 530 machine antifreeze adding guide

1. Fill the water tank with antifreeze

First, please prepare a measuring glass to measure purified water and antifreeze.



2. Determine the volumes of antifreeze and purified water to be used

Note:

Do not pour the antifreeze directly into the water tank. Determine the volume of antifreeze to be used according to the annual lowest temperature in your region first.

Ensure that you use purified water to prepare the antifreeze. Tap water contains impurities and bleach, which may cause too many bubbles, affecting the working of the laser tube and even damaging the lase tube.

You need to fill the water tank twice. Strictly follow the steps to fill the water tank, using the recommended volume of antifreeze and avoiding overflow.

The cooling water tank is placed on the topper left inside the machine, Use the hex wrench in the tool kit to unscrew the two screws marked in the picture below. And refer the following proportion information to add antifreeze.

If the annual lowest temperature in your region is ＞ 0℃ Please refer to the value for adding water and antifreeze.

Annual lowest temperature in your region(℃)	Concentration (%)	First filling	
		Antifreeze (ml)	Purified water (ml)
＞0℃	0	0	4000

If the annual lowest temperature in your region≤0℃, please refer to the ratio below to add antifreeze.

Annual lowest	Concentration	First filling		Second filling
emperature in your region(℃)	(%)	Antifreeze (ml)	Purified water (ml)	Purified water (ml)
-10≤T≤0	20	700	2100	1200
-20≤T≤10	35	1540	1260	1200
-30≤T≤20	45	1600	1200	1200
-40≤T≤30	50	1800	1000	1200
-50≤T≤40	60	2100	700	1200

Note: The two separate pours are for better allow the antifreeze to settle and fully blend with the water.

CO2 laser mirror and lens cleaning guide

Mirror/Lens Cleaning:

Take out the mirror/lens holder.

Moisten the lens/mirror cleaning paper/cotton swab with cleaning solution, and lightly pull the lens/mirror paper to wipe the mirror surface.

Wipe repeatedly until the mirror surface is clean.

Put the mirror holder back, please do not touch the mirror with hands, let alone blow it with your mouth.

Cleaning supplies

Cleaning liquid: the common cleaning liquid is ether: ethanol = 1:3, users can configure it by themselves.

Special cleaning fluid: camera lens cleaning fluid.

Camera lens cleaning fluid and cleaning paper: It must use camera-specific lens cleaning paper/cotton swabs, and other items cannot be used to clean the camera lens.

After-sales service

For more product information, please visit good-laser.com.

If you need technical support, plesse contact us via the following methods:

Service Hotline: 400-060-6086

Email: info@good-laser.com

Thank you for choosing Good-Laser Light 530 and wish you a pleasant creation and use experience.