



Thank you very much for purchasing **RAYMING** laser machine.

- ☆ Please read this User of manual carefully before start using, and make sure to be familiar with operating of the machine. It is better to master the technics to make your laser machine working much longer and steadily.
- ☆ Please shut off the power supply immediately and refer to this manual if any exceptional case happens. If you can't solve the problem yourself, please contact us or local agent through email or phone.
- ☆ You can login in our website at any place and get the contact information immediately, so you can get new information or help from us or local agent at any time.
- ☆ Please remember the “Equipments maintenance and safe notice”, in order to guarantee people and machine's safe.



PACKING LIST

1	MACHINE	LASER MACHINE	220V / 110V	1
2	RMBOX	CHILLER + AIR	220V / 110V	1
3		HONEYCOMB BOARD		1
		FAN	130FJ 220V / 110V	2
		PIPE	Φ 80MM PVC	1
		HOSE CLAMP	Φ 90MM	3
4		PLASTIC BOX		1
		POWER CABLE		2
		USB CABLE		1

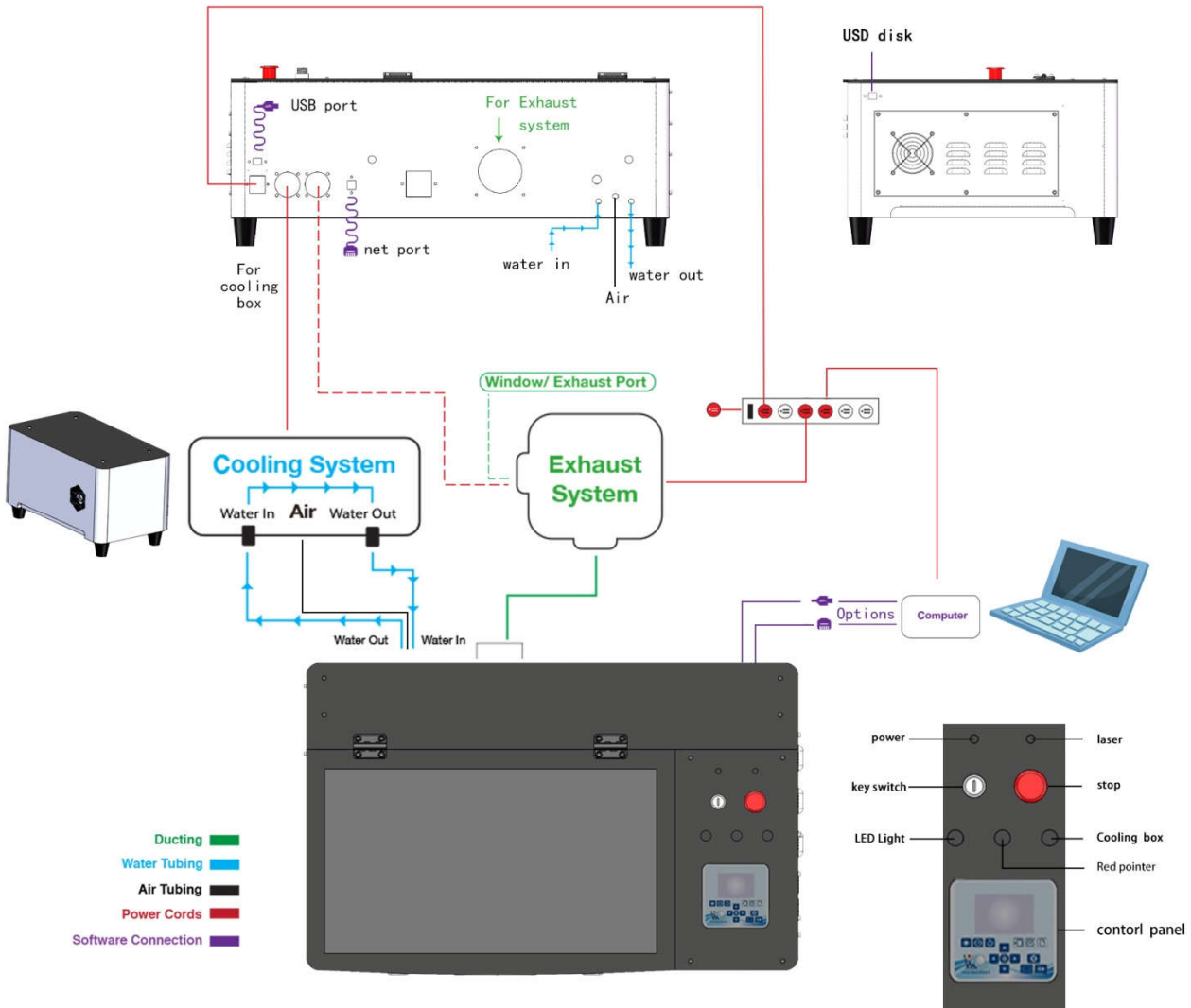


	NET CABLE		1
	USB FLASH DISK	4G RD/BL SOFTWARE	1
	KEYS		2
	FUNNEL		1
	WATER TUBE	Φ8*12 1.5m	2
	AIR TUBE	Φ6 1.5m	1
	FUSE	10A	2
	TEXTURED TAPE		1
	LIMIT SWITH	小	2
	RED DOT		1
	0.3 cable 0.3		1
	SCREW /TOOLS 工具	M2. 5*14&SPRING&NUT	2
		M3*15 & nut	1
		M4*6	4
		M4*12	4
		BRA SCREWS M3*4. 5	1
		Wrench M2. 5/M4	1
		M1/2/3/4/5/6/8	1



Quick Start RM320

Your RM320LASER will require some minor assembly of the accessory systems, such as the water system. This process should take less than an hour to complete.



A----- LOCATE AND CUT YELLOW ZIP TIES

- Cut and remove the zip ties that belts of the machine

B----- CONNECT THE EXHAUST SYSTEM

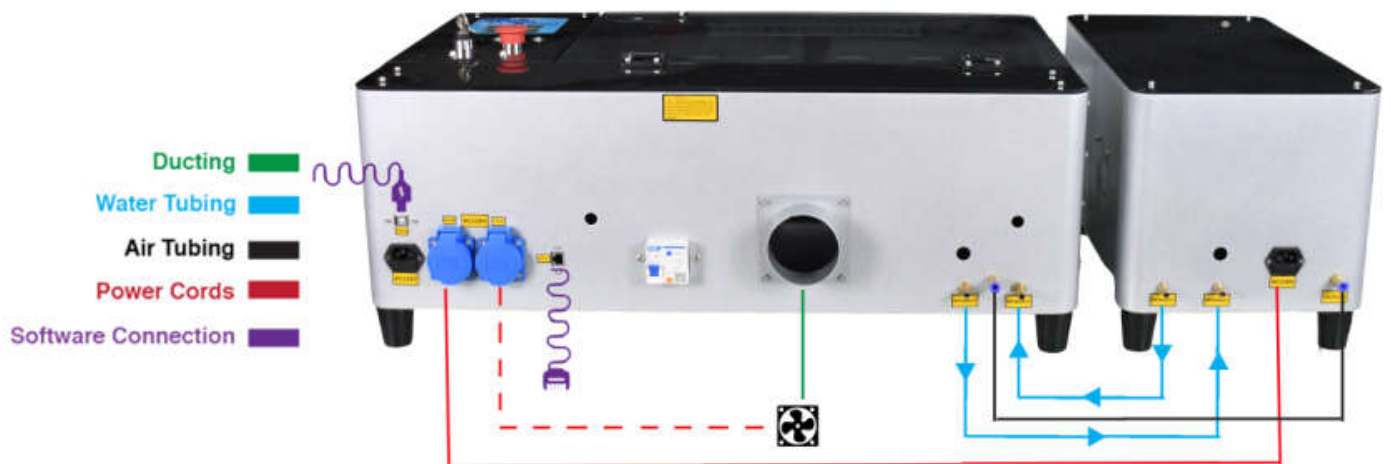
1. Position ducting on RM320 exhaust port and secure with ducting clamp.
 2. Attach other end of ducting to flange side of exhaust fan, then the second ducting to the exit port of the exhaust fan.
 3. Ventilate the ducting outside through a window or exhaust port.
- If using a fume extractor, you can attach the ducting from RM320 directly to the fume extractor, and bypass the exhaust fan completely.

C. ASSEMBLE THE WATER/AIR SYSTEM

1. RM320 LASER needs about 4L distilled water



2. RM320 laser have Water cut-off protection sensor , so you have to connect right "waterflowdirection" . cooling/air system out → laser in → laser out → cooling/air system in





D .CONNECT POWER

The power cord plugs into RM320 LASER power receptacle located on the back of the machine.
2. Follow the diagram and connect all power connections to a central power bank and then plug the power strip into an appropriate wall outlet.

Please ensure




Emergency stop button pressed ! You have to turn on your RM320 laser ready to turn on.









E.CONNECT THE USB CABLE




Plug in the **USB cable** into the **CHIAVE USB** slot on your RM320 LASER back.

PANEL INTERFACE



-  :Reset the whole system;
-  :Set the relative origin;
-  :Let the Laser to splash;

-  :To track by the current file's frame;
-  :The management of the memory and U disc files;
-  :Set the speed of the current running layer, or set the direction keys' move speed;
-  :Set the max laser power of the current running layer, or set the power of "Laser"
Key;
-  :Set the min laser power of the current running layer,
-  :To start or pause the work;
-  :To move the X axes or the left/right cursor;
-  :To move the Y axes or the up/down cursor;

-  :The Z/U key can be pressed when the system is idle or the work is finished. On pressing this key, it will show some entries in the interface, each entry includes some functions, Z axes move, U axes move, each axes to go home etc.;
-  “:To stop work, or to exit to some menu;
-  : Validate the change;

SAFETY GUIDELINES

The following safety guidelines are meant to highlight the most common safety violations. Use of controls or procedures other than those specified herein may result in hazardous radiation exposure, fires or electric shock. Please refer to your user manual for a complete listing of safety protocol.



GENERAL SAFETY

NEVER leave your machine unattended while it is operating.

ALWAYS use the air assist and the exhaust system when operating the machine.

Failure to do so can increase the fire risk and cause damage to the machine's parts, particularly the focus lens.

BE AWARE that removal of any portion of the cabinet will expose a Class 4 laser system and greatly increase the risk of injury and/or fire.

KEEP the area around the machine clean and free of clutter, combustible materials, explosives, or volatile solvents such as acetone, alcohol or gasoline.



FIRE SAFETY

KEEP YOUR LASER SYSTEM CLEAN – A build-up of cutting and engraving residue and debris is dangerous and can create a fire hazard.

Keep your laser system clean and free of debris. Regularly remove the cutting grid to clean any small pieces that have gotten stuck or fallen through.

ALWAYS keep a properly maintained and inspected or larger fire extinguisher on hand. RM320 Laser recommends a CO2 fire extinguisher.



LASER SAFETY

NEVER engrave or cut any material containing PVC or vinyl as corrosive gases will occur that can cause harm to the operator, as well as damage the machine and void the warranty. Never engrave or cut any unknown material.

DO NOT look into the beam of the Alignment Laser (visible red diode laser).

DO NOT run laser with lid open. Always be sure the lid is closed and never tamper with lid safety mechanism.

NEVER operate the machine without a properly operating ventilation system. Most materials produce an irritating smoke when engraved. Some materials, including but not limited to paint, varnish, composition board and plastics, produce compounds that can be harmful if concentrated



ELECTRICAL SAFETY

DO NOT make or break any electrical connections to the system while the unit is turned on.

DO NOT access or tamper with any electronics unless specifically directed to by support, as electronics have high voltage components

WORKFLOW CHECKLIST

This checklist presents a “best practice” for each time you run a project. by the shipping process. Refer to this checklist often until you are comfortable operating your RM320 LASER

1. Safety First: Ensure workspace is free of fire, electrical and other safety hazards. Be aware of all safety issues when cutting materials with a laser. Always have a fire extinguisher on hand.
2. Power on the laser and all of its components.
3. Ensure that:
 - The laser is powered and the boot up cycle begins on the screen.
 - The cooling system is connected properly and water is flowing through the tube.
 - The air compressor is powered and exhausting air to the laser head.
 - The exhaust system is on and vented into a safe location.
4. Import your design and adjust power and speed settings. Double check settings including the number of passes and cut order.
5. Insert material into the laser bed. Focusing should be done each time a new material is introduced.



7. Use the “” function to ensure that the file will fit within the cutting area. Adjust accordingly.



8. Run the job file. Do not leave a job running unattended

MAINTENANCE

To ensure the maximum output for your laser cutter, be aware of periodic maintenance requirements. Before every job, always be sure your water, air and power are operational as well as checking that the machine and workspace are clutter-free. For long term care, relative to use, follow these guidelines:

WEEKLY

Use optical grade lens wipes to clean both sides of the beam combiner, all mirror surfaces, the focus lens, and the tube aperture. Optic surfaces may need to be cleaned more often if cutting materials produce excessive residue. Clean fallen debris from the catch tray of the machine. Less excess material will reduce fire risk and provide for better exhausting. Always keep rails, motors and moving parts free from excess material as it can obscure movement and cause damage.

MONTHLY

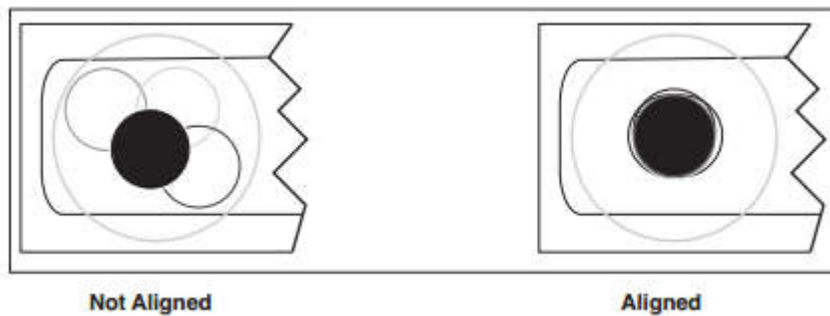
Check rail lubrication. When the laser arrives, you should be able to visibly see the lubricant on the x and y rails. These rails will not need to be relubricated often, but check monthly to be sure that the rails are properly lubricated and aren't grinding or catching. Check your fume extractor filters. Depending on your output and the materials being cut, your fume extractor filters may need to be replaced as often as every month.

QUARTERLY

Change water in cooling system. This will keep your tube safe from unwanted debris, mold or evaporation. A chiller system is enclosed and will stay relatively clean and undisturbed, but it is good practice to check and change the water as needed.


MIRROR ALIGNMENT TEST

The CO2 and Alignment Laser beams were matched to follow the same path through the mirrors and fire down the center of the focusing head. Before starting your first job, check to see that the alignment has not been altered. This checklist presents a "best practice" for each time you run a project. by the shipping process.



1. Open the Safety Lid: You will need to access the interior of the machine.
2. Place TEXTURED Paper: Take a small piece of thermal paper and place it over the focal lens under Mirror.
3. Position Laser Head: Move the laser head into the upper left corner of the workspace.
4. Close Safety Lid: Safety measures should make it impossible to fire the laser with the safety lid open. Regardless, never attempt to fire the laser with safety lid open.



5. Test Fire the Laser: Press the  Button on the Panel.
6. Repeat Test Fire in Other Three Corners: Without removing the thermal tape, repeat firing the laser once in each of the other corners of the machine (Upper Right, Lower Right, and Lower Left).
7. Check Results: With the fourth corner test fire complete, open the lid and remove the TEXTURED Paper. The four burn marks should overlap each other perfectly (see illustration). If they do not overlap perfectly, you will need to align the mirrors.

THANKS for Reading!