Product Description
SUP22C (V2.0 version)

Wuxi Super Laser Technology Co., LTD

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Copyright Statement

Update Record

Update Time	Update Content	Hardware version	Software version	Screen version	Version
2022.12.28	Add endpoint optimization functionality	V5.8	639	550	
2023.1.6	Software compatibility optimization	V5.8	640	551	
2023.3	Software compatibility optimization	V5.8	641	552	
2023.3	Software compatibility optimization	V5.8	642	552	
2024	Update 6.3 Hardware	V6.3	643	554	
2024	Power detection optimization	V6.3	644	554	
2024.7	Laser-enabled and logic optimization for light-off asymptotic. Protocol Extension	V6.3	645	554	
2024.9.9	Structural optimization	V6.3	645	554	
2025.8.1	Wiring diagram update	V 6.3	645	556	V 2.0

I. Notes

This product is a accessory for laser processing equipment and is applied in the field of metal material processing. According to the relevant regulations, this product meets the basic safety standards for all kinds of electrical products that are handheld, portable and fixed for indoor and outdoor use. According to actual requirements, it is recommended that each product have an operating area of 2 to 10 square meters (indoor height is recommended to be more than 3 meters).

Warnings! Please read all safety warnings, instructions, illustrations and specifications in this manual. Failure to follow all of the instructions below may result in electric shock, fire, or any other serious injury!! This product is only intended for use in professional industrial fields and must be used by professionals! No use by people without professional qualifications!

1 Transport and storage requirements

Handheld laser cleaners should be able to function properly under the following environmental conditions.

(1) Ambient air temperature range:

During transport and storage: -25°C to +55°C.

(2) Air relative humidity:

Not more than 70 percent at 40°C;

No more than 90 percent at 20°C.

(3) No more than normal amounts of dust, acid, corrosive gas or substance in the surrounding air, except for substances produced during the cleaning process.

(4) No obvious vibration or shock.

2 Description of possible hazards

2.1 Machine hazards

① Pinching or other secondary hazards caused by fastening structures.

② Injury from falling equipment or other secondary hazards.

2.2 Electrical hazards

① Electric shock or other secondary hazards caused by leakage of the equipment power supply.

② Electric shock or other secondary hazards caused by static electricity generated during the operation of the equipment.

2.3 Thermal hazards

① Heatstroke, dehydration or other secondary hazards caused by the large amount of heat generated by laser processing.

② Scalding of personnel, environmental fires or other secondary hazards caused by high-temperature materials, residues and splashes produced by laser processing.

2.4 Radiation hazards

① Skin damage, retinal damage or other secondary hazards caused by direct laser exposure or secondary exposure after reflection.

② Hazards of electrolytic plasma produced by laser energy or other secondary hazards.

③ Secondary radiation or other secondary hazards caused by material decomposition and stimulated radiation resulting from laser irradiation.

2.5 External interference hazards

Abnormal operation of the product caused by external factors may lead to equipment failure and dangerous conditions.

The external environment refers to:

① Temperature
② Humidity
③ External shock/vibration
④ Steam, dust or gases in the environment
⑤ Electromagnetic interference
⑥ Interruption/fluctuation of the original power supply
⑦ Lightning strike
⑧ Insufficient hardware/software compatibility or completeness
⑨ External communications do not comply with the communication protocol.

2.6 Hazards in confined Spaces

Hazards that may result from using handheld laser processing equipment in confined Spaces:

① An increase in the concentration of harmful substances in the space
② Excessive concentrations of process gases (argon, nitrogen, etc.) in the space
③ Hypoxia
④ Enhanced current
⑤ Temperature rise
⑥ Radiation hazards caused by direct or diffuse reflection of the laser.

2.7 Hazards from working at heights

① Hazards of falling objects.
② Hazards of personnel falling.

3. Preventive measures

In response to the above hazards, in order to ensure safe production and normal operation of the product, the following safety signs are posted on the complete machine product, clearly informing all personnel using, maintaining and approaching the product of the following safety matters and must take the following safety measures.

Warnings! Please read all safety warnings, instructions, illustrations and specifications in this manual. Failure to follow all of the instructions below may result in electric shock, fire, or any other serious injury!!

3.1 Production operating environment

① Special laser cleaning areas should be designated for product use.

② Flammable and explosive items should not be placed around the product to avoid potential safety hazards.

③ The product should be kept away from bad weather conditions such as fog, strong wind, lightning, rain, snow and hail when working outdoors.

④ Good ventilation and visibility (sunlight or light) should be maintained when the product is working indoors.

⑤ Dust, acids, alkalis, corrosive gases in the working environment of the product should not exceed normal levels.

⑥ Temperature range of the product working environment: 10 to 40°C, humidity range ≤70%.

⑦ The working environment of the product should avoid obvious vibration and shock.

3.2 Engineering protection measures

① Isolation fences should be placed around the laser cleaning area. The fences should be able to withstand a certain amount of laser energy to prevent the laser from shining outside the area.

② No other person should enter the laser cleaning area without the operator's authorization.

③ This product is powered by 220V AC. The applicable range is 220V±5% AC 50/60Hz. The supply voltage should be stable without shock. Please pay attention to electrical safety when using to avoid the risk of electric shock.

④ To ensure the normal operation of the product and to prevent static electricity damage and leakage of the product, the product should adopt safety grounding measures, that is, connect the easily conductive parts to the protective (grounding) wire in the fixed wiring of the product, so that the easily accessible conductive parts will not become live parts when the basic insulation fails; Additional safety measures (such as double insulation or reinforced insulation) may be added as appropriate, or separate grounding may be provided;

Within a 2-meter radius centered on the individual within the operator's working area, there must be an emergency stop switch control device.

3.3 Personal protective measures

Warnings! The operator must be a professional who, in addition to being familiar with the product and the associated cleaning system, must also be familiar with the properties of the processed material, be familiar with possible side effects, be capable of assessing health risks, and ensure effective preventive measures.

① Individuals should wear professional laser protective clothing and protective gloves.

② Individuals should wear laser protective glasses and face masks corresponding to the power and wavelength.

3.4 Protective measures for product maintenance

① When replacing vulnerable parts, make sure the product is powered off to avoid light exposure.

② The control box of this product does not contain accessories that require user operation. Any installation, maintenance or disassembly of this product should be carried out at the designated repair point when the power is off. Please contact your local dealer.

3.5 Other Precautions

① Warning! The product is compatible with lasers of wavelengths 1080nm and near, a band that is invisible and whose radiation is hard to detect before it has a direct effect, requiring special attention! Operators must wear all protective gear, work area must be protected as required, and no other personnel are allowed to enter the work area!

② The energy output of the laser is very high in an instant. Do not point the light outlet at people or other objects when it is working, placed or idle.

③ Even if the type 4 laser does not directly shine on the skin and eyes, it will indirectly shine on the skin and eyes due to the diffuse reflection of the material, which will still cause irreversible damage. Operators must wear protective equipment such as glasses and protective clothing.

④ When the laser shines on a smooth surface, it causes specular reflection, especially when processing high-reflectivity materials such as copper and aluminum. When processing materials, the Angle of reflection can also change due to the variation of the molten pool. Operators should be fully aware of the possible angles of reflection to avoid laser reflection from endangering personnel and equipment.

⑤ The gas around the molten pool, when exposed to the high-energy laser, forms electrolytic plasma. The splashing waste and exhaust gas produced by the laser on the material can also pose a threat to personnel. Operators must wear protective equipment such as face masks.

⑥ During work, the emergency stop switch control device should be placed within 2 meters of the operator's working area with the operator as the center.

⑦ When working at heights, the operator should wear a safety rope, helmet, etc. and take measures to secure the equipment to prevent it from falling.

When working indoors or in confined Spaces, adequate ventilation measures should be maintained to prevent the accumulation of harmful substances. Maintain adequate visibility and avoid exposure to strong light. Appropriate measures need to be provided to remove smoke, exhaust gases, etc. that may be produced from the processing area, which need to be sufficiently purified before being discharged into the atmosphere far from people.

3.6 Safety signs

The following safety signs must be fully understood and used.

Signs	Name
	Movable fire zone
	Warning! Be safe
	Beware of hot surfaces
	Do not wear synthetic fiber clothing
	Flammable materials are prohibited
	Laser radiation avoid direct or scattered exposure to eyes and skin Category 4 laser products
	Laser window Avoid exposure to laser radiation coming out of the window
	Protective goggles must be worn

	Beware of lasers
	Beware of ionizing radiation
	Danger！High Voltage
	Must be grounded
	Must unplug
	Do not close the circuit

II. Product Overview

This product belongs to laser cleaning equipment accessories and is used in the field of metal material processing, including common metals such as carbon steel, stainless steel, aluminum, copper, and other metals that can absorb 1064 band laser.

For continuous lasers with a laser power of 3000W and below and a wavelength of 1064±10nm.

Cooling is water cooling.

It is not commonly used for processing non-metallic materials such as wood, stone, plastic, composites, etc.

Not suitable for underwater work. For detailed operating conditions, see [Production Operating Environment].

This manual includes a general description of the basic functions, installation, operation, and maintenance of the SUP22C series of handheld laser cleaning head products.

2.1 Description of the gun body

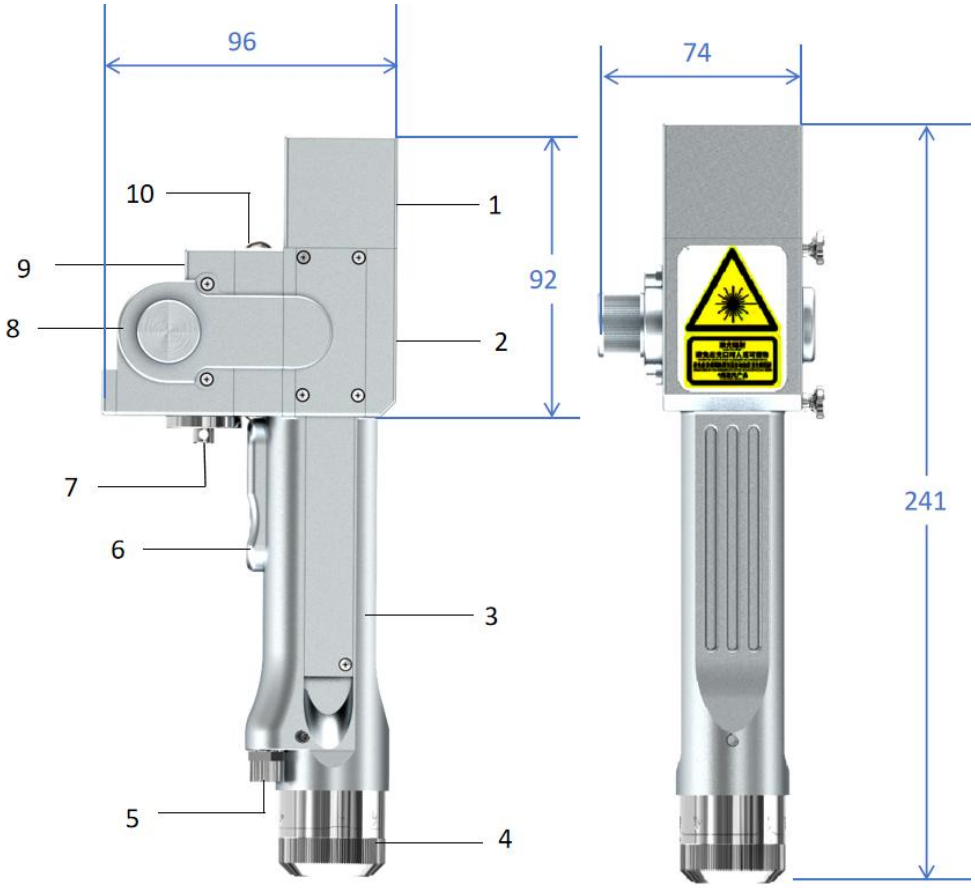

Figure 2.1 SUP22C body

1- Motor	2- Mirrors	3- Collimating mirror	4-QBH
5-Water & Gas Circuits	6- Switch button	7- Air deflector	8- Safety lock
9- Protective goggles	10- Focusing lens		

22C Air Supply mode Description: The SUP22C has three air supply modes, namely coaxial air supply mode, side-axis air supply mode, and simultaneous air supply mode. Different air supply modes can be switched between the three modes by rotating the knob. In coaxial blowing, the direction of the air is the same as the direction of the light output; In paraxial blowing, the air direction intersects the light direction; When blowing simultaneously, the direction of the air is the same and intersects with the direction of the light, blowing in both directions simultaneously. The illustration is shown in Figures 2.2, 2.3, 2.4 below:

Figure2.2Coaxial Blowing Mode Figure2.3Paraxial blowing Mode Figure2.4Simultaneous Blowing Mode

2.2 Product Features

● Basic features of the product: Self-developed control system and structural design, suitable for various cleaning requirements within 3000W, multiple safety alarms set, simple and flexible operation.

● More stable whole machine: All parameters are visible, real-time monitoring of the whole machine status, early avoidance of problems, convenient troubleshooting and resolution of faults, ensuring stable operation of the handheld cleaning head.

● Unique air knife design: The unique outlet "air knife" design can greatly increase the flow rate of the protective gas at the light outlet to better prevent lens contamination.

● Controllable parameters with high repeatability. Stabilize the mechanical structure and lens state. As long as the laser power is stable, the process parameters must be repeatable, greatly improving efficiency.

2.3 Operating environment and basic parameters of the product

The operating environment requirements and main parameters of the SUP22C handheld laser cleaning head are shown in Table 2.1

Table 2.1 Operating Environment Requirements and Basic Parameters

Supply voltage (V)	220V±5% AC 50/60Hz
Operating ambient temperature (°C)	10 to 40°C
Working environment humidity (%)	< 70
Cooling method	Water cooling
Applicable wavelengths	1064nm (±10nm)

Applicable power	≤3000W
Collimating mirror	D16-F60
Focusing mirror	D20*T3.5- (F400/F600/F800)
Protective goggles	D30*T5
Air flow rate	≥15L/min
Focus vertical adjustment range	±10mm
Weight	0.7 kg
Compatible laser	The beam is collimated to φ≤10mm

III. Product accessories and installation

3.1 Unpacking list

Taking the standard version as an example, the product factory list is shown in Table 3.1. The actual product may differ from Figures 3.1, 3.2, 3.3. Please refer to the specific order.

Table 3.1 Factory Configuration List of Products

SUP22C packing list				
Serial Number	Material code	Name	Specifications	Quantity
1	A01030007	Handheld laser cleaning head	SUP22C	1
2	A05010010	Homemade laser cleaning system	SUP-LCS-C V6.3	1
3	K01016201	Multifunctional system connection line	22C-d	1
4	K01030001	Multifunctional system connection cable	C-10 meters	1
5	C04010006	Display screen	SUP-DW128 HJT	1
6	K04010002	A 1-meter line for the display screen	1M	1
7	C03010001	Switching power supply	HF55W-D-L (HF±15V)	1
8	C03020001	Switching power supply	HF100W-SE-24 (HF24V)	1
9	D01020006	Protective lenses	D30T5	5
10	D03010007	Focusing lens	D20T3. 5 f400	1
11	D02010008	Collimating lenses	D20T5F60	1
12	B0323014A	Red light correction plate	22C-405	1

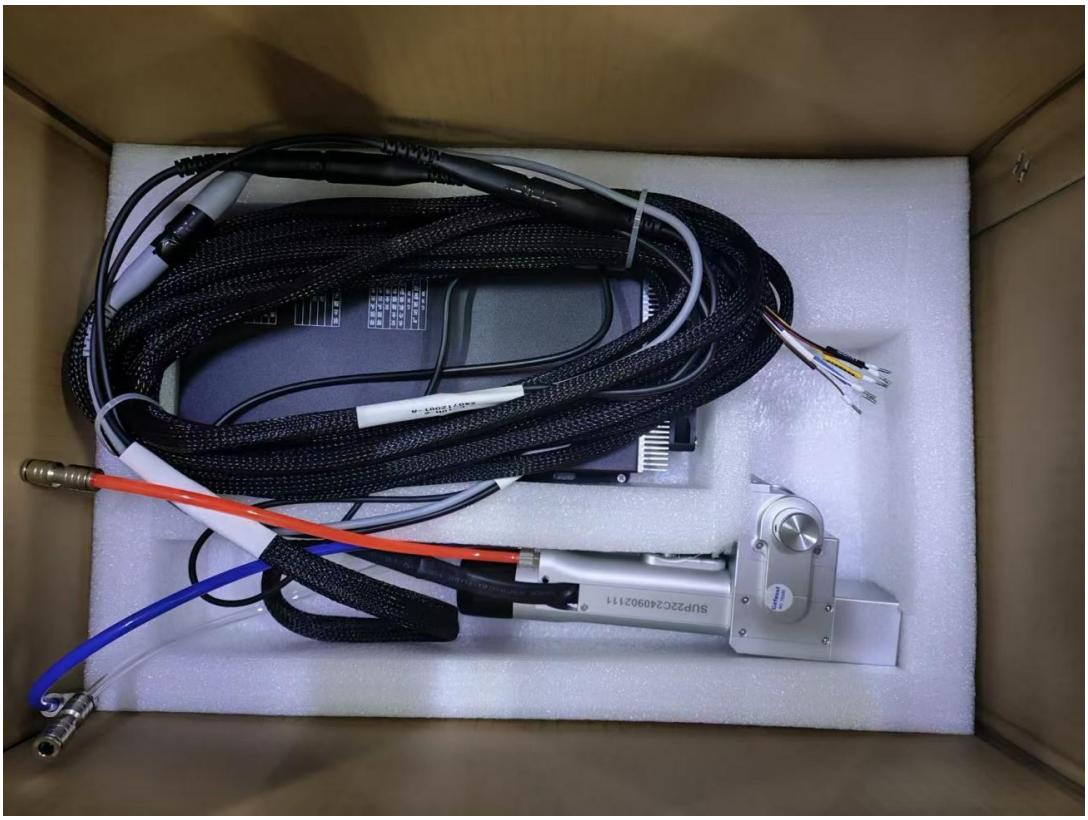

Figure 3.1 Packaging the first layer

Figure 3.2 Packaging the second layer

Figure 3.3 Second layer of packaging

3.2 Control Box Wiring and Interface Definition

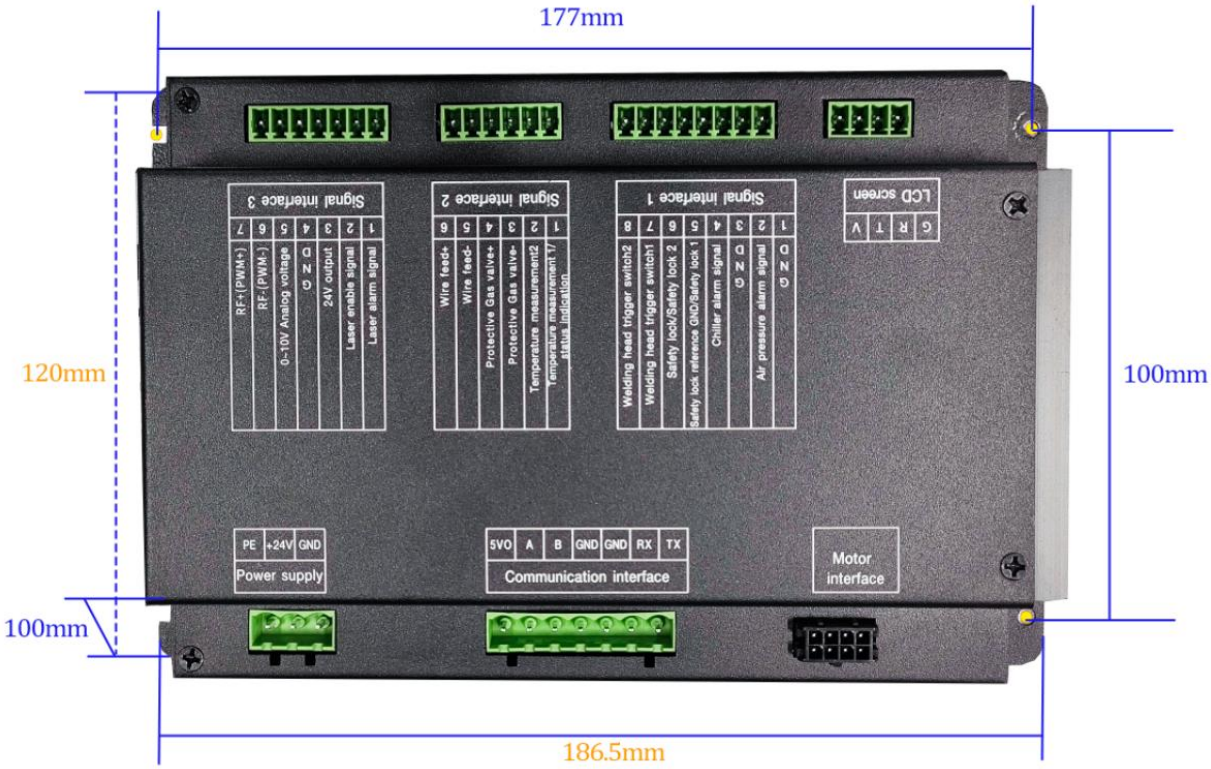

Figure 3.4 Control box

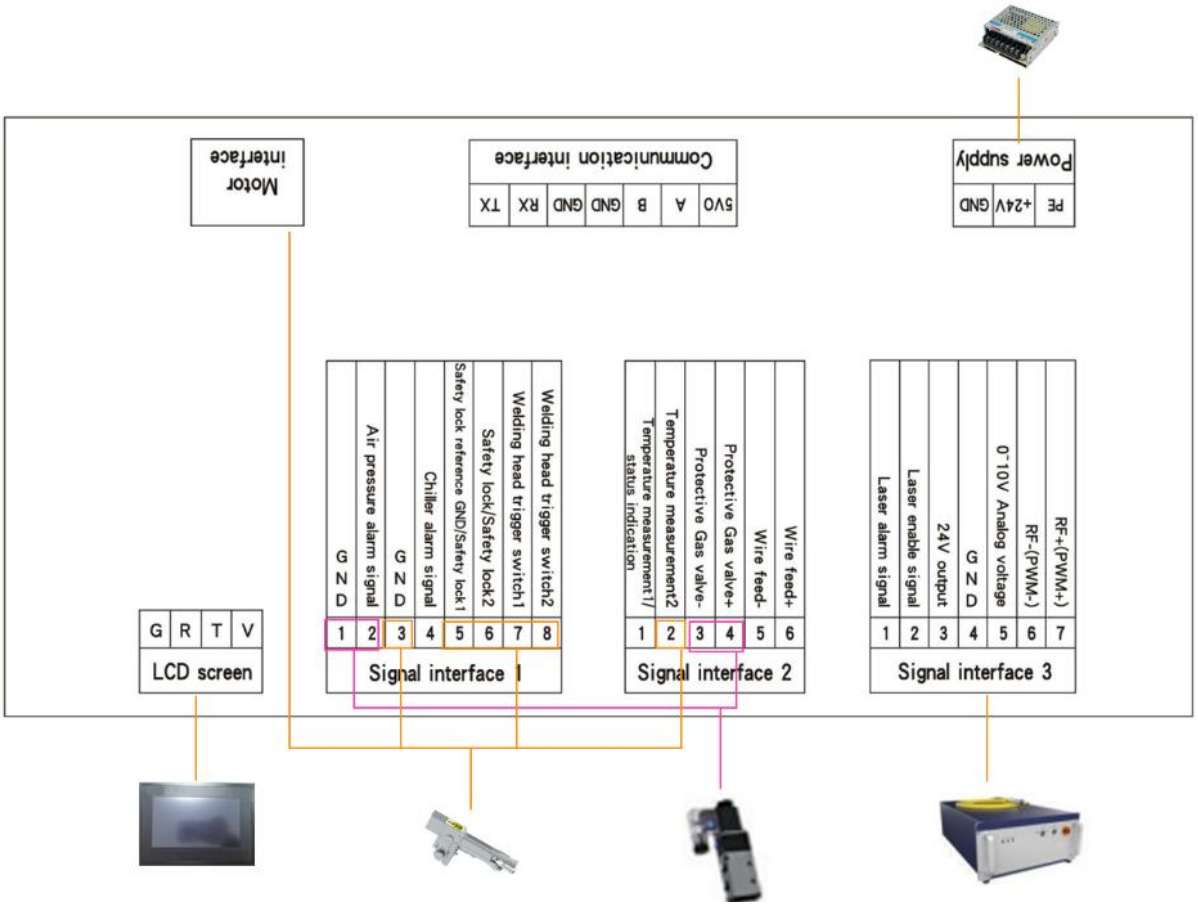

Figure 3.5 Wiring diagram

① To avoid abnormal power consumption of the product, the ground wire of the switching power supply must be effectively grounded! The product casing must be grounded!

② The ICONS used in Figure 3.5 refer only to a certain type of product and not specifically to the corresponding product.

3.2.1 Control Box - [Power Supply]

The Power Supply end uses a 3P interface (with terminals included randomly), please use the 24V switching power supply included randomly.

Note: The switching power supply must be grounded! The control box signal [power] interface is shown in Table 3.2.

Table 3.2 Description of Power Interface Functions

Power Supply			
Pin numbers	Signal Definition	Signal type	Feature Description
1	PE	Ground wire	Protective wire
2	+24V	Input	Connect to +VO of the 24V switching power supply
3	GND	Reference ground	Connect to a 24V switching power supply -VO
Note: The device must be effectively grounded. 1. Make sure the ground wire is conductive, there are no loose connections or open circuits; 2. The ground wire itself is stable and not			

electrified (that is, the AC and DC voltages between the live wire and the neutral wire and the PE wire are both less than 10V, preferably maintained at 0V).

3.2.2 Control Box - [LCD screen]

The wiring of the LCD screen is included. Just plug it into the corresponding interface. [LCD Screen] Interfaces are shown in Table 3.3.

Table 3.3 Description of Interface Functions of the LCD Screen

LCD screen		
Pin numbers	Signal Definition	Feature Description
1	G	White wire, terminals at both ends [4P-1] - [6P-G], 24V power negative and cable shielding layer.
2	R	Black wire, terminals [4P-2] -- [6P-R], 232 signal.
3	T	Brown wire, terminals [4P-3] -- [6P-T], 232 signal.
4	V	Blue wire, two terminals [4P-4] -- [6P-V], 24V power positive.
Note: The full screen cable comes with it, plug and play.		

3.2.3 Control Box - [Signal Interface 1]

[Signal Interface 1] The interface is shown in Table 3.4.

Table 3.4 [Signal Interface 1] Interface Function Description

Signal Interface 1		
Pin numbers	Signal Definition	Feature Description
1	GND	For the air pressure alarm signal input port, if you need to enable it (wiring is required), please set the "air pressure alarm level" on the display screen Settings page to be consistent with the actual alarm level of the air valve in use.
2	Air pressure alarm signal	
3	GND	For the water tank alarm signal input, if you need to enable (wiring required), set the "Water chiller alarm level" on the display Settings page to be consistent with the actual water chiller alarm level in use.
4	Water chiller alarm signal	
5	Lock the reference ground safely	Six-core wire - yellow wire (superscript safe lock reference)
6	Safety lock	Six-core wire - blue wire (supermarked safety lock)
7	Clean the head light switch 1	Six-core wire - black wire (with light switch 1 marked on it)
8	Clean the head light switch 2	Six-core wire - brown wire (with light switch 2 marked on it)
Note: Only when there is no alarm and the safety lock and switch signal is displayed in green will there be a normal output signal at subsequent output ports.		

3.2.4 Control Box - [Signal Interface 2]

Table 3.5 [Signal Interface 2] Function Description

Signal Interface 2		
Pin numbers	Signal Definition	Feature Description
1	Status indication/Temperature measurement 1	Suspended, not connected
2	Temperature measurement 2	Temperature measurement with a protective lens
3	Protective air valve -	Air valve open: Protective air valve + output 24V; Valve closed: Protective valve + no output.
4	Protective valve +	
5	Wire feeding -	Suspended, not connected
6	Wire feeding +	

3.2.5 Control Box - [Signal Interface 3]

Signal Interface 3 uses the 7P interface. Detailed functions are shown in Table 3.6:

Table 3.6 Function Description of Signal Interface 3

Signal Interface 3		
Pin numbers	Signal Definition	Feature Description
1	Laser Anomaly signal	To enable (wiring required), set the "Laser Alarm level" on the display Settings page to be consistent with the alarm level of the actual laser in use.
2	Laser output enable	Enable +, connect the laser to enable +.
3	24V output	24V output, directly output 24V voltage upon power-on
4	GND	For common ground (reference ground for pins 1/2/3/5)
5	0 to 10V analog quantity	Analog output (default 0-10V analog voltage)
6	RF- (PWM -)	PWM - Modulated signal
7	RF + (PWM +)	PWM + Modulates the signal

3.2.6 Control Box - [Communication Port]

Table 3.7 [Communication Port] Interface Function Description

[Communication Port]		
Pin numbers	Signal Definition	Feature Description
1	5V0	Normal 5V output, no need to connect.
2	A	RS485 signal A, used for communication with the host computer, is usually not connected
3	B	RS485 signal B is used for communication with the host computer and is usually not connected
4	GND	Signal ground
5	GND	Signal ground
6	RX	RS232_RXD. When communicating with the Wire feed, connect [TXD].
7	TX	RS232_TXD. When communicating with the Wire feed, connect to [RXD].

3.3 Gun body interface

The gun body interface, as shown in Figure 3.6, mainly includes the gas line interface, QBH, and system connection line interface.

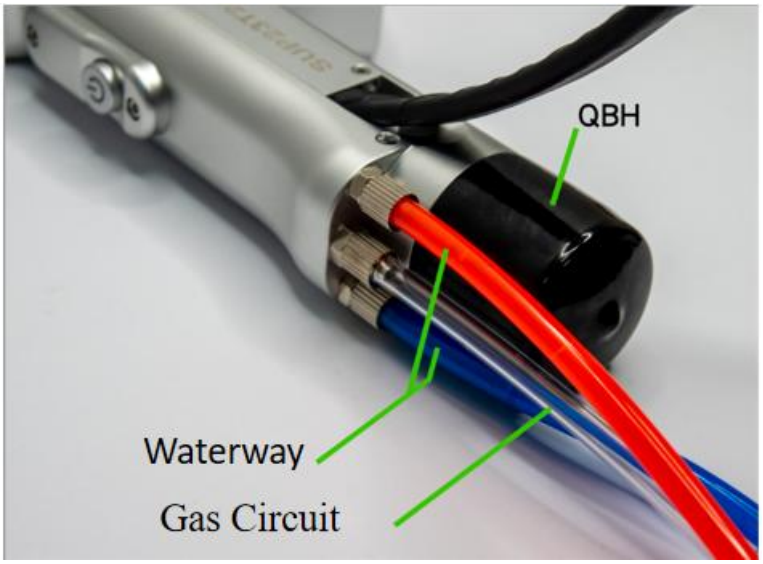

Figure 3.6 Diagram of the cleaning head interface

3.3.1 Fiber optic head connection

Product [QBH] interface is suitable for most industrial laser installations. Note:

① Keep the device clean;

② Install the fiber head horizontally with [QBH];

③ According to the [Lock] and [Unlock] marks in Figure 3.7, rotate and release QBH first, insert the fiber head and then lock it. After locking, the fiber head is placed inside the QBH without shaking.

Figure 3.7 QBH [unlocked] and [Locked] status

IV. Interface Operations

4.1 Home Page

Switches used to display the current process, alarm information, and adjust the main output signal, as shown in Figure 4.1.

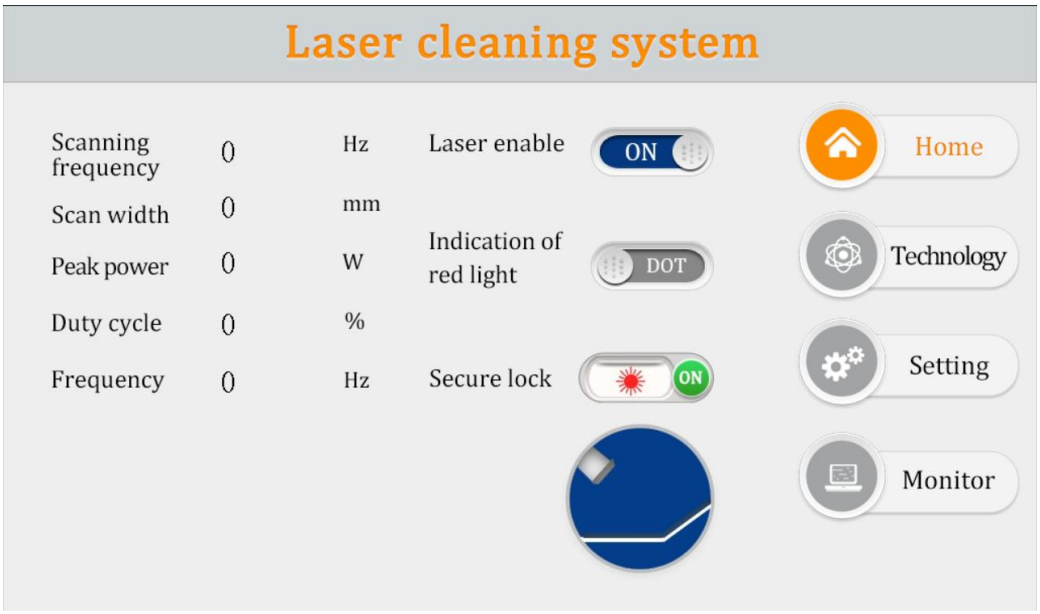

Figure 4.1 Home Page

① [Laser enable - On/Off] : Controls, indicates whether to output [Laser output enable signal].

② [Indicating red light - Dot/Line] : Controls, indicates whether the galvanometer motor swings, adjusts the red light to [Dot] or [line] without affecting the presence or absence of the red light.

③ [Secure lock] : When the gun body "Secure lock" is opened, it shows "ON" and can emit light normally; when it is closed, it shows "OFF" and cannot emit light.

4.2 Process Page

Figure 4.2 Process Page

① [Scan speed] : The linear speed at which the focused spot moves, affecting the cleaning quality. For example, for a scanning width of 3mm, it is usually set to 600-1200. An increase in the cleaning speed leads to an increase in the scanning speed.

② [Frequency]: The number of cycles that the focused spot scans back and forth within one second, affecting the precision or fineness of the cleaned surface. It is usually set at 30 to 100HZ.

③ [Scan Width] : The theoretical width corresponding to the spot, controlling the spot size. Adjust according to the size of the weld.

④ [Peak power] : The maximum power output, or processing power, cleaning power.

⑤ Duty cycle, pulse frequency: Usually set the duty cycle to 100% and the pulse frequency to 2000. The equivalent processing power can be changed by adjusting the duty cycle and pulse frequency according to the characteristics of the laser, but usually no adjustment is made.

⑥ [End point optimization] : Range -30 to 30 can eliminate the uneven light output at both ends of the cleaning trajectory, with different scanning frequencies corresponding to different optimal parameters. Default is 0, adjust to the ideal state as needed.

4.3 Settings Page

Figure 4.3 Settings Page

The page shown in Figure 4.3 is used to set the factory parameters, including the product's power and alarm level, etc.

① [Laser Power] : Based on the actual laser.

② [Open gas delay]: Gas is released in advance before the light is emitted.

③ [Off gas delay]: After the light is turned off, the gas-off is delayed.

④ [Laser center offset]:[-]indicates left shift,[+]indicates right shift.Used to adjust the spot to be centered.

⑤ [Laser starting/ laser off Power][Laser ON/Laser Off Progressive Time]:As shown in Figure 4.8, [Laser on progressive time T1]represents the time it takes to increase from [laser starting power N1]to[peak power N3], and [Laser off progressive time T2]represents the time it takes to decrease from [peak power N3]to[Laser off power N2].

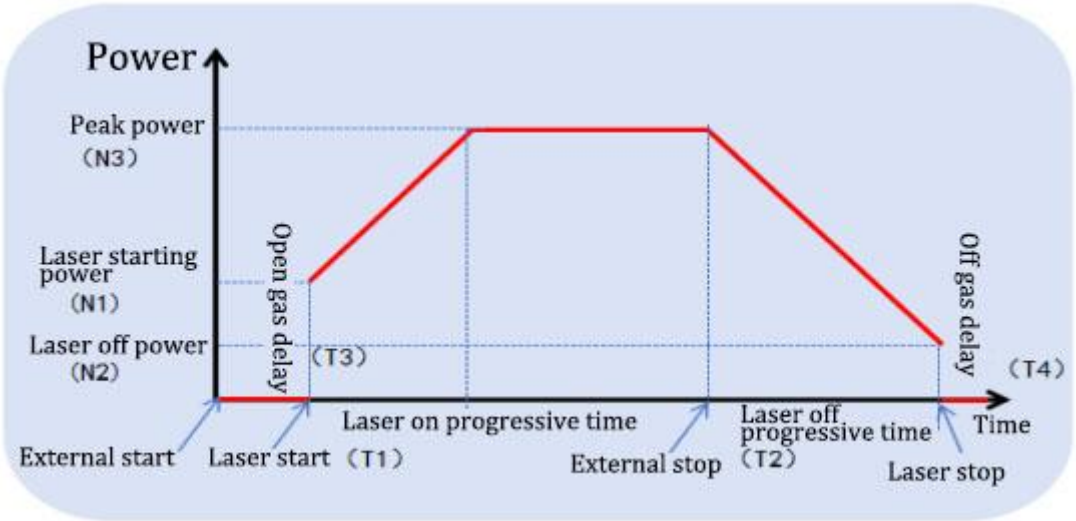

Figure 4.4 Power-to-time relationship

⑥ [Temperature threshold] : Up to 70°C. When this value is set to 0, no temperature alarm is detected.

⑦ [Alarm Level - High/Low]: Set to low when not in use, depending on the external product Settings.

⑧ [Trigger Settings - Click/Double-click]: In clean mode, control the trigger mode. It is usually set to [Double-click].

⑨ [Gun size - Focal Length - Width] : Switch the maximum scan width when using different focusing lenses.

4.4 Monitoring Page

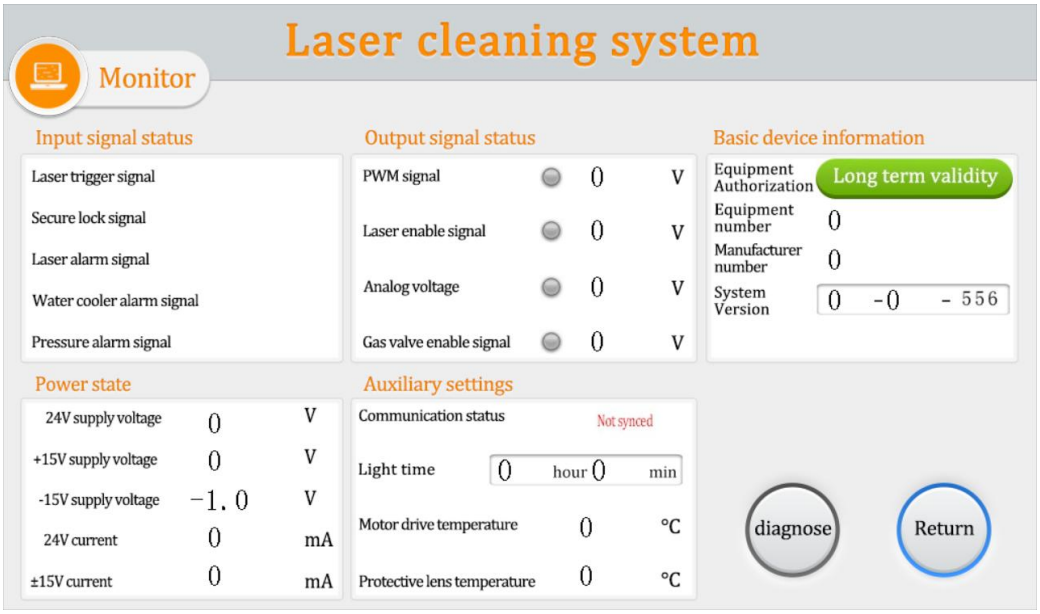

Figure 4.5 Monitoring Page

The page shown in Figure 4.10 shows the actual machine information monitored.

① Among them, [Input signal transition] [Output signal status] [Power status] are real-time monitoring signals used to determine whether the product is working properly.

② [Basic Product Information] :

- [Product Authorization] can be clicked for product encryption.
- [Product Number][Manufacturer Number][System Version] are simply displayed information to be provided to technicians in after-sales work.

③ [Assisted status] :

- [xx temperature] is the measured temperature. The system alarms when it exceeds the [xx temperature alarm threshold] corresponding to the Settings page.
- [Ground Lock jitter] is the compatible interruption time for poor contact of the [safety lock] signal, ranging [0 to 300ms].

4.5 Diagnostic Page

Figure 4.6 Diagnostic Page

The page shown in Figure 4.6 is the laser cleaning system diagnostic page. This mode can only perform [output signal] output, which is used to determine whether the output signals of the main control board are normal in a safe situation. This mode does not produce light.

V. Daily maintenance of the product

1. It is recommended that users change the water in the chiller once a month to prevent clogging of the water pipes inside the gun body. The water quality should be pure water or distilled water, and antifreeze should be added in low-temperature conditions.

2. Maintenance and replacement of the lenses should be carried out in a relatively clean on-site environment. When performing open operations such as opening the protective lens, focusing lens compartment cover, and pulling out the lens holder, protective measures should be taken (cover with masking tape). The replacement methods for different lenses corresponding to all gun types can be found in the wechat mini-program → Super Laser → Lens Installation.

3 Handle with care when in use. For complex production environments, please clean the dust promptly.

VI. Common Product Issues and Solutions

Warnings! All power must be cut off before dealing with any problem to avoid any danger!!

Repair and maintenance of this product must be carried out by professionals! Do not operate without training! If you have any problems, contact your dealer and have a professional handle it!

Once any appearance damage occurs to the product, it will not be repaired and should be scrapped directly.

Common alarm instructions and solutions to problems are as follows:

Problem items	Phenomena	Solutions
Temperature alarm, indicating that all kinds of temperatures are too high	The Home prompts that the temperature of XXX is too high	For general lens temperature alerts, usually first check if the lens is damaged and replace the damaged one. If the lens is normal, you need to directly block this alarm on the Settings page. Set the corresponding lens temperature alarm threshold to 0 on the Settings page and save it.
Chiller/laser/air pressure alarm	The Home pop-up window shows chiller/laser/air pressure alarm	Level alarm logic: The system will compare the wiring method of the corresponding product with the set level on the Settings page and alarm if they are different. Usually, an alarm occurs because the alarm level is set incorrectly. Just change the corresponding alarm level. If an alarm occurs when an alarm signal is connected and the alarm is triggered regardless of how it is set, unplug the alarm signal line and set it to low level.
Screen issue	The screen doesn't light up/the screen doesn't respond when clicked	If the screen does not light up, make sure the controller is powered on. Check whether the four-core wires of the controller and the screen are connected correctly and whether the 24V voltage at pins 1 and 4 is normal. If clicking doesn't work during normal use, check if the whole machine is overheating. If clicking fails to input, check if the four-core wires of the controller and the screen are properly connected, and if pins 2 and 3 are functioning properly. See 3.2.2 Control box display end. If a new device has no response when clicked, it may be a system version mismatch. Re-flash the program using the SD card. For the specific version, please inquire with our company.

Light output	No light output	Check if there are warning prompts ON the home page and if the laser enable is ON; Check if the trigger signal and safety lock signal on the monitoring page are displayed in green; Check if the monitoring page's PWM, laser enable, and analog output are functioning properly. If all of the above states are normal, check the laser for abnormal alarms.
	Suddenly stop emitting light while working	Check if the safety lock and other alarms on the monitoring interface are functioning properly.

For more problem-solving solutions, please refer to the "Problem Handling" page of the wechat Mini Program

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