

**User Manual  
of  
Nd: YAG Laser**

**Model: ND-YAG PRO X**

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# Chapter 1 User Information

Before using the machine, the operator must read the user manual carefully and check whether the various functions of the equipment are working properly to avoid unnecessary damage. If the operator need to connect the device to the peripheral device, the operator must read the instruction manual of the peripheral device in detail.

## 1.1 Safety warming

**Warning:** Do not approach active HF surgical equipment with high EMI intensity and RF shielding chambers of ME systems used for magnetic resonance imaging.

**Warning:** Do not put the machine in the place where it is difficult to disconnect the power supply, so that the machine can be turned off safely.

**Warning:** Do not use this device adjacent to or stacked with other devices. Otherwise, improper operation may occur. If necessary, observe the device and other devices to confirm the normal operation.

**Warning:** Use accessories, transducers and cables that not specified or provided by the manufacturer of this equipment may increase electromagnetic radiation or reduce electromagnetic immunity of this equipment and lead to improper operation.

**Warning:** Portable RF communication equipment (including antenna cables and peripherals such as external antennas) should be at least 30 cm (12 inch) away from any part of the ND-YAG laser therapeutic apparatus, including cables specified by the manufacturer. Otherwise, the device performance may deteriorate.

**Note:** The emission characteristics of this equipment make it suitable for industrial areas and hospitals (CISPR class 11 A). If used in a residential environment, which typically requires CISPR 11 class B, this device may not provide adequate protection for RF communications services. Users may need to take mitigation measures, such as repositioning or redirecting the device.

**Warning:** During the equipment use, the equipment may cause risks due to mutual interference and it may also cause external electromagnetic interference to other

equipment.

**Warning:** It is forbidden to modify the equipment without authorization. The maintenance personnel of the equipment need to pass the special training of the company.

**Disclaimer:** The manufacturer can provide the schematic diagram for maintenance upon request.

## 1.2 Safety measures

During emergency situations, tap the emergency stop switch, turn off the device.

## 1.3 User training

Only the people who had been professional trained to understand the treatment effect and know the potential risks then can use the device. The operator must read the user manual carefully before operating the device. During treatment, treatment rooms should be marked “non-related personnel are forbidden” words. Before the treatment, the operator must be informed of the possible risks during treatment. The success of treatment depends on the operator's experience and understanding of professional knowledge. During treatment, the operator must wear protective glasses, treated subjects wearing safety goggles, do not wear glasses which cannot meet the security needs.

## 1.4 Electro mechanical safety of equipment

Device power supply used 100~130VAC(50/60Hz) or 210~240VAC(50/60HZ) single-phase power supply, equipment by three line contact with the ground, the ground must ensure reliable grounding. Only authorized personnel can repair the device, otherwise it will cause warranty invalid.

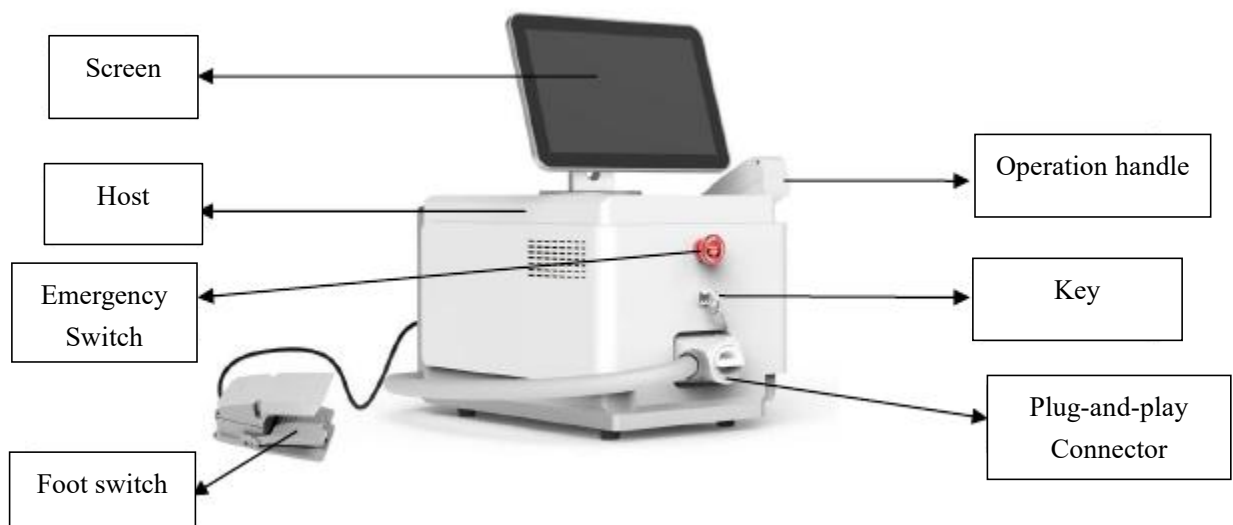
**Notice:** In the operating range, avoid to use flammable substances, such as acetone, alcohol. When using alcohol-based products to disinfect equipment, make sure that the alcohol evaporate completely before device operation.

## Chapter 2 Product Introduction

### 2.1 Product description

Model ND-YAG Pro X is a kind of laser pigment therapy device. It works by “light lasting”. Laser emits high-energy in a moment, The pigments particles absorb the laser energy, then rapidly expanding burst, part of the pigments burst exploded into tiny nibs excreted out of the body, another part of pigments was swallowed by human body macrophages and excreted through the lymphatic system, so that reached pigment faded and even the complete elimination purposes.

### 2.2 Product structure and properties



Picture 2-2-1

As the picture 2-2-1 shows, ND-YAG Pro X mainly composed by host, the operation handle and foot switch. The operation handle is the treatment handle.

#### Host

For a device, main frame is the carrier of the other product components. ND-YAG laser

machine main frame generally consists of the following components: power module, control module, display module:

## **Power Module**

Power Module: The entire device system power supply, the main power source of the device working.

## **Control Module**

Control Module: The operation of the instrument is mainly completed through the control module, which mainly includes the following parts:

Key Switch: Start the device so that the device connected to the power supply.

Emergency stop switch: When an emergency fault occurs or operator error, press the power switch to enable the device to stop working, to protect device and people.

## **Display Module:**

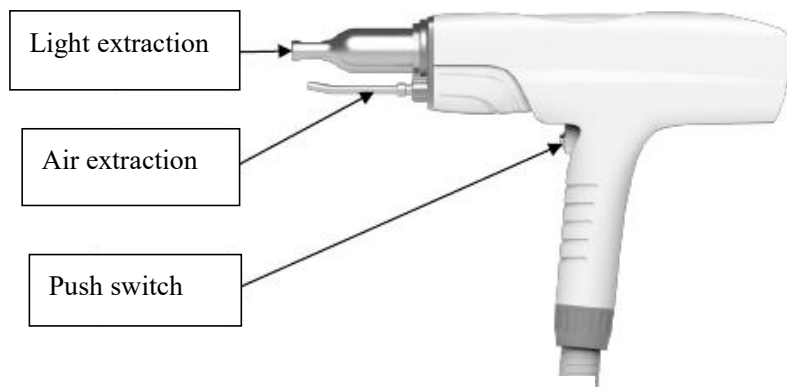
Control screen: As man-machine interface, it can display setting of operation and adjust system parameters.

## **Foot switch:**

Foot switch: Depresses the foot switch, the device begins to work. Lift up the foot switch, the device stops working.

### **2.2.1 Operation handle**

The operating handle is the main body of the operation and is the applied part of the machine, which includes a bellows and a treatment head. The bellows are equipped with power cables and data cables. The treatment handle is equipped with a control switch, as the picture 2-2-2 shows:



Picture 2-2-2

The operating handle is the main body of the operation and is the applied part of the machine, which includes a bellows and a treatment head. The bellows are equipped with power cables and data cables. The treatment handle is equipped with a control switch, as the picture shows:

ND-YAG have three kinds laser wavelength: 1064nm, 532nm and 1320nm, 1064nm wavelength which is mainly used on the skin to get rid of blue, black pigmentation, 532nm wavelength mainly used to get rid of the skin red, brown pigmentation. The laser head of the 1064nm wavelength laser treatment handle is circular, the laser head of the 532nm wavelength laser treatment handle is square and the laser head of the 1320nm is honeycomb shaped for skin whitening.



Picture 2-2-3



## 2.2.2 Product technical parameters

Table 2-2-1 Product technical parameters

Technical Parameters	Data
Power Supply Voltage	100V~130V/50-60Hz
Power	500W
Wavelength	1064nm/532nm/1320nm
Max. Energy	1200mj
Laser bar size	Φ5mm
Light source	Xenon Lamp
Air volume	9L/min
Cooling Power	15W
Cooling Temperature	5°C
Frequency	1~10Hz
Spot size	2~5mm
Screen	13.3inch OGS Android screen
Dimension	30cm*48cm*50cm (L*W*H)
Net weight	20Kg

## 2.3 Intended use of the product: Applicable people and places

Eliminate endogenous pigment: nevus, dark spots, age spots, freckles.

Eliminate exogenous pigment: tattoo on eyebrow, eye line, lip line, and traumatic tattoo.

Applicable places: hospitals, clinics, and beauty salons with medical qualifications;

Surgery used types: single wavelength laser treatment, non-embedded.

## 2.4 Product accessories


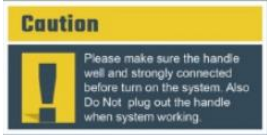

ND-YAG Pro X' accessories composition as shown in table:



Accessories Name	Quantity	Accessories Name	Quantity
Instruction	1	Power line	1
Laser treatment handle	1	Foot switch	1
Cross screwdriver	1	Funnel	1


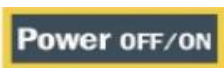


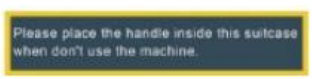



Plastic hose	1	Operator protective glasses	1
Treated subjects goggles	1	500ml measuring glass	1
1064nm laser head	1	532nm laser head	1
1320nm laser head	1		



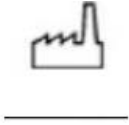

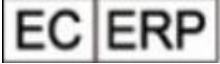



Table 2-4-1 Product Accessories List

## 2.5 Label instructions

Number	Picture	Name	Function
Picture 2-6-1	 A rectangular label with a yellow background. On the left is a black triangle with a white exclamation mark and a laser beam. To the right, it says "DANGER LASER 4" in red and black. Below that, it says "AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION" in black. On the right side, there are two red circles with white slashes over them, each containing a laser beam icon.	Laser grade identification	The laser level of this product is 4.
Picture 2-6-2	 A rectangular label with a yellow header that says "Caution" in black. Below the header is a blue box with a white exclamation mark. To the right of the exclamation mark, it says "Please make sure the handle well and strongly connected before turn on the system. Also Do Not plug out the handle when system working." in white text.	Identification of handle connection	Please note that when the hand is plugged into the host machine, ensure that the connection is reliable.
Picture 2-6-3	 A triangular warning label with a yellow border and a black background. It features a white exclamation mark inside a yellow triangle. Below the exclamation mark, it says "Please Do Not Look At Laser With Naked Eyes Directly" in white text.	Dangerous	Do not look directly into the window of the device with naked eyes.

<p>Picture 2-6-4</p>		<p>Passed the quality inspection certification</p>	<p>The product has passed the certification of quality inspection.</p>
<p>Picture 2-6-5</p>		<p>Adding Water</p>	<p>Note that the product inserts the white connector port of the water filling funnel into the water filling hole, and fills the device with water through the funnel. When the water level displayed by the water filling pipe reaches H or there is water overflow, the water filling is completed.</p>

Picture 2-6-6		Foot Switch	Label for foot switch
Picture 2-6-7		Power	Label for power
Picture 2-6-8		Water injection/drain	Fill and drain the tank through the fill/drain port.
Picture 2-6-9		AC socket connection	Identification of the AC input port.
Picture 2-6-10		Handle suitcase	When not using the handle, please store the handle in the handle suitable.
Picture 2-6-11		Change Distilled Water	The product should be replaced with purified water at most every 4 weeks.
Picture 2-6-12		Exhaust	After receiving the product, it is necessary to replace the air outlet head, which is used to drain the gas from the tank.
Picture 2-6-13		Fuse Wire	Requirements for the specification parameters of the fuse used by the machine.

Number	Label Picture	Label Name	Function
Picture 2-6-14		Read catalog	Before using the machine, you need to read the instructions carefully.
Picture 2-6-15		Production serial number	Requirements for the identification of the machine.
Picture 2-6-16		The date of manufacture	Requirements on the manufacturing time of the machine.
Picture 2-6-17		Manufacturer	Request for information on the manufacturer of the machine.
Picture 2-6-18		European Authorized Representative information	Request for information on the EAR information of the machine.
Picture 2-6-19		Waste disposal	Requirements for the manner of disposal of machine waste.
Picture 2-6-20		Electrical safety	Requirements for the electrical safety of the machine, which are type B applications.
Picture 2-6-21	PX1	Waterproof rate	Device requirements for waterproof level.
Picture 2-6-22		Avoid exposure - laser radiation is emitted from this aperture	Laser exit and direction instructions

## Chapter 3 Equipment Installation

### 3.1 Equipment installation process

Device should be installed in non-corrosive gases, dust, particles less environment, Corrosive gases will damage electronic devices, optical components, connecting wires. Dust and larger particles in the air, will damage filters and electrical components. Installing environment temperature, humidity range should be consistent with the requirements of the technical parameters of the device.

Installation of process device:

The device taken out.

Taken out the device for one day, because of long-distance transportation, device may be excessive humidity, so that avoid resulting in device damage.

After device proper humidity, assembling the various components to ensure that all connections are secure interface.

Let the tank is filled with distilled water.

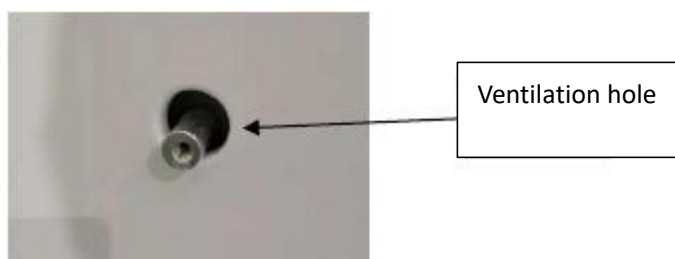
Device's Hand piece and power connections.

After various parts and power connection was completed, in ensuring the device is connected correct the situation, open the device, testing of all system parameters and performance

### 3.2 Equipment installation and injection instructions

#### Water Injection instructions

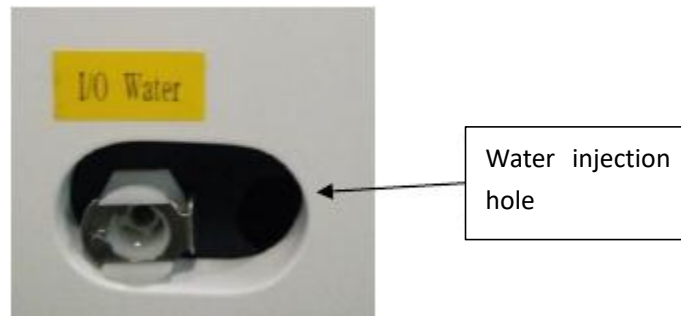
When install the parts of the device, the first to be is water injection operation, **before run the device each time, must check the water injection position's water level mark whether is above the blue sign the water column or not. If do not reach it must be distilled water refilling.**



### 3.2.1 Water injection instructions

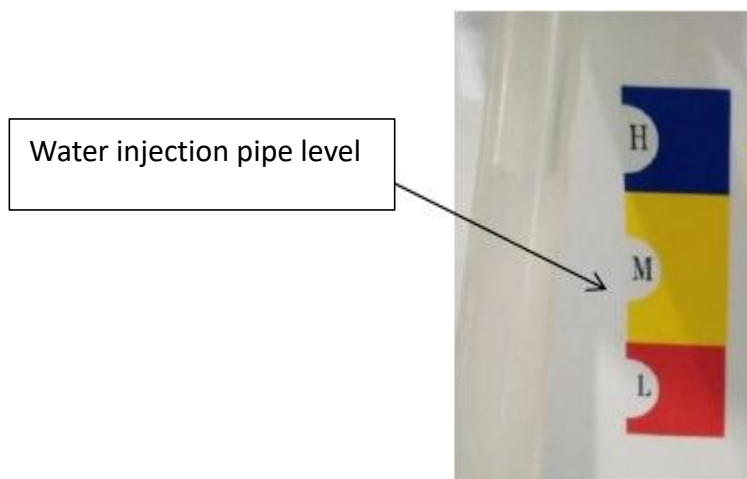
When the device start to work the ambient outside temperature best at 15 °C ~ 30 °C; wetness can not be higher than 80%; treatment room should always be kept clean.

Before filling with water, make sure that the ventilation hole is open and the handle is fully assembled (Picture 3.2.3 Therapeutic Handle Installation), otherwise it will not fill in water, as picture 3-2-1 shows:



Picture 3-2-1

Insert the white connector of the water injection funnel into the water injection hole and inject water into the device through the funnel. When the water level on the water injection pipe reaches H or water overflows, the water injection is complete, as picture 3-2-2 shows:



Picture 3-2-2

After water injection, press the iron sheet on the water injection/drain hole to remove the water injection device from the water injection hole, as picture 3-2-3 shows:



### 3.2.2 Water cycling debugging

After the device water injection completed, then connected the power line and foot line, then begin to do water cycle debugging test.

Water cycle debugging running steps as follows:

Before device starts to work, must ensure that the emergency stop switch in the up state. If the emergency stop switch is pressed, please click on the emergency stop button, keep it in the up state.

Keep the rear of device's circuit breaker switch to the "ON" position.

Press the button switch, device internal water cooling system runs automatically.

Observation of the water cycle is running correctly or not.

If no leaks, water flow alarm, etc, let device work more than one minute, then turn off the power. It proves water cycle debugging is work well.

***Notice: Every 1-2 months changing the water inside the device,as much as possible to discharge all remaining water in the cooling system.***

### 3.2.3 Treatment handle installation

When install the handle, need to lower than the machine height,in order to discharge bubble from the handle.After installed,start the device,let the water circulation run for at least one minute, then can do treatment.

As the 3-2-4 shows: align the hand with the interface, rotate clockwise, insert the handle socket completely and lock it. The socket connection is complete.

To remove the hand, rotate counterclockwise and pull it out. The treatment handle can be removed.

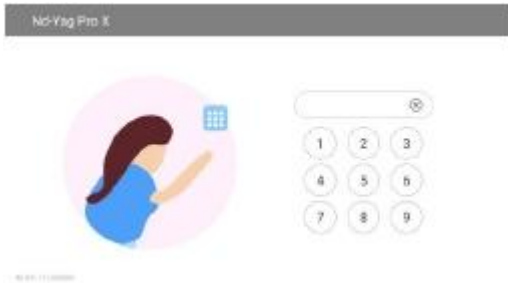


Picture 3-2-2

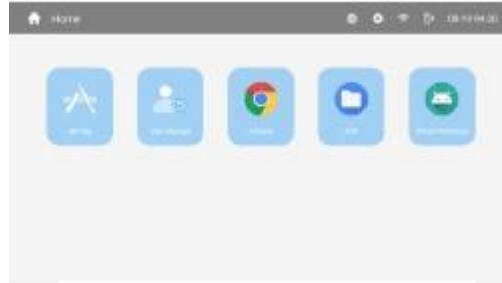


# Chapter 4 Equipment software operating instructions

## 4.1 Interface display and instruction



Password login page



Program selection interface



WIFI login interface



Treatment operation interface



User management interface



User addition and search interface



User history therapy interface







User list

Picture 4-2-1

As picture 4-2-1 shows: click ND-YAG to enter the system automatically generates the required parameters, click work, you can use.

### 4.1.1 System setting interface description

Table 4-2-4 System setting interface description











Picture	Name	Function	Remarks
	Language settings	Language selection	---
	Background settings	Click to enter the background page	---
	Network settings	Click to enter network settings	---
	Return key	Click to return to the main page	---

### 4.2 Work Interface



## 4.2.1 Working interface description

Table 4-1-1 Working Interface Description

Picture	Name	Function	
User setting key		Main page	Click to return to the main page
		Music	Click to enter music playback
		Help	Enter instructional video
		Rent	Start the rental model
		Screen Connection	Connection condition with the host
		System Settings	Go to Background Settings
		Clients Information	Browse client treatment information
		Air Level	Click to adjust the air level of the handle
		Water Velocity	Real-time display of water flow
		Water temperature	Real-time display of water temperature











 Normal	Water Level	Red marks for water shortage, gray marks for normal.
 Normal	Pre burning	Hand lighting: yellow indicates successful pre burning, gray indicates no pre burning.
 Full	Charging	Charging condition of the host: red is not charged, gray is charged
 ON	Red Light	The hand shows the light condition, red is on, gray is not on.
	Ready	Green indicates ready to work, gray indicates not ready to work. Green indicates ready to work, gray indicates not ready to work.

Table 4-1-2 Working Interface Description

Picture	Name	Function
	Remove tattoo eyebrow	Click to enter eyebrow removal treatment parameters

<b>User setting key</b>		Remove freckle	Click to enter the freckle treatment parameters
		Remove tattoo	Click to enter tattoo removal treatment parameters
		Skin whitening	Click to enter whitening treatment parameters
		Remove birthmarks	Click to enter the parameters of birthmark removal treatment

#### 4.2.2 Indicator icon alarming description

##### Water level alarm

When the water level alarm icon is displayed in red and "!" appears, it means that the water level is in the alarm state, and the water level of the water tank is too low.

Handling method: Add water in time.

##### Water tank temperature alarm

When the value displayed in the water tank temperature indicator icon is too high

and “!” appears in the icon. , indicating that the water tank temperature alarm, the system automatically switches to standby state. The default factory alarm temperature of the water tank is set to 45°C.

Handling method: Check whether the components of the water circulation system work properly and there is no damage. If the above situation does not occur, please contact the dealer.

Handling method: Check whether the hand is properly and firmly inserted. If the socket is not firmly inserted, please contact after-sales maintenance personnel.

## **Water flow alarm**

When the value displayed by the water flow indicator icon is less than “1” and the water drop in the icon is lit, it indicates water flow alarm, and the system automatically switches to standby state. The flow alarm is set to 2L/min by default.

Handling method: Observe the water label to see if there is enough water or check the connection between the treatment handle and the device for leaks.

If the above situation does not occur, please contact after-sales maintenance personnel.

## **4.3 Treatment interface operation instructions**

### **Standby/working state switch**

Click the “standby/work” button, if the system is in the standby state, it will switch to the working state; if the system is in the working state, it will switch to the standby state. The button is gray in the standby state, and the button is green in the working state.

## **4.4 Detailed operations on the equipment**

Before treatment, the operator should communicate with the treatment object in detail, use a mild cleanser to clean the treatment area, wipe the treatment area with anhydrous cotton cloth, and ensure that the treatment area is dry and not damp.

Start the system and enter the treatment parameter setting interface;

Select according to the actual situation of the treatment object, set the treatment parameters, and click the standby/work button to enter the working state;

When the treatment head is in working state, it is strictly forbidden to make the light outlet of the treatment head aim at the human eyes. Before the treatment, the operator should wear protective glasses, and the treated person should wear goggles.

During the treatment process, the operator should observe the treatment situation of the treatment object in real time, and if necessary, adjust the treatment parameters according to the actual situation;

During the treatment process, the treatment head should avoid staying in the same treatment site for a long time; bleeding may occur after treatment. The ND-YAG Pro X is an exfoliative treatment method, and bleeding is a normal phenomenon.

After the treatment, turn off the power switch; the treatment area can be wiped with an anhydrous cotton swab.

Clean the treatment head with a warm towel, and then disinfect the treatment head with a cotton ball dipped in disinfectant;

Put the cleaned and sterilized treatment head into the transport box, unplug the device, and the treatment process is over.

#### **4.5 Precautions and contraindications**

During treatment, the treatment head should not stay in the treatment site for too long;

For the treatment area, do not touch the water for 72 hours, and avoid sauna bathing and sweating for 3 to 7 days;

Avoid high humidity and heat environment;

Avoid spicy, seafood, and spicy foods; eat less photosensitive vegetables (for example, celery, white radish, spinach, coriander, etc.)

Pay attention to sun protection and prevent sweating. If the ultraviolet rays are strong in summer, use a sunshade or wear a sun hat;

Children, pregnant women, and lactating women should not use the machine;

Those with scar constitution and light sensitivity are not allowed to use this machine;

The use of functional cosmetics on the treatment area is prohibited within the past month.

## Chapter 5 Requirements for EMC equipment

### Notice:

Buyers or users should use this product in the electromagnetic environment specified in Table 1-4-2, Table 1-4-3, Table 1-4-4, and Table 1-4-5, otherwise the product may not work properly Work.

Portable and mobile radio frequency communication equipment may affect the normal use of this product, please use this product in the recommended electromagnetic environment.

### Warming:

In addition to the accessories and cables provided by the manufacturer of this product (Table 1-4-1), the use of unspecified accessories and cables may result in an increase in the emission of this product or a decrease in the immunity.

Table 1-4-1 Product Accessories List

Accessories Name	Quantity	Accessories Name	Quantity
Instruction	1	Power line	1
Laser treatment handle	1	Foot switch	1
Cross screwdriver	1	Funnel	1
Plastic hose	1	Operator protective glasses	1
Treated subjects goggles	1	500ml measuring glass	1

This product should not be used close to or stacked with other equipment. If it must be used close to or stacked, it should be observed to verify that it operates normally in the configuration it is used in.



Table 1-4-2

This product is intended to be used in the electromagnetic environment specified below, and the purchaser or user should ensure that it is used in this electromagnetic environment:		
Launch test	Compliance	Electromagnetic Environment - Guide
RF emissions CISPR 11	Group 1	This product uses radio frequency energy only for its internal function. Therefore, its RF emissions are low and the potential to cause interference to nearby electronic equipment is low.
RF emissions CISPR 11	Class A	This product is suitable for use in non-domestic and all installations not directly connected to the public low-voltage power supply network of domestic residences.
Harmonic emission IEC 61000-3-2	not applicable	
Voltage fluctuation/flicker emission IEC 61000-3-3	not applicable	

Guidelines and Manufacturer's Declaration - Electromagnetic Emissions

Table 1-4-3

Guidelines and Manufacturer's Declaration - Electromagnetic Immunity			
This product is intended to be used in the electromagnetic environment specified below, and the purchaser or user should ensure that it is used in this electromagnetic environment:			
Immunity test	IEC 60601 test electric level	Compliance electric level	Electromagnetic Environments - Guidelines


Electrostatic discharge IEC 61000-4-2	±8kV contact discharge ±15 kV air discharge	±8 kV contact discharge ±15 kV air discharge	Floors should be wood, concrete or tile, and if covered with synthetic materials, the relative humidity should be at least 30%.
Electrical fast transient burst(EFT)	±2 kV pair of power line Cord ±1 kV pair of input/output lines	±2 kV pair of power line Cord ±1 kV pair of input/output lines	Mains power should be of the quality used in a typical commercial or hospital environment.

Surging IEC 61000-4-5	±1 kV Wire to Wire ±2 kV line-to-earth	±1 kV Wire to Wire ±2 kV line-to-earth	The grid power supply should be of the quality typically used in a commercial or hospital environment.
Power input line voltage, temporary outages and voltage changes IEC 61000-4-11	0% UT for 0.5 cycles at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% UT for 1 cycle, 70% UT, Lasts 25/30 cycles; Single phase: at 0°, 0% UT. 250/300 cycle	UT by 0% for 0.5 cycles in 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% UT for 1 cycle, 70% UT for 1 cycle 25/30 cycle; Single phase: 0% UT at 0°; 250/300 cycle	Mains power should be of the quality used in a typical commercial or hospital environment. If the user of this product requires continuous operation during power interruptions, an uninterruptible power supply is recommended for this product.

Power frequency magnetic field (50 Hz/ 60 Hz) IEC 61000-4-8	3 A/m 50Hz/60Hz	3 A/m 50Hz/60Hz	The power frequency magnetic field should have the characteristics of the power frequency magnetic field level of a typical location in a typical commercial or hospital environment.
Note: UT refers to the AC network voltage before the test voltage is applied.			

Table 1-4-4

Guidelines and Manufacturer's Statement - Electromagnetic Immunity			
This product is intended to be used in the electromagnetic environment specified below, and the purchaser or user shall guarantee its use in such electromagnetic			
Immunity test	IEC 60601 test level	match level	Electromagnetic Environments - Guidelines
The radio frequency transmission IEC 61000-4-6	3 V (RMS) 150 kHz~ 80 MHz 6 V ISM frequency range 150 kHz~ 80 MHz	3 V (RMS) 150 kHz~ 80 MHz 6V ISM frequency range 150 kHz~ 80 MHz	Portable and mobile RF communications equipment should not be used closer than the recommended isolation distance to any part of this product, including cables. The distance shall be calculated by a formula corresponding to the transmitter frequency. Recommended isolation distance.d 1.2 P d 1.2 P 80 MHz~800 MHz d 2.3 P 800 MHz~2.5 GHz: P—According to the transmitter manufacturer's maximum rated transmitter output power, in watts

<p>Radio frequency radiation IEC 61000-4-3</p>	<p>3 V/m 80 MHz~ 2.7GHz</p>	<p>3 V/m 80 MHz~ 2.7GHz</p>	<p>(W); d—Recommended isolation distance, in meters (m).  The field strength of the stationary RF transmitter passes through the electric pair  The magnetic field measured by a is determined at each frequency range  b should be lower than the conforming level. Interference may occur near devices marked with the following symbols.</p> 
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Notice 1: At 80 MHz and 800 MHz, the formula for the higher frequency band is used.

Notice 2 : These guidelines may not be suitable for all situations. Electromagnetic transmission is affected by buildings, objects and people and effects of absorption and reflection.

a、 Fixed transmitters, such as base stations for wireless (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcasting, and television broadcasting, have field strengths that cannot be predicted theoretically with accuracy. To assess the electromagnetic environment of fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location where this product is located is above the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the product.

Recommended isolation distance between portable and mobile RF communication equipment and the product.			
This product is intended for use in electromagnetic environments where RF radiation disturbance is controlled. Based on THE maximum rated output power of the communication equipment, the purchaser or user may prevent electromagnetic interference by maintaining a minimum distance between the portable and mobile RF communication equipment (transmitter) and the product as recommended below.			
Maximum rated output power of the transmitter: W	The isolation distance of different frequencies of the corresponding transmitter /m		
	150 kHz~80 MHz $d = 1.2 \sqrt{P}$	80 MHz~800 MHz $d = 1.2 \sqrt{P}$	800 MHz~2.5 GHz $d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For the maximum rated output power of the transmitter not listed in the above table, it is recommended that the isolation distance d, in meters (m), can be determined by the formula in the corresponding transmitter frequency column, where P is the maximum rated output power of the transmitter provided by the transmitter manufacturer, in watts (W).			
Notice 1: At 80 MHz and 800 MHz frequency points, the formula of higher frequency range is used.			
Notice 2 : These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.			

## Chapter 6 Equipment maintenance

### 6.1 Clean the device

Clean the device with a soft and damp cloth, but to avoid liquid into the interior of the device.

### 6.2 Therapy handle cleaning and replacement

Clean the hand piece lens regularly (In the course of treatment will be a small amount of pigment granules splashed on the treatment lens, affecting the laser output), and wipe the lens with lens paper or cotton ball moistened with ethanol (Wipe the treatment lens after each use)

Each hand piece has a certain life with 1 million treatments. It must be replaced after a certain time, you need to contact the dealer to buy again.

### 6.3 Waste disposal of equipment

The waste of the equipment shall be treated harmlessly in accordance with the relevant regulations of local environmental protection.

### 6.4 System troubleshooting

Table 5-3-1 System troubleshooting

Fault Name	Dealing methods
Screen does not display	Check the power cord
	Check circuit breakers, fuses. The specification of the fuse is 250V/16A, just open the fuse box to replace the fuse.
	Check the power switch
	Please contact your dealer

Power button no response	Please contact your dealer
System can not initialize	Check the power
	Please contact your dealer
The output of the laser energy is weak or empty gun - no laser	Voltage is too low, the treatment head does not work
	Check whether the laser mirrors dirt or not, please wipe clean up if has
	Internal handle damaged, replace treatment head.
	Remove the treatment head, check the front-end mirror damage or not
	Treatment head is overheated, closed the device,cooling a half hours
	Check whether the handle or treatment head leaks
Laser treatment head naked	Check whether the laser treatment head is damaged, if damaged to replace a new one.
Treatment process, click the trigger button, appear a "creak" sound	Equipment unused for a long time, triggering difficulties.
	Water temperature alarm, check whether the water temperature is normal.
	Water flow alarm, check whether the water flow is normal.
	Water level alarm, check whether the water level is normal.
	The xenon lamp is damaged, replace the lamp.
Cooling system temperature too high	Close the system , let the system cooling for a period ,then restart .If still not OK, please contact the dealer.
Treatment handle energy is too low	Check whether there are impurities on the lens surface, if any, wipe it clean
	Check whether the treatment handle overheating , if any, shut off and cooling half an hour then used again

	Check whether the front mirror is complete , if damaged , please contact the dealer
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## Chapter 7 Specifications

This chapter describes the most important technical parameters and system categories of treatment system.

Table 7-1 System Specification

Parameter	Parameter
<b>The Data Of Electrical Connections</b>	
Circuit Voltage:	100~130VAC      16A(refer to system tag) 210-240VAC      10A(refer to system tag)
Circuit Frequency:	50/60Hz
<b>System Category</b>	
The Type Of Electric Shock:	A kind of equipment
The Degree Of Electric Shock:	B type device
The Degree Of Harmful Water Intrusion Protection:	General equipment
<b>Climatic Conditions(During Operation)</b>	
Ambient Temperature	+15°C to +30°C
Relative Humidity	30% – 80%
Atmospheric Pressure	86.0kpa – 106.0kpa
<b>Climatic Conditions (During Transport Storage )</b>	
Ambient Temperature	-20°C – +60°C;



Relative Humidity	≤ 93 %, no condensation
Atmospheric Pressure	86.0kpa – 106.0kpa