



USER MANUAL

Model: NYC-D

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Chapter 1 Introduction

Thank you for choosing Sapphire IPL Therapy System produced by Beijing Sincoheren

This chapter illustrates a general introduction to Sapphire typed IPL Therapy System .



Attention: any operator or maintainer of this device shall read this Manual in detail

1.1 Equipment Description

Name of the system M Sapphire IPL Therapy System. The device is applicable in skin treatment of sunburn damage, freckle, age pigment, tiny wrinkle, angiotelectasis as well as in reduction of unnecessary hair. The mechanism of treatment is based on light's selective absorption effects. This device is composed of main console and treatment hand piece.

The operating and controlling parts are placed in main console. Built-in integrated in controller consecutively monitors the operation of device system.

Controlling system consists of a 10 inch touch screen, key switch and emergency shut off knob etc. The screen displays system's working mode, parameter and times of light spot treatment. Treatment handpiece is composed of intense light emitter, handle switch and transmitting system. It is hold by hand in operation.

1.1.1 Product Model

NYC-D

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1.1.2 Constitute of Equipment

Following two parts constitute therapy device

- Main console
- Treatment handpieces

1.2 Expected Applications

This system is applied in skin lesions treatment and skin texture perfection:

A pigmented lesions treatment

B Vascular lesions treatment

C Aging skin improvement

D Hair removal

1.3 Treatment Parameters

Treatment parameters for adjustment are as followed:

Energy Density:

Treatment mode for HR is 1-50J/cm² continuously adjustable

Treatment mode for SR is 1-50 J/cm² continuously adjustable

Pulse pattern: multiple-pulse light source.

1.4 Caution Marks



signifies “warning”: it means that may affect safety of patients and operators.



signifies “Attention”: please pay special attention when seeing this sign.

Chapter 2 Equipment Safety



Warning: please carefully read this chapter and strictly follow relevant regulations so as to avoid equipment failure or personnel injury.

Broad Laser bears no responsibility for the following conditions:

- To apply NYC-D IPL Therapy System in fields beyond its original designed fields.
- Equipment failure and operators or patients injury caused by faulty operation
- without following User Manual stipulations.
- Mechanical and Electric transformation during or after equipment installation.
- Non-specialized person is not allowed to enter into treatment room.
- Make sure all persons present are familiar with operation of the system.
- Please do not use this equipment in flammable and explosive or any other place with hidden danger.
- Guarantee safety warning board is placed obviously when the system operation.
- Only personnel authorized by Beijing Sincoheren can provide technological support

2.1 Terms Explanation

- **Key Switch:** In order to avoid unauthorized usage, only when the key is inserted to controlling lock and turned to “ON” position, can machine be started. When pulling off key, the system will be turned off and machine closed.
- **Emergency Switch:** button for turn off equipment in emergency; the output of intense pulsed light can be stopped immediately in emergency circumstances.
- **Protective goggles:** protect operator’s eyes from being radiated by intense pulsed light.
- **Protective blinder:** protect patient’ eyes from all kinds of intense lights’ radiation, reflection and scattering.

2.2 Product Safety Cautions

2.2.1 Electrical Safety

All operations of this equipment are controlled by advanced electronic microprocessor. In order to guarantee safety of patients and operators at the greatest extent, operators should always pay close attention to the equipment. Please immediately press red emergency button in front of control panel if any danger happens. Equipment will enter into safety state.

A 2000W voltage stabilizer should be used to guarantee device service life and reduce power fluctuation's affecting on equipment.



Warning: dangerous high voltage (HV) exists in machine when it is in use. Residual voltage remains after power off. Randomly opening of protective cover may bring high-

voltage shock. Please keep far away from areas with signs of .



Attention: power supply of this system is equipped with national standard connection. Please make sure that there is earth wire that safely connected with ground.

2.2.2 Optical Safety

- This operating system emits intense pulsed light with wavelength of 690-1200nm (HR), 640-1200nm (SR) and 560-1200nm (VR for optional). All persons (including patients) in operating areas should wear protective goggles or blinders;
- Remain high alert because intense pulsed light injures eyes instantly;
- Reflective articles such as watch, mirror and jewelry are not allowed to place in treatment room;
- Direct looking at light source is forbidden

2.2.3 Warnings

- Non-professionals are not allowed to enter into treatment room;

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- Guarantee personnel present know well about equipment operation;
- Please do not use this equipment in flammable, explosive or other insecure places;
- Guarantee safety warning board is placed obviously when the system is operation.

2.2.4 Transfer Safety

This complete equipment is not allowed to move over long distance since it contains precise parts, which will lead to disorders of optical system and affect energy outputting. Therefore, the original shock absorption package should be used in transportation.

2.3 Environmental Risk and Impacts

NYC-D IPL Therapy System and its components contain following materials and modules that should be processed at the end of their service life in recycling center designated by local environmental department.

Electrical parts: iron, copper, aluminum, non-biodegradable plastic, printed circuit board etc.

2.4 Nameplate

2.4.1 Equipment Nameplate



2.4.2 Position of Equipment Nameplate

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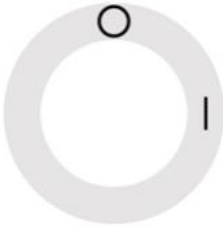
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Label and its position on the back

2.4.3 Equipment Labels

Serial Number	Sign	Explanation
1		Key Switch Label: In order to avoid unauthorized usage, only when the key is inserted to controlling lock and turned to "ON" position, can machine be started. When pulling off key, the system will turn off and machine closed.

2		Emergency switch Label: button for turn off equipment in emergency; the output of intense pulsed light can be stopped immediately in emergency circumstances.
3		Above human safe voltage label: Any site with this label has potential dangerous voltage beyond human body acceptability. As for non-professionals, please keep away from it.
4		HR Treatment Handpiece Jack label: it shows this is HR Handpiece (Energy density: 50J/cm ² ; Aperture size: 16mm×57mm) This label are pasted on sockets of both console and Handpiece, please pay close attention to connect it right, or the Handpiece will be damaged.
5		SR Treatment Handpiece Jack label: it shows this is SR Handpiece (Energy density: 50J/cm ² ; Aperture size: 8mm×34mm) This label are pasted on sockets of both console and Handpiece, please pay close attention to connect it right, or the Handpiece will be damaged.
6		Labels of Inlet, Vent and Drain: the cooling circulation of this product guarantees refrigeration. Pure water are need to add into the equipment regularly through this inlet; if excessive water is added, it will overflow through Vent, which is normal; Drain hole is used to discharge all cooling water.
7		indication and restrictions water level.
8		Warning Label

2.4.4 Package and other Labels

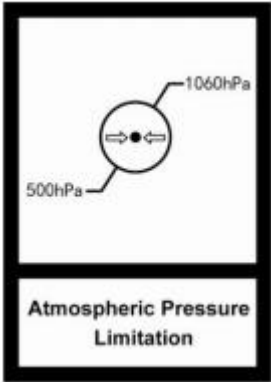
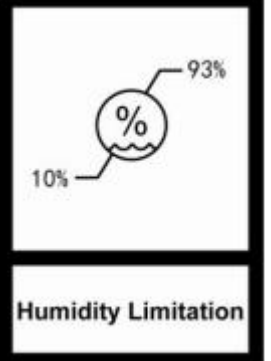
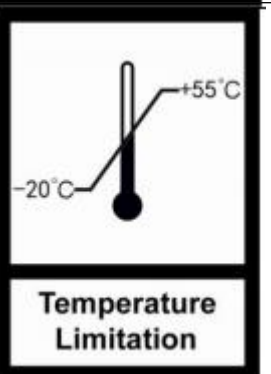
Serial	Number	Sign
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1	 Prohibit Stacking	Prohibit Stacking Label
2	 Keep Dry	Keep dry label
3	 Upward	Upward label
4	 Handle With Care	Handle with care label

5		pressure Atmospheric limitation label
6		Humidity limitation label
7		Temperature limitation label
8		Earth connection label

Chapter 3 Technical Parameters and Product Configuration

3.1 Technical Parameters

Equipment Model	NYC-D
Supplier	Beijing Sincoheren
Treatment Wavelength	Wavelength of SR treatment handpiece: 560nm - 1200nm Wavelength of HR treatment handpiece: 640nm - 1200nm
Energy Density Max.	SR treatment handpiece: 50J/cm ² ±20% HR treatment handpiece: 50J/cm ² ±20%
Size of Aperture	Size of SR Aperture: 10mm×40mm, error range: ±0.1mm Size of HR Aperture: 16mm×50mm, error range: ±0.1mm
Temperature of Aperture Surface	≤37°C
Demensions	470MMX590MMX455MM
Net Weight	35kg

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3.2 Standards

EN 60335-1:2012,

EN 55014-1:2006+A2:2011,

EN 55014-2:1997+A2:2008

3.3 Main Structure

The system structure are as followed: Liquid Crystal Display (LCD), Emergency Switch, Key Switch, Main Console, Handpiece holder, Treatment Handpiece, etc.



- Liquid Crystal Display (LCD) : display specific information of operation system.
- Emergency Switch: shut power supply in emergency.
- Key Switch: turn on and off power of equipment.

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- Main Console: built-in cooling system, power system, control system and integrated circuit.
- Treatment Handpiece: removable treatment handpiece, which can be used in treatment areas.

Chapter 4 Installation and Debugging

This system can be applied in hospital, clinic and beauty salon. There is little preparatory work before installation. The installation and debugging of this equipment should be done by professionals authorized by Broad Laser. The installation work includes:

4.1 Pre-installation

Before unpacking, check whether components are complete, whether installation position conforming to requirements described in this chapter. This system shall be installed away from hot wind and keep a certain distance with other objects.

4.1.1 Equipment List Checking

Serial Number	Name of Components		Quantity
1	Main Console		1
2	Treatment Handles	HR treatment handpiece	1
		SR treatment handpiece	1
		RF treatment handpiece	0
3	IPL protective goggles		1
4	Blinder		1
5	Funnel		1
6	Keys		1

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7	Power line	1
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Attention: Please contact with agent or supplier before using it if there is any component shortage after checking equipment list. We will act accordingly if components are found to be lack after using the device.

4.1.2 Operating Requirements

Nominal voltage in local is preinstalled before delivery according to clients' requirements.

Designed installation environment is hospital, clinic and beauty salon, thus following operating environment are needed:

- Environment temperature: 10℃ ~ 30℃;
- Relative humidity: 30% ~ 70%;
- Atmospheric pressure: 860hPa ~ 1060hPa;
- Environmental requirement: avoid direct sunlight;
- Cooling water: demineralized water or pure water.



Attention: Thermal power dissipation of this system is about 200 W. It will be better that an air conditioner is prepared in treatment room. Please do not keep equipment under direct sunlight for a long time and keep it away from heater.

Electrical Requirements:

- Power: single-phase alternating current 110V/220V
- Frequency: 50Hz
- Input Power: 1200VA



Attention: The input voltage can not be transient; peaks, valleys and surge of voltage and current are not permitted.



4.1.3 Installation Procedure

- Carefully unpack equipment package, and place it in the expected site
- Take out handpiece holder and install it in corresponding position
- Open the package of treatment handpiece, plug it in corresponding position
- Plug key in the switch

4.2 Debugging

4.2.1 Water Filling

Firstly, plug the tube of water filling device into the filler in the side of device. Fill the equipment with 5L demineralized water or purified water (tap water or mineral water is not

permitted) through funnel. Then turn the key switch and start up equipment. After operating for 3 minutes, eliminate air existing in waterway. The water level decreases.

Five minutes after starting up, turn off the power, refill tank till the water reaches the maximum level and water filling process is finished. (water in equipment should be changed once a month.)



Attention: Each time of starting up after water changing, the equipment needs to operate for 3 minutes. Observe whether waterway is clear or not.

4.2.2 Debugging

Check whether the emergency switch is pressed down or not, if not, please turn the key to right position of "ON". Treatment handpiece and LCD then will be lighted up and equipment begin to work.



4.2.3 Water Drainage

Open the water overflow and water outlet at the same time. When there are no water come out, which means the water is clean.

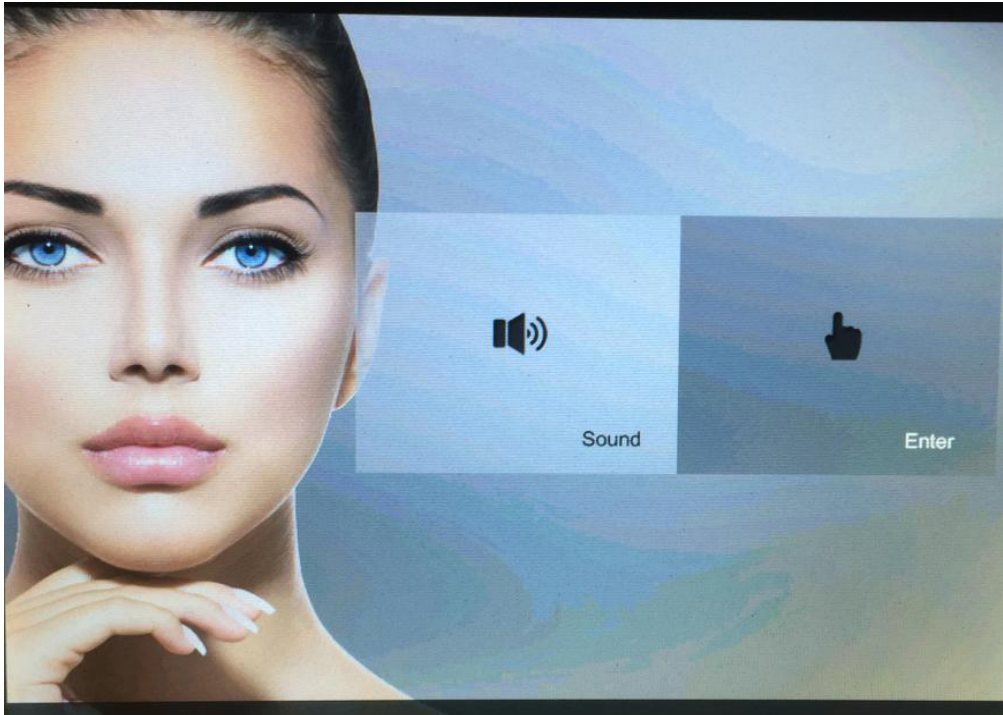


Attention: After being fully evacuated , a little circulating water will remain in tank and waterway; the storage temperature should not be below 0°C.

Chapter 5 Operation

5.1 Starting up

The system will firstly show main interface with company logo after starting up (shown in picture 1):



Picture 1 Main interface of starting up

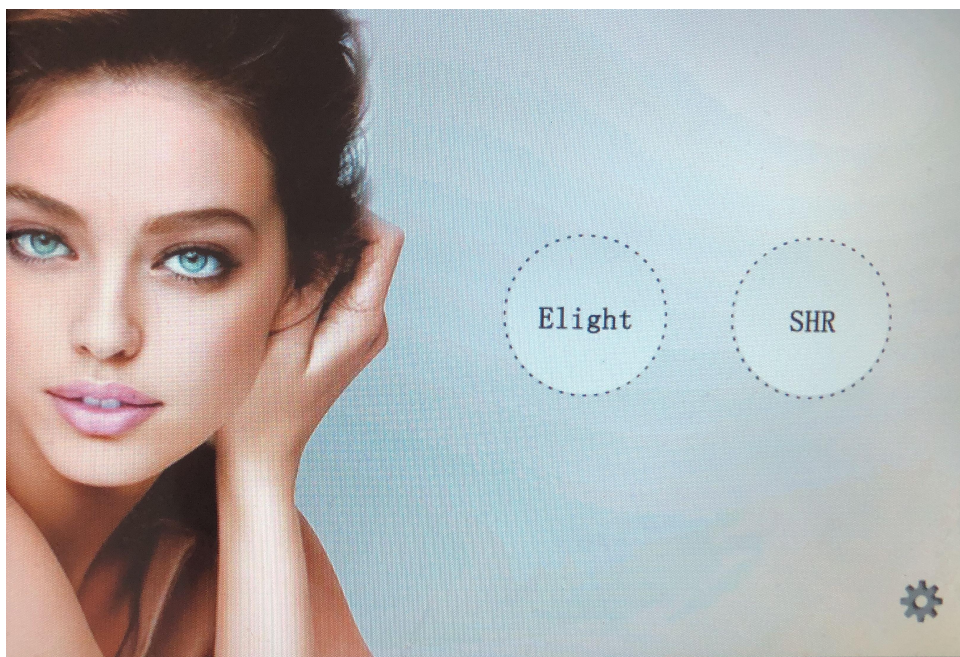


Attention: this equipment provides customers with various kinds of treatment handpieces and treatment modes, which can be chosen after entering into the system.

Randomly touch on the interface, the system will go into handpiece selection interface (shown in picture3)

5.2 Treatment Settings

Step 2. Touch screen, you can see follow picture



Step 3. If click [SHR](#), you can enter the interface as follow:

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a.You can adjust the



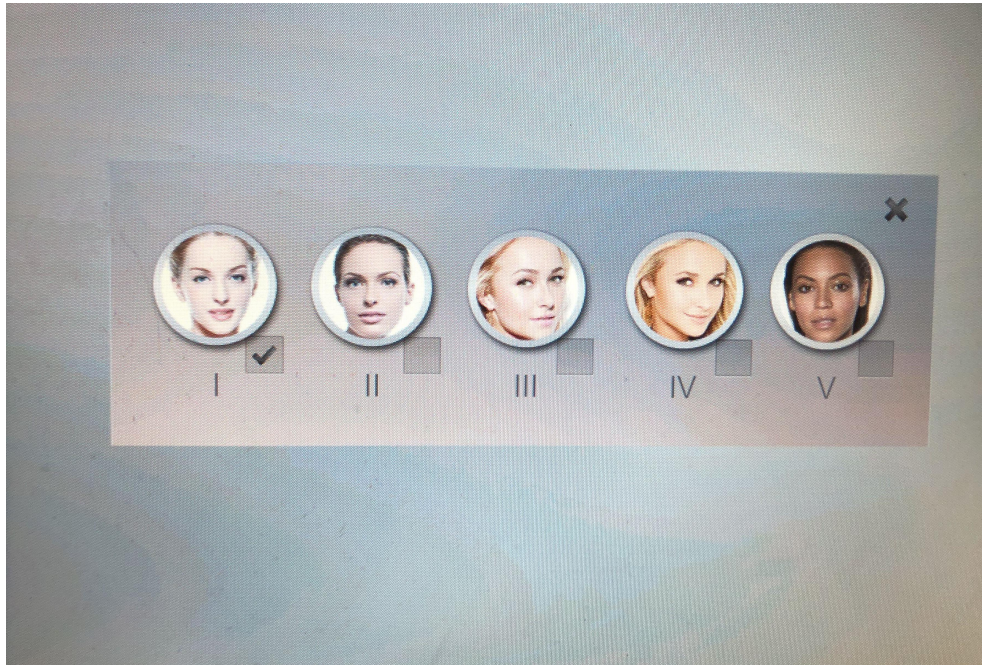
and



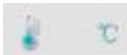
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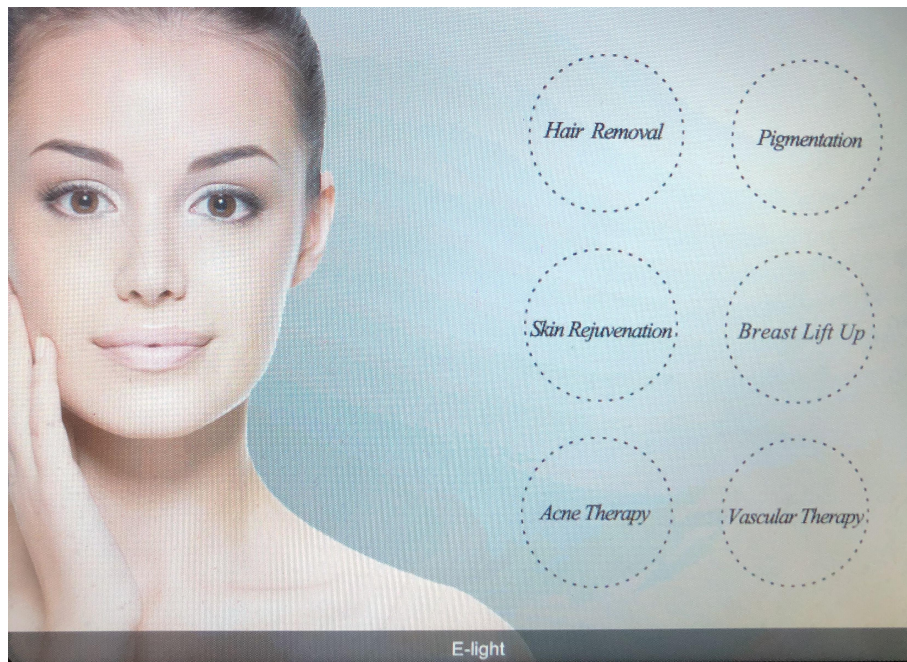
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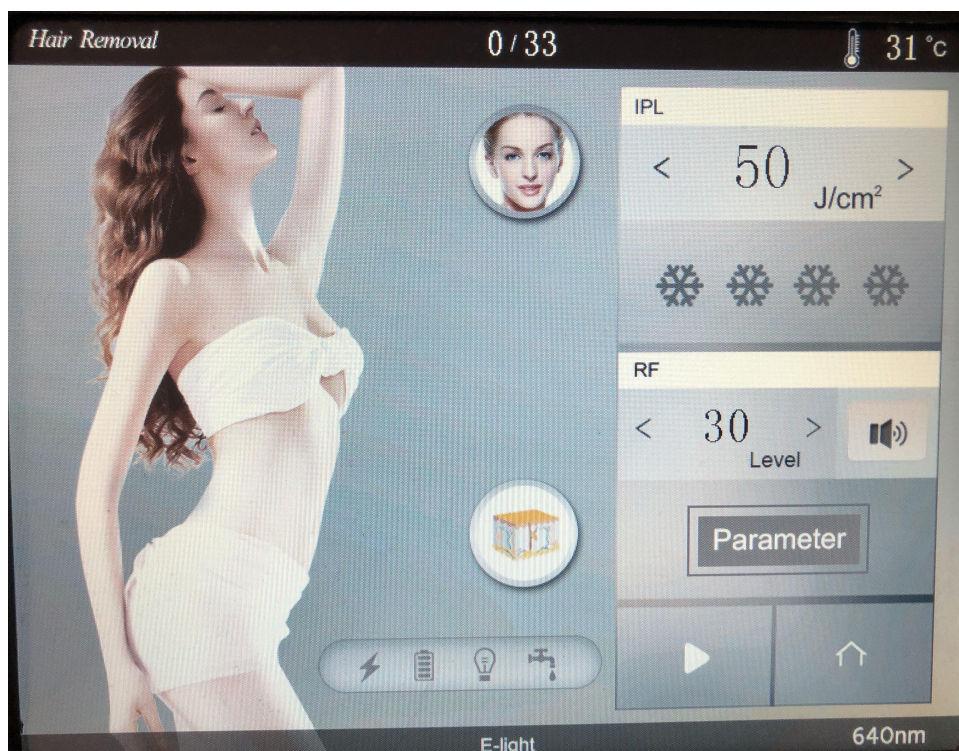
Energy:1-50J/cm2

b.  Alarm marks of water temperature.



For example:if you choose

you can enter the interface as follow:



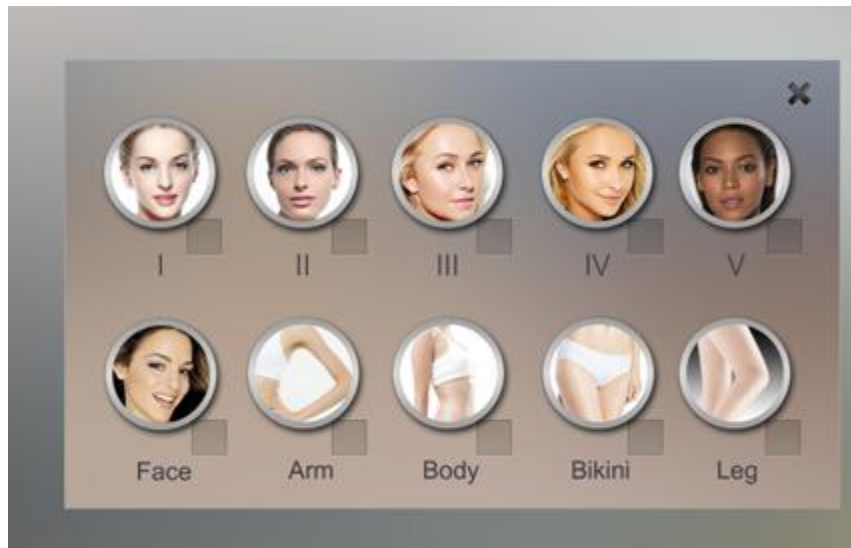
a.You can adjust the and energy:

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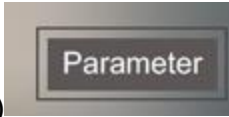
Tel:+86-13161361995 ;

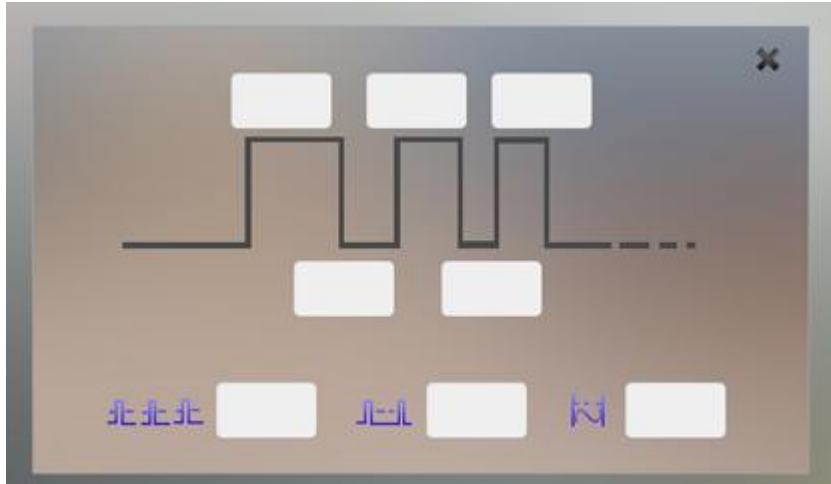
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IPL:1-50J/cm²



b.  set cooling system for 4

level (highest) 



: It is already set by our engineer, usually you need not adjust it.

5.3 Treatment Procedure

According to patients' practical condition, choose relevant application and treatment hand piece.

After the setting and adjustment of operating ways in accordance with 5.2, operate skin test with appropriate energy (please see 5.4 for specific information about skin test).

Apply a thin layer of cooler gel at the test patch;

make the treatment head closely contact with treatment area sufficiently.

Click hand control switch and start treatment.

The equipment will release intense pulsed light. Meanwhile, handpiece counter and screen count once.

After treatment, establish treatment file for each client so as to check right parameters for next time treatment and improve treatment effects.

Notes:

Lifetime of treatment handpiece: standard lifetime of each treatment handpiece is

300,000 shots or 1 year, whichever comes first. Energy will be lowered if handpiece reaches its lifetime. It is suggested to change for a new one. Handpiece beyond 300,000 shots are not in warranty.

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5.4 Skin Test

Skin test is essential before optical treatment. Details are as follows:

1. If treatment on face is needed, please select skin under ears as test patch, where it is not influencing facial beauty. If treatment areas are in chest, neck or other body parts, please select an area not influencing beauty as test patch.
2. Please clean test patch after it is chosen. Apply a thinner layer of cooling gel at test patch. Make the treatment head sufficiently contact with treatment area. Choose Elight mode, trigger 2 to 3 slots and 1/3 area of spot size overlapping treatment area is not permitted. Wait for 2 to 3 minutes and observe treatment area. If light reddening (not swelling) appears to test patch, then the energy is appropriate. The operator could choose this energy level and parameter to continue treatment. If there is no visible change at the patch test, the energy is too low. 1 - 2J/cm² energy should be added each time. If serious reddening immediately appears to test patch after shot, the energy is too high, please continue to test with lower energy level.

5.5 Attentions

1. Carefully protect patients' eyes during treatment.
2. Second scanning is possible on diseased areas
3. Light crystal should be tightly connected with treatment area
4. Leave no blank during treatment and 1/3 overlapping is permitted
5. Do not shoot light at upper eyelid
6. Direction of treatment head is changeable so as to guarantee a complete treatment.

5.6 Equipment Shut down

Loosen handpiece switch after treatment and put it back to handpiece holder. Click "Standby", press the button switch, and equipment will be automatically shut down.

Clean light crystal with gauze for next time usage.

Chapter 6 Treatment Principle and Characteristics

6.1 Treatment Principle

The spectrum of IPL Therapy System is continuous which contains wide wavelength ranges. The selective light filtering scope is 640/420-1200nm. The decided effects on skin include heat effect, mechanical effect, electromagnetic effect, photochemical effect and physical stimulation effect. The working principle of IPL lies in treating benign lesion of

skin pigmentation, vascular disease and hirsutism with IPL's photothermal effects.

Treating results are realized through different target skin cells' (including melanin, hemoglobin, collagen, and water) absorbing ability for phototherapy.

Contacting refrigeration effectively protects epidermis from damage.

Treatment principle is selective photothermal theory and intense pulsed light with wavelength of 640/420-1200nm penetrates into derma. The abnormal pigment granules and block mass absorb light and pigments will be resolved. Some resolved debris will be peeled and remains will be eliminated out of body by phagocyte. The hyperpigmentation will be lighter and gradually become normal after treatment.



Treatment principle of Intense Pulsed Light (IPL) Therapy Device: Multi-wavelengths and colorful wide spectrums produced by intense pulsed light penetrate into epidermis and reaches to dermis. Acting on abnormal pigment cells and target vascular tissue, IPL dissolves abnormal pigments, closes abnormal vessels, and stimulates regeneration of collagen. Then elastic fibers will be rearranged and effects of pigments removal and skin rejuvenation will be achieved. This is a targeted, symptom focused and energy sufficient.

6.2 Product Advantage

- Energy sufficient
- Symptom focused
- Highly targeted
- Strong penetrated

Chapter 7 Scope of Application and Contraindications

7.1 Scope of Application

HR is used for hair removal in each body part;

SR is used for exogenous and endogenous pigments removal such as blue, black and brown pigment lesions

7.2 Contraindications

- pregnancy
- using photosensitive medicine

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- allergic to test light
- recently taking sunbath
- patients with serious heart, liver, kidney and other internal organs diseases as well as malignant tumors.
- epilepsy
- patient with severe diabetes
- History of keloid scarring
- treatment area being infected
- other reasons according to doctor's advice;

Chapter 8 Attentions for Post-operation

Sun block

Sunscreen cream and opacifying agent with SPF 30 and above shall be used for patients taking operation within a month. Take good sunscreen measures, such as taking umbrellas and wearing sunbonnet. Tanning after treatment sessions may enhance melanin regeneration, which results in hyper-pigmentation.

Makeup

- Generally speaking, makeup immediately after treatment is not allowed for better curative effects. Biological skin appliances, instead of chemical pharmaceuticals and powder contained cosmetics should be used after treatment. Remove makeup if swelling or redness appears at the treated area to prevent infection and pigmentation. Meanwhile, medicines such as Vitamin C or Vitamin E are suggested to be taken.
- Customers are advised to take next treatment after three weeks in accordance with normal physiological process. Generally, a course includes 3 to 5 times treatment. After a course treatment, freckles, wrinkles and aging skin will be improved. Skin will be more smooth, fine and elastic.

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- Keep a light diet and avoid spicy stimulation food.
- Protect treatment area and do not press or scratch treated area so as to avoid trauma.(pay attention to freezing proof in cold areas).



Attention: temporary discomfort, vesicles, hyperpigmentation, red and swollen, scar and bruise may occur to some customers depending on different constitutions. It is suggested to adopt external ice bag for 30 minutes. Makeup is allowed 5 days after treatment.

Chapter 9 Troubleshooting

9.1 Malfunctions



The following table is about possible failures and relevant measures can be taken:

Malfunctions	Possible causes	Solutions
Breakdown of water way and device	Power unconnected	Check power
Equipment breakdown with waterway normal, no display of LCD	Emergency switch is depressed	Loosen emergency switch and keep it upspring
Normal waterway, normal light output, no display on screen	Abnormal of LCD 5V power supply	Check whether LCD board indicator is on, if not, 5V power supply is abnormal.
Disorder and dark of screen	Whether LCD data line is loosed or not	Check data line
For other questions, please timely contact with After-sale Service Department. Do not disassemble equipment by yourself.		

If any malfunctions occur during process of start up or normal operation, stop running it immediately and contact with maintenance department of Beijing Sincoheren. Only professionals authorized by Beijing Sincoheren have the right to carry out troubleshooting.

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Chapter 10 Maintenance and

Clearing up

10.1 Equipment Cleaning

Clean Equipment cover with soft and wet cotton ball at least once a week. Neutral detergent can be used but please be careful not to leak liquids into the equipment. Purified water or distilled water in waterway should be changed once a month.

10.2 Optical Crystal Cleaning

Optical crystal should be kept clean and be washed after each treatment. Firstly clean it with soft cloth and then use another cloth with anhydrous alcohol, after that keep it dry.

Optical crystal should be kept clean and sanitized after each treatment.

Firstly clean it with soft cloth and then use another cloth with anhydrous alcohol, after that keep it dry.



Attention:

- If dust exists inside of handpiece crystal, please stop using it and contact with serviceman.
- If light shots are above 300,000 counts or the handpiece is used for more than 1 year, its energy will be lowered. Please contact with maintenance personnel to adjust.
- If the equipment is used or idle for half a year and above, and will be used again, please contact serviceman to maintain.

10.3 Scrapping and Harmless Disposal

Processing of disposal:

Harmlessly dispose the equipment with principle of proximity in local areas.

Chapter 11 Service and Optional Components

Beijing Sincoheren takes strong commitments:

The equipment has a warranty period of 1 year since the date of contract signing. But human caused damage and consumable items are not covered in warranty. (Treatment handpiece can be free of maintenance if amount of light shots is below 300,000 within one year.)

Beijing Sincoheren provides - maintenance service for malfunctions of equipment within warranty period.

The equipment enjoys lifetime maintenance; relevant costs will be charged for parts replacement.

Contact

After service tel: +8 18 701341926

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