



DIODE LASER HAIR REMOVAL



USER MANUAL

When operating this product, please read the instrument manual carefully first

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1. Principles of Hair Removal

1.1 808 Principles of Ice Hair Removal

808 Ice is based on the principle of selective photothermodynamics, through the reasonable adjustment of laser wavelength, energy and pulse width so that the light energy through the surface layer of the skin to the root of the hair follicle, is absorbed and converted into the destruction of the follicle tissue of heat energy, so that hair regeneration ability.

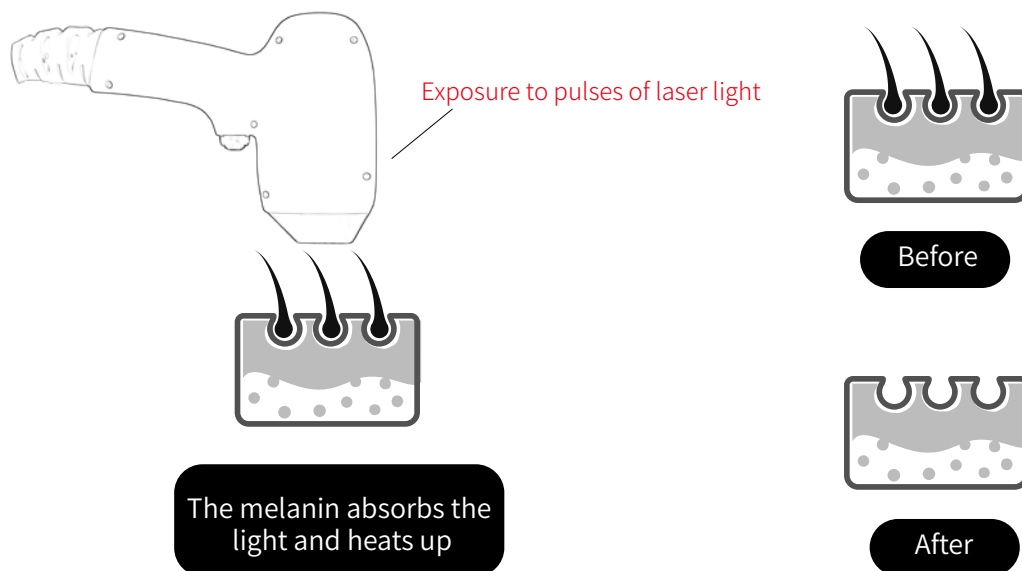
Extreme Ice Hair Removal System adopts unique freezing protection, can make the local epidermis cooled to 5 degrees Celsius, such as in the summer, there are ice-cold snowflakes drifting, suddenly feel cool; overcome the early hair removal cold touch color light side effects, as well as epidermal damage, bulky equipment, complicated operation and other shortcomings. At the same time does not damage the surrounding tissue, painless, is currently safe, fast, long-lasting hair removal technology.

1.2 Hair Removal Scope of Application

Lips, underarms, arms, legs, bikini five areas

1.3 Hair Removal Cycle

LASER HAIR REMOVAL



There are three stages in the hair growth cycle: anagen, anagen, and resting. The best results can only be achieved when 808 Ice Spot Hair Removal is performed during the anagen phase. During the anagen phase, the pigmented particles inside the hair follicle are able to fully absorb the heat energy. Hair follicles are the most fragile at this time of the year, and the results of hair removal are inevitably the best. The number of treatments is also related to the density and color of the hair in the treatment area and the proportion of hair follicles that are not in the anagen phase, and the results can be seen after one or two treatments. Not only can it permanently remove unwanted hair from limbs, armpits, chest and back, bikini line and other body parts, but it can also make your skin look more beautiful.

It's a perfect way to make your hair look polished and fine, making it easy to dress. It is also ideal for modifying the contour of the hairline and the shape of the beard, making it easy to look fresh and beautiful.

1.4 Hair Removal Process

① (sales) inquiry (formal):

You can call or come to the store for a free one-on-one consultation to talk about your hair problems, and the esthetician will formulate a personalized treatment plan according to your situation, and eliminate your anxiety and doubts by explaining the hair removal methods.

② Confirmation of skin:

The esthetician confirms your skin condition, hair texture and volume to determine the treatment plan.

③application of cold gel:

Clean both underarms and apply a cold gel containing hair inhibiting ingredients.

④irradiate:

Customers wear goggles and complete the hair removal session with 3 minutes of painless irradiation.

⑤cool off:

Wipe off the cold gel and use the cooling pack to apply cold to the skin.

Sedation (application of beauty lotion)

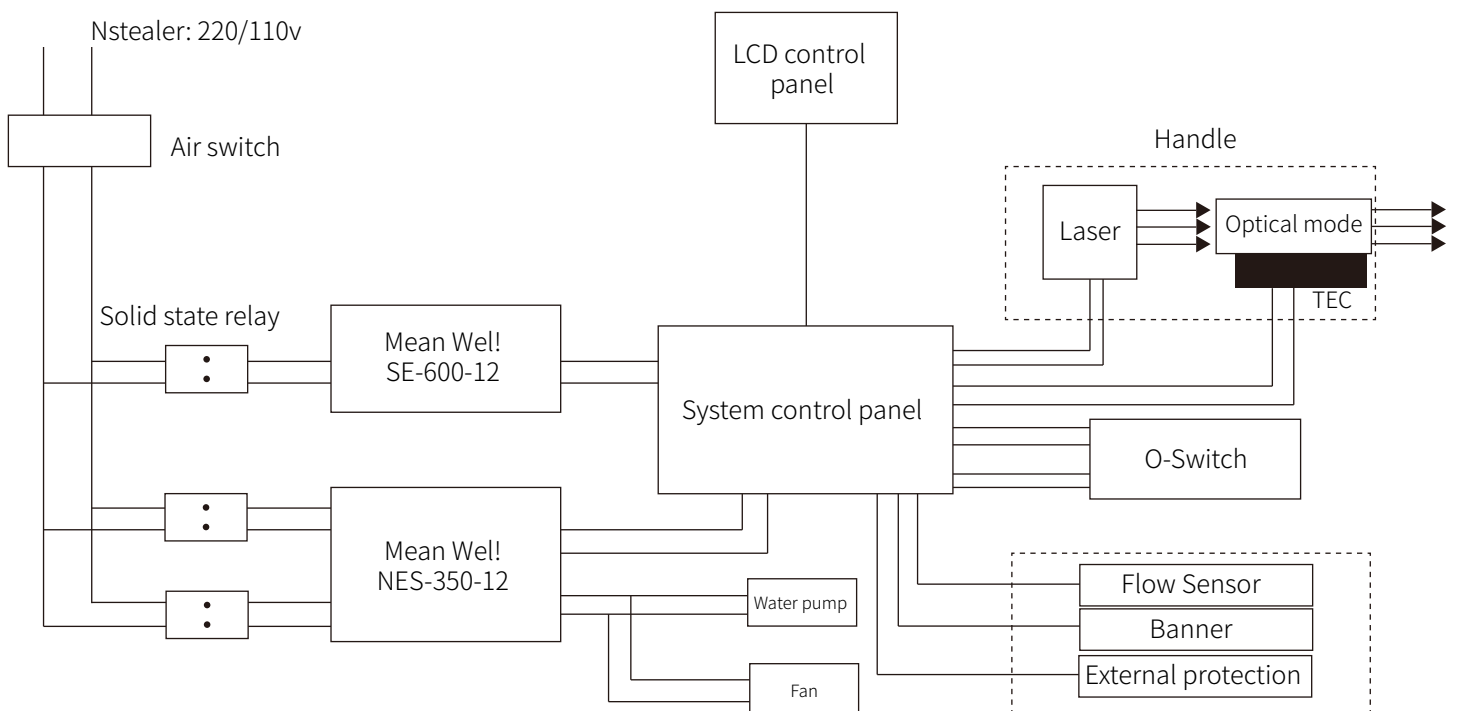
Apply a calming, moisturizing lotion to gently pamper your skin after waxing.

2. 808 hair removal technical parameters

2.1 System principle

System principle version 2.1

HIssue 2



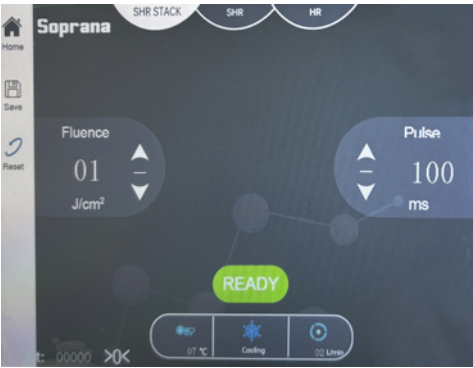
2.2 808nm Ice Hair Removal Interface

User interface

Home page



Operating interface



SHR STACK



SHR



HR

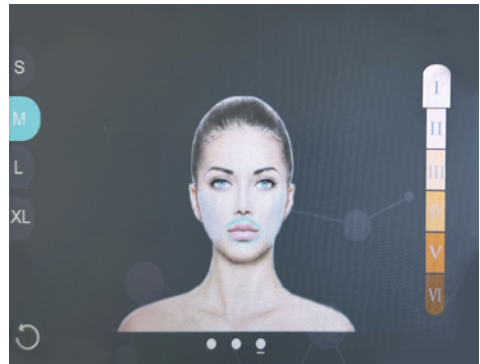
Site interface



THE RIGHT SIDE



BACK

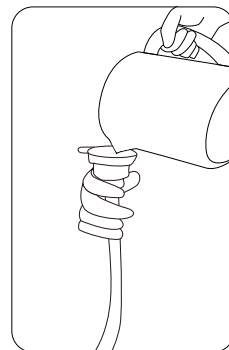


FACE

3. Instructions for use

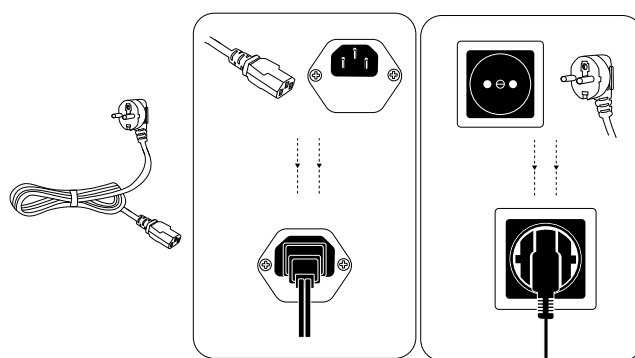
1 >>

First add water to the machine, 808nm freezing point hair removal instrument on the water quality requirements, **it is recommended to use steamed water and pure water, can not be used! Tap or mineral water, or better yet, deionized water if available;**



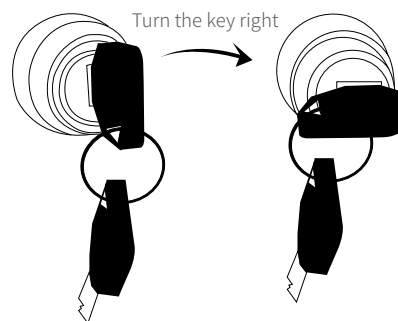
2 >>

Connect the power cord, please check the input part, divided into 220V and 110V, can not be connected wrongly.



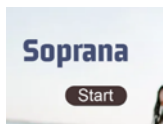
3 >>

Connect well the power supply , Rotate the key;The machine will enter the power-on interface after three seconds, tap and press



4 >>

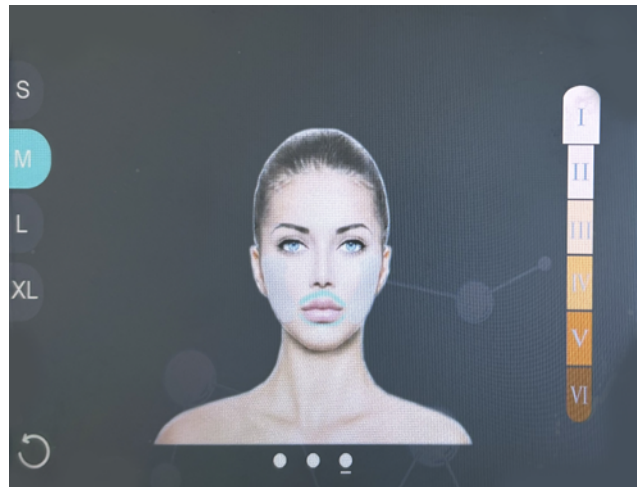
In the working interface



I, II, III, IV, V, VI are for 6 kinds of skin. According to the actual situation, choose I-VI for different skin colors. S, M, L, XL are for the 4 different parts of human body hair. When you click S, M, L, etc. to correspond to different body parts, select the part you need to remove hair according to the actual situation.



Click this position to switch to back and face hair removal



HR- Fixed point mode

It is a traditional method of selecting high energy point to point: suitable for dry hairline, beard, base foot and limbs, trunk and other parts. It is characterized by high energy point-to-point traditional therapy with high energy density up to $120\text{J}/\text{cm}^2$.

SHR- Freezing point mode

Is to choose low energy density, high average power in a certain area, through the handle repeatedly sliding, so that the temperature of the hair follicle gradually rise and maintain a certain time, finally achieve the effect of hair removal; It is suitable for the treatment of large hair area. It is characterized by low energy density and high average power.

STACK point mode

In the same treatment point continuous output 2-5 flying points, continuously increasing hair follicle temperature to achieve the effect of hair removal; Or in a healing area, glide to release flying spots of light. It is suitable for the treatment of small areas such as dry face (hairline, lip hair), bikini and fingers.

READY

The size of the density, general hair removal energy density of $50\text{J}/\text{cm}^2$ above. After adjusting the parameters, press key for 3 seconds and then it turns red.

Enter the working state; set the energy according to the human skin, if the skin is lighter it is recommended to increase the frequency and decrease the pulse width, on the contrary, if the skin is darker it is recommended to increase the pulse width and decrease the frequency. The energy density is kept between $60\text{J}/\text{cm}^2$ - $80\text{J}/\text{cm}^2$, and then the energy density is adjusted according to the sensitivity of the skin.

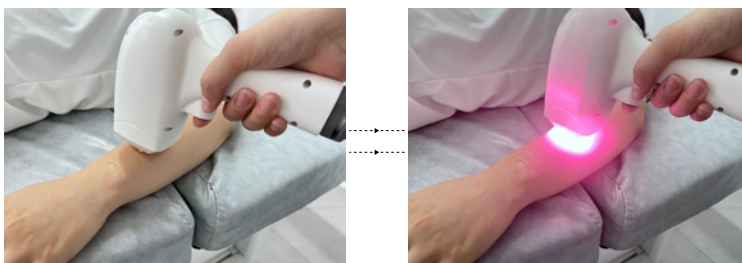
Turn on the freezing switch before use to allow the handle to cool and freeze.

Click the snowflake switch. It is gray before opening and blue after opening



5 >>

Then press the key and the handle TEC starts to cool when it turns red;



6 >>

The hair removal operation is then performed by pressing the handle button or foot pedal out of the light.

If you need to pause press the button to stop working and enter standby mode.



4. Notes on use

- ①Keep the water tank water sufficient and clean, it is recommended to change the water once a month.
- ②Room temperature is controlled at 5°C ~ 28°C, if in summer, you must work in an air-conditioned room to prevent the water temperature from getting too high; if in winter, the water temperature is too high.Prevents water from freezing;
- ③The use of a handle collar is recommended to prevent the handle from falling;

ATTACHMENT	Button Notes
FLUENCE	Energy density
GRID SIZE	Spot size adjustable
FREQUENCY	Frequency
COOLING	Refrigeration
STANDBY	Pause
READY	Work

5. Clinical Operations

5.1 Introduction

This section is available for professionals who use the 808 Ice Hair Removal System.

The annex adds and strengthens the information in the operating instructions on use, prevention and warning to minimize the occurrence of hazards.

Tuning. All operators should read through the entire operator's manual before reading this section and before operating the system.

5.2 Training requirements

The 808 Ice Spot Hair Removal System is designed to require that the operator has been trained in this area and has read the manual. Requirements include Physicians, nurses, technicians, or other professionals.

SPEKTRUMLAB TEKNIK provides training to operate the system. At the end of the training, participants will be familiarized with the operation.

The physician is responsible for contacting the local licensing agent to determine the legally required certification for clinical use to operate the system.

5.3 Uses and indications

The 808 Ice Hair Removal System is used for body hair removal and permanent reduction of body hair. The 808 Ice Hair Removal System is expected to be used on all Skin types (skin types I-VI), including sunburned skin.

The process of hair removal is based on the principle of selective photothermolysis. The method consists of disrupting the hair regeneration mechanism by raising the temperature of the hair follicle high enough to destroy the germ cells without damaging the epidermis and surrounding tissues. Hair growth cells are those that divide and differentiate into the cells that make up the hair follicle. After the laser has been applied, the debris from these cells is phagocytized and eliminated from the body by phagocytes.

The unique cooling technology of the 808 Ice Hair Removal allows the laser to be directed into the root of the hair, while the cooling protects the surrounding tissues of the skin and improves the patient's comfort.

The Semiconductor Plus 808nm wavelength is used to: remove unwanted hair and the effect is stable, long term or permanent reduction.

5.4 Contraindications

- ⊗ Cancer, especially skin cancer
- ⊗ Pregnancy (including IVF)
- ⊗ Use of photosensitizing drugs and herbs
- ⊗ Active inflammation or herpes simplex infection in the treatment area
- ⊗ History of scarring tumors
- ⊗ Diabetes (insulin-dependent)
- ⊗ Dry and Sensitive Skin
- ⊗ Endocrine disruption (bright light can cause irritation)
- ⊗ Use of anticoagulants
- ⊗ epilepsy
- ⊗ History of blood coagulation
- ⊗ Conditions susceptible to irritation at 808 nanometer wavelengths of sun exposure or artificial tanning 3 to 4 weeks prior to treatment

5.5 Side effects of treatment

The 808 Ice Hair Removal System is similar to other laser technology products, which are often used in ways that can cause controlled or uncontrolled damage to tissue.

This includes:

- Severe erythema and edema for 2-24 hours after the procedure, which may last for several weeks.
- Symptoms of allergy, itching, mild burning sensation or pain in the treated area 48 hours after the procedure.
- Symptoms such as blisters, epidermal necrolysis or pigmentation of the surrounding skin appear after the procedure and last for several days to weeks.
- Since prolonged unprotected exposure to bright light or lasers can damage the eyes, appropriate protective eyewear should be worn throughout the treatment to protect the eyes.

It is important to observe the skin's reaction during treatment. Improper screening of patients or too much energy can cause thermal damage and lead to side effects.

5.6 Side effects that can result from treatment

Discomfort - Some patients experience varying degrees of discomfort when the laser pulse is emitted, some feel like bites, others compare it to the sensation of a rubber band popping or a burning sensation that lasts for up to an hour after the procedure. Most patients can tolerate the treatment, while some require prior surface anesthesia.

Damage to the skin texture - In some cases, patients have developed hard nodules or blisters on the skin surface after the procedure, requiring routine wound protection.

Pigmentation Changes - The pigmentation of the skin in a treatment area may change. Hyperpigmentation or hypopigmentation occurs most often when the skin type is between IV and VI, or when the skin in the treatment area has been exposed to sunlight before, during and after 3 weeks of treatment.

In some cases, the pigmentation is noticeable even when the patient is protected from light, but it will fade after three to six months. In rare cases, the pigmentation remains permanently.

Scarring - Scarring is rare, such as hyperplastic hypertrophic scars or keloid tumors. Following preoperative and postoperative guidelines can effectively minimize the potential for scarring.

Excessive edema - Temporary edema of the nose and cheeks occurs immediately after surgery and usually subsides within a few hours, but may last for several days.

Fragile Skin - The skin in and around the treatment area will become fragile after the procedure. Avoid applying makeup and rubbing (may cause skin damage) when this is the case.

Bruising - A purple bruise that lasts a few days to a few weeks may appear after surgery, fading to a rusty red color and disappearing gradually over a period of one to three months.

5.7 Eye protection

- . It is very important that all personnel in the treatment room wear protective eyewear. (patients and operating physicians).
- . Eyes should be optically dense at 5 (OD>5)
- . Have patients close their eyes during treatment even with glasses
- . If the patient is unable to wear eyeglasses, eye patches are used, which completely block light from entering the eye.
- . If the area to be treated is very close to the eye (e.g., the eyelid), a corneal plate is used to protect the eye

5.8 Visual safety

- . Avoid bright light in the eyes.
- . Never look directly into the laser beam or reflective surface of the handheld, even when wearing eye protection.
- . Set the system to standby mode anytime there is a pause in intraoperative operations to prevent the laser from being fired inadvertently.
- . Trigger the footswitch and handpiece by pressing only when the beam is aimed at the area of skin to be treated.

5.9 Fire safety

- . Remove hair from the treatment area. Place only sterilized water-soaked gauze near the treatment area if needed.
- . Make sure fire extinguishers are always available.
- . Avoid flammable paper products or make sure they have evaporated before laser/light exposure.
- . Do not use the system in the presence of flammable materials or anesthetics.
- . Oxygen tubing must be laser-safe.

5.10 Definitions

5.10.1 application mode

Each application mode contains predefined pulse parameters: the mixing mode rate and the total pulse width of the warm-up and treatment pulse segments.

Hybrid Mode 1 energy is delivered through a patented software-controlled pulse processing method that mixes preheat and treatment pulses to optimize the pulse for the skin type.

This unique technology creates preheating conditions that gradually and efficiently increase the temperature and minimize damage to the surrounding skin tissue.

Pulse width is the duration of each pulse segment (from warm-up to treatment segment) measured in milliseconds.⁸⁰⁸ The pulse width of the Ice Hair Removal System is set by the operator by pressing the Pulse Type key and is controlled by the software.

5.10.2 Energy density

The energy density output (Joules/cm²) is set by the operator at each treatment. Energy density is: total energy (Joules) output/spot area (cm²) for the selected pulse type.

At a large spot (12X10mm) scattering is minimized, so the result is a sustained energy output and deeper penetration, the greater the energy density, the higher the temperature of the target tissue hairs, surrounding tissue and epidermis.

5.10.3 Pre-treatment

Treatment parameters depend on the skin type, color, type, density and depth of the hairs being treated. Once the treatment parameters have been selected, shave and clean the treatment area, removing any surface hairs and debris that may interfere with the treatment.

5.10.4. Cooling technology

Cooling technology provides cooling before, during and after treatment to protect the epidermis and reduce the initial epidermal temperature. This reduces patient discomfort. The most important aspect of cooling is that it maximizes the energy of the treatment without increasing the likelihood of side effects.

Dense hairs (30-4 hairs per cm²) generate higher temperatures because there is more melanin per cm². Tissue damage can easily occur due to the excessive heat generated in the surrounding tissue. Therefore, the higher the hair density, the lower the energy.

5.11 Taking photographs

It is recommended that photographs be taken "before and after" the procedure to document the healing process. Photographs provide an objective basis for demonstrating efficacy, as some patients are unable to objectively judge the process in the light of the gradual effects.

Patients should be photographed under the same conditions, with the same camera exposure and focal length. This consistency allows for comparable photographs to be taken at different times.

5.12 Surface anesthesia

Due to the system's effective sapphire skin cooling system, the procedure can be performed without anesthesia, however, some patients may still choose to use it (e.g., EMLA) to avoid feeling any sensation from the treatment.

Anesthesia is usually applied some time (1 hour) before surgery. Care is taken to remove all anesthetic residue prior to surgery.

5.13 Pre-operative note

5.13.1 Basic Information

It should be at the time of the initial consultation with the physician:

- >> Bring a detailed medical history card, including previous treatments, and check skin condition for suitability for 808.
- >> Ice Spot Hair Removal System Treatment.
- >> Patients who have previously been exposed to sunlight for a regular period of time or who have been artificially sunbathed within 48 hours are not eligible for treatment.
- >> Patients who will be exposed to sunlight for an extended period of time afterward may not receive treatment.
- >> Patients with a history of herpes simplex in the area to be treated are required to receive prophylactic medication (e.g., Zovirax) preoperatively.
- >> Determine the patient's surgical intent and their expectations.
- >> Discuss treatment goals with the patient.

5.13.2 Advisory services

During the patient's initial consultation, the physician should inform the following:

- >> Clarify why the patient is seeking treatment and clearly know his/her expectations.
- >> Discuss the following with the patient.
- >> 808 Ice Hair Removal laser treatment requires multiple sessions over several months.
- >> Some discomfort or pain may occur during treatment.
- >> Temporary erythema and swelling may occur after the procedure.
- >> Gradual recovery of the skin may take several months.
- >> There is a small possibility of side effects, such as changes in skin color, which are usually temporary.

5.13.3 Skin testing

Energy is the key parameter for optimal treatment results and minimizing side effects. The treatment is usually preceded by the following parameters.



This symbol stands for "European Conformity", which declares conformity with all relevant EU health, safety and environmental protection regulations.

Row Skin Test

Recommended skin wait 30 minutes, 1V-V1 skin wait 45 minutes



Note the parameters of the 600w small spot.

6. Warning/Treatment

Treatment parameters are selected and ready to start.



Excessive energy transfer can lead to thermal damage to the skin, which may include skin hypertrophy, atrophy, or abnormal pigmentation.

- 1- Ensure that the patient lies comfortably on the table and wears eye protection, and that all personnel in the treatment room wear eyeglasses. The operator has easy access to the treatment area and the 808 Ice Hair Removal System.
- 2- Remove perfume, makeup residue and sunscreen from your skin.
- 3- Note that the current number of pulses is recorded and used to calculate the cumulative treatment energy.
- 4- Select the appropriate settings and save them once the parameters have been selected. This allows the operator to use the same parameters for a cohort of patients with the same condition.
- 5- Examine the handheld to make sure it is cold.
- 6- Hold the handpiece perpendicular to the skin and in contact with it. Press the end gently on the skin to make contact with the Good touch.



Care needs to be taken to ensure contact with the skin before the laser is turned on.

- 1- Skin testing is required at any time after starting the procedure to observe the reaction.
- 2- Carefully diagnose the test results.
- 3- If it is known that the desired effect is achieved, continue the treatment with the same parameters.
- 4- Simultaneously press the footswitch and handheld to begin treatment.
- 5- From time to time, check the skin color of the treated area and the morphological changes of the hair follicles (erythema and edema). The odor of burning hairs may be detected even when the parameters are set appropriately.
- 6- If side effects (such as excessive redness) occur before the hair follicle responds favorably, adjust the Treatment parameters to minimize the damage of the treatment, which can be reduced by reducing the energy by 5-10% or by adjusting the pulse type to a larger value.
- 7- If the skin does not have any adverse reaction and there is no morphological change, the energy can be increased by 5-10%.
- 8- Until the desired effect is achieved.



The 808 Ice Hair Removal laser can cause severe eye damage or blindness. For added safety, patients are required to wear laser goggles in the facial treatment room.
Cooling of the treated area is recommended immediately after surgery (see A. 17.:Postoperative Care).



Attention:

Treatment is not recommended for hairs that are lighter in color than the surrounding skin.

7. Treatment parameters

The 808 Ice Spot Hair Removal System presets are based on the findings of experienced users. In addition, the user can select and set their own parameter values.

Treatment parameters for 808 Ice Hair Removal include skin color type, laser energy density, and repetition frequency.

7.1 Recommended treatment parameter settings

RECOMMENDED PARAMETERS (SPOT AREA 15MM*15MM)

The frequency and pulse width are adjusted according to the client's sensitivity and skin color. If the client has lighter skin, the frequency is higher and the pulse width is lower, and vice versa, the frequency is lower and the pulse width is higher.

7.2 Energy requirement per part

PARAMETERS FOR THE ACCUMULATION OF THE ENERGY OF A SINGLE TREATMENT PER CELL (1 CELL0X10CM2).

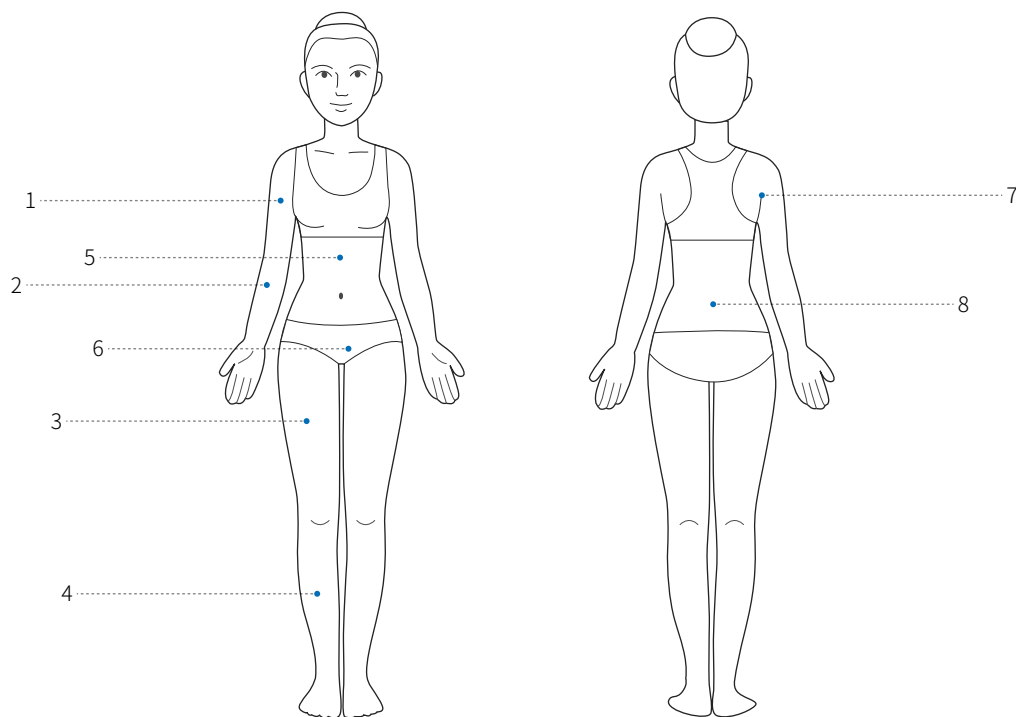


FIGURE A-2 :TOTAL ENERGY PER SQUARE CENTIMETER (KJ) CUMULATIVE

BODY PART	PART NAME	THERAPEUTIC AREA (COMPARTMENTS)	CUMULATIVE ENERGY (J)
1	upper arm	8-10	50,000-8,000
2	forearms	6-8	40,000-6,000
3	lap	11-13	650,000-100,000
4	calf (of the leg)	0-12	60,000-9,000
5	front part of the chest and abdomen	12-14	75000-110000
6	bikini line	1	6000-8000
7	armpits	1	6000-8000
8	backpack	12-14	75000-110000

7.3 Post-operative care

- . Immediately after the procedure, cold (but not frozen) ice packs should be used to cool the treatment area to minimize edema and discomfort. Cooled 10*10cm soaked gauze can also be used.
- . For 4 hours to 5 days after the operation, prevent trauma by doing the following: no hot water baths, exercise, massages, etc.
- . Sun Exposure - Patients should wear a high index sunscreen (SPF>30) and avoid direct sunlight on the treatment area for at least one month after the procedure. Exposure to the sun after the procedure can cause melanin regeneration and result in pigmentation.
- . Makeup - After the procedure, makeup can be worn during the day unless blisters or hard nodules appear. Due to the sensitivity of the skin during this period, care should be taken when removing makeup to avoid infection.
- . Other post-operative recommendations - A topical dressing should be applied for 10 days if the treated area comes into contact with dirt. Patients are advised to avoid strenuous exercise or similar activities for a few days until they return to normal.

7.4 Follow-up visits

THE FOLLOWING ARE FOLLOW-UP RECOMMENDATIONS THAT PATIENTS CAN USE TO DETERMINE THEIR STATUS.

Under normal circumstances, patients can expect to be examined and receive additional treatments within 6-8 weeks after surgery. This period varies depending on the outcome of the treatment, and the individual's hair growth cycle.

If no further treatment is needed, the patient should be re-examined after 3-4 months or if hair regrowth occurs in the treated area.

If partial hair removal occurs, the patient should be re-examined in 6-8 weeks if necessary.

If no change is observed, it is necessary to change the treatment parameters. Multiple treatments, with increased intervals, allow new hair growth in the treated area. New growth varies in different parts of the body (growth cycle) and in different individuals (gender, hormones).

Patients should be advised to protect themselves from the sun during the course of treatment.

7.5 End of treatment

Precautions during operation

When to end treatment is subject to professional judgment or based on the patient's satisfaction with treatment goals.

PRECAUTIONS IN THE OPERATION OF THE 808

- I** The instrument must be connected to the specified power supply AC200~240v.
- II** You must read the instruction manual carefully and understand it completely before you start to use it manually.
- III** Treatment in an isolated separate room is recommended.
- IV** Pure water must be used for refrigeration before the first use, and it is recommended that the water be renewed once a month.
- V** Frequently and gradually adjust the parameters from low to high, and constantly ask the customer to avoid harm caused by overheating.
- VI** Keep the touch screen away from water. Do not use alcohol or other things to clean the plastic case and display of the instrument, and do not put additional objects on the instrument.
- VII** Prior to treatment, clean and remove hair and apply cold gel to the treatment area, take precautions and put on goggles for both the patient and the operator.
- VIII** Always check hand tool cooling before treatment to avoid abnormal cooling circulation.
- IX** People with conditions such as diabetes, scarred and sensitive skin, photosensitivity, etc. are not suitable for the treatment of this series of products. Ten, after the treatment of redness and swelling is normal, after a week to subside, since the treatment of a week, do not get wet, do not make up, do not expose to the sun or other sensitive light sources.
- XI** In the machine's READY button is in the state of light, do not use your eyes to look at the handle of the light outlet, and even more not to the eyes of the light shot!
- XII** In the operation must be close to the customer's skin for compression sliding, do not leave the skin empty playing.
- XIII** The handle in the light remember not to hit against the black objects, including clothing and all black objects with.

8. Troubleshooting

Error#	Safeguard	Possible causes and troubleshooting
Tempi error	Control board temperature alarm	There is a 60-degree temperature alarm under the control board heatsink, the alarm causes: 1, the temperature is too high; 2, the control board fan does not work; 3, the temperature sensor is bad or broken wire (note that the control board fan only turns when the light)
Temp2 error	Room temperature alarm	There is a temperature sensor inserted in the control board, macro channel 35 degrees alarm, no channel 55 degrees alarm. Alarm causes: 1, room temperature is too high, need to control the room temperature below 28 °; 2, the machine is not good heat dissipation, the internal temperature of the machine is too high; 3, temperature sensor damage (soaked in water is easy to bad). (If the temperature sensor into the water tank, that is the water temperature alarm)
Flow error	Water flow alarm	There is a flow sensor connected to the water circuit, the alarm causes: 1, the water flow is not enough, mainly and the pump pressure is small, the water pipe is too thin, the connector water resistance, the water circuit is not reasonable, etc.; 2, there is a leakage of air in the water circuit; 3, the flow sensor is damaged; 4, check the wiring
Level error	Tank water level alarm	The water level switch is connected to the middle of the tank, the alarm causes: 1, the water is not added enough; 2, the water level is stuck without floating up; 3, check whether there is a false welding; 4 control board problems
The handle doesn't light up	Macro channel Non channel	1 (a) handle does not light visual inspection of the laser appearance, there is a buckle broken phenomenon, send back to the original factory maintenance (b) If there are no alarms on the machine interface and the READY changes color normally, either the hitch bar in the handle is loose or the power cord supplying power to the handle is loose. 2, Weak light out of the handle, laser or control board problems
Blue screen	Monitor	1, the handle button did not pop up; 2, the terminal wires on the control board are stuck together 3, if there is a foot pedal, test whether the foot pedal wire connection is twisted together, or directly cut the wire. 4, the foot pedal dripped into the water, wait for the water to dry out.
Black screen	Monitor	1, the screen into the water; 2, heavy objects to the screen crushed; 3, control board problems 4, control board and screen wires loose
TEC does not cool	TEC	1, TEC refrigerator is bad, 2, Test the relay in the chassis whether all bright, may be one of the relay is bad.