

Training Manual

For

E-light (IPL+RF)

YWE-4

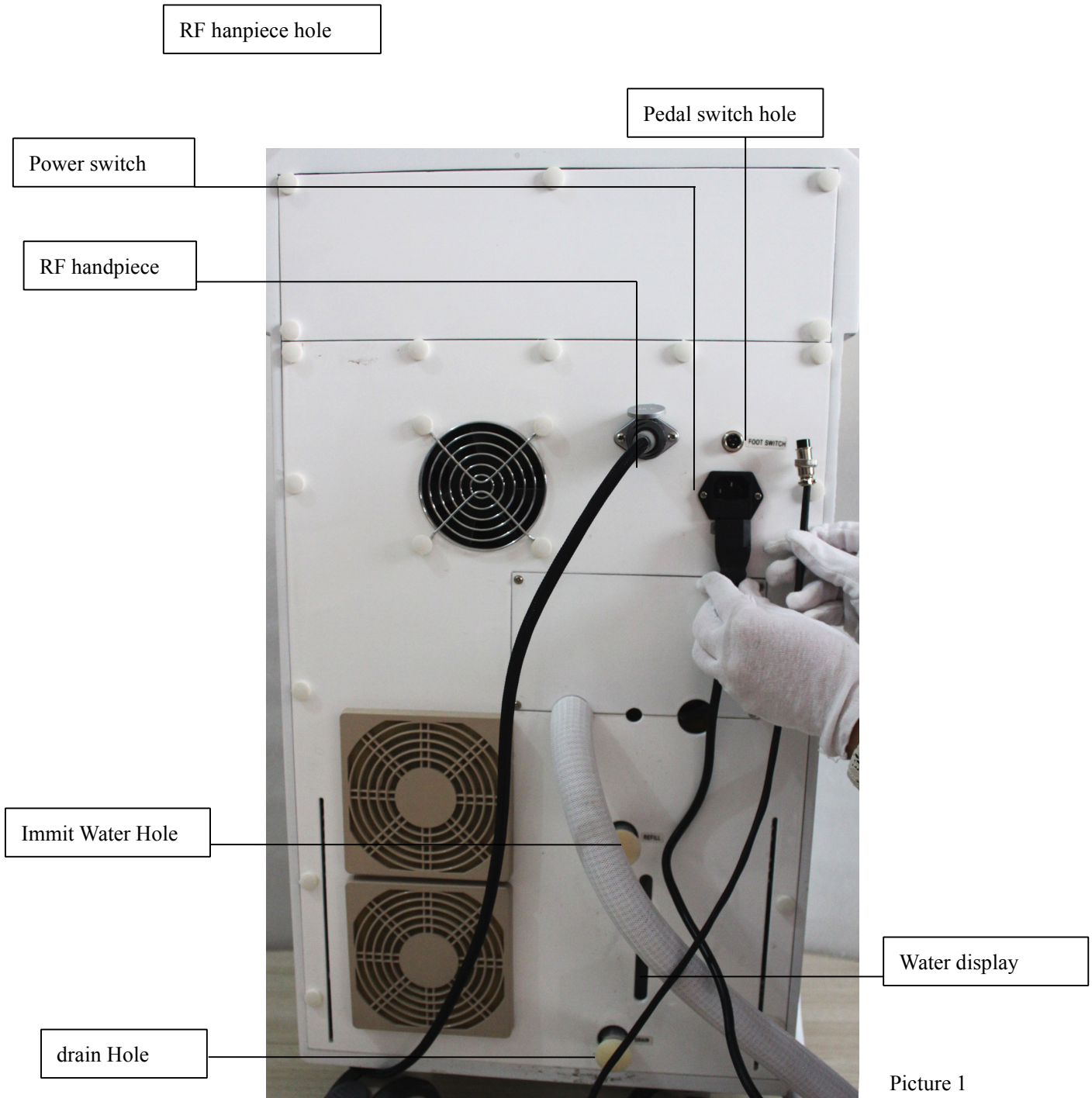
Elight / IPL hair removal beauty machine



Chapter I How to inject pure/distilled water into the machine?

Alarm: Operating machine when the water tank has no water or has no enough water is absolutely prohibited!

This is the overview of the back of YWE-4.



Picture 1



Picture 2

Fill the bottle with pure or distilled water.



Picture 3

Immit water into tank through immit water hole

Picture 5



When the water level reaches max, it means that water is full. Water injection is finished. Cover the immit water hole.

※ **We may open the drain hole to discharge water.**



drain hole

Chapter III How to use E-light?

Choose suitable treatment parameter:

Choose suitable pulse number, pulse width and pulse delay time, and set up the energy from low to high, meantime observe the color change of the skin. It is OK when the skin becomes a little red temporarily. Setting parameter is very important, which should be different according to different patients. Parameters should be adjusted in accordance with skin reflection during the treatment. The principle is as the following:

1. The thicker skin and the pathological skin spread deeper need longer pulse width and higher energy.
2. The darker, thinner skin is, the more sensitive skin is, and the lower energy should be used.
3. When to operate on the part with less subcutaneous tissue, low energy should be used at first. With more times of treatment, properly enhance 1-2J/cm².

Management on the skin before and after treatment:

The hairs on the surface of skin should be shaved before the hair removal operating. And the couplant, like cold gel, should be daubed averagely on the skin. Cold compress with cold towels on the skin in 20-30 minutes after a treatment is better to ease pain and inflammation. In this situation, the aloe vera gel can be daubed to make recovery. During operation, the using of SPF15-30 sunscreen cream is suggested for against sun burnt. Also having vitaminB₁ could reduce the sensitivity of skin to light. The photonasty medicine and food (like celery, leek, caraway etc.) should be prohibited. The person with sensitive skin is prohibited to eat food that may cause skin allergy. Dryness of skin may be happened among part of patients, because absorbing capability of skin is getting stronger and body metabolism is getting faster after operating. So the complementarity of water and nutrition by skincare is necessary after operation. For thorough effect, the pigment that related to incretion should be treated with matching medicines.

Treatment Period:

Each treatment lasts 20 minutes. The interval of every 2 treatments is 3 weeks. 5-6 treatments are a period. Why there are so many treatments? It is to reduce secondary reaction while to gradually beautify skin. In addition, we can start our work and life soon after a treatment with IPL, which is in accord with modern life. Treatment time and times are up to the size and degree of pathological area. Each treatment produces remarkable improvement.

Complicating disease

Seldom complicating diseases arise under the normal operation .The most familiar complicating disease is temporary rubeosis on skin, which needs no cure and would become normal in several hours after a treatment. Water blister, scab or purpura may appear on the treatment area of a very few of patients after a treatment, which is caused by overhigh energy or repeated overlapping of light spots. The area of water blister, scab or purpura should be kept dry and clean and it will disappear in 2 weeks. Because intense light sensibility for different people is different, pigmentation may be caused on a very few of patients. The pigmentation would be absorbed by our body in 3-9 months. Meantime, patients with pigmentation should try not to be under the sun for a long time and can have vitamin C and vitamin E to accelerate color metabolism. Part of treatment area, when a treatment is on, may feel like being shot by a rubber band. Most of the patients can bear it. No need to use anesthesia. For those who are sensitive in pain, narcotic can be sprayed on the treatment part before treatment.

Chapter IV Taboo Instructions

Taboo

- a. Pregnant, high blood pressure, cardiopathy, diabetes
- b. Irritability skin for light
- c. The open scar part
- d. People who don't shun the sun in long time
- e. Stop using the efficiency products in 1-3 months
- f. Forbid to enlarge breast during the menses
- g. The scars, birthmarks, naevi which higher than the skin

Notices:

- a. There is dangerous high-voltage inside the equipment, please make the panel board and cover board closed.
- b. The light head must hang on the tieback when you don't use it.
- c. The light head should point at the operated position, because it sends out high-intension pulse light.
- d. Make sure the safety of the medical personnel and sufferer. Don't see the light directly even you wear the protection glasses.

【Warning】

It can cause hot damages of the skin if the treatment part of the skin accepts excessive light so as to making the hyperplasia or atrophy of the tissue, and even making the abnormal pigment depositing.

Chapter V Introduction of E-light

The key technology of E-light has mainly three points: radio frequency, light energy and epidermis cooling. It can joint each advantage of IPL and RF, make use of the skin's selective absorption to light energy, and cause the impedance differences to target tissue and normal skin. In the situation of low light intensity, E-light can strengthen the absorption to the frequency for target tissue and make the tissue get to the ideal temperature. The frequency can penetrate the skin deeply, and have no selective absorption. The conductivity is closely related with temperature. E-light

combines advantages of IPL and RF, makes the selective absorption to IPL and strengthen the absorption of RF by skin tissue. At the same time, the touching cooling technology of RF dismisses the uncomfortable feeling and complication, which caused by violent light. The effect and safety have been improved.

1. Treatment principle:

E-light operates on hypodermal and connective tissue by using the technology of IPL and RF, so that it stimulates collagen of different depths that is rearranged and grow, thereby obtaining the effect. At the same time, RF releases the energy to make all kinds of injured tissue in cuticle and dermis photo-pyrolyzed. More E-light that has much lower energy than traditional IPL is absorbed by various pigment and hemal injured tissues, so that it can remove these injured tissues and has the treatment effect.

A. Biological Stimulation

Actinism, produced by Intense Pulsed Light operating on the actinic skin, makes the structure of molecules in the collagen fibers and the elastic fibers in the dermis layer change to restore original elasticity of skin. Besides, photothermy produced by above operation boosts blood vessel function, improves the circulation, so as to achieve dispel wrinkles and shrink pores.

B. Pyrolysis

With Intense Pulsed Light operating on the skin, for reason that the pigment agglomerate pathological tissue is much more than that in normal skin tissue, the temperature after absorbing light is higher than that of normal skin. The temperature difference blocks out the pathological blood vessel leading to cracking and decomposition into fragment, part of which is raised from the cuticle, and the other part will be decomposed into small particles, which can be swallowed by macrophage and discharged out of human body with the lymphatic system. Normal skin will not be hurt, because normal skin tissue absorbs little light energy.

C. Unhairing

Intense Pulsed Light operates on hair nipple and acts on pigment therein without any impact on its hair follicles or sweat glands. The cycle of a hair is divided into three periods: growing period, maturity period and dormant period. The growing hair can be dispelled completely once (Medically, a kind of small villus hair, which is white and not harmful to beauty, is called Juemao in Chinese)

2. Application

- a. Smooth fine wrinkle, tighten skin, stretch face;

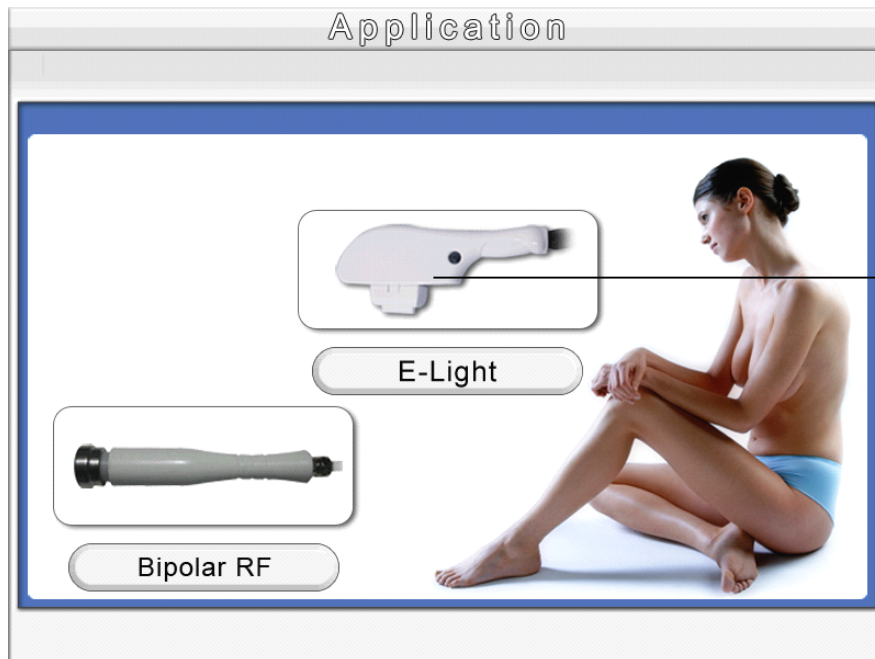
- b. Remove deep-seated speckle, dermal speckle, cuticular speckle, fleck, age pigment, chloasma and so on;
- c. Whiten skin;
- d. Remove unwanted hair;
- e. Remove acne; remove facial vascular lesions (Telangiectasis).

3. Procedure of treating.

- a. Confirming the treatment time and ask the patient to fill the register, and then clean his/her face;
- b. After cleaning face, cover the patient eyes with a humid cotton sheet or paper towel, turn on the apparatus and confirm the water circulation is in a right way;
- c. Cleanly shave off the hair on treatment part; if shrink pores, clean the pores firstly;
- d. Smear condensation glue about 2mm in thickness on the patient's either side of his/her face; adjust parameters in proper value;
- e. After adjustment, hold light head, which should be downwards; shoot in the air two times; have an experiment on normal skin to see whether there is change and ask for the patient's feelings;
- f. If treatment part does not become red and there is no feeling of heat and sting, increase the energy. The increased value shall not be more than 2J every time. Shooting the light two times every time after adjusting the energy and one light spot should be lapped at the location of 1/3 of the other light spot. In this situation, it is normal that the treatment part is reddish for 3-5 minutes. It is at the best if the patient feels stinging and heated.
- g. Operating on the two cheeks firstly; when it is the turn for forehead and circumference of mouth, the energy value should be reduced by 10%; When to treat canthus and if it does not become red, another one or two operations can be done;
- h. Confirm the effect after the first operation. If not satisfying, another 1-2 operations can be done after the red and heat fade away, and then turn the apparatus off;
- i. Keep the condensation glue on face for 20 minutes and then wash it away.

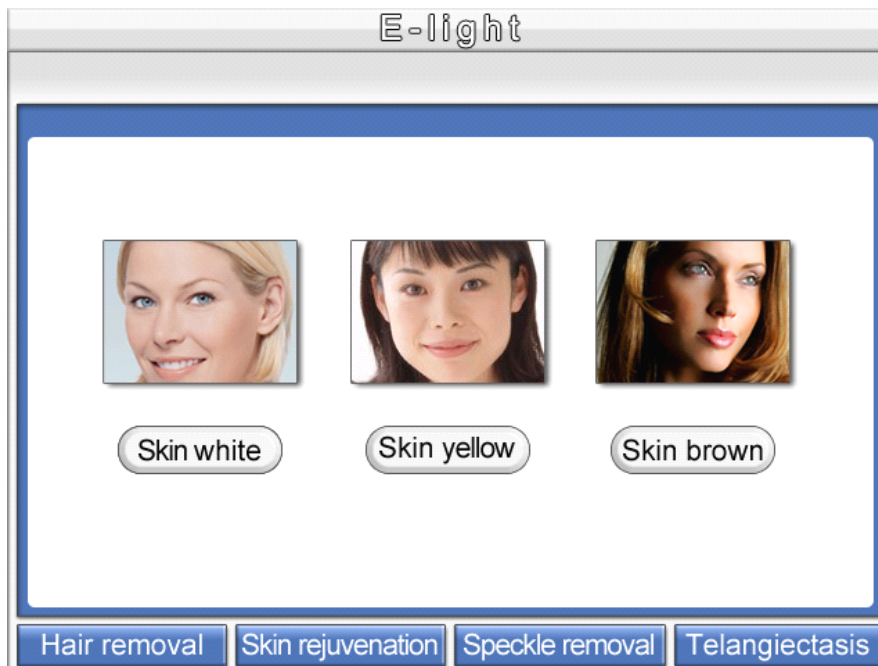
4. To choose the treatment interface of YWE-4

A. When you choose the interface of E-LIGHT



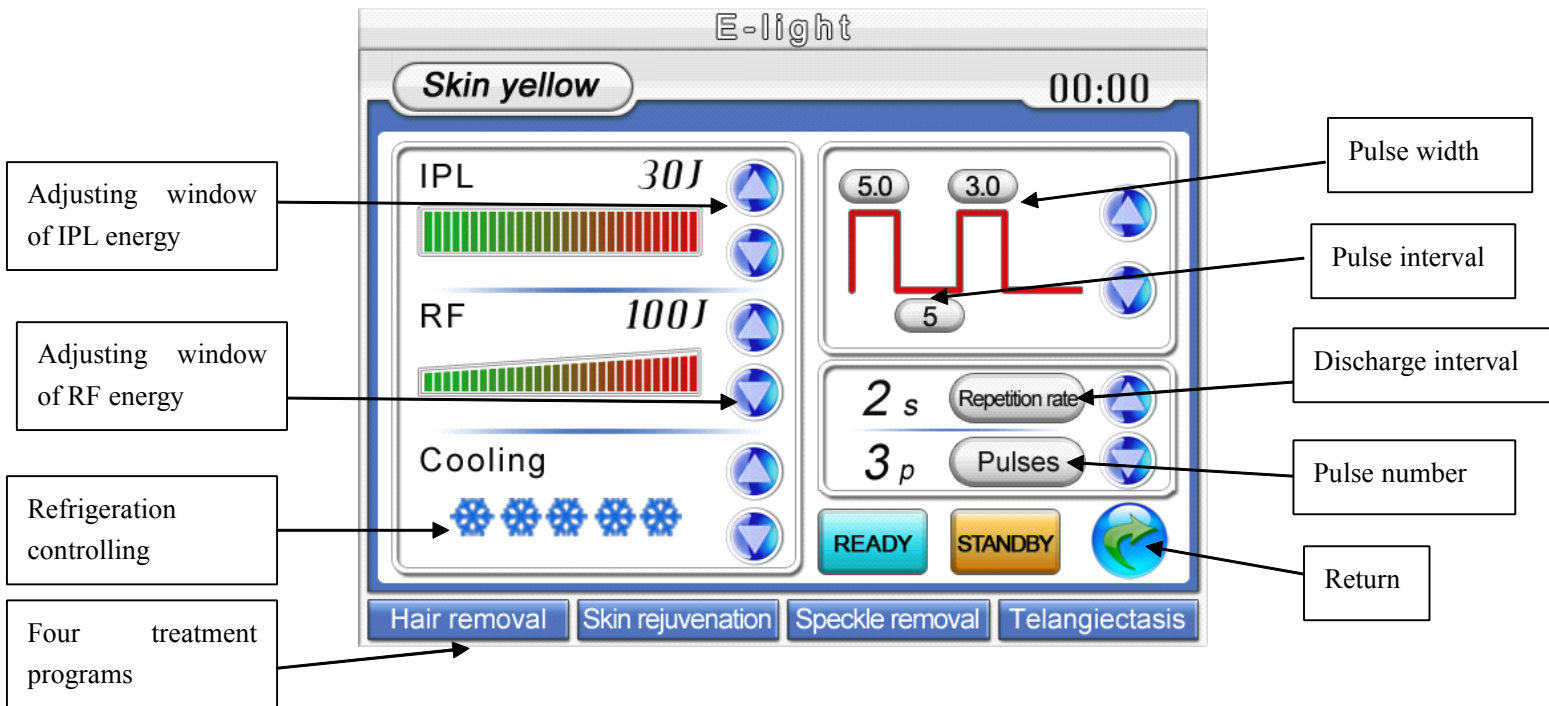
Press E-light ----
The screen will show three
skin
col

Picture 9



The screen will show three
skin colors, press the button
accordingly

Take skin yellow for example:



You can choose the accordingly treatment key to enter the treatment mode, just like Picture above. The system can charge up the capacitance automatically.

Pulse parameter adjusting window: to adjust parameters. Click on the figures for adjusting, and then click again for confirmation.

Pulse number: it is seepage force. More number, stronger seepage force.

Return: clicking it to go back to the interface.

Discharge interval: To adjust the discharge interval, the adjusting extension is 3~6S, you can touch different figure. It the interval time bewteen the two adjacent flashes if keep pressing the switch on the handle.

IPL controlling: Click this key can turn off&on IPL system. IPL system and RF system can be turnt on at the same time, but cannot turnt off at the same time.

Adjusting window of IPL energy: to adjust the output energy of the light head. The adjusting extension is from 1 to 35 J/cm². It can be changed during your treatment through clicking “△or▽”, “△”means up while “▽”means down.

Treatment parameter: to record the current parameter.

Light head counter: to show the light number of the light head radiates. It can return

to zero when you touch the number, and it will not counter when you open RF only.

Refrigeration controlling: to adjust the amount of snowflake from the left to right

Treatment recording: to display the current record, it also can record different treatment parameter in order to treat different sufferer. It can be changed through touch different keys.

Adjusting window of RF energy: to adjust the output energy of RF. The adjusting extension is from 1% to 100% levels. It can be changed during your treatment through clicking “ Δ or ∇ ”, “ Δ ” means up while “ ∇ ” means down.

RF controlling: Click this key can turn off&on RF system. RF system and IPL system can be turned on at the same time, but cannot be turned off at the same time.

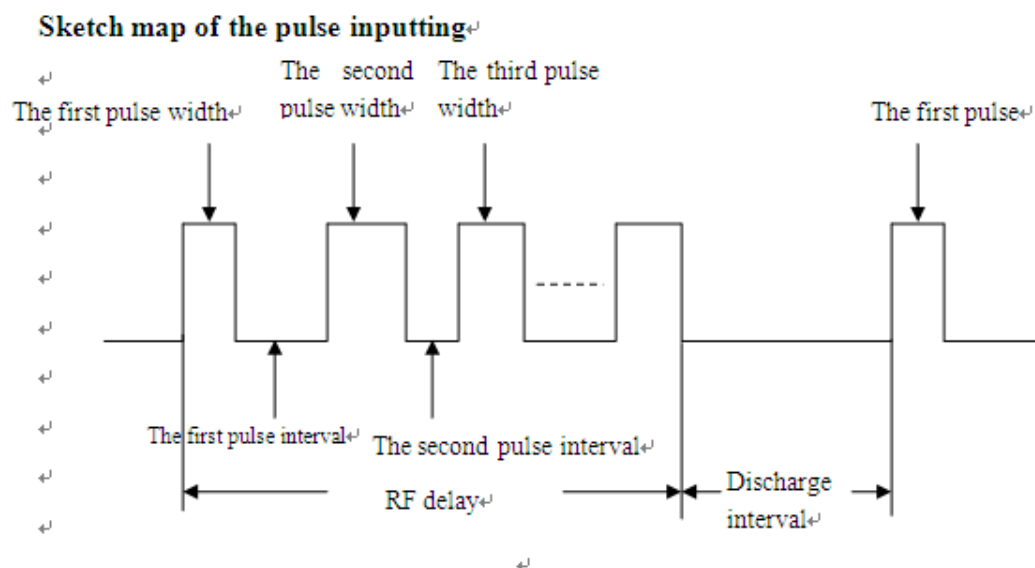
To modify the treatment parameter:

Treatment parameter means the data which you can change; we can change the output energy, pulse width and the number of the pulse of the light head to reach the different treatment effect.

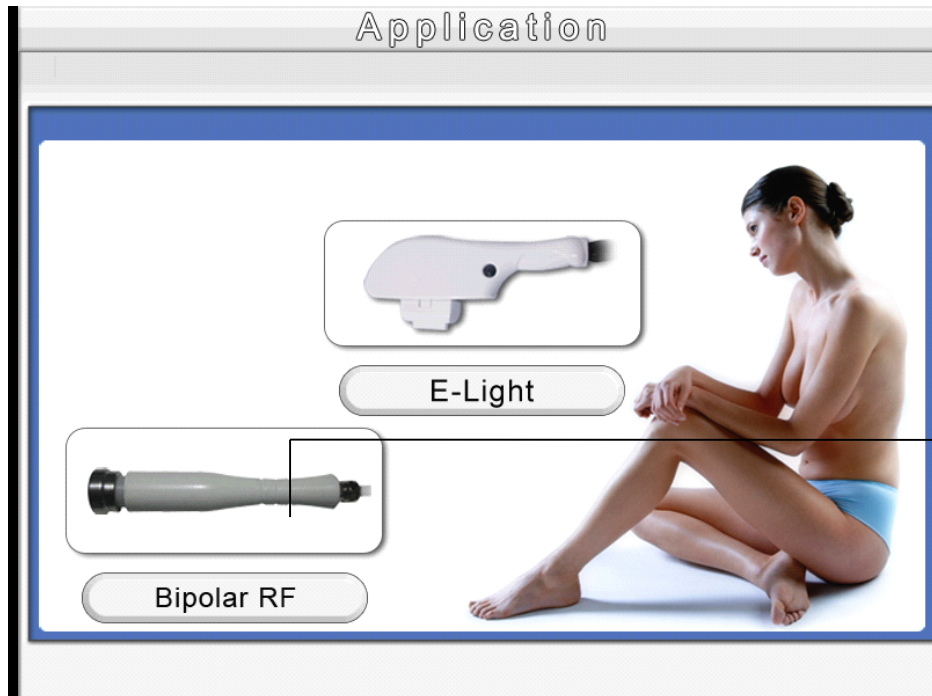
pulse width: to adjust the pulse width, adjusting extension is from 3 to 8ms by 1ms step in.

pulse interval: to adjust the stay time between the pulses, the adjusting extension is from 5 to 5ms by 5ms steps in.

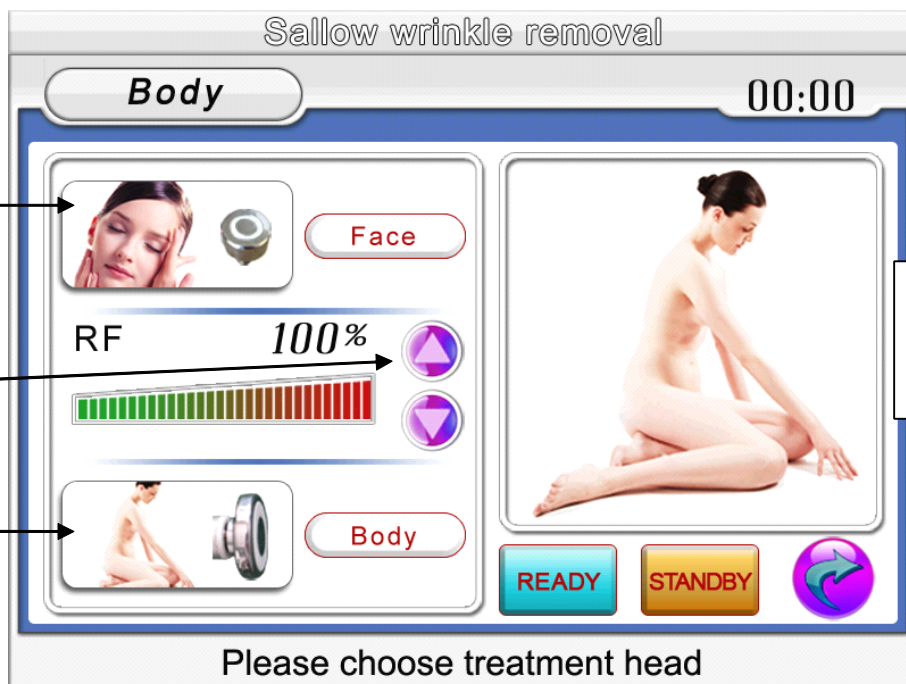
The treatment parameter can be changed, and you can adjust the parameter on the pulse wave pattern. The folder should be clicked again for saving the parameter after you input the needed number. The number will not be changed if the number is too big.



B. When you choose the interface of RF



Press Shallow wrinkle removal



There are two programs: Face and body

For face wrinkle removal

Adjust RF energy

For body wrinkle removal

Please choose treatment head

RF handpiece

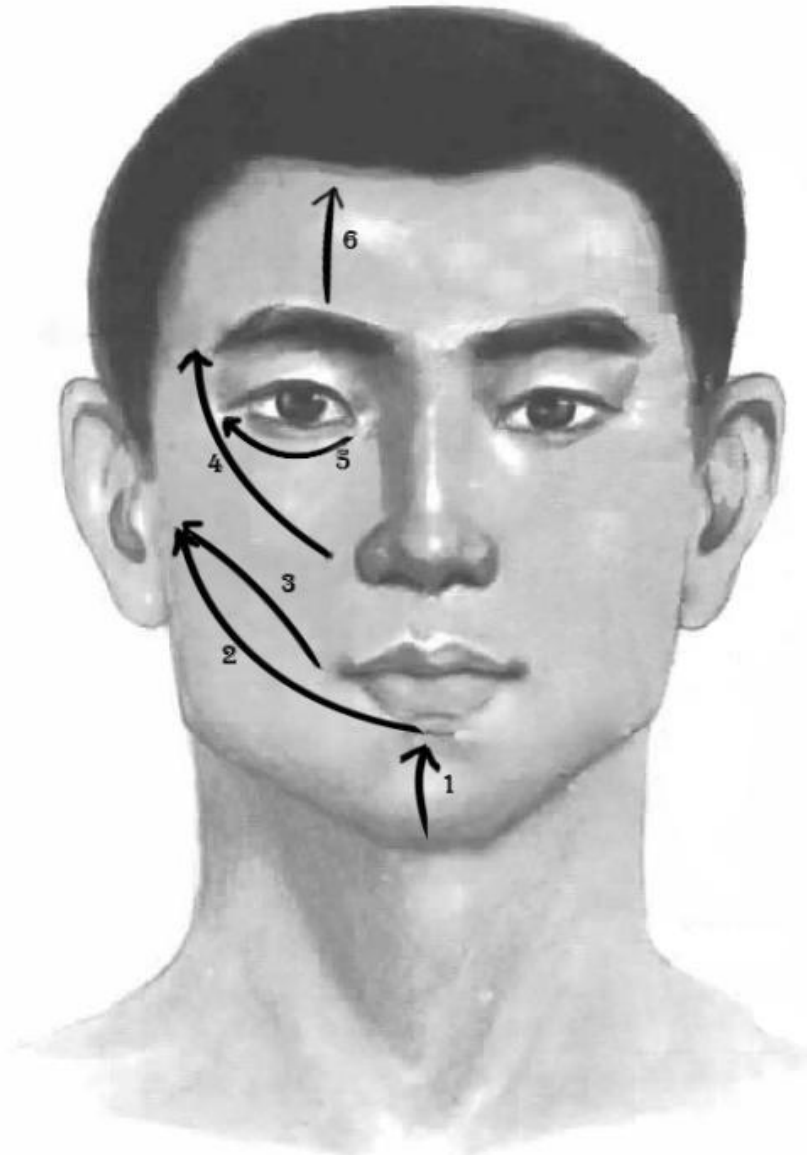


F. Treatment

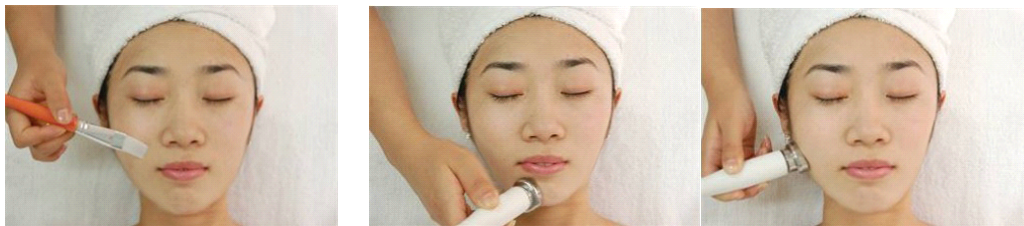
On RF treatment, cold gelatin must be daubed, RF electrode must contact skin well, RF energy must be adjusted from low to high and the contact time of electrode and skin can not be too long, or skin may be burnt. What does a suffer feel when he/she is treated with RF? Normally, heat can be felt inside the skin, for example, strong feeling of picotement because of too little cold gelatin daubed on skin or bad contact of electrode and skin. In this situation, cold gelatin should be redaubed or electrode should be well contacted to skin.

When operation, the treatment head should be touched the skin perpendicularly.

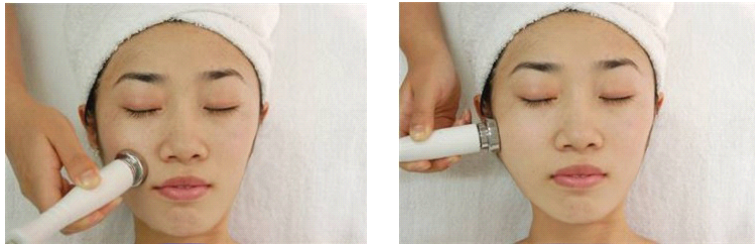
Procedure for Face Treatment with RF handle



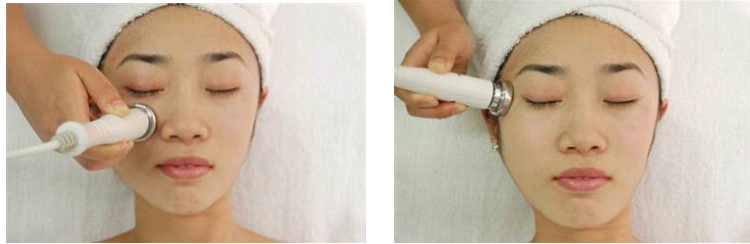
(2) Facial treatment : (RF Gel need to be applied on the skin)



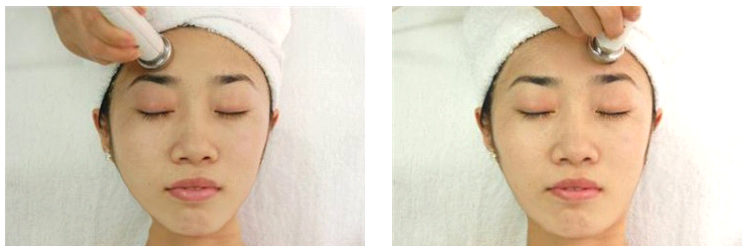
Step1: Apply RF oil evenly on the face and keep circle moving at even pace from jowl to basal part of the ear.



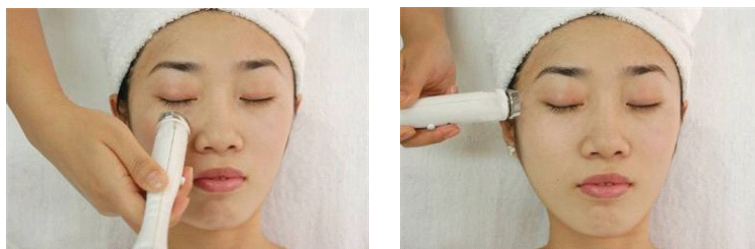
Step2: Lift from corners of the mouth to the part of cheek in front of ear.



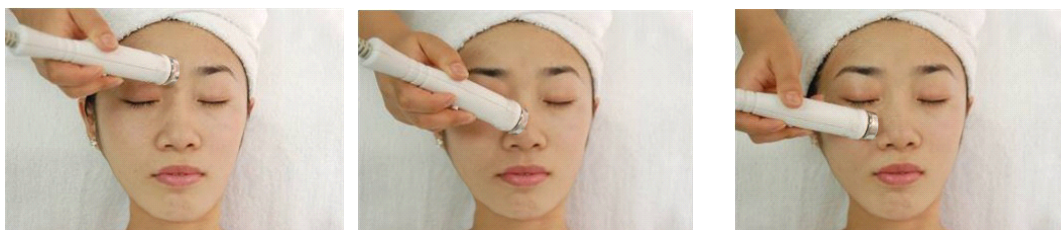
Step3: Move from inner to outer corner of eye.



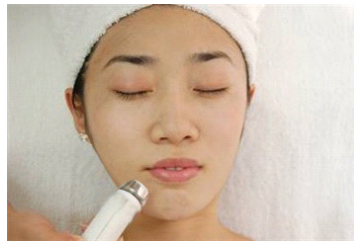
Step4: Keep circle moving at even pace on forehead.



Step5: Using the small size tip, move from inner to outer corner of eye.



Step6: Keep circle moving at the wrinkle between eyebrows, then move to tip of nose at even pace, after that make circle moving on nose wings.

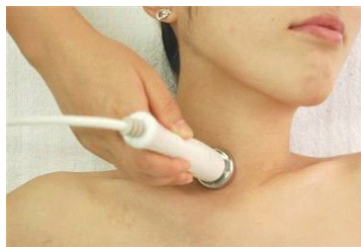
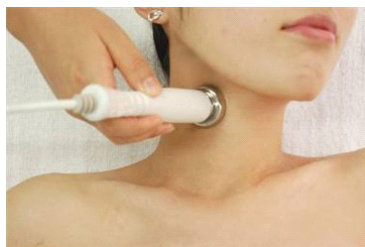


Step7: Make half round moving around mouth.

(3) Neck Treatment



Step1: Lift from upward side of collarbone to lower jaw bone.



Step2: Lift from upward side of collarbone to lower jaw bone keep clear of prominentia laryngea.

5. Operation of IPL handpiece

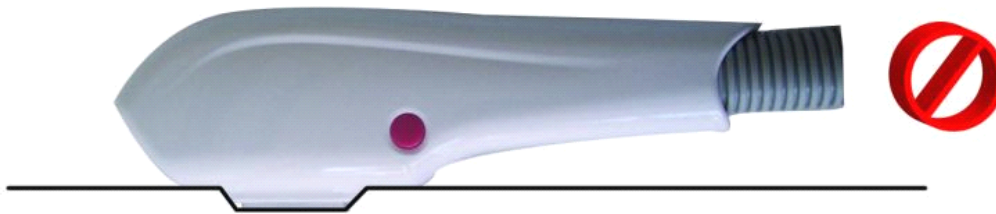
Please pay attention the way of handpicec during the treatment.



A Correct



B Incorrect



C Incorrect

- a. Smear gel on the skin about 2 mm thickness before treating.
- b. Start the machine, processing step by step and adjust the suitable parametre.
- c. While exerting light pressure, approximate the treatment head perpendicularly over the treatment area. Ensure both metal slices of the head touch the skin naturally at the same time during treatment, If only one side metal slice touch the skin, it can be easily burnt skin. See above picture **A**.Then can press the red bottoms to treatment. Before the treatment head leave the skin, please loose the red bottom first then treatment head can be off the skin.
- d. When the skin is in red after operation, coat the cool get till the red is die out. Do not wash with water.

【ATTENTION】 Please shave the hair off that you want to remove firstly with little knife before smear gel.

6. Principles adjusting of parameters.

The white skin and lighter Skin	1. Increase the power energy
	2. Decrease the pulse interval more cooling
The darker skin	1. Decrease the power energy
	2. Increase pulse interval (allow more cooling)
The lighter the hair /pigments	1. Increase the power energy
	2. Decrease the pulse interval
The darker the hair/ pigment lesion	1. Decrease the power energy
	2. Increase the pulse interval more cooling
Fine Blood Vessels (vascular lesion)	1. Increase the power energy
	2. Decrease pulse interval
Thick Blood vessels	1. Decrease the power energy
	2. Increase the pulse interval more cooling
The smaller the target size / lesion (vascular)	1. Decrease pulse interval
The larger the target size/ lesion (vascular)	1. Increase pulse interval (allow more cooling)
Bony prominences (forehead, molar area, shin, bikini)	1. Decrease the power energy

Chapter VI Safety Notice Things

1. Contraindication of IPL:

- a. Pregnant, high blood pressure, cardiopathy, diabetes
- b. Irritability skin
- c. The open scar part
- d. Don't shun the sun in long time
- e. Stop using the efficiency products in 1-3 months, essence oil in 1-2 days, and cleared acne in three days

2. Instructions for using IPL:

- a. There is dangerous high-voltage inside the equipment, please make the panel board and blind flange closed.
- b. The light head must hang on the tieback when you don't use it.
- c. The light head should point at the operated position, because it sends out high-intension pulse light. Make sure the safety of the medical personnel and sufferer. Don't see the light directly even you wear the protection glasses.

3. Reflection and nursing after IPL treatment

- a. Don't use the efficiency cosmetics
- b. Don't use the hot water to wash face and don't take massage
- c. Don't eat the stimulus thing and pigmentary food, such as chocolate, coffee. No cigarette and alcohol
- d. Pay attention to prevent sunstroke
- e. Don't scratch the skin even if there is scab
- f. Water replenishing 10 days later

4. (1) People as follows cannot be operated on with RF:

- a. Treatment of ice electric skin lifting should be made unless 3 months later, if a patient is injected with Hyaluronic Acid, collagen and creatoxin.
- b. People with heart disease, high blood pressure, blood vessel disease; pregnant women and people who are sensitive to electricity;

- c. If treatment part has open cut, serious skin disease and if under-skin weighting material, ice electric skin lifting shall not be made. It can be made half year later if spun gold is implanted; No make up on treatment day, or cleaning the treatment part before the operation.

(2) Reflection and nursing after RF treatment

- a. If there is the feeling of warmness, hotness, swelling, it will disappear in several hours;
- b. Only a handful of people can feel light swelling after treatment and it will disappear in 3-5 days;
- c. Make-up can be made at once after treatment. Paying more attention to keep humid and avoid sunshine at usual;
- d. People cannot take therapeutic baths in one week after treatment; washing face using 37 °C water. Don't go to sauna.

5. Instructions for Operation

- a. During operation, loosing the treatment switch before the switch leaving from skin (If a treatment head is leaving from skin while the switch is on, it may scald skin). Energy shall be adjusted according to patients' sensitivity;
- b. During operation, treatment head should be pressed to skin and treatment head should be pinned by hand. The treatment head should be perpendicular, but not slanted to the surface of skin;
- c. Coupling glue should be smeared to coupling part of treatment head;
- d. Strength on sensitive parts, such as cheekbone or around the eyes, should be light. It is Ok that treatment head is lightly pressed to skin;
- e. Mostly 3-4 times of treatment should be repeated;
- f. It is not allowed to sprinkle alcohol to the treatment head for antisepsis;
- g. During operation, energy should be adjusted from low to high. High energy brings good effect, however, it must be in patients' endurance;
- h. Never operate on larynx, eyeball, temple and nose;
- i. During operation, it should be cautious to operate on thin skin and parts where has vascularity;
- j. After operation, it is normal that skin becomes light red. It will disappear in half

an hour.

6. Reflection and nursing after RF treatment

- a. If there is the feeling of warmness, hotness, swelling, it will disappear in several hours;
- b. Only a handful of people can feel light swelling after treatment and it will disappear in 3-5 days;
- c. Make-up can be made at once after treatment. Paying more attention to keep humid and avoid sunshine at usual; People cannot take therapeutic baths in one week after treatment; washing face using 37 °C water. Don't go to sauna.

Chapter VII Documents for E-light

A. Documents for RF Ice Electricity Skin Lifting

1. Why to choose RF Ice Electricity Dispel Wrinkle?

Five reasons to choose RF:

- a. Sharing and enjoying the dignity and honor with the statesmen, the famous model and the super stars.
- b. The collagen of the skin can growth: The frequency can reach into the depth of the skin, and stimulate the collagen tissue. As a result, the collagens can rebirth incessantly so as to realize the skin's tighten and lifting.
- c. High safety: The temperature of the cuticle is constant. No need to get operation, no need to being anesthesia, no need to get injection.
- d. Tightening the skin promptly: The collagen can shrink at once at 45°C-60°C, so the flabby skin can be lifted and tightened instanter.
- e. Rebirth long-term duration: The collagen of the skin can rebuild and rebirth step by step between 2 and 6 months after receiving cosmetology. The skin becomes velveter and the wrinkles become shallower, so you look younger.

2. Do we need special care after treatment?

You needn't special care, but we suggest that you must be careful when you need the skin care cosmetic, including all the functionality cosmetic such as speckle removal frost, wrinkle removal frost and all the kinds of chemic exfoliated cure, it also be called exchange skin cure. You are also be forbidden to use skin grinding and facial grinding cleanser. And it's important for you to against sun burnt and keep the skin's moisture.

3. How times a period of treatment? How long can the effect keep?

You can take the treatment one time a week, and eight times belong to one period of treatment. You can feel the skin tighten at once as soon as you are receiving the treatment. The effect will become more and more distinguished. The effect of the treatment can keep different times according to the different treatment parts. The effect can keep longer if you take good care of you health maintain. According to the newest investigation, the effect can keep longer if you keep using the machine, so we suggest that you receive the cure every 3-6 months.

4. What are the differences between RF Ice Electricity Dispel Wrinkle and Electric Wave Dispel wrinkle?

Both are using frequency, but we suggest that you must be care when you receive the RF treatment. Because some kind of machines don't have the cooling system, you must make the cuticle's temperature keeping at 1°C in case the skin is burnt.

5. Are the same of the effect between RF Ice Electricity Dispel Wrinkle and Laser Impulse light?

One same feature between Laser of Radium-therapy and Impulse light is that they cure the skin with light, and they produce the energy depending the skin's color. And the energy can reach into the skin 2mm below the subcuticular but cannot reach the depth of the skin. The energy that produced by frequency can reach 15mm below the subcuticular, so the effect can keep longer and deeper.

6. What the skin and the appearance will be change after receiving the treatment?

87% of the people who use the RF can be seen tighten because of enough collagen. The next the mother cell of the dermis can rebirth new collagen, and keep tightening and lifting the flabby skin so as to making you look younger and younger, and the wrinkles become decrease and rebuild the tighten line of the face.

7. How long can I see the effect?

The main purpose of the RF is to make the skin appear close immediately, and it's common to receive the treatment 4-5 times so as to receive the obvious effect. Then the skin's model shape will be obvious after 6 months with the rebirth of the collagen continually.

8. What are features of the double pole?

- a. The positive pole and the negative pole will have effect on the same interface.
- b. The depth that the frequency can penetrate is the half of the distance between two electrodes.
- c. The effective depth is 15mm.
- d. The temperature of the subcuticular can reach above 60°C.

B. Documents for E-light

1. How to use the E-light?

Before treatment, you should spread on a layer of condensing glue. You may also be asked to wear protection glasses to prevent from shining by violent light. During the treatment course, you put the light conduction of the cure head on the certain skin, and release the pulse light. There is on pain in the treatment just only a little hot feeling. It takes about 30 minutes once and needs 3-5 times in order to get to the ideal effect.

2. Is the E-light safe? Can damage the skin?

The E-light skin rejuvenation technology is non-desquamation therapy. There will be no side effect as long as you choose the advantaged equipment specialized company and well-trained beautician.

3. What are mechanizations of E-light?

There will be more RF frequency goes through the advanced heated tissue. RF can be conducted well in the blood.

4. What are distinguishes between E-light and E-light skin rejuvenation series?

	Laser/photon	E-light
Function Principle	Making use of target tissue selectively absorbing specific wavelength	Controlling special target tissue absorbing energy according to different skin impedance

<p>Comparison of Characteristics</p>	<p>C. No effect on light-color hair. Making use of target tissue selectively absorbing specific wavelength;</p> <p>D. Light energy is absorbed by pigment in cuticle. Be somewhat dangerous for dark skin. The deepness the light penetrate into skin is not more than 4mm;</p> <p>E. Only 30-40% of energy is absorbed; most of the rest is reflected or refracted.</p>	<p>F. Effectively used for pathological changes in any color. Controlling special target tissue absorbing energy according to different skin impedance, including target tissue whose color is similar to that of skin;</p> <p>G. Energy is pushed into deep skin on the premise that energy is precooled;</p> <p>H. Reaching 15mm under skin at most;</p> <p>I. Light energy is used mainly to adjust impedance of target tissue to prevent major energy from being reflected and refracted;</p> <p>J. Be equipped with all superiorities of optics treatment.</p>
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5. Why can E-light cure shallow fuzz?

A traditional intense pulse apparatus is in a good effect in thick black hair, but it has big problems in dispelling shallow fuzz, such as lip hair. That because a traditional intense apparatus can only outputs intense light which has strong function on hair shaft. Hair shaft absorbs light energy, which will be converted to be heat energy. Heat energy will be conducted to and damage hair follicle. However, when hair shaft is too thin or too light in color, heat energy will not be enough to damage hair follicle. E-light wrinkle dispelling system not only outputs intense light, but also relays on 4-15mm RF energy to damage hair follicle directly, but not only depends on hair shaft for conduction. Therefore, E-light can dispel all kinds of hair, even those thin, small, light, golden and white hairs.

6. Superiorities of E-light comparing with other methods:

- a. Clinic effect is strengthened. Effect on erythema, splash, freckle and capillary vessel dilatation is improved remarkably;
- b. Patients feel more comfortable. Effect is better. Acting more quickly. Little side effect after operation will arise;
- c. Risk of complicating disease is lowered. Applying to IV and V skin and brown skin.

Process of E-light dispelling speckle

- a. A period of treatment consists of 4 treatments. The interval of every two treatments is 28 days;
- b. Eyes shall be well protected before a treatment. Painting 20% glutamic acid onto treatment part or the whole face 10 minutes before the treatment;
- c. No need of local anesthesia;
- d. Asking patients for feelings during the operation and observing changes of skin at the same time;
- e. Avoiding sunburn 48 hours after an operation.

7. Is the E-light safe? Can damage the skin?

The E-light skin rejuvenation technology is non-desquamation therapy. It provides a treatment method of nonintervention to adapt different skin. Therefore, it is safe and causes no damage to skin.

8. Superiorities of Skin Rejuvenation

Traditional skin rejuvenation technology adopts the grinding way and chemical deep-seated exuviations. Then laser dispelling deep-seated wrinkles method followed. Although these methods have a certain remedy for some parts of skin aging treatment, patients usually need a rest from work and oppressive pain is accompanied. Potential side effect and shutdown seriously cause loss of revenue.

9. Outstanding features of E-light technology:

- a. Curing and polishing up whole face;
- b. No need of shutdown or rest;
- c. Treatment time is short, only 15-20 minutes;
- d. No side effect.

10. How the treatment with E-light skin rejuvenation goes:

Normally, condensation glue shall be smeared onto the treatment part and the operator shall wear deep-color goggles to guard against intense light 10-30 minutes before the treatment. Then the treatment can be on. Put the light guiding crystal of the treatment head onto the treatment part and shoot the pulse light. The patient may feel slight being nipped, just like being struck gently by elastic. It doesn't need anaesthesia. The whole period of treatment includes 4-6 treatments in order to achieve the best effect, generate the least side effect and get satisfaction. Each treatment takes 15-20 minutes.

11. How many times of E-light treatment for satisfying effect?

The times are subject to the size and pathological degree of treatment part. There are normally 4-6 treatments in the whole period of treatment. Remarkable improvement can be seen every time after a treatment.

12. Why are repeated treatments required?

The purpose of dividing the whole treatment into several small treatments is to lower the danger of side effect while the skin is improved. The most important thing is that patients need not to leave from work. They can go to work immediately after the treatment. That is the treatment mode that modern people are seeking.

13. Does skin need nursing after treatment?

No special deep-seated dispelling wrinkle method is required. Although these methods have a certain remedy for some parts of skin aging treatment, patients usually need a rest from work and oppressive pain is accompanied. Potential side effect and shutdown seriously cause loss of revenue.

14. Does E-light remove hair forever? Does E-light affect perspiration negatively?

Pulse light of special spectral coverage delivered by the apparatus can penetrate skin and reach the root of hair follicle directly. Melanocyte in hair follicle absorbs the light with specific wavelength and makes hair nipples generate heat. In this way, hair nipples are broken selectively. Accordingly, hair is removed and skin is rejuvenated while there is no damage to ambient tissue.

For reason that there is a space between sweat gland and hair follicle and sweat gland has no melanocyte therein. Therefore, sweat gland cannot be hurt and perspiration is not affected negatively.

15. Will the pathological changes recrudescence?

Pathological changes of transmissibility will not recrudescence, i.e. freckle and facial vascular lesions (Telangiectasis) of transmissibility; pathological changes caused by maladjusted incretion may recrudescence, which needs patients to improve their diet structure and law of life. Unhairing is permanent.

16. Is nurse required for skin after a treatment?

No special nurse is required. But insolation and irradiation by ultraviolet radiation shall be avoided in 24 hours. The interval between every two treatments is 21-45. The improvement of the whole face can be seen after a treatment. All facial flaws, enlarged pores, matted skin and other abnormal status caused by insolation and light aging can be improved remarkably or removed. The E-light skin rejuvenation can also improve skin's deep level to make the skin smooth and rejuvenated and can be used on neck, breasts and other parts of human body.

C. Knowledge about Skin

1. More Advantages. It can improve various skin flaws:

The treatment mode of IPL has breached the limit of traditional partial focus treatment, which can cure the whole face. The E-light apparatus can also cure the diseases as follows: capillary vessel expanding, erythema, pigment, petty wrinkle, sunburn, brown splash, enlarged pores, whiten skin. The treatment results show that over 75% of skin of 49% of patients has been improved. Facial erythema (75% of patients) and capillary vessel expanding (49% of patients) have been improved. The improving rate of wrinkle of 73% of patients has reached 25%, wherein the improving rate of 36% of patients have reached more than 50% and the improving rate of facial wrinkle and enlarged pores of 76% of patients has reached over 50%. In clinic reflections, skin structure, petty wrinkle, atactic pigment, enlarged pores and capillary vessel expending of all patients are improved.

2. Treatment on the whole face to improve skin's character in order to resume skin's flexibility:

New collagenous fibre produces smooth structure: pores become large, petty lines and wrinkles become less and can be reduced to utmost-to make skin more flexible.

3. Excellent results after 14 months and positive appraisal from patients.

Many treatment cases show that the long-time data of treatment with IPL technology is 14-18 months of patients with facial erythema and red face after treatment. The status of 80% of patients is the same as that after their last treatments. Few people get purpura edema. Most people's convalescence is 1-5 days and two treatments with an

interval of 21-45 day leads to better curative effect. There is no report about scars in all of cases. The IPL technology indeed provides safe treatment of nonintervention and non-exfoliation for people with love of beauty and is accepted by general suffers.

4. E-Light Skin Rejuvenation is a nontraumatic technology:

Traditional skin rejuvenation technology adopts the grinding way and chemical deep-seated exuviations. Then laser dispelling deep-seated wrinkles method followed. Although these methods have a certain remedy for some parts of skin aging treatment, patients usually need a rest from work and oppressive pain is accompanied. Potential side effect and shutdown seriously disturbs normal life and work. Photon skin rejuvenation adopts the treatment of nonintervention and non-exfoliation to rejuvenate skin with low-density energy. Accordingly, this technique brings no pain, no side effect, no shutdown and wins higher satisfaction of patients.

5. What is freckle?

It is a kind of small brown or filamentous pigmentation on face and is autosomal dominant inheritance, which is serious especially in summer. The development of pathological changes is related to solarization. Freckle occurs mostly to women and emerges in childhood after the age of 6-7 usually. It becomes obvious in youth. Skin lesion due to solarization gets serious in summer but mitigatory in winter. Skin lesion is canary or filamentous or brown splash, which is rotundity or elliptical or irregularly shaped. Freckle is concentrated mainly on face, especially from eyes to cheekbones.

6. What is chloasma?

It has another three names, which are butterfly spot, chloasma hepaticum and soot-black macules in physic. It is common and a frequently encountered disease for women. The incidence of the disease becomes more obviously and seriously for the past few years.

In the beginning, chloasmas are in light color. They may be multiple but gradually syncretize into spot in different sizes and shapes with clear borderline. They intersperse symmetrically on exposure parts, usually on cheekbones, forehead and cheeks. They have no subjective symptom.

Chloasma has three types according to their location: it is called superficial type one if it locates on cuticle, shallow-seated type if deep in cuticle and deep-seated type if in corium. This classification is mainly related to treatment. The deeper the location is, the longer the treatment time is and the more difficult the treatment is.

Aetiological agent is very complicated. It may occur to healthy women from

youthhood to climacteric. The incidence rate of chloasma caused by oral contraceptive reaches over 80%. Some chronic diseases, especially female diseases of reproductive system, such as menoxenia, adnexitis, acyesis, ovarian cyst and hysteromyoma, may cause chloasma. In addition, chloasma may be caused by other diseases, such as hepatopathy, chronic alcoholism, thyrotoxicosis, tuberculosis and viscera tumor. Many kinds of medicine may cause chloasma. It also can be induced and deepened by sunshine and hereditary factors, sleep disorder, psychic factor and so on are somewhat related to chlosama.

7. What is acne?

Acne is a familiar hair follicle thylacitis in youthhood. It is also called acne vulgaris and commonly referred to as whelk (Qingchundou in Chinese). Acne is usually found on face, sometimes looks like papilla, blain and so on. Sebum is often accompanied and overbrims. The pathogeny has not been clear yet but may be formed synthetically by various factors.

- a. Androgen-mediated lipid overflow - androgen and its metabolites, such as dual-oxygen copper and sulfuric acid dehydrogenation Cremaster epidermal-steroidal copper increase, which strengthens the activity of sebaceous gland. Secretion of patients with acne skin is higher than that of normal people.
- b. Funnel of hair follicle keratosis - acne patients' keratosis of of hair follicle funnel boosts up and its epicyte becomes thick and dense, so it is difficult to drop off. It has not been clear yet why the keratosis of of hair follicle funnel boosts up, but it may be related to free fatty acids in the cortex. In addition, the amount sebum linoleic acid of patients with acne is less than normal, which might be another reason.
- c. Acne propionibacterium increases- acne propionibacterium belongs to anaerobic organism and is a resident bacterium. Why it increases may be related to funnel of hair follicle keratosis, sebum discharge blocking and relative anoxic environment.
- d. Inflammation - acne propionibacterium excrete dissolved lipase, which will decompose the triglyceride into glycerol and free fatty acids. Glycerol and free fatty acids further stimulate gland wall keratosis, so the adenovirus mouth is blocked. Experiments prove that carbon atoms containing 8-14 can penetrate hair follicle and goes into corium and then causes more obvious inflammation. In addition, acne propionibacterium can not only produce dissolved lipase but also prolease, hyaluronidase and some chemotactic factor activating complement, which all can bring inflammation of the hair follicle sebaceous gland and papilla, blain, nodules and so on.

- e. Acne caused by cosmetic – (a) improper cosmetics are used, i.e. people with oily skin use oily cosmetics, making the hair follicle mouth metabolism sluggish. Hair follicles are blocked by hard, dense keratose substance, which leads to expand, these keratose substance forms keratose bolt, plugging in the hair follicle mouth. Accordingly, acne arises. (b) Some cosmetics containing substance of particles, such as a great deal of superfine titanium pigment, whose particles are agglutinated with sebum or stroma. It is easy to plug holes of hair follicle and causes acne. And young people indulge in the cosmetic, making light acnes serious.

Moreover, inheritance may be an important factor causing acne, and orally taking medicine containing iodine, bromine, cortex steroid and so on can make acne more seriously.

8. Six inducements making skin dark and spotted

Specifically, inducement causing skin black and spotted mainly is:

- a. The arch-criminal-ultraviolet radiation;
- b. Some sensitive food, such as animal liver and kidney, oyster, shrimp, crab, legume, walnut seed, currant and so on;
- c. Drinking and smocking;
- d. Some diseases;
- e. Some medicine: quina, tranquillizer containing chlorpromazine;
- f. External cause: rubbing skin hard when having wash.

9. How wrinkle come?

Wrinkle is the result of skin aging. Wrinkle is synthetically formed by internal cause, external cause and other factors.

- a. Internal cause: in youth, skin is rich of moisture and all kinds of glands' body fluid are excreted noticeably. Skin is at its best time at this time. Wrinkle is not easy to arise. However, wrinkle will come and temporarily exist if skin is of over hydropenia for reason that skin is not taken good care or diseases arise. If moisture is makeup to skin once, the temporary wrinkle will disappear. But in middle age, the horny layer's ability of keeping moisture declines. Sebaceous gland is excreted less. Elastic fibers in corium are of denaturation and ruptured. Adipose layer decreases.... All these factors lead to skin's change. Wrinkle is the symbol of skin aging, which can be seen with our naked eyes.

- b. External cause: skin is the surface layer, which receives sunshine, wind, and dryness. These are all factors making more and deep wrinkles. We all know that people living on Qinghai-Tibet Plateau all have deep wrinkles on their faces. This is brought about by wind and sunshine. Ultraviolet radiation in sunshine is one of the reasons for skin aging and wrinkles. Therefore, people should prevent skin from being sunburned. Sunburn prevention and moisture keeping are both important.

In addition, too much make-up is a direct harm to skin. All cosmetics are chemical. Although some cosmetics adopt natural materials, synthetics, such as coloring matters and flavors are also used in their production. Therefore, make-up provides beauty temporarily. It also damages skin and causes wrinkles.

What should attract our attention is that some wrinkles on women's face are caused by cortex steroids ointment used in external way, such as fludrocortisone ointment, triamcinolone acetonide ointment, compound dexamethasone acetate ointment. These ointments lead to skin shrinking, thinning and wrinkles.

10. Four-step wrinkle prevention

Wrinkle can be divided into kinetic energy wrinkle and static energy wrinkle. Static energy wrinkle is a kind of wrinkle that can be seen even a person has no facial motion, i.e. part under eyes, at the corners. That is brought from skin aging and from cuticle and corium becoming thin. Kinetic energy wrinkle is a kind of wrinkle that can be seen when a person's face has a motion, i.e. wrinkles on glabella, sides of eye tail and forehead. But wrinkles can be also caused if a person's bodily form is thin with less subcutaneous fat.

According to external changes in different ages, wrinkle' formation can be divided into four stages:

a. Mild aging stage: at the age of about 28-25. Fundamentally no wrinkle can be seen;

b. intermediate aging stage: at the age of about 35-40. Kinetic energy wrinkle arises;

c. relative serious aging stage: at the age of about 50-60. Static energy wrinkle arises;

d. most serious aging staging: at the age of over 60-75. Obvious wrinkles and skin prolapse can be seen.

11. Wrinkle arisen rate of all ages

Wrinkle arisen rate of all ages is recorded in percent form as follows:

At the age of 18-29: wrinkles arise on 44% of women' forehead

At the age of 30-39: wrinkles arise on 56% of women's glabellas

At the age of 40-49: wrinkles arise under the eyes of 72% of women and on glabellas of 75% of women

At the age of 50-59: 65% of women have goosefoot lines and 60% have nose-chin veins.

12. How sensitive skin comes?

Is delicate skin easy to form sensitive skin?

No exactly. Sensitive skin is divided into congenital type and postnatal type. The former one is related to inheritance. It is usually sensitive skin. The later one is related to many factors, such as: a. environment, season alternation. Lines are caused by changes of humidity, air pollution and ultraviolet radiation; b. internal disease and incretion disorder, i.e. long-term disorder of stomach and intestines' function; c. unbalanced nutrition and long-term innutrition; d. spirit, long-term instable spirit, high pressure and excessive blahs; e. medicament, i.e. skin may has dependency on medicine if keeping using punchy or steroids medicine; f. improper maintenance, i.e. skin is cleaned excessively using alkaline products, or excessively remove cutin.

13. How hypersusceptibility comes?

There are four factors that tend to bring and induce hypersusceptibility:

- a. Food: irritative food, such as seafood, pollen and capsicum and so on;
- b. Medication: eternal medicine, such as liniment, lintment; medicine, such as aspirin, anodyne, diuretic and so on;
- c. Cosmetics: alcohol, coloring matter, flavor, antiseptic and sun-screening agent, and hair dye, cold wave lotion and so on;
- d. Eyewinker: such as animal hair, leather goods, K gold, oil paint and so on.

14. Why sensitivity and hypersusceptibility occur?

Healthy skin has a layer of natural protective membrane-sebum membrane. In normal conditions, it contains about 5%-7% of axunge, 20%-30% of moisture, both of which are in subacidity. It can prevent not only moisture from excessive evaporation, but also ultraviolet and air pollution from hurting skin. Once sebum is damaged, moisture-keeping function will become weak, skins is getting dry, itch, even peels, and becomes weak in guarding against cold and hot and pressure. In this situation, we can see inflammation, red in some parts of skin. That is sensitivity.

Hypersusceptibility refers to that a series of reflection will arise when skin contacts anaphylactogen.

15. Characteristics of hypersusceptibility and sensitivity:

Characteristics of sensitive skin are: a. hair pores are closed and fine. The surface of skin is dry, coarse. Skin is thin, and capillary vessel and asymmetric rubeosis can be seen; b. dryness and itch tend to occur to surrounding of eyes, mouth margin, arthrosis and so on. c. many cosmetics and some medication lead to hypersusceptibility, which is marked by partial rubefaction, itch and anthema if not serious, and swelling, exuviations, many irritable pimples, water seepage and even exuviations in large area and fever heat on the whole body if it is serious.

16. Treatment of hypersusceptibility and sensitivity:

Words from exports:

- a. For sensitive skin, irritative food and herb cosmetic should not be eaten and used; no contact on hotness, alkali and electricity; do not rub skin excessively; avoid being irradiation by ultraviolet radiation and wash face with cold or warm water.
- b. Once hypersusceptibility occurs, we should go to find out why. We should keep away from anaphylactogen. Simultaneously, adjusting immunity and improving sensitive constitution through eliminating free radical.

If hypersusceptibility occurs during nursing:

- a. Stop using cosmetics. Have a treatment if it is not serious and smear antianaphylaxis medication if it is serious, and stop using the medication at once when the disease straightens up. If it is very serious, go to hospital for a treatment.
- b. Nursing order in beauty parlor can be improved. The order is: cleansing cream-skin lotion- cold spraying (B6 vitamin or antianaphylaxis essence can be added)- shiatsu on facial points- antianaphylaxis collagen face mask- cold compress-basic maintaining.

Chapter VIII Maintenance

Daily Maintenance

[Notice] Our customers can only take the steps stated in this chapter for maintenance.

Only technicians authorized by our company shall make other repairs.

[Caution]

- a. The apparatus shall be turned off and the power supply shall be cut off. Maintenance with electricity on may injure both of the user and the apparatus.
- b. If there are other problems on maintenance, please contact with our company.

1. The safety of E-light

E-light skin rejuvenation & hair removal apparatus is high-tech medical equipment, which safely dispels all kinds of facial flaws and unwanted hair on any part of human body. As long as an employee after training appropriately operates and maintains the apparatus, it is safe to operate. Security information in this Chapter can be understood completely by all operators or other staff or adjuvants. And the most important thing is to consider the safety for patients, operators as well as the other staff. Security is the first item considered in designing the E-light skin rejuvenation & hair removal apparatus.

Part of its security measures is as follows:

- a. Self-inspection system is activated instantly when the apparatus is turned on and the system will monitor the circuit continuously in the operation of the apparatus;
- b. Filter / light guiding crystal are used and transmitted onto skin. Impulse light can only shoot from the front of the light guiding crystal;
- c. Independent safety circuit can be cut off when the intense light is too strong;
- d. Using the red emergency switch to quickly cut off power supply if need;
- e. Using the key switch, the apparatus can only be turned on by the appointed person;
- f. High-quality molded shell is to prevent electrical leakage caused harm to person.

【Warning】

Any intense light device and harm the people if you operate improper. The equipment can exert high voltage, so people must pay attention when operating the device and take the necessary protection measures.

Sufferer: The safety of the sufferer depends on the high qualified director, and the operating room which decorates properly. The cultural quality of the sufferer is also important, they must know well the treatment principle, and the eyes of them should be protected.

Operator: The operator may contact with high-intension light, and she must wear special safety glasses.

Operating room: You must paste the notice that the high-intension light is working.

【 Main Warning 】 In order to assure the safety of equipment, you must read the warning items following:

- a. Anyone mustn't examine this apparatus except the technician who has been authorized by ESC. Attention that dangerous high-voltage inside the machine.
- b. Make sure that the specified voltage in accordance with the voltage in your own country.
- c. You can maintain this machine only after you turn off the machine and power-line. It can make personal and equipment damaged.
- d. The light head should keep clear and prevent the gule from permeating into the light head.
- e. You must turn off the machine if you find the light head seeping water.

【 Warning about Intense Light 】

- a. The intense light can hurt the eyes can cause fire, so you must take the protection measures.
- b. Radiating excessive light to the cure part of the body can damage the skin and make the usual pigment increase.
- c. You can't see the light directly.
- d. Don't radiate the light to the skin. You should put the head on the hook hitch.

2. The safety of electricity and machinery

- a. Keep both panel board and blind flange closed. It's dangerous if you open the blind flange.
- b. There is still the rest electricity even if you disconnect the mains lead, so you

can't take apart the machine except the technician.

- c. You can't open the electricity when maintain the equipment.
- d. The equipment weight more than 40 kilograms. You must pay attention when move it. Don't pull the machine by light head.
- e. It is important for the earth wire to touch the ground.

【Prevent fire】

- a. The temperature becomes high if object absorb the light, so we must take measure to decrease the number of the inflammable material.
- b. Don't use the inflammable materials, such as ethyl alcohol. If necessary, please use the soap-suds and distilled water.
- c. The light head must parch when use it.

【System fire】

- a. The equipment has some safety device; all the operators must know the instruction manual.
- b. Key switch: The function of the key is to turn on or turn off the current source; all the keys must be provided by our company.
- c. Hurry-up switch: The red mushroom switch can turn off the source. It cut down the current whatever condition it should be. Turn it in clockwise direction and the equipment can work again.

Electric shock protection: class one and class BF

Anti-corrosion: common

Don't use the machine in the environment with flammable anesthetic and the mixture of gas and nitric oxide.

Operation way: continuation

【Warning】

Excessive light energy may cause heat damage for skin, and tissue hyperplasia or atrophy.

Explanation: You must tell something to the sufferer before the operation: (1) there may be a little uncomfortable. (2) There maybe transient flush phenomenon. (3) It takes several times to get to the ideal effect and gradual improvement can be seen in

the whole period of treatment.

The Exact Adjusting of Parameters

I. The Six Types of Skin.

There are six different classifications used by dermatologists ranging from Skin Type 1 (almost never tan) to Skin Type 6 (naturally dark skin that seems to tan endlessly)

Type 1 (very white or freckled)

Type 2 (white)

Type 3 (white to olive)


Type 4 (brown)

Type 5 (dark brown)

Type 6 (black)

II. Adjusting Range of Parameters.

【 Attention 】

1. Strictly speaking, everyone has his/her own type skin.
2. The parameters as follow just for reference and shouldn't be deemed to be absolute. It should be set based on different skin of different people.
3. Observations of the skin reaction is crucial for success of the treatment.
4. During the treating, once the patients' skin become a little red so the energy is suitable ,you can not increase it once again ,
5. Keep intercommunication with patients during treating. The energy will be the suitable energy if patient feel a little acceptable heat.
6. Setting the refrigeration  from 1 to 5 on the screen to protect the skin.

<i>Scope</i>		<i>Freckle</i> <i>530-1200nm</i>	<i>Telangiectasia</i> <i>585-1200nm</i>	<i>Skin</i> <i>Rejuvenation</i> <i>560-1200nm</i>	<i>Hair removal</i> <i>640-1200nm</i>
<i>Fitzpatrick Type</i>					
	<i>Energy</i>	<i>13J</i>	<i>16J</i>	<i>15J</i>	<i>20-30J</i>
	<i>PulseDuration</i> <i>(WIDTH)</i>	<i>3-5</i>	<i>5-6</i>	<i>3-5</i>	<i>3-5</i>
	<i>Pulse interval</i>	<i>20-25</i>	<i>10-15</i>	<i>20-25</i>	<i>20-25</i>
	<i>Pulses</i>	<i>2P</i>	<i>3P</i>	<i>2P</i>	<i>1P</i>

The respond after operation: Oxter become red, hair follicle putrescence, with smell, other part feels stinging and heated a little red, no smelled the time between the fist treatment and the second time is 28-45 days

【Remarks】

1. Pulse number: it means how many pulses in a flash. More pulses, more powerful.
2. Pulse width: it means how long time a pulse works on skin. Longer time, more powerful.
3. Pulse interval: it means the interval time between a two adjacent pulses. No pulse works on skin at interval times. It for allowing skin have time to rest during treatment. If no pulse interval, skin cannot stand. So, longer pulse interval times, less powerful.

III.Principles of Adjusting of Parameters.

The white skin and lighter Skin	1.Increase the power engery
	2.Decrease the pluse delay=(pluse interval) more cooling
The daker skin	1. Decrease the power energy
	2. Increase the pulse delay (allow more cooling)
The lighter the hair /pigments	1.Increase the power engery
	2. Decrease the pluse delay= (pluse interval)
The darker the hair/ pigment lesion	1. Decrease the power engery
	2.Increase the pluse delay= (pluse interval) more cooling
Fine Blood Vessels (vascular lesion)	1.Increase the power engery
	2. Decrease the pluse delay= (pluse interval)
Thick Blood vessels	1. Decrease the power engery
	2. Increase the pluse delay= (pluse interval)cool more
The smaller the target size / lesion (vascular)	Decrease pulse delay
The larger the target size/ lesion (vascular)	Increase pulse delay (allow more cooling)
Bony prominences (forehead, molar area, shin, bikini)	Decrease the power energy

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