

OPT Hair Removal Machine



User Manual

❖ Safety notices

Safety of IPL SHR



Any people who are eligible in using and maintaining can safely use this machine . Any operators and his/her assistants must know well the following safe notices and make sure both the operator and the customers are safe during the treatments .

- a) The machine will start inspection automatically after it is on.
- b) Adopt the close filter /crystal of transferring light, the IPL SHR can only emit from the front face
- c) Independent electrical circuit, it will automatically stop working if the energy is too high.
- d) The emergency switch is convenient when you are in emergency
- e) The key switch can protect it from stolen because they can't start the machine without certain key



Any intensive light without correct using will hurt people. It can work out high voltage when working;we suggest anybody who operates this machine should read this safety notices before using it.

For Operator: it's possible to touch the intensive light. So make sure you wear the 3 grade glasses.

For customer: it is better if the operator is trained eligible and arrange a proper treatment room for the customer. It is even better if the customer knows the treatment theory and cooperates with the operator during the treatment. He/she must make sure wear the professional protective eye patch which protects his/her eyes from burning.

About the treatment room: there must be clear mark which shows “using intensive light NOW!”

【MAIN WARNING】

Please make sure you will carefully read the following warning tips:

- a) We need to warn you that it has dangerous high voltage .Anybody except technicians that authorized by our company can repair this machine. Especially the inside of device e.g.: electrical source,cooling system, optic organs and treatment head. etc.
- b) Make sure the voltage of this machine is same with yours, (110V or 220V)
- c) It will hurt both you and the machine if you repair it when it is still working, we strongly warn you that you must turn off the machine and pull out the electricity line and then start repairing it.
- d) Keep the probe clean. MAKE SURE there is no cooling gel inside the probe.
- e) Stop using the machine when the handpiece is leaking water, if it is already on,

please close it immediately.

【WARNING ON INTENSIVE LIGHT】

a) The intensive light is possible to hurt your eyes or cause fire and burnt .so we suggest you wear the glasses.

b) It will hurt the customer if you use too high energy or make too many shots in one certain treatment area

c) Do not directly see the intensive light or laser light even if you wear the protective glasses and eye patch.

d) Do not point the treatment head to the air. Point it to the treatment area when using and hang it on the bracket when you don't use it.

C. Safety of the electricity and equipment

a) Keep all the panels and cover board closed.

b) There is high voltage inside the machine even when it is off. So it is better not open the equipment if there is no need.

c) Please make sure the electricity is off if you want to repair the machine

d) This machine is about 40kg in net weight .it might hurt people if you move it in not proper ways. So pls make sure you move it slowly and carefully



a) The temperature of objects will rise after absorbing light energy, so please take actions to reduce the flammable risk on treatment areas and surrounding areas.

b) Do not use alcohol, acetone or other flammable things on skin before treatment. You can just wash the skin with water or sometimes a little soap.

c) If you use alcohol to disinfect the treatment head or any other parts, please wait till dry and then start the machine, otherwise it is dangerous.

【SYSTEM SAFETY SETTINGS】

a) Everybody in the operation room must know where the safety sets are and how to use them.

b) Anybody who doesn't have our key is not able to start the machine.

c) There is a red indicator light which will be on if you start the machine.

d) Emergency button: the red switch is used to switch off power when you come to any emergency. Just press it and the machine will stop working .next time you use the machine, you need to turn this emergency button on.

【AUTOMATICAL INSPECTION】

It will start inspecting itself automatically when you start the machine. You need to turn on and turn off the machine repeatedly for 3 times and then start using it.

【LEVEL OF EQUIPMENT】

a) Level of motor protection: 1 CLASS, BF CLASS

b) Anti - corrosive liquid: general

c) Not allowed to use this machine in room that exists flammable anesthetic and nitrous oxide.

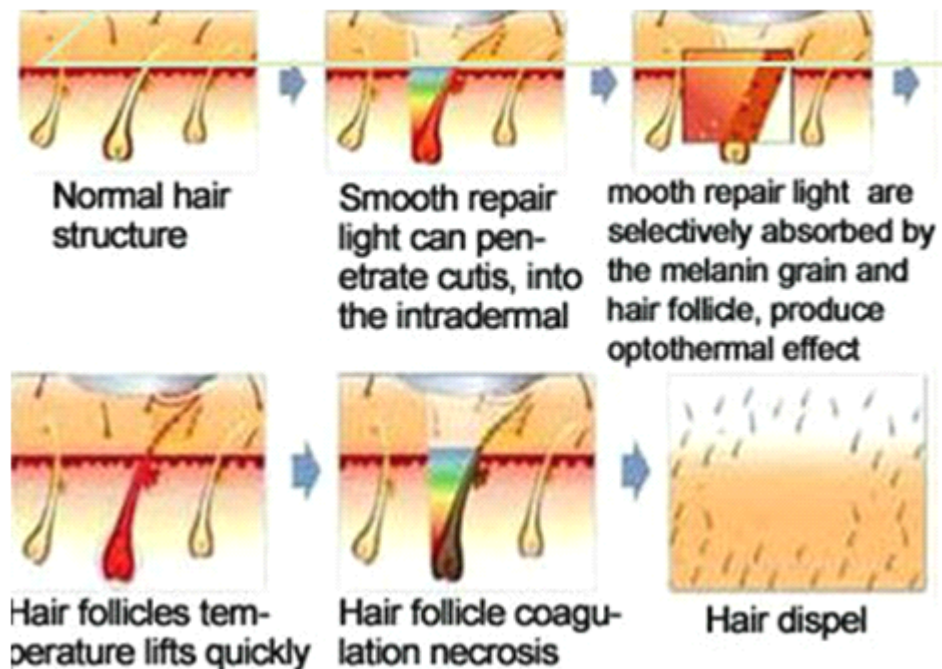
d) Operation manner: continuous operation

❖ Theory

OPT(SHR) is with new AFT technology (Advanced Fluorescence Technology) uses low and equal energy. The special filter cuts 950-1200nm wavelength, which is useless in treatment and absorbs water to make patient feel painless

SHR stands for Super Hair Removal, a technology for permanent hair removal which is having a sweeping success. The system combines laser technology and the benefits of the pulsating light method achieving practically painless results. Even hairs which until now have been difficult or even impossible to be removed, can now be treated.

“In Motion” represents a breakthrough in permanent hair removal with light technology. The treatment is more pleasant than with the conventional systems and your skin is better protected.





Compared to normal IPL machines, SHR(OPT)(is much more professional:

Items	Normal IPL	SHR	Advantages
Work Mode	Multi pulse mode	Single pulse mode	Single pulse mode can emit energy averagely, however, multi-pulse mode focus energy on first pulse, which is very easy to burn patients.
Wavelength	640-1200nm	640-950nm	SHR(OPT) filtered violet light and infrared light, which will eradiate and absorb water from target skin. So SHR does not have any side-effect to body.
Identified handpiece	Available	Available	Identifited function makes operation simple, and makes treatment safely!
DEC Technology	Unavailable	Unavailable	Make sure energy output accurate and same with the display all the time, which makes operation easy and safe.
Frequency	0.2-1Hz	1-10Hz	Which accelerate operation speed and short a lot of time for treatment!
Work technology	Stationary technology	Stationary technology & In-motion technology	“Moving IPL” can use less time to do treatment on back, leg and arm.

Filters

Wavelength	Treatment
430-1200nm	Acne removal
480-1200nm	Age spots, sun spots & pigmentation removal, skin rejuvenation
530-1200nm	Freckles removal, Skin rejuvenation
560-1200nm	Whitening skin, Skin rejuvenation
580-1200nm	Vascular removal, fade melasma, skin rejuvenation
640-1200nm	Thick Hair removal
690-1200nm	Soft Hair removal

Note : This machine only one handle,with three standard filters, 480nm,530nm,640nm.

❖ **Installation**

【Components of the device】

◆ **Assembly parts**

Power line

Water pipe

Water funnel

Professional protective glasses

Professional protective eye patch

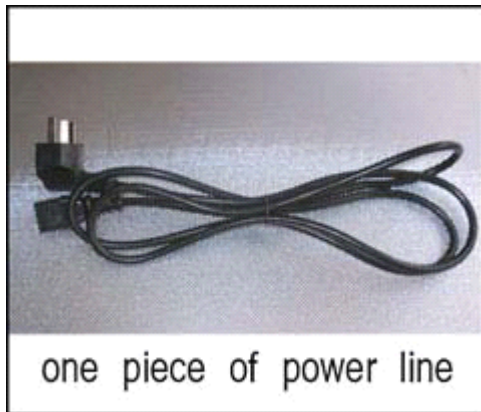
Pictures



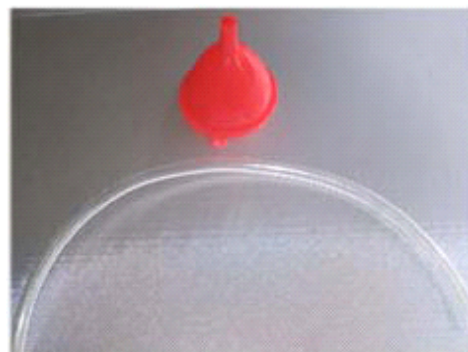
protective glasses for doctor



protective eyepatch for patient



one piece of power line



one piece of water funnel,
and one piece of water tube

About switch:



Emergency switch: keep it bounce in working; when press it downwards, the machine will be power off immediately; turn right to recover)

【How to install this machine ?】

- a. Open the package when receiving the machine
- b. Place the machine on flat ground.
- c. Check up whether good condition of machine from appearance, make sure no damage in transportation. **PS:let it takes several hours rest before test the machine .**
 - 1.Good condition of machine but there's some water on the surface of the machine; please wait till dry then input water to test. In fact, we do function test before shipment; and output water after perfect performance. Sometimes the water may spill, but normally, please do not worry about.
 - 2.After above operation, Keep 22℃ - 28℃ temperature and the humidity not more than 20% in the treatment room. Finally input water and function test.
- d. Input water:
 - (1)Water source: pure water or distilled water;
 - (2)Screw off the caps of water inlet and water spilt at the same time;
 - (3)Take advantage of water pipe and water funnel to input water



Sequence of orifice from right to left:water inlet, water spilt orifice.Add water till the water flow out from “water spilt orifice”

Attention: Must be full of water before start the machine

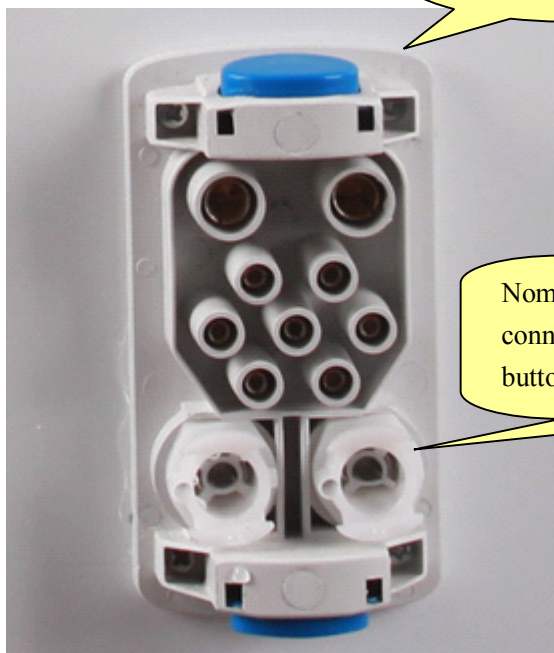
(4). Draw out water pipe and water funnel.



After add full of water , just need to close the cap of “Water Outlet” , place the other two to a clear and safe area during treatment . Close all of the three caps after turned off machine .

Note: Change water every 10-15 days approximate.

e.Handle installation



The handle socket

Nomally,the white button is protuberant.when connect the handpiece socket,press the white button downwards firstly.



【Function test】

- a. Turn on machine, when show the first LCD display, please do not do any other operation.
- b. Turn off machine

PS: This is to make sure good water circulation before normal operation. It's allowed to operate only based on good water circulation.

How to know good water circulation inside machine?

1. Generally you can hear water flow sound;
2. Under machine power on, the probe (sapphire) turn to cold after 3 - 5 minutes.
3. from the observe window, you can see the something rotate inside.

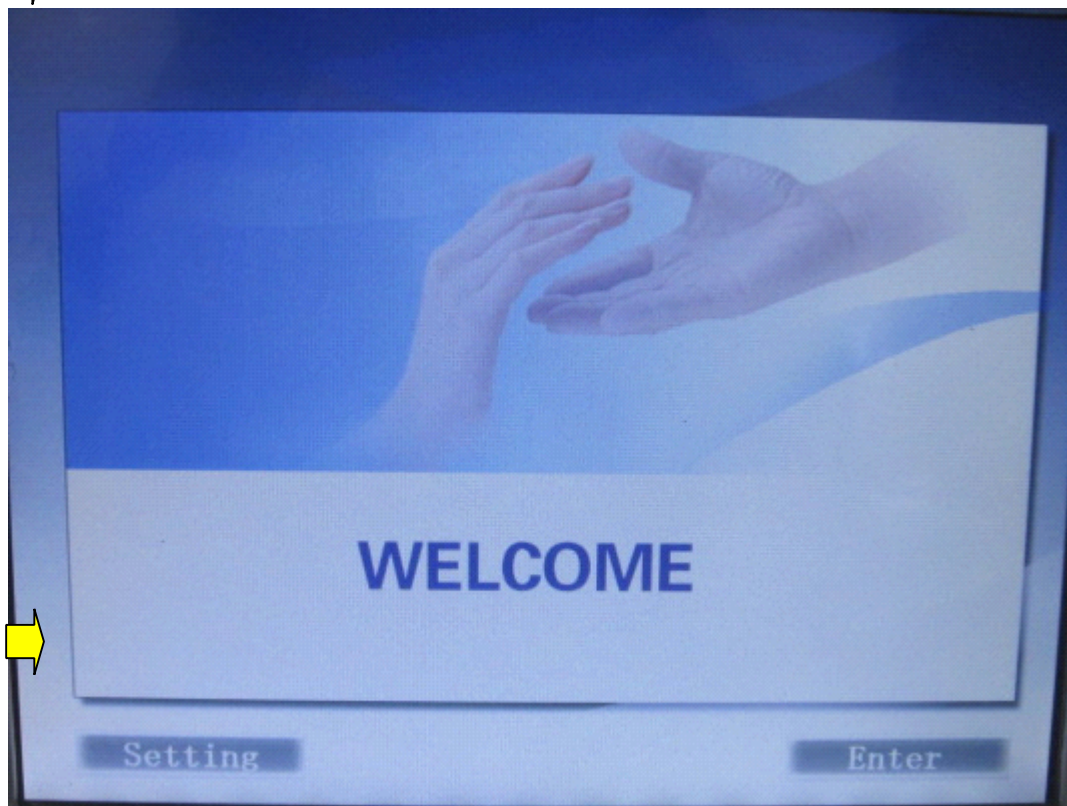


If the water doesn't cycle well or the probe does not cold, there might be some air in the pump. We suggest do as following:

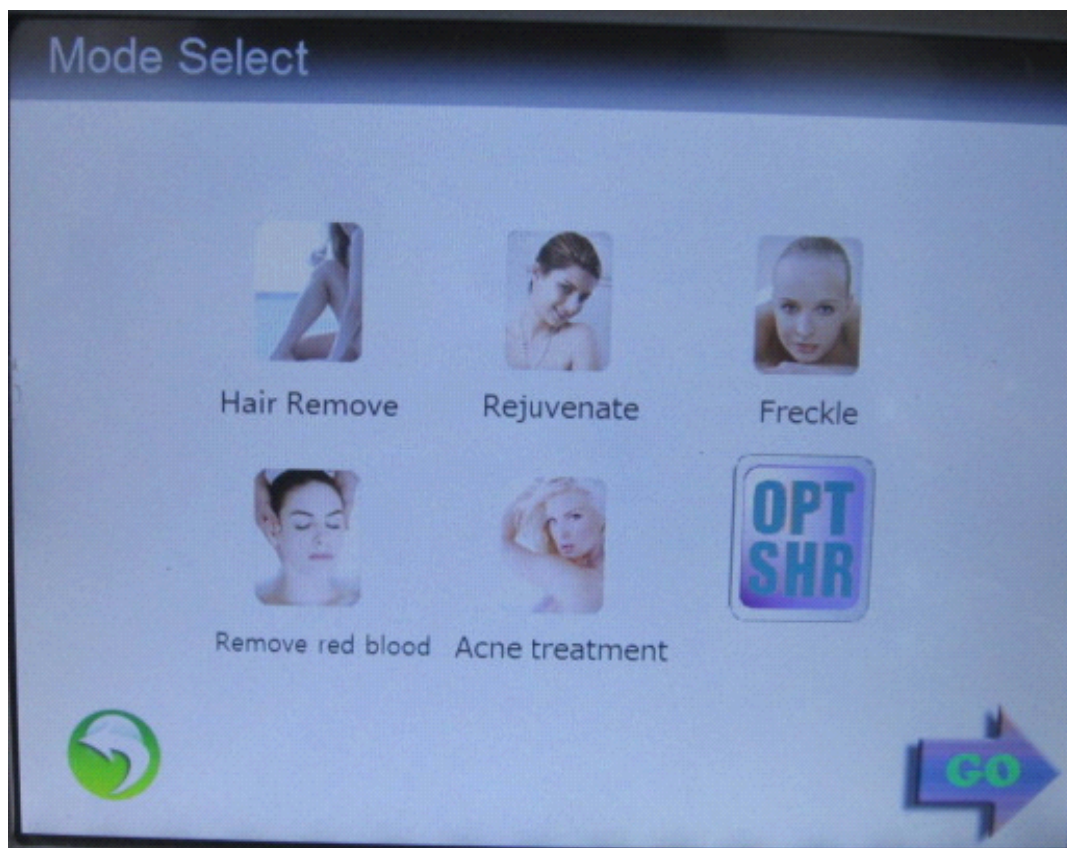
- a. Pull the handle ,Turn on machine, when show the first LCD display, please do not do any other operation.
- b. Let the handle put the earth Lower than the machine . Check the probe whether cooling well . If no, write the next step .
- c. Button the water injection , until it spurt the water ,then turn off machine .
- d. Connect the probe well . Turn on the machine .

❖ **Operation instruction of LCD controller**

➡ When turning on the machine, the screen will show as the picture one:

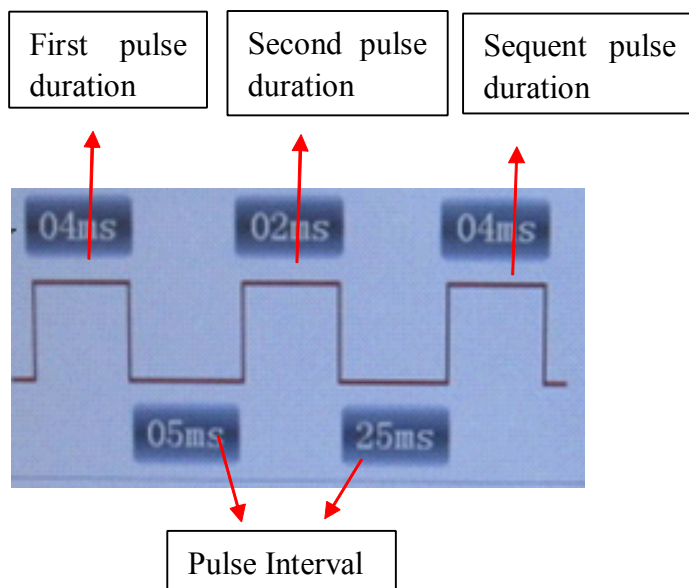
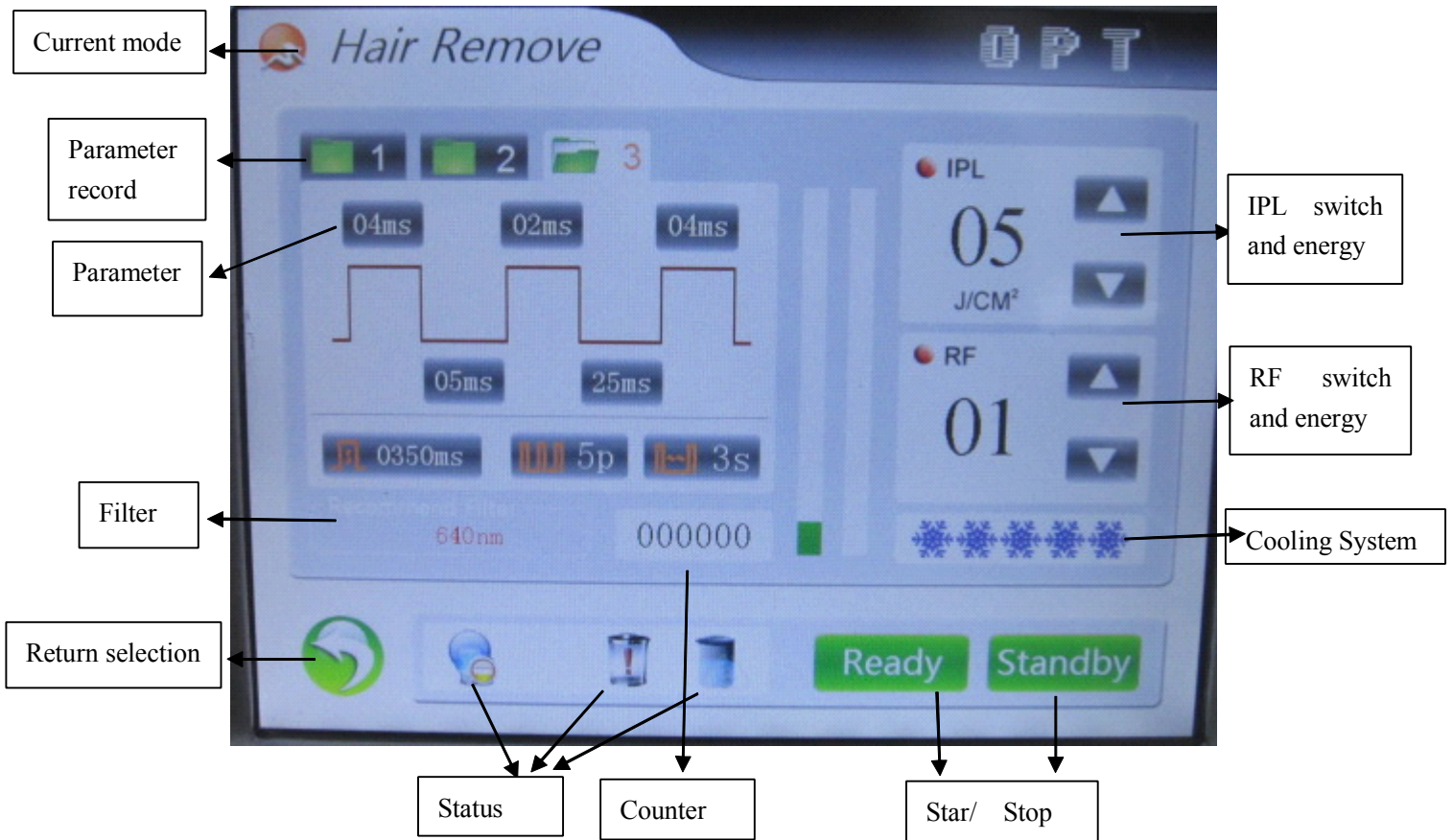


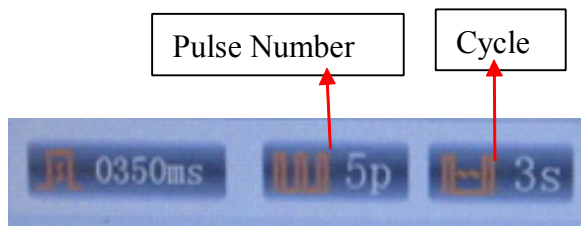
And then the system turn to



Select relevant treatment mode, such as Hair Remove, Skin Rejuvenate...

Now take **Hair Remove** mode for example , show as follows :





The same as follows Hair remove:



How to use the OPT(SHR) ?

I 【Clinic operation】

A. Before treatment

To the machine:

- b). Input enough water and make good water circulation before actual operation
- c). Water source: distilled water or pure water
- d). Before the operation, make sure probe cold. Then it's able to start the operation. (if take operation under the state of no water circulation or hot probe, the handpiece is easy to damaged.)
- e). Inflammable and explosive things should be kept away from operating room, such as stupefacient, liquid and gas.

To the patients:

- a). Classification of skin: it's safe and effective to the white, brown or yellow skin.
- b). Clean skin to eliminate the perfume and cosmetics.
- c). Use digital camera for memory, take photo from different orientations, if necessary
- d). If necessary, use external anesthetic one hour before the treatment; Please shave hair firstly under hair removal treatment.
- f). Spread the cooling gel on skin, about 2 mm thickness
- g). Wear eyepatch before actual option

Note: can not look at the intensive pulsed light directly, or alarm to people's eyes, such as keratitis, cornea brushing off, or even lose sight.

- h). forbidden to wear watch and necklace etc. during the treatment.

To the operators:

- a). Adjust the right parameters
- b). Touch the "▶" on the LCD to start
- c). Test the device working, please shot the 3 first pulse to ground at beginning, make sure even energy output in treatment.
- d). Wear glasses before actual option
- e). forbidden to wear watch and necklace etc. during the treatment.
- f). can not look at the intensive pulsed light directly, or alarm to people's eyes, such as keratitis, cornea brushing off, or even lose sight.
- g). Please do not optionally open the panel of the machine even power stopped, in case high voltage danger.
- h). It must tighten up the screw caps of machine before movement.
- i). vertically slide the probe on skin, and keep close to skin
- J). Keep the machine rest every 2 - 3 hours continuously working
- k). The handle is fragile, please keep special care when hanging to the holder or in handle
- l). Please do treatment from the lower energy at the beginning, and adjust the energy according to actual conditions.



If the probe is not cold or it even becomes hot, please stop using this machine and turn to us for help. Otherwise it will hurt people and damage the machine.



Please do not press the button on handle one press by one press or step the foot pedal step by step. That will make skin gets different energies which will sure hurt the customer.

Others:**System alarm of water temperature:**

The lowest system settings of water temperature is 25 degree the highest system setting of water temperature is 60 degree. During 25---60 degree, the machine works well. If lower 25 degree or higher 60C, now pulse output from the probe.

B. In the process of treatment

- a. Spread approximate 2 mm cooling gel in front the ears and below the chin. Making test of 2 - 3 spots according to the former parameter designed. After 3 - 5 minutes, observe the reflection of skin, to make sure the right treatment parameter. However, it needs to wait for a little longer time.
- b. When taking the treatment to the protruding parts in the bone structure (like forehead, mandible and cheekbone). Appropriately adjust the RF energy based on different conditions of patients.
- c. During the treatment, vertically slide the bipolar probe on skin with level force, and observe whether it's touched well or not. Overlapped shoot makes sure to good effects of treatment area.
- d. please continuously step the pedal or press the button on handpiece.
- e. Adjust the energy from low to high, and step - by - step; make sure not more than 2J each time,avoiding skin burn.



Please do not press the button on handle one press by one press or step the foot pedal step by step. That will make skin gets different energies which will sure hurt the customer.

- f. When ending the treatment or try to change another treatment part or parameter adjustment,firstly release the button on the handpiece or pedal firstly, avoiding electric shock by chance.
- g. It's can be adjusted the energy, according to the actual conditions of the patients.

C. Special Notices

- a. Avoid sunlight and burn before and after the treatment, could use the suntan lotion (cream),(SPF>30) to avoid direct sunshine.
- b. Avoid chemical or mechanical stimulation before and after 1 week of the treatment
- c. Do not take filled things or injection treatment before and after 2 weeks of the treatment
- d. Avoid direct or indirect heat stimulation to the treatment area after 3 days of the treatment,especially to those of high pigment deposit.
- e. If taking laser skin care treatment before, please wait for 3 weeks at least and then do this treatment.
- f. After the treatment, patients are not allowed to eat the foods of dark color or great pungent within two weeks, such as the sauce, coke, seafood, capsicum etc.
- g. It's not allowed insolation in sun before and after the treatment
- h. It's not allowed that use any cosmetics after the treatment, suggested that use the

natural moisturize products

i. Please cooling the bad reaction area after the treatment, like tumescence and causalgiase.

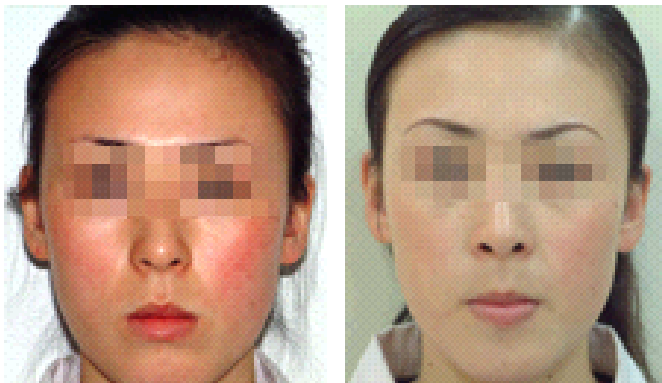
j. After the operation, make sure clean the probe.

k. It's not allowed to operate the machine without professional operators.

Chart of Face treatment



***Comparative chart after
Thread Vein treatment***



***Comparative chart after
Acne treatment***

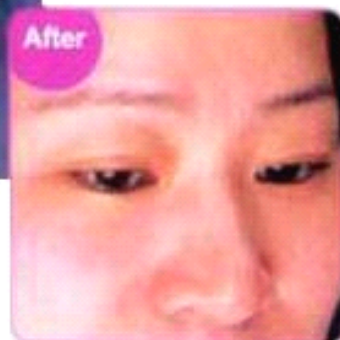
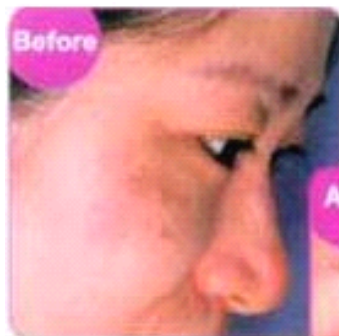


***Comparative chart
after Face Repairing
treatment***

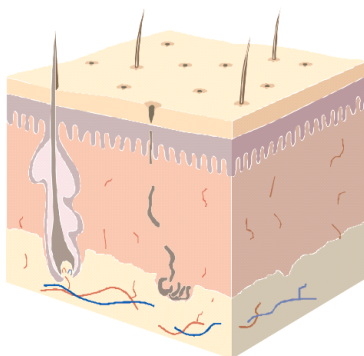


*Comparative
chart after
Freckle
removal & skin*

rejuvenation treatment



9. PHYSIOLOGY of HAIR



Hair is mainly composed of two parts.

Hair Trunk, it is the visible part, hardly no influence on hair growup.

Hair follicle is endermic tissue, to determine hair growup.

Period of Hair Growup

1. Growup

Normally, human being has 85% hair always in growing up. Hair growup can keep 2-6 years, it will grow up 10cm every year, but its length will not over 1meter usually.

2. Transition

After period of hair growup, it will enter transition. Transition normally will keep 1-2weeks. During transition, hair follicle will be shrinkened to be one sixth of normal hair length.

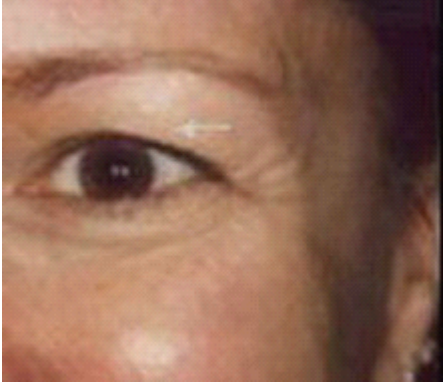
3. Dormancy

Dormancy is after Transition, hair will not grow up, but it also connected with hair follicle, dermis nipple is in dormacy and will keep 5-6weeks. Normally, there is 10-15% hair in dormacy. During course of laser hair removal, it is important to choose proper hair grow-up. During growup, mother cell of hair rapidly split, melanin quantity is most, melania develop in period of hair growup, and will become a part of hair follicle, it is extremely sensitive on laser. We only can use this equipment to do hair removal during this time.

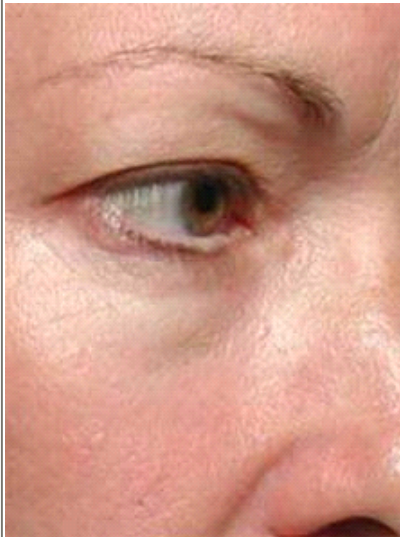
Part of body	Proportion of developing period	Dormancy	Density /cm²	Deepness /mm
Mandible	70%	10 week	500	2-4
Muffle	65%	6 week	500	1-2.5
Oxter	30%	12week	65	3.5-4.5
Bikini area	30%	12week	70	3.5-5
Leg	20%	24week	60	2.5-4

Eye, Upper half face

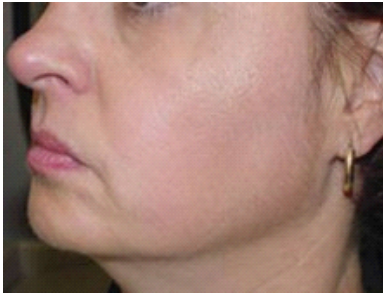
Upper eyelid lift and rise eyebrow, Before	Upper eyelid lift and rise eyebrow, After
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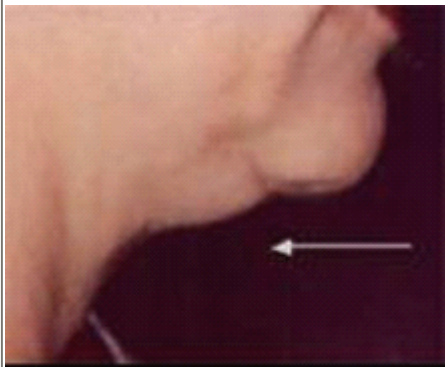
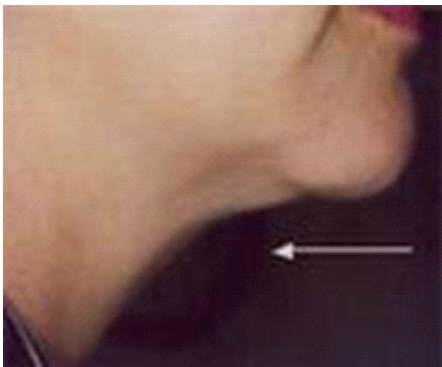
	
	
Arround eyes, wrinkle obvious and eyelid drooping before treatment	Upper eyelid and eyebrow lift obvious, wrinkle improvement after treatment

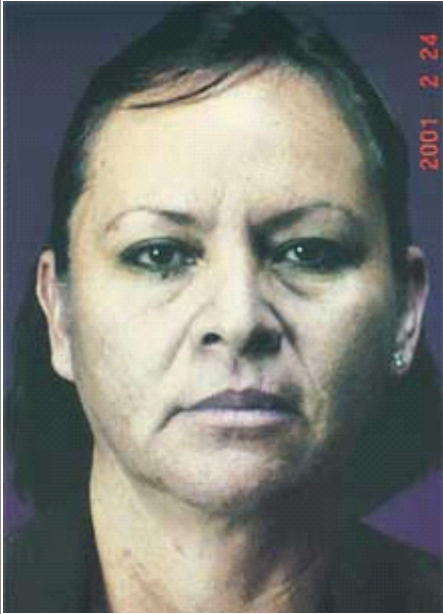
Lower eyebag firming, Before	Lower eyebag firming, After
	

	
Eyebag obvious and tumidness before treatment	After one year therapy, the before eyebag improvement and smooth.

Lower half-face

Falin wrinkle improvement, Before	Falin wrinkle improvement, After
	
Falin wrinkle on the cheeks, lower eye and lines of corners of the mouth both very deep. Before	Two months after therapy, both of them improved, line of the jaw also three-dimensional

Jaw and neck slack therapy, Before	Jaw and neck slack therapy, After
	
Before therapy, Jaw and neck,	After one month therapy, turkey

both have obvious slack, form turkey neck.	
neck disappear	
Firm the whole face, Before	Firm the whole face, After
	
Before, Falin wrinkle, area between eyebrows, lower eye, lines of corner of mouth all obvious.	After 4 months therapy, all lines are improved obviously.
Scar Therapy, Before	Scar Therapy, After
	
Obvious scar, concave holes before therapy	After 4 months therapy, they are improved obviously.
Turgid Pox therapy, Before	Turgid Pox therapy After

	
Before therapy, the patient's face has serious turgid poxes.	After therapy, turgid poxes obviously loss, improvement.
Acne therapy Before	Acne therapy After
	
Before therapy, on cheeks, many acne.	After therapy, acne obviously loss, skin become smooth.

COMPARISON of HAIR REMOVAL



Before



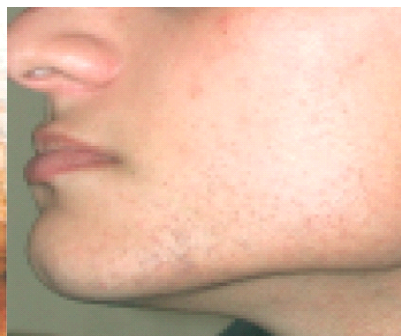
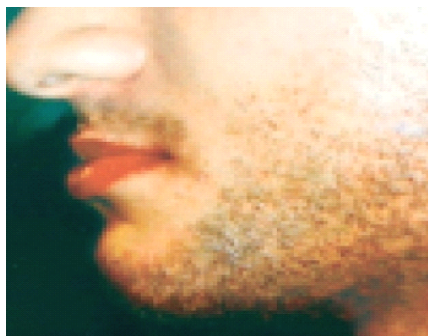
After



Before



After



❖ **Taboos(who are not suitable to use this machine?)**

- a) Pregnant
- b) Isolation in the sun
- c) Sensitive to light or medicine, or are taking medicine that sensitive to light
- d) Using vitamin within 6 months
- e) Not representative naevi or malignant pathological changes in the treatment area.
- f) Pacemaker or quiver dispelling device user
- g) Herpes or trauma
- h) Pimple record
- i) People who accept Hirudin etc. treatment (should stop using it before 2 weeks).
- j) Severe diabetes patient, high blood pressure sufferer, and epileptic

❖ **Technical Parameter & Packing List**

★ **Technical Parameter**

Wavelength	480-950nm or 530-950nm or 640-950nm
Counter Handle	Yes.
Spot size	15*50mm ²
Energy	1-36J/cm ²
Continually shooting timer	1-30s
Pulse repetition rate	1-10 Hz
Pulse	Single
Pulse on	2-15ms
Water temperature tank	38 degree
Display system	8.4" colorful touch screen
Drive Power	2,000W
Power supply	220V, 50Hz or 110V, 60Hz

★ **Packing List**

Main device	1pcs
OPT(SHR) Handle	1pcs
Filters	3 pcs
Water Funnel	1pcs
Protective Eyepatch	1pcs
Protective Glasses	1pcs
Holder	1pcs
Fuse	2pcs
Power cord	1pcs
User manual	1book

❖ Question & Answer

Which advantages does this have for you?

An optimal intensity can be achieved given that the same area is treated multiple times with low energy impulses. The treatment is more comfortable and the skin is better protected than with conventional methods.

How are different hair and skin colours affected?

Light skin with dark hair responds most favourably to the treatments. In addition to targeting the melanin, SHR-technology affects the chromophore, a protein located in the follicle, enabling the successful treatment of dark skin removing achromous, fine hairs.

What does the client feel during treatment?

Treatment with SHR is practically painless as opposed to treatment with the conventional IPL devices. On areas with dense hair growth, warmth from the light impulses is evoked and the light impulses may be felt to a much lesser extent than with laser or IPL.

Which areas can be treated?

Body hair can be removed on any part of the body. It is recommended a test be performed on a small patch before the first treatment.

How many treatments are necessary?

Until now hair had to be treated during the growing phase (20%-30%). In the telogen phase stem cells are in a resting phase but can still successfully be treated with the SHR system. Since growth cycles vary, approx. 8 treatments are usually necessary.

How long should the intervals between treatments be?

The hair growth cycle and the interval between treatments should correspond requiring spacing of approximately 6-8 weeks.

How much time is necessary for a treatment?

Depending on the size of the area to be treated, the time varies from 15 to 30 minutes for a facial treatment and about 3 hours for both legs.

Will there be any side-effects?

Skin is more sensitive in some areas of the body than in others and redness can occur as a side effect. It should disappear in a matter of hours but could potentially be as intense as a sunburn lasting a few days. Contrary to conventional methods, a light crusting which will vanish after 2-3 weeks, or an alteration of the skin's pigmentation which will disappear after 4-6

months, are very rare.

Precautions to be taken before the treatment?

At least 1 week before the first treatment, intense sun exposure or solarium visits should be avoided. Hairs should not be waxed or plucked less than 6 weeks before treatment. Shaving is permitted any time. Areas to be treated should be shaved one day before the scheduled appointment.

Precautions to be taken after the treatment?

The skin's natural protection is highly weakened after this intense light treatment. Therefore a high level of UV protection (30-50) in the form of suntan lotion should be applied for about 1 week.

After 1-5 weeks hair will fall out. Shaving is possible any time but hair should not be plucked.

❖ **Maintenance of Machine**

I **【precautions】**

- 1) No stress on the touch - LCD, prevent it from breaking up;
- 2) Keep the handle clean. It's not allowed to clean it with ethanol;
- 3) The handle is fragile, please do be careful when you pick up the headpiece;
- 4) Change water 10-15 days. make sure water circulate normally before you start the treatment.

II **【Analysis On Simple Malfunction】**

1. **No power supplied**

Please don't worry. You can DO AS following the sequence below to find out what the problem is.

- ① Check up whether there is power supplied from electrical source.
- ② Check up whether the power line is connected well.
- ③ Check up if the emergency switch is on
- ④ Check up if the inside electricity line is connected well
- ⑤ Check up the fuse, which could be pulled out at the bottom of hole for power plug.

2. **The probe is not cold**

Check up whether there's water in water tank

- ① and make sure water circulates normally
- ② Check up the direct power supply switch.

3. **The xenon lamp is not on:**

- a. The lamp is exhausted; the lamp broken down.
- b. Poor contact (anode and cathode line)
- c. Sinmer board broken down

4. **Only LCD screen displays, but can't enter into the treatment menu.** Touch LCD screen broken down

❖ **After-sale Service And Maintenance**

The term of maintaining guarantee is main device 1 year and spare part 3 months from the date of purchasing according to the receipt. (Expendable is not included in it.) Others not included in maintaining guarantee or over the time, we also supply to maintain and renew but need charges. Please contact with the dealer if need change of purchasing the parts and easily expendable products.

A. We will guarantee the quality of our equipment, normally there is no quality problem

1. If there is a deficiency, please email or call us on the reasons, it would be best to dealt with by email or telephone. Because some of the problems are caused by using the machine in a wrong way.
2. We suggest the client to take photos of the area where the problem occurs, we will pass them to our technician , our technician will give a satisfactory answer within 1-7 working days
3. If the problem comes from the spare part within the warranty, we could consider in changing the spare part to our client, which could be sent with his/her next order. If the next order is uncertain, we could pay freight cost to send the spare parts.
4. If the problem comes from the main device within the warranty, we could advice our client to post the device back to our company for repair by ordinary post, or we could re-send a new one to our client. If the cost of posting the problematic device back to BEST is more than the value of a new device, BEST would take it into consideration, according to the actual status; apply to re-send a completely new device back to our client.

B. We won't supply maintaining guarantee if troubles as below:

- a) Disassembling the machine by self;
- b) Fall it without caution;
- c) Lack of reasonable keeping and protect;
- d) Not operate according to the user manual.
- e) Expendable reasons

If changes of the design and specification of the machine, we will not notice you in addition. If any queries, please feel free to contact with the local marketing company.

All in one, we will try our best to serve you and also need your fully cooperation. Thanks.

Product name :		Purchase date:	deadline:
Seller:		Add.:	Tel.:
Customer:		Add.:	Tel.:
Repair date	Reason of the fault	Repair content	
Maintain list			