

Manual of Users

Model No.: IE-11



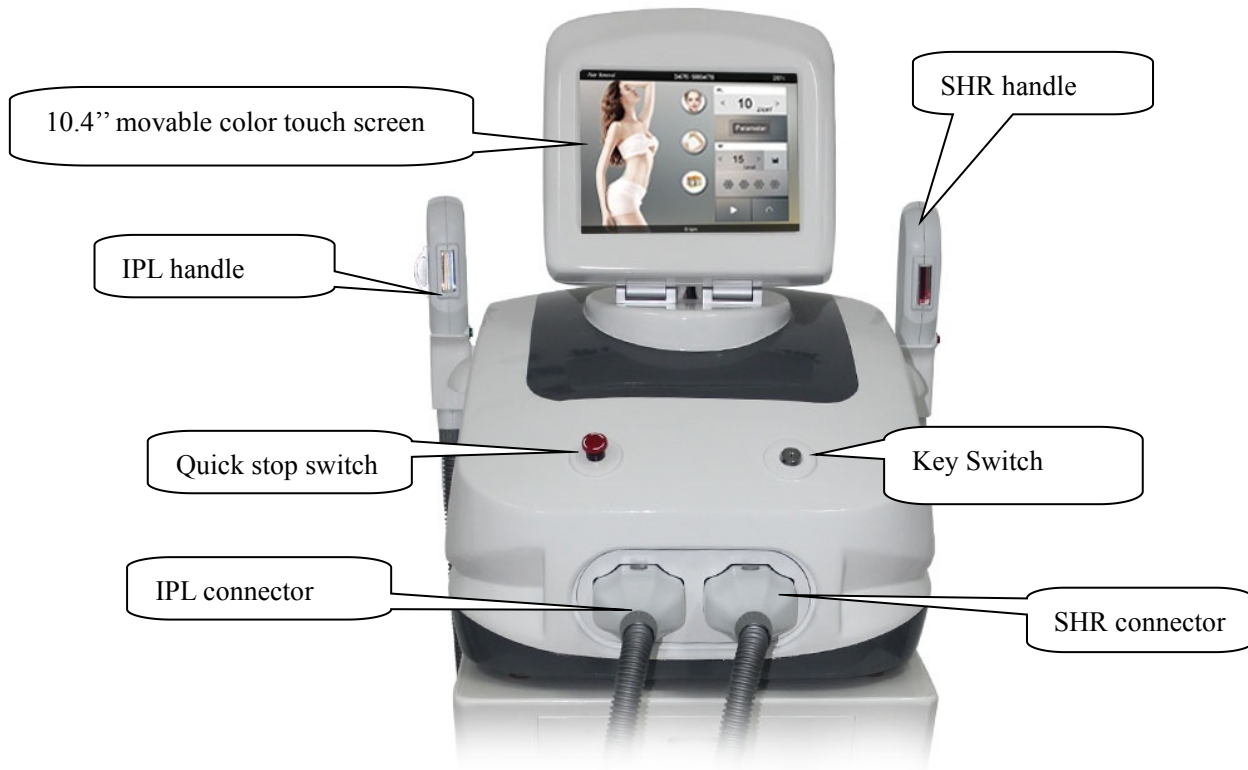
Defender IPL/SHR hair removal machine



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Chapter 1 Introduction

2in1 IPL/SHR hair removal machine

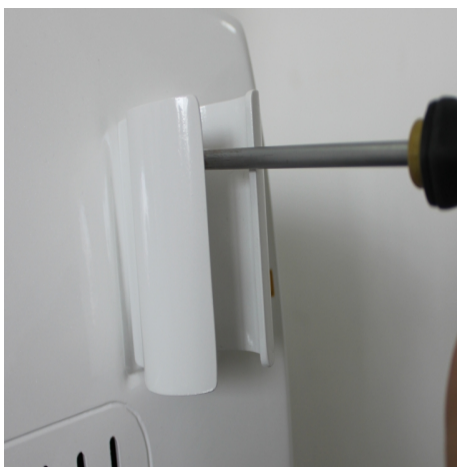


Chapter 2. Installation

2.1. Raise the screen slowly.



2.2.1 Install 2 hand holders on both sides



2.2.2 Connect the 2 handpieces. There are labels you can see, so you can know which



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handpiece to connect onto which socket.



3.1 How to connect.

3.1.1 Press down the 2 buttons firstly.

There are two buttons on both above and below of each handpiece. The two buttons may be in the upspring or press-down state. Before connect it onto the machine, it must be in the press-down state. So press down the 2 buttons firstly.

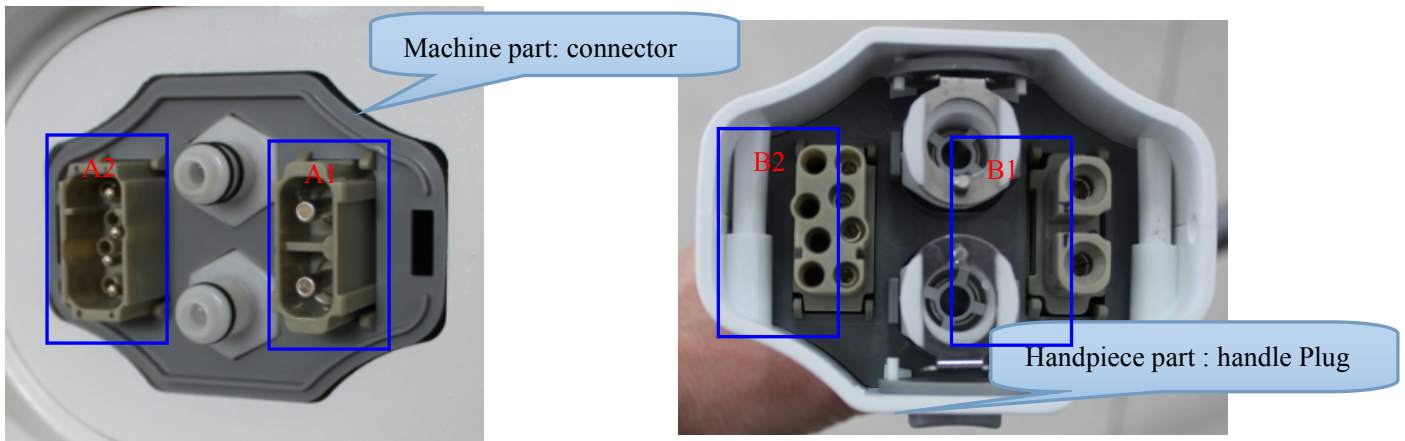


3.1.2 Connect it in the right direction.

There are two parts of the connectors: machine part and handpiece part. Please look at the following pictures. A1 connects to B1, and A2 connects to B2. It cannot plug if connecting A1 to B2.



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3.1.3 Use some power of your hands to plug it. When you plug one well, you can hear the click – the button springs and it locks. Then you can try to pull the handpiece connector slightly to check whether or not it locks well. Then hang up the two handpieces onto handpiece holders.



3.4. Water-in.. Pure water or distilled water necessary.

3.4.1 First, remove the black connector. After the water-in, you do not need put it back again.



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3.4.2

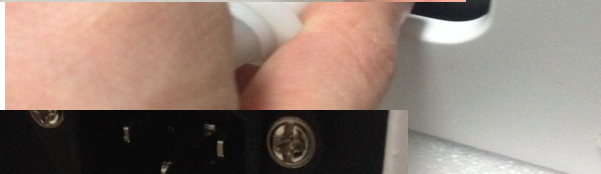


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① Press the button on the water-in-hole.



② Insert the water pipe



with plug and add



water via funnel.

③ Add water until water runs from Water Overflow hole.

④ Press the button on the Water-In mouth, the water pipe pops out automatically.

Special Note: please use purified water or distilled water. It is recommended to



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change the water every 3-4 months. If there are many customers, you can change the water every 2 months.

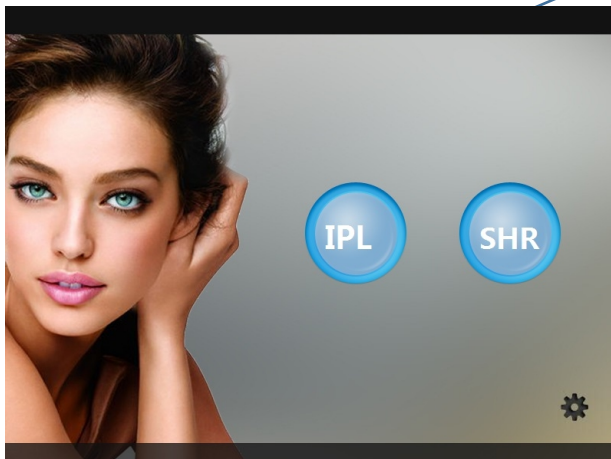
Chapter 3 Operating system

3.1 Connect the power. Turn on the machine by the key switch. If the machine has nothing reacts, turn the Quick Stop.

3.2 This screen saved for add customers logo. If no special requirements, there will be the producer's logo or no logo.

3.3 Click the IPL button to enter the IPL function.

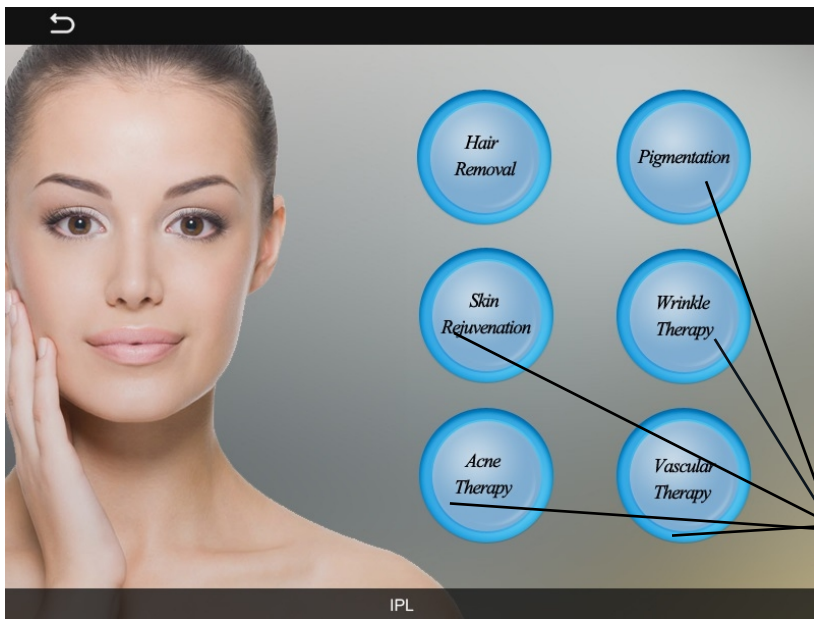
3.3.1. IPL function selection page



Click the Hair Removal button to go to the Hair Removal homepage.

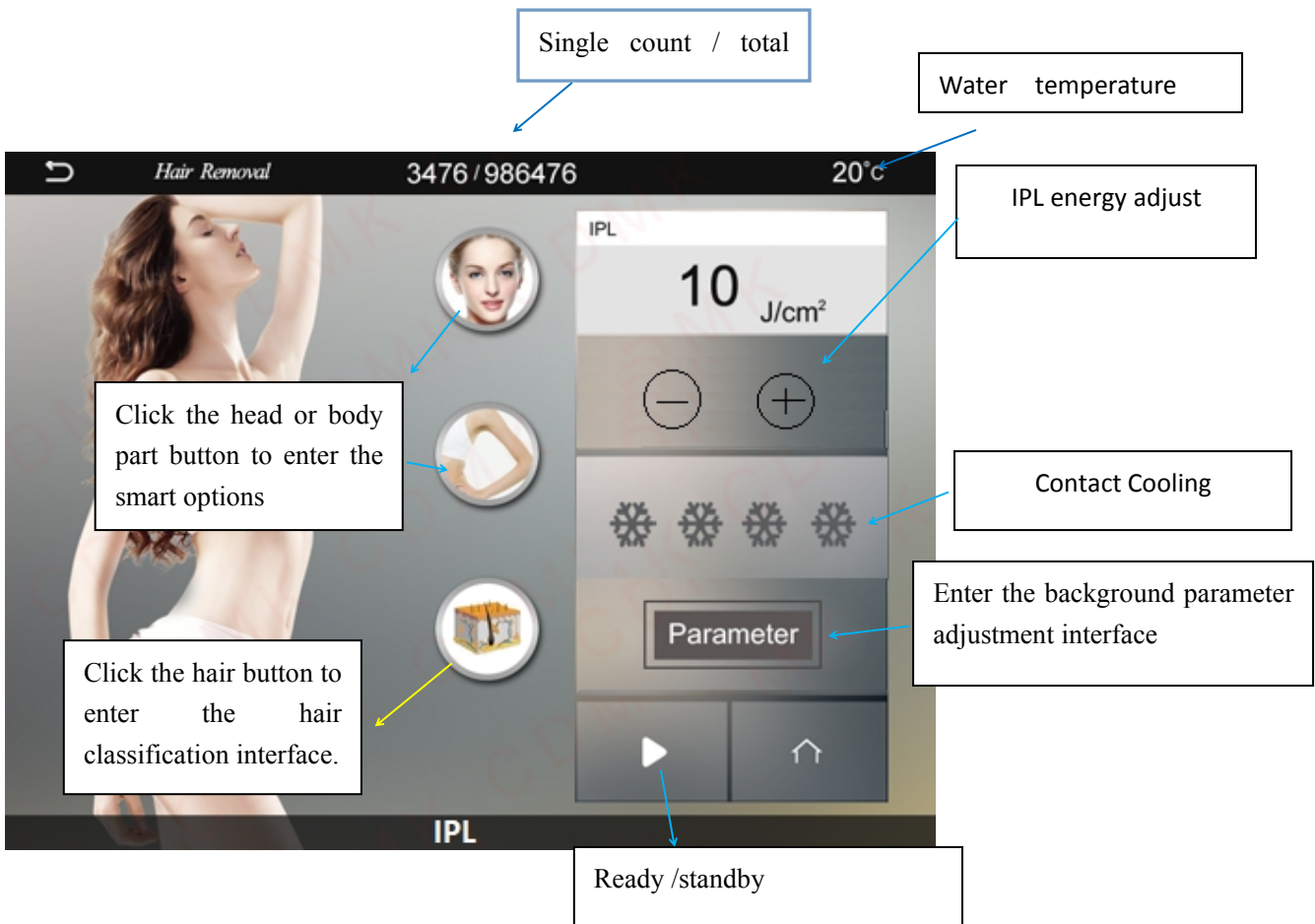


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Click on the 5 other buttons of IPL to enter the interface of other options.

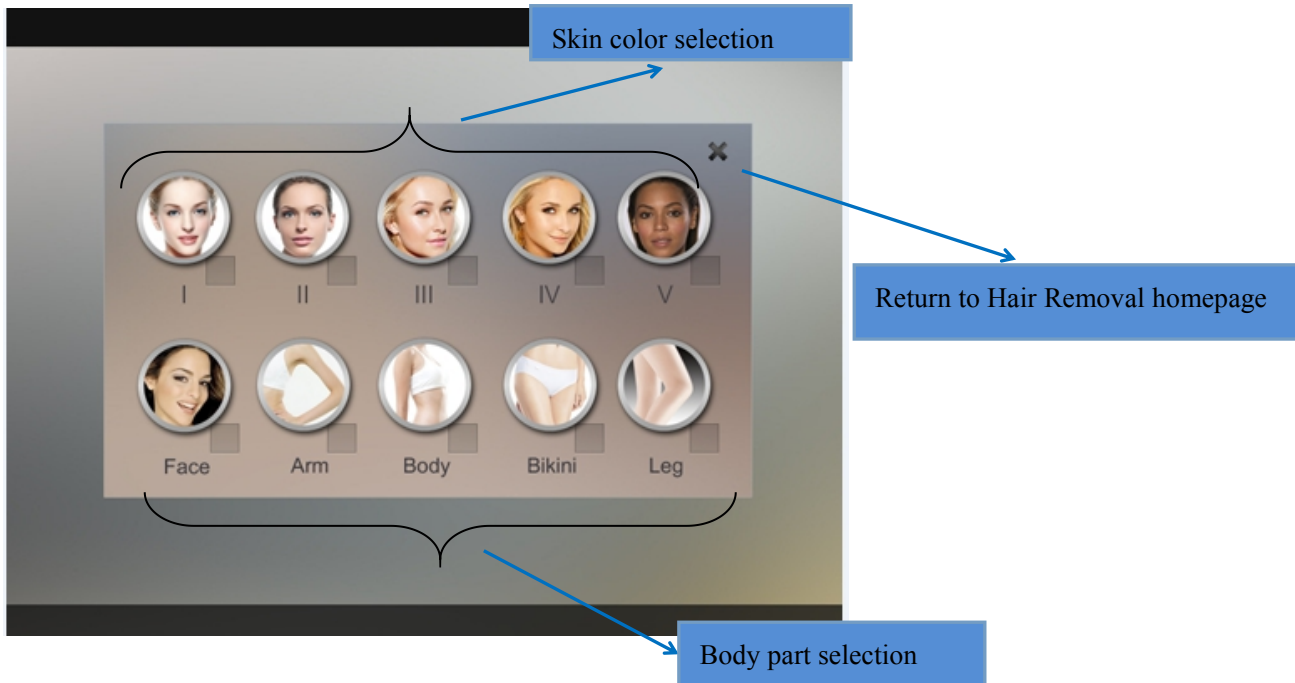
3.3.2 Hair Removal button



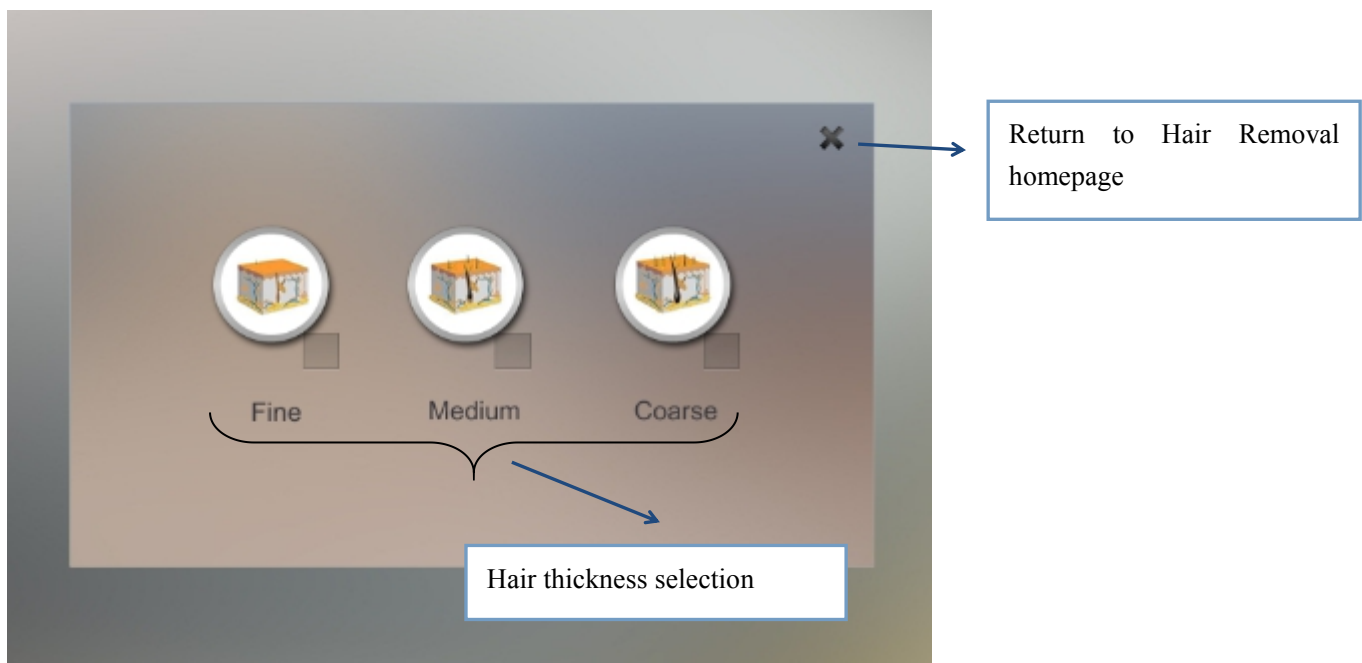


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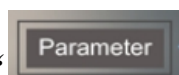
3.3.3: Smart option interface



3.3.4: Hair classification interface

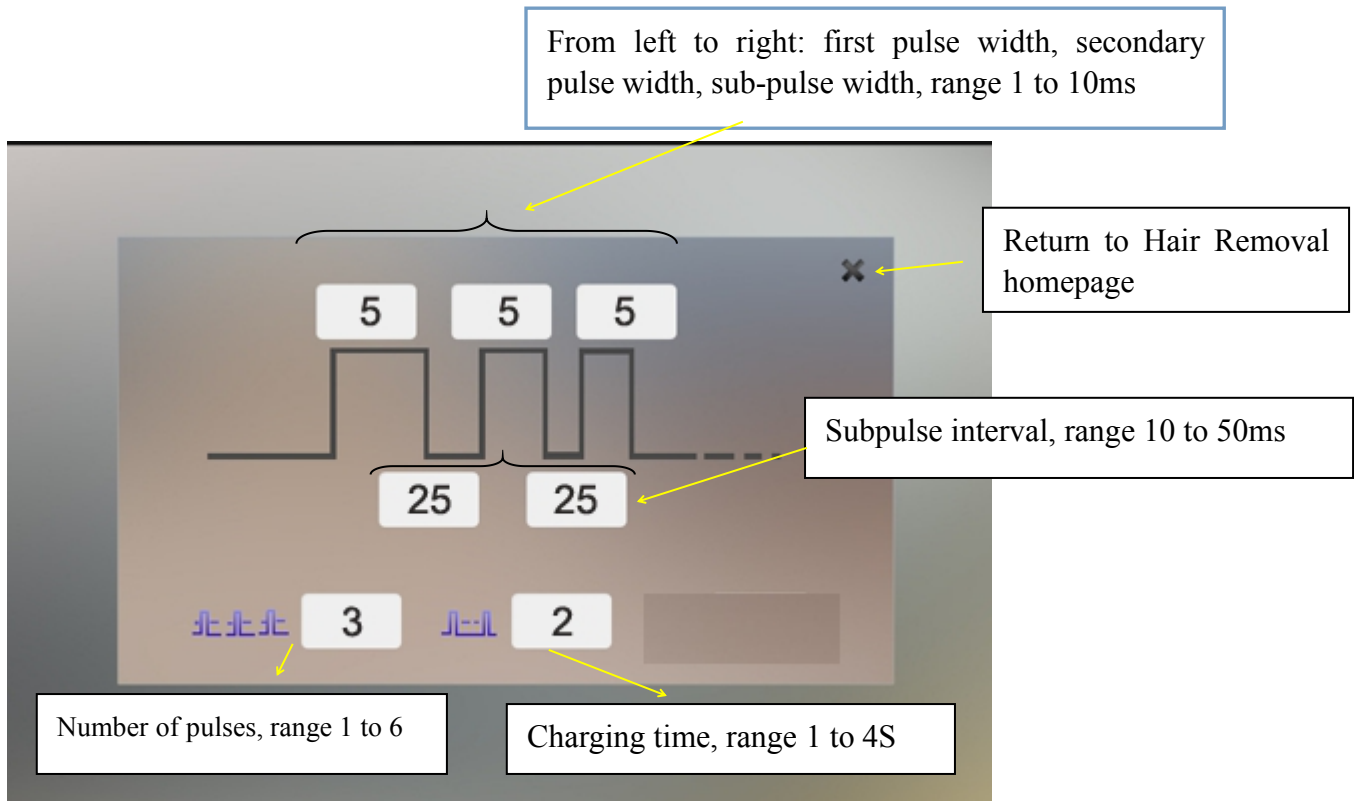


3.3.5 : Click the button “Parameter” Background parameter adjustment interface:







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3.4 Note:

After adjusting the parameters, click the button “” to “” and keep for 2-3 seconds, the machine will automatically store the treatment parameters, so that you can use the machine directly to treat next time.

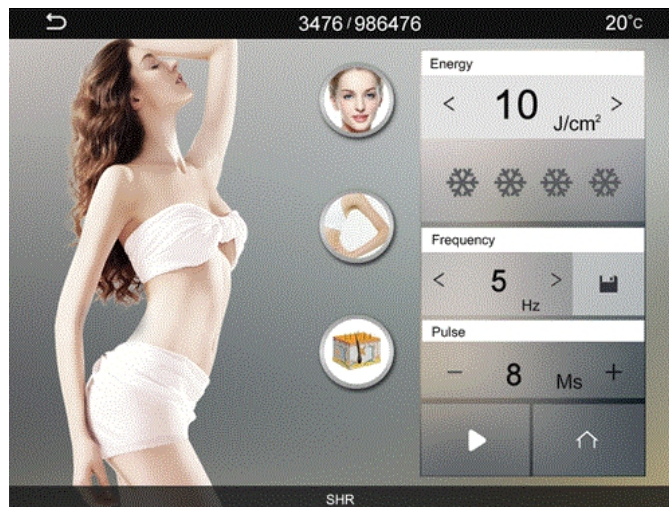
3.5 Parameter list.





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IPL function	wavelength h	Pulseduration (pulse width) /ms	Pulse (Subpulse) Interval /ms	Number of pulses	Engery J/cm ²	
Acne therapy	430nm	5	10	4-6	2-14	2-3
<i>skin rejuvenation / pigment removal</i>	530nm	5	10	3-5	2-14	2-3
Wrinkle therapy/ vascular removal	590nm	10	10	4-6	2-14	2-3
Hair removal	640nm	5	10	4-6	5-23	3-4

4,1 Click SHR, we go to: Treatment interface

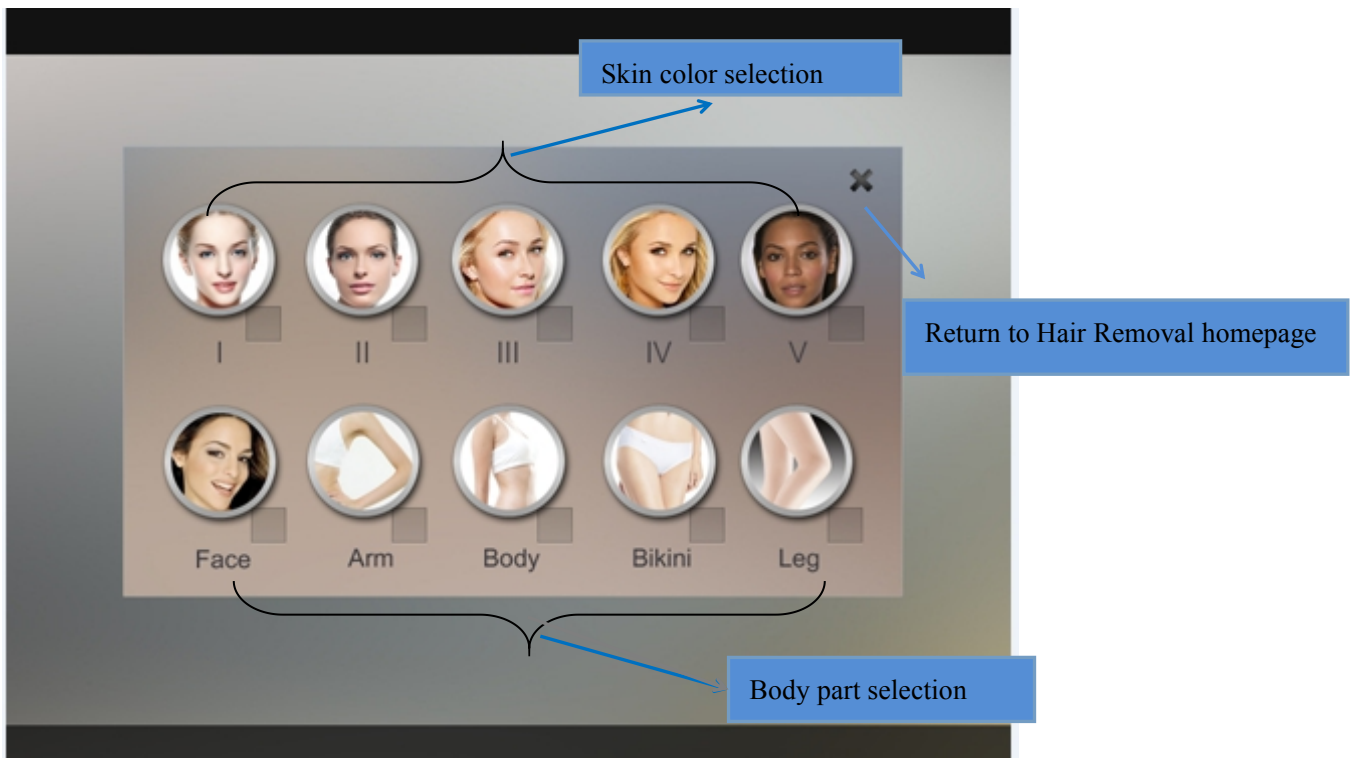


After adjust parameters(skin color, treatment part, energy, Frequency etc. **Please press**  to , keep about 3-5 second, then parameters will be stored, you will not need adjust when you use it next time.

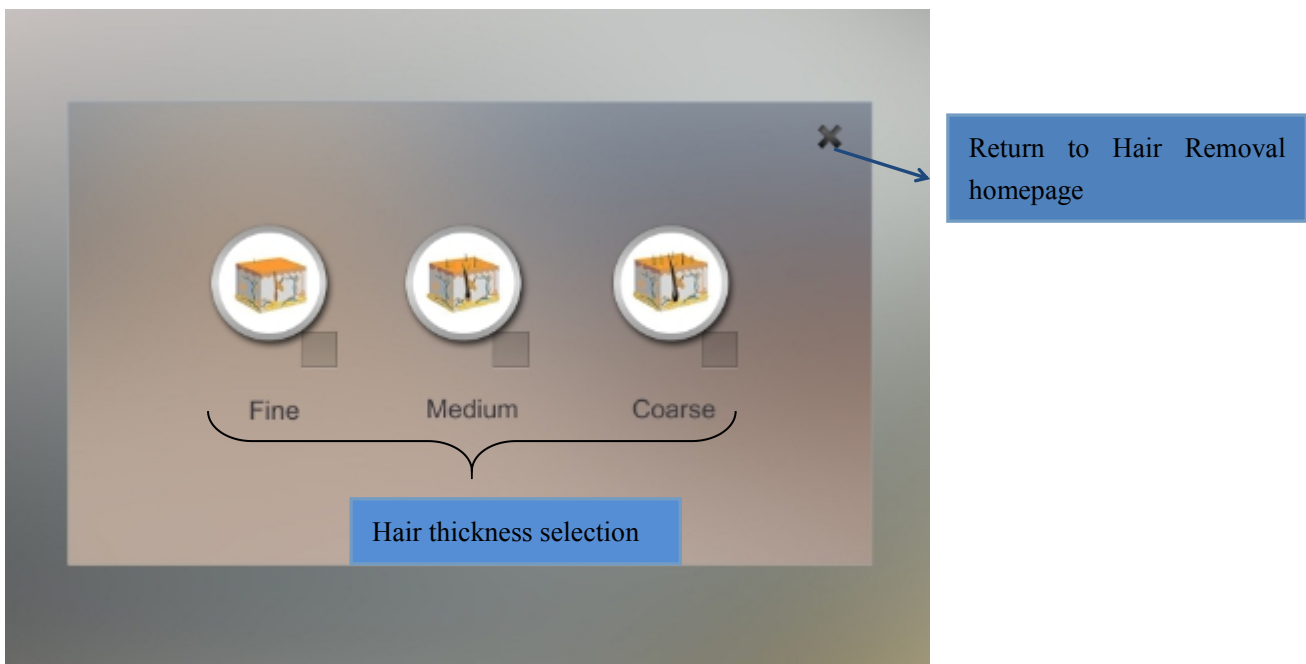


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4.2: Smart option interface



4.3: Hair classification interface



4.4 how to adjust system:

1, choose skin color





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- 2, Choose parts of body to treat
- 3, Hair Status
- 4, Adjust Energy "10-28J/cm²" "<" mean : Energy reduce; Energy ">" mean :Energy increase
- 5, Adjust✳:4-5 pieces"therapeutic temperature of the handle"
- 6, Adjust Frequency, usually"3-5HZ", "<" reduce, ">"increase

Friendly reminder:(Parameters need to be adjusted appropriately according to treatment part of body and customer experience)

- 1)Energy :13-28J/cm²
- 2)Snowflake: 3-3.5/piece
- 3)Frequency: 3-5HZ (Light output speed)
- 4)Pulse width: 5-8Ms
- 5)Skin color:I , II, III, IV, V.
- 6)Parts of body : Face, arm, body, Bikini, Leg;

Click Handle cool levels into full levels (from gray  to ) and the sapphire becomes cold in 1 or 2 seconds.

Pulse width: how long a shot work on skin. 1~7ms adjustable

Frequency: how many shots in one second. 1~10Hz adjustable

Energy: when the frequency is 1hz/2hz/3hz/4hz, the energy is 1-50J adjustable

- when frequency is 5hz, energy is 1-35J adjustable
- when frequency is 6hz, energy is 1-30J adjustable
- when frequency is 7hz, energy is 1-25J adjustable
- when frequency is 8hz, energy is 1-20J adjustable
- when frequency is 9hz, energy is 1-15J adjustable
- when frequency is 10hz, energy is 1-10J adjustable
-

When settings are ready, press "Ready" button to trigger the treatment head and to charge the capacitances automatically. Press the red button of handle and it shots.

When treatment finishes, press "Standby" button to turn off the head.



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Chapter 4 Operation for treatment

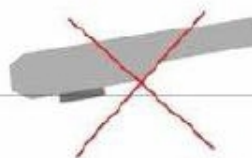
1. Shave the hair



Daub ultrasonic Gel on the skin in 1-2mm thick.



Please pay attention the way of handle during the treatment.



a. Smear gel on the skin about 2 to 3 mm thickness before treating.

b. Before click ready "▶", processing step by step and adjust the suitable parameter.

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(SHR/IPL) (1) Then can press the green buttons to treatment. Before the treatment head leave the skin, please loose the green button first



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then treatment head can be off the skin.

d, When the skin is in red after operation, coat the cool gel till the red is die out. Do not wash with water.

A. Principles adjusting of parameters.

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

Chapter 5 Usage of Handle

IPL handpiece



How to use filter for the IPL handpiece:

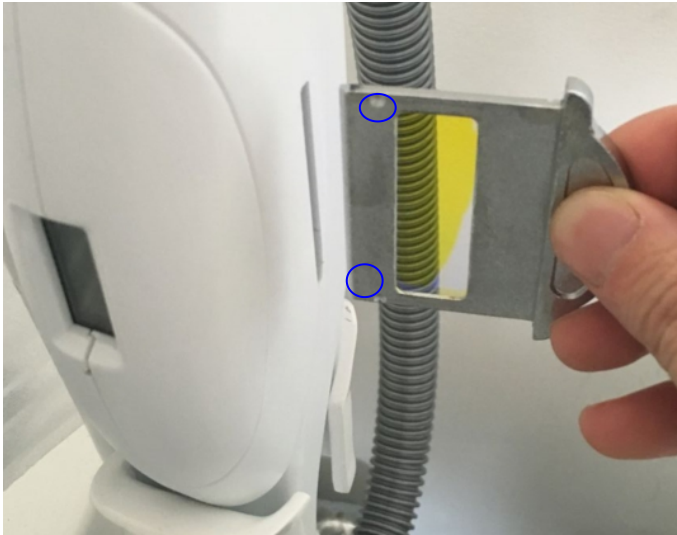





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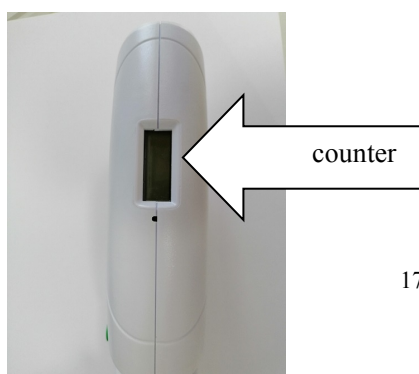
Choose a right filter and install it onto the handpiece

There are 2 grooves here. Just insert the filter in this direction as shown in the picture.



When all the settings are ready, click “”. You can hear “PA,PA PA” . And at the same time the light in the handpiece is on.

SHR handpiece





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Counter on handpiece: indicate how many shots this handpiece has been used.

Chapter 6. Treatment

After adjust the suitable parameters, the treatment site is coated with a thin layer of coupling agent (such as cold gel), will head the handle guide light crystal alignment treatment site (paste can not tightly pressed on the skin), press the handle button switch to carry out treatment, every time before sending light, machines will issue a "beep" warning sound, and then immediately out of light, a light once per second. When long time treatment, the internal temperature overheating, which cannot light treatment, Thus machine need cool about 10 minutes that do treatment.

Notice attention:

Recommend if condition is ok, you can use zero constant temperature block compress with the treatment area.

In removing zero temperature block within 3 seconds of the parts of the E light treatment, which can prevent E light energy for certain sensitive skin injury.

Shutdowns:

- (1) Release of the handle switch
- (2) The E light treatment handles is replace back
- (3) The machine interface is switched to the interface 1.
- (4) Turn off the key switch
- (5) The total power cut off

Note: if the customer can't accordance with normal operation, will have danger photon radiation.

Attention after operation

1、Prevent from solarization: As the solarization may spur the rebirth of melanin, in 30 days after operation, patient should apply suntan oil with SPF 15 or sun block, and hold parasol or wear sunbonnet at outdoor place.



2、Face-painting: Face-making is not recommended after



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Photons operation. A few days after operation, patients are not allowed apply chemical cosmetic or powdery makeup while biological skin-protection products are better. If symptoms like red turgescence or effusion, patient should report to doctors immediately and stop face-paiting. Take some Vitamin C and Vitamin E will help the treatment.

According to the normal physiological circle of human body, patient should go on with the next treatment 3 weeks after the operation. A period of treatment includes 3-5 treatments. After a period of treatment, typical flaws of skin like solar speckle, age pigment will be removed, and at the same time the skin will be tender, glossy and elastic.

Attention: Due to the constitutional difference, some clients may get vesicles, pigment diposition, red turgescence and gore. So patient could apply ice pack to the affected part for 30 minutes. Face- making is forbidden until 5 days later.

Contraindication

Cancer patients, hypotensives and diabetes sufferers, or people

With scar, cut or infected skin, abnormal diathesis or

Hyper susceptibility patients and people with irregular incretion are forbidden to undergo the operation.

Maintaining and Service

The equipment is constituted by precise optics instrument or electronic instrument.

The maintaining and service of the machine should agree with the general regulation of precise optics instrument

Or electronic instrument. Avoid knocking, extrusion and vibration in placing and using it. Check the surface of lens after every operation, if there are splashing objects on it, dab them away with lens paper or cotton sticker with absolute alcohol



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Skin-test (Essential)

Skin test is essential before the treatment for the safety operation. The detail is as following:

- 1) Skin test should be performed before the treatment for the client when the first time. The test patch should be under the ears or other skins not influencing the facial beauty.
- 2) Clean the test patch with pure water and wash- milk; apply a layer of cold coupling gel at the test patch. Take the treatment handle from the
- 3) Supporter, and direct the light guide to the test patch. Trigger 2-3 shots (1/3 area of the spot size overlapping the treatment site is permitted.), and wait for 2-3 minutes to examine the test patch:
 - a. If lightly swelling and/ or reddening at the test patch appears several minutes later, continue the treatment with the same settings of energy level and pulse type.
 - b. If no visible changes at the patch appear, continue the test with $2\text{J}/\text{cm}^2$ higher energy level. Re-perform the test for several times until the above situation happens.
 - c. If the skin show adverse effect or excessive reddening and/or swelling at the test patch just after shot, continue the test with lower energy level.
- 4) For hair-removal with the Hair-removal treatment handle (630-1200nm wavelength):
- 5) First, cut off the hair and leave only 1-2 mm. clean the test patch with pure water, and apply a layer of cold coupling gel at the test patch. Take the treatment handle from the supporter, and direct the light guide to the test patch. Trigger 2-3 shots (1/3 area of the spot size overlapping the treatment site is permitted.), and wait for 2-3 minutes to examine the test patch:
 - a. If swelling and/or reddening around the hair follicles appear within a few minutes, continue the treatment with the same settings.
 - b. If no visible changes appear around the follicles, continue the test with $2\text{J}/\text{cm}^2$ higher energy level.
 - c. If the skin shows adverse effect such as excessive reddening or swelling), lower the energy level.

Cautions



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1. All personnel including clientele must wear protective glasses when the system is in use
2. If do skin-rejuvenating for all face, start the treatment from the ear-root, and spread to all face
3. One time overlapping to the pathology site is allowed.
4. Place the treatment handle perpendicular to the skin, apply minimal pressure and slightly touch the skin. The light guide should be in complete contact with the gel.
5. Leave no blank site and overlapping 1/3 of the spot size is allowed.
6. Better not shoot the light at upper eyelid

For Skin-rejuvenating: The System emits varied wavelength, intense pulse, and broad-spectrum photon-current. It can permeate the cuticle to the derma and take effect on the abnormal pigment and vessel such target tissues to break the abnormal pigment cells, close the abnormal blood vessels, stimulate the proliferation of collagen and improving the rearrangement of elastic fibers, finally achieving the purpose of pigment removal and skin rejuvenation.

For Hair -removal: The system emits varied wavelength, broad spectrum and mild pulse light that can permeate the cuticle to derma of the skin. Utilizing the selective absorption elements, the light is absorbed by the pigment of the hair follicles. Through the optical & thermal effect generated and sourced from the light, it achieve the purpose of removing unexpected hair by rapid destroying of hair follicle tissues.

Chapter 7. post-treatment care

No exposure to sunlight

Clients should use highest factor sunscreen and protect the treated area from exposure to sunlight, sunbed or other artificial tanning for one month following treatment. Tanning after treatment sessions may enhance melanin regeneration, which may result in hyper-pigmentation

Free from always touching and pressing

Clients must do not press and scratch the treated area against infection

Makeup immediately after the treatment is not allowed for better curative-effect, advising no use of makeup for four to five days following treatment. The skin is



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sensitive during this period. Remove the makeup when swelling and reddening appearing at the treated site against infection and pigmentation. In the mean time advise client take some

Food

Advising not eat the hot and spicy food because the skin is sensitive during this period.

Other

Advise that improve other causes of disease, such as adjusting the endocrine situation by taking Chinese herb of medicine, taking few medicines that include VitC and Vit E. According to the normal physiological process, clients should take the next treatment 21 days later. The whole treatment needs 3-5 times.

Chapter 8. Technical Specifications

SHR	Energy	1-50J
	Wavelength	640-950nm
	Pulse duration	1-7ms
	Pulse	single
	Pulse Repetition Rate	1-10HZ
IPL	Energy	1-50J
	Pulse No	1-6
	Pulse Duration	1-10ms
	Pulse No.	1-6
	Wavelength	430/530/590/640nm standard
Basic specifications	Controller:	10.4" color touch LCD screen
	Output power	2500W
	Program languages	English, Spanish, French, German, Italian, Polish, Japanese, Korean, Chinese
	Cooling System	semiconductor+ air + water + cooling gel



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	Skin Cooling	≤0-100C
	Dimension of machine	58X50X39cm
	Dimension of package	71X59X58cm
	N.W.	27kg
	G.W.	45kg
	Voltage	100V~240V