

# OPT+SHR

User's Manual V1.0



**VL87**

# Accessories List



Handpiece x 2



Footswitch



Water bottle



Key



Power supply wire



Gas bubble



Protection glasses



goggle



water tube

# Catalogue

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2. Operator safety
3. Treatment room
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# I. Security Issues

## 1. System safety

**【Notice】** Must add enough distilled water before power on the machine.

**【 Notice 】** Must connected two handpieces on machine together before power on the machine. The machine has “HR” “SR” labels. The two handpieces must connect with “HR” and “SR” socket respectively. If plug wrong handpiece, the machine can't start. “HR” handpiece is only for HR treatment, “SR” handpiece is only for SR treatment.

- Ready/Stand by control: “Stand by” status prohibits light output.
- Intense light radiation warning: when Intense light comes out , the machine will make alarm.
- Lock Switch : Operator qualification restriction.
- Urgent Stop : To stop the machine easily when something emergency happens.

**【Notice】** The key should be removed after every usage and kept by professional trained or appointed operator.

## 2. Operator safety

- Ensure that the machine is well connected to the 220V electrical source.
- The operator should be trained with proper knowledge of safety, operation

method and other relative information.

- When operating the machine, the operator should wear protection glasses to protect his eyes. The character of the equipped goggle is: effective wavelength 400-1200nm, OD $\geq$ 4.
- The operator is forbidden to wear any ornament reflects intense light.

### 3. Treatment room

The treatment room in which the system is used should explicitly be labeled with the following plate:

**SYSTEM WITH INTENSE PULSED LIGHT  
WEAR PROTECTION GLASSES AT ANY  
TIME OF SYSTEM OPERATION AND  
CUSTOMER TREATMENT**

### 4. Optical safety

The output of the intense pulsed light could cause damage to eyes; the intense light shoots eye at a close distance will cause permanent damage to the vitreous body and the retina!

- Intense light could harm eyes. Carry out all necessary precautionary measures in the area where using the system.
- Whenever the system is in operation, any person in this room must wear protection glasses. The characters of the effective glasses is wavelength 400-1200nm, OD $\geq$ 4, and the frame of the glasses should have the same

protection effect.

- Provide customers goggles, gauzes or other effective methods to protect eyes.
- The treatment room must be labeled explicitly with an according plate.
- Make sure that the treatment person can handle the system properly and know how to switch off the system as quickly as possible.
- Never look directly into the sapphire of the handpiece, even if you wear protection glasses.

If the system was not in operation, the handpiece should be stored in the clamping device on side of the system. During treatment the sapphire of the handpiece must be pointed at the treatment area (exert light pressure) avoiding eye area.

- Make sure that no reflective objects such as jewellery or mirrors reflects the impulse light.

## **5 .Fire hazard**

- The absorption of optical energy causes temperature rise of absorbing material. Never use this system close to explosives or inflammable materials.
- Never use inflammable substances while preparing skin for treatment.
- Don't use alcohol for cleaning or disinfection, take care that it's dry before using the system.

## **6 .Electrical and mechanical safety**

[The power supply for VL87 is single-phase 220V and the power capability is 2KW.]

The electricity system connected to the VL87 must be accorded with the international standard, well earthing and single-phase two lines socket.

After the power is off, there may still have some steam and voltage left----open the cover of the machine box may cause danger of high pressure and electricity shock!

## **II. Great Attention**

- All operators must be trained properly with knowledge of operation and security of intense pulsed light before practice!
- Only the maintainers of or person be authorized by manufacture can repair and maintain the rejuvenator!
- Please read the operation instruction carefully! Any damages or loss caused by improper actions, prohibited in the Operation Instruction, are beyond our company's responsibility.

# III. Installation and Usage

## 1. Introduction

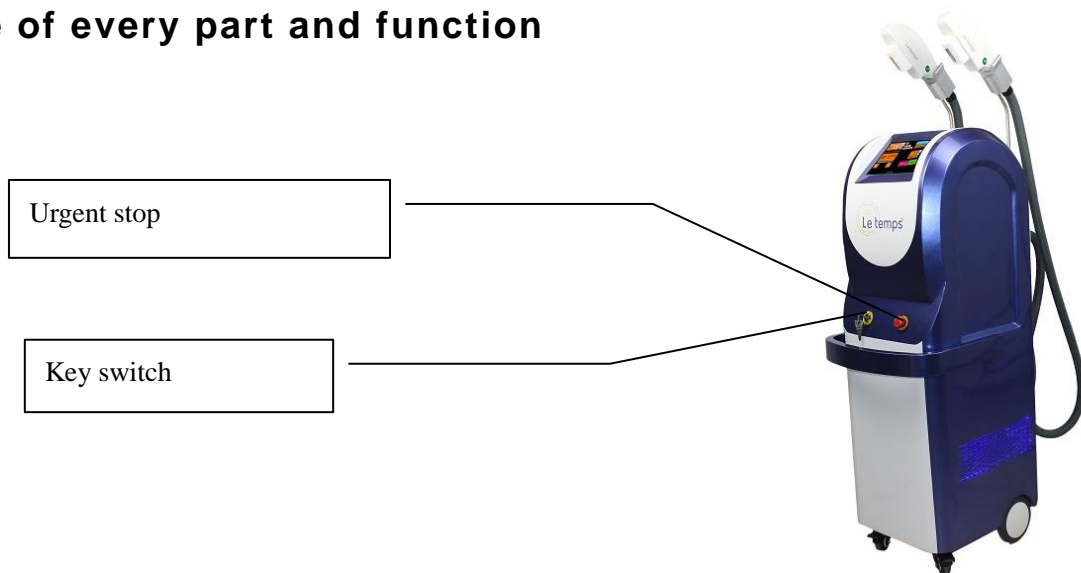
- VL87 is a machine for skin care. This system is controlled by intelligent software. The Software is operated with a touch screen monitor.
- The output of the light-impulses is carried out by a handpiece that is connected with the system with a demountable flexible tube.
- Activation of the light-impulses is carried out with a foot-switch or the release button at the handpiece after the system has been activated by the software.
- The handpiece should always be fixed in the handpiece-support on the right position of the system.
- The contact cooling system in the handpiece will protect customers' epidermis from the high energy output and it's another safety mechanism of the system.



## 2 . Main technique parameter

<b>Lamp-house</b>	<b>intense pulsed light</b>
<b>Wave length</b>	<b>560nm, 640nm</b>
<b>Spot size</b>	<b>8x40mm<sup>2</sup></b>
<b>Max energy density</b>	<b>50J/cm<sup>2</sup></b>
<b>Amount of pulse</b>	<b>1~6,adjustable</b>
<b>Interval of Pulse</b>	<b>0-99ms,adjustable</b>
<b>Sub-pulse Width</b>	<b>0~9.9ms,adjustable</b>
<b>Cycle</b>	<b>1~4s,adjustable</b>
<b>Cooling way</b>	<b>inside distilled water cycle</b>
<b>Power supply</b>	<b>220V ~ ±10%, 50HZ</b>

### 3. Name of every part and function



#### **Urgent stop :**

When something emergency happens push down, the power is off.

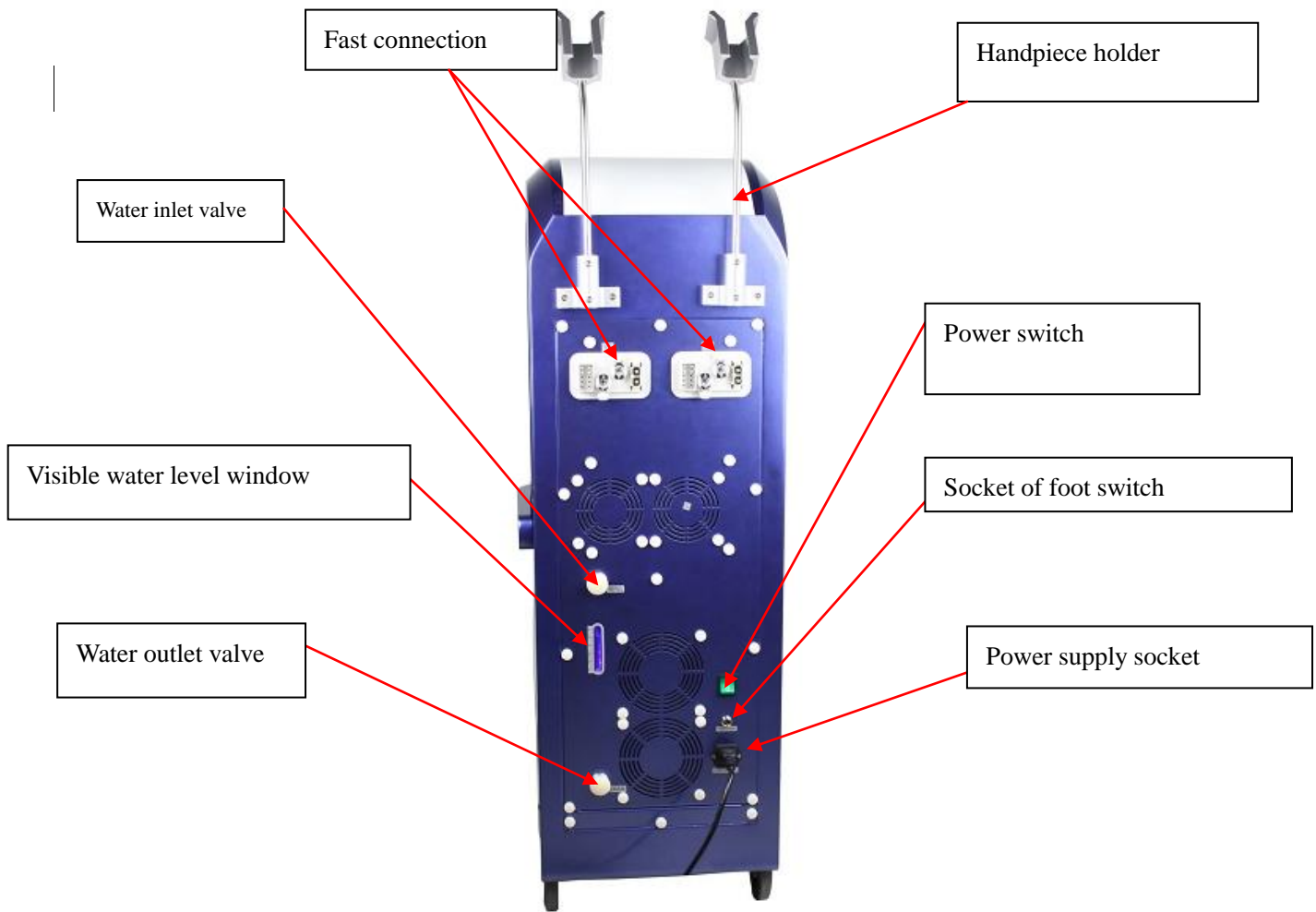
Screwed clockwise, the power supply is on.

#### **Key switch :**

Screwed clockwise, the power supply is on.

screw to the original part anticlockwise to power off.

**【 Notice 】**Never connect this equipment with any other equipment!  
Otherwise it will cause damage and risk of electric attack!



- Socket of foot-Pedal: connect the foot pedal
- Power supply socket: It is used for connecting the equipment with the net power supply.
- Power switch: control the on and off of the main machine with net power supply.
- Visible water level window: It is used to check the water level inside the water tank. It will have bright blue light when the machine is on working status.
- Water inlet valve: It is used to add cooling water. Open the water inlet valve, close the water outlet valve. Use water bottle

to add water to this equipment.

- Water outlet valve: It is used to drain off cooling water. When you open that valve, the water will flow out automatically.
- Fast connection: connection of handpiece

#### 4. Operation Condition

Temperature	5 ~ 30°C
Relative humidity	≤70%
Atmosphere pressure	860 ~ 1060hPa

#### 5 . Power supply configuration

Power Supply: 220V±10%

[ Notice] the power supply must be grounded.

[ Notice] Voltage range is 220V, when the power supply exceed this range, a manostat should be used, with power  $\geq$  3KW

#### 6. Installation

(1) Install the handpiece holder

(2) Add water into water tank

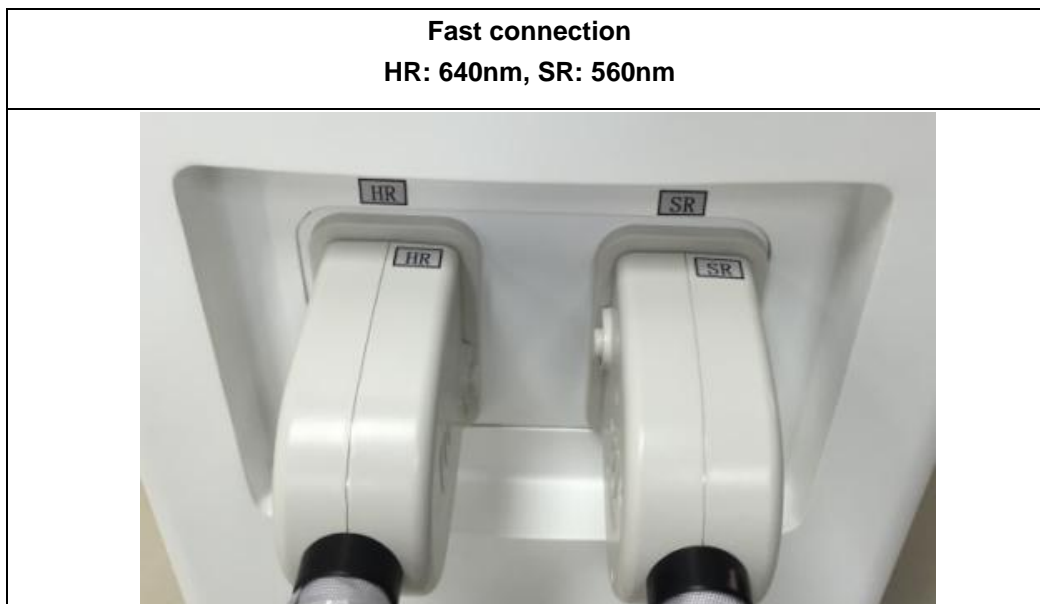
**【NOTE】** You must add water in the water tank. Do not start the machine without water inside.

- Open water inlet valve
- Close water outlet valve
- Use water bottle to add water

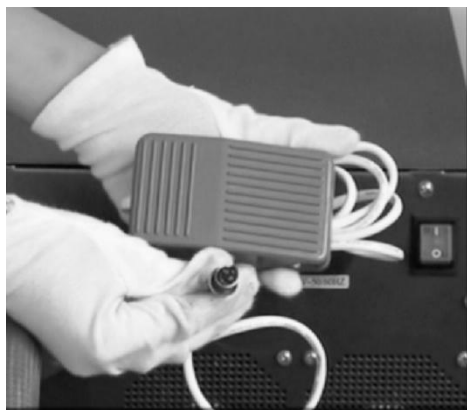
**【NOTE】** The water added must be distilled water

(3)Headpiece installation:

Connect the handpiece depend on label on backside of the machine.

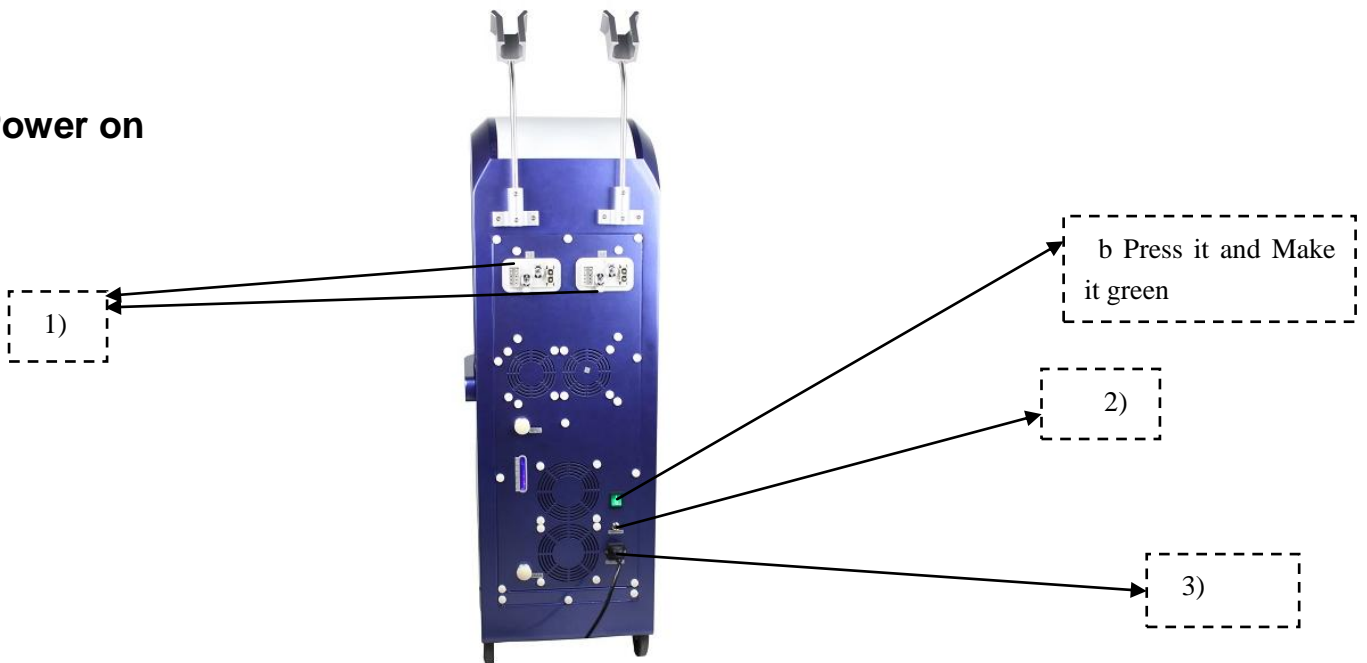


**(4)Install foot switch:**



Insert the foot switch plug into socket and screw down it. If you do not want to use foot switch, you do not need to install it

## 7. Power on



### a. Preparation before power on :

Make sure 1), 2), 3) are connecting well.

**b. Preparation before treatment :** Add distilled water into water tank, press the general switch at the back side of the equipment, the green power indicator light is on. Turn the key switch rightwards, the screen is on.

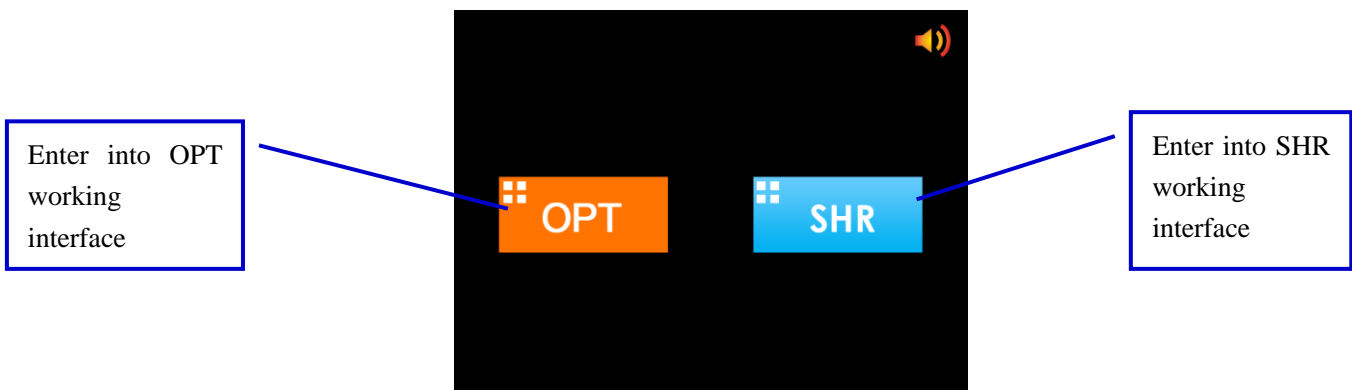
## 8 . Power off :

- 1) Turn the software to the main interface.
- 2) Turn off the key switch,
- 3) Turn off the main power switch
- 4) Clear the cooling gel on the handpiece, insert it to the socket for fixing the handpiece.

## IV. Screen Operation

After power on, the LOGO screen will be showed on the screen, about 5 seconds later, then it turns to the treatment screen automatically.

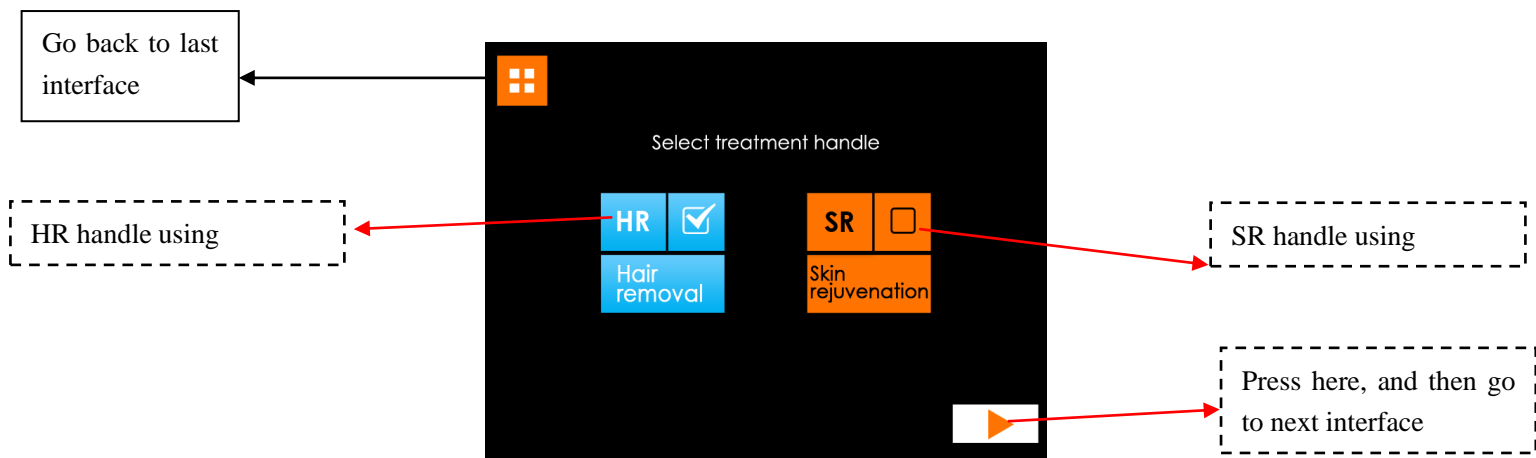
**【Notice】** Must connect two handpieces on machine together before power on the machine. The machine has “HR” “SR” labels. The two handpieces must connect with its position respectively. Enter screen software, choose HR, the “HR” side handpiece will start to work.



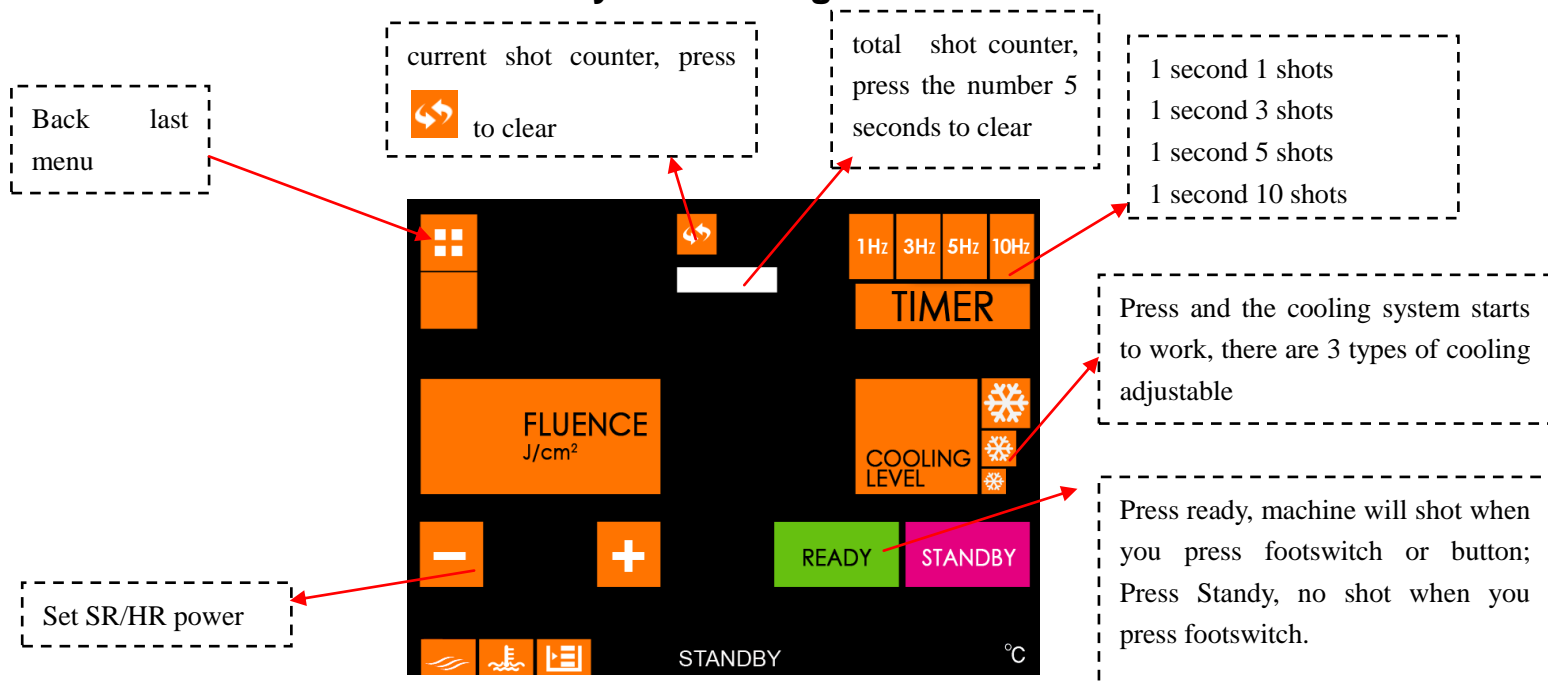
**[Note]:** Each Handpiece has single memory, but regardless of OPT and SHR interface, both of the SR and HR handpiece can enter into the OPT or SHR interface, but the SR handpiece can not be used in the HR interface, Instead HR can not be used for SR(ie, recognition memory). The machine must be plugged in at the same time with two handpieces, namely: SR and HR handpiece.

## Operation Interface:

### Enter SHR



### System setting screen



### Enter OPT





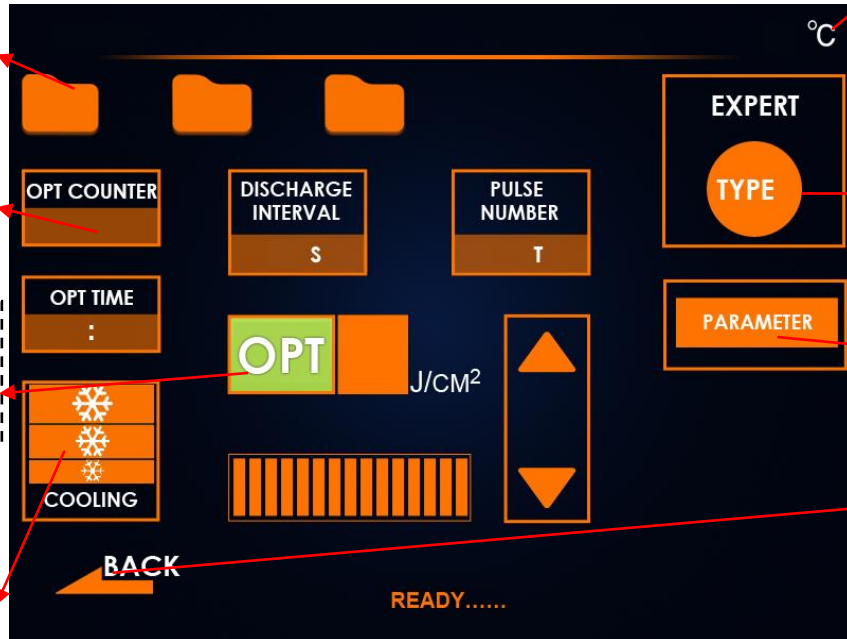
## Treatment interface

3 folders for saving treatment parameters

Count shots of current treatment

Press OPT, it turns to green, OPT system on ready status

Press and it turns to green, the cooling system starts to work, there are 3 types of cooling adjustable.



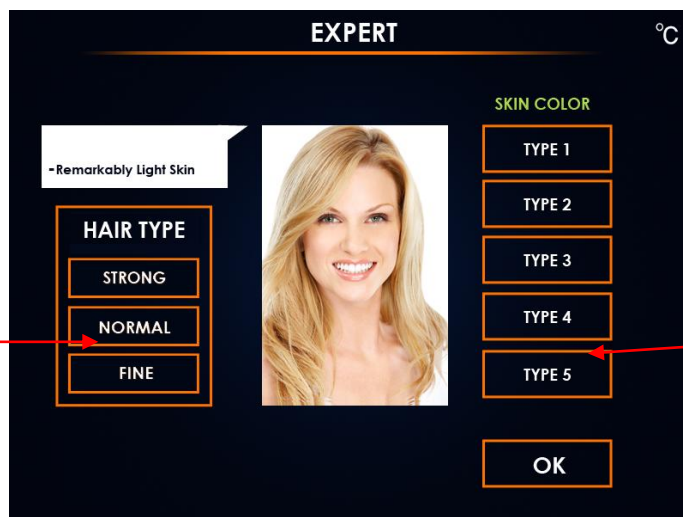
Temperature of water inside water tank

Press to go into expert system

Press to go into parameter setting screen

Press to go back to operation choosing screen

## Expert System



Choose here depend on the hair/skin type

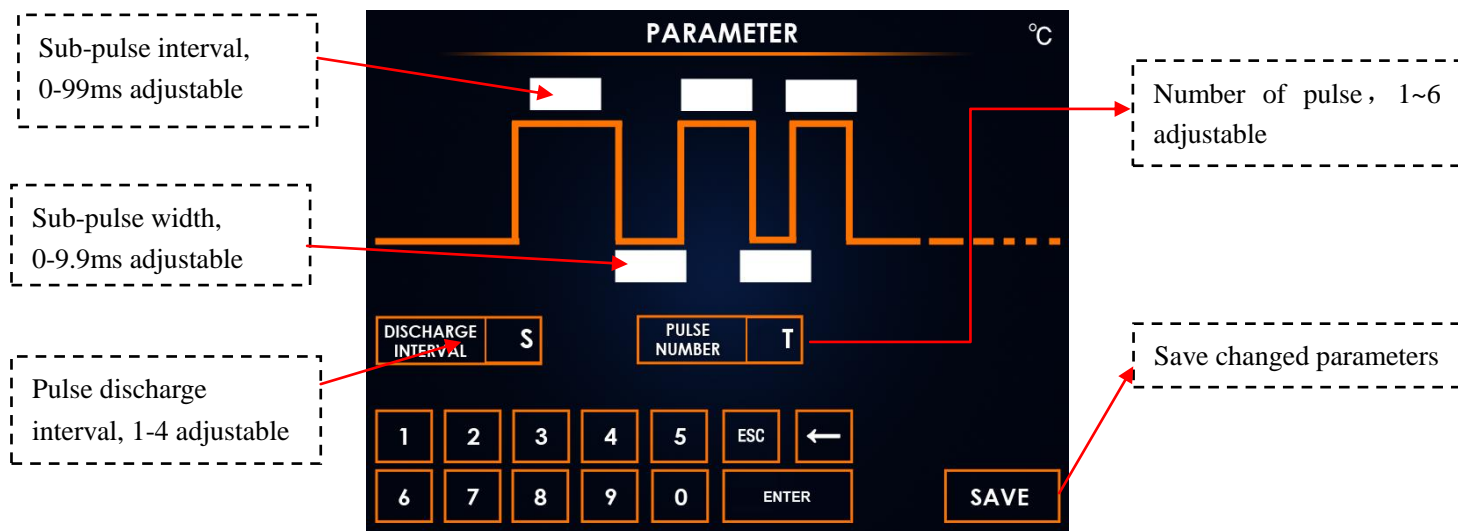
Choose here depend on the client skin color

Choose skin color and type of clients, and then all parameters will be well set.

It is convenient for beauty salon and Spa. Type 1-5 is corresponding to the five types of color skin.

If you are professional operator, could press "Parameter" button to set detailed data.

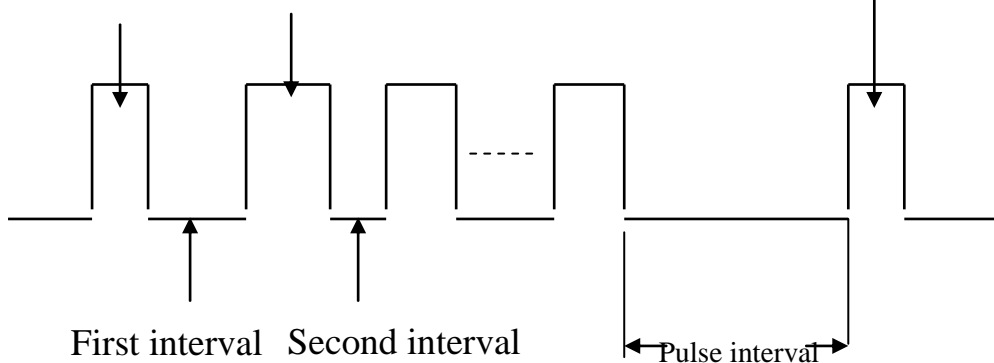
## Parameter setting screen



## Schematic diagram of pulse output

First pulse width second pulse width

First pulse



## V.Maintenance

### 1. Cleaning of the system

- Clean the system once a week minimum. Switch off the system and wipe all surfaces with a soft, wet tissue, especially the window of the handpiece. Please

take care that you do not pour any liquids onto the system. After each treatment the window of the handpiece has to be disinfected.

## 2. Add water

- Purified water is not distilled water!
- Warning : Damages caused by not using the distilled water will beyond our company's responsibility.

## 3 .Usually find problems and their solve methods

Problem	Check
<p style="text-align: center;"><b>No power</b></p>	<p>1 . Whether the power supply is on or off</p> <p>2 . Whether the power socket is set well</p> <p>3 . Whether the urgent stop is lifted up</p> <p>4 . Whether the key lock is switched on</p> <p>5 . Whether the power switch is set at I position</p>
<p><b>No output or buzzing when step on the foot switch</b></p>	<p>1 . Whether the machine is in ready state</p> <p>2 . Whether the foot switch is broken or not</p> <p>3 . Whether there are wrong code on the screen</p>