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# DL811 810NM DIODES LASER HAIR REMOVAL USER MANUAL



## Treatment Principle

Diode laser hair removal technology is based on the selective dynamics of light and heat. The laser goes through the skin surface to reach the root of hair follicle; light can be absorbed and converted into heat damaged hair follicle issue, so that hair loss regeneration without injury surrounding tissue. It provides less pain, easy operation, the safest, technology for permanent hair removal now.

Diode laser machine adopts 808 nm, particular effective to hair melanocytes without injury

surrounding tissue. The laser light can be absorbed by the melanin in hair follicles, and converted into heat, thus increasing the hair follicle temperature. When the temperature raises high enough to irreversibly damage the hair follicle structure, the hair will disappear after a period of natural physiological of hair follicles and thus achieve the purpose of permanent hair removal.

## Application

1. Permanent hair removal, better than IPL and E-light; Remove hair on different part of body effectively. Such as armpit hair, beard, lip hair, hair line, bikini line, body hair and other unwanted hair.
2. Also Relieve symptoms of speckle, telangiectasis, deep color naevus, spider lines, red birthmark and so on.

## Features

1. With Sapphire Crystal on the treatment head that can be used forever without replacement;
2. Powerful semiconductor cooling, air cooling and water cooling can ensure longer working time.
3. Water cycle& water temperature checking system and powerful abstractor extend the service life and safety for the machine;
4. Short treatment time and quick recovery have little effect on patients' daily work.
5. Advanced flash computer calculator: xenon lamp computer calculator system always show how many flashes you have used.
6. Easier installation: plug-and-play connectors.
7. Minimum energy loss: ceramic silver-gilt lumen reflects diffuse light onto laser rod to produce stronger power.
8. Medical CE approval, ISO9001:2008.

## How to Fill water and outlet water

In the back machine, there are connectors, one is for fill water, and the other one is for outlet water;

1. When fill the water, use the pipe with cup, it is for fill water, meanwhile, use the short pipe insert the outlet water; when the outlet water connector have the water overflow it, means the water tank is full, it needn't fill the water anymore;

Fig. 1 as follows

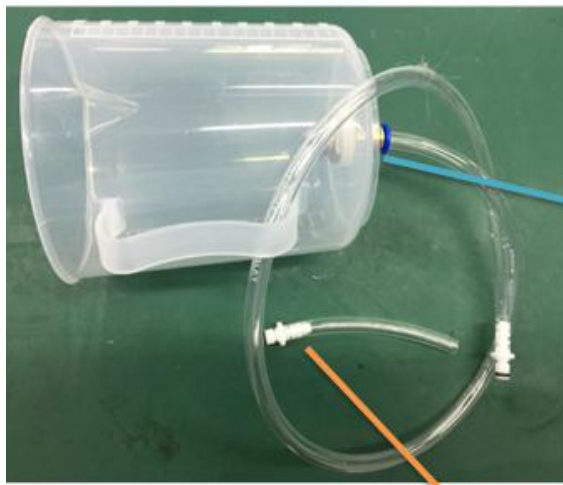
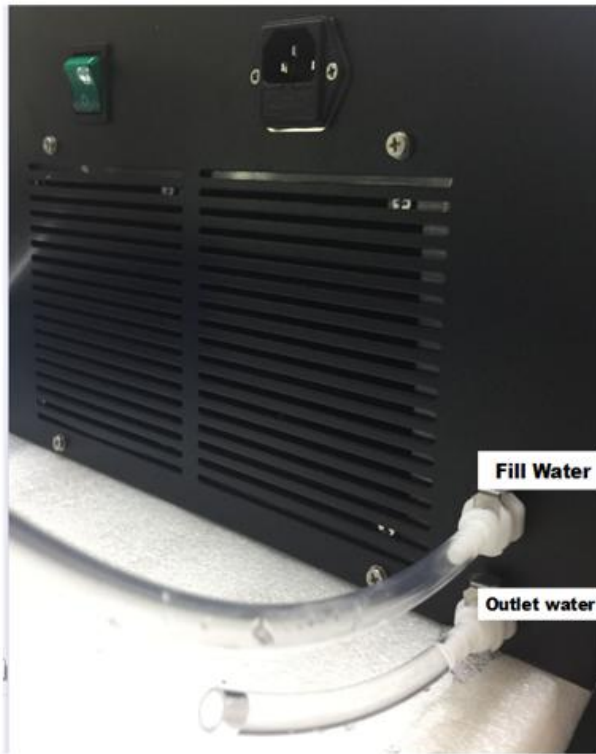


Fig two as follows;



2. If yours want to outlet the water, just use the short pipe insert the outlet connector, the water will outlet;

## Diode Laser handle



## **INSTRUCTION OF SCREEN OPERATION**

### **1: Welcome screen:**

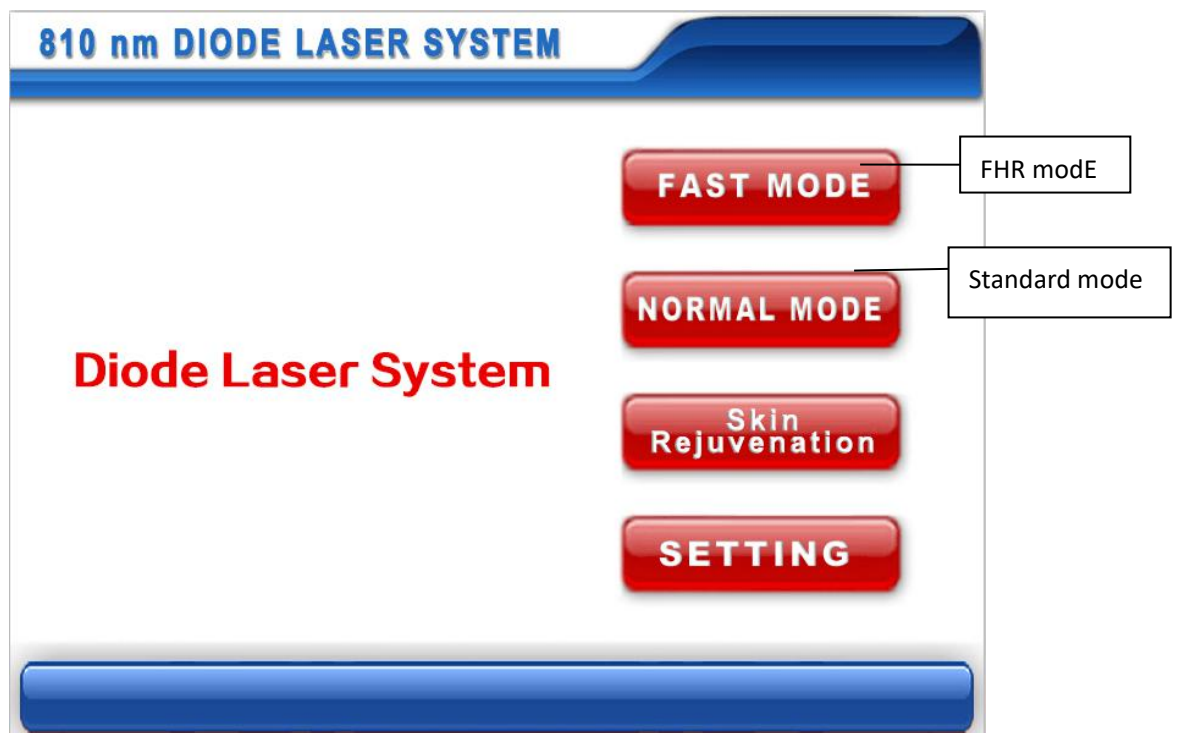


Picture 1-welcome screen

Turn on equipment with key switch, the device will automatically goes to welcome screen as picture 1 shown; running 2 seconds at welcome screen system will directly

go to menu screen as picture 2 shown:

**2: Menu screen:**



Picture 2-menu screen

At this menu screen, there is a three treatment functions: fast mode, normal mode and skin rejuvenation model;



it is FHR (Fast hair removal) mode, this mode is suitable for public

treatment, easy to start a treatment, most popular with beautician in beauty salon, spa centers, etc

**NORMAL MODE**

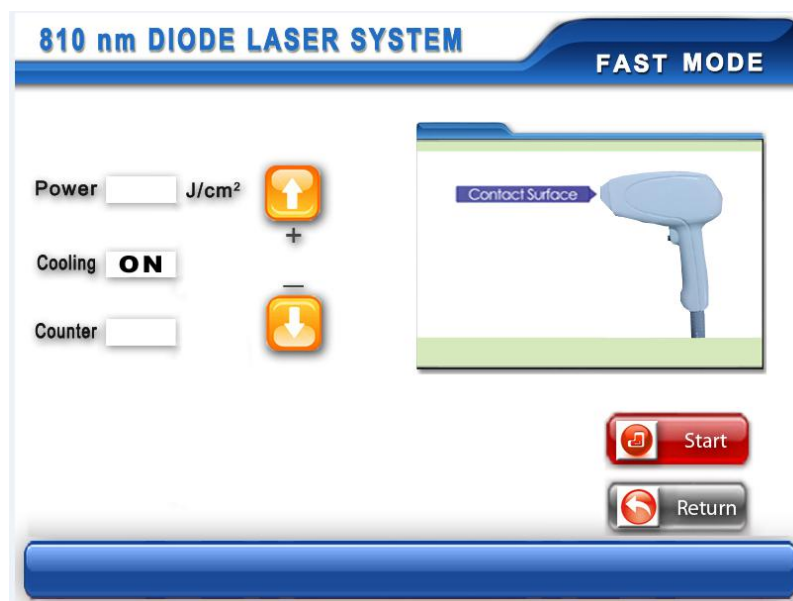
it is standard hair removal mode, according to the different individual to have a targeted treatment, designed for doctor and professional trained operator use in medical clinic, surgical hospital, etc

**Skin Rejuvenation**

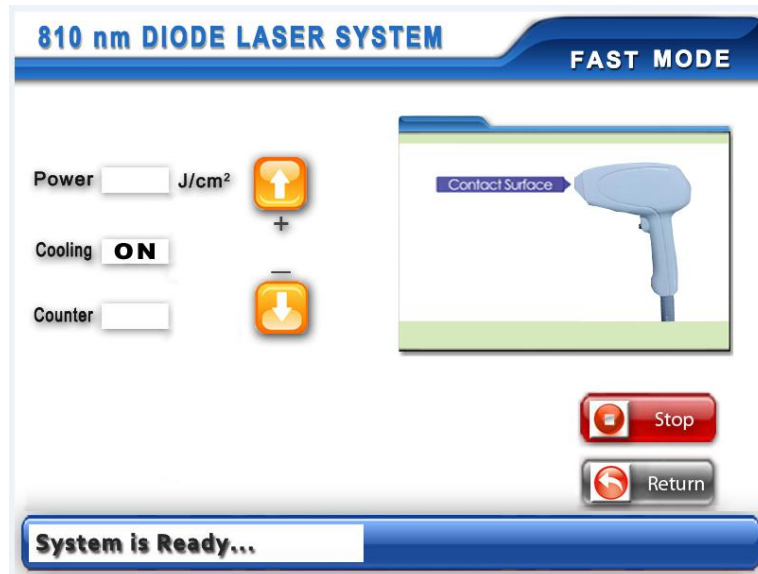
it is a additional function of skin rejuvenation with low energy shooting to make face smooth, tender and younger;

**SETTING**

it is system settings, user backstage;

**2.1: Fast mode:**

Picture 2.1-FHR mode standby





Picture 2.1-FHR mode ready


At FHR mode, it is easy to set parameter then fast go on a therapy: adjust power---press “start”---system becomes to “STOP”and shows “system is ready” at screen bottom---press “button” on hand-piece to start a treatment;


Power **20** J/cm<sup>2</sup> the power of FHR mode is adjustable from 5-10J/cm<sup>2</sup>;


Cooling **ON** the water cooling is default “on” after device running;

Counter **002508** show current shooting numbers of hand-piece, automatically be cleared at next entry;

  press “UP” or “DOWN” to adjust power;

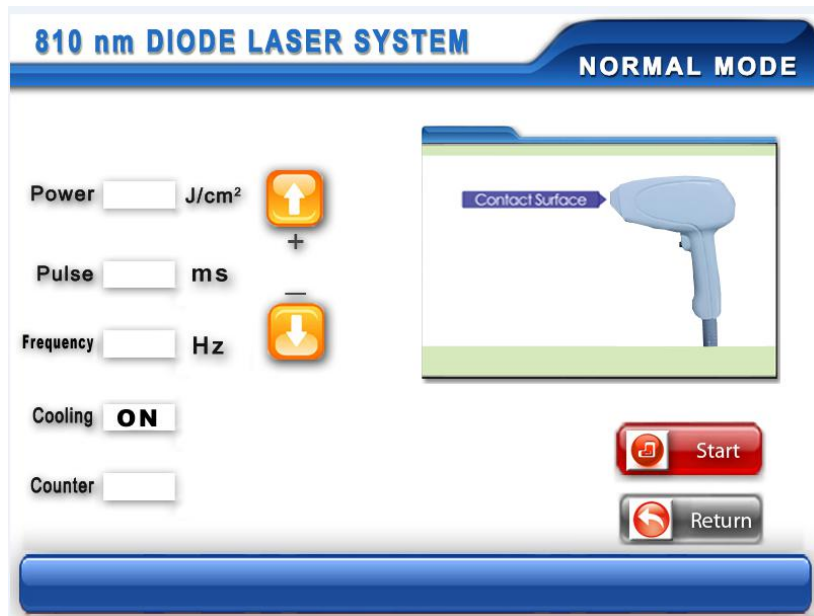
 system under standby condition;

 system ready to work;

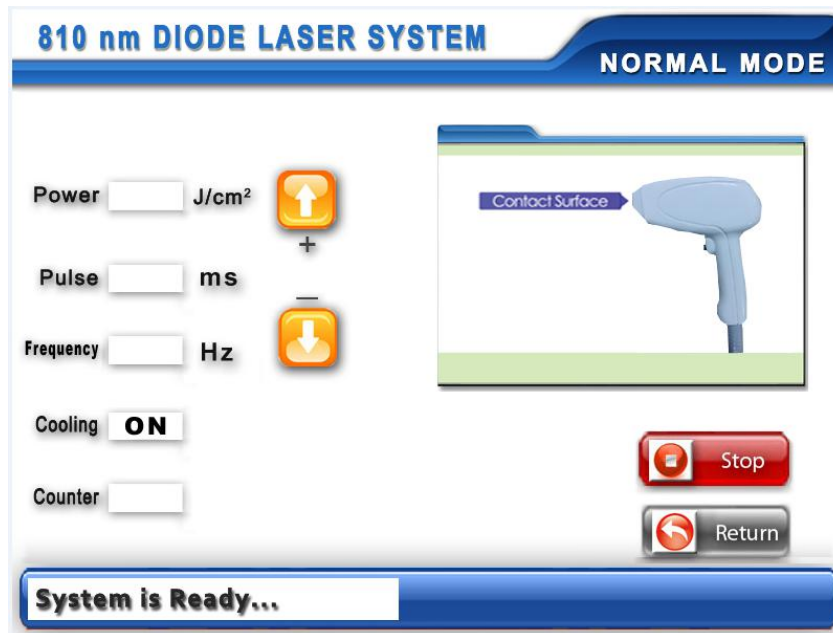
 press “return” system automatically goes back to menu screen;

## 2.2: Normal mode





Picture2.2-standard mode standby



Picture 2.2-normal mode ready

This is a professional mode, the operator needs to be professional and adjust correct treatment parameters for targeted patients:

Power  J/cm<sup>2</sup> : the power changes from 6-50J/cm<sup>2</sup>;

Pulse  ms : pulse means pulse width, changes from 80-200ms;

Frequency  Hz : the frequency changes from 1-5Hz;

Cooling **ON** : the water cooling is default "on" after device running;

Counter  : show current shooting numbers of hand-piece, automatically be cleared at next entry;

**Treatment parameter is adjusted by following principles:**

**Pulse width at 80ms:**

**Power from 6-20J/cm<sup>2</sup> adjustable;**

**Frequency from 1-5Hz adjustable;**

**Pulse width at 120ms:**

**Power from 6-30J/cm<sup>2</sup> adjustable;**

**Frequency from 1-3Hz adjustable;**

**Pulse width at 160ms:**

**Power from 8-40J/cm<sup>2</sup> adjustable;**

**Frequency from 1-2Hz adjustable**

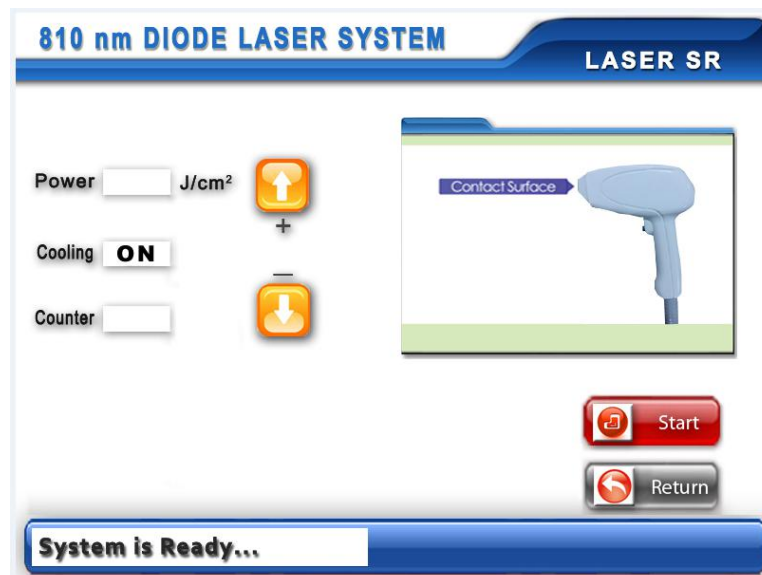
**Pulse width at 200ms:**

**Power from 10-50J/cm<sup>2</sup> adjustable;**

**Frequency from 1-2Hz adjustable;**

**Power and Frequency will change based on different pulse width;**

**3: Skin rejuvenation screen:**



Picture 3-skin rejuvenation screen

At skin rejuvenation screen, it is additional function for face rejuvenation and easy to set parameter: adjust power---press “start”--system becomes to “STOP”and shows “system is ready” at screen bottom---press “button” on hand-piece to start a face treatment;

Power  J/cm<sup>2</sup> : set power from 1-5/cm2 adjustable;

Cooling **ON** : the water cooling is default “on” after device running;

Counter  : show current shooting numbers of hand-piece, automatically be cleared at next entry;

**Cautions: At each treatment function, the cooling is default “ON”, PLEASE DO NOT CLOSE IT IN ORDER TO SYSTEM NORMAL WORKING !**

### Therapy steps:



Therapy areas suitable

### 1: Cleaning:

Before do treatment, clean and disinfect the treatment area;



**2: Shaving hair away:**

For better energy transmit to skin, need to shave the exposed hair away;



**3: Daub cooling gel:**

Cooling gel can reduce discomfort during treatment, so before start treatment daub proper cooling gel onto treatment area (normal 2mm thickness)



#### 4: Set parameters for device:

Gradually set pulse width and corresponding power, frequency to achieve the best user experience;



#### 5: Hair depilation:

The method to do hair depilation: the hand-piece (sapphire) is stick to skin tightly, and sliding 6-7 times back and forth; during this treatment, observe the changes of skin: if skin no obvious changes, need to increase power until user feels hot and the skin on treatment area appears flushed;



### **6: Cleaning and Ice compress:**

After do treatment, clean again the treatment area, and do ice compress to partial skin for 10-15 minutes if needed; for device, return to menu from treatment screen, turn off device with key switch and clean the sapphire with tissue;

**Before and After Hair Removal Photos:****Cautions after treatment:**

- 1: After finished treatment, the treatment area will feel slightly scorching hot and skin around hair follicles appears erythema, which is normal phenomenon, do ice compress to partial skin for 10-15 minutes if needed;
- 2: the residual hair on treatment area can pull out in 24 hours or automatically fall off in several days;
- 3: The current day of treatment, use low temperature water to wash and use liquid skin care products;

4: After treatment, pay attention to protecting moisture and sunscreen;

**Cautions before and after therapy:**

1: One month before treatment, pay attention to the sunscreen;

2: Two weeks before treatment, the treatment area does not remove hair with plucking out, with cream or electrolysis ;

3: Two days before and after treatment, to avoid chemical or mechanical stimulation;

4: Two weeks before and after treatment, to disable the filling or other injection, etc the kind of interventional therapy;

**Therapy periods:**

Underarm, Face: One Therapy interval---4-6 weeks;

Arms and legs, body: One Therapy Interval----4-6 weeks;

Treatment Period: 3-5 times;

**Contraindications:**

The following symptoms are forbidden to use:

- The pregnant
- Recently (within 1-3 months) accepted the sun exposure or sun bath
- The patient with open wound
- The patient with infected wounds
- The patient suffering from skin disease



- The patient with epilepsy

**Attentions:**

1: First check the host, accessories, power supply wire is broken or not before use;

2: connect correct voltage (220V to 220V, 110V to 110V), can not get through wrong voltage.

3 Start system, in addition to television, refrigerator, Do not turn on electrical power device at the same time;

4 Before therapy, please take hearing aid, electronic wristwatch, magnetic card, mobile phone or other things off first, pay attention to child's care to avoid touching;

5 During the therapy, drink more water based on your physical;

6 In case of happening special circumstances or accident, please immediately stop using and consult professionals;

7 Patients with above mentioned medical electrical device can not use this system at the same time;

8 Above mentioned patients should be agreed by professionals before using this device;

9 Please immediately turn on power supply, stop using if following abnormal situation happened:

9A water or other things into host;

9B: The sound of system to be unusual;

9C Abnormal smell or smoke;

9D: Any accessories broken;

9E: Natural disaster, earthquake, and the sudden thunder;

10: When the treatment is finished, please cut off the power supply, be sure to unplug the power plug from the power socket;

11: Transportation and storage conditions: the transport process should be to prevent sun and rain, packaged equipment should be stored in relative humidity of not more than 80%, no corrosive gas and ventilated

room;

### **Maintenance:**

1: Prohibit use of machine in the following environment;

-----Hot and humid environment;

-----Dusty environment;

-----Environment with much smoke or steam;

2: If there comes a failure, shut down the power immediately, and send it to the distributors or contact manufacturer for maintenance, Do not repair by yourself without guidance;

### **3: Exclusion of liability:**

3A: if fire, earthquake or war occurred;

3B: The fault of user, operator error;

3C: Damage caused by using other purpose (not included in the use manual);

3D: Operate without manual's guide;

3E: Do not make the machine close to the wall, keeping a 30cm space around for cooling;

3F: The service life of treatment heads according to make times;

### **Parameter**

- **Laser Type: High Quality 810nm Semiconductor laser beam source**
- **Wave Length: 810nm**
- **Output: 810nm Treatment of handle out direct output mode (hand gun type)**
- **Mode: Single Pulse and Continuous pulse**
- **Frequency: 1~10Hz**
- **Pulse Width: 10-200 ms**

- **Spot Size: 10x12 mm<sup>2</sup>**
- **Energy Density: 0-150J/cm<sup>2</sup>**
- **Electrical Requirement: AC 220V±10% 50Hz; AC 110V±10% 60Hz**
- **Cooling System: water cooling + wind cooling + Semiconductor**
- **Temperature: 0-40°C**
- **Input Power: 1200W**
- **Fuse :Max10A**
- **Gross weight: 30KGS**
- **Machine size: 45cmx49cm\*35cm**
- **pacakge size:65cmx60cmx52cm**