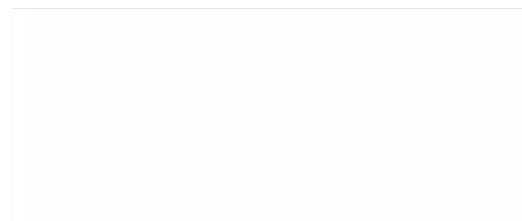


# *Q-touch*

## **MANUAL**

**Q-Switched Nd:YAG Laser**



# USER MANUAL

This manual contains important information on the use and operation of this machine.

Please read all the information carefully for optimal performance to prevent any damage or misuse of the machine. Any change or modification not expressly approved in this manual could void the warranty for this equipment.

## CONTENTS

### Basic Introduction

- Theory
- Applications
- Contraindications
- Advantages
- Specifications

### Installation Instruction

- Accessories
- Installation steps

### Operation Instruction

- Before operation
- During operation
- After operation
- Recommended parameters

### Other Information

- Safety
- Precautions
- Warranty
- Troubleshooting

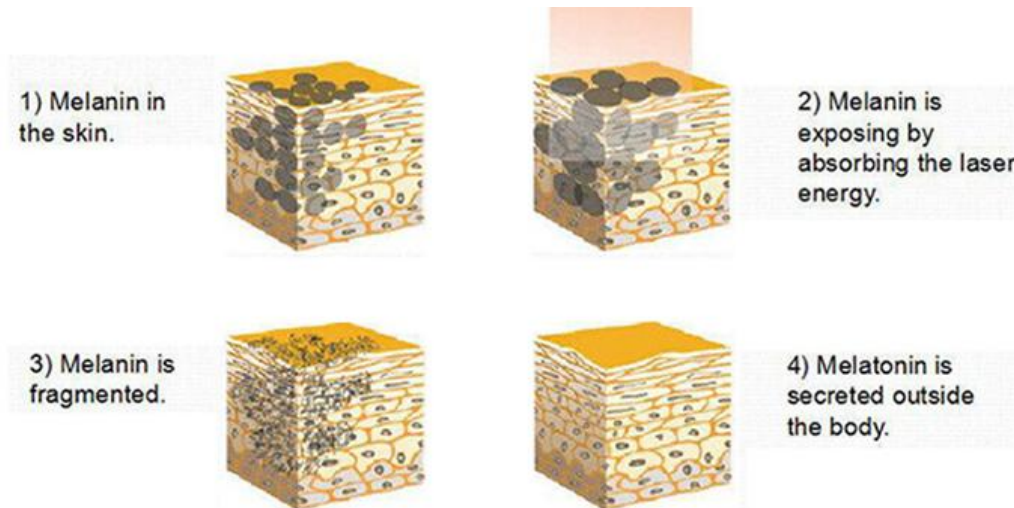
Following these instructions will help you use the equipment efficiently and safely and will prolong the machine life.

# Basic Introduction

## THEORY

Q-switched Nd: YAG laser radiates the light with a specific wavelength in high peak energy pulses, hence the light penetrates into the tissue only for a nanosecond. The light is absorbed by the pigmentation and results in an instantaneous blast, that is “Light Blasting Principle”.

The pigmentation particles are shattered into fragments, some can be bounced out of the skin and others can be split into tiny particles that can be engulfed by phagocytes and then eliminated by the lymphatic system.



The treatment is powerful enough to address challenging skin imperfections, hyper pigmentation and multi-colored tattoos, while gentle enough to treat the most delicate areas of the face, neck and décolleté.

## APPLICATIONS

- ✓ Remove all kinds of tattoos, such as eyebrow tattoo, eye line, lip line, eyelid tattoo, etc.
- ✓ Remove pigmentation, such as freckles, foxiness, coffee, superficial and deeper speckles, age pigment, birthmark, nevus, upper skin splash, traumatic pigmentation, etc.
- ✓ Treat skin lesion of blood vessel, hemangioma, red blood streak, etc.
- ✓ Skin whitening and acne removal.
- ✓ Anti-wrinkle and skin rejuvenation.
- ✓ Perfect for all skin types (I, II, III, IV, V, VI).

## CONTRAINDICATIONS

- ❖ Women in pregnancy, lactation and menstrual period.
- ❖ People with such serious diseases such as heart disease, hypertension, diabetes, etc.
- ❖ People with open wound.
- ❖ Patients who have to be exposed to the sun after operation.
- ❖ People planted with electrical devices.
- ❖ People with inflammatory skin conditions.
- ❖ People with autoimmune deficiency.
- ❖ Patients who are sensitive to chemical light.
- ❖ Scar, birthmark, nevus on the skin.

## ADVANTAGES

- ❖ No scars, no scabs, no damage or marks.
- ❖ The most comprehensive Q-switch Nd:YAG treatment solution available today.
- ❖ The latest plug head is equipped with a tightening knob, which is more secure and firm.
- ❖ A single laser module treats 3 separate indications for all skin types, with new and unique technological innovations for each indication.
- ❖ **Maximum power 1600mj** can be reached. Others are only 1000mj.
- ❖ This laser can fire up to **10 times/second (1-10Hz)**, but the normal laser is only 1-5Hz or 1-6Hz. The treatment is **much faster**.
- ❖ 3 types of treatment heads are available for our patented Q + treatment handle, provides you more skillful and easy operation.

**532nm treatment head:** remove light-colored pigments such as shallow red, brown, pink, etc

**1064nm treatment head:** remove deep-colored pigments such as black, blue, scarlet red, deep coffee, etc

**1320nm treatment head:** professional for skin rejuvenation, pimples removal, skin whitening, etc.



755nm



532nm



1064nm



1320nm






## SPECIFICATIONS

Power	2500W
Wavelength	532nm, 1064nm,1320nm , 755nm
Pulse duration	6ns
Frequency	1Hz ~10Hz
Spot size	1mm ~7mm
Energy	100mj ~ 1600mj
Screen	15.6" color touch display
Voltage	220V/60HZ, 110V/50HZ
Package size	50 * 45 * 45cm
Package weight	32kg

# Installation Instruction

## ACCESSORIES

Picture	Item	Quantity
	Handle	1
	Treatment probes	3
	Protective glasses	1
	Protective goggles	1
	Water funnel and tube	2
	Connectors 1 (tubes)	2
	Water filter	1
	Connectors 2 (filter)	2

	Foot pedal	1
	Power line	1
	Keys	2
	Fuses	2
	Chain safeguard	1

## INSTALLATION STEPS

### Add water:

- Get some purified water (can be drink water) around 3.5L and don't stop injecting until there is water flowing out from "SPILT WATER". And change it about 1~2 months.

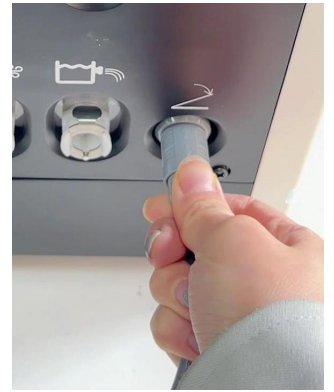


### Install handle:





### Install foot pedal:



### Install chain safeguard:



### Connect the power line:

- Make sure the local voltage is well-matched with the tagged one.
- Put one end of the power line into power strip and the other one into the preset slot in the back of machine. Put power button from "O" to "I" position.



# Operation Instruction

## BEFORE OPERATION



- ❖ Please read through this manual and know exactly every step of the operation procedures.
- ❖ Consult patients on the following questions: Whether they have physical scar or irritability skin? Have they removed tattoos by other ways?
- ❖ It is suggested that this machine is operated in a separated room.
- ❖ People who are sensitive to pain can put anaesthetic into use.
- ❖ Make sure the treatment area is absolutely dry before operation.
- ❖ Disinfect the probe and other therapeutic devices.
- ❖ It's recommended to do a 30min ice compress before treatment so as to lower the aching feeling.

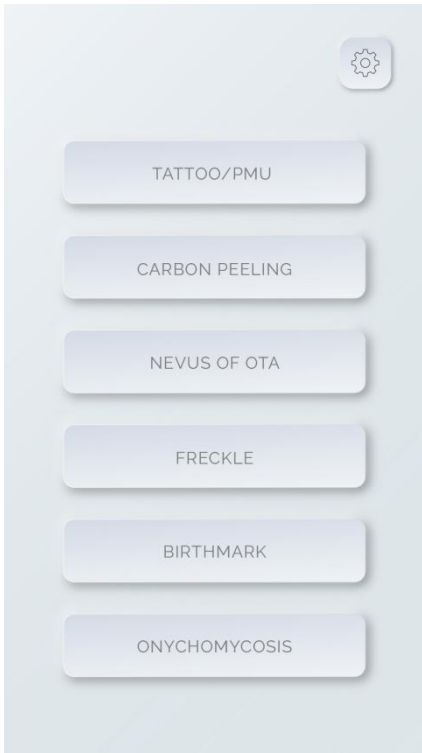
## DURING OPERATION

### 1. Turn on the machine:

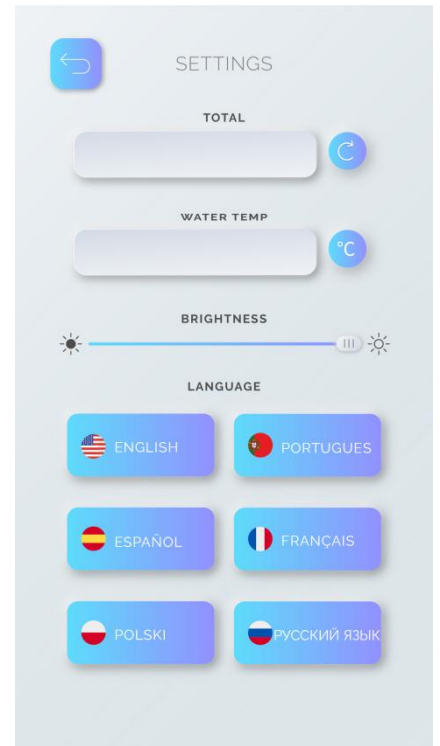
- Lift the emergency button: If the red Emergency Switch is pressed down, the power will be shut off immediately. So, it should be released when you are trying to start the machine.
- Insert the start key in front panel and start the machine.



2. Ensure good water flow. Switch on and off the machine for two minutes respectively. Then repeat this cycle for 3 times to normalize the inside water circulation.
3. Then you will see the main interface on the screen. Click setting button  and enter into setting interface.
4. Set language: There are "English", "Español", "POLSKI", "PORTUGUES", "FRANCAIS", "РУССКИЙ ЯЗЫК" optional in the setting interface. Choose "English" and click  back to the main interface.

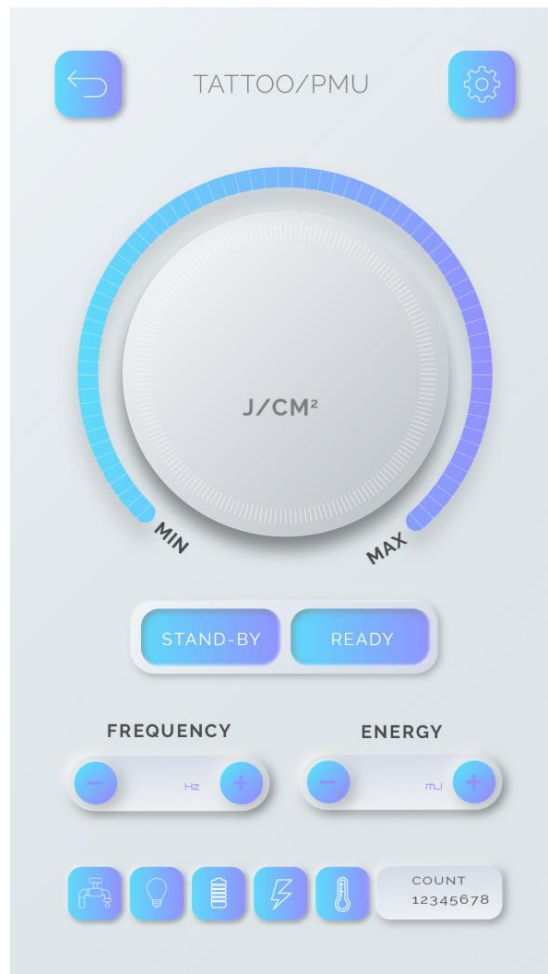


Main interface





Setting interface

5. Choose treatment function: There are six treatment functions (“TATTOO/PMU”, “CARBON PEELING”, “NEVUS OF OTA”, “FRECKLE”, “BIRTHMARK”, “ONYCHOMYCOSIS”) optional in the main interface. Click any one to enter into the treatment interface (Take “TATTOO/PMU” as an example).



Treatment interface

6. Adjust parameters: there are “Frequency” and “Energy” need to be adjusted (please refer to the next part for recommended parameters).
  - “Frequency”: 1-10HZ adjustable.
  - “Energy”: 100-1600mj adjustable.
  - “Fluence”: It is affected by frequency and energy. When any one of them changes, it will change automatically.
  - Click button  to increase the value and  to reduce.
7. Install a treatment head (532nm, 1064nm or 1320nm) according to customers' symptoms.
8. Put on protective goggles for operators and patients to protect their eyes from the laser.
9. Click the button "READY" and the machine begin to work.
10. Place the probe close to instead of on the treatment area, after which press the button on handle or step on the pedal to begin the treatment (5-10cm should be kept between treatment head and treatment area).



11. After the treatment is completed, release the button on handle.
12. Click the button “STAND-BY”, screw the start key anticlockwise, and clean treatment head and working area.

*NOTE: Any abnormal phenomenon during operation, please press “Emergency Switch” to end work.*

## AFTER OPERATION

- ❖ After treatment, there may appear slight bleeding and scabbing which will fall off naturally in several days and shouldn't be torn up by hand.
- ❖ Swelling may appear irregularly according to the different skin features of different patients, on which phenomenon ice compress can play its role.
- ❖ Ice packs to reduce internal heat in the skin and prevent discolouration and blisters.
- ❖ Skin is sensitive to sunlight after the operation is just finished so please pay attention to sun protection for three to six months after treatment. But you can't use sunscreen before the scabs fall off, only physical sun protection can be used.
- ❖ Keep away from hot water as well as sauna within seven days after treatment.
- ❖ The treatment area will be vulnerable within three days after treatment so use gentle cleansers instead of rubbing vigorously.
- ❖ Avoid tight clothing, but wear loose and comfortable clothing.
- ❖ Both spicy food and seafood are prohibited.
- ❖ Avoid food and beverages with pigment, such as chocolate, coffee, cola and so on.
- ❖ Avoid soaking and excessive sweating within two days after treatment.
- ❖ Avoid smoking and drinking for several weeks before and after treatment.



## RECOMMENDED PARAMETERS

Skin type	Symptom	Wavelength/nm	Energy/mj	Frequency/Hz	Distance/finger	Interval/week	Section/th
I	Tattoo/PMU	532/1064	500-600	3-5	3-4	4-6	2-3
	Carbon peeling	1320	550-650	3-5	3-4	4-6	2-3
	Nevus of ota	1064	550-650	3-5	3-4	4-6	2-3
	Freckle	532/1064	500-600	3-5	3-4	4-6	2-3
	Birthmark	532/1064	500-600	3-5	3-4	4-6	2-3
	Onychomycosis	1064	550-650	3-5	3-4	4-6	2-3
II	Tattoo/PMU	532/1064	400-450	3-5	3-4	4-6	2-3
	Carbon peeling	1320	400-500	3-5	3-4	4-6	2-3
	Nevus of ota	1064	400-500	3-5	3-4	4-6	2-3
	Freckle	532/1064	400-450	3-5	3-4	2-4	2-3
	Birthmark	532/1064	400-450	3-5	3-4	4-6	2-3
	Onychomycosis	1064	400-500	3-5	3-4	4-6	2-3
III	Tattoo/PMU	532/1064	400-450	3-5	3-4	4-6	2-3
	Carbon peeling	1320	400-500	3-5	3-4	4-6	2-3
	Nevus of ota	1064	400-500	3-5	3-4	4-6	2-3
	Freckle	532/1064	400-450	3-5	3-4	2-4	2-3
	Birthmark	532/1064	400-450	3-5	3-4	4-6	2-3
	Onychomycosis	1064	400-500	3-5	3-4	4-6	2-3
IV	Tattoo/PMU	532/1064	320-400	3-5	3-4	4-6	2-3
	Carbon peeling	1320	350-450	3-5	3-4	4-6	2-3
	Nevus of ota	1064	350-450	3-5	3-4	4-6	2-3
	Freckle	532/1064	320-400	3-5	3-4	2-4	2-3
	Birthmark	532/1064	320-400	3-5	3-4	4-6	2-3
	Onychomycosis	1064	350-450	3-5	3-4	4-6	2-3
V	Tattoo/PMU	532/1064	250-350	1-5	3-4	4	3-4
	Carbon peeling	1320	300-400	3-5	3-4	4-6	3-4
	Nevus of ota	1064	300-400	3-5	3-4	4-6	3-4
	Freckle	532/1064	250-350	1-5	3-4	2-4	2-4
	Birthmark	532/1064	250-350	1-5	3-4	4-6	2-3
	Onychomycosis	1064	300-400	3-5	3-4	4-6	3-4
VI	Tattoo/PMU	532/1064	220-300	1-5	3-4	4	2-4
	Carbon peeling	1320	300-350	3-5	3-4	4-6	2-3
	Nevus of ota	1064	300-350	3-5	3-4	4-6	2-3
	Freckle	532/1064	220-300	1-5	3-4	2-4	2-4
	Birthmark	532/1064	220-300	1-5	3-4	4-6	2-3
	Onychomycosis	1064	300-350	3-5	3-4	4-6	2-4

**NOTE:** The above parameters are for reference only! Please adjust parameters according to the patient's feelings.

# Other Information

## SACURITY

This machine is a precise equipment merely used for medical application. Passing strict security detection before delivery, this system won't have any accident under normative operation. Therefore, please read this chapter and others concerned carefully so as to protect the personal safety of operators and patients.

### Fire Prevention

- ❖ Paper and plastic are forbidden to put near to the work area of this machine, because considerable absorption of energy may lead to the burning of these materials.
- ❖ Instead of any other people, the medical staff responsible for this operation should control the output of laser.
- ❖ Prevent laser beam from getting close to combustible, anesthetic or other inflammable solvent.
- ❖ Switch the state of this machine to "STANDBY" when it's not in use.

### Electric Protection

- ❖ Keep the workshop where this machine is put clean and dry, and make sure there is no dripping or vapour at startup.
- ❖ To avoid dangerous output in abnormal condition, current-limiting setting is done before delivery.
- ❖ This equipment can only be maintained and repaired by the technical engineers of our company. Any consequence caused by unauthorized disassembly is beyond our responsibility.
- ❖ Please make sure the machine is well earthed at using.

### Eye Protection

- ❖ It's forbidden to directly observe the laser beam and that reflected or scattered after radiation. Otherwise, the damage to retina may be caused.
- ❖ The place where safety goggles are placed should have highlighting marks, which can ensure all staff including the patient take protective measures to prevent their eyes from being harmed.
- ❖ NOHD refers to that the irradiance dose is less than the distance of relevant MPE (maximum permissible exposure). If it's not for intentional observation, the NOHD value of this machine is about 5m.

### Key Keeping

- ❖ Main switches of this beauty apparatus are the two start keys delivered together with host machine.
- ❖ Both the carrying and usage of them should be done by the doctors who have received professional laser medical training.
- ❖ If any abnormal state appears, the system will show malfunction failure immediately and close all power supplies after sounding an alarm, under which circumstance, you can turn on power to restart it. If the malfunction still exists, please contact the manufacturer or the appointed agent instantly.

## PRECAUTIONS

- ❖ Put the machine on the flat and stable surface.
- ❖ Check the main machine, accessory and the power cable are intact well before use.
- ❖ The machine is fragile. Do not drop it.
- ❖ Clean the equipment with a wet cloth but make sure no liquid penetrates.
- ❖ Do not operate the machine with wet hands.
- ❖ Do not bend or turn the power cable and the wires.
- ❖ Before you clean or transport the machine, make sure that it is switched off and the power cable is unplugged.
- ❖ Put the equipment in a ventilated area. Do not cover the fan or the machine nor put any objects on it.
- ❖ Do not use the machine in the toilet or near a microwave or oven.
- ❖ Make sure that the power cable is not worn or broken before you plug it.
- ❖ The operator must be trained to be familiar with the structure and performance of the equipment and master the knowledge of the operating system.
- ❖ Users under 18 cannot use the equipment.
- ❖ The machine cannot be used on animals.
- ❖ Do not use the machine for other purposes than those described in this manual.
- ❖ The operating temperature should be in good control.
- ❖ The treatment button should always be pressed by hand.
- ❖ When there is an error, the system will show a message to the operator, at which time please stop any operation.
- ❖ Adjust the energy from low to high frequently, during which consult patients about their feelings for fear of harm.
- ❖ The continuous working time of this machine shouldn't exceed 8 hours a day at most.
- ❖ Turn off the power after the operation. When not in use, make sure unplug the power line from the power outlet.
- ❖ Please take good care of the equipment. The power cord and accessories should be carefully inspected before operation. If there are any traces of damage, stop using them and replace them with a new one.

## WARRANTY

All products are strictly tested before sale. The guarantee of free repair is provided starting from the purchasing day, during which time the maintenance for any breakdown due to non-artificial factors will be performed free of charge. Accessories are not included in the warranty, so please contact us if they are needed.

The standard of the operation process and the environment should be in accordance with all the instructions above.

Malfunctions caused by the following factors are out of the warranty:

- ❖ Malfunctions caused by artificial factors like improper movement, collision, etc.
- ❖ Malfunctions caused by uncontrollable natural force.
- ❖ Abuse operation that is against the manual, like connecting wrong VAC input or using the machine for other purposes.
- ❖ Energy diminishing caused by wet environment or dust.



# TROUBLESHOOTING

Problem	Possible cause	Solution
The machine does not start	<ol style="list-style-type: none"> <li>1. It is not plugged correctly</li> <li>2. The power cable is not well connected</li> <li>3. The power button is off</li> <li>4. The fuse is damaged</li> <li>5. The electrical circuit is damaged</li> <li>6. The power cable is broken</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the plug</li> <li>2. Check the power cable</li> <li>3. Press the power button</li> <li>4. Change the fuse</li> <li>5. Contact the technical service</li> <li>6. Change the cable/ contact the technical service</li> </ol>
The buttons do not work	Defective buttons or circuit damaged	Contact the technical service
The machine does not start and does not emit heat	<ol style="list-style-type: none"> <li>1. Defective connections</li> <li>2. Handle cable defective or badly connected</li> <li>3. Breakdown of electrical circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the connection</li> <li>2. Connect the cable correctly</li> <li>3. Contact the technical service</li> </ol>
The machine works, but the effectiveness is reduced	<ol style="list-style-type: none"> <li>1. Bad connection of handle</li> <li>2. Piezoelectrical transducer damaged</li> <li>3. Mechanical damages in handle or machine</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the handle correctly</li> <li>2/3. Contact the technical service</li> </ol>