

# Xiamen ELOS Photoelectric Technology

## User Manual



**This machine does not belong to medical product, please don't use it for disease treatment!**

**Please read this manual carefully before operating the machine and retain it for future reference!**

Dear users,

Thanks for choosing our machine, in order to make full use of the machine, we sincerely suggest:

- ◆◆ Please read the instruction in detail and keep it well for further reference.
- ◆◆ Please follow the instruction to install and operate the machine correctly.
- ◆◆ Please do not remove and change any accessories of the machine.
- ◆◆ Except the factory's authorization, it forbids others to open and remove the mainframe.
- ◆◆ It forbids others to change and maintain the machine except the factory's authorization.
- ◆◆ Please contact us if there is any trouble during operation.

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## 1. Safety Notice

1. Before using the machine, please check to see if the device, power line and accessories are in good condition. Make sure the machine voltage is in accordance with the voltage of your beauty salon or center.
2. When using this machine, please don't use other electrical power device in the room at same time.
3. Please don't disassemble the equipment or try to do some other operation, which haven't been indicated in our instruction. All the repairing work should be done by our admitted professional personnel.
4. Please don't assemble or operate this equipment while you are near the water or your hands are wet. Please do not drop liquid on it.
5. Please pull out the plug from the socket when you met such conditions as below. And in touch with professional maintenance Station.
  - A. The equipment touched liquid
  - B. The equipment has abnormal smell, smoking or loud and strong noise.
  - C. Cable is broken
  - D. The equipment is fallen down and broken
6. Please don't put anything on the cables, don't place the equipment at any place where someone can step on the cable.
7. When you don't use the machine, please disconnect the power line for your safety.
8. Don't put anything into the equipment's jack, otherwise it may cause fire or touch the electricity. If something enters the equipment, please don't pick it out by yourself, contact distributor or our company immediately.
9. Please don't put the equipment on the anything that can't stand steadily, avoid it turns over and damage.
10. Our company has the right to modify the information in this introduction before notify! And keep the explanations right for the above.

### **Important Information**

This user guide 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 changes or modifications not expressly approved in this user's guide could void your warranty for this equipment.

## 2. Operation Notice



Before operation, please read the following content.

- 1.It is essential to make different setting according to specific treatment demand.
- 2.Do not apply the device on children less than 18 years old. The treatment to children over 18 requires medical advice.
- 3.Do not use this device on the client suffering from a fever, inflammation, dermatitis (acne, eczema, herpes), warts, open or recently stitched wounds, serious and progressive illnesses (cancer, AIDS, hepatitis, blood diseases, etc.) or blood coagulation problems. Do not apply the device if you have or have had phlebitis, after veins surgery within the last two months, if you have varicose veins or tingling in your limbs, if you have any concerns consult a physician.
- 4.Never use the device on a pregnant woman.
- 5.The machine cannot be used on the eyes, throat, ears, glottis and the genital area.
- 6.The machine cannot be applied inside the mouth, or on mucous membrane, or on nipples, or moles.
- 7.Never use the device if you suffer from epilepsy. The device must not be used by any person suffering from mental illness.
- 8.In the case of long-term treatment with drugs such as anti-inflammation, anticoagulants, antibiotics or if your skin bruises at the slightest shock, ask advice of your doctor/physician before using.
- 9.Both the beautician and client should take off jewelry/ring/the hearing aid/electronic wristwatch/magnetic card/mobile phone when doing treatment.
- 10.Treatment result may vary depending on your age, life habits (level of physical activity, diet, etc.).
- 11.If the client had any plastic surgery,we must consult the surgeon to see if she can take the shock-wave treatment.
- 12.The machine is designed for professional use only, any personal use of this device is prohibited.
- 13.The machine's continuous working time shall not exceed 1 hour. The best way is to cut the power off, let the machine have a rest for 20-25 minutes after the machine have worked for a hour.
- 14.After the treatment is finished,please turn off the machine and disconnect the power line. When we don't use the machine,please disconnect power line and take care of all the accessories.
15. **Never use the strong acid or strong base or alcohol clean the machine.**
16. You can use a little gel or other lubricants on the treatment area, **but do not use too much, preventing the lubricants get into the treatment head(which will damage the treatment head).**
17. Due to the weight of the treatment head and inner design,continuous vibration of the treatment head may strain and hurt the operator's hand.
- 18.The shockwave head is consumable, please replace it after a period time of usage.
- 19.The bullet iron pillar inside shockwave handle must be replaced when the service life is above one million times.
20. **Before you turn on the machine each time,please check the filter(in the machine back). If the liquid inside the filter exceeds half of the filter,we must pour out the liquid as indicated in this manual. Please protect the accessories of the filters to ensure the machine performance.**

### Cleaning Methods:

Put some paper at the bottom of the filter, rise the valve(in the bottom) with your fingers, let the liquid flow out. Or you can uninstall the filter pour out the liquid(turn left to unscrew, turn right to tighten).

### 3. Taboos(who cannot receive shockwave treatment)

1. This machine cannot be used on areas as:the eyes and the surrounding area, the myocardium, the spinal cord, the gonads, the kidneys,the liver,proximity to large nerve bundles, blood vessels, the spinal cord and the head.
2. This machine cannot be used on areas of the body and organs with possible gas content.
3. This machine cannot be used on below people:
  - (1) people with blood disorders, coagulation problems or the use of anticoagulants.
  - (2) the treatment area has polypus.
  - (3) pregnant female.
  - (4) people with tumor diseases
  - (5) people with thrombosis
  - (6) people with polyneuropathy and acute inflammation
  - (7) people with heart disease or high blood pressure, or configured cardiac pacemaker.
  - (8) people with metal inside the body(include metallic tooth).
  - (9) people using corticoids.
  - (10) patients with acute inflammation, asthma, deep vein thrombosis, thyroncus, cancer.
  - (11) Child younger than 18 years
  - (12) People with artificial bone,patients with silicosis
  - (13) Drunk or high fever patients
  - (14) Patients with severe infection

## 4. Brief Introduction

### 4.1 General Introduction

The shockwave system uses the ballistic principle of shockwave generation: A pressure wave is formed via a projectile by using accelerated compressed air. The compressed air is generated by an electronically-controlled ballistic-pressure compressor. Using elastic impact, the kinetic energy of the projectile is transferred into the probe of the applicator and then into the client's body. Consequently, during the treatment, the end of the applicator must be in direct-contact with the skin and subcutaneous tissue.

Shockwave is aimed at the affected areas that are the source of chronic pain. The influence of the shockwaves causes to the dissolution of calcium deposits and leads to better vascularization. The after-effect is relief from the pain.

Shockwave has the following effects:

>Cellular: Increase in cell membrane transmittance by improving ionic channels activity, stimulation of cell division, stimulation of cellular cytokines production.

>Reproduction of vessels in the area of tendons and muscles: Improvement of blood circulation, increase in concentration of growth factor beta 1 , chemotactic and mitogenic effect on osteoblasts.

>Effect on nitrogen oxide system: Bone healing and remodelling.

>Improvement of micro-circulation and metabolism.

>Dissolution of calcified fibroblasts.

>Supports the production of collagen.

>Reduction in tissue tension.

>Analgesic effect.

### 4.2 Advantage

1.By the targeted application of the shockwaves, stress to the surrounding tissues is quite insignificant.

2.The body is not burdened by pharmaceuticals, except the short-term effect of local anaesthesia, if used.

3.The possibility of preventing the necessity of surgical intervention and its relevant hazards.

4.For some indications, such as Tennis Elbow, there is really no other effective treatment.

## 5. Illustration And Installation

### 5.1 Machine Illustration



the front of the machine

- 1--Screen
- 2--Connector of shock wave handle
- 3--Function selection or confirmation button

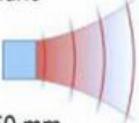
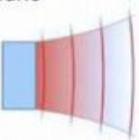


the back of the machine

- 4--Handle bracket
- 5--Filter
- 6--Operation button
- 7--Fuse
- 8--Power line connector

## 5.2 Accessories



Treatment head	Model	Penetration Depth/Waveform	Energy Density at maximum pressure
1 	A6, Ø 6 mm,	Radial  0 – 40 mm	0.32 mJ/mm <sup>2</sup>
2 	DI15, Ø 15 mm,	 0 – 60 mm	0.63 mJ/mm <sup>2</sup>
3 	F15, Ø 15 mm,	 0 – 20 mm	0.16 mJ/mm <sup>2</sup>
4 	D20-S, Ø 20 mm,	Cylindric  0 – 50 mm	0.48 mJ/mm <sup>2</sup>
5 	D35-S, Ø 35 mm,	Cylindric  0 – 50 mm	0.46 mJ/mm <sup>2</sup>

### 5.3 Replace Treatment Head



Bullet

When you want to change the treatment head, please turn off the machine first, then disconnect the handle from the machine.

1. Hold the shockwave handle with one hand, use U shape combination wrench to get stuck flat bit of 3# treatment head, screw it out by turning it to anticlockwise.
2. Choose 1# or 2# treatment head, put it into screw cap, and then install then into shockwave handle, tighten it by turning them to clockwise. Then use the O shape wrench to fasten the treatment head.
3. When shot number reaches 1 million, you need to replace the bullet iron pillar. Remove the screw cap, and take out the old one. Then put a new one inside and install the treatment head.

## 6. Operation

1.Connect accessories to the machine

- (1)Connect Shockwave handle to shockwave handle connector.
- (2) Insert suitable treatment head.

2.Connect power line.

3.Turn on operation button, enter password "000000", you will enter:

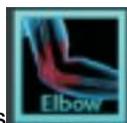


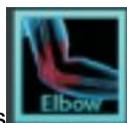
4.Press "Basic setting" to select language, to set time and date.

NOTICE: "Advanced setting" is only for engineering debugging, not for user use.

5.Choose treatment area,you will enter into operation interface accordingly.

This machine includes nine operation areas. Elbow, knee, shoulder, hip, pubic symphysis, Hand/wrist, Lumbar Region, foot/ankle, and fat accumulate.



6. Let us take Elbow treatment for example. Press ,you will enter:



(1)"Preselection 2500 Times": when the system works to 2500 times each time, it will pause and

promote automatically. Please click on any place of the screen according to the hint.

(2)"Current": the working times of the current treatment course . The times will be accumulated when the current operation finished each 2500 times. Click on "RESET" to clear the number of current treatment.

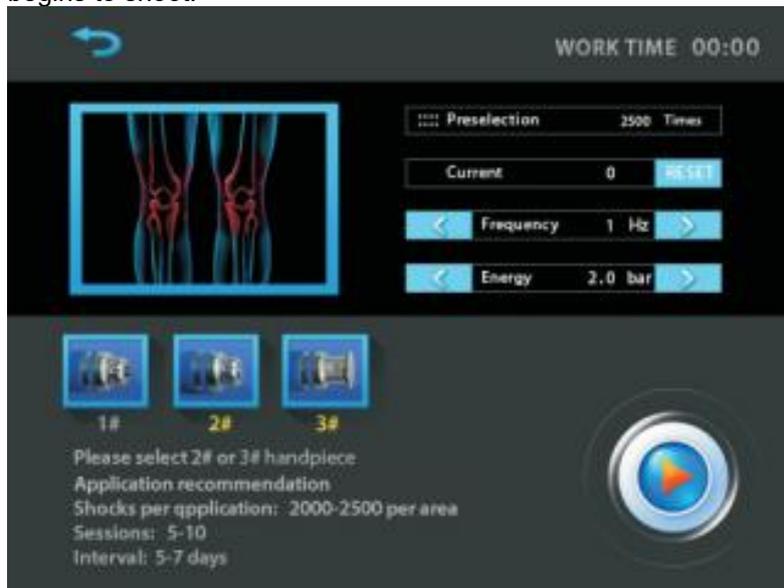
(3)"Frequency": The system default frequency is 1 Hz, range 1-21Hz.

(4)"Energy" : hit strength, the system default energy is 2.0bar. The range is 1.0 bar to 4.0bar.

You can set parameters on the screen or by switching Function selection or confirmation button on the machine.



(5) Press , the handle is ready to shoot, press working button on the handle, the handle begins to shoot.



Knee treatment interface



Shoulder treatment interface



Hip treatment interface



pubic symphysis treatment interface



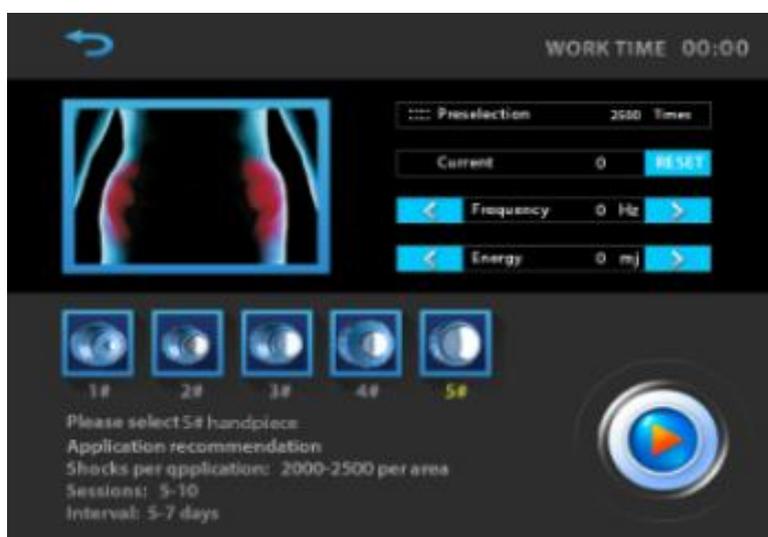
Hand/wrist treatment interface



Lumbar Region treatment interface



Foot/ankle treatment interface



Fat accumulate treatment interface

## 7. Treatment Tips

1. Clean the treatment area.
2. Select suitable treatment head according to the treatment area.
3. Set suitable frequency(the max range is 1Hz~21Hz) and energy(the max range is 1.0bar~4.0bar).
4. Beautician holds the shock wave handle in one hand and put treatment head on treatment area.



Press , then press handle button once, the handle begins to work.

5. After treatment, use warm towel to clean the treatment heads.

### Cautions:

1. You can use a little gel or other lubricants on the treatment area, **but do not use too much, preventing the lubricants get into the treatment head(which will damage the treatment head).**
2. Due to the weight of the treatment head and inner design, continuous vibration of the treatment head may strain and hurt the operator's hand.
3. The shockwave head is consumable, please replace it after a period time of usage.
4. The bullet iron pillar inside shockwave handle must be replaced when the service life is above one million times.
5. **Before you turn on the machine each time, please check the filter(in the machine back). If the liquid inside the filter exceeds half of the filter, we must pour out the liquid as indicated in this manual. Please protect the accessories of the filters to ensure the machine performance.**

### Cleaning Methods:

Put some paper at the bottom of the filter, rise the valve(in the bottom) with your fingers, let the liquid flow out. Or you can uninstall the filter pour out the liquid(turn left to unscrew, turn right to tighten)

## 8. Possible Side Effects

1. Erythema or swelling can temporarily occur in the treated area.
2. Loss of bodily sensation or itching can temporarily occur in the treated area.
3. Skin damage after previous corticoid therapy.
4. Shockwave application can cause undesirable heart activity.

## 9. Machine Maintenance

1. Appliances and medical equipment close to the machine may be resulting in operational failure due to interference.
2. Prohibit use of the equipment in the following environment:
  - Hot and humid environment
  - Dusty environment
  - Environmental with much smoke or steam
3. If there is a failure, please shut down the power immediately, and contact the supplier for maintenance. Do not repair it by yourself.
4. Exclusion of liability.  
Our company is not responsible for the following circumstances:
  - (1) If fire, earthquake, war occurred.
  - (2) The fault of the user, operator error.
  - (3) Damage caused by using with other method not included in the user manual.
  - (4) Operate without the manual's guide.
5. Do not let the machine close to the wall, keeping a 30CM space around for cooling.
6. No stress on the Screen, prevent from breaking up.
7. Keep the handle head clean, do not let the gel/oil/cream enter into treatment head.
8. The handle is fragile, please take care when pick up and place it in the holders.
9. Please check the surface of treatment head to see if there's attachment object after treatment. If there is, please lightly clean it with hot towel.
10. Please don't rip off series number on the machine back, it is important for warranty.