

# Portable Ultrasound

## US PRO 2000™ MANUAL



BEFORE USING THE DEVICE, PLEASE READ OPERATING INSTRUCTION CAREFULLY.



V1.0 2010

### INTENDED FOR USE

The US PRO 2000™ generates deep ultrasonic waves within body tissues for the treatment of selected medical conditions such as relief of pain, muscle spasms, and joint contractures, but not for the treatment of malignancies. This is an FDA regulated product available by prescription only. Keep out of reach of children.

### CONTRAINDICATIONS

1. Do not use over or near bone growth centers until bone growth is complete.
2. Do not use over a healing fracture.
3. Do not use over the eyes.
4. Do not use for patients with implanted neurostimulation systems because tissue damage can occur at the location of the implanted electrodes resulting in severe injury or death. This can also damage the system components.
5. Do not use to treat malignancies nor in the region with malignant tumors.
6. Do not use for patients with demand type cardiac pacemakers.
7. Do not use on someone who is pregnant.
8. Do not use over ischemic tissues in patients with vascular disease where the blood supply would be unable to follow the increase in metabolic demand and tissue necrosis might result.
9. Do not use over the carotid sinus nerves or arteries, laryngeal or pharyngeal muscles.

### PRECAUTIONS

1. Do not use on patients with hemorrhagic diatheses.
2. Do not use over an area of the spinal cord following a laminectomy, i.e., when major covering tissues have been removed.
3. Do not use over anesthetic areas.
4. Avoid bony prominences.
5. When using ultrasound, keep the sound head moving while maintaining contact with skin.
6. If treatment becomes uncomfortable, inform or contact your physician.
7. Do not immerse the Portable Ultrasound in water or other solvent.
8. Do not use over metallic implants, especially prostheses with a cement-matrix.

### EXPLANATION OF ULTRASONIC STIMULATOR EFFECT

The US PRO 2000™ is a Therapeutic Ultrasound device that generates pulsed high frequency sound waves (1MHz) that are transferred to a specific body area via a sound-headed probe. The Pulsed Sound Waves travel deep into the tissue to generating vasodilatation, which helps increase blood flow to the treated area. Therapeutic Ultrasound is found to help relieve pain and reduce muscle spasms and is the one of the most frequently used therapies by physicians and physical therapists. Most patients will feel nothing at all during treatment, while some patients may feel a very slight warmth.

### SPECIAL FEATURES

1. The precise parts are assembled and tested under strict process.
2. Designed with single chip micro-processor, the quality is assured.
3. Precious alloy round-headed probe creates smooth, nice-touching surface to the skin.
4. Attractive exterior fits to the human body and easy to hold and convenient to use.
5. Micro-computer single button, very user friendly.
6. Three output intensity and three treatment time selections to meet different requirements.

### CAUTIONS

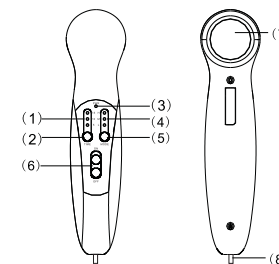
- ▲ Always use this device under the directions of professional physician.
- ▲ Patients with following diseases or symptoms should not use the device.
  - Pregnancy or Menses period.
  - Acute disease, Heart disease, Tubercle disease, Facial neuralgia, Pernicious tumor, Hemophilia, High fever, abnormal blood pressure patient, or under abnormally healthy conditions.
  - Patients with Sensitive physical condition, Ringworm, Dermatitis, Infectious disease.
  - Person who can't express themselves clearly such as infants, mental disables, after alcoholic drinking or under extreme fatigues.
  - Don't apply this product on following spots: Gash, Mucous membrane in the mouth, neuralgia spot, surgery area, skin with sun burn problem, sensitive skin irritated by cosmetic, skin implanted with metal, plastic and silicone material.
  - Do not use with other electronic equipments such as ECG machine...etc., even this device conforming to the EMC requirements.
- ▲ DO NOT use on the thoracic region if you are a pacemaker user.
- ▲ DO NOT use on the region with malignant tumors.
- ▲ DO NOT use on the region of blood-lacking tissue, because there is not enough blood supplied to meet the metabolic demand, so that the tissues would result in necrosis.
- ▲ For the patient with bleeding physique, DO NOT use US PRO 2000™
- ▲ DO NOT use on the anesthesia regions.

### \*\*\* Warning \*\*\*

- The device complies completely with all parts of 21 CFR 1050.10 of the performance standard for sonic, infrasonic and ultrasonic radiation-emitting product.
- Cautions- use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous exposure to ultrasonic energy.

### PARTS OF THE DEVICE

- (1) TIME INDICATOR LIGHT
- (2) TIME BUTTON
- (3) POWER INDICATOR LIGHT
- (4) INTENSITY INDICATOR LIGHT
- (5) MODE BUTTON
- (6) POWER SWITCH
- (7) ULTRASOUND HEAD
- (8) AC/DC ADAPTER CONNECTOR



### STEPS TO CONNECT THE ADAPTOR

#### How to use the ultrasonic physiotherapy equipment?

1. Prepare the ultrasound coupling agent and power adapter.
2. Prepare the tissues for cleaning the ultrasound coupling agent on the skin.
3. US PRO 2000™ is using the AC power as power source, no battery is used. Connecting the adapter cord to the unit, then connecting the adapter plug to the wallet.



Connection Way

Now ultrasound mode is ready for treatment.

4. Press the "TIME" button to adjust the treatment time and press the "MODE" button to adjust the treatment intensity.
5. When you are not using, remember to switch the power-switch to OFF position if not in use.

#### — ATTENTION —

Please use the original adaptor. The user can not re-assemble or change the specification of the adaptor. Personal injury or damage to the unit may be caused if you do not follow the above instructions.

### FUNCTION TEST OF ULTRASONIC ACTION

Place the probe horizontally, then apply several water drops on the surface of the probe. Turn the device on, you can observe the ultrasonic action. The water drops on the probe start to perform one million vibrations per second with slight atomization phenomenon.

Intensity LOW: The water drops vibrate slightly.

MED : The water drops vibrate stronger, and with atomization.

HI : The water drops vibrate very strongly, and with atomization phenomenon.

### TROUBLE SHOOTING

The device is manufactured through complete quality assurance system, if there is any performance problem, please check the chart below for problems you can fix. Performance problems often result from little things that you can find and fix at home without tools. This can save you the cost of a service call.

PROBLEM	CHECK POINTS	POSSIBLE SOLUTION
POWER LED does not light on.	<ul style="list-style-type: none"> <li>● The plug of adaptor is not inserted into the socket properly.</li> <li>● The DC plug of the adaptor is not inserted into the DC receptacle on the device correctly.</li> <li>● Did not press on the ON/OFF button.</li> </ul>	<ul style="list-style-type: none"> <li>● Insert the plug of the adaptor into the socket again.</li> <li>● Connect the adaptor with the device again correctly.</li> <li>● Press the ON/OFF button again.</li> </ul>
POWER LED is performing normally, but no output function occurs.	<ul style="list-style-type: none"> <li>● Output intensity button setting is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>● Please make sure and set it again.</li> </ul>

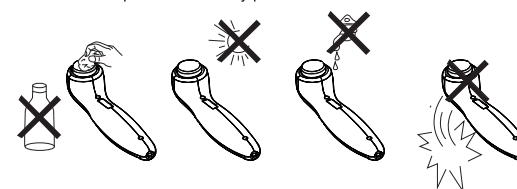
For technical documentation or support, please contact your local distributor or the manufacturer as shown on the label.

### HOW TO USE THE DEVICE

1. Please refer to Chapter 7 to select the pain point you want to treat. If you have questions on identifying the treatment area, ask your doctor or profession person.
2. Apply a little ultrasound transmission gel on the treatment area. The gel acts as a coupling substance and ensures effectiveness. (Please purchase the ultrasound gel with CE certificated)
3. Pull the power switch to ON position to turn on system, power indicator light and L indicator will be light. Therapeutic equipment is in standby mode.
4. Press the "MODE" button to select the treatment intensity, the treatment intensity have three level, Low (L), Middle (M) and High (H), each level corresponds to a light indicator.
5. The device can choose three kind of working time, 5 minutes, 10 minutes and 15 minutes, each kind corresponds to a light indicator. Press the "TIME" button, the indicator of 5 minutes will be light, and the system start working. During working time, User can press the "TIME" button to adjust the treatment time. When the treatment time is set to 15 minutes, press the "TIME" button again, all time indicator will be turn off and treatment will be stopped.
6. The device has load detect system considering for safety use. Only when you put the treatment head on your body and have a good contact (using ultrasound gel, we do not suggest using the water, but it could be a substitute if ultrasound gel is not available soon), the device will start sending ultrasound energy and will stopped automatically when contact is poor. At this time, the time indicator will flash (1Hz). The device will restore treatment automatically when the contact is good.
7. The device has temperature protection function. When the temperature of treating head is exceed 42℃, the treatment will automatically stopped and will automatically resumed when the temperature is below 40℃. The time indicator will flash (2Hz) when treating head is exceed 42℃.
8. Please pull the power switch to OFF position after the treatment.

### MAINTENANCE

- Don't put into water, neither fall down or throw to ground from height.
- Do not use volatile solution such as turpentine or gasoline to rub the device.
- Please clean the device housing & alloy probe by wet towel or tissue.
- Do not use coarse or used fabric to rub the surface of the alloy probe.
- Store at room temperature in a dry place.



### Prescription Statement

Caution: Federal law restricts this device to sale by or on the order of a practitioner licensed by the law of the State in which he/she practices, according to 21 CFR 801.109.

### UNIT SPECIFICATION

1. Power : Switch adaptor  
Input: AC100~240V, 50/60Hz  
Output: DC15V
2. Frequency: 1 MHz ± 10%
3. Beam type: Collimated
4. Modulation wave shape: 100Hz±10%
5. Wave form: Pulsed
6. Temporal maximum power: 9.6W±20%
7. Temporal maximum effective intensity: 2.4W/cm²±20%
8. Effective radiating area: 4.0cm²±20%
9. RBN(MAX): 5.0
10. Timer: 5min, 10min, 15min
11. Output intensity with duty factor: 30%, 40%, 50%
12. Size of main unit: 202mm(L)x49mm(W)x70mm(H)
13. Material of applicator: Aluminium
14. The degree of protection against of water: IPX7(Only for treatment head)
15. Program List:
 

Program	Duty factor	Wave Character
L	30%	Low
M	40%	Middle
H	50%	High

### STORAGE CONDITIONS

Operating Conditions: 5℃-40℃, 30%-75% r.H.  
Conditions for Storage/Transportation: -10℃-50℃, 20%-93% r.H.

### LIMITED WARRANTY

We warranty each new US PRO 2000™ Portable Ultrasound unit (excluding gel, wires and adaptor) for 6 months from defects in materials and workmanship from the original date of purchase. This warranty applies only to the original purchaser. The original invoice or receipt must accompany all returns.

This warranty does not cover abuse, accident, or damage resulting from failure to follow operating instructions. The warranty is voided if the unit has any alterations or has been disassembled.

We shall not be liable for any direct or indirect consequential damages resulting from the use of this unit.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Product: Portable Ultrasound  
Model: US PRO 2000™

Serial number: \_\_\_\_\_

Date of purchase: \_\_\_\_\_

Distributor: \_\_\_\_\_