

TheraLAS USER GUIDE

 **LASERCON**

High Intensity Laser Therapy



Lasers *for* DEEP tissue therapy

Spasms ↓

Pain ↓

Flexibility ↑

Circulation ↑

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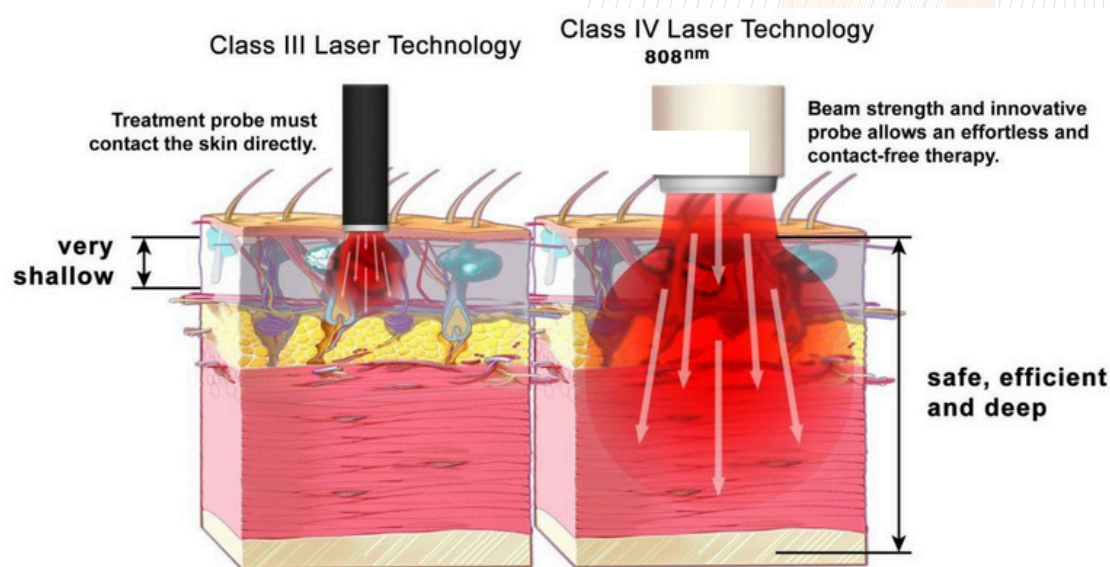
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I About Deep Tissue Laser Therapy

1. Principles

Laser Therapy is used for the relief of pain, to accelerate healing, and to decrease inflammation. When the light source is placed against the skin, the photons penetrate several centimeters and get absorbed by the mitochondria, the energy-producing part of a cell. This energy fuels many positive physiological responses, restoring normal cell morphology and function. Laser Therapy has been successfully used to treat a broad range of medical conditions, including musculoskeletal problems, arthritis, sports injuries, post-surgical wounds, diabetic ulcers, and dermatological conditions. The central goal of laser therapy is to stimulate cells to perform their natural functions at an enhanced rate. Targeted at hemoglobin and cytochrome c oxidase, the high-power diode laser can help improve respiration, resulting in better therapeutic performance.



DEPTH OF EFFECTIVE DOSAGE AS A FUNCTION OF TREATMENT TIME

In sharp contrast to “Cold lasers,” which provide no feeling or sensation, high-power diode laser therapy will provide a warm and soothing feeling. Unlike many pharmacological treatments that mask pain or only address the symptoms of disease, Laser Therapy treats the underlying condition or pathology to promote healing. The treatments are effective, and the benefits of Laser Therapy are long-lasting.

2. Indications

Anti-Inflammation

Laser therapy has an anti-edema effect as it causes vasodilation, but also because it activates the lymphatic drainage system (drains swollen areas). As a result, there is a reduction in swelling caused by bruising or inflammation.

Anti-Pain (Analgesic)

Laser therapy has a highly beneficial effect on nerve cells. It blocks pain transmitted by these cells to the brain and decreases nerve sensitivity. Laser therapy reduces inflammation, thereby reducing edema and pain.

Accelerated Tissue Repair and Cell Growth

Photons of light from lasers penetrate deeply into tissue, accelerating cellular reproduction and growth. The laser light increases the energy available to the cell, allowing it to absorb nutrients more efficiently and eliminate waste products.

Improved Vascular Activity

Laser light will significantly increase the formation of new capillaries in damaged tissue, which speeds up the healing process, closes wounds quickly, and reduces scar tissue.

Increased Metabolic Activity

Laser therapy stimulates specific enzymes, increases oxygen and nutrient loads for blood cells.

Trigger Points and Acupuncture Points

Laser therapy stimulates muscle trigger points and acupuncture points in a non-invasive manner, providing relief from musculoskeletal pain.

- » Back/neck pain
- » Sciatica
- » Dizziness/vertigo
- » Post natal back pain
- » Muscular pain
- » Sports injuries
- » Pelvic issues
- » Frozen shoulder/shoulder pain
- » Achilles/ankle injuries
- » Menstrual cycle issues
- » Elbow injuries



II Introduction to the TheraLAS

1. Overview



2. Specification

Laser Power	10W/15W/20W/30W
Wavelengths by Handle	808nm/980nm/1064nm (3 separate handles)
Laser Contact Area	2mm up to 15mm diameter (by distance)
Peak Power(%)	10~100
Pulse Width	1~200ms
Repetition Rate	1~200Hz
Time Meter	1-60Min
Working Mode	Pulsed/CW
Display	7-inch Touch Screen
Handle Cable Length	1.2 meters
Net Weight	4 Kg
Dimension	35cmx29cmx17cm

3. Accessories

	
Machine Body	Handle
	
Power Cable	Interlock
	
Goggles for operator	Goggles for patient

III Installation

1. Install the handle



2. Insert the power cable



3. Insert the interlock



5. About the emergency button

Make sure the RED emergency button is not depressed. If depressed, turn the emergency stop button in a clockwise direction. It will pop out and allow treatment. This button can also be pushed to stop treatment in an emergency. It should not be used to turn the power off routinely.



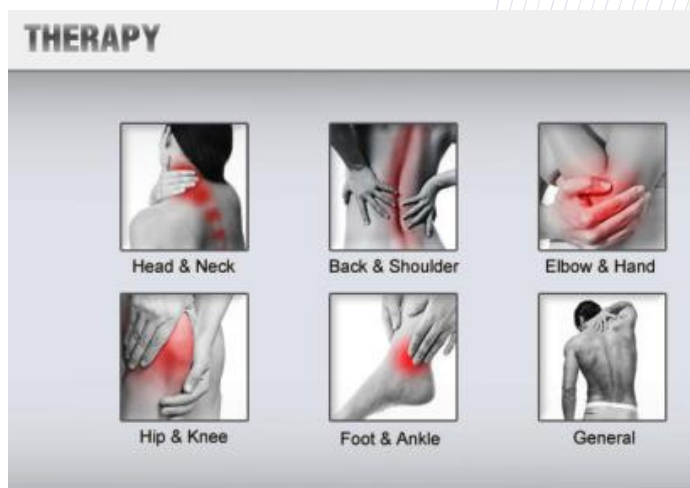
IV Operation

1. Connect the power cable and turn on the power switch on the back of the machine

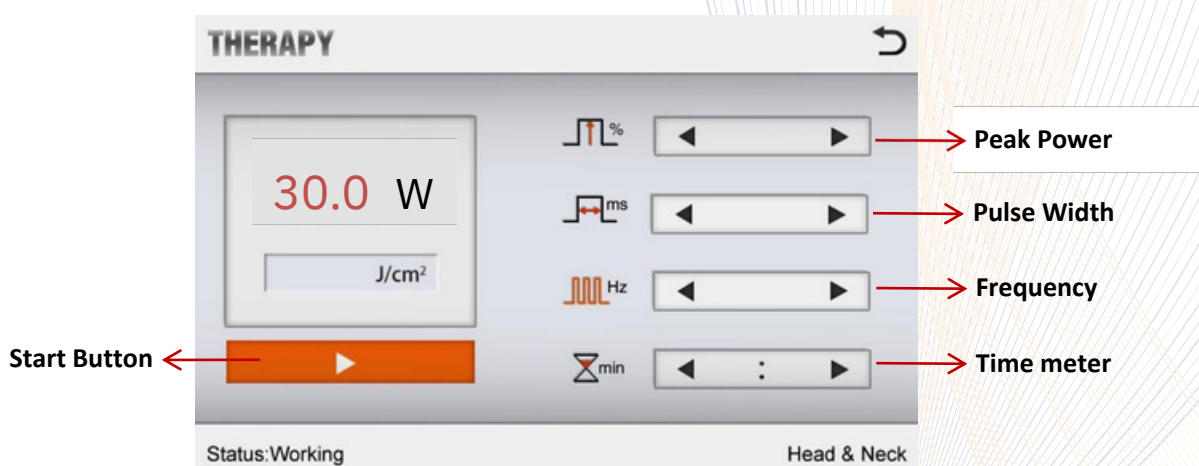


2. Introduction to the interface

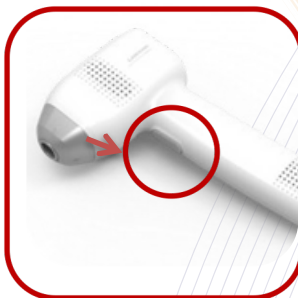
2.1. Body part option



2.2. Parameter setting



- A. Adjust the Peak Power to 80%.
- B. Adjust the Pulse Width and Frequency according to the parameter list (Page 11).
- C. Press the “Start Button”.
- D. The Status (bottom left) should change from “READY” -> “STANDBY”.
- D. Squeeze the TRIGGER on the handle.
- E. The laser will start to emit.



V Treatment

Guidelines prior to Use

This laser is a serious medical device, and extreme caution should be exercised in its use and handling for general safety.

Designate a secure and private location for the laser, and ensure the interlock is removed when it is not in use. Put the “LASER IN USE” sign up on the door every time the laser is used. Ensure everyone has protective eyewear when the TheraLAS is in use.

- A special person should be designated as the Laser Safety Officer (LSO) and be responsible for all aspects of the laser in both use and non-use.
- All users of the Therapist laser should have at least a minimal amount of training before use.
- The user should be familiar with all parts of the laser as well as safety and operation.
- Have measures in place to protect staff and patients
- Make sure all persons in the room have appropriate protective eyewear and use it
- Use the LASER IN USE sign and display it for everyone to see
- NEVER point the laser emitter at anyone at any time. Its use is solely for therapeutic treatment
- Remove interlock when not in use
- Secure laser from unauthorized usage

Principle Steps of Use

- 1) When choosing the treatment, different body parts will use different power and methods.
- 2) If the skin is a lighter color, increase the power.
- 3) Ensure all eye protection is on and start the treatment.
- 4) The first treatment can release the pain by 30-40%.
- 5) Keep the handle tip 1-2 cm away from the skin and use a spiral motion.

If a body part has a serious injury, stop at this position for several seconds. Start from 4.2W (peak power 70%, pulse width 20%, frequency 10Hz), and adjust the parameters according to the skin color, the thermal feeling, and the body part.

6) The First treatment should last 10-15 minutes, once a week.

1. Before treatment

1.1 Prepare the following

Goggles for both operator and patient;

Suit up the operator;

Locate the treatment area.

Clean the treatment area with H₂O₂ (3%) or an alcohol pad.

Clean the handle window with an alcohol pad.

2. During Treatment

2.1 Method: A. handle 3-5cm above the skin

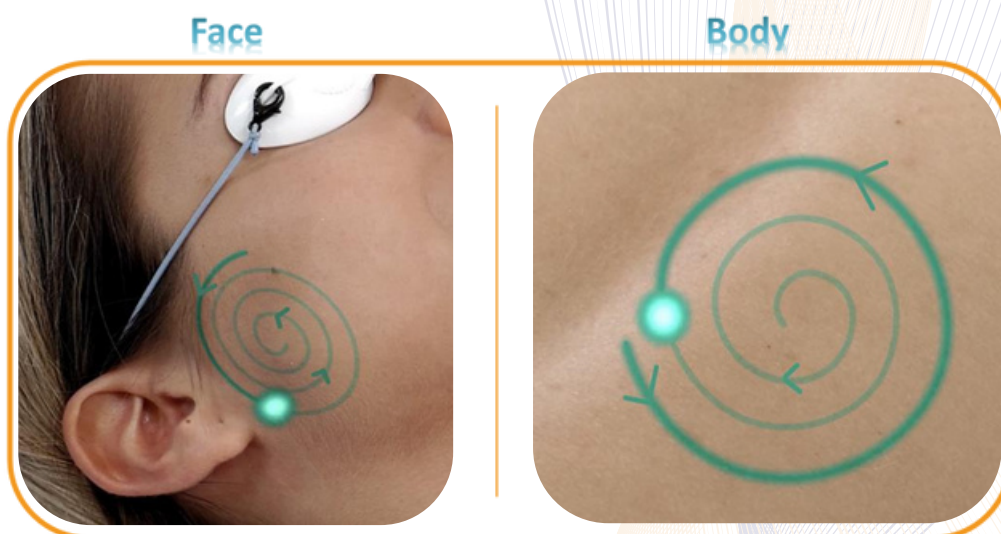
B. Keep the handle vertical with the treated area.

C. The treated area should feel warm. Check with the patient for temperature. If it's too hot, increase the application speed or decrease the power. If there is no warmth, lower the speed, increase the power, or a combination thereof.

D. Typical treatment time is 3 to 10 minutes.

E. For more painful points, keep the laser stationary for 2-3 seconds.

2.2 Step 1: Move in a spiral rotation for 2 to 5 minutes.



2.3 Step 2: Move one line by one line for 2 to 5 minutes.



2.4 Suggested Parameters

You may need to adjust the power due to variations in skin pigment, patient size, and individual tolerance to laser therapy. There is no exact and perfect treatment setup for everyone; thus, it should be adjusted accordingly.

Recommend parameter for different body parts

Body parts	Peak Power (%)	Pulse Width (ms)	Frequency (Hz)	Avg. Watt	Recommend Time
Cervical	85	20	13	6.6	10min.
Elbow	80	30	10	7.2	5min.
Shoulder	80	30	12	8.6	4min.
Lumbar-stenosis-disc	80	30	15	10.8	7min.
Knee	80	25	11	6.6	5min.
Thoracic	80	25	13	7.8	9min.
Plantar fascitis	75	25	15	8.4	5min.
Ankle	80	25	13	7.8	5min.
Wrist	75	30	16	10.8	4min.
Foot	80	25	10	8.4	10min.
General tendonitis	80	25	14	8.4	9min.

Recommend parameter for other applications

Treated Area	Peak Power (%)	Pulse Width (ms)	Frequency (Hz)	Avg. Watt	Recommend Time
Whole face	60	20	10	6.6	10-15min.
Wound Healing (Before treatment)	80	30	15	7.2	5-10min.
Wound Healing (After treatment)	60	20	10	6.6	5min.

2.5 Technical Parameter Adjustment

Parameter instructions

Parameter	Range	Step	Recommend initial value
Power(Avg Watt)	0-30W	0.1	4.2W
Peak power	10-100%	5	70%
Pulse width	5-200ms	5	20ms
Frequency	1-200Hz	1	10Hz
Time	1-60Min	1	5min

2.6 Session setting

One to two times per week.

2.7 Treatment feeling

It can create little to no sensation, or it can make a gentle, soothing warmth. It feels like a “laser massage”.

3. After Treatment


- Do not bathe for 24 hours
- No immediate sun exposure
- Apply a moisturizing mask after facial treatments

VI Warranty Notice

Please take necessary precautions for the operation of the machine and handle piece, and note that the following situations cannot be warranted:

- 1) Power up the system without connecting the handle piece.
- 2) Regular drops of the handle piece.
- 3) Wrong input VAC.
- 4) Other manual operating mistakes.
- 5) In case of malfunction or emergency, follow these steps to disable the laser:
 - Depress the trigger on the handle which should stop all laser emissions.
 - Remove the interlock.
 - Push the RED EMERGENCY STOP BUTTON on the upper left corner of the machine if the interlock does not disable the laser.
 - Worst case scenario, unplug the power cord from the electrical outlet.

VII ABOUT LASERCONN



LASERCONN is an advanced Medical & Aesthetic laser manufacturer from Beijing, China.

Since 2007, the company's founders have been focusing on high-reliability and long-lifetime research of high-power diode lasers.

Laserconn has become the leading manufacturer of laser diodes with over 50 million shots(10Hz, 10J/cm², continuously shot). This is 5 to 10 times longer than lasers from Israel, Germany, and the USA. It is 20-30 times longer than other suppliers from China.

LASERCONN has been providing these advanced lasers for various dermatological applications, including hair removal, pigmented lesions, and tattoo removal, as well as physiotherapy, lipolysis and body contouring, vascular surgery and EVLT treatment, eye and face tightening and lifting, and many more applications.