

Instruction Manual





Single Laser Diode Applicator + Cluster Applicator

## **Precautionary instructions**

The precautionary instructions find in this section and throughout out this manual are indicated by specific symbols. Understand these symbols which are as follows:



**CAUTION** - Text with a "CAUTION" indicator will explain possible safety infractions that could have the potential to cause minor to moderate injury or damage to equipment.



**WARNING** - Text with a "WARNING" indicator will explain possible Safety infractions that witll potentially cause serious injury and equipment damage.



**DANGER** - Text with a "DANGER" indicator will explain possible safety infractions that are imminently situations that would result in serious injury.

**NOTE**: Throughout this manual, "NOTE" may be found. These NOTEs are helpful information to aid in the particular area or function being described.

Nomenclature: The following are the symbols used in manual and Sticker:

Hardware symbols:

	Single Laser Diode Applicator/Cluster (5 laser diode) Applicator
⊙-⊙⊕	DC Input Symbol/ Charging Point Symbol
<b>→</b>	Output Indication
CAUTION  The control of the control	CAUTION
DANGER	DANGER

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### 1. INSTRUCTION FOR THE USER OF WINLASE

Please read this instruction manual carefully before using **WinLase** because it is unsafe to start using the device before reading the whole manual. The instructions on the following pages will show you how to use and care for your **WinLase** in a general manner. You should be particularly familiar with the prescription information and precautions before proceeding.

- 1.1 CAUTION: This device must be used only under the continued supervision of a physician or licensed practitioner in the state he/she practices.
- DO NOT use sharp objects such as a pencil point or ballpoint pen to operate the buttons on the touch screen
- This unit should be operated in temperatures between 17° C and 45° C, transported and stored in with Relative Humidity 5% non-condensing at 30° C (+80° F).
- Handle Laser Applicators with care, Inappropriate handing of the Applicator may adversely affect its characteristics.
- Before each use, inspect Laser Applicators for cracks, which may allow the ingress of conductive fluid. Inspect Applicator cables and associated connectors before each use.
- The Winlase system is not designated to prevent the ingress of water or liquids. Ingress of water or liquids could cause malfunction of internal components of the system.

# 1.2 Warnings

- The long-terms effects are un known.
- Use safety goggle during treatment.
- No Metal Implants
- No reflective surface should be there in surrounding.
- Do not pull out cables.

### 1.3 INDICATIONS FOR USE:-

- Pain Relief:
- Anti-inflammatory/Healing:
- Accelerated Tissue Repair and Cell Growth:
- Improved Vascular Activity
- Wound Healing.
- Soft tissue injury

# 1.4 CONTRAINDICATIONS FOR LASER THERAPY

- Applications in the area of the eyes possibility of direct eye irradiation and retina damage
- Menstruation
- Tumour diseases
- Irradiation of malignancies and potentially precancerous growths
- Irradiation of patients with cochlear implants
- Irradiation of glands with inner secretion
- Patients with febrile conditions
- Pulse modes (both red and infrared beam) are not used on patients with anamnesis of epilepsy
- Pregnancy
- Do not treat patients that are on immune suppression therapy because the light may boost the immune system.
- Do not treat directly over a bacterial infection.
- Do not treat a port. The laser may stimulate the cells to block the port.

### 1.5 PRECAUTIONS:-

- Be careful treating children and sensitive adults, start with a smaller dosage for the first treatment.
- Avoid treating someone with a fever.
- Avoid treating or significantly reduce the dosage for patient that may be photosensitive
  or have a stronger reaction to light like patients that are taking any light sensitive drugs
  including thyroid medication.
- Avoid treating people with sensitive skin.
- Avoid treating any area with a sunburn or recent high sun exposure (including tanning booths). The laser can increase the reaction of these areas and increase the level of sunburn.
- Suspend therapy if the patient is feeling pain from the treatment or if they have any unusual reactions to the therapy.
- Avoid treating anyone with a coagulation disorder. Lasers can increase blood flow and this could result in unexpected consequences.
- Use Laser Safety Goggle when any of the applicator plugged into the device as well as during the treatment.

# 2.0 Introduction :-

The term LASER is an acronym for the Light Amplification by Stimulated Emission of Radiation. It can be considered to be a form of light amplifier which provides enhancement of particular properties of light energy and can be transmitted, reflected, refracted and absorbed. It can be placed within the electromagnetic spectrum. Laser Therapy is used for the relief of pain, to accelerate healing and decrease inflammation. When the light source is placed against the skin, the photons penetrate several centimetres and get absorbed by the mitochondria, the energy producing part of a cell. This energy fuels many positive physiological responses resulting in the restoration of normal cell morphology and function. Laser Therapy has been successfully used to treat a broad range of medical conditions, including musculoskeletal problems, arthritis and sports injuries.

# 3.0 Description

Therapy lasers tend to fall into a particular category of laser light known as 3A or 3B & are often referred to as 'soft laser' or 'mid laser' sources or 'cold laser'. The laser diode which we are using is of class 3b with 5-500 mW of average power: viewing beam is hazardous to eyes, diffuse reflections are safe. Class 3 lasers are sometimes referred to as cold lasers, and the therapy may be called LLLT for low-level laser therapy. The actual penetration of LLLT at common wavelengths is a widely debated point & it is common to find widely varying values cited in the literature. It is often claimed that because laser light is monochromatic, polarized & coherent it is capable of greater penetration than 'normal' (or non-coherent) light. This should give penetration depths of 3-7mm for visible red light & some 30-40mm for IRR laser light though 10-15mm is probably a more realistic penetration in human tissue.

LLLT is generally considered to be a non-thermal energy application, though one must be careful to appreciate that delivery and absorption of any energy to the body will result in the development of heat to some extent. Non thermal in this context really relates to the non-accumulative nature of the thermal energy.

Photobioactivation is a commonly used phrase in connection with LILT - meaning the stimulation of various biological events using light energy but without significant temperature changes.

Laser Therapy can have a more direct effect of nerve conduction characteristics and hence may result in reduced pain as a more direct effect of the therapy.

The concept is that light energy from a laser can reduce pain and inflammation, accelerate healing in damaged tissues, relax muscles, and stimulate nerve regeneration. It depends on wavelength power of laser and its capacity to penetrate into the body. Once you are in the infrared spectrum and above 800 nanometers in wavelength, laser energy penetrates like x-rays, but to achieve depth you need significant power or energy.

# 3.1 <u>Laser safety classifications</u>

The FDA established the laser safety classification system primarily to indicate the risk of injury to the eyes, not to specify clinical performance.

Class 1 Safe under reasonable operation Class 1m generally safe: some precaution

required

Class 2M UV or IR light at low average power, generally safe LED systems Class 3R (A)

Safe for viewing with the unaided eye

Class 3a 1-5 mW of average power

Class 3b 5-500 mW of average power: viewing beam is hazardous to eyes, diffuse

reflections are safe

Class 4 >500mW average power all the way to industrial megawatts: hazardous to

eyes under all conditions.

# 3.2 FEATURES

One device for Single or Cluster Applicator.

• Continuous, Pulse and Sweep therapy options.

• Preset protocols for laser treatment.

### 3.3 TECHNICAL SPECIFICATIONS

MODEL Winlase Laser Therapy

Part No. H02M03, H05M01 (Laser Applicators)

Display 8 "TFT with Touch Panel.

Knob Rotary Encoder with inbuilt button.

No. of Applicators Two (Single Laser Diode Applicator, Cluster applicator)

Modes operation Continues, Pulse, Sweep

Wavelength 850nm Central Wavelength of diode. Power Single diode Applicator - 200mW

Cluster Applicator-500mW

Dosage Max. 100 Joules

Frequency In Pulse Mode Frequency Range is 10 to 5000 Hz.

Laser Class 3b

Dimension 365 x 325 x 365 Input +24Volts DC, 3.75A

Standard accessories Laser Safety Goggle with optical density +4D

(800-2000nm wavelength)

# 4. ACCESSORIES

**WinLase** comes complete with all the necessary accessories and below is a list of items that are included:

S.No.	Particulars	Qty.
01	Winlase Devise	1
02	Laser Applicators Single Laser Diode Applicator - H02M03	1
03	Laser Applicators Cluster Applicator (5 Laser Diode) H05M01	Optional
04	AC Cord	1
05	Adapter Input : 100-240V AC, 50/60 Hz Output : 24V DC (3.75A)	1
06	Applicator Stand	1
07	Instruction Manual / CD	01
08	QRF	01
09	Laser Safety Goggle with optical density of 4+ (800-2000nm Wavelength)	01
10	Oval Carry Bag for Applicator	01
11	Warranty Card	01

WinLase Instruction Manual

# **5. SPECIFICATIONS**

### SYSTEM SPECIFICATIONS:



Height WS4U unit 365 mm

Power

+24Volts DC, 3.75A Input

CLASS II **Electrical Class** Laser Diode Used Class III B

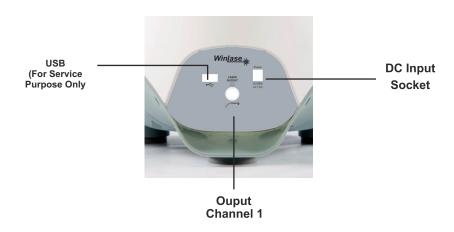
**Electrical Type** 

Between  $+17^{\circ}$  C to  $+45^{\circ}$  C **Operating Temperatures** 

# **6. CONTROLS AND FUNCTIONS**

WinLase is an innovative touch screen desktop device providing Laser Therapy through Single channel.







As we rotate the Intensity Control Knob, the Intensity on the screen keeps on Increasing / Decreasing The Value of intensity set is also displayed on the screen.

### **PROTOCOLS**

The device has predefined set of 8 protocols namely:-

- NECK
- JAW
- SHOULDER
- ELBOW
- HAND
- BACK
- HIP
- KNEE

### **TREATMENTS**

Above mentioned protocols provide following predefined treatments

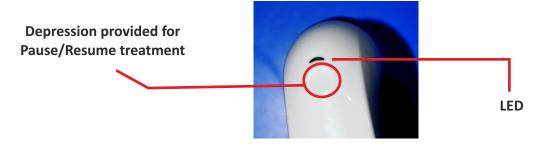
- Whiplash
- Radiculopathy
- Chronic pain
- Osteoarthritis
- Arthritis
- Tendonitis
- Periarthritis
- Bursitis
- · Epicondylitis
- Arthrosis
- Sciatic pain

#### Safety Advice for laser diode used

This laser diode emits highly concentrated IR light which can be hazardous to the human eye. This diode is classified as CLASS 3 laser product according to IEC 60825-1 and 21CFR Part 1040.10 Safety Standards.

### **INDICATOR**

- When treatment starts, led on applicator (whether single laser diode applicator or cluster applicator) glows and it blinks when user pause the treatment.
- **Blue LED** in single diode applicator and **Red LED** in cluster applicator ,glows indicating the zone of therapy and also indicates start of treatment.
- There is a depression provided on the applicator just below the blue led, by long press on that the treatment goes in PAUSE state and again long press user can RESUME the treatment.



# 6.3 How to Operate

Given below are pictures and detailed description of the elements of the touch screen interface.

STEP 1: CONNECTS ADAPTOR, SWITCH ON DEVICE POWER SWITCH PROVIDED AT THE LEFT BOTTOM SIDE.

The device will display splash screen with product name and version as shown in below image. Device will display HOME Screen with Programs and Option. When Applicator is not plugged it shows Unplugged in highlighted form.



Splash Screen



Home Screen

# **STEP 2: SELECT ANY TREATMENT MODE**

After connecting applicator it shows Ready state and we can select any treatment mode as shown in below image.



# **STEP 3: START THE TREATMENT**

Select time and treatment dosage from the given range and start the treatment



# **STEP 4: SET TREATMENT TIME & DOSAGE**

During treatment we cannot set the parameters, if want to stop the treatment before completing the treatment time we can do so by selecting STOP.



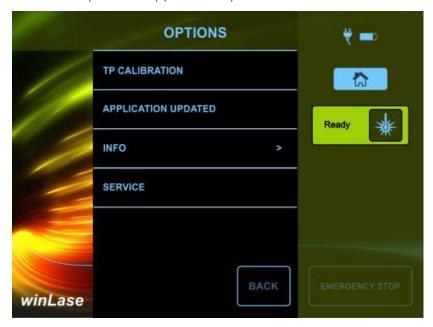
**STEP 5: TO SAVE TREATMENT** 

When treatment completes we can save it using STORE



# **STEP 6: DEVICE OPTIONS**

Other information regarding device is here, also option for application update and other services



**STEP 7: SWITCHING OFF DEVICE** 

When treatment completes, buzzer blows indicating that treatment is over. We can switch off the device with the help o rocker switch provided.

# 7.0 TROUBLESHOOTING

Given below are pictures and detailed description of the elements of the touch screen interface.

Observation	Possible Cause	Remedy
After inserting applicator into the device, status on display shows unplugged. It is the rare case observed.	Due to loss of connection and device is unable to detect the applicator	Handle applicator with care and try to reinsert or redo the calibration
After inserting applicator into the device, status shows uncalibrated	Applicator lost calibration	Need to re-calibrate through software.
Skin irritation at applicator placement site	Problem in Applicator	Change the applicator

# (In case of replacement or ordering)

90AY69001	LPRD APP HEAD2 Applicator Assembly BOM
90AY69002	LPRD APP HEAD5 Applicator Assembly BOM
50SEE00095	Adapter 24V DC @ 3.75A
40CFG00003	Bag Oval Black BLD T250 W/out Logo Printing
50CME00233	Laser Goggle;OD4+;800-2000 nm
40SEE00033	AC Cord Round 3Pin 5A

#### 8.0 WARRANTY

This product warranty extends to the original consumer /purchaser of the product.

#### **Warranty duration**

This product is warranted to the original consumer for a period of one (1) year from the original purchase date.

#### Warranty coverage

This product is warranted against defective materials or workmanship. This warranty ceases if the product has been damaged by accident, in shipment, unreasonable use, misuse, neglect, improper service, commercial use, and repair by unauthorized personnel. This warranty does not extend to any units which are used in violation furnished by manufacturer, or to units which have been altered or modified, or to damage to products or parts there of which have the serial number removed, altered or defaced or rendered illegible. The warranty doesn't cover normal wear & tear or replacement of electrode cables, electrodes and other accessories.

#### Warranty disclaimers

This warranty is in lieu of all warranties expressed or implied and no representative or person is authorized to assume for manufacturer/ any other liable in connection with the sale of our products. There shall be no claims for defects or failure of performance or product failure/ any theory of tort, contract or commercial law including, but not limited in negligence, gross negligence, and strict liability, breach of warranty and breach of contract. Some states do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations may not apply to you.

Manufacturer is not responsible or liable for indirect special or consequential damages arising out of or in connection with the use performance of the product or other damage with respect to loss of property or loss revenues or profit.

#### Legal remedies

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

#### **Warranty performance**

During the above one-year warranty period, a product with a defect will be repaired or replaced with a reconditioned comparable unit at distributor's option when the product is returned to the distributor. The repaired or replacement product will be in warranty for the balance of the one-year warranty period and an additional one-month period. No charge will be made for such repair or replacement.

#### **Consumer service**

For in warranty service for a product covered under the warranty period, no charge is made for service and return postage. Please return the product insured, packed with sufficient for service and return postage. Please return the product insured, packed with sufficient protection, postage insurance, prepaid to the address. Customer's duty/brokerage fee, if any, must be paid by the consumer.

#### Out of warranty service

There will be charges rendered for repairs made to the product after the expiration of the aforesaid one (1) year warranty period, after purchaser is advised appropriately.



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