

# ADVANCED LASER THERAPY



## INSTRUCTIONS MANUAL

**Sun Medisys Inc.**

An ISO 9001:2015 Certified Company

An ISO 13985:2012 Certified Products

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# SUNMEDISYS INC.



Welcome to the Sun Medisys Inc.

Thank you for trusting & considering Sun Medisys Inc.

CONGRATULATIONS for purchasing our next generation Computerized LASER Therapy Unit. It provides effective management for most of the pain conditions.

We understand what it takes to get this, and certainly there must have been lots of planning and research involved before the purchase.

Sun Medisys Inc., an independent run business, started its operation way back in 2000.

With great integrity, high ethical values, stringent quality control backed up by highly motivated team putting tremendous efforts and disciplined activity in business; we are a registered ISO 9001:2015 manufacturer.



We reassure you that what you have chosen is right.

Thanks

To know more, log on to:  
[www.sunmedisys.com](http://www.sunmedisys.com)



# INTRODUCTION

Congratulations for purchasing our next generation LASER Therapy Unit, designed to suit almost every clinical application to provides effective relief of muscle and joint ache and stiffness. The LASER probe has AlGaAs diode that emits coherent light at the RED wavelength of 685 nm.

The newly designed control panel has 128x64 graphic panel, integrated keyboard to select parameters or various mode & sensor cap to test the LASER power in mW. The main unit allows the clinician to select 60 programs pre-sets in program mode or create their own program in modify section. User programs will be saved in patient section for the use in next session. In all programs, treatment parameters are fixed which can be selected via membrane keyboard. During treatment all parameters will be displayed on graphic LCD.

# GENERAL INSTRUCTIONS

This manual provides necessary information about the operation of this LASER Therapy Unit. This Manual must be carefully studied before putting the unit into operation. Before administering any treatment to a patient, you should become acquainted with the operating procedures as well as the indications, contraindications, warnings and precautions. Low intensity LASER therapy has been applied to a wide range of conditions with successful outcomes. These include wound healing, treatment of arthritic conditions, treatment of soft tissue injuries and pain relief. It is intended that the unit should be used by qualified healthcare professionals such as physiotherapists. Effectiveness of the treatment is dependent upon correct use of LASER therapy and proper knowledge of quantum physics.

## INDICATIONS

- Increase of local blood circulation.
- Relief of minor muscle and joint aches, pains, and stiffness.
- Relaxation of muscles.
- Relief of muscle spasms.
- Relief of minor pain and stiffness associated with arthritis.
- Relief of minor pain.
- Relief of muscle and joint pain.
- Relief of muscle spasms.
- Relief of associated minor stiffness and pain associated with arthritis
- Relaxation of muscles.

## CONTRAINDICATIONS

- Where analgesia may mask progressive pathology, and where the practitioner would normally avoid the use of any other analgesia in order to retain the beneficial aspects of pain.
- For direct aim into the eyes of humans or animals.
- Over areas injected with steroids in the past 2-3 weeks.
- Over areas that are suspicious or contain potentially cancerous tissue.
- Over areas of active hemorrhage.
- Over a pregnant uterus.
- Over the neck (thyroid or carotid sinus region) or chest (vagus nerve or cardiac region of the thorax).
- Directly over areas with open wounds, unless covered with a clear protective barrier.

- Treatment over sympathetic ganglia.
- For symptomatic local pain relief unless etiology is established or unless a pain syndrome has been diagnosed.
- On patients suspected of carrying serious infectious disease and or disease where it is advisable, for general medical purposes, to suppress heat or fevers.
- Over or near bone growth centers until bone growth is complete.
- Over the thoracic area if the patient is using a cardiac pacemaker
- Over or applied to the eye.
- On ischemic tissues in individuals with vascular disease where the blood supply would be unable to follow the increase in metabolic demand and tissue necrosis might result.
- Over an area of the spinal cord following a laminectomy, i.e., when major covering tissues have been removed.
- Over anesthetic areas.
- On patients with hemorrhagic diatheses.

## *STANDARD ACCESSORIES*

- LASER Probe : 01 No.
- Safety Goggles : 02 No.
- Key Pair : 01 set
- Mains Power Cord : 01 No.
- User's Manual : 01 No.

# PROGRAM LIST

Serial No.	Program Name	Mode	Time	Frequency (Hz)
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## PHYSIO

1	Achillodynie	Continuous	10 min	0000
2	Analgesia	Pulse	6 min	0010
3	Arthritis	Pulse	4 min	0008
4	Arthritis Rheumatica	Pulse	3 min	0010
5	Arthritis Uratica	Pulse	2 min	0005
6	Arthrosis	Continuous	6 min	0000
7	Bursitis	Continuous	5 min	0000
8	Calcar Caloanei	Pulse	4 min	0010
9	Contusio	Pulse	3 min	0008
10	Decubitus	Pulse	2 min	0006
11	Distorsio	Pulse	2 min	0010
12	Enthesopathia	Pulse	5 min	0012
13	Epicondylitis	Continuous	10 min	0000
14	Haematoma	Pulse	2 min	0008
15	Chondropathia Patelly	Pulse	2 min	0010
16	Induratio Penis Plastica	Continuous	3 min	0000
17	Ischialgia	Pulse	3 min	0010
18	Migraena	Pulse	2 min	0010
19	Morbus Dupuytren	Continuous	5 min	0000
20	Myorelaxatio	Pulse	4 min	0008
21	Neuralgia	Pulse	2 min	0005
22	Oedema	Pulse	5 min	0002
23	Paresis Nervi Facial	Pulse	4 min	0005
24	Sacralgia	Pulse	10 min	0002
25	Spinal Dorsalis	Pulse	6 min	0010
26	Spondylarthritidis Ancy	Continuous	4 min	0000
27	Sy. Canali Carpi	Pulse	2 min	0010
28	Sy. Tietz	Continuous	6 min	0000
29	Sy. Vertebralis	Pulse	2 min	0010
30	Tendopathia	Continuous	3 min	0000
31	Tendovaginitis	Pulse	3 min	0010
32	Tinnitus	Pulse	10 min	0005

Serial No.	Program Name	Mode	Time	Frequency (Hz)
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**NEURO**

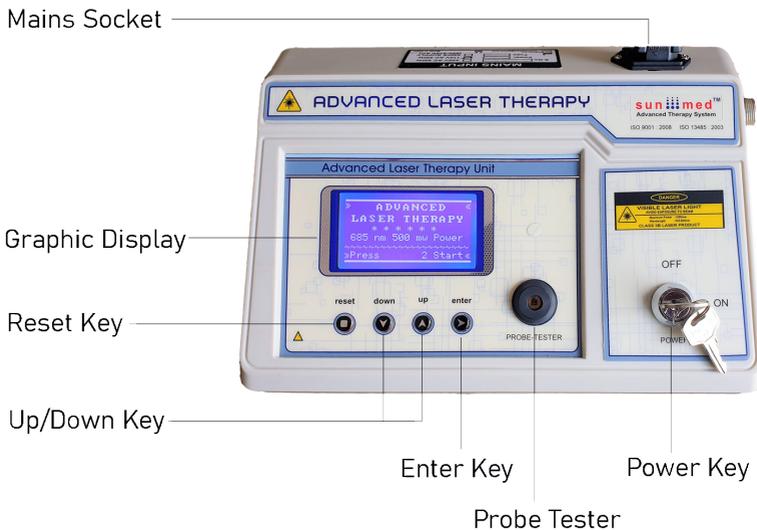
33	Calcar Calcanei	Continuous	6 min	0000
34	Enthesopathia	Pulse	4 min	0010
35	Induratio P. Plastica	Continuous	3 min	0000
36	Ischialgia	Pulse	2 min	0010
37	Migraena	Pulse	6 min	0015
38	Morbus Dupuytren	Continuous	5 min	0000
39	Neuralgia	Pulse	4 min	0006
40	Paresis Nervi Facial	Pulse	3 min	0008
41	Sacralgia	Pulse	2 min	0010
42	Spinal Dorsalis	Continuous	5 min	0000

**DERMA**

43	Acne	Pulse	6 min	0006
44	Alopecie	Continuous	5 min	0000
45	Cicatrix Chealoidum	Pulse	6 min	0010
46	Cicatrix Recens	Continuous	5 min	0000
47	Combustio	Pulse	8 min	0010
48	Decubitus	Pulse	5 min	0006
49	Dermatitis	Pulse	3 min	0008
50	Dermatitis Perioralis	Pulse	4 min	0005
51	Eczema	Pulse	3 min	0006
52	Furunculus	Pulse	6 min	0002
53	Haematoma	Pulse	2 min	0008
54	Herpes Zoster Simplex	Continuous	5 min	0000
55	Lichen Planus	Continuous	1 min	0000
56	Rosacea	Pulse	1 min	0005
57	Sanatio Postoperativa	Pulse	10 min	0012
58	Striae	Pulse	2 min	0008
59	Ulcus Cruris	Pulse	4 min	0005

# DESCRIPTION OF SWITCHES

1. Mains Socket - On back panel to connect the unit to mains supply.
2. Graphic Display - The screen that shows all the operations and functions being performed in LASER Therapy Unit.
3. Power Key/Switch - When the key operating power switch is turned to right, the equipment starts. To switch off the unit same key will be used in reverse, or turned to left.
4. Reset Key - Use this key to restart the equipment from the beginning.
5. Up/Down Key - Use these keys to navigate through the different menus, functions and programs inside the equipment.
6. Enter Key - Use this key to enter next menu, and/or select functions and programs and enter values.
7. Probe Tester - Use this optical sensor to test the power of the probe.



# OPERATING PROCEDURE

Upon receipt, open the box and check for any visible damage which may have occurred in transit. If any signs of damage are found, then retain all packing material and inform the carrier and the company or its agent from whom the unit was purchased.

If everything looks good, connect the unit to a mains supply with the main cable supplied with the unit. The electrical supply must have provision for an EARTH (GROUND) connection. If the integrity of the earthing is in doubt, do not connect the unit to MAIN SUPPLY. This may cause instability in output or malfunction in operation. CHECK AND CORRECT THE MAIN SUPPLY FIRST.

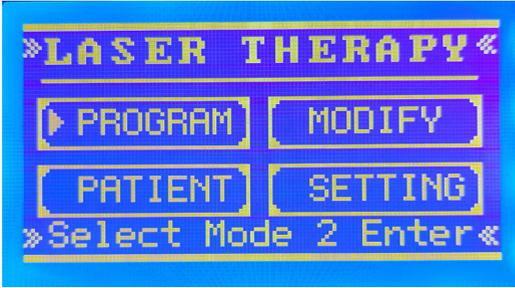
Operation of the unit in close proximity (less than 1 metre) to short wave therapy or radio frequency equipment could result in the output of the LASER being affected.

Mains Operation : Connect the mains cable to the IEC socket on the rear side of the unit and there pin plug to a suitable power output. Now turn power key switch to right (clockwise), and the graphic LCD will initialize and the Home Screen will load.



Home Screen

Now press <sup>enter</sup> key to enter Mode Select Window.



Mode Select Window

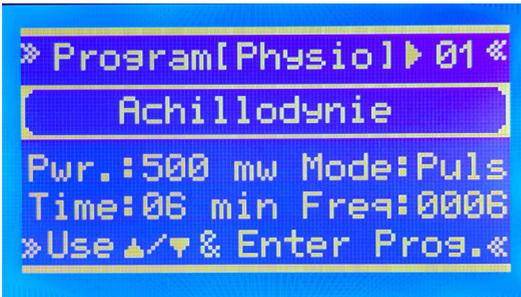
In the main menu, 4 options are available:

1. Program
2. Patient
3. Modify
4. Setting

Use  $\downarrow$   $\uparrow$  keys to scroll/change mode while the selected option will blink continuously. Press  $\rightarrow$  key to enter the selected mode. Use  $\square$  key to reverse this process.

## PROGRAM MODE

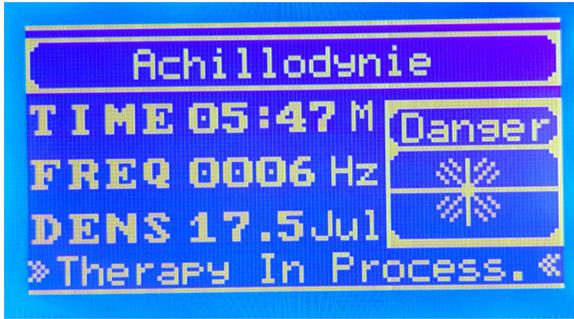
In PROGRAM mode, 59 preset programs stored, which cannot be changed by the user. Use  $\downarrow$   $\uparrow$  keys to navigate through the list of programs and use  $\rightarrow$  key to select the appropriate program. Use  $\square$  key to reverse this process.



Program Select Window

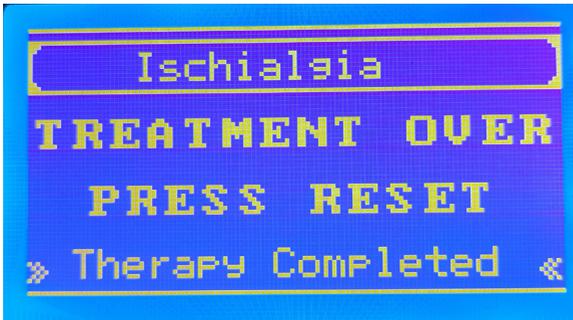
At this stage unit will start delivering energy to the patient & all the required parameters will displayed on the graphic LCD.

During treatment, danger symbol of LASER will keep flashing & “THERAPY IN PROCESS” will be displayed.



Treatment Begins

When the treatment is over, the buzzer will start beeping and the display will show the message “TREATMENT OVER”. Now press  key to start the unit from the beginning.



Treatment Completed

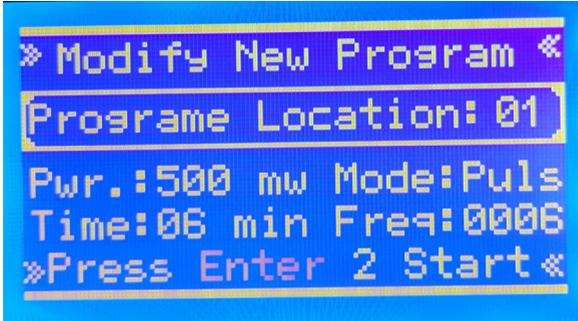
## MODIFY MODE

In MODIFY mode, user can create a new patient protocol. First enter patient/pathology name by using   keys to choose between different alphabets. Use  key for selecting alphabets or putting space between them. Maximum 21 letter space is available for creating names. Now press  key to bring cursor to set time parameter and set the time(min.) by using   keys (1 min to 30 min). Now press  key to set mode parameter, then select mode, i.e. 1) Cont(continuous) or 2) Puls(-pulsed).

If user selects cont., then program will be saved with a program location number. If selected puls, then user can select frequency from:

- 1hz to 100hz @ 1hz steps
- 100hz to 1000hz @ 100hz steps
- 1000hz to 5000hz @ 500hz steps

Now press  key to save data.

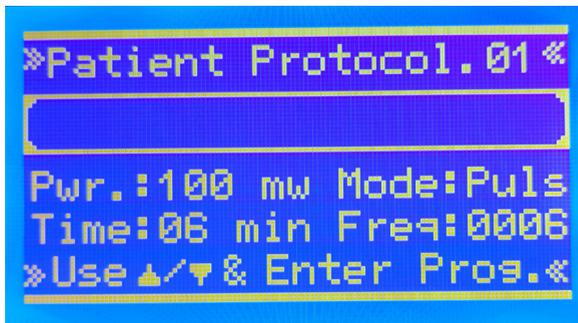


Modify Mode Window

The program will be saved with a new location number, and can be accessed through PATIENT mode. User can now start the program.

## PATIENT MODE

In PATIENT mode, user can select patient protocol and start treatment instantly, although, the different parameters in the protocol cannot be changed. Use MODIFY mode to create patient protocol and the data will be saved and transferred in PATIENT mode automatically.



Patient Mode Window

## SETTINGS MODE

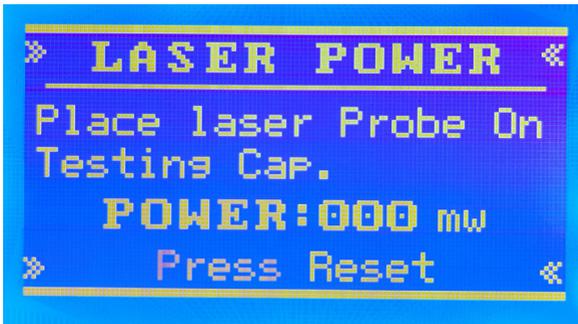
In setting mode, the user is provided with 3 options:

1. Test LASER Probe
2. Erase Memory
3. Information

Settings Window



1. TEST LASER PROBE : User can select this option to check the power of the LASER probe. Place the LASER probe on the testing cap and try to focus into the center of probe. Probe power will be displayed in mW.

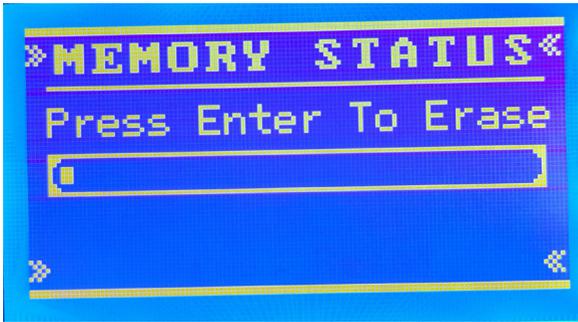


Probe Test Window

Upon testing, the power value should read 100mW. That means the LASER probe is working fine.

2. ERASE MEMORY : User can select this option to erase all patient data. Once selected, press  key to erase all patient data. Within a few seconds all memory will be erased.

**WARNING:** All data and protocols will be permanently deleted. Please proceed with caution, as the deleted data cannot be restored.



Erase Memory Window

3. **INFORMATION** : User can select this option to check relevant information related to the product.

## PRECAUTIONS

1. The Unit must be grounded during application.
2. Do not use this unit near other high frequency/electromagnetic device.
3. Do not use sharp objects such as a pencil point or ballpoint pen to operate the unit buttons on the control panel as damage may result.
4. Only the supplied/recommended accessory must be used with unit.
5. Handle the probe with care. Inappropriate handling of the probe may adversely affect its characteristics.
6. Inspect probe cables and associated connectors before each use.
7. Do not apply this unit in conditions of pregnancy.
8. Do not disassemble, modify, or remodel the unit or accessories.
9. Failure to use and maintain the Sun Medisys LASER Therapy Unit and its accessories in accordance with the instructions outlined in this manual will invalidate your warranty.

# WARNING

- Before using the equipments, the user should read carefully the instructions contained in this manual.
- Before treating a patient, the user should familiarize himself with the operating modes and have clear knowledge of indications & contraindications for the use of apparatus.
- Please insure this manual is readily available at all times to the personnel authorized to use the apparatus.
- For safety purpose, the power cord has been fitted with an earthed plug.
- The unit must be connected to approved power supply system.
- Do not use the apparatus close to SWD or MWD devices, may cause instability in output and functioning in program.
- Never leave the patient unattended during the treatment.
- The apparatus may not be used in hydrotherapy rooms
- SunMedisys will not be responsible for Therapy Effects resulting from an improper use of the apparatus.

# TECHNICAL SPECIFICATIONS

LASER Beam Class	3B
LASER Type	Semiconductor GaAs
Modes Of Operation	Continuous; Pulse upto 5 KHz
Wavelength	685 nm
Maximum Probe Power	100 mW
Power Density	0.20 w/cm <sup>2</sup>
Max Energy within 1 min	3.0 joule
Beam Surface	0.10 cm <sup>2</sup>
No. of pre-programs	59

# WARRANTEE CERTIFICATE

Customer Name: \_\_\_\_\_

Address: \_\_\_\_\_

Equipment Name: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Warranty Form: \_\_\_\_\_ To \_\_\_\_\_

- The Instrument is under warrantee by the manufacturer for one year from the date of purchase and during this period, the defective parts shall be replaced or repaired, free of charges, If it is due to faulty material or workmanship, subject to the following Terms and Conditions.
- The Instrument should be used properly in accordance with the instructions given in the instruction manual.
- The warranty would be void if attended by other person except by our authorised service centre / dealer.
- Replacement of parts made of Rubber Electrodes, Laser Probe, Laser Diode, enclosure and carry bag are not covered within this Warranty.
- The cost incurred bringing the machine to our dealers premises or service centre and back are to borne by the customer.
- The Warranty does not cover the Instrument operated outside the range of stipulated Electric Supply i.e. below 198 volts and above 242 Volts.
- The decision of the manufacturer is final in all cases of warranty claims.

HERE CERTIFIED  
Your's Truly  
Sun Medisys Inc.