

R-2500

INSTRUCTION MANUAL



SPINAL REHAB SOLUTIONS, INC.



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CAUTION: Federal law restricts the sale of this device to, or the order of a physician, veterinarian or any other practitioner licensed by the law of the state in which he practices.

Please read this operating manual carefully before using Russian Stimulator R-2500 because it is unsafe to start using the device before reading the whole manual. The instructions on the following pages will show you that how to use and care for your R-2500 in a general manner. You should be particularly familiar with the prescription information and precautions before proceeding.

INDICATIONS FOR USE

Russian Stimulator provides Electrical Muscle Stimulation (Russian) is indicated for:

- Relaxation of muscle spasm.
- Prevention or Retardation of disuse atrophy.
- Increasing local blood circulation.
- Muscle re-education.
- Immediate post-surgical stimulation of calf muscles to prevent venous thrombosis. Maintaining or increasing range of motion.

CONTRAINDICATIONS

- Stimulation is contraindicated for patients using cardiac pacemakers, It shouldn't be used on patients with known myocardial arrhythmia without physician evaluation.
- Stimulation should not be applied transcranially in any mode.
- Stimulation should not be applied over the carotid sinus nerves. Particularly on the patient with a known sensitivity to carotid sinus reflex.
- Stimulation should not be applied over swollen, infected or inflamed areas of skin eruptions, e.g. phlebitis, thrombophlebitis, varicose veins, etc.
- Stimulation should not be applied over or in proximity to cancerous regions.



WARNINGS

- For external use only.
- Safety of stimulation during pregnancy or delivery has not yet been established
- Do not stimulate the eye area.
- This therapy is ineffective for pain of central origin.
- Stimulation should not be applied over the neck or mouth, severe spasm of the laryngeal and pharyngeal muscles may occur and the contractions may be strong enough to close the airway or cause difficulty in breathing.
- Stimulation is a symptomatic treatment and as such suppresses the sensation of pain, which would otherwise serve as a protective mechanism.
- Powered electrical stimulators should be kept out of the reach of children.

PRECAUTIONS

- Caution should be used for patients with suspected or diagnosed heart problems and epilepsy.
- Some patients may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium.
- Electrode placement and stimulation settings should be based on the guidance of the prescribing practitioner.
- Powered electrical stimulators should be used only with the leads and electrodes recommended for use by the manufacturer.

ADVERSE REACTIONS

- Skin irritation and burns under the electrodes may occur.
- Possible allergic skin reaction to tape or gel.



CONDITIONS THAT AFFECT USE

- The unit should not be used in wet environment.
- Patient should not move while the treatment is ON. This may cause electrodes to leave the skin or electrode wire may break.



INTRODUCTION

Russian Stimulator R-2500 is an electrotherapy unit producing Russian Medium Frequency Stimulation with carrier frequency of 2500 Hz square-wave through two channels and selectable beat frequency (1-70 Hz). The user can select contraction/ relaxation time period as well as two pole or four pole application.

Russian Stimulator R-2500 is handy and works on 9 Volts battery or adaptor, so the treatment can be provided any time and anywhere (even at the bedside).

Dual safety measures have been taken by providing insulation between power line inputs and outputs.

The instrument **Russian Stimulator R-2500** is attractive and fitted in an ABS body enclosure that is strong and sturdy. The unit is supplied in a compact pouch to carry along.

ACCESSORIES

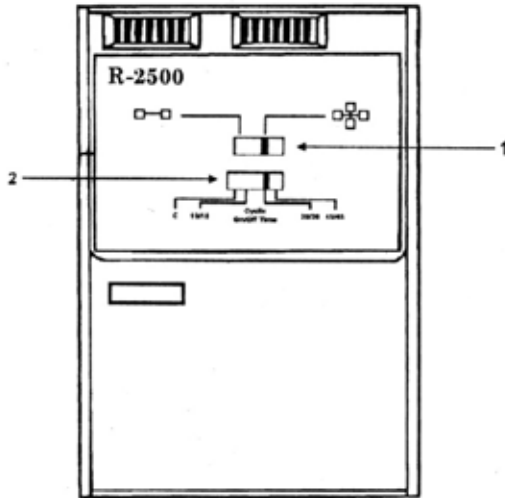
Russian Stimulator R-2500 comes complete with all the necessary components to perform electrical stimulation. Below is a list of accessories provided with the unit.

- | | | |
|-----------------------------|---|-------------------|
| 1. Electrode Cable (2 Core) | : | 02 |
| 2. Round (2.75" Diameter) | : | 04(Self Adhesive) |
| 3. Adaptor | : | 01 |
| 4. Manual | : | 01 |
| 5. Carry Bag | : | 01 |



TECHNICAL SPECIFICATION

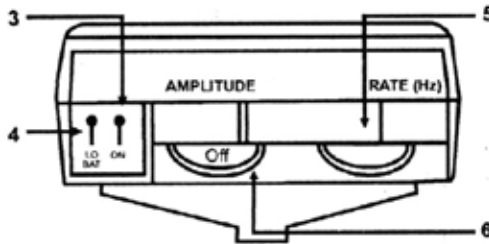
Number of Channels	:	Two
Carrier Frequency	:	2500Hz. (± 100 Hz.) Fixed
Difference Frequency	:	1 (± 0.5) to 70 (± 20 Hz.) Adjustable
Output Voltage	:	28 \pm 2. 5 volts (500 ohm load)
Power Source	:	+9V Alkaline Battery or Adaptor provided with the unit
Stimulation Types	:	Russian Stimulation
Waveform	:	Symmetric Biphasic Squarewave
Contraction & Relaxation Time	:	Continuous, 10/10, 20/20, 45/45
Ramp UP/Down	:	In built 2 ± 0.5 seconds (Up and Down)



1. **Mode Selector Switch - 2 Pole/4 Pole:** Slide this switch to the left to select 2 Pole application and to the right to select 4 Pole application.
2. **Cyclic ON/OFF Time Switch:** Slide this switch to select from different options of Contraction/Relaxation period. There are following four options available:
 - **C** Output is continuous that is no relaxation period in this selection.
 - **10/10** 10 seconds Contraction Period and 10 seconds Relaxation period.
 - **20/20** 20 seconds Contraction Period and 20 seconds Relaxation period.
 - **45/45** 45 seconds Contraction Period and 45 seconds Relaxation period.



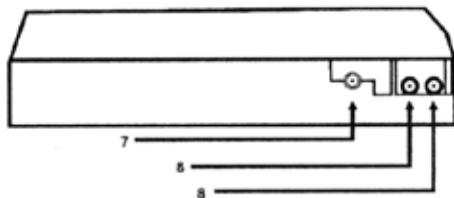
(TOP VIEW)



- 3 **Power ON Indicator Light:** The power ON indicator light shows whether the unit is ON/OFF.
- 4 **Low Battery Indicator Light:** The low battery indicator light remains off when the R-2500 is in operation and the battery is at sufficient strength for normal operation. The light will glow when the battery requires replacement. The light will cease glowing when the battery is completely drained. When the unit is turned ON or OFF, the indicator light may flash for 1 to 3 seconds, which is normal and doesn't indicate a low battery condition.
- 5 **Rate (Hz.) Frequency Control Knob:** Turn the Rate (Hz.) Frequency Control Knob clockwise to set desired frequency.
- 6 **Amplitude Control Knob:** It controls the strength of the electrical stimulation delivered through both channels. The OFF position indicates that power to the unit is turned OFF. No stimulation is delivered at the OFF setting. Slowly turn the amplitude control knob clockwise until a strong and yet comfortable sensation is felt. Always set the Amplitude Control Knob to the OFF position before selecting all the parameters. Inserting the lead wires and removing or replacing battery.
- 7 **Adaptor Receptacle:** You can also use adaptor instead of battery. Insert adaptor plug into the adaptor receptacle. Whenever you use adaptor, the battery power supply will be cut off automatically.



(SIDE VIEW)



8. **Output Sockets:** The lead wire plugs are inserted into the output socket. When applying only one pair of electrodes, use the socket Channel 2. No stimulation is delivered from socket Channel 1 when one pair of electrodes will be placed. Use both sockets when applying two pairs of electrodes.

HOW TO USE R-2500

1. **Clean the skin thoroughly:** Proper skin care will help make your Electrical Muscle Stimulation (Russian) more comfortable and trouble-free. Using mild soap and water, wash the skin areas where the electrodes will be placed. Rinse and thoroughly dry the skin. If necessary, remove excess body hair.
2. **Check battery:** Switch ON the instrument by turning ON the amplitude control. If battery is poor, LED will glow LOW BAT. indication that battery is low. Replace the battery if needed or use the Unit with an adaptor.
3. Follow the instruction included with the electrodes.
4. **Connect the electrodes to the lead wires:** Insert the connector pin into the appropriate hole in the electrode. Push the connector pin in all the way. Make certain no metal is exposed.
5. **Place electrodes on skin:** Apply the electrodes to the exact site indicated by your physician following the instruction included with the electrode system. Make sure that the electrodes are placed in firm contact with the skin.
6. **Connect lead wires to the output sockets**
7. **Make sure the Unit is in OFF position.**
8. **Select 2 or 4 Pole application mode by sliding the Mode Selector Switch.**



9. **Select Cyclic ON/OFF Time** by sliding the Cyclic ON/OFF Time Switch.
10. **Set the frequency by turning the RATE (Hz.) Frequency Control Knob** clockwise to the desired position or position your health professional has indicated.
11. **Turn ON the Amplitude Control Knob:** Slowly turn ON the R-2500 by turning the amplitude control knob in clockwise direction. Turn it up to the desired strength that your health professional has indicated to you.
12. **Turn OFF the Amplitude Control Knob:** When your prescribed treatment is finished, turn the Amplitude Control Knob to the OFF position. Then disconnect the lead wires from the unit and remove the electrodes from your skin.

WARNING : Always turn the Stimulator OFF before attempting to remove wires or electrodes



MAINTENANCE

Cleaning

- The soiled unit should be cleaned with a damp cloth.
- Follow the care of electrode as indicated on the package.
- For routine cleaning of the electrode cable use soap and water. Thoroughly dry after cleaning.

Warning

- Do not pull out cables.
- Electrode wires should be kept loosely wound or breakage may occur.

Storage

- Keep the unit properly covered when not in use. This will help to keep out of dust.
- Make special space to keep the unit after the treatment is over.

Caution : Do not store the unit in a damp area, Dampness may effect device and cause rust.

Battery Replacement

- Turn the Amplitude Control Knob to the OFF position. Slide the body enclosure part upward. This exposes the battery for removal.
- Slide the enclosure into the grooves on the case and push down until the battery and control panel are covered.

Electrodes Care

- Use the electrodes recommended by your physician and obey the instructions attached to the electrodes.
- After using any of these electrodes, grasp the corner of the electrode
- Reapply the release liner to the adhesive side of the electrode.



Store the electrode in a re-sealable pouch or plastic bag.

- Do not pull on the electrode or wire connection.
- To prolong the life span of electrodes, re-moisten them by gently applying a few drops of tap water with your fingertips when the electrodes seem to dry up or losing their adhesive.
- Replace self adhesive electrodes when needed.
- After repeated usage, self adhesive electrodes begin to lose their adhesives and therefore deliver less stimulation.

Skin Care

- Apply electrodes on clean, dry and unbroken skin only.
- Before applying electrodes and after removing always wash the site mild soap and water. Then rinse and dry thoroughly.
- Excess body hair in the electrode placement site should be clipped and not shaved.
- If clinician recommends skin prep usage, follow instruction as directed.
- When applying electrodes, do not stretch skin or electrodes.
- When removing electrodes-always peel back in direction of hair growth, or moisten edges or underside of electrode.
- Applying unflavored Milk of Magnesia over electrode placement sites after removing electrode helps maintain the natural pH of the skin and reduces irritation problems.
- If skin irritation arises and persists from the use of Electrical Muscle Stimulator and certain type of electrodes. Discontinue usage immediately and consult your clinician.



TROUBLE SHOOTING

If none of the L.E.D. are glowing after turning ON the Amplitude Control Knob then:

- Turn the Amplitude Control Knob to OFF position
- If the device still does not switch ON, inform supplier.

Observation	Possible Cause	Remedy
Weak stimulation or no stimulation even at maximum amplitude setting	Poor electrode contact or insufficient gel on the electrode	Check channel ON/OFF position. Check the electrodes
	Electrode conduction is low, lead wire is worn out	Change electrodes Changes electrode wire
Stimulation strong	Improper electrode placement	Check electrode placement
Uncomfortable or too strong stimulation	Amplitude too high	Reduce amplitude
Skin irritation at electrode placement site	Improper contact/Gel dried up	Wet or change the electrode
Sudden high intensity while increasing amplitude	Increasing amplitude too fast	Increase amplitude slowly giving time to patient to indicate his comfort
Machine stops working	Low battery	Change battery



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 (1) year from the 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, repair by unauthorized personnel or cause not arising out of Defect in materials or workmanship. 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 thereof which have had the serial number removed, altered or defaced or rendered illegible. The warranty doesn't cover normal wear & tear or replacement of battery, elec. cord, electrodes & 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, 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.

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 distributors 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 protection, postage insurance, prepaid to the address. Customers 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. This distributor cannot assume responsibility for loss or damage during shipment. For your protection, carefully pack the product for shipment and insure it with the carrier. Ensure that you return the unit and accessories related to your problem and also that you indicate full return address. Also send a copy of sales receipt or other proof of purchase to determine warranty status. C.O.D. shipments cannot be accepted.

Model No.	SLNo.
Dealer Name	Purchase Date
Dealer Address	
Customer Name	
Customer Address	
Dealer's Signature	Customer Sign