

TWIN STIM™

**Transcutaneous Electrical
Nerve Stimulator &
Electrical Neuromuscular
Stimulator**

Instruction Manual

CONTENTS

It is recommended that you read this entire manual thoroughly before using your stimulator.

GENERAL INFORMATION	1
SAFETY	3
SPECIFICATIONS	5
CONTROLS & INDICATORS	6
ELECTRODE PLACEMENT	8
PREPARATION FOR USE	9
ADJUSTING THE CONTROLS	11
AFTER USE	13
CARE AND MAINTENANCE	13
DO'S AND DON'TS	14
SERVICE/REPAIR	14
TROUBLE SHOOTING	15
WARRANTY	15

GENERAL INFORMATION

WHAT IS THE TWIN STIM™ ?

TWIN STIM™ has been proven useful in pain management for many pain patients. but also enables you to enjoy the benefits of rapid healing of injury and the ability to rehabilitate and strengthen muscles at your convenience.

TWIN STIM™ achieves these two electrical stimulation functions in one pager sized package by combining the electronic technology used for generating pain relieving stimulation with that used to generate muscle stimulation.

The **TWIN STIM™** is an easy-to-use system. A marvel of miniaturized electronics the lightweight power unit transmits electrical pulsed through the skin surface and stimulates motor units (nerve and muscles) effectively exercising the muscles. The electrical impulses are "ramped" so that they closely emulate natural muscle contractions.

What this means to you is the chance to personally manage a wide range of musculoskeletal disorders as well as develop and strengthen your muscles with one compact, highly efficient electrical body stimulator.

WHAT IS TENS?

TENS, or Transcutaneous Electrical Nerve Stimulation, mean the transmission of small electrical pulses through the skin to the underlying peripheral nerves.

TENS works in two different way :

First of all, "High frequency" continuous, mild, electrical currents may block the pain signal traveling to the brain. Brain cells perceive pain. If the pain signal does not get through to the brain, the pain won't "FEEL".

The second way **TENS** works by stimulating the body's own natural pain-control mechanism. The "low frequency" or short bursts of mild, electrical activity of **TENS** may cause the body to release its own analgesics, called "Beta endorphins". Ask your doctor or clinician for more details.

No matter what pain theory is applied, **TENS** has been proven useful in pain management for many pain patients.

WHAT IS ELECTRICAL NEUROMUSCULAR STIMULATOR ?

Neuromuscular stimulation is achieved by sending small electrical impulses through the skin to the underlying motor units (nerves and muscles) to create an involuntary muscle contraction. This passive exercise is a therapeutic treatment to minimize the degeneration that occurs following partial denervation or immobilization.

Electrical Neuromuscular stimulation has many uses beyond its traditional application to prevent disuse atrophy, including :

- Range of motion - as a substitute for passive and active stretching exercise performed by the patient or therapist.
- Facilitation - for example, teaching a patient how to set his or her quads.

COMMON CANDIDATES

- Patients recover from cortical neuron lesion such as caused by a head trauma or stroke.
- Spinal cord injury patients.
- Anaplasty patients receiving a prosthesis or an athlete recovering from a knee injury.
- Patients recover from lower motor neuron disorders such as Guillain-Barre Syndrome.

SAFETY

CAUTION

Federal (USA) restricts this device to sale by or on the order of a physician. Keep out of the reach of children.

CONTRAINDICATIONS

Super STIM is combined TENS and EMS.

Transcutaneous electrical nerve stimulator

- Symptomatic relief of chronic intractable pain.
- Post-traumatic and post-surgical pain.

Powered muscle stimulator

- Relaxation of muscle spasms.
- 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

Transcutaneous electrical nerve stimulator

TENS devices can affect the operation of demand type cardiac pacemakers. TENS is not recommended for patients with known heart disease without physical evaluation of possible risk. **DO NOT** stimulate over the eyes or carotid sinus nerves. **DO NOT** apply TENS for undiagnosed pain syndromes until the etiology is established. Any electrode placement that causes current to flow transcranially (through the head).

Powered muscle stimulator

- Children - Electric neuromuscular stimulation devices should be kept out of the reach of children.
- Carotid Sinus - Do not stimulate over the carotid sinus nerves.
- Neck Stimulation - Severe spasm of the laryngeal and pharyngeal muscles may occur when the electrodes are placed across the neck or the mouth. This may be strong enough to close off the airway.
- Machinery Operation - Patient should never operate potentially dangerous machinery such as power saws, automobiles, etc...during the stimulation.

WARNINGS

Transcutaneous electrical nerve stimulator

This device should be used only under the continued supervision of a physician.

TENS is not effective for pain of central origin (i.e., headache). TENS is of no curative value; It is a symptomatic treatment which suppresses pain sensation which would otherwise serve only as a protective mechanism. Safety of TENS devices for use during pregnancy or delivery has not been established. This device is for external use only. Electronic equipment such as ECG monitors and EKG alarms may not operate properly when TENS devices are in use.

PRECAUTIONS/SIDE EFFECTS

Transcutaneous electrical nerve stimulator

Avoid using TENS while operating machinery or vehicles. Turn the stimulator **OFF** before applying or removing electrodes. Long-term stimulation at the same electrode site may cause skin irritation. Use only for the specific pain problem prescribed by physician. Effectiveness is dependent upon patient selection.

Powered muscle stimulator

Long-term stimulation at the same electrode site may cause skin irritation. Should this occur, remove the electrodes, discontinue stimulation and consult your clinician to determine the cause of irritation.

Pregnancy - The safety of stimulation for use during pregnancy or delivery has not been established.

The patient's psychological status and medication may influence the outcome of the treatment.

ADVERSE REACTIONS

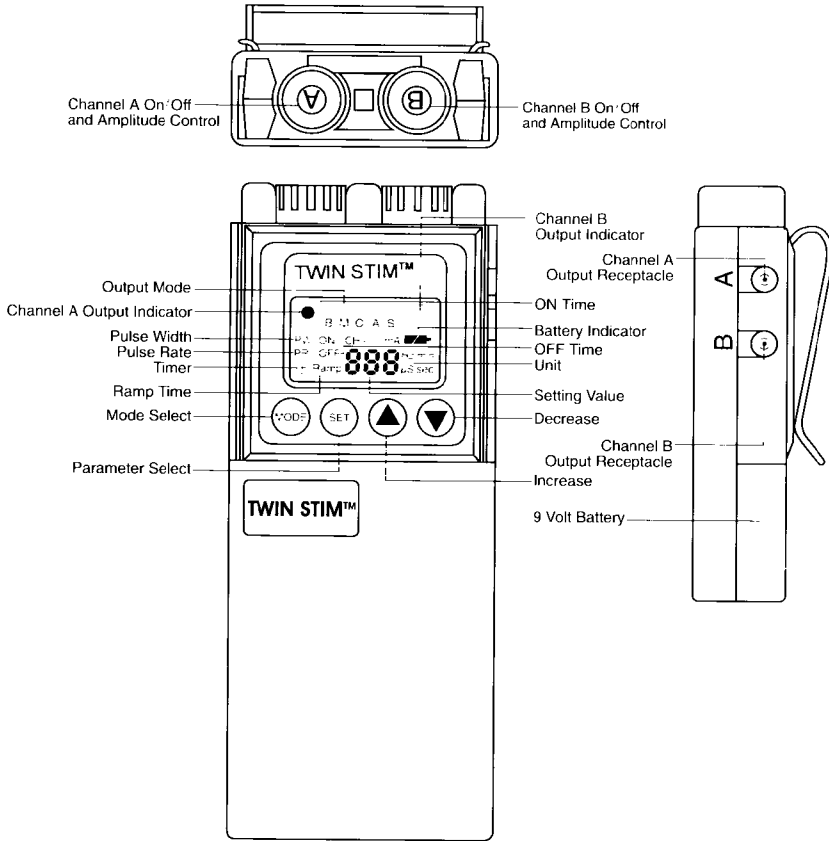
Possible allergic reaction, skin irritation or electro-burn under self-adhesive electrode.

SPECIFICATIONS

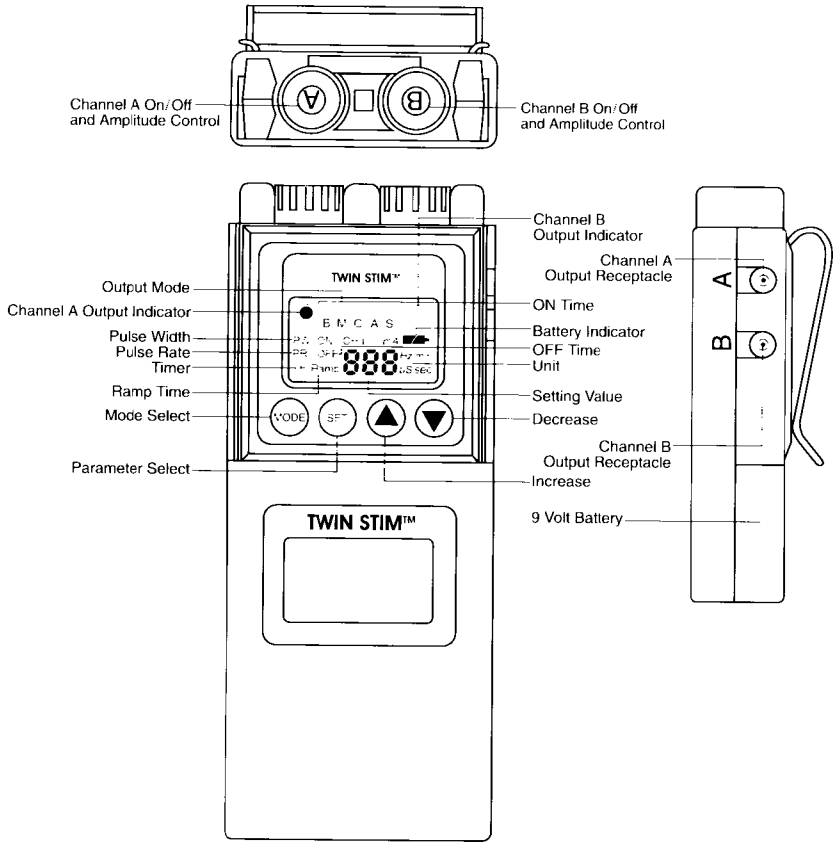
Channel	: Dual, Isolated
Output voltage	: 0~40V (500 Ω load)
Output in intensity	: 0~80mA (500 Ω load)
Frequency	: 1~150Hz, 45 adjustable frequencies
Impulse width	: 30~300 μ S, (10 μ S/step.)
Impulse waveform	: Asymmetrical bi-phase rectangular pulse
Modes	: 5 therapeutical mode (1) TENS-B (2) TENS-M (3) TENS-C (4) EMS-A (5) EMS-S
On Ramp	: Adjustable 1~6 seconds
Cycle ON Time	: Adjustable 1~30 seconds
Cycle OFF Time	: Adjustable 1~30 seconds
Timer	: 1~60min. (1min./step.)
Time memory	: Memory of the accumulated time from 0~999 minutes of executed applications. Memory function only possible if the battery stay in the unit.
Display	: Showing all chosen function and indicating the condition of the battery
Low battery indicator	: Indicate symbol by weakness of the battery
Battery	: 9V, ordinary
Dimension	: 95 \times 60 \times 25mm
Weight	: 90g (battery included)
Tolerance	: \pm 20 %

CONTROLS AND INDICATORS

TYPE I



TYPE II



ELECTRODE PLACEMENT

For effective therapy, it is very important that the electrodes should be placed correctly. Your physician will choose one of the following procedures to place the electrodes on suitable area :

PROCEDURE A

Your physician will mark the exact electrode placement position with a nontoxic skin-marking pen. You should use your skin-marking pen to darken these marks every day. If you are unable to do this yourself, have someone help you.

NOTE : The marks may wash off when you swim or shower, so be sure to re-mark before and after these activities.

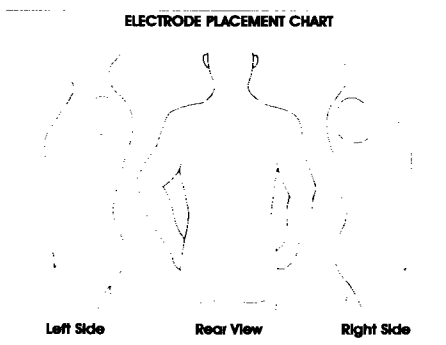
PROCEDURE B

Your physician will place your electrodes directly over or next to a body "landmark." This "landmark" may be a mole or scar on your body that will be a reference point. Refer to the diagram so that you can find exactly where your "landmarks" located, and where the electrodes should be placed.

Stimulator can be easily adjustable to your comfortable level and relieve the pain by two in TWIN STIM control knobs. The output of the stimulator may decrease slightly as the battery wears down. If you sense no stimulation, check the battery as well as the cables, making sure they are properly connected.

If your pain is not relieved, consult your clinician for electrode placement or stimulation mode alternatives.

ELECTRODE PLACEMENT CHART



Mark your electrode placement (s) ▶ here to be a reminder.

NOTES ON ELECTRODE PLACEMENT

The electrodes must be placed in the exact location marked by your physician for getting better result. Don't hesitate to call your physician if the marks are washed off or if you have any question about the electrode placement.

Before applying the electrodes, wash and dry the skin around the electrode placement area.

Place the electrodes in their exact locations. Make sure that the electrodes are attached securely; press and hold them firmly against your skin. Loosed electrodes will reduce stimulation and cause discomfort.

PREPARATION FOR USE

Caution for digital device


When the device on, it take about 5 sec for IC reset. If you switch ON and OFF too quickly, the device will be down and no work. When change battery, you should OFF the device first.

The **TWIN STIM™** can be easily adjustable to your comfort, or create an involuntary muscle contraction and relief of your pain by two in **TWIN STIM™** control knobs. The output of the stimulator may decrease slightly as the battery wears down. If you sense no stimulation, check the battery as well as the cables, making sure they are properly inserted.

If you receive no or muscle contraction pain relief, consult your clinician for electrode placement or stimulation mode alternatives.

1. CHECK POWER SOURCE

Be sure there is enough battery electricity. Insert battery if needed, just slide away the battery cover to the down and put in a new battery.

Note : When the battery power indicator "  " is show up, it means the battery should be replaced with a new one as soon as possible. However, the stimulator will continue to operate for a few more hours, before replacement.

2. CLEAN YOUR SKIN

Before attaching electrodes, identify those areas where your physician has recommended electrode placement. Each location should be clean, rinsed and thoroughly dried.

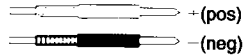
3. ELECTRODE LEAD WIRES

The use of the electrically conductive medium is subject to the specifications the component parts contained in the unit or recommended by the dealer.

Output plug
(plugs into
output receptacle)

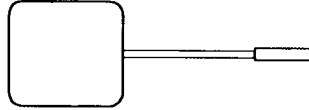


Pin Connectors
(plug into electrodes)



Electrode

Electrode Pin Socket



4. CONNECT THE WIRE AND ELECTRODE

Insert pin connector into electrode socket.

Note : For prolonging wire's life, please do not pull cable line when disconnect the wires and electrodes.

5. TURN OFF THE INTENSITY CONTROL

Be sure both intensity controls of both channels are turned off.


6. CONNECT THE WIRE AND MAIN UNIT

Connect the wire to channel A,B, or both (need two wires).
Be sure the wire pin completely plugs into the output jack.


ADJUSTING THE CONTROLS

Push the top slide cover from up to down to expose the mode control section.
Turn on the device with optional by turning channel A or channel B amplitude knob.



1. STIMULATION MODE CONTROL

- (1) Slide away the front cover to the down.
- (2) Press the "" button, the three modes B, M, C of the TENS and the two modes A, S of the EMS will jump from one to another and rotate accordingly.



2. THE PW/PR/Timer/ON/OFF/Ramp CONTROL

Press "" key to adjust these 6 parameters. When press the key, the 6 parameters PW/PR/Timer/ON/OFF/Ramp will jump from one to another and rotate accordingly. The LCD panel will show as



- PW From 30 to 300 μ S. with 10 μ S / step.
- PR From 1 to 150 Hz, with 45 levels.
- Timer From 1 to 60 minutes, with 1 min. / step.
- Ramp-up times from 1 to 6 seconds.
- Cycle-on time from 1 to 30 seconds.
- Cycle-off time from 1 to 30 seconds.

The display will show PR, then PW, then Timer, then ON, then OFF, then Ramp. To adjust these 3 parameters by using the "" and "" keys. The digit number goes from one digit to the next digit (increase or decrease).

3. SETTING VALUE

Press the "" or "" over 1 second, the digital numbers will increase / decrease continuously.

4. BATTERY POWER INDICATOR

- "" : Full-scale battery power full
- "" : Half-scale battery power low



5. ADJUST CHANNEL AMPLITUDE

Turn channel A or B clockwise. The display will light up as long as the unit is in stimulation. Slowly turn the channel control in a clockwise direction until you reach the setting recommended by your medical professional. Repeat for the other channel, if both channels are to be used, display light will blink at lower pulse rate setting or keep solid when the pulse rate setting is high.



6. PORTABILITY

Your Neurostimulator may be clipped to clothing such as a belt, vest, shirt pocket or bra. Push the top slide cover from down side to up.

7. TOTAL TREATMENT TIME

Press "" + "" to get the total treatment time by minute, maximum to 999 minutes.

8. RESET RECORD

The accumulate treatment time could be store up to 999 minutes. To erase the record, press "" + "" to reset the unit to zero.

Note : the number / function reads on the display will be the last number / function adjusted.

AFTER USE

1. TURN THE INTENSITY CONTROL OFF

Turn the intensity control in anticlockwise to OFF.

2. DISCONNECT WIRE AND ELECTRODE

Pull out the wire from the output jack. Leave the electrode on skin if another treatment is going to start in minutes. After a treatment session is finished, take off the electrode and clean your skin.

Note : The self-adhesive electrode is disposable. To use repeatedly, please flush the electrode mildly and leave it air-dried with the gel side up, then stick back to the paster.

3. UNINSTALL BATTERY

Slide away the battery cover and take out the battery.

CARE AND MAINTENANCE

1. MAINTENANCE OF WIRE

Please clean the wire and plug with dry cloth.

2. WIPE CORDS WITH DAMP CLOTH

For fear abnormal stimulation on skin and for better contact, please keep the electrodes clean.

Note : Please renew electrode if the used one lacks of stickiness or conductivity.

DO'S AND DON'TS

A. DO

1. Place the electrodes only as your clinician recommends.
2. Keep the stimulator clean.
3. See your clinician if you have any problems regarding treatment or physician questions.
4. Clean the cables only with water and mild soap. Do not use rubbing alcohol or any other solvents.
5. Remove the electrodes and discontinue stimulation if you experience skin irritation, until the source of that irritation is determined by your clinician.
6. Turn both in **TWIN STIM™** knobs to "OFF" before replacing the battery or removing electrodes from skin.

B. DONT

1. Use your **TWIN STIM™** when driving or working with dangerous machinery.
2. Loan your **TWIN STIM™** to another person as it is a prescription device which is specially prescribed for you. Its use may be contraindicated for another person who has not been examined by a doctor.
3. Allow children to play with your **TWIN STIM™**.
4. Immerse your **TWIN STIM™** in water or any other liquids.
5. Use other electrodes with your **TWIN STIM™** unless approved by your physician or manufacturer. If you have questions, please contact your purchaser.

SERVICE / REPAIR

To obtain service, first call your dealer for instructions. You may need to send in your **TWIN STIM™** (neurostimulator, lead wires, electrodes only) with a letter describing the problem. Do not send carry case. Send postage-paid and insured to your purchaser.

TROUBLE SHOOTING

If your **TWIN STIM™** unit seems to be functioning improperly, use the chart below to determine what may be wrong.

Display lights on but unit does not function properly

1. Check control settings. Are they set as prescribed by your medical professional?
2. Are electrodes in proper position?
3. Check lead wires. Make sure all connectors are firmly seated.
4. Replace lead wires with another to check for broken wires.

LCD & Battery indicator show half-scale light dim

Replace battery with a new one.

No LCD indicator lights on

Replace battery with a new one.

IF NONE OF THESE MEASURES CORRECT THE PROBLEM, THE UNIT SHOULD BE SERVICED.

WARRANTY

We warranty each new **TWIN STIM™** unit only (excluding lead wires, electrodes and battery) for one (1) year from defects in materials and workmanship. This warranty only applies to the original purchaser and the warranty registration card must be completed and returned to us within thirty (30) days of purchasing.

This warranty does not cover abuse, accident, damage resulting from failure to follow operating instructions and alterations/disassembly other than by manufacturer. Only the defective part will be repaired or replaced and the customer will have to pay for the labor.

The defective **TWIN STIM™** unit must be returned to us postage prepaid and insured.

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