Med-Fit

4 CHANNEL MULTI STIM PLUS TENS & EMS

24 PROGRAMMES AND FULLY ADJUSTABLE IN MANUAL MODE

PATIENT INSTRUCTION & USER MANUAL

med-fit

Tel: 0161 429 7330 email sales@med-fit.co.uk

CE 2460

IMPORTANT INFORMATION

The EV906A 4 Channel TENS and Muscle Stimulator as 24 pre-set programmes and is manually adjustable. The Step by Step guide on pages 10 explains how to operate your device using the pre-set programmes we always recommend using the device in the pre-set mode initially as this will be the best way to familiarise yourself with the operation.

A full explanation of manual adjustments is detailed on pages 15.

Med-Fit UK Ltd
Unit 8
Martel Court
S. Park Business Park
Hamilton Road
Stockport
SK1 2AF.

Tel: 0161 429 7330
Fax: 0161 427 0215

Email: sales@thetenscompany.co.uk
www.tensmachineuk.com

Company registration number 08961942
Vat registration number 184 9281 69

Contents

4

GENERAL DESCRIPTION

The EV-906A Digital TENS/EMS is a battery operated pulse generator that sends electrical impulses electrodes to the body and reach the nerves and underlying muscle group. This unit is a combination stimulator of TENS and EMS which can be used for muscle stimulation and pain relief. The device is provided with four controllable output channels, each independent of each other. An electrode pair can be connected to each output channel. The intensity level is controlled by press buttons.

INTRODUCTION

EXPLANATION OF PAIN

Pain is a warning system and the body 's method of telling us that something is wrong. Pain is important; without it abnormal conditions may go undetected, causing damage or injury to vital parts of our bodies.

Even though pain is a necessary warning signal of trauma or malfunction in the body, nature may have gone too far in its design. Aside from its value in diagnosis, long-lasting persistent pain serves no useful purpose. Pain does not begin until coded message travels to the brain where it is decoded, analyzed, and then reacted to. The pain message travels from the injured area along the small nerves leading to the spinal cord. Here the message is switched to different nerves that travel up the spinal cord to the brain. The pain message is then interpreted, referred back and the pain is felt.

EXPLANATION OF TENS

Transcutaneous Electrical Nerve Stimulation is a non-invasive, drug-free method of controlling pain. TENS uses tiny electrical impulses sent through the skin to nerves to modify your pain perception. TENS does not cure any physiological problem; it only helps control the pain. TENS does not work for everyone; however, in most patients it is effective in reducing or eliminating the pain, allowing for a return to normal activity.

INTRODUCTION

There is nothing "magic" about Transcutaneous Electrical Nerve Stimulation (TENS). TENS is intended to be used to relieve pain. The TENS unit sends comfortable impulses through the skin that stimulate the nerve (or nerves) in the treatment area. In many cases, this stimulation will greatly reduce or eliminate the pain sensation the patient feels. Pain relief varies by individual patient, mode selected for therapy, and the type of pain. In many patients, the reduction or elimination of pain lasts longer than the actual period of stimulation (sometimes as much as three to four times longer). In others, pain is only modified while stimulation actually occurs. You may discuss this with your physician or therapist.

EXPLANATION OF EMS

Electrical Muscle Stimulation is an internationally accepted and proven way of treating muscular injuries. It works by sending electronic pulses to the muscle needing treatment; this causes the muscle to exercise passively.

It is a product derived from the square waveform, originally invented by John Faraday in 1831. Through the square wave pattern it is able to work directly on muscle motor neurons. The EMS has low frequency and this in conjunction with the square wave pattern allows direct work on muscle groupings. This is being widely used in hospitals and sports clinics for the treatment of muscular injuries and for the re-education of paralyzed muscles, to prevent atrophy in affected muscles and improving muscle tone and blood circulation.

HOW EMS WORKS

1. Relaxation of muscle spasms
2. Prevention or retardation of disuse atrophy
3. Increasing local blood circulation
4. Muscle re-education
5. Immediate post-surgical stimulation of calf muscles to prevent venous thrombosis
6. Maintaining or increasing range of motion

The EMS units send comfortable impulses through the skin that stimulate the nerves in the treatment area. When the muscle receives this signal it contracts as if the brain has sent the signal itself. As the signal strength increases, the muscle flexes as in physical exercise. Then when the pulse ceases, the muscle relaxes and the cycle starts over again, (Stimulation, Contraction and Relaxation.) Powered muscle stimulators should only be used under medical supervision for adjunctive therapy for the treatment of medical diseases and conditions.

6

TENS CAUTIONS

IMPORTANT SAFETY INFORMATION

1. Read instruction manual before operation. Be sure to comply with all "CAUTIONS" and "WARNINGS" in the manual. Failure to follow instructions can cause harm to user or device.
2. Do not use this device for undiagnosed pain syndromes until consulting a physician.
3. Patients with an implanted electronic device, such as a cardiac pacemaker, implanted defibrillator, or any other metallic or electronic device should not undergo TENS treatment without first consulting a doctor.
4. Patients with heart disease, epilepsy, cancer or any other health condition should not undergo TENS treatment without first consulting a physician.
5. Stimulation delivered by this device may be sufficient to cause electrocution. Electrical current of this magnitude must not flow through the thorax or across the chest because it may cause a cardiac arrhythmia.
6. Do not place electrodes on the front of the throat as spasm of the Laryngeal and Pharyngeal muscle may occur. Stimulation over the carotid sinus (neck region) may close the airways, make breathing difficult, and may have adverse effects on the heart rhythm or blood pressure.
7. Do not place electrodes on your head or at any sites that may cause the electrical current to flow transcerebrally (through the head).
8. This device should not be used while driving, operating machinery, close to water, or during any activity in which involuntary muscle contractions may put the user at undue risk of injury.
9. Turn the TENS off before applying or removing electrodes.
10. Isolated cases of skin irritation may occur at the site of electrode placement following long term application. If this occurs, discontinue use and consult your physician.
11. If TENS therapy becomes ineffective or unpleasant, stimulation should be discontinued until its use is re-evaluated by a physician
12. Keep this device out of the reach of children.
13. The device has no AP/APG protection.

Do not use it in the presence of explosive atmosphere and flammable mixture.

7

EMS CAUTIONS

1. Safety of powered muscle stimulators for use during pregnancy has not been established.
2. Caution should be used for patients with suspected or diagnosed heart problems.
3. Caution should be used for patients with suspected or diagnosed epilepsy.
4. Caution should be used in the presence of the following:
   a. When there is a tendency to hemorrhage following acute trauma or fracture;
   b. Following recent surgical procedures when muscle contraction may disrupt the healing process;
   c. Over the menstruating or pregnant uterus; and
   d. Over areas of the skin which lack normal sensation.
5. Some patients may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium. The irritation can usually be reduced by using an alternate conductive medium, or alternate electrode placement.
6. Electrode placement and stimulation settings should be based on the guidance of the prescribing practitioner.
7. Powered muscle stimulators should be kept out of the reach of children.
8. Powered muscle stimulators should be used only with the leads and electrodes recommended for use by the manufacturer.

9 Driving, operating machinery, or during any activity in which involuntary muscle contractions may put the user at undue risk of injury.

CONTRAINDICATIONS

Electrical stimulators should not be used on patients with cardiac demand pacemakers.

ADVERSE REACTIONS

Skin irritation and burns beneath the electrodes have been reported with the use of electrical stimulators. If irritation occurs, discontinue use and consult your physician.

8

WARNINGS

1. The long-term effects of chronic electrical stimulation are unknown.
2. Stimulation should not be applied over the carotid sinus nerves, particularly in patients with a known sensitivity to the carotid sinus reflex.
3. 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.
4. Stimulation should not be applied transthoracically in that the introduction of electrical current into the heart may cause cardiac arrhythmias.
5. Stimulation should not be applied transcerebrally.
6. Stimulation should not be applied over swollen, infected, or inflamed areas or skin eruptions, e.g., phlebitis, thrombophlebitis, varicose veins, etc.
7. Stimulation should not be applied over, or in proximity to, cancerous lesions.

MAINTENANCE, TRANSPORTATION AND STORAGE OF THE DEVICE

1. Non-flammable cleaning solution is suitable for cleaning the device. Note: Do not smoke or work with open lights (for example, candles, etc.) when working with flammable liquids.
2. Stains and spots can be removed with a cleaning agent.
3. Do not submerge the device in liquids or expose it to large amounts of water.
4. Return the device to the carrying box to ensure that the unit is well-protected before transportation.
5. If the device is not to be used for a long period of time, remove the batteries from the battery compartment (acid may leak from used batteries and damage the device). Put the device and accessories in carrying box and keep it in cool dry place.
6. The packed TENS/ EMS device should be stored and transported under the temperature range of -20°C ~ + 60°C, relative humidity 20%~ 95%, atmosphere pressure 500 hPa~ 1060 hPa.

9

SAFETY-TECHNICAL CONTROLS

For safety reasons, review the following checklist before using your EV-906A Digital TENS/EMS

1. Check the device for external damage.
   - deformation of the housing.
   - damaged or defective output sockets.

3. Check the usability of accessories.
   - patient cable undamaged.
   - electrodes undamaged.
   - Battery is not corroded

Please consult your distributor if there are any problems with device and accessories.

MALFUNCTIONS

Should any malfunctions occur while using the EV-906A Digital TENS/EMS, check

- whether the parameters are set to the appropriate form of therapy. Adjust the control correctly.
- whether the cable is correctly connected to the device. The cables should be inserted completely into the sockets.
- whether the LCD reveals the menu. Check the unit is fully charged.
- for possible damage to the cable. Change the cable if any damage is detected.

CONFORMITY TO SAFETY STANDARDS

The EV-906A Digital TENS/EMS devices are in compliance with the following standards:

EN 60601-1-2: 2007 Medical electrical equipment -

Part 1-2: General requirements for basic safety and essential performance
-Collateral standard: Electromagnetic compatibility -Requirements and tests

EN 60601-1:2006 Medical electrical equipment -
Part 1: General requirements for basic safety and essential performance

10

STEP BY STEP GUIDE

This extremely easy to use 4 channel stimulator offers 24 medically researched pre-set programmes P1-P12 are pre-set TENS programmes. P13-P12 are pre-set muscle stimulator programmes. (For manual adjustments please refer to page 15)

STEP 1

To access the controls, open the front cover (opens from the left hand side see Fig B) for control functions.

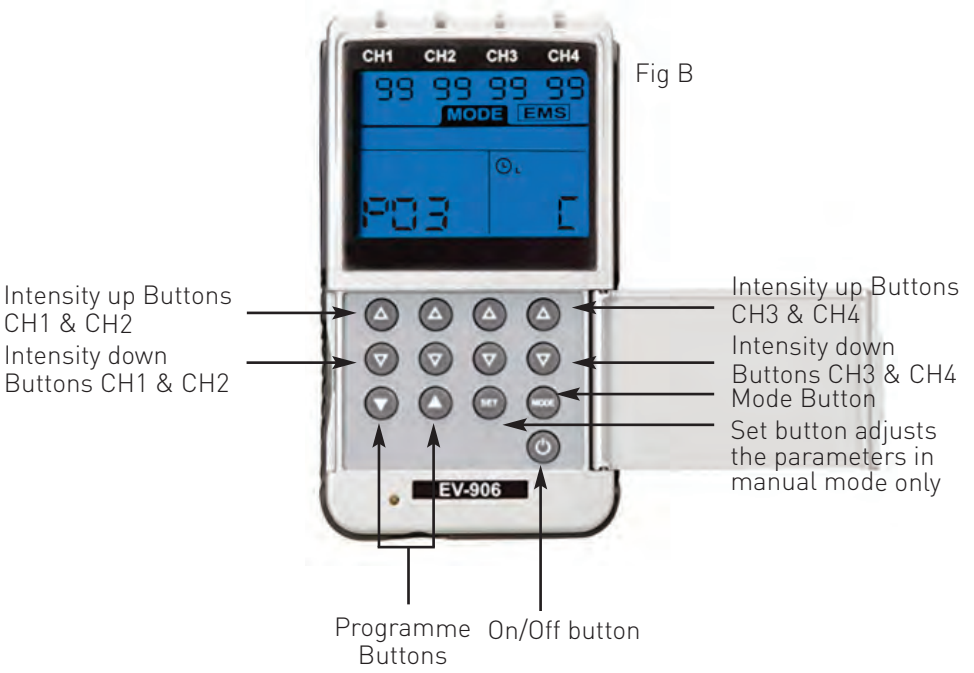


Fig B

STEP BY STEP GUIDE

This easy to use instruction manual, explains how to set up the Med-Fit 4 channel stimulator modes.

STEP 2

The Premier TENS comes with rechargeable batteries similar to the type used in a mobile phone, it is recommended that you charge the batteries before using the TENS see page 21 for charging instructions.

Fig A

Important Information

For the first charge we recommend a 6 hour charge time, further subsequent charge would be 2 hours or until the battery charging LED turns green.

STEP BY STEP GUIDE

STEP 3

To turn the unit on press the On-Off button located in the bottom right corner of the device. We recommend you initially use one of the pre-set programmes, to do this press the mode button until a P0 number is displayed in the bottom left corner of the screen as shown in Fig D. As already described the programmes P1-P12 are TENS programmes and P13-P24 are EMS programmes.

Fig D

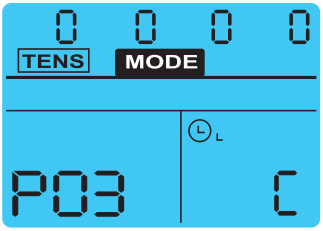
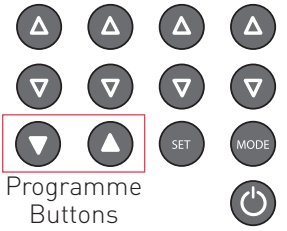


Fig E



Intensity up/down buttons

Programme Buttons

To change the programme simply press the up and down buttons to the desired programme (see Fig E). We recommend starting with programme 3 as this is ideal for pain block. Please see page 14 for full programme information.

STEP 4

You are now ready to use your device. It is recommended to now turn off the device and connect the patient leads to the sockets as shown in Fig C.

Depending on the condition and treatment area, you may use any number of electrodes up to a maximum of 8 electrodes and 4 channels.

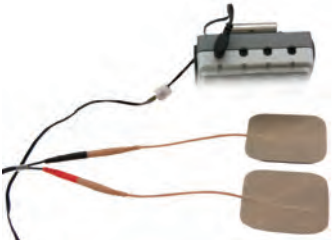


Fig C

WHICH PROGRAMME SHOULD I USE?

We always recommend you start with programme 3, as already mentioned in your step-by-step guide. The premier TENS has 12 programmes P1 to P12, Each programme has been shown to reduce and block pain in a wide range of conditions. It is very difficult to know which programme is best for you. It is therefore recommended that over a period of time you try all 12 programmes. To help get you started, we have included some common conditions with suggested electrode placements including treatment times and recommended programmes you may wish to try.

HOW HIGH SHOULD I TURN THE INTENSITY?

Everybody reacts differently to TENS Stimulation so it is important that you increase the intensity (sensation feeling) to the correct level.

Increase the intensity to a sensation which is comfortable and always perceptible; never turn up to a level which is strong and uncomfortable.

You may use TENS if required for long periods of time to combat long term chronic pain, however, please remember to place the electrodes in slightly different areas around the painful site, as this will help reduce skin irritation.

HOW LONG SHOULD A TYPICAL TREATMENT TIME LAST

The most up to date research in TENS treatment times, indicates that a minimum of 1 hour to $1^{1}/_{2}$ hours is required for effective pain relief. Your TENS may be used for much longer periods and you may find treatment times of 3 to 4 hours may work best for you.

Please remember that the intensity level is always kept at a pleasant sensation, never increase the intensity to uncomfortable levels as this can possibly have a detrimental effect on your results.

The Premier Plus TENS Programs

P1 - P12

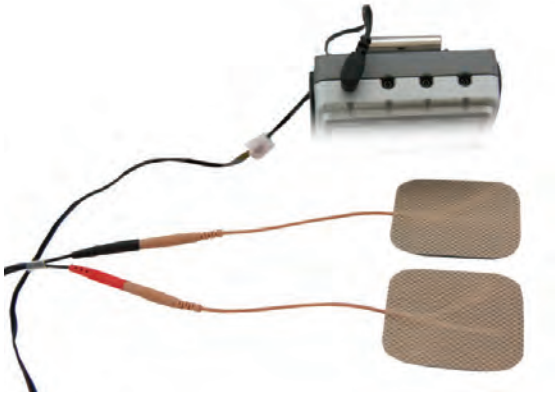
NO	PROGRAMME	FREQUENCY	PULSE WIDTH
1	**Covential TENS** - Ideal for first applications of TENS for both acute and long term pain **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Hip Pain, Osteoarthritic Pain in the knee	80Hz	180µs
2	**Burst TENS** - Most effective for radiating pain if arms and legs and deep muscular pain **CONDITIONS** Osteoarthritic Pain in the Knee, Sciatica Central Pain	2Hz	180µs
3	**Modulated TENS** - Pain relief with a massage effect **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Menstrual Pain, Hip Pain, Osteoarthritic Pain in the knee	80Hz	70-180µs
4	**Mixed Frequency TENS** **CONDITIONS** Osteoarthritic Pain in the knee, Neck Pain, Shoulder Pain, Menstrual Pain, Central Pain Lumbago	15Hz/2Hz	180µs
5	**Fixed Frequency TENS** - Effective programmes for long term use with reduced accommodation factor **CONDITIONS** Osteoarthritic Pain in the knee, Neck Pain, Shoulder Pain Menstrual Pain, Central Pain Lumbago	80Hz/2Hz	180µs
6	**Nausea** - Specifically for treatment of nausea, most successful placing electrodes over acupuncture point C6 **CONDITIONS** Nausea	10Hz	180µs
7	**Migraine/Headaches** - Reduced pulse width ideal for treating nerve rich areas **CONDITIONS** Tension Type Headache, Facial Pain, Neck Pain, Postherpetic Neuralgia	80Hz	60µs
8	70% Rate Modulation over 10 seconds **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Menstrual Pain, hip Pain, Osteoarthritic Pain in the Knee	10Hz	200µs
9	90% Rate Modulation over 10 seconds **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Menstrual Pain, hip Pain, Osteoarthritic Pain in the Knee	50Hz	250µs
10	Mixed Frequency long term use programme. Ideal for treating chronic pain over long periods example 5+ hours **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Menstrual Pain, hip Pain, Osteoarthritic Pain in the Knee	5-125Hz	120µs
11	Modulation Rate & width over 6 seconds **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Menstrual Pain, hip Pain, Osteoarthritic Pain in the Knee	2-100Hz	260-150µs
12	Modulation Rate over 6 seconds **CONDITIONS** Neck, Shoulder, Elbow Pain, Rheumatic Pain, Lumbago, Menstrual Pain, hip Pain, Osteoarthritic Pain in the Knee	80<->7Hz	260µs

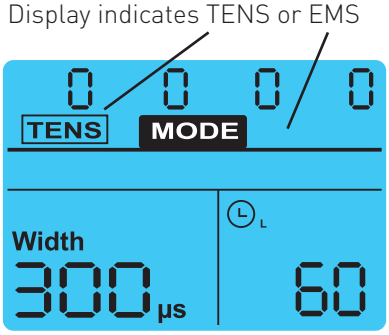
ADJUSTING THE CONTROLS USING THE MANUAL ADJUSTMENTS

1. Power On/Off Button and Intensity Controls : (as previously described)
   The unit can be turned on by pressing the power button. The intensity level can be increased or decreased by pressing the intensity controls. Intensity level can be adjusted in 100 steps linearly.
   There are 4 leds on the top of unit showing the output of electrical current. They will be light up when there is output.

2. Lead Connector
   Connection of the electrodes is made with the four-lead connector (lead wires). The device must be switched off before connecting the cables. Electrodes must be pressed firmly on the skin.

3 Mode Control
There are 5 TENS modes(B, N, M, SD1, SD2) and 3 EMS modes (C, S, A) available. The mode can be selected by pressing the "Mode" Button. When a TENS mode is selected, the LCD shows "TENS" on the top. When EMS mode is selected, the LCD shows "EMS" on the top.





ADJUSTING THE CONTROLS USING MANUALLY

4. Set Control
   By pressing the "SET" control, you may enter the setting you intend to make adjustment. You may start to set the value by pressing the "Increment" and "Decrement" controls when the value is flashing.

5. Increment Control
   This button controls the increase of settings. When pressing this button, the parameter will increase.

6. Decrement Control
   This button controls the decrease of parameter. When pressing this button, the parameter will decrease.

7. Timer
   The unit has a timer of 1-60 minutes and Continuous. It can be adjusted by pressing the "SET" and "Increment" or "Decrement" controls. The treatment time will countdown automatically in one minute increments. Its output will be shut off when time is up.

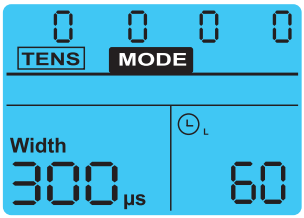
ADJUSTING THE CONTROLS FOR TENS

8. Steps to Set a TENS Program
   The settings can be adjusted according to the following steps.
   a. Turn on the power
   After the electrodes are placed firmly on skin and the lead wires are plugged in the socket of device, turn the on/off control clockwise. The menu will reveal on LCD. Notice the indication of power and function on the LCD.
   b. Select a Mode
   Select a mode by pressing the "Mode" control. The mode you selected will show up on the top of liquid crystal display. There are 5 modes of your option including –B(Burst), N(Normal), M(Modulation), SD1 and SD2. When a TENS mode is selected, it shows "TENS" on the top of liquid crystal display.
   After a mode is selected, always press "SET" to enter next setting, and press "Increment or "Decrement" to adjust its value.

ADJUSTING THE CONTROLS FOR TENS

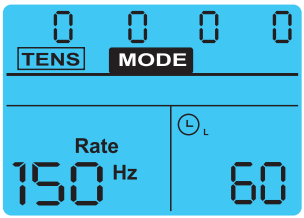
c. Set Pulse Width

Pulse Width is adjustable from 50 µs to 300 µs. Press "SET" control to enter this menu, then press "Increment" or "Decrement" to adjust the setting. If no instructions regarding the pulse width are given in therapy, set the control to the suggested
70-120 µs setting.



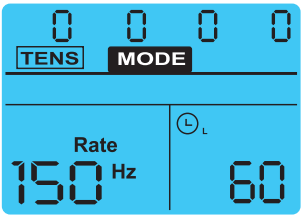
d. Set Pulse Rate

Pulse rate is adjustable from 2Hz to 150 Hz . Press "SET" control to enter this menu,then press "Increment" or "Decrement" to adjust the setting. Unless otherwise instructed, turn the pulse rate control to the 70-120 Hz range.

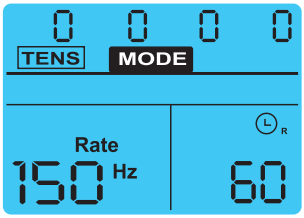


e. Set Timer

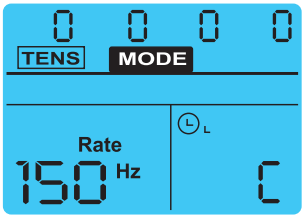
There are two adjustable timers available. The left timer controlling the treatment time of CH1 and CH2.
The right timer controlling the treatment time of CH3 & CH4. The treatment time is adjustable from 1 to 60 minutes or C (Continuous). Press "SET" control to enter this menu, then press "Increment" or "Decrement" to adjust the setting.
Press "Increment" control when the timer shows 60 minutes, it will be switched to continuous stimulation. Two timers can be set in the same way.



Left Timer



RightTimer



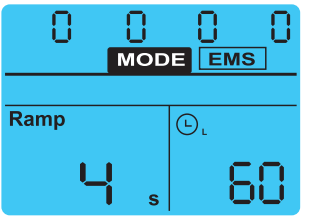
Continuous Timer

ADJUSTING THE CONTROLS FOR EMS

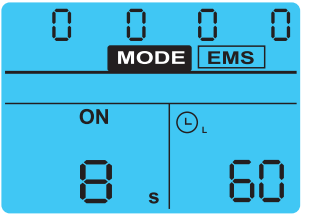
9. Steps to Set a EMS Program
The settings can be adjusted according to the following steps.
f. Turn on the Power
After the electrodes are placed firmly on skin and the lead wires are plugged in the socket of device, press the ON/OFF button. The menu will reveal on LCD. Notice the indication of power and function on the LCD.

g. Select Mode
There are three EMS modes of option, C(Constant) S (Synchronous) or A (Alternate). Select a mode by pressing the "Mode" control. When an EMS mode is selected, the LCD shows "EMS" on the top.
After a mode is selected, press "SET" control to enter next setting. You may adjust the setting only when it is flashing. Then press the "Increment" or "Decrement" control to change the settings.

h. Set Ramp Time
The ramp time controls the time of output current that increase from 0 to the setting level, and from the setting value to 0. When the ramp time is set, each contraction may be ramped up and down in order that the signals come on and come off gradually and smoothly. The ramp time is adjustable from 1 to 8 seconds.



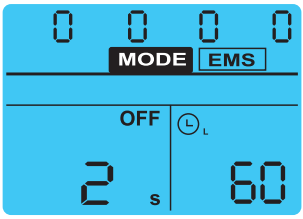
i. Set On Time
The On Time controls the time of stimulation. By pressing the "Set" control, the contraction time can be adjusted. Both channels' stimulation is cycled on and off by the contraction and relaxation settings. The range is adjustable from 2 seconds to 90 seconds.
As the "ON" time including the ramp up and ramp down time, the setting of it should be no less than two times of the "Ramp" time. (ON TIME >_Ramp up + Ramp down)



ADJUSTING THE CONTROLS FOR EMS

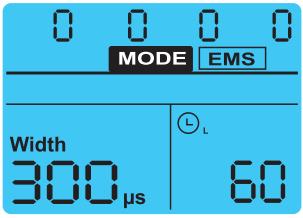
j. Set Off Time

The Off Time controls the time of relaxation. By pressing the “SET” control, the relaxation time can be adjusted. Both channels’ stimulation is cycled on and off by the contraction and relaxation settings. The range is adjustable from 0 second to 90 seconds. In Alternate mode, the OFF Time should be equal or more than the ON Time. (OFF TIME > ON TIME)



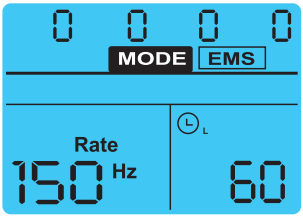
k. Set Pulse Width

Pulse Width is adjustable from 50 µs to 300 µs. Press “SET” control to enter this menu, then press “Increment” or “Decrement” to adjust the setting. If no instructions regarding the pulse width are given in therapy, set the control to the suggested 70-120 µs setting.



l. Set Pulse Rate

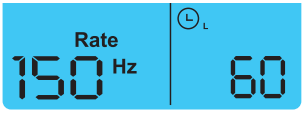
Pulse rate is adjustable from 2Hz to 150 Hz . Press “SET” control to enter this menu, then press “Increment” or “Decrement” to adjust the setting. Unless otherwise instructed, turn the pulse rate control to the 70-120 Hz range.



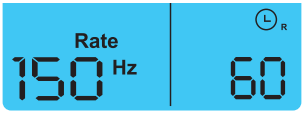
m.Set Timer

There are two adjustable timers available. The left timer controlling the treatment time of CH1 and CH2.

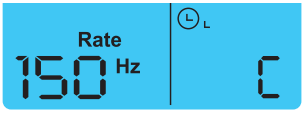
The right timer controlling the treatment time of CH3 & CH4. The treatment time is adjustable from 1 to 60 minutes or C (Continuous). Press “SET” control to enter this menu, then press “Increment” or “Decrement” to adjust the setting. Press “Increment” control when the timer shows 60 minutes, it will be switched to continuous stimulation. When you use the EMS treatment, the intensity level will flash when it is at “OFF” time (relaxation). The intensity level can not be adjusted until it works again at “ON” time.



Left Timer



RightTimer



Continuous Timer

COMPLIANCE METER

10. Compliance Meter

This unit can store 60 sets of operation records. Total treatment time up to 999 hours can be stored.

Check & Delete Individual Record

Press “Mode” control and turn on the power simultaneously. The LCD will show the number of records and operation time. Press the “Increment” and “Decrement” button to check each record.

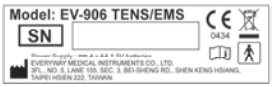
To delete a record, press “SET” control for 3 seconds.

Check & Delete Accumulative Record

At the individual records menu, press “Mode” control to switch to accumulative record menu. Press the “SET” control first, then press the “Mode” control simultaneously for 3 seconds and all of the records will be deleted followed by a beeper sound.

GRAPHIC SYMBOLS

Ⅱ. LABEL



The label attached to the back of device contains important information about this device model, supply voltage, CE number, serial number and caution. Please do not remove.

1. Note Operating Instructions
2. Degree of Electrical Protection BF
3. Do not insert the plug into AC power supply socket.
4. Timer
6. Increment
7. Decrement
8. Consult Instructions for use
9. DC Current (DC Power Source)
10. Manufacturer
11. SN Serial Number

CHARGING INSTRUCTIONS

Important information The USB charging cable connects to TENS charging port as shown in fig 1 (Please ensure you connect the cable the right way round)

fig1

Before using your Premier TENS & Muscle Stimulator please charge the unit, as follows:

Charging your TENS device.

Connect the USB cable to the AC adaptor or USB port.

Now connect the USB cable directly into the USB socket, which is located on the right hand side of your Premier TENS.

A red indicating light will be seen in the bottom right hand corner of your TENS device. We recommend you charge the device for approximately 2 hours. After the initial 6 hours charge. Once fully charged the unit will be ready for use and the LED charging light will turn to green, this indicates the unit is fully charged. Remove the USB charging lead from your TENS device and disconnect from the mains supply or USB port. Please store your adaptor and cable in the carry case provided when not in use.

22

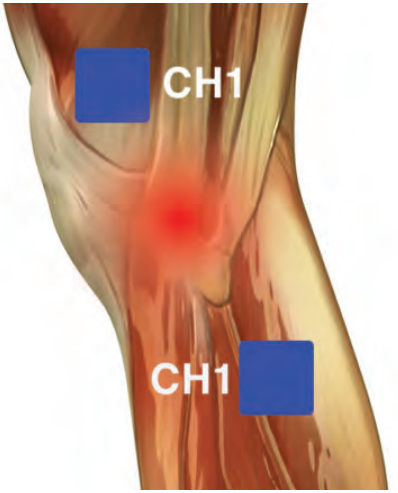
HELPFUL TIPS FOR SUCCESSFUL TENS TREATMENT

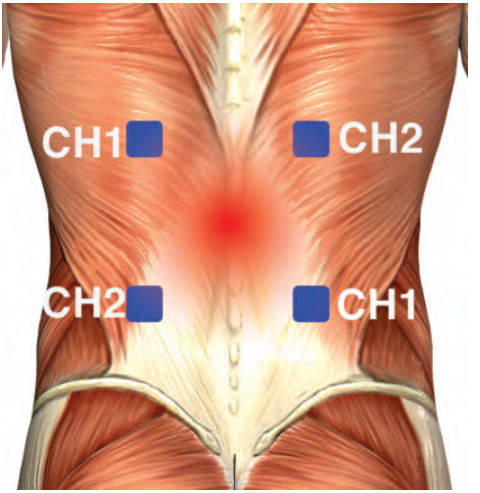
Once you have familiarised yourself with the controls and features of your TENS device, it is important to place the TENS electrodes in a position which gives the most pain relief. This may take 3 or 4 attempts to find the most suitable position, for maximum pain relief.

If you are using two electrodes, place the electrodes directly onto the painful area at a position where you feel the pain starts and where it finishes. You may now position the electrodes around the painful area to locate the most suitable position for maximum pain relief.

The alternative method is to use four electrodes surrounding the painful area see examples below

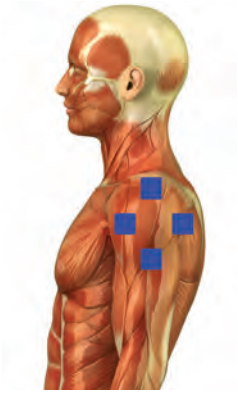
The complete area between the electrodes will now be treated when positioning the electrodes as shown.





TENS ELECTRODE PLACEMENT

Frozen Shoulder

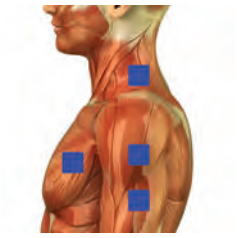


Primary Placement

Suggested Programmes

P8, P9, P10, P11, P12

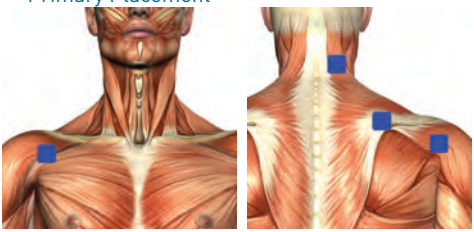
Shoulder Pain



Primary Placement

Suggested Programmes

P8, P9, P10, P11, P12



Alternative Placement

Degenerative Arthritis: Cervical and Lumbar

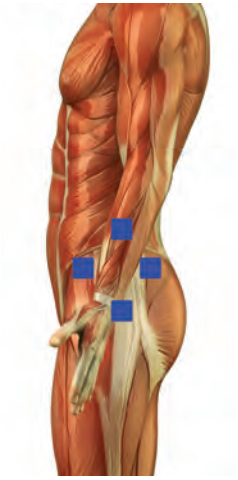
Primary Placement

Alternative Placement

Suggested Programmes

P1, P4

Chronic Hip Pain



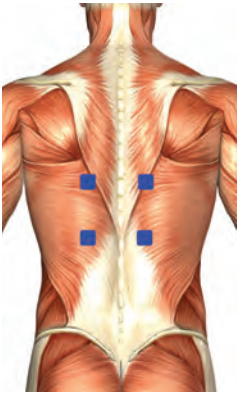
Primary Placement

Suggested Programmes

P1, P4, P5

TENS ELECTRODE PLACEMENT

Lower Back Pain

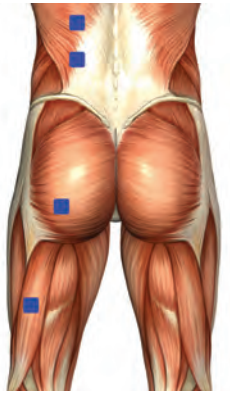


Primary Placement

Suggested Programmes

P8, P9, P10, P11, P12

Hip Neuralgia

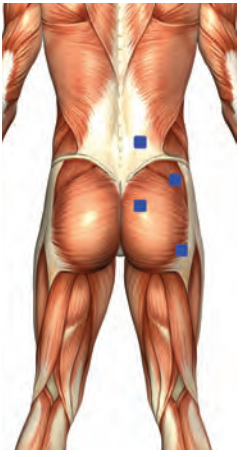


Primary Placement

Suggested Programmes

P1, P4, P11, P12

Phantom Limb, Lower Extremity

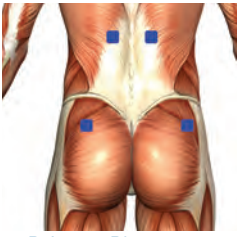


Primary Placement

Suggested Programmes

P8, P9, P10, P11, P12

Sciatica



Primary Placement

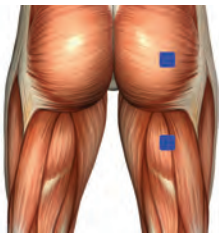
Alternative Placement

Suggested Programmes

P2, P4, P5

TENS ELECTRODE PLACEMENT

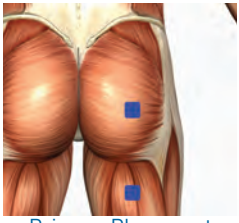
Low Extremity Pain



Primary Placement

Suggested Programmes

P8, P9, P10, P11, P12



Primary Placement

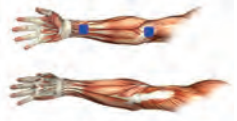
Alternative Placement

Carpal Tunnel Syndrome

Primary Placement

Suggested Programmes

P9



Alternative Placement

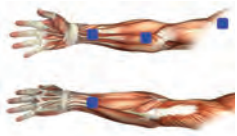
Elbow & Forearm Pain

Primary Placement

Suggested Programmes

P8, P9, P10, P11, P12

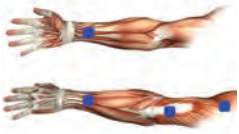
Wrist Pain



Primary Placement

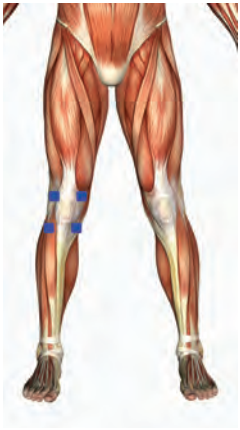
Suggested Programmes

P9



Alternative Placement

Degenerative Arthritis - Knee Pain



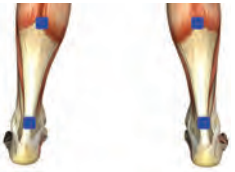
Primary Placement

Suggested Programmes

P2, P3, P4, P5

TENS ELECTRODE PLACEMENT

Lower Leg Pain



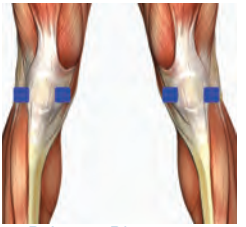
Primary Placement

Alternative Placement

Suggested Programmes

P8, P9, P10, P11, P12

Knee Pain - Post-Op



Primary Placement

Alternative Placement

Suggested Programmes

P2, P3, P4, P5

Cervical Placement

Primary Placement

Alternative Placement

Suggested Programmes

P1, P5, P12

Chronic Cervical Strain

Primary Placement

Alternative Placement

Suggested Programmes

P1, P10, P12

The Premier Plus EMS Programs P13 - P24

These 12 individual electronic muscle stimulator (E.M.S) programmes have been clinically proven for the treatment of

1. Muscle Re-Education
2. Muscle Training
3. Muscle Strengthening
4. Muscle Toning

Please refer to the electrode placement charts provided for recommended treatment time and suggested programmes. It is important to remember to take professional medical advice wherever possible.

NO	PROGRAMME	SYN/ALT	Rate (Hz)	Width (µs)	Ramp (sec)	On Time (sec)	Off Time (sec)	Timer (min)
13	Muscle training / Re-education	SYNCHRONOUS	30	300	0	1	1	30
14	Muscle training / Re-education	SYNCHRONOUS	30	300	1	5	2	30
15	Muscle training / Re-education	SYNCHRONOUS	30	300	1	10	3	30
16	Muscle training / Re-education	SYNCHRONOUS	30	300	2	15	4	30
17	Muscle training / Re-education	SYNCHRONOUS	30	300	2	20	4	30
18	Muscle training / Re-education	SYNCHRONOUS	30	300	3	25	5	30
19	Muscle training / Re-education	SYNCHRONOUS	30	300	4	30	5	30
20	Muscle training / Re-education	SYNCHRONOUS	30	250	0	1	1	30
21	Muscle training / Re-education	SYNCHRONOUS	30	260	1	5	2	30
22	Muscle training / Re-education	SYNCHRONOUS	30	280	2	10	3	30
23	Muscle training / Re-education	SYNCHRONOUS	30	300	3	20	3	30
24	Muscle training / Re-education	SYNCHRONOUS	30	300	4	30	5	30

ELECTRODE PLACEMENT

Arms

Suggested Programmes

P20 - P24

You men want to gain more volume and you women are fed up with this little bit of skin that dangles under your arms ! Here are the solutions for you: Long supinator muscle of the forearm

Biceps

Suggested Programmes

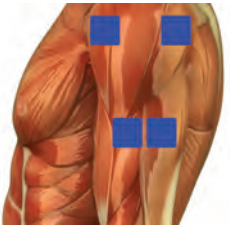
P20 - P24

This position is useful for muscle training and for gaining volume using the devices' muscle strengthening programmes. But it is equally very useful for diminishing the effects of lactic acid (substances manufactured by the muscles after sporting exertion and that result in pain during the following few hours).

Deltoid

Suggested Programmes

P14, P18, P20 - P24



Deltoid & Anterior Fascia

Suggested Programmes

P14, P18, P20 - P24

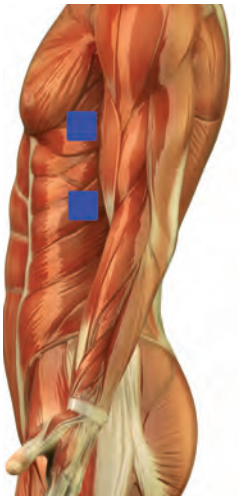
ELECTRODE PLACEMENT

Deltoid Posterior Fascia

Suggested Programmes

P14, P20 - P24

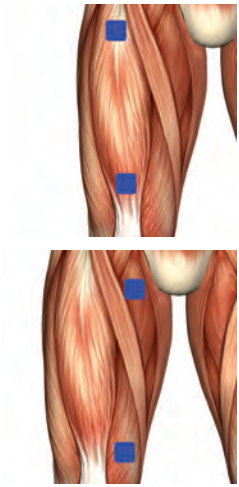
Latissimus



Suggested Programmes

P14, P20 - P24

Thigh

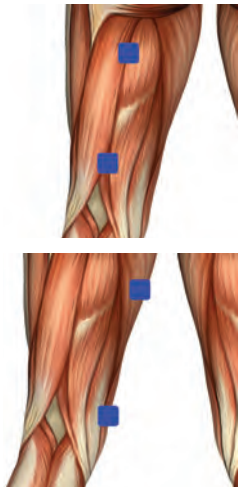


Suggested Programmes

P14, P15, P17, P20 - P24

For you men, this strengthening brings you more noticeable muscle build-up for sports such as tennis or even football.

Internal Thigh



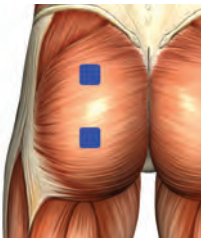
Suggested Programmes

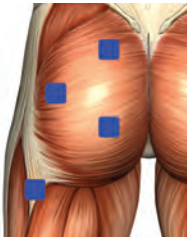
P14, P15, P17, P20 - P24

But for you women, this area, which is very difficult to build up muscles in, will become curvy and well-toned thanks to this position. Even so, this should be carried out in moderation to avoid over-developing the muscle.

ELECTRODE PLACEMENT

Gluteals



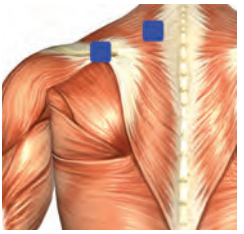


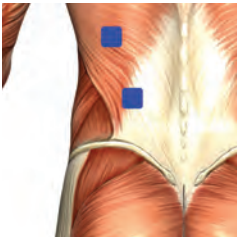
Suggested Programmes

P20 - P24

This position is ideal for shaping the gluteal muscle.

The Trapezius Muscles and Dorsals

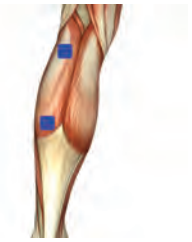




Suggested Programmes

P14, P15, P18, P20 - P24

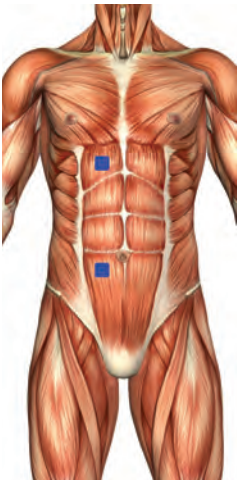
The Legs and Calves



Suggested Programmes

P15, P16, P18, P20 - P24

The Abdominals



Suggested Programmes

P15, P16, P18, P20 - P24

It is the abdominal muscle which, when electro-stimulated, will make a six-pack appear and get rid of this little pot-belly

ELECTRODE PLACEMENT

The Abdominals

Suggested Programmes

P14, P15, P20 - P24

These muscles are very difficult and painful to work on. So, go on, the electrodes positioned like this will allow you to work on your muscles

The Pectorals

Suggested Programmes

P14, P15, P19 - P24

BE SURE to follow the positioning.

DO NOT POSITION ON THE HEART AREA !

TECHNICAL SPECIFICATION

The technical specification details of EV-906 Digital TENS/EMS are as follows:

	MECHANISM	TECHNICAL DESCRIPTION
01	Channel	Four, isolated between channels
02	PulseAmplitude	Adjustable, 0-100 mA peak into 500 ohm load each channel.
03	Wave Form	Asymmetrical Bi-Phasic Square Pulse
04	Voltage	0 to 50V (Load: 500 ohm)
05	Power source	Four 1.5V AA batteries
06	Size	13.8cm(L) x 7.8cm(W) x 2.8cm(H)
07	Weight	276 grams with battery.
08	Pulse Rate	Adjustable, from 2 to 150 Hz, 1 Hz/step
09	PulseWidth	Adjustable, from 50 to 300 microseconds, 10 μs/step
10	OnTime	Adjustable, 2~90 seconds , 1 Sec./ step
11	Off Time	Adjustable, 0~90 seconds , 1 Sec./ step
12	RampTime	Adjustable, 1~8 seconds, 1 Sec./ step, The "On" time will increase and decrease in the setting value.
13	Mode	Five TENS Modes: B(Burst), N(Normal),M (Modulation), SD1(Strength Duration), SD2 Three EMS Modes: C(Constant) S (Synchronous), A (Alternate)
14	Burst Mode(B)	Burst rate: Adjustable, 0.5 ~ 5Hz Pulse width adjustable, 50~300 μs Frequency fixed = 100 Hz
15	Normal Mode (N)	The pulse rate and pulse width are adjustable. It generates continuous stimulation based on the setting value.
16	Modulation Mode (M)	Modulation mode is a combination of pulse rate and pulse width modulation. The pulse rate and width are automatically varied in a cycle pattern. The pulse width is decreased by 50% from its original setting in 0.5 second,

TECHNICAL SPECIFICATION

	then the pulse rate is decreased by 50% from its original setting in 0.5 second.Total cycle time is 1 second. In this mode, pulse rate(2-150Hz) and pulse width(50-300 μs) are fully adjustable.
17 SD1Mode	The SD1(Strength-Duration) mode consists of automatic modulation intensity and pulse width in 40% range. The intensity is always increasing while the pulse width is decreasing and vice-versa. The intensity is decreased by 40% while the pulse width is increased by 40% in 5 seconds. In the next 5 seconds, the intensity is increased by 40% while the pulse width is decreased by 40%.Total cycle time is 10 seconds. Pulse rate (2~150Hz) and pulse width(50~300μs) are fully adjustable.
18 SD2 Mode	The SD2(Strength-Duration) mode consists of automatic modulation intensity and pulse width in 70% range. The intensity is always increasing while the pulse width is decreasing and vice-versa. The intensity is decreased by 70% while the pulse width is increased by 70% in 5 seconds. In the next 5 seconds, the intensity is increased by 70% while the pulse width is decreased by 70%.Total cycle time is 10 seconds. Pulse rate(2~150Hz) and pulse width (50~300μs) are fully adjustable.
19 Constant (C)	Constant stimulation based on setting value. Mode Only pulse width, pulse rate and timer are adjustable in this mode. “Constant” is equal to the “Normal” mode of a TENS unit.
20 Synchronous (S)	Stimulation of both channels occurs Mode synchronously. The “ON” time including “Ramp Up” and “Ramp Down” time. Therefore, the setting of ON Time should be no less than two times of the “Ramp” time in this mode. ON TIME ³ Ramp up + Ramp down

TECHNICAL SPECIFICATION

21	Alternate Mode(A)	The stimulation of the CH2 will occur after the 1st contraction of CH1 is completed. In this mode, the setting of ON Time should be no less than two times of the "Ramp" time. The OFF Time should be equal or more than the ON Time. ON TIME ³Ramp up + Ramp down OFF TIME ³ ONTIME
22	Timer	Two Adjustable timers, from 1 to 60 minutes or Continuous. Adjustable in 1 minute each step from 1 to 15 minutes, and 5 minutes each step from 15 to 60 minutes. Treatment time countdown automatically.
23	Patient	This unit can store 60 sets of operation Compliance Meter records. Total recorded time is 999 hours.
24	Low Battery	A low battery indicator will show up when Indicator the battery is low.
25	Operating	Temperature:0°~40°C Condition Relative Humidity: 30%~75% Atmosphere Pressure : 700Hpa~1060Hpa
26	Remark	There may be up to a +/-5% tolerance of all parameters and +/-20% tolerance of amplitude & voltage.

The waveforms of the TENS modes are as follows.

1. Burst

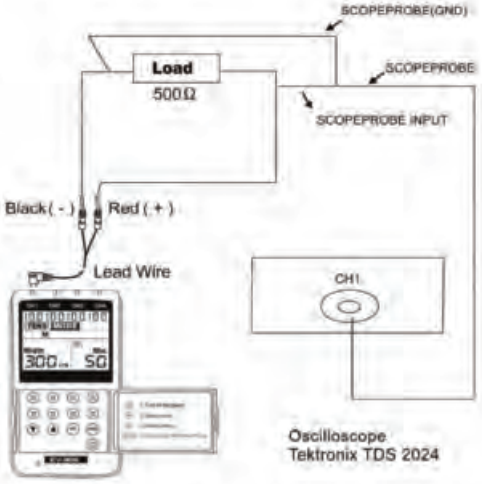
2. Normal

3. Modulation

4. SD1 (Strength-Duration)

5. SD2 (Strength-Duration)

TEST ENVIRONMENT



WARRANTY

All EV-906A Digital TENS/EMS models carry a warranty of one year from the date of delivery. The warranty applies to the stimulator only and covers both parts and labor relating thereto. The warranty does not apply to damage resulting from failure to follow the operating instructions, accidents, abuse, alteration or disassembly by unauthorized personnel.

Manufacturer: Everyway Medical Instruments Co., Ltd.

3Fl. & 8Fl., No.5, Ln. 155, Sec. 3, Beishen Rd. Shenkeng Dist. New Taipei City 22203 Taiwan

Representative in the UK:

MDSS-UK RP LIMITED 6 Wilmslow Road, Rusholme, Manchester, M14 5TP.

INFORMATION FOR DISTRIBUTOR:

Please contact the above mentioned manufacturer for technical support and documentation when necessary.

Everyway Medical Instruments Co., Ltd.
3FI. & 8FI., No.5, Ln. 155, Sec. 3, Beishen Rd.
Shenkeng Dist. New Taipei City 22203 Taiwan

EC REP Luana med. B.V.
Weena-Zuid 130, 3012NC
Rotterdam, Netherlands

UKRP MDSS-UK RP LIMITED
6 Wilmslow Road, Rusholme, Manchester, M14 5TP
England, United Kingdom

Med-Fit UK Ltd.
Unit 8 Martel Court, S. Park Business Park, Hamilton Road, Stockport, SK1 2AF
Telephone: 0161 429 7330
Email: sales@med-fit.co.uk | www.tensmachineuk.com
Company registration number 08758741 | Vat registration number 308286105