
PRESCRIBING INFORMATION

FOREWORD



Read this manual carefully before using your StimTec PLUS unit.

The manufacturer strongly recommends carefully reading the "Warnings and Cautions", and subsequent chapters of this manual.

WARNINGS AND CAUTIONS

Contraindications:

1. Do not use this device if you have a cardiac pacemaker, implanted defibrillator, or other implanted metallic or electronic device, because this may cause electric shock, burns, electrical interference, or death.
2. Do not use this device if your pain syndromes are undiagnosed.

WARNINGS

1. Do not apply stimulation over your neck or mouth because this could cause severe muscle spasms resulting in closure of the airway, difficulty in breathing, or adverse effects on heart rhythm or blood pressure.
2. Do not apply stimulation across your chest, because the introduction of electrical current into the chest may cause rhythm disturbances to your heart, which could be lethal.

3. Do not apply stimulation over open wounds or rashes, or over swollen, red, infected, or inflamed areas or skin eruptions (e.g., phlebitis, thrombophlebitis, varicose veins).
4. Do not apply stimulation over, or in proximity to, cancerous lesions.
5. Do not apply stimulation in the presence of electronic monitoring equipment (e.g., cardiac monitors, ECG alarms), which may not operate properly when the electrical stimulation device is in use.
6. Do not apply stimulation when you're in the bath or shower.
7. Do not apply stimulation while you are sleeping.
8. Do not apply stimulation while you are driving, operating machinery, or during any activity in which electrical stimulation can put you at risk of injury.
9. Consult your physician before using this device, because the device may cause lethal rhythm disturbances to the heart in susceptible individuals.
10. Apply stimulation only to normal, intact, clean, healthy skin.

PRECAUTIONS

1. TENS is not effective for pain of central origin, including headache.
2. TENS is not a substitute for pain medications and other pain management therapies.
3. TENS devices have no curative value.
4. TENS is a symptomatic treatment and, as such, suppresses the sensation of pain that would otherwise serve as a protective mechanism.
5. The long-term effects of electrical stimulation are unknown.
6. Since the effects of stimulation of the brain are unknown, stimulation should not be applied across the head, and electrodes should not be placed on opposite sides of the head.
7. The safety of electrical stimulation during pregnancy has not been established.
8. Some users may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium (gel).
9. Users with suspected or diagnosed heart disease should follow precautions recommended by their physicians.
10. Users with suspected or diagnosed epilepsy should follow precautions recommended by their physicians.

11. Use caution if you have a tendency to bleed internally, such as following an injury or fracture.
12. Use caution following recent surgical procedures when stimulation may disrupt your healing process.
13. Use caution if stimulation is applied over the menstruating or pregnant uterus.
14. Use caution if stimulation is applied over areas of skin with less than normal sensitivity.
15. Keep this device out of the reach of children.
16. Use this device only with the leads, electrodes, and accessories recommended by the manufacturer.

ADVERSE REACTIONS

- Users may experience skin irritation and burns beneath the stimulation electrodes applied to the skin.
- Users may experience headache and other painful sensations during or following the application of electrical stimulation near the eyes and to the head and face.
- Users should stop using the device and should consult with their physicians if they experience adverse reactions from the device.

GENERAL WARNINGS

1. Do not immerse any part of the unit in water.
2. Do not place the unit close to excessive heat.
3. Do not use any electrodes which are less than 50mm X 50mm.
4. Use only the specified battery: 1x 3.7volt rechargeable lithium battery. The use of any other battery could damage the unit.
5. Remove battery if unit is not used for a long period of time.
6. Do not use the unit while asleep.
7. Keep the unit away from sources of high magnetic fields such as TV'S, microwave ovens, and hi-fi speakers, as these may affect the LCD screen.
8. Temperature & Relative Humidity of storage:
-20°C--+40°C, 8%--70% R.H.
9. Temperature & Relative Humidity of transportation:
-20°C--+40°C, 8%--70% R.H.

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OPERATING INSTRUCTIONS

INTENDED USE

The StimTec PLUS combines the treatment capabilities of a TENS device and EMS or NMES device all in one unit.

TENS stands for Transcutaneous Electrical Nerve Stimulation. The TENS settings are used to provide symptomatic pain relief for chronic, acute or post-operative pain.

EMS stands for Electrical Neuromuscular Stimulation. The EMS settings are used to provide a muscular training for localized regeneration and muscular hypertrophy.

HOW DOES T.E.N.S. WORK

Transcutaneous Electrical Nerve Stimulation (TENS) is believed to work by stimulating your body's own natural defenses against pain. The unit produces a gentle stimulus that is communicated through electrodes normally placed over the area of pain. This stimulus helps the body to produce natural pain relievers called endorphins.

The correct positioning of the electrodes is important and we recommend correct placement through experimentation. Some people feel immediate benefit from EMS/TENS, however some may only achieve benefit after repeated treatment sessions and over an extended period of time.

HOW DOES E.M.S. WORK

Electrical Neuromuscular Stimulation (EMS) is believed to work by stimulating the muscles with electrical impulses. When the muscle receives impulses, it contracts as if the brain has sent the signal itself. As the pulse strength increases, the muscle flexes as in physical exercise. Then when the pulse ceases, the muscle relaxes and the cycle is repeated.

INSTRUCTIONS FOR USE

Your StimTec PLUS has been designed to be simple and easy to use.

CONTENT IN THE PACK

Your StimTec PLUS pack should contain the following:

- 1 × StimTec PLUS Unit
- 2 × Leads
- 1 × 3.7V Rechargeable Lithium Battery (BL-6F)
- 1 × AC Power Cord
- 1 × Battery Charging Cradle
- 1 × User Manual

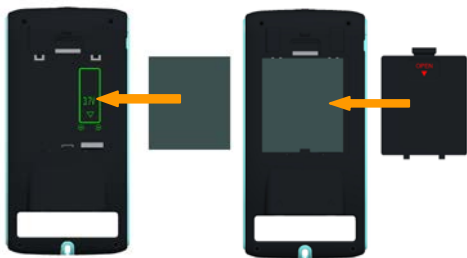
HOW TO ASSEMBLE YOUR UNIT

Assembly of the StimTec PLUS Unit is very simple and requires only five steps.

STEP 1 BATTERY

Slide belt clip down to access battery cover. Remove the battery cover and insert the battery, as shown on the diagram inside the battery compartment. Replace the battery cover.

NOTE: Fully charge battery before initial use. See “Charging The Battery” on Page 14.



Insert the battery

Replace the battery cover

CAUTION

There is a risk of explosion if the battery is fitted incorrectly. Replace with the 3.7 volt lithium battery. Do not dispose of the battery in a fire and keep them out of reach of children. The battery must be removed from the unit if unit is not used for a long period of time.

STEP 2 LEADS

If only using one lead, insert into one jack. If using two leads, insert into both jacks.

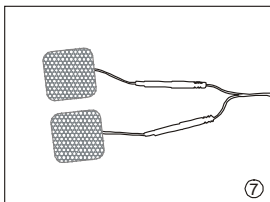
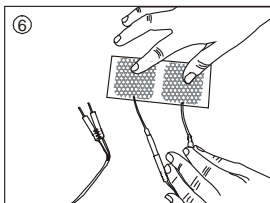
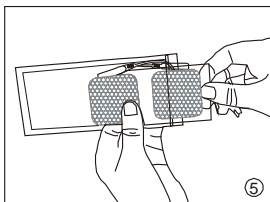


A: Insert the lead wires

B: Turn the plug on the lead wire 90° to lock it between the main body and handle of the unit. This prevents accidental disconnection during treatment.


STEP 3 *ELECTRODES*

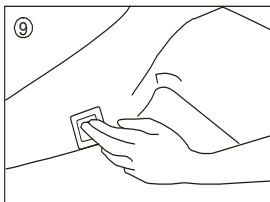
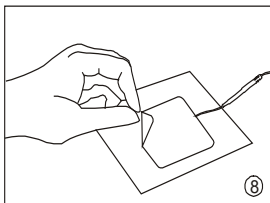
Remove electrodes from the bag and connect to the leads.



STEP 4 PLACEMENT OF ELECTRODES

Ensure wherever you intend to place the electrodes, the skin is clean and thoroughly dry. Remove the electrodes from the clear plastic shield and position on your body as required.

Please note: Attempting to increase intensity without electrodes connected and placed on the treatment area is not possible. The  symbol on the display will notify you if this occurs.

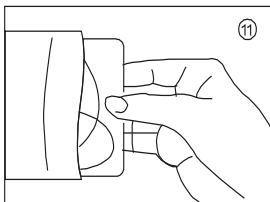
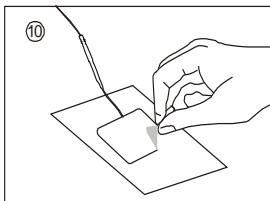


STEP 5 READING

Read "Operation of the StimTec PLUS Unit" on page 15, and decide how to use the unit for the treatment.

NOTE: AFTER USE

Always ensure that the unit is switched OFF before removing the electrodes. After use, return the electrodes to the clear plastic shields. There is no need to separate the lead wires from the electrodes.



Life of the electrodes: When the electrodes initially lose their adhesive quality, it is possible to reactivate their adhesiveness by applying a fine spray of water. Replace the electrodes when they lose their adhesive quality in order not to affect the efficiency of the unit.

CHARGING THE BATTERY

The StimTec PLUS is powered by a type BL-6F rechargeable Lithium battery. A separate Charging Cradle and Power Adaptor are included in the kit.

When the battery is running low, a low battery indicator will show on the screen (battery symbol). Although the display fades as the battery runs down, the strength of the output does not change until the warning is shown.

When the battery is fully charged, the indicator light on the cradle will change from red to green.

NOTE

1. Remove the battery from the StimTec PLUS if the unit is unlikely to be used for a long period.
2. When the battery is running low, it has to be removed from the unit and charged in the charging cradle.
3. Use only the power adaptor and charging cradle supplied.


USE OF OTHER CHAGERS COULD BE HAZARDOUS.


OPERATION OF THE STIMTEC PLUS UNIT

StimTec PLUS Unit is easy to operate using the keys shown in the following diagram.



WHAT DOES EACH KEY DO

 This key switches the unit on or off. Press once and the unit is on, the LCD display located at the front of the unit will light up, there will be no feeling from either lead at this point as the intensity always starts at zero. Press this key again and the unit will switch off.

 There are two stimulation types available with the StimTec PLUS (TENS and EMS).

Press and hold the "Prog" key at least 3 seconds, to switch between TENS – EMS. The symbol "TENS", and "EMS" will display on the LCD accordingly.

Once the stimulation type is selected, press the "Prog" key to select the related programs.

There are a total of 40 programs available:

For TENS treatment:

Program 0-13 --- TENS Preset programs

Program 14-21 --- TENS Manual programs

For EMS treatment:

Program 22-31 --- EMS Preset programs

Program 32, 33 --- EMS Manual programs

In EMS preset modes (Prog 22- Prog 31) the treatment status symbols below will be displayed.

	WARM-UP		FORCE 1
	AEROBIC EXERCISE		FORCE 2
	TONING		FAST FORCE
	HARDENING		EXPLOSIVE FORCE
	RESISTING FORCE		PROGRESSIVE RECUPERATION



Press this key to select the following parameters one by one:

TENS Preset Mode(P0-P13) :

Treatment Timer (min)

TENS Manual Mode(P14-P21) :

FREQUENCY (Hz)

PULSE WIDTH (μ s)

Waveform

Treatment Timer (min)

EMS Manual Mode(P32-P33) :

FREQUENCY (Hz)

PULSE WIDTH (μ s)

Waveform

Treatment Timer (min)


SYNCHRONOUS/ALTERNATING

ON TIME (sec)


OFF TIME (sec)


RAMP UP TIME (sec)


RAMP DOWN TIME (sec)



 Press these keys to increase or decrease the value of the parameter, which has been selected by MENU key.



 Press these keys to adjust the intensity of channel 1 and channel 2. Left side is for channel 1; right side is for channel 2.

 Pause key: Press this key to make the unit pause; to continue treatment, press and hold down this key again.

 For TENS preset modes (Prog 2- Prog 13), if a preset mode is working, press this key to skip a phase (sub-programs **A** **B** **C**). For EMS preset and manual modes (Prog 22- Prog 33), if a preset mode is working, press this key to choose the treatment area.

 Press and hold this key for at least 3 seconds to LOCK or UNLOCK parameters. When the unit is locked, only intensity and treatment timer can be adjusted. The  symbol displayed on the LCD screen indicates that the unit is locked.

SPECIFICATIONS

Model:	StimTec PLUS
Channel	Dual, isolated

TENS:

Intensity	0-150mA zero to peak at 500ohm load
Frequency	1-150 Hz
Pulse width	50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180,190, 200, 210, 220, 230, 240, 250 μ s
Waveform	Symmetrical bi-phase rectangular, Asymmetrical bi-phase rectangular, Mono-phase rectangular
Treatment timer	Continuous, 15, 30, 45, 60, 90min

The PRESET program apply a sequence of 3 sub-programs **A** **B** **C**, optimized to treat the specific pain situation. The characters **A**, **B** or **C** will flash, showing the phase in use or will be ON to show the completed phase.

Mode Constant A – Both Pulse Rate and Pulse Width are adjustable. Default values are PR=3Hz and PW=250 μ s characterized by a decontracturing effect. Use this program if you want to relax the painful area. The stimulation level must be set to produce a gentle muscular contraction.

Mode Constant B – Both Pulse Rate and Pulse Width are adjustable. Default values are PR=10Hz and PW=150 μ s characterized by an endorphins stimulating effect. Use this program if you want produce endorphins at the painful area. The stimulation may reach the muscular contraction level. If the Pulse Rate will be

increased, the stimulation level must be set to avoid the muscular contraction.

Mode Constant C – Both Pulse Rate and Pulse Width are adjustable. Default values are PR=70Hz and PW=50 μ s characterized by an endorphins stimulating effect through the Gate-control mechanism. Use this program in case of ACUTE PAIN. The stimulation level must be set to avoid the muscular contraction.

Mode MODulation SW (A) – Pulse Rate SWeep modulation. Pulse Rate is automatically modulated within F1=50Hz and F2=80Hz (adjustable); each frequency step will last 1 sec. F2 can be changed only if the intensity level of both channels are set to 0. The Pulse Width is 200 μ s (adjustable from 50 μ S to 250 μ S).

Mode MODulation 2F (B) – Pulse Rate Dual Frequencies modulation. Pulse Rate is automatically changed every 5 seconds, between F1=70Hz (adjustable) and F2=5Hz. F1 can be changed only if the intensity level of both channels are set to 0. The Pulse Width is 50 μ s (adjustable from 50 μ S to 250 μ S).

Mode Burst A – 3 second Burst sequence = 1s on, 2s off. Both Pulse Rate and Pulse Width are adjustable. Default values are PR=30Hz and PW=250 μ s. The stimulation level must be set to produce a gentle muscular contraction.

Mode Burst B – 1.5 second Burst sequence = 0.5s on, 1s off. Both Pulse Rate and Pulse Width are adjustable. Default values are PR=50Hz and PW=200 μ s. The stimulation level must be set to produce a gentle muscular contraction.

Mode Burst C – 0.75 second Burst sequence = 0.25s on, 0.5s off. Both Pulse Rate and Pulse Width are adjustable. Default values are PR=100Hz and PW=150µs. The stimulation level must be set to produce a gentle muscular contraction.


EMS:

Intensity	0-150mA zero to peak at 1000ohm load
Frequency	1-120 Hz
Pulse width	Positive phase: 50-400µs, in steps of 50µs
Waveform	Symmetrical Bi-Phasic rectangular, Alternated Bi-Phasic rectangular
Ramp up time	0-5s in steps of 1s
Ramp down time	0-5s in steps of 1s
On time	1-60s in steps of 1s
Off time	0-60s in steps of 1s
Treatment timer	Continuous, 10, 20, 30, 45, 60, 90min

Program 32&33 (manual) – When using ALTERNATING Frequency, ensure that the “Ramp Up Time”, “On Time”, and “Ramp Down Time” equals “Off Time”.

Ramp Up + On Time + Ramp Down = Off Time



The  will appear on your screen if this formula is not followed in EMS manual mode.

Programs:

1) P0-P21 TENS programs

Program 0-13 --- TENS Preset programs

Program 14-21 --- TENS Manual programs

2) P22-P33: EMS Modes

Program 22-31 --- EMS Preset programs

Program 32,33 --- EMS Manual programs

OTHER FEATURES

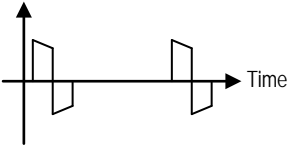
1. When the unit is turned on, if any of the keys are not pressed within 5 minutes, it will automatically shut off.
2. When the treatment timer has been set, it begins to count down one minute by one minute and is displayed on the LCD. Once it counts down to zero, the device automatically shuts off.
3. The treatment time will be accumulatively recorded when the output level is above zero, by pressing "CH1▼" key and "Prog" key for 3 seconds, the accumulative treatment time in minutes can be displayed, or return back to the previous normal display in toggle; by pressing "CH2▼" key and "Prog" key for 3 seconds will clear the treatment time to zero.
4. When the program changes, the output level will go down to zero immediately.
5. When the unit is turned on, it will automatically enter the mode that the unit had worked in before the unit was turned off.
6. When the battery is low, the battery icon will flash indicating that the batteries should be recharged.
7. When one or both of the electrodes are not placed firmly on the skin, the output level goes immediately to zero.

Waveform Information

There are 4 types of waveforms:

- (1). Symmetrical Bi-Phasic rectangular waveform

Amplitude



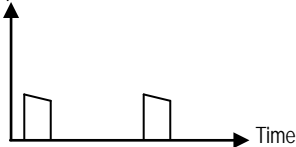
- (2). Asymmetrical Bi-Phasic rectangular waveform

Amplitude



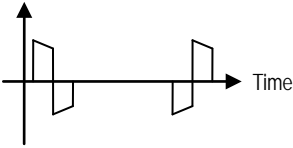
- (3). Mono-Phasic waveform

Amplitude



(4). Alternated Bi-Phasic rectangular waveform

Amplitude



ELECTRODES PLACEMENT

Please study the body maps in this guide, which illustrate placement of the electrodes depending on your symptoms.

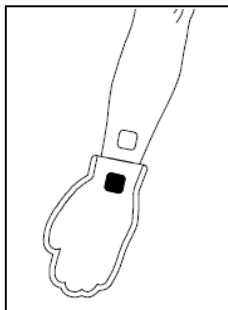
Examples of electrodes placement for TENS:

0 & 1 – HANDS & FEET

These modes require the use of special electrode garments not included.

Note: Should you choose to source electrode garments for these treatment modes, please ensure that the garment selected is designed to function in accordance with the following instructions for use, and with the output specifications of this device.

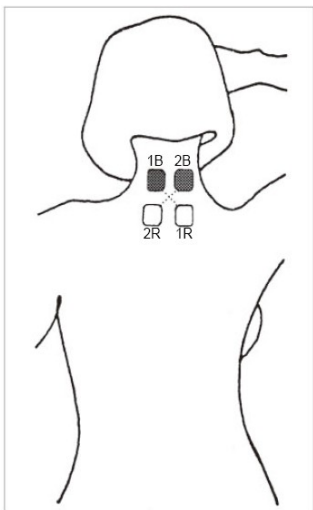
Using a single channel, connect one lead to the garment, and connect the other lead to an electrode which is placed on the lower arm or lower leg.



2 – NECK PAIN

Using both leads, place the electrodes at the back of the neck and over the top of your shoulders.

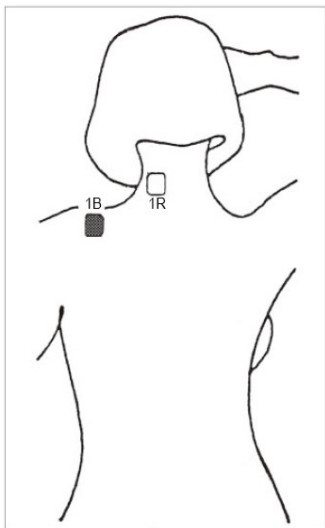
Note: Do not place electrodes on the side or front of the neck.



1B = Channel 1 black / 1R = Channel 1 red
2B = Channel 2 black / 2R = Channel 2 red

3 – TORTICOLLIS

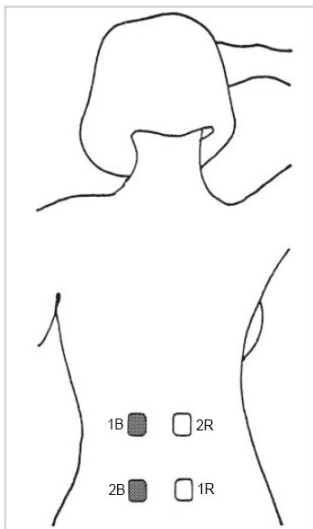
Using a single channel, place the electrodes, over the area of maximum pain.



1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

4 – LOW BACK PAIN

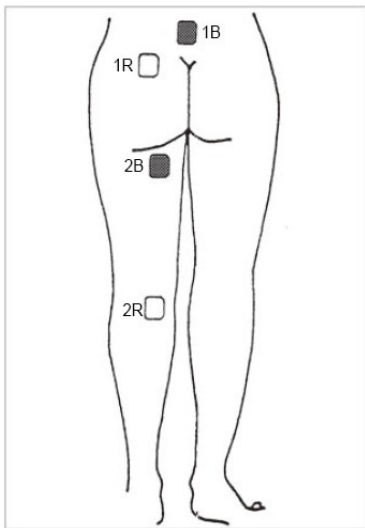
Using both leads, place electrodes on either side of the spine, crossing the channels, at the site of pain.



1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

5 – SCIATICA

Using both leads, take the first lead and place the electrode with the black adapter on your lower back on one side of your spine, and the second electrode with the red adapter at the top of the back of your leg. With the second lead, place the other two electrodes lower down as illustrated.



Channel 1



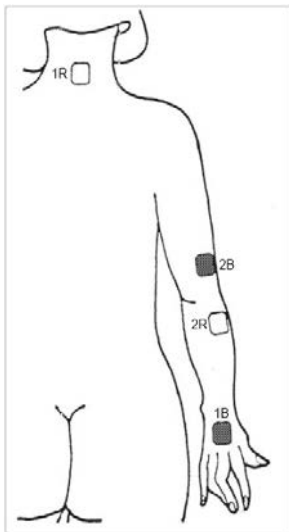
Channel 2



1B = Channel 1 black / 1R = Channel 1 red
2B = Channel 2 black / 2R = Channel 2 red

6 – EPICONDYLITIS

Using both leads, place electrodes on either side of the elbow.



Channel 1

Channel 2

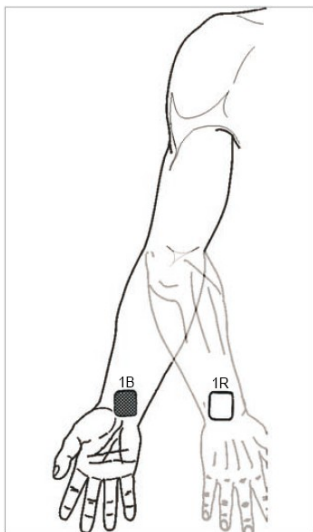


1B = Channel 1 black / 1R = Channel 1 red

2B = Channel 2 black / 2R = Channel 2 red

7 – WRIST PAIN

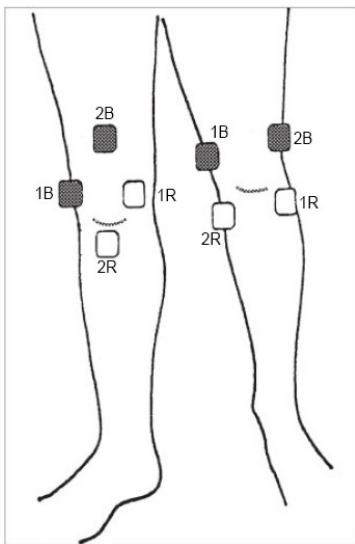
Using a single channel, place the electrodes over the area of maximum pain on each side of the wrist.



1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

8 – KNEE PAIN (CHRONIC)

Using both leads, place electrodes over the top and base of the knee. Avoid placing directly on the kneecap. Below are two common application techniques.



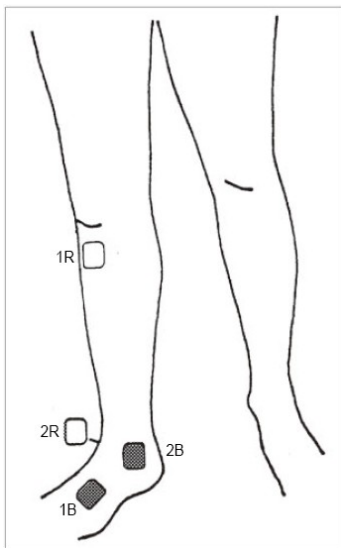
Channel 1 Channel 2



1B = Channel 1 black / 1R = Channel 1 red
2B = Channel 2 black / 2R = Channel 2 red

9 – ANKLE SPRAIN

Using both leads, place an electrode from one lead on either side of the leg, and the other electrode on your ankle. The electrodes from the other lead will be placed along the affected nerve.



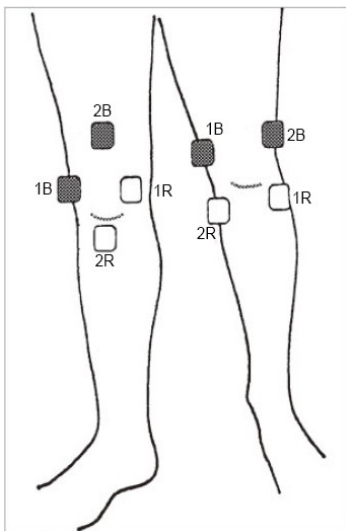
Channel 1 Channel 2



1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

10 – KNEE PAIN (ACUTE)

Using both leads, place electrodes over the top and base of the knee. Avoid placing directly on the kneecap. Below are two common application techniques.



Channel 1

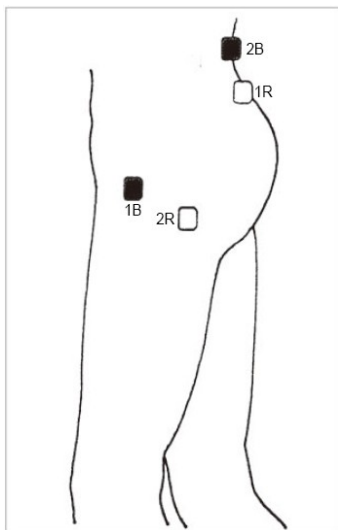
Channel 2



1B = Channel 1 black / 1R = Channel 1 red
2B = Channel 2 black / 2R = Channel 2 red

11 – HIP PAIN (COXALGIA)

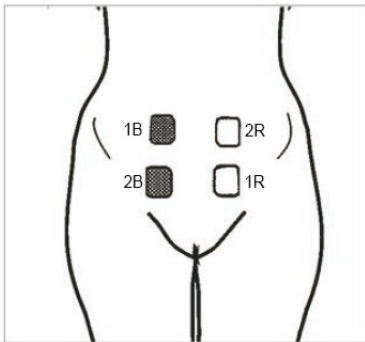
Using both lead wires, place one electrode from each lead wire on your lower back on the side of the spine related to the affected hip. The remaining electrodes must be placed on the area of pain, on your hip.



1B = Channel 1 black / 1R = Channel 1 red
2B = Channel 2 black / 2R = Channel 2 red

12 – MENSTRUAL PAIN

Using both lead wires, place electrodes over the tummy area as shown.

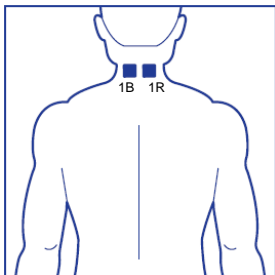


1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

13 – MIGRAINE

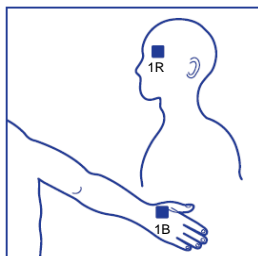
Using only 2 electrodes, place each on the back of the neck.

Note: Do not place electrodes on the side or front of the neck.



MIGRAINE (ADDITIONAL POSITION)

Using only 2 electrodes, place one on the left temple, and the other on the back of your right hand between your thumb and first finger.

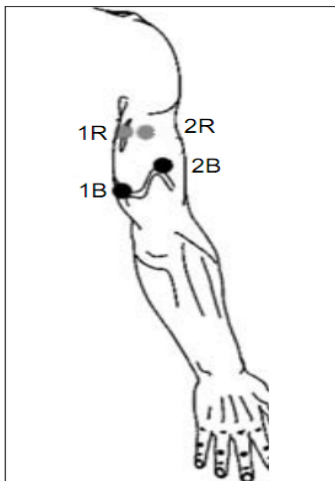


Note: If only 2 electrodes are being used, connect both electrodes to the 2-lead single-channel lead wire.

Examples of electrodes placement for EMS:

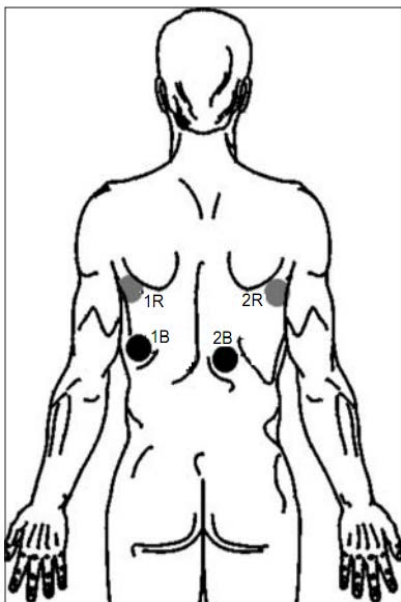
Please Note: In EMS mode, electrode placement is not determined by the program mode selected. Simply select your program mode, then place electrodes on the required treatment area according to the following diagrams.

TRICEPS



1B = Channel 1 black / 1R = Channel 1 red
2B = Channel 2 black / 2R = Channel 2 red

LATISSIMUS DORSI



Channel 1

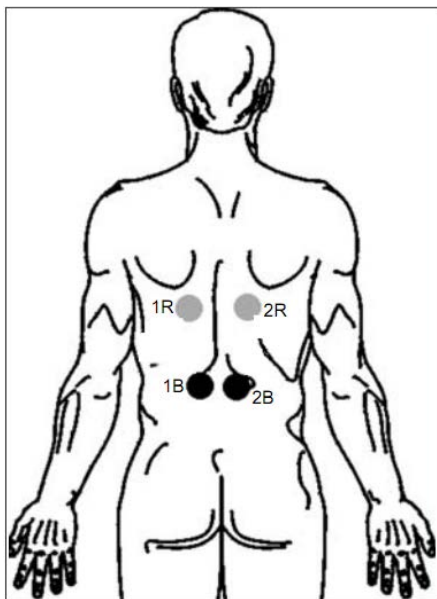
Channel 2



1B = Channel 1 black / 1R = Channel 1 red

2B = Channel 2 black / 2R = Channel 2 red

SPINALIS MUSCLE (BACK)



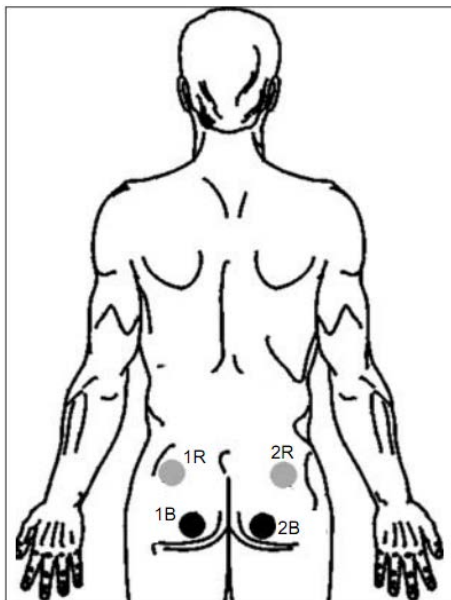
Channel 1

Channel 2



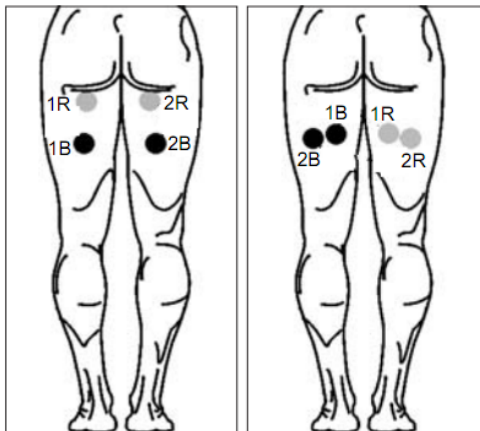
1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

GLUTEUS



1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

HAMSTRINGS

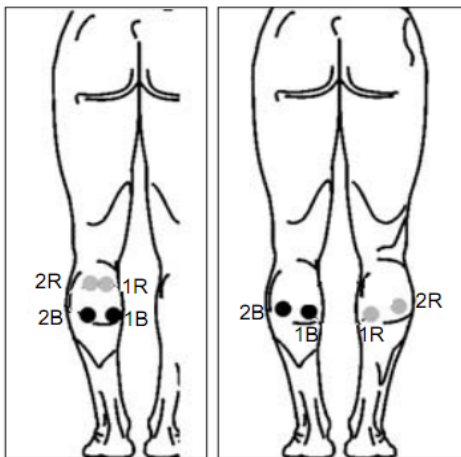


Channel 1 Channel 2



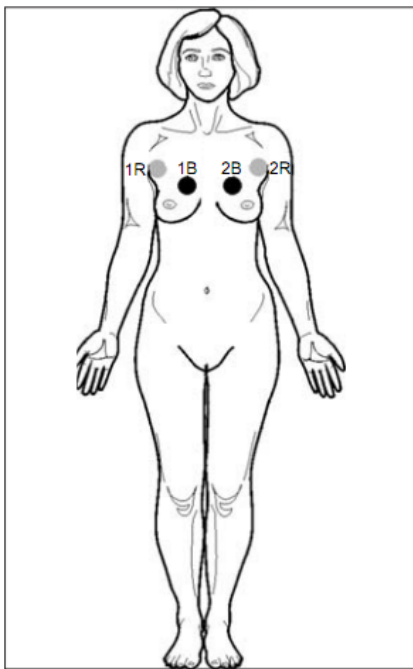
1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

CALVES



1B =Channel 1 black / 1R =Channel 1 red
2B =Channel 2 black / 2R =Channel 2 red

BREAST



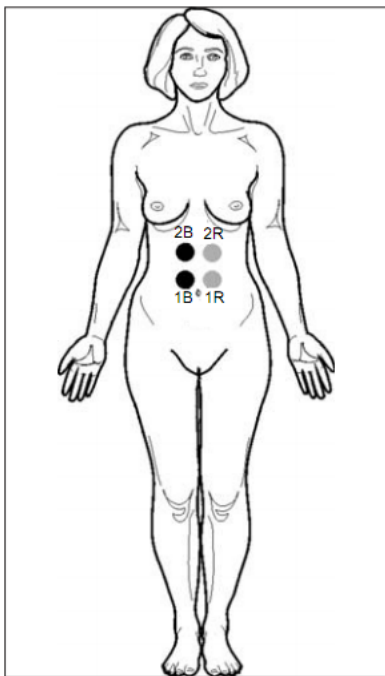
Channel 1 Channel 2



1B =Channel 1 black / 1R =Channel 1 red

2B =Channel 2 black / 2R =Channel 2 red

ABDOMEN



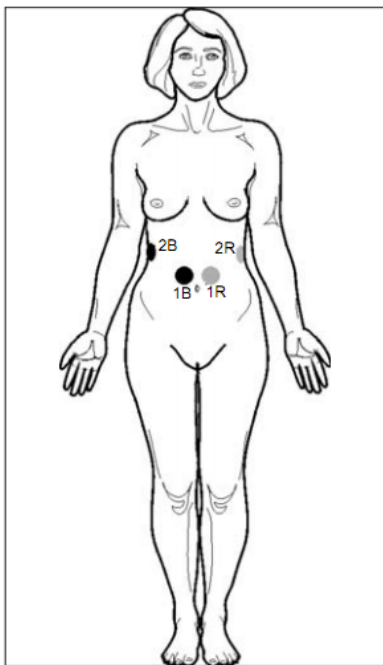
Channel 1 Channel 2



1B =Channel 1 black / 1R =Channel 1 red

2B =Channel 2 black / 2R =Channel 2 red

ABDOMEN + WAIST



Channel 1

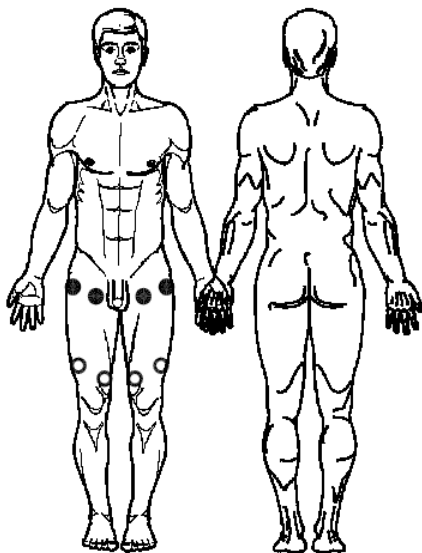
Channel 2



1B =Channel 1 black / 1R =Channel 1 red

2B =Channel 2 black / 2R =Channel 2 red

QUADRICEPS



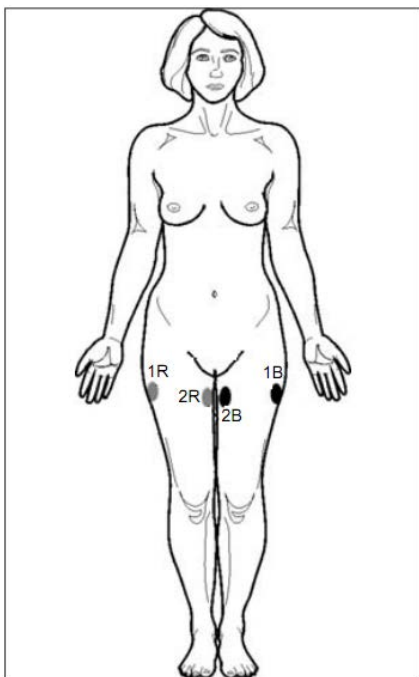
Channel 1 Channel 2



1B =Channel 1 black / 1R =Channel 1 red

2B =Channel 2 black / 2R =Channel 2 red

THIGHS



Channel 1

Channel 2



1B =Channel 1 black / 1R =Channel 1 red

2B =Channel 2 black / 2R =Channel 2 red

ELECTRODES

The electrodes that are supplied with your STIMTEC PLUS Unit are self-adhesive and can be used several times. Skin must be allowed to breathe, so the electrodes should be removed periodically. When not in use, the electrodes should be placed onto the clear plastic shield.

The condition of the electrodes has a direct effect on conductivity, and therefore the effectiveness of the treatment. When the electrodes start to lose their adhesive quality, it is possible to reactivate their adhesiveness by applying a fine spray of water to the gel side of the electrode. In time, this technique will not work, the gel will not reactivate, and new electrodes should be used.

WARNINGS

Do not use any electrodes less than 50mm X 50mm.

Allergic reactions to the self-adhesive electrodes can occur even though they are hypoallergenic.

- Do not apply to broken skin.
- Do not apply electrodes to areas with less than normal sensitivity. This could lead to setting intensities at higher levels than intended.