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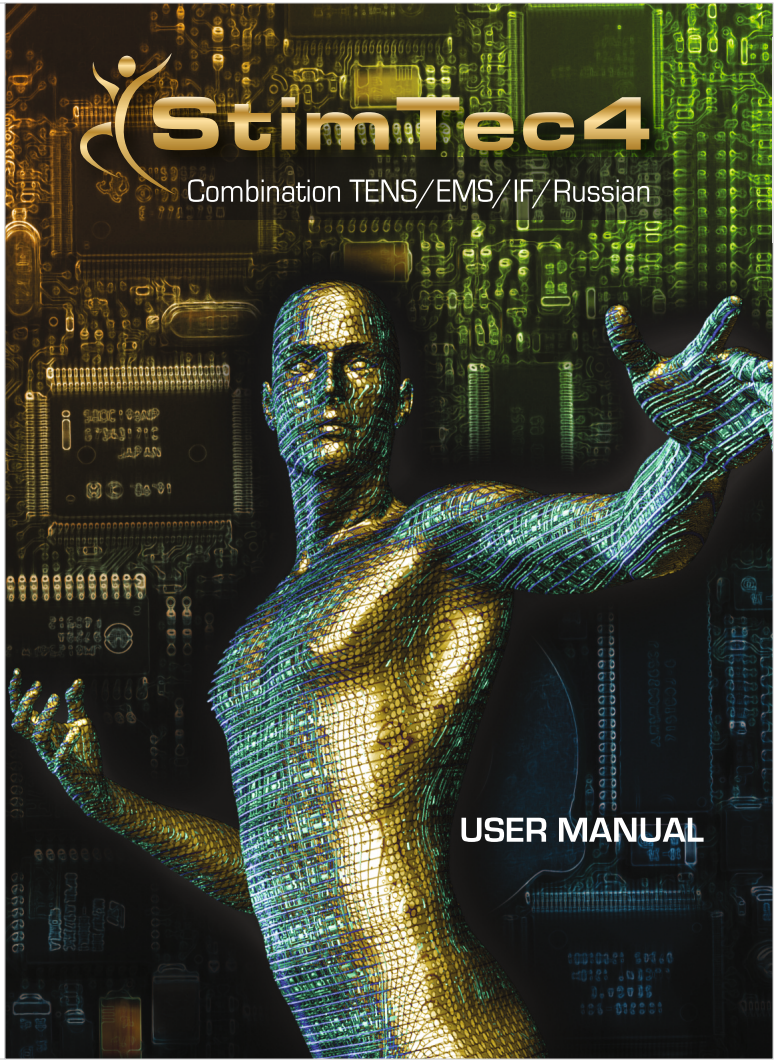
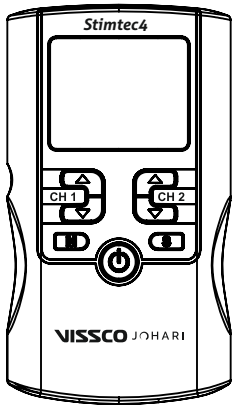


This manual is valid for StimTec4 Combo TENS/EMS/IF/Russian Stimulator

Congratulations on your choice to purchase this combination unit. We know you will enjoy the treatment option and pain relief this product can offer you.

CAUTION: USA Federal law restricts these devices to sale by or on order of a physician or licenced practitioner. This device should be used only under the continued supervision of a physician or licensed practitioner.

Please consult your healthcare professional for specific treatment settings before using. Please also assure you have thoroughly read and understood this manual before your first session.



User Manual StimTec4

Table of Contents

1. Safety Information

1.1 Product Description:

StimTec4 Electrical Stimulator is a portable electrotherapy device featuring four Therapeutics modes: TENS, EMS, Interferential & RUSSIAN which are used for pain relief and electrical muscle stimulation. The stimulator sends gentle electrical current to underlying nerves and muscle group via electrodes applied on the skin. The parameters of the device are controlled by press buttons. Its intensity level is adjustable according to the needs of patients.

1.2 Medical Background

EXPLANATION OF TENS: Transcutaneous Electrical Nerve Stimulation (TENS) 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 reducing or eliminating the pain, allowing for a return to normal activity.

EXPLANATION OF EMS- Electrical Muscle Stimulation (EMS) 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 (ladder shaped). Through the square wave pattern it is able to work directly on the muscle motor neurons. This device 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.

EXPLANATION OF IF: Interferential stimulation (IF) is an inflammatory based treatment modality. Interferential stimulation is characterized by two alternating current sine waves or square waves of differing frequencies that 'work' together to produce an interferential current that is also known as a beat pulse or alternating modulation frequency. One of the two currents is usually held at 4000 Hz and the other can be held constant or varied over a range of 4001 to 4100 Hz. Because of the frequency, the interferential wave meets low impedance when crossing the skin to enter deep into soft tissues. The interferential currents can reportedly stimulate sensory, motor and pain fibers. These large impulse fibers interfere with the transmission of the pain messages at spinal cord level. This deep tissue penetration stimulates parasympathetic nerve fibers for increased blood flow and edema reduction. It utilizes the low electric current to stimulate muscle nerves to achieve the symptomatic relief of chronic intractable pain, post traumatic pain and post surgical pain.

EXPLANATION OF RUS: Russian Stimulation (RUS) is a specific form of electro-stimulation with a Symmetrical Biphasic Square waveform produced by dividing a 2500 Hz carrier frequency into 50 Hz packets. Originally developed by the

Russian Olympic team for muscle mass enhancement, is now often used for muscle strengthening, muscle spasms & Edema reduction in the United States. Russian Muscle stimulation is similar to EMS. It is designed to stimulate motor nerves. However, the high frequency of 2500 Hz allows for deeper muscle penetration and a more complete/stronger contraction of the muscle fibers.

1.3 Intended Use.

A) Interferential Current Stimulation and TENS is indicated for :

1. Symptomatic relief and management of chronic and intractable pain.
2. Adjunctive treatment in the management of post-surgical and post-traumatic, acute pain conditions.

B) Electrical Muscle Stimulation (EMS or Russian) is indicated for:

1. Relaxation of Muscle spasm.
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

Important Safety Information:

Read instruction manual before operation. Be sure to comply with all “Contraindications”, “Warnings”, “Cautions” and

"Adverse Reactions" in the manual. Failure to follow instructions can cause harm to user or device.

1.4 Contraindications:

DO NOT use the device if you have one or more of the following medical conditions:

- This device MUST NOT BE USED on persons with cardiac pacemakers, defibrillators, or other implanted metallic or electronic devices.
- Epilepsy
- Cancerous Lesions
- Following acute trauma or fracture
- Following recent surgical procedures
- Abdominal or inguinal hernia
- Critical ischemia of lower limbs
- Blood flow deficiencies/ venous thrombosis

1.5 Warnings, Precautions and Adverse Reactions:

Warnings:

1) This device should be used only under the continued supervision of a licenced physician.
2) The long-term effects of chronic electrical stimulation are unknown. Electrical stimulation devices do not have any curative value.
3) TENS is symptomatic treatment and as such, suppresses

the sensation of pain, which would otherwise serve as a protective mechanism.

4) Safety has not been established for the use of therapeutic electrical stimulation during pregnancy. Do not use during pregnancy unless directed by your physician.
5) Electronic stimulation is not effective for pain of central origin.
6) Electrical monitoring equipment (such as ECG monitors and ECG alarms) may not operate properly when electrical stimulation is in use.
7) Stimulation should not be applied over the carotid sinus nerves, particularly in patients with a known sensitivity to the carotid sinus reflex.
8) 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.
9) Stimulation should not be applied transthoracically in that the introduction of electrical current into the heart may cause cardiac arrhythmias.
10) Stimulation should not take place while the user is connected to high-frequency surgical equipment, it may cause burn injuries on the skin under electrodes, as well as problems with the stimulator.
11) Do not use the stimulator in the vicinity of shortwave or microwave therapy equipment, since this may affect the output power of the stimulator.

12) Never use in environments with high humidity such as in the bathroom or when having a bath or shower.

13) Caution should be used in applying electrical stimulation to patients suspected of having heart disease. Further clinical data is needed to show there are no adverse result.

14) Never use near the heart. Stimulation electrodes should never be placed anywhere on the front of the thorax (marked by ribs and breast bone), but above all not on the two large pectoral muscle. Here it can increase the risk of ventricular fibrillation and lead to cardiac arrest.

15) Electrodes should not be placed over the eyes, in the mouth, near the genitals or internally.

16) Never use on the areas of the skin which lack normal sensation.

17) Apply the electrodes to clean, dry and unbroken skin only.

18) Keep electrodes separate during treatment, electrodes in contact with other could result in improper stimulation or skin burns.

19) Keep the stimulator out of reach of children.

20) Consult your doctor if you are in any doubt whatsoever.

Precautions:

Before using the device please consult your doctor if you are experiencing or have any of the following conditions:

- An acute disease
- Malignant tumor

- Infectious disease
- Heart disease
- High fever
- Abnormal blood pressure
- Skin sensory disorders or skin problems
- Hernia – Abdominal or Lingual
- Expectant Mothers

Always remember that natural pain signals that your body creates are a very important warning function, telling us that something is wrong. If you suffer from any serious illness, consult your doctor before using this device or any other device.

This unit should only be used with leads, electrodes and accessories provided by the manufacturer.

Keep this device out of reach of children.

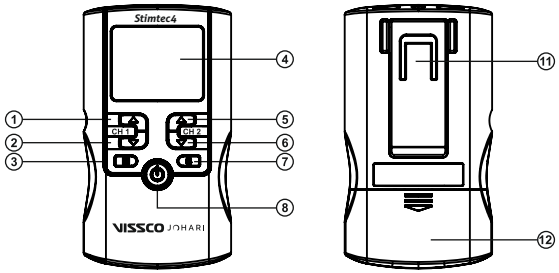
Adverse Reactions:

Skin irritations and burns beneath the electrodes have been reported from use of some electrical stimulators.

Headache and other painful sensations have been reported during or following the application of electrical stimulation to head, face, and near the eyes.

2. Presentation

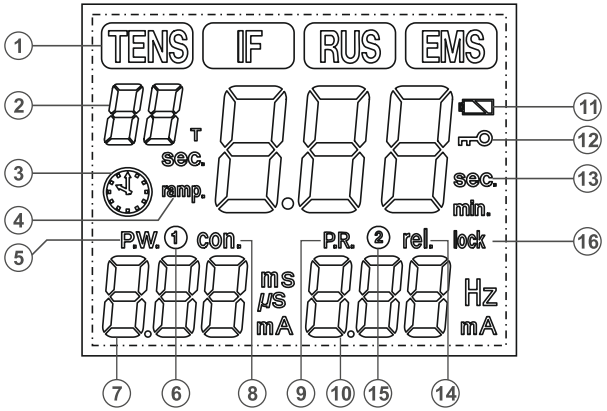
2.1 Front and Rear Panel:



1) Increasing the output intensity of channel 1 (▲). To change the application program and the parameter of the waveform in the setting state.
2) Decreasing the output intensity of channel 1(▼). To change the application program and the parameter of the waveform in the setting state. To unlock the current treatment program.
3) Therapeutic mode selection (M). Stop the treatment. Exit setting mode to the user interface.
4) LCD display: Shows the operating state of the device.

5) Increasing the output intensity of channel 2 (▲). To change the application program and the parameter of the waveform in the setting state.
6) Decreasing the output intensity of channel 2 (▼). To change the application program and the parameter of the waveform in the setting state. To unlock the current treatment program.
7) Parameter Selection (S): press the button to enter setting state; you can select the different parameters in conjunction with (▲) and (▼).
8) Turn OFF/ON: Press the (⏻) button to turn on the device or keep (⏻) button for approx 3 seconds to turn off the device.
9) Output socket: electrical signal output after connection of the cable with adhesive electrodes channel 1.
10) Output socket: electric signal output after connection of the cable with adhesive electrodes channel 2.
11) Belt Clip
12) The battery compartment cover for opening,
13) Adapter Receptacle
14) Program Lock/Unlock Button;
15) Indicator of treatment: Indicator of treatment is lit when the stimulus is present on the channel 1 or flashes when there is no-load condition on the same channel;
16) Indicator of treatment: Indicator of treatment is lit when the stimulus is present on the channel 2 or flashes when there is no-load condition on the same channel.

2.2 LCD Display:



1) Display therapeutic mode
2) Display the therapeutic program or Display the cycle for TENS, IF and RUSSIAN therapeutic mode in setting state.
3) Timer Symbol
4) EMS waveform of ramp up and ramp down time.
5) Display of waveform pulse width,
6) Display the channel 1
7) Display the numbers of the output intensity for channel 1 (CH1); Display numbers of waveform pulse width or EMS waveform of contraction (working) time in setting state.
8) EMS waveform of contraction (working) time.

9) Display of waveform pulse rate.
10) Display the numbers of the output intensity for channel 2 (CH2); Display numbers of waveform pulse width or EMS waveform of contraction (working) time in setting state.
11) Low-battery indicator.
12) The keyboard is locked indicator.
13) Display numbers of treatment time or EMS waveform of ramp up and ramp down time.
14) EMS waveform of relaxation time.
15) Display the channel 2
16) Indicator of program lock/unlock. This segment is active when the program is locked;

3. Specification

3.1 Accessories

S.N.	Particulars	Qty
1.	Electrical Stimulator device	1 piece
2.	Electrode Leads	2 pieces
3.	40*40 mm Adhesive Electrodes	4 pieces
4.	9V Battery	1 piece
5.	User Manual	1 piece
6.	Carrying case	1 piece

3.2 Technical Information

Channel: Dual

Power supply: 9.0 V DC - 1 Battery.

Operating conditions: 5°C to 40°C (41°F to 104°F)with a relative humidity of 30% - 75%, atmospheric pressure from 700 to 1060 Hpa.

Storage conditions: -10°C to 50°C (14°F to 122°F) with a relative humidity of 10% - 90%, atmospheric pressure from 700 to 1060 Hpa. -10°C to 50°C with a relative humidity of 10% - 90%, atmospheric pressure from 700 to 1060 Hpa.

Dimensions: 4.5 X 2.55 X 0.9 inches (L*W*H)

Weight: 0.28 lbs (with battery)

Tolerance: There may be a ±5 % tolerance of all setting and ±10% tolerance of output of intensity.

Timer: Adjustable, from 1 to 60 minutes or continuous, Adjustable in 1 minutes each step. Treatment time countdown automatically.

TENS MODE:

Waveform: Mono-phase square pulse wave;

Pulse Amplitude: Adjustable, from 0 to 100mA peak at 1000 ohms load each channel; 1mA/step;

Pulse Width: Adjustable, from 50 to 300μS, 10μS/step; Default value is 300μS.

Pulse Rate: Adjustable, from 1 to 150Hz, 1Hz/step;

Time: Adjustable, from 1 to 60min or continuous, 1min/step; Default value is 30min.

TENS / P1 – TENS / Burst Mode

- Burst Rate: Adjustable, from 0.5 to 5Hz, 0.1Hz/step;
- Pulse Rate / Freq: Fixed 100Hz;
- The Pulse Rate is adjustable in according with general specification for TENS;

TENS / P2 – TENS / Normal Mode

- The Pulse Rate and Pulse Width are adjustable in according with general specification for TENS; Default value for Pulse Rate is 10Hz.
- This mode generates continuous stimulation based on the setting value;

TENS / P3 – TENS / Pulse Width Modulation

- The Pulse Rate and Pulse Width are adjustable in according with general specification for TENS; Default value for Pulse Rate is 10Hz.
- Cycle Time: Adjustable, from 5 to 30 sec, 1sec/step; Default value: 10 sec
- Description: The Pulse Width is automatically varies in a Cycle Time. The Pulse Width is decreased from its original setting to 60% in setting cycle time, and then increasing from 60% to its original setting in next Cycle Time.

TENS / P4 – TENS / Pulse Rate Modulation

- The Pulse Rate and Pulse Width are adjustable in according with general specification for TENS; Default value for Pulse Rate is 10Hz.
- Cycle Time: Adjustable, from 5 to 30 sec, 1sec/step; Default value is 10s.
- Description: The Pulse Rate is automatically varies in a Cycle Time. The Pulse Rate is decreased from its original setting to 60% in setting Cycle Time, and then increasing from 60% to its original setting in next Cycle Time.

EMS MODE:

Waveform:	Mono-phase square pulse wave;
Pulse Amplitude:	Adjustable, 0-100mA peak at 1000 ohms load each channel; 1mA/step;
Pulse Width:	Adjustable, from 50 to 300μS, 10μS/step; Default value is 300μS.
Pulse Rate:	Adjustable, from 1 to 150Hz, 1Hz/step; Default value is 10Hz.
Contraction Time:	Adjustable, from 1 to 30sec, 1sec/step; Default value is 10s.
Relaxation Time:	Adjustable, from 0 to 60sec, 1sec/step; Default value is 40s.
Ramp Time:	Adjustable, from 1 to 6sec, 1sec/step; Default value is 5s.
Time:	Adjustable, from 1 to 60min or continuous, 1min/step; Default value is 30min.

EMS MODE General Specification – Sub Modes

EMS / P1 – EMS / Synchronous

- Description: Stimulation of both channels occurs synchronously. The ON Time includes Contraction Time, Ramp Up Time and Ramp Down Time. Ramp Up Time and Ramp Down Time are same (Ramp Time).

EMS / P2 – EMS / Alternate

- Description: The stimulation of the channel #2 will occurs after first working of channel #1 is completed. In this

program, the ON Time including Contraction Time, Ramp Up Time and Ramp Down Time. OFF Time should be equal or more than the ON Time.

EMS / P3 – EMS / Delay

- Description: The stimulation of the channel #2 will occur after the first working of channel #1 is started delayed for Delay Time. Default value is 30min.
- Delay Time: Adjustable, from 1 to 10sec, 1sec/step; Default value is 10s.

IF MODE:

Waveform:	Symmetrical bi-phase square pulse wave;
Pulse Amplitude:	Adjustable, from 0 to 70mA peak to peak at 1000 ohms load each channel; 1mA/step;
Interference Frequency:	from 1Hz to 150Hz;
Pulse Rate:	Channel #1 – Fundamental frequency – 4000Hz fixed; Channel #2 – Selectable frequency – from 4001Hz to 4150Hz;
Pulse Width:	Channel #1 – 125μS fixed; Channel #2 – depends of frequency;
Cycle Time:	Adjustable, from 5 to 30sec, 1sec/step; Default value is 10s.
Time:	Adjustable, from 1 to 60min or continuous, 1min/step; Default value is 30min.

P1: The pulse rate of the CH1 is fixed in 4000Hz; CH2 pulse rate is increased from 4001 Hz to 4010Hz in a cycle time, and then decreased from 4010Hz to 4001 Hz in next cycle time. In this program, CH2 interference frequency is varied from 1Hz to 10Hz, cycle time (5 to 30 sec) is fully adjustable. CH2 pulse rate= 4000Hz + Interference frequency.

P2: The pulse rate of the CH1 is fixed in 4000Hz; CH2 pulse rate is increased from 4001Hz to 4150Hz in a cycle time, and then decreased from 4150Hz to 4001 Hz in next cycle time. In this program. CH2 interference frequency is varied from 1 Hz to 1 50Hz. cycle time (5 to 30 sec) is fully adjustable. CH2 pulse rate= 4000Hz + Interference frequency.

P3: The pulse rate of the CH1 is fixed in 4000Hz; CH2 pulse rate is increased from 4080Hz to 4150Hz in a cycle time, and then decreased from 4150Hz to 4080Hz in next cycle time. In this program, CH2 interference frequency is varied from 80Hz to 150Hz, cycle time (5 to 30 sec) is fully adjustable. CH2 pulse rate= 4000Hz + Interference frequency.

P4: The pulse rate of the CH1 is fixed in 4000Hz: CH2 pulse rate is automatically varied in a cycle time. Interference frequency is decreased from its original setting to 60% in cycle time, and then increased from 60% to its original setting in next cycle time. In this program, CH2 interference frequency (2 to 150Hz) and cycle time (5 to 30 sec) are fully adjustable. CH2 pulse rate= 4000Hz + Interference Frequency,

RUSSIAN (RUS) MODE:

Waveform: Symmetrical bi-phase square pulse wave

Pulse Amplitude: Adjustable, from 0 to 70mA peak to peak at 1000 ohms load each channel; 1mA/step;

Interference Frequency: 50Hz fixed;

Pulse Rate: Channel #1 – 2500Hz fixed; Channel #2 – 2550Hz;

Pulse Width: Channel #1 – 200μS, fixed; Channel #2 – ~196μS, fixed;

Contraction Time: Adjustable, from 1 to 30sec, 1sec/step; Default value is 10s.

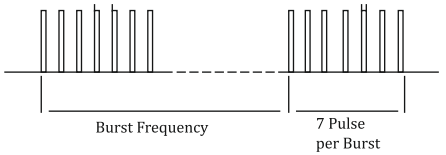
Relaxation Time: Adjustable, from 0 to 60sec, 1sec/step; Default value is 40s.

Ramp Time: Adjustable, from 1 to 6sec, 1sec/step; Default value is 5s.

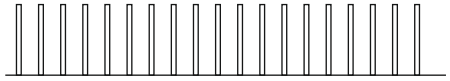
Time: Adjustable, from 1 to 60min or continuous, 1min/step; Default value is 30min

3.3 The Waveforms of the Stimulation Programs:

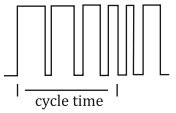
Burst



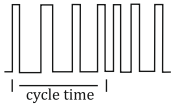
Normal



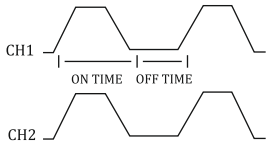
Pulse Width Modulation



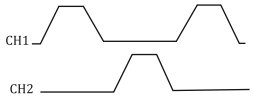
Pulse Rate Modulation



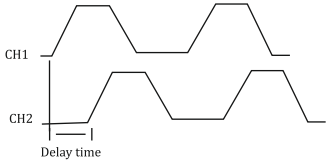
Synchronous



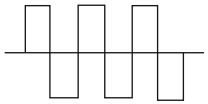
Alternate



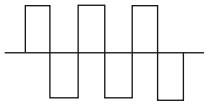
Delay



Interferencial



Russian:



4. Instructions for use:

4.1 Battery

4.1.1 Check/ Replace the Battery

Over time, in order to ensure the functional safety of device, changing the battery is necessary/

1) Slide the battery compartment cover and open.
2) Insert the 9V battery into the battery compartment.
3) Make sure you are installing the battery properly. Be sure to match the positive and negative ends of the battery to the markings in the battery compartment of the device.
4) Press and pull down following the direction of the arrow indicated on the photo.
5) Replace the battery compartment cover and press to close
6) If replace the battery, you should slide the battery compartment cover and open. Pull up the battery following the direction of the arrow indicated on the photo. And insert the 9V battery according to the above step.

4.1.2 Disposal of Battery

Spent batteries do not belong in the household waste. Dispose of the battery to the current federal, state and local regulations. As a consumer, you are obligated by law to return spent battery.

Caution:

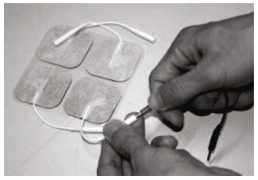
1) Battery may be fatal if swallowed. Therefore, keep the battery and the product out of the range of children, if a battery was swallowed, consult a physician immediately.
2) If a battery has leaked, avoid contact with skin, eyes and mucus membranes, Rinse the affected spots with lots of clear water immediately and contact a physician immediately,
3) Battery may not be charged, dismantled, thrown into fire or short circuited.
4) Protect battery from excess heat. Take the battery out of the product if they are spent or in case you no longer use the article. This prevents damage caused by leaking battery.

5) Always replace the same type battery.

4.1.3 Recommended battery

High quality Alkaline battery 9V 6LR61 must be used.

4.2 Connect electrodes to lead wires:



Insert the lead wire connector into electrodes connector (standard 0.08 inch female connection). Make sure no bare metal of the pins is exposed.

Caution: Always use the electrodes with the requirements of the IEC/EN60601-1, ISO10993-1/-5/-10, and IEC/EN60601-1-2, such as with CE mark, or which are legally marketed in the US under 510(k) procedure.

4.3 Connect Lead wires to device:

1) Before proceeding to this step, be sure the device completely turns OFF.
2) The wires provided with the system insert into the jack sockets located on the top of the device.
3) Holding the insulated portion of the connector, push the plug end of the wire into one of the jacks (see drawing); one or two sets of wires may be used.

4) This device has two output receptacles controlled by Channel 1 and Channel 2 at the top of the unit. You may choose to use one channel with one pair of lead wires or both channels with

two pairs of lead wires. Using both channels gives the user the advantage of stimulating two different areas at the same time.

Caution: Do not insert the plug of the patient lead wire into any AC power supply socket.

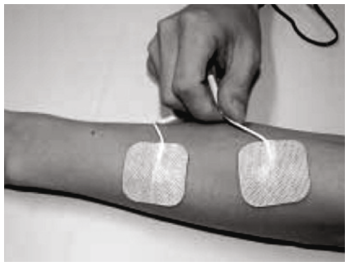
4.4 Electrode

4.4.1 Electrode options:

The electrodes are disposable and should be routinely replaced when they start to lose their adhesive nature. If you are unsure of the electrode adhesive properties, order replacement electrodes. Replacement electrodes should be re-ordered through or on the advice of your physician to ensure proper quality. Follow application procedures outlined in electrode packing, to maintain optimal stimulation and to prevent skin irritation.

4.4.2 Place electrodes on skin:

Apply electrodes to the exact site indicated by your physician or therapist, before applying electrodes, be sure the skin surface which electrodes are placed is thoroughly cleaned and dries. Make sure the electrodes are placed firmly to the skin and make good contact between the skin and the electrodes. Place the electrodes over the skin; attach them properly, firmly and evenly.



Caution:

1) Before applying the self adhesive electrodes, it is recommended to wash and degrease skin, and then dry it.
2) Do not turn ON the device when the self-adhesive electrodes are not positioned on the body.
3) Never remove the self adhesive electrodes from the skin while the device is still turned ON.
4) It is recommended that, at minimum, 4cm*4cm self-adhering based, square electrodes are used at the treatment area.

4.4.3 Electrode Placement:

The placement of electrodes can be one of the most important parameters in achieving success with therapy. Of utmost importance is the willingness of the physician to try the various styles of electrode placement to find which method best fits the needs of the individual patient. Every patient responds to electrical stimulation differently and their needs may vary from the conventional settings suggested here. If the initial results

are not positive, speak to your physician about alternative stimulation settings and/or electrode placements. Once an acceptable placement has been achieved, mark down the electrodes sites and the settings, so the patient can easily continue treatment at home.

4.5 Turn On:

Before using the device for first time, you are strongly advised to take careful note of the counter indications and safety measures detailed at the beginning of this manual (Safety Information).

In order to turn on the device, keep the (⏻) button pressed down until the operation page appears on the screen.

4.6 Select the Therapeutic Mode:

There are 4 therapeutic modes available – TENS, IF, EMS and RUSSIAN. The therapeutic mode can be selected by pressing the **'M'** control.

Caution: Consult your physician for your suitable therapeutic mode.

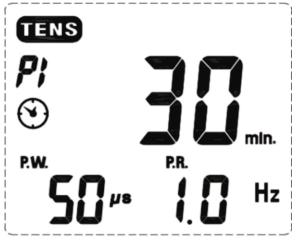
4.7 Steps to Set a New Program

4.7.1 TENS Setting:

Press the **(M)** button to set the stimulation mode TENS, EMS, IF or RUSSIAN according to the need of therapeutics which was recommended by your physician or therapist.

4.7.2 Select the Program

Press the **'S'** Button to enter the setting state. The settings can be adjusted according to the following steps:



1) Set the Therapeutic Program: There are 4 programs in the TENS therapeutic mode available –Burst (P1), Normal (P2),

Pulse Width Modulation (P3) and Pulse Rate Modulation (P4). The therapeutic program can be selected by pressing the (▲) and (▼) button.

2) Set the Cycle Time (Optional) – Cycle time is adjustable from 5 to 30 seconds. Only Modulation modes has this parameter setting. Press "S" button to enter this menu, and then press the (▲) and (▼) button to adjust the setting. Default cycle time is 10 sec.

3) Set Timer – Press "S" button to enter this setting. The treatment time is adjustable from 1 to 60 minutes or Continuous. Press the (▲) or (▼) button control to adjust setting. You can set the timer to "Continuous" mode by pressing the (▲) control when it shows 60 minutes. Its output will be shut off when the time is up.

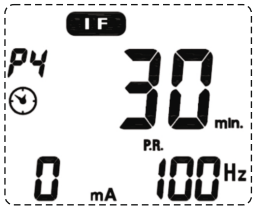
4) Set Pulse width – Pulse width is adjustable from 50 uS to 300 uS. Press the "S" button to enter this menu, and then press (▲) and (▼) button to adjust the setting.

5) Set Pulse Rate/ Burst Rate – Pulse rate is adjustable from 1 Hz to 150 Hz (0.5 Hz to 5 Hz for Burst). Press "S" button to enter this menu, and then press (▲) or (▼) button to adjust the setting.

6) Once the setup is complete, adjust channel intensity to begin treatment. Refer to section 4.8

4.7.3 IF Setting

Press the "S" button to enter the setting state. The settings can be adjusted according to the following steps:



1) Set the Therapeutic Program: There are 4 programs in the IF therapeutic mode available. The therapeutic program can be selected by pressing the (▲) and (▼) button. The mode you selected will show up on the top of liquid crystal display.

2) Set Timer – Press "S" button to enter this setting. The treatment time is adjustable from 1 to 60 minutes or Continuous. Press the (▲) or (▼) button control to adjust setting. You can set the timer to "Continuous" mode by pressing the (▲) control when it shows 60 minutes. Its output will be shut off when the time is up.

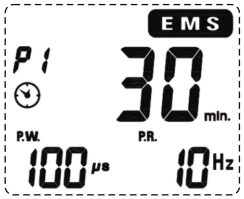
3) Set Interference frequency (optional) – Channel1 has 4000 Hz fixed fundamental frequency. Channel2 has selectable frequency from 4001 to 4150 Hz; Interference frequency is adjustable from 2 Hz to 150 Hz. Only 'P4' has this parameter setting. Press "S" button to enter this menu and then press the (▲) or (▼) button to adjust the setting.

4) Set the Cycle Time (Optional)– Cycle time is adjustable from 5 to 30 seconds. Press "S" button to enter this menu,, and then press the (▲) and (▼) button to adjust the setting.

5) Once the setup is complete, adjust channel intensity to begin treatment. Refer to section 4.8

4.7.4 EMS Setting:

Press the "S" button to enter the setting state. The settings can be adjusted according to the following steps



1) Set the Therapeutic Program - There are 3 programs in EMS therapeutic mode available- Synchronous (P1), Alternate (P2) and Delay (P3). The therapeutic program can be selected by pressing the (▲) and (▼) button.

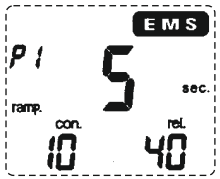
2) Set Timer – Press "S" button to enter this setting. The treatment time is adjustable from 1 to 60 minutes or Continuous. Press the (▲) or (▼) button to adjust the setting. You can set the timer to "Continuous" mode by pressing the (▲) control when it shows 60 minutes. Its output will be shut off when the time is up.

3) Set Pulse Width – Press the "S" button to enter this setting. The pulse width is adjustable from 50 to 300 uS. Press the (▲) or (▼) button to adjust the setting.

4) Set Pulse Rate: The pulse rate determines how many electrical impulses are applied through the skin each second. Press "S" button to enter this menu. By pressing the (▲) or (▼) button to adjust the setting. The pulse rate is adjustable from 1Hz to 150 Hz.

5) Set Delay Time (Optional) – Delay time is adjustable from 1 to 10 seconds. Only Delay therapeutic program has this parameter setting. Press "S" button to enter this menu, and then press the (▲) or (▼) button to adjust the setting.

6) Set Ramp Time - The ramp time controls the time of output current that is being increased from 0 to the setting level, and decreased from the setting value to 0. When the ramp time is set, each contraction will be ramped up and down.



7) Set Contraction time: The contraction time controls the time of stimulation. The contraction time can be adjusted. Press "S" button to enter this menu, and then press the (▲) or (▼) button to adjust the setting. Both channel's stimulation is cycled on and off by the contraction and relaxation settings. The range is adjustable from 1 to 30 seconds. Default value for contract time is 10 sec.

Caution: Contraction time has not including the ramp up and ramp down time, ON time = Ramp up + Contraction time + Ramp Down.

8) Set Relaxation (OFF) time – The Off Time controls the time of relaxation. The relaxation time can be adjusted. Press "S" button to enter this menu, and then press the (▲) or (▼) buttons to adjust the setting. Both channels stimulation is cycled on and off by the contraction and relaxation settings. The range is adjustable from 0 to 60 seconds. In Alternate program, the OFF Time should be equal or more than the ON

Time. (OFF Time > ON Time). Default time for relaxation time is 40 sec.

9) Once the setup is complete, adjust channel intensity to begin treatment. Refer to section 4.8.

4.7.5 RUSSIAN Setting:

Press the "S" button to enter the setting state. The settings can be adjusted according to the following steps:

1) Set Timer – Press "S" button to enter this setting. The treatment time is adjustable from 1 to 60 minutes or Continuous. Press the (▲) or (▼) button to adjust the setting. You can set the timer to "Continuous" mode by pressing the (▲) control when it shows 60 minutes. Its output will be shut off when the time is up.

2) Set Ramp Time: The ramp time controls the time of output current that is being increased from 0 to the setting level and decreased from the setting value to 0.

3) Set Contraction time: The contraction time controls the time of stimulation. The contraction time can be adjusted. Press "S" button to enter this menu, and then press the (▲) or (▼) button to adjust the setting. Both channel's stimulation is cycled on and off by the contraction and relaxation settings. The range is adjustable from 1 to 30 seconds.

4) Set Relaxation (OFF) time – The Off Time controls the time of relaxation. The relaxation time can be adjusted. Press "S" button to enter this menu, and then press the (▲) or (▼) buttons to adjust the setting. Both channels stimulation is cycled on and off by the contraction and relaxation settings.

The range is adjustable from 0 to 60 seconds.

5) Once the setup is complete, adjust channel intensity to begin treatment. Refer to section 4.8.

4.8 Adjust Channel Intensity

When all parameters are set, and device is in ready for treatment state, press the intensity control button (▲) or (▼) to start the stimulation and control the intensity output. Slowly press the intensity button control until you reach the setting recommended by your physician or therapist. Repeat for the other channel, if both channels are to be used.

Caution:

1) If the stimulation levels are uncomfortable or become uncomfortable, reduce the stimulation intensity to a comfortable level and contact your medical practitioner if problem persists.

2) If the electrodes are not placed firmly on skin or the device has not connected on the electrodes, and the stimulator's intensity is below 12mA, the intensity will enulls automatically and device will indicate the absence of load.

4.9 Lock the button:

In working state, if there is no operation in the panel for 30 seconds, the keyboard will be locked automatically. You can press only one of the (▼) buttons to unlock.

4.10 Stop the Treatment:

When you have activated the treatment timer, you can press the **"M"** button or decrease the intensity to zero by pressing the (▼) button in order to stop the treatment.

Caution: In default state, if the button is locked, you can press only one of the (▼) buttons to unlock, and then use the "M" button or the (▼) button to stop the treatment.

4.11 Turn OFF:

Keep (⏻) for approx. 2 seconds to Turn OFF the device.

Caution:

1) If there is no operation in the panel for 3 minutes in the ready for treatment state, the device will be turned off automatically.
2) In turned off state, keep pressed the channel 2 (▼) first, and then press (⏻) button at the same time to restore factory parameter settings.

4.12 Low Battery Indicator:

When the low battery indicator flashes, that indicates the device will turn off automatically soon, so the battery should be replaced with a new one as soon as possible. However, the unit may continue to operate for a few more hours depending on the setting and intensity level.

4.13 Button for parameter locking

When the device is in ready for treatment state, configured parameters can be locked by pressing button for parameters locking in duration of 2sec. While parameters are locked, user will be able only to use that particular configuration setting (even after the device reset). Parameters can be unlocked by pressing button for parameters locking in duration of 2sec when the device is in ready for treatment state.

5. Program:

Mode	Program	Modulation Method	Frequency	Pulse Width	Treatment Time
TENS	P1	Burst	0.5-5 Hz	50-300 µS	1-60 min Continuous
	P2	Continuous	1-150 Hz	50-300 µS	1-60 min Continuous
	P3	Pulse width modulation	1-150 Hz	50-300 µS	1-60 min Continuous
	P4	Frequency modulation	1-150 Hz	50-300 µS	1-60 min Continuous
EMS	P1	Synchronous Mode	1-150 Hz	50-300 µS	1-60 min Continuous
	P2	Asynchronous Mode	1-150 Hz	50-300 µS	1-60 min Continuous
	P3	Delay mode	1-150 Hz	50-300 µS	1-60 min Continuous
IF	P1	Frequency modulation	4kHz 4001-4010 Hz	125 µS	1-60 min Continuous
	P2	Frequency modulation	4kHz 4001-4150 Hz	125 µS	1-60 min Continuous
	P3	Frequency modulation	4kHz 4080-4150 Hz	125 µS	1-60 min Continuous
	P4	Frequency modulation	4kHz 4002-4150 Hz Adjustable	125 µS	1-60 min Continuous
RUS			2500 Hz 2550 Hz	200 µS	1-60 min Continuous

6. Cleaning and Maintenance:

6.1 Tips for Skin Care:

To avoid skin irritation, especially if you have sensitive skin, follow these suggestions.

1) Wash the area of the skin where you will be placing the electrodes, using mild soap and water before applying electrodes, and after taking them off. Be sure to rinse soap off thoroughly and dry skin well.

2) Excess hair may be clipped with scissors; do not shave stimulation area.

3) Wipe the area with the skin preparation your clinician has recommended. Let this dry. Apply electrodes as directed.

4) Many skin problems arise from the "pulling stress" from adhesive patches that are excessively stretched across the skin during application. To prevent this apply electrodes from centre outward; avoid stretching over the skin.

5) To minimize "pulling stress", tape extra lengths of lead wires to the skin in a loop to prevent tugging on electrodes.

6) When removing electrodes, always remove by pulling in the direction of hair growth.

7) It may be helpful to rub skin lotion on electrode placement area when not wearing electrodes.

8) Never apply electrodes over broken or irritated skin.

6.2 Cleaning the device

1) Remove the battery from the device every time you clean.

2) Clean the device after use with a soft, slight moistened cloth. In case of more extreme soiling you can also moisten the cloth with mild soapy water.

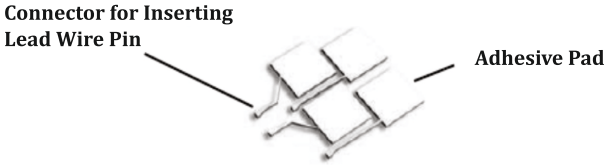
3) Do not use any chemical cleaners or abrasive agents for cleaning.

6.3 Electrodes:

1) Use the device only with the leads and electrodes provided by the manufacturer. Use only the electrode placements and stimulation settings prescribed by your physician or therapist.

2) It is recommended that, at minimum, 4cmX4cm self adhering based, square electrodes are used at the treatment area.

3) Inspect your electrodes before every use. Replace the electrodes as needed. Reusable electrodes may cause slight skin irritation, lose adhesion and deliver less stimulation if overused.



Reusable, Self-adhering Electrodes

To use these electrodes:

1) Attach the electrode to the lead wire.
2) Remove the protective backing from the electrode surface. Do not throw away the protective backing because it is reused after the treatment session has been completed.
3) Place the tacky surface to the prescribed skin area by pressing the electrode firmly against the skin.

To remove your electrodes:

1) Lift the corner of the electrode and gently remove it from the skin.
2) Apply the protective backing on the tacky side of the electrode. Place the electrode on the side of protective backing that is labeled with the word on.
3) It may be helpful to improve repeated application by spreading a few drops of cold water over the adhesive and turn the surface up to air dry.
4) Between uses, store the electrodes in the resealable bag in a cool dry place.

Caution:

- Do not pull on the electrode wire. Doing so may damage the wire and electrode.
- Do not apply to broken skin.
- The electrodes should be discarded when they are no longer adhering.

- The electrodes are intended for single patient use only.
- If irritation occurs, discontinue use and consult your clinician.
- Read the instructions for use of self adhesive electrodes before application.
- Always use the electrodes with the requirements of the IEC 60601-1, IEC 60601-1-2 such as with CE mark, or are legally marketed in the US under 510(k) procedure.

6.4 Cleaning the Electrodes cords

Clean the electrode cords by wiping them with damp cloth. Coating them lightly with talcum powder will reduce tangles and prolong the life.

6.5 Maintenance

1) Maintenance and all repairs should be carried out by an authorized agency. The manufacturer will not be held responsible for the results of maintenance or repairs by unauthorized persons.
2) The user must not attempt any repairs to the device or any of its accessories. Please contact the retailer for repair.
3) Opening of the equipment by unauthorized agencies is not allowed and will terminate any claim to warranty.
4) Check the unit before each use for signs of wear and/or damage. Replace wear items as required.

7. Troubleshooting:

If your device does not seem to be operating correctly, refer to the chart below to determine what may be wrong. Should none of these measures correct the problem, the device should be serviced

Problem	Possible Cause	Solution
Display fail to light up	Battery contact failure	I. Try tresh baatteries 2. Ensure battaries are inserted correctly Check the following contacts • All contacts are in place. • All contacts are not broken
Stimulation weak	Electrodes 1. Dried out or Contaminated 2. Placement Lead wires 1. Old/worn/damaged	Replace and re-connect Replace
Stimulation is uncomfortable	Intensity is too high Electrodes are too close together Damaged or worn electrodes or lead wires Electrode active area size is too small	Decrease intensity Reposition the electrodes. Replace Replace electrodes with ones that have an active area no less than 16.0 cm^2 (4cm*4xm)
Intermittent output	Lead wires Program option in use	1. Verify connection is secure. 2. Turn down the intensity. Rotate lead wires in socket 90. If still intermittent, replace lead wire. 3. If still intermittent after replacing lead wire, a component may have failed. Call the repair department, Some programs will seem intermittent. This is expected. Refer to the Program Option Controls in the Operation section for a description of the program option
Stimulation is ineffective	Improper electrode and applicator placement Unknown	Reposition electrode and applicator Contact clinician

8. Storage

1) For a prolonged pause in treatment, store the device in a dry room and protect it against heat, sunshine and moisture.
2) Store the device in a cool, well-ventilated place.
3) Never place any heavy objects on the device.

9. Disposal

Used fully discharged batteries must be disposed in a specially labeled collection container, at toxic waste collection points or through an electrical retailer retailer. You are under legal obligation to dispose batteries correctly. Please dispose of the device in accordance with the legal obligation.

10. Electromagnetic Compatibility (EMC) Tables:

Guidance and Manufacturer's declaration – electromagnetic emissions. The device is intended for use in the electromagnetic environment specified below. The customer or the user assures that it is used in such an environment.

Emissions Test	Compliance	Electromagnetic environment guidance
RF emissions CISPA 11	Group 1	The device uses RF energy only for its internal function. Therefore its RF emissions are very low and are not likely to cause any interference i nearby electronic equipment.
RF emissions CISPA 11	Class B	The device E suitable for u in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emission IEC 61000-3-2	Not Applicable	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Not Applicable	

Guidance and Manufacturer's declaration – electromagnetic immunity.

The device is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.

Immunity test	**IEC 60601 test level**	**Compliance Level**	**Electromagnetic environment guidance**
Electrostatic discharge (ESO) IEC 61000-4-2	Group 1±6 kV contact ±8 kV air	Group 1±6 kV contact ±8 kV air	Floor should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Immunity test	**IEC 60501 test level**	**Compliance Level**	**Electromagnetic environment guidance**
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4	3 Vrms 150 kHz to 80 MHz 3 V/m 80MHz to 2.5 GHz	3 Vrms 3 Vrms	Portable and mobile RF communication equipment should be used no closer to any part of the device. including cables. than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2\sqrt{p}$ $d = 1.2\sqrt{p}$ 80 MHz to 800 MHz $d = 1.2\sqrt{p}$ 800 MHz to 2.5 MHz Where P i the maximum output power rating of the transmitter in watts (W) according to the. Transmitter manufactures and D is the recommended separation distance in meters (m). field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the complines level in each frequency range. Interference may occur In the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz ends 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

1. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered.

   If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.

2. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [Vi] V/m.

   Recommended separation distance between portable and mobile RF communications equipment and device. The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications

equipment (transmitters) and the as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150kHz to 80 MHz d= 1.2√p	80 MHz to 800 MHz d= 1.2√p	800 MHz to 2.5 GHz d= 1.2√p
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) accordable to the transmitter manufacturer.

Note 1: At 80 MHz, the separation distance for the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

11. Warranty:

This product warranty extends to the original consumer/ purchaser of the product.

Warranty duration

This product is warranted to the original consumer for a period of one (1) year from the original purchase date.

Warranty coverage

This product is warranted against defective materials or workmanship. This warranty ceases if the product has been damaged by accident, in shipment, unreasonable use, misuse, neglect, improper service, commercial use, and repair by unauthorized personnel. This warranty does not extend to any units which are used in violation furnished by manufacturer, or to units which have been altered or modified, or to damage to products or parts there of which have the serial number removed, altered or defaced or rendered illegible. The warranty doesn't cover normal wear & tear or replacement of electrode cables, electrodes and other accessories.

Warranty disclaimers

This warranty is in lieu of all warranties expressed or implied and no representative or person is authorized to assume for manufacturer/ any other liable in connection with the sale of our products. There shall be no claims for defects or failure of performance or product failure/ any theory of tort, contract or commercial law including, but not limited in negligence, gross negligence, and strict liability, breach of warranty and breach of contract. Some states do not allow the exclusion or limitation of

implied warranties or consequential damages, so the above limitations may not apply to you.

Manufacturer is not responsible or liable for indirect special or consequential damages arising out of or in connection with the use performance of the product or other damage with respect to loss of property or loss revenues or profit.

Legal remedies

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Warranty performance

During the above one-year warranty period, a product with a defect will be repaired or replaced with a reconditioned comparable unit at distributor's option when the product is returned to the distributor. The repaired or replacement product will be in warranty for the balance of the one-year warranty period and an additional one-month period. No charge will be made for such repair or replacement.

Consumer service

For in warranty service for a product covered under the warranty period, no charge is made for service and return postage. Please return the product insured, packed with sufficient protection, postage insurance, prepaid to the address. Customer's duty/brokerage fee, if any, must be paid by the consumer.

Out of warranty service

There will be charges rendered for repairs made to the product

after the expiration of the aforesaid one (1) year warranty period, after purchaser is advised appropriately.

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

Glossary of Symbols

SN Serial number..... 0001

 Attention: Read the operating instruction for use!

 Meaning of the symbols on the product, the packaging or in the operating instructions: electric devices are recyclable material and should not be disposed of with household waste after their useful life! Help us to protect the environment and save resources and take this device to the appropriate collection points. Please contact the organization which is responsible for waste disposal in your area if you have any questions.

 The name and the address of the Manufacturer

 Type BF equipment

 ON/OFF button

M Mode button

S Set button

▲ Up button (CH1/CH2)

▼ Down button (CH1/CH2)