

FORE-CARE™

TRANSCUTANEOUS ELECTRICAL NERVE STIMULATOR TENS



■ SE-30

USER MANUAL



READ BEFORE USE

CE₀₁₂₃

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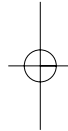
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1. INTRODUCTION

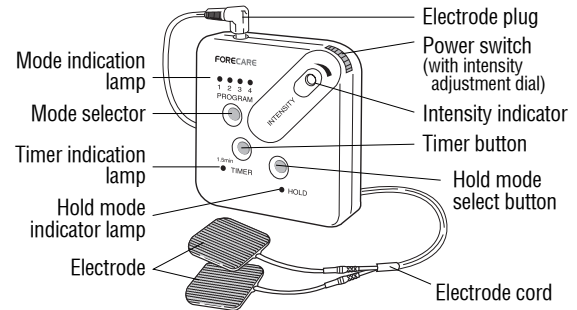
The SE-30 is portable and safe based on the fact that an internal Microprocessor automatically changes polarity and controls pulse size and width in response to the particular circumstances. In addition, an internal Microprocessor performs safety testing for all pulses with approximately 1.18-200 Hz frequency and 170-440 usec of pulse width.

The SE-30 is easy to use. The user controls the strength of the pulse. The duration, standstill time, pulse width and pulse shape of each mode divided by pulse shape and frequency are automatically produced by the programmed order.

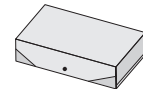
The SE-30 is battery-saving. The internal automatic power-off function of the SE-30 automatically turns the device off after 15/30 minutes of use.

Please do not forget to read SE-30 TENS instruction manual before use. Please use the device under medical supervision of a doctor or a physiotherapist.

2. PARTS NAMES AND ACCESSORIES



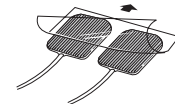
Battery



Carrying case



Electrode holder



Adhesive pad

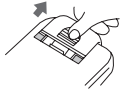
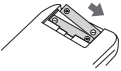
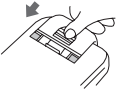
3. FEATURES

- 15-minute timer
- Gradual start stimulation signals.
- Compact pocket size.
- One touch adhesive contact pads.
- Special hold switch for repetitive stimulation signal.
- No polarity change required.

Classification according to EN 60601-1

- Internally powered equipment
- Type BF applied part
- Ordinary equipment without protection against ingress of water.
- Equipment not suitable for use in presence of a flammable anesthetic mixtures.
- Continuous operation
- Equipment that complies with Class A for Noise-Emission, Level B for Noise-immunity by standard of IEC/EN 60601-1-2(Electromagnetic Compatibility Requirements)

4. BATTERY INSTALLATION/REPLACEMENT

<p>Push open the battery cover in the direction of the arrows as shown in the figure Use two 1.5V LR03(AAA) batteries.</p>	
<p>Please ensure that the batteries are inserted with the correct polarity</p>	
<p>Replace the battery cover and slide it shut.</p>	

REPLACEMENT:

“If TIMER LED flashes at interval of 0.5 second, the batteries should be immediately replaced.”

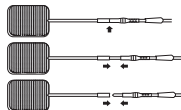
Take the battery out of the main unit when the TENS will not be used for a long time. If the batteries are not used any more, please dispose of them in accordance with National Regulation.



Only discard empty batteries. They should not be disposed of in the household waste, but at appropriate collection sites or at your retailer.

5. HOW TO CONNECT THE ADHESIVE GEL WIRE

Please completely insert the two small plugs at the end of the leadwire into the pigtail pins connected to the electrode.



WARNING:

Never switch the TENS unit without the electrodes connected.

NOTE:

Low frequency waves do not penetrate well when the pads are in contact with dry skin. If the adhesive pads become soiled, they will not stick or conduct properly. In such a case, clean the adhesive pads with a soft cloth moistened with water. If the adhesive pads have dried, soaking the pads in water will extend the life of the pads.

NOTE:

Since the conductive medium and electrode size may affect the safety and effectiveness of the device, user should use the only conductive medium and electrode supplied by Genexel Medical Instrument, Inc.

THE ADHESIVE PADS ARE REPLACEABLE ITEMS.

Please contact Genexel Medical Instrument, Inc. when you wants to get the adhesive pads.

Adhesive pads are called electrodes because electrodes is directly attached to adhesive pads.

The size of the electrode is "4.445cm × 4.445cm"

Part number of the electrodes (or adhesive pads) is 30104.

6. TREATMENT

1) Placing the Electrode

Wipe off any perspiration from the skin before attaching the adhesive contact pads. Apply the pads to the area to be treated and insert the plug of the electrode lead into the socket of the TENS unit.

Make sure that the INTENSITY CONTROL DIAL is set at "OFF" ("0").

Remove all metal in the area to be stimulated.

Non-removable metal should be well insulated.

2) Setting the Treatment Mode

Turn the power switch (with intensity adjustment dial) until the dial displays 1 and select the treatment mode by pressing the mode switch (program).

Mode 1

- Pulse rate
programmed from 1-100 pulses per second by microcomputer.
- Pulse width

programmed 240 to 440 microseconds by microcomputer.

- Pulse train rate
programmed from 1.25 to 5 pulse trains per second by microcomputer.
- Pulse train width
programmed at 8 milliseconds by microcomputer.

Mode 2

- Pulse rate
programmed to alternate 16 pulses per burst-4 bursts per second with 16 pulses per burst-6 bursts per second by microcomputer.
- Pulse width
programmed 170 to 440 microseconds by microcomputer.

Mode 3

- Pulse rate
programmed from 1 to 5 pulses per second by microcomputer.
- Pulse width
programmed at 240 microseconds by microcomputer.

Mode 4

- Pulse rate
programmed to alternate 200 pulses per burst-1 burst per second with 90 pulses per burst-1 burst per second by microcomputer.
- Pulse width
programmed 260 to 440 microseconds by microcomputer.

Output characteristics of each mode

► Mode 1

Step 1	Pulse width : 220us, Pulse train shape: a Max voltage : 55V, Min voltage: 5.5V Freq. change : 1Hz→2Hz→3Hz→5Hz→Step 2
Step 2	Pulse width : 440us, Pulse train shape: b Max voltage : 39V, Min voltage: 5.0V Freq. change : 9Hz→20Hz→29Hz→40Hz→50Hz→ 40Hz→29Hz→20Hz→9Hz→Step 3
Step 3	Pulse width : 240us, Pulse train shape: a Max voltage : 53V, Min voltage: 5.5V Freq. change : 5Hz→3Hz→2Hz→3Hz→Step 4
Step 4	Pulse width : 240us, Pulse train shape: d Max voltage : 39V, Min voltage: 5.0V Freq. change : 9Hz→20Hz→29Hz→40Hz→50Hz→ 40Hz→29Hz→20Hz→9Hz→Step 5
Step 5	Pulse width : 240us, Pulse train shape: a Max voltage : 53V, Min voltage: 5.5V Freq. change : 3Hz→2Hz→3Hz→5Hz→Step 6
Step 6	Pulse width : 440us, Pulse train shape: b Max voltage : 39V, Min voltage: 5.0V Freq. change : 9Hz→20Hz→29Hz→40Hz→50Hz→ 40Hz→29Hz→20Hz→9Hz→Step 7
Step 7	Pulse width : 240us, Pulse train shape: a Max voltage : 53V, Min voltage: 5.5V Freq. change : 5Hz→5Hz→2Hz→3Hz→Step 8

Step 8	Pulse width : 240us, Pulse train shape: d Max voltage : 39V, Min voltage: 5.0V Freq. change : 9Hz →20Hz →29Hz →40Hz →50Hz → 40Hz →29Hz →20Hz →9Hz →Step9
Step 9	Pulse width : 240us, Pulse train shape: a Max voltage : 53V, Min voltage: 5.7V Freq. change : 3Hz →2Hz →3Hz →Step10
Step 10	Pulse width : 440us, Pulse train shape: c+e Max voltage : 46V, Min voltage: 4.2V Freq. change : 5Hz →9Hz →20Hz →29Hz →50Hz → 100Hz →50Hz →29Hz →20Hz →9Hz → 5Hz →Step11
Step 11	Pulse width : 240us, Pulse train shape: a Max voltage : 53V, Min voltage: 5.7V Freq. change : 3Hz →2Hz →3Hz →Step12
Step 12	Pulse width : 240us, Pulse train shape: c+e Max voltage : 40V, Min voltage: 4.2V Freq. change : 9Hz →20Hz →29Hz →50Hz →100Hz → 50Hz →29Hz →20Hz →9Hz → Step1

► Mode 2

Step 1	Pulse width : 440us, Pulse train shape: c+e Max voltage : 20.5V, Min voltage: 4.0V Freq. change : 63Hz →67Hz →71Hz →77Hz →91Hz → 100Hz →125Hz →Step 2
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Step 2	Pulse width : 170us, Pulse train shape: f Max voltage : 30V, Min voltage: 5.3V Freq. change : 77Hz →Step 3
Step 3	Pulse width : 440us, Pulse train shape: c+e Max voltage : 20.5V, Min voltage: 4.0V Freq. change : 125Hz →100Hz →91Hz →77Hz → 71Hz →67Hz →63Hz →Step 4
Step 4	Pulse width : 170us, Pulse train shape: f Max voltage : 30V, Min voltage: 5.3V Freq. change : 77Hz →Step 5
Step 5	Pulse width : 440us, Pulse train shape: c+e Max voltage : 20.5V, Min voltage: 4.0V Freq. change : 67Hz →71Hz →77Hz →91Hz →100Hz → 125Hz →Step 6
Step 6	Pulse width : 170us, Pulse train shape: f Max voltage : 25V, Min voltage: 5.0V Freq. change : 77Hz →Step 7
Step 7	Pulse width : 440us, Pulse train shape: c+e Max voltage : 20.5V, Min voltage: 4.0V Freq. change : 125Hz →100Hz →91Hz →77Hz → 71Hz →67Hz →63Hz →Step 8
Step 8	Pulse width : 170us, Pulse train shape: f Max voltage : 30V, Min voltage: 5.3V Freq. change : 125Hz →Step 9

Step 9	Pulse width : 240us, Pulse train shape: e Max voltage : 25.5V, Min voltage: 4.4V Freq. change : 125Hz→100Hz→77Hz→100Hz→ 125Hz→167Hz→125Hz→100Hz→ 77Hz→Step 10
Step 10	Pulse width : 220us, Pulse train shape: a Max voltage : 55V, Min voltage: 5.5V Freq. change : 1Hz→2Hz→3Hz→5Hz→Step 1

► Mode 3

Step 1	Pulse width : 240us, Pulse train shape: d Max voltage : 54V, Min voltage: 5.5V Freq. change : 1Hz→2Hz→3Hz→5Hz→3Hz→2Hz
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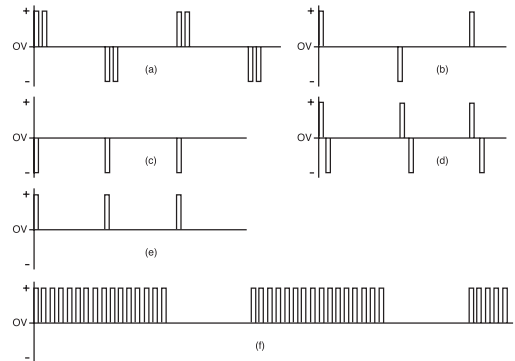
► Mode 4

Step 1	Pulse width : 260us, Pulse train shape: d Max voltage : 14V, Min voltage: 2.9V Freq. change : 200Hz→167Hz→143Hz→125Hz→ 111Hz→100Hz→91Hz→Step 2
Step 2	Pulse width : 420us, Pulse train shape: c+e Max voltage : 15.3V, Min voltage: 3.1V Freq. change : 200Hz→167Hz→143Hz→125Hz→ 111Hz→100Hz→Step 1

► Output voltage according to intensity dial setting at a load of 500 ohm

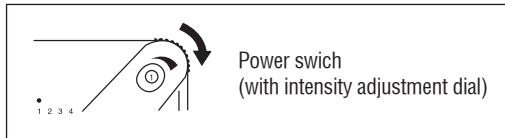
MODE		Intensity Dial Setting				
		1	2	3	4	5
MODE 1	Min.	5.0V	6.3V	12.0V	16.7V	23.0V
	Max.	5.8V	6.3V	18.3V	32.0V	55.0V
MODE 2	Min.	4.0V	4.8V	7.8V	10.6V	14.3V
	Max.	5.3V	7.3V	14.7V	23.0V	30.0V
MODE 3	Min.	5.5V	8.2V	18.0V	29.0V	44.0V
	Max.	5.8V	8.5V	20.0V	32.0V	54.0V
MODE 4	Min.	2.9V	3.7V	5.5V	7.2V	9.4V
	Max.	4.0V	5.0V	8.1V	11.0V	14.6V

► Output pulse waveform



3) Starting the Treatment

Always make sure that the Intensity Dial is set at OFF (“0”) before each treatment or before moving the electrode from one position to another.



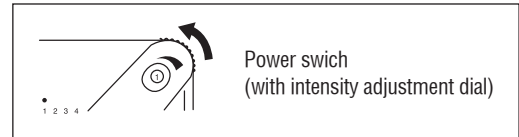
Turn the unit on by slowly rotating the intensity dial clockwise and then continue to slowly turn the intensity dial to adjust strength. The same output will give different sensations depending upon the person who is receiving it. Sensation also will vary depending upon the part of the body stimulated. There is no standard duration or intensity for each pain condition because physical constitution varies from person to person and sensation differs depending upon the part of the body stimulated. Longer stimulation may cause residual muscle fatigue and soreness. Always avoid overstimulation.

NOTE:

“When the device is operating properly, the LED light flashes, but when the device is not operating properly, the LED light does not flash.”

4) Terminating the Treatment

After treatment, turn off the power by turning the intensity dial to “0”. Also, before repositioning the pad on skin, turn “OFF” the power then start again from step 1.



5) Press the Hold switch if you want to repeat a specific repetitive stimulation signal.

The same impulse will continue to operate automatically.

The Hold switch does not have to be continuously depressed by the user to keep the stimulation signal on, and the device can be shut-off by turning the intensity dial counter-clockwise.

6) Treatment automatically stops after 15/30 minutes.

And then user should set the intensity at “OFF” (“0”) by turning the intensity dial counter-clockwise.

7) Press the timer switch during stimulation if you want to disable the 15/30 minutes of use.

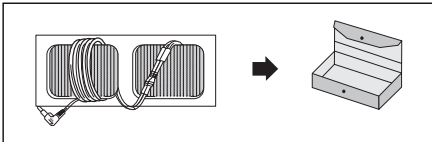
PRECAUTION

For first time users of TENS, especially an elderly person, weak person or a child, lower the intensity and shorten the treatment time. Observe the person's condition before increasing the intensity and time.

This device should only be used according to a physician's instructions, Children should only use the device under the supervision of an adult, and only after receiving instructions from a physician.

7. STORING CORD AND ADHESIVE PADS

Attach the adhesive pads to the protective vinyl as shown in the figure and set them in the case.



NOTE:

After use, always attach the adhesive pads as shown to prevent them from drying out and losing their adhesive properties.

8. HANDLING PRECAUTIONS

- Do not drop the TENS unit.
- Do not sharply strike the TENS unit.
- Do not touch the adhesive surfaces of the pads.
- Do not modify or disassemble the TENS.
- Do not give the cord a jerk. Wind it gently.
- Be sure to turn off the power switch after use.

9. NOTES ON STORAGE

- Keep the TENS away from children.
- Do not expose the TENS to high temperature, high humidity, or in environments where there is excessive dust, salt or phosphor.
- Store the TENS away from intense electromagnetic fields.
- Do not store the TENS together with chemical agents.
- Keep the TENS away from gases.
- After use, wind up the cords and store the pads properly.

10. INDICATIONS

TENS devices are used for the symptomatic relief and management of chronic (long-term) intractable pain and/or as an adjunctive treatment in the management of post surgical and post traumatic acute pain.

11. CONTRAINDICATIONS

Do not stimulate the carotid sinus region. Do not use the TENS device on patients who have a demand-type cardiac pacemaker. Do not apply TENS current transcranially or transthoracically. Do not apply TENS when pain syndromes are undiagnosed until etiology is established.

12. WARNINGS

TENS devices should be used only under the continued supervision of a physician. The safety of TENS devices for use during pregnancy or delivery has not been established. TENS is ineffective for pain of central origin. TENS devices are of no curative value. TENS is a symptomatic treatment and as such suppresses the sensation of pain which would otherwise serve as a protective mechanism. Do not give to other individuals for whom the device is not prescribed. Electronic monitoring equipment (such as ECG monitors and ECG alarms) may not operate properly when TENS stimulation is in use. Avoid adjustments in controls while operating machinery or driving vehicles including bicycles. Keep out of the reach of children.

THE STIMULUS DELIVERED BY THE SE-30 MAY BE SUFFICIENT TO CAUSE ELECTROCUTION.
TRANSTHORACIC USE IS CONTRAINDICATED AS SUCH USE MAY CAUSE CARDIAC ARRHYTHMIA.

13. PRECAUTIONS

Isolated cases of skin irritation may occur at the site of electrode placement following long-term application. Use-effectiveness is directly related to patient selection.

14. ADVERSE REACTIONS

A reversible contact type skin irritation may be encountered in some patients at an electrode site. This could be encountered with any of the materials in contact with the skin, including the electrode or the adhesive. Also possible is skin irritation or electrode burn under the electrode. The causative factor should be determined and, if possible, replaced or eliminated.

15. DOS

1. Clean the device only with a soft and dry cloth and the adhesive pads with a wet cloth to remove dirt of gel.
2. Suspend the therapy immediately whenever anything abnormal arises with physical conditions or the equipment itself.
3. Consult your physician if there is any change in your existing condition or if any new condition develops.
4. Use this device away from intense electromagnetic fields such as other medical devices, TV, Radio, etc.

16. DON'TS

1. Do not disassemble the unit or the accessories.
2. Do not wet the main appliance or the accessories except the electrodes.
3. Do not place the appliance where temperature and/or humidity are extremely high or low.
4. Do not use electrodes of other equipment without our advice or recommendation.
5. Do not connect the main appliance to electrodes before turning the intensity control dial to the OFF("0") position.
6. Do not use an electrode without coupling medium (conductive gel).
7. Do not unplug by pulling directly on wire.
8. Do not use the TENS device near the heart, mucous membranes or eyes.
9. Avoid excess use of the TENS.
10. Do not use other medical equipment simultaneously with the TENS device.
11. Avoid using the TENS immediately after a meal.
12. Do not use while sleeping.

☞ Please feel free to contact Genexel Medical Instrument, Inc. should you want any further information such as circuit diagrams, part lists, descriptions, calibration instructions, etc.

17. TECHNICAL SPECIFICATIONS

Treatment Waves	Impulse
Power source	LR3(AAA) 1.5V ×2 batteries, DC 3V
Output	One channel
Frequency	1.18 - 200Hz
Pulse Width	170 - 440 usec
Timer	15/30 minutes
Treatment Mode	Mode 1, Mode 2, Mode 3, Mode 4
Hold Mode	Repeats specific stimulation signal
Polarity	Automatically changed by microprocessor control
Start Mode	Gradual start
Power Consumption	Approx. 210mW
Battery Life	Approx. 2 months if the unit is used for 15 minutes a day
Operating Environment	+10 °C ~ +40 °C, Less than 85% RH
Storage Environment	-10 °C ~ +50 °C, Less than 95% RH (non-condensing)
Dimension	70mm(W) ×79mm(H) ×17mm(D)
Weight	Approx. 80g including batteries.

- There may be up to ±20% tolerance of all specifications



At the end of the product's useful life, please disposal of it at appropriate collection points provided in your country.

18. Limited Three Year Warranty

Your TENS SE-30 is warranted to be free from manufacturing defects for a period of three year under normal use. The three year warranty excludes the electrode pads. The electrode pads are warranted to be free from material and workmanship defects when received with the TENS. The electrode pad warranty terminates after initial use. This warranty extends only to the original retail purchaser.

Should repair be needed within the warranty period, ship the unit prepaid to **Genexel Medical Instrument, Inc. #133-3, Pyungchon-dong, Dongan-gu, Anyang-city, Kyunggi-do, Korea.**

ATTN: Service Dept. Be sure to include the model number of your unit and your phone number on any correspondences.

The above Warranty is Complete and exclusive. The warrantor expressly disclaims liability for incidental, special, or consequential damages of any nature. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above warranty may not apply to you.

Any implied warranties arising by the operation of law shall be limited in duration to the term of this warranty. (Some states do not allow limitations on how long an implied warranty lasts, So the above limitation may not apply to you)

This warranty gives you specific legal rights and you may have other rights which vary from state to state. As a condition to operation of your warranty, the enclosed registration card must be completed and sent to us within one month from the date of purchase.

FOR CUSTOMER SERVICE CALL 82-31-421-0389

