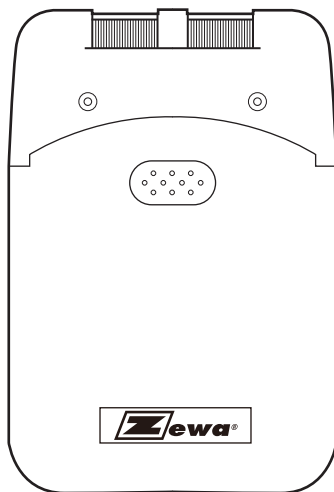


# Transcutaneous Electrical Nerve Stimulation Device



 **Operation Manual**  
Read Before Using



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## **INTRODUCTION TO TENS**

### **What is Pain?**

Pain is the body's warning system. Pain is important because it signals an unusual condition in the body and alerts us before additional damage or injury can occur. However, long-lasting, persistent pain, often called chronic pain, once diagnosed serves no apparent purpose. TENS is developed to help relieve some types of chronic and acute pain.

### **How does TENS work?**

TENS is a method of treating pain that is non-invasive and non-narcotic.

The TENS device sends comfortable impulses through the skin that stimulate the nerve (or nerves) in the treatment area. In many cases this stimulation will greatly reduce or eliminate the pain sensation you feel by masking the original pain message sent to the brain.

It is also believed that TENS stimulation helps release endorphins into the blood stream thereby further reducing pain.

TENS devices are clinically proven useful in pain management for many patients. By reading this manual and carefully following the treatment instructions given to you by your clinician, you will attain the maximum benefit from your TENS device.

## **INDICATIONS AND CONTRAINDICATIONS**

Read the operation manual before using TENS.  
Federal law (USA) restricts this device to sale by or on the order of a physician.

### **INDICATIONS**

Transcutaneous Electrical Nerve Stimulation (TENS) may be used, with a physician's prescription, for the symptomatic relief and management of chronic (long term) pain and for the treatment of postoperative or posttraumatic pain.

## **CONTRAINDICATIONS**

- Patients with implanted electronic devices ( for example, a pacemaker ) or metallic implants should not undertake TENS treatment without first consulting a physician.
- Any electrode placement that applies current to the carotid sinus (neck) region.
- Any electrode placement that causes current to flow transcerebrally. (through the head).
- The use of TENS whenever pain symptoms are undiagnosed, until etiology is determined.

## **WARNINGS**

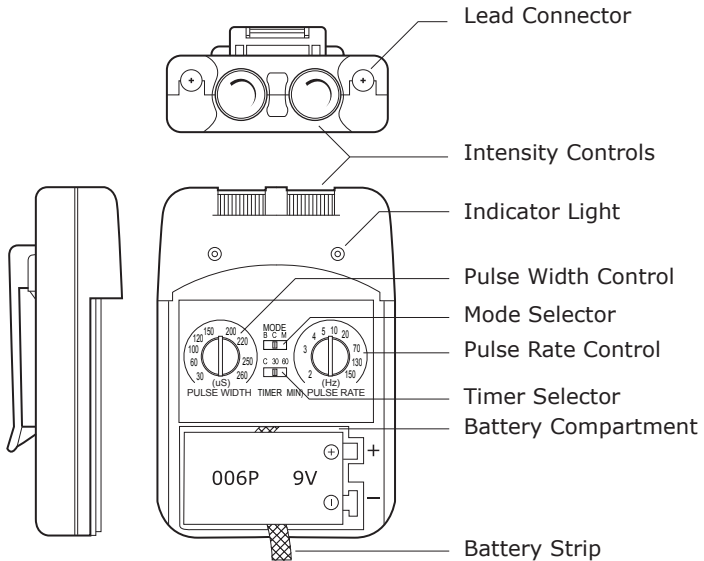
- TENS devices must be kept out of reach of children.
- The safety of TENS devices for use during pregnancy or delivery has not been established.
- TENS is not effective for pain of central origin (headaches).
- If TENS treatment becomes ineffective or unpleasant, stimulation should be discontinued until re-evaluation by a physician.
- Avoid adjusting controls while operating machinery or vehicles.
- Always turn the TENS device OFF before applying or removing electrodes.
- TENS may interfere with electronic monitoring equipment (ECG monitors/alarms).
- Electrodes should not be placed over the eyes, in the mouth, or internally.
- TENS devices have no curative value.
- TENS is a symptomatic treatment and as such suppresses the sensation of pain which would otherwise serve as a protective mechanism.

## PRECAUTIONS/ADVERSE REACTIONS

Isolated cases of skin irritations may occur at the site of electrode placement during long term application.

Effectiveness is highly dependent upon patient selection by a person qualified in the management of pain patients.

Skin irritation and electrode burns are potential adverse reactions.



## **ABOUT THIS DEVICE**

Your TENS device is a battery operated device that includes two controllable output channels. This TENS device creates electrical impulses whose amplitude, duration, and modulation can be altered with the controls or switches. The TENS dial controls are very easy to use and the slide cover protects accidental changes in settings.

## **UNIT CONTROLS**

### **Panel Cover**

A cover conceals the controls for Pulse Width, Pulse Rate, Mode Selector and Modulation Selector. Press the top side of the cover and pull down in order to open the cover.

### **Intensity**

The intensity knobs located on the top of the unit affects the strength of the stimulation and also functions as the ON/OFF control.

### **Mode**

The Mode switch is used to select the type of treatment utilized. The three modes are Burst (B), Continuous (C), and Modulation (M).

### **Pulse Width**

The Pulse Width knob regulates the pulse width for both channels.

### **Pulse Rate**

The Pulse Rate knob regulates the number of pulses per second for both channels.

### **Time Control**

Treatment Time of TENS can be preset with timer control. This switch has 3 positions: 30 minutes, 60 minutes and C (continuous). Push the mode selector until engaged in position desired.

### **Resetting the Timer**

To resume operation or to reset the timer, simply turn the intensity control OFF and then ON again.



## **Mode Functions**

Burst (B) releases individual bursts twice per second. Pulse width is adjustable and the pulse rate is set at 100Hz per second.

Continuous (C) stimulation is delivered continuously at the settings determined by intensity, rate, and width knobs.

Modulation (M) pulse width decreases from its setting by 60% and maintains the decreased width for 2 seconds before returning to the original width setting, which is maintained for 3.5 seconds. The cycle is then repeated. The intensity and pulse rate are adjustable.

## **ATTACHING THE LEAD WIRES**

The lead wires provided with the TENS device insert into the jack sockets located on top of the unit. Holding the insulated portion of the connector, push the plug end of the wire into one of the jacks; one or two sets of the wires may be used. After connecting the wires to the stimulator, attach each wire to an electrode.

Lead wires provided with the TENS device are compliant with mandatory compliance standards set forth by FDA.

**NOTE: Use care when you plug and unplug the wires. Pulling on the lead wire instead of its insulated connector may cause wire breakage.**

**CAUTION: Never insert the plug of the lead wire into an AC power supply socket.**

## **ELECTRODE SELECTION AND CARE**

Your physician/clinician should decide which type of electrode is best for your condition.

Follow application procedures outlined in electrode packaging to maintain stimulation and prevent skin irritation. The electrode packaging will provide instructions for care, maintenance and proper storage of your electrodes.

## TIPS FOR SKIN CARE

Good skin care is important for comfortable use of your TENS device.

- Always clean the electrode site with mild soap and water solution, rinse well and blot dry thoroughly prior to any electrode application.
- Any excess hair should be clipped, not shaved, to ensure good electrode contact with the skin.
- You may choose to use a skin treatment or preparation that is recommended by your physician/clinician. Apply, let dry, and apply electrodes as directed. This will both reduce the chance of skin irritation and extend the life of your electrodes.
- Avoid excessive stretching of the skin when applying electrodes. This is best accomplished by applying the electrode and smoothly pressing it in place from the center outward.
- When removing electrodes, always remove by pulling in the direction of hair growth.
- It may be helpful to rub skin lotion on electrode placement area when not wearing electrodes.

## CONNECTING THE TENS DEVICE

### 1. Prepare the Skin

Prepare the skin as previously discussed and according to instructions provided with your electrodes. Before attaching the electrodes, identify the area which your physician/clinician has recommended for electrode placement.

### 2. Connect lead wires to the electrodes

Connect the lead wires to the electrodes before applying the electrodes to the skin.

**NOTE: Be sure both intensity controls for Channel 1 and 2 are turned to the "OFF" position.**

3. Place electrodes on the skin

Place the electrodes on the skin as recommended by your physician/clinician.

4. Insert Lead Wire Connector to TENS device

Plug end of lead wire into the channel output receptacle to be used, pushing plug in as far as it will go.

5. Select Treatment Settings

Check and be sure your unit is still set to the proper settings recommended by your physician/clinician.

6. Adjusting Channel Intensity Control

Locate the intensity control knob at the top of the unit. Turn channel 1 or 2 clockwise. The indicator light will light up as long as the unit is in operation. Slowly turn the channel control in a clockwise direction until you reach the intensity recommended by your physician/clinician. Repeat for the other channel if both channels are to be used.

If the stimulation levels are uncomfortable or become uncomfortable, reduce the stimulation amplitude to a comfortable level or cease stimulation and contact your physician if problems persist.

## **BATTERY INFORMATION**

When the yellow indicator light located on the front of the unit will no longer light, the battery has become too weak to power the unit and it is time to charge the battery. At this point the unit will shut off until a fresh battery is inserted.

Your unit may also be powered by a 9 volt disposable alkaline battery. This type of battery cannot be recharged and should be discarded when the yellow light no longer lights.

## **Changing the Battery**

When the yellow indicator light on the front of the unit does not remain lit once the unit is turned on, the battery should be replaced with a newly charged battery.

1. Remove the panel cover by pressing the top and sliding down until it is completely removed from the unit. This will reveal the battery compartment.
2. Remove the discharged battery from the device.
3. Place new battery in compartment. Note the proper polarity alignment indicated on the battery and the compartment.

## **CARING FOR YOUR TENS DEVICE**

Your TENS device may be cleaned by wiping gently with a damp cloth moistened with mild soap and water. Never immerse the device in water or other liquids.

Wipe lead wires with a damp cloth as above if they become soiled.

To properly store the TENS device for extended period of time, remove the battery from the unit. Put the unit and accessories in the carrying case and store in a cool dry location.

## **TROUBLESHOOTING**

If the TENS device does not function properly:

1. Make sure the battery is properly installed or replace battery. Be sure to observe proper polarity markings when replacing the battery. If the yellow light on the front of the unit does not stay lit when the unit is turned on, replace the battery and check again.
2. If the ON/OFF Indicator Light is flashing and you still feel no stimulation, check that the lead wires are properly connected and the electrodes are in place. If the unit appears to be functioning and no stimulation, the lead wires or electrodes may need to be replaced.
3. If the battery appears to be charged and the unit is not functioning, turn both Intensity Control Knobs to the OFF position(counter clockwise). Then gradually turn the Intensity Control Knob to the on position.

If there is any other problem, please consult or return the device to your distributor, Do not try to repair a defective device.

## **SYSTEM COMPONENTS**

Your TENS device may include the following components or accessories:

- TENS unit
- Lead wires
- Electrodes
- Battery
- Carry case
- Operation Manual

## TECHNICAL SPECIFICATIONS

Channel: Dual, isolated between channels  
Modes of Operations: Continuous, Burst, Modulation  
Pulse Intensity: Adjustable 0-80mA peak into 500 ohm load each channel, constant current  
Pulse Rate: 2Hz-150Hz (adjustable)  
Pulse Width: 30uS-260uS (adjustable)  
Timer: Cont., 30 min., 60 min.  
Burst Mode: Burst consists 2 burst per sec at 100 Hz  
Wave Form: Asymmetrical Bi-Phasic square pulse  
Voltage: 0-100 Volt (open current)  
Power Source: 9 volt battery (alkaline or nickel-cadium rechargeable)  
Dimensions: 95(H) x 65(W) x 23.5 (T) mm  
Weight: 115 grams (battery included)

## OUTPUT SPECIFICATIONS

Mode	Intensity (mA)	Width (uSec)	Pulse Rate Freq(Hz)	Cycle Time (Sec)
Continuous	Adj. 0-80	Adj. 30-260	Adj. 2-150 Hz	N/A
Burst	Adj. 0-80	Adj.30-260	100Hz fixed 2 burst per sec.	N/A
Modulation	Adj.0-80	Modulates down from preset width setting by 60% then back to original setting	Adj.2-150Hz	5.5 sec total time

## **WARRANTY**

This TENS device carries a one year warranty from the date of purchase. The warranty applies to the TENS device and necessary parts and labor relating thereto. The distributor reserves the right to replace or repair the unit at their discretion.

The warranty does not apply to damage resulting from failure to follow the operating instructions, accidents, abuse, alteration or disassembly by unauthorized individuals.

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