TENS and Electrodes Guide
General Information on TENS and Electrodes

General Description of Electrotherapy:

Electrotherapy is a physical treatment whereby electrical stimulation is applied to nerves and muscles via electrodes (also called electro pads) that are placed on the skin. Electrotherapy devices work in slightly different ways, depending on what type of problem they are treating. Certain devices excel at treating pain, while others specialize in muscle stimulation. Electrotherapy devices that help with pain associated with surgery, traumatic injury as well as chronic and acute pain are called TENS, Transcutaneous Electrical Nerve Stimulator.

How does TENS work?

TENS are designed to relieve pain by sending gentle electrical impulses through the skin to the nerves. Those impulses are sent through lead wires to electrodes that are strategically placed at appropriate pain sites. TENS units use a 2-way approach: First, the stimulation targets the sensory nerves, stimulating them to block pain signals and prevent their transmission to the brain. Second, it promotes production of endorphins, the body’s natural pain reducing substance.

What is the most effective way to use a TENS unit?

For best results it is important to remember that electrotherapy merely activates the body’s own pain fighting mechanism. Placing electrodes directly over or around the painful area delivers a pain blocking current to the nerves and blocks the pain. Health professionals suggest varying the placement of the electrodes for each treatment to avoid skin irritation.

What are electrodes (leads)?

Electrodes, also called leads, are used to conduct electricity from the main unit to your skin. All Zewa electrodes are made in USA and are manufactured with a hypoallergenic gel (no additional gel needed). A good quality electrode is very important to achieve maximum comfort with the best treatment results. There are several different sizes as well as 3 different connection types available:

**Pre-Wire Connection (also called pig tail connection):**
A pre-wire connection refers to the small wire that is attached to the electrode. This wire is generally 1” - 1.5” long and makes it easier to connect an electrode to the lead wire. Uses lead wire with a “Pin” ending.

**Pin connection:**
A pin connection refers to the “pin” side of the lead wire which is directly inserted into the electrode. Uses lead wire with a “Pin” ending.

**Button/Snap connection:**
A button/snap connection refers to the button that is located on top of the electrode. Uses lead wire with a “Button/Snap” ending.
What are lead wires:
Lead wires are used to connect the main unit to the electrodes. They are normally black or white with a black and red tip to indicate the positive and negative side of the wire. Newer lead wires have a plastic covered end which connects to the TENS unit and 2 pins or buttons/snaps on the other side which connect to the electrodes.

Lead Wire with Pin connection:  
![Lead Wire with Pin connection](image)

Lead Wire with Button/Snap connection:  
![Lead Wire with Button/Snap connection](image)

All Zewa electrodes are universal and fit most TENS units on the market (Pin connection). Lead wires (wires connecting electrodes to main unit) are designed to fit a manufacturer’s specific TENS unit. Zewa lead wires may or may not fit another manufacturer’s unit. Contact your Zewa customer service representative for questions on compatibility of electrodes and lead wires.

Other Common Questions

Do I need any gel for Zewa electrodes?
No, Zewa electrodes are manufactured with a self-adhering gel, which is already on the electrodes.

How long do electrodes last?
Usage depends on several factors:
   1) Clean your skin with soap and water before placing the electrodes. This will help to increase usage.
   2) Electrodes will last less long for men than women because of a man’s body hair.
   3) It also depends on how long a patient uses the TENS unit each time. Some customers will use a TENS unit for several hours while others use them for several minutes a day.
   4) Electrodes should not get wet! They can’t get wet from sweat or water because they will loose adherence.

What battery do I use?
Zewa units use a 9V battery which is included.

How long does the battery last?
This depends on the quality of the battery, usage, settings and strength. Depending on the settings and strength a battery uses more or less power. Also, better quality batteries will last much longer.

Can I use a rechargeable battery?
Yes, but not included. A customer can buy any re-chargeable battery in an electronics store along with a charger.
How to use a TENS unit

Caution: People with cardiac conditions and/or pacemakers, and pregnant women should consult their doctors before using a TENS unit.

Skin preparation:

In order for electrodes to stick correctly, clean your skin with soap and water before each use. Make sure your skin is dry before placing the electrodes. This simple step will increase the lifespan of your electrodes.

Do’s and don’ts for electrodes:

With proper maintenance electrodes will perform better and last longer.

Note 1: The gel used on electrodes will gradually lose adherence and will stop sticking. At this time they have to be replaced.

Note 2: When electrodes get wet from water or sweat they will no longer adhere to your skin and must be replaced.
**Where should I place the electrodes?**

In order to achieve the best treatment results place the electrodes around or on top of your painful area. If possible always use all 4 electrodes at the same time. Electrodes should be placed between 0.5” - 1.5” apart from each other.

When treating a long area, for example on your shoulders, place the electrodes as indicated in the picture. Connect the lead wires to the electrodes closest to each other. In the example picture use wire 1 to connect A and B and wire 2 to connect C and D.

When treating a larger area, for example your back, place the electrodes as indicated in the picture building a big square. Connect the lead wires diagonal to achieve the best treatment. In the example picture use wire 1 to connect A and D and wire 2 to connect B and C.

When connecting electrodes it is **not** important if the red or black part of the wire is used at a specific location. The red and black color on the wire tip only indicate the negative and positive side of the wire.

**Note 1:** When not in use, always reseal Electrodes in their original package and store at room temperature.

**Note 2:** The use of hot and cold packs will cause an Electrode’s gel to break down over time.

**Note 3:** Electrodes are intended for single patient use.
Initial programming of the TENS unit:

Please refer to your instruction manual.

What settings should I use?

Your doctor should let you know what settings to use, however, if you have not received any specific instructions here are some general programming guidelines and settings:

Pulse Width: 60 - 100
Pulse Rate: 60 - 130
Modes; B (Burst), M (Modulation), C (Constant): Use C for constant
Timer: C for Continuous

Once you get accustomed to your TENS unit, you can adjust those settings to your liking. The above settings are the most common ones, but should be adjusted to meet your individual needs.

How strong should I put my TENS unit?

Your doctor should let you know what strength to use, however if you have not received any specific instructions here are some general guidelines:

Start on the lowest setting and turn it higher. You should use the unit at the strongest level possible as long as it is comfortable. If you feel a stinging sensation or pain, turn it down to a lower level. Treatments with TENS units should never be painful, if you feel any discomfort, consult your doctor.

Additional tips and warnings:

- Read your instruction manual for general warnings
- Do not place electrodes on your head
- Do not place electrodes on nerves that run on your back of the neck leading to the brain
- Do not sleep with TENS unit turned on
- Do not immerse TENS unit or electrodes in water
**Troubleshooting:**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>My electrodes won’t stick any longer</td>
<td>Replace electrodes</td>
</tr>
<tr>
<td>The unit will not turn on</td>
<td>Change the 9V battery</td>
</tr>
</tbody>
</table>
| My unit is on, but I can not feel anything or I only feel very little | - Electrodes are placed too far from each other. Electrodes can be maximum 1.5” apart from each other.  
  - Battery needs to be replaced.  
  - Both lead wires are damaged and need to be replaced.  |
| My unit is on, but I can only feel something on 1 side (1 wire) | The other wire is damaged and needs to be replaced. Wires can break inside which can’t be seen from the outside. This normally happens by accident when they are bent too much while you sit on them. |

If you have any other problems or questions, please call Zewa customer service at 1-888-993-3592.

**HCPCS Codes:**

4 Lead TENS units (all Zewa units are considered 4 lead): E0730  
Replacement Electrodes: A4595

![Zewa Logo](image)