



*Smart TENS*TM

Instructions for use



The Smart TENS is a state-of-the art, efficient method of drug-free pain relief. This powerful digital TENS unit is smooth, sophisticated and simple to use. It has 4 pre-set modes for ease of use.

TENS is recognised as a safe and highly effective method of pain relief and is regularly recommended by medical professionals.

TENS is drug-free, with no known side effects. It can also be used in conjunction with any additional medication if required.

Explanation of Symbols on Unit



Equipment providing a particular degree of protection against electric shock particularly regarding allowable leakage currents having an F type (floating) applied part.



Warning - refer to page 4 of these instructions.



Denotes a product which must be disposed of safely.



Contents

<i>What is TENS?</i>	3
<i>Precautions and Contraindications</i>	4
<i>Controls on the Smart TENS</i>	5
<i>Additional Functions</i>	5
<i>Setting up your Smart TENS</i>	6
<i>Using your Smart TENS</i>	8
<i>FAQ's and Troubleshooting</i>	10
<i>Technical Data</i>	11

What is TENS?

TENS (Transcutaneous Electrical Nerve Stimulation) works by passing mild electrical impulses through the skin, into the nerve fibres which lie below, via electrode pads. TENS impulses help your body produce its own pain-killing chemicals, such as 'endorphins'.

What can TENS be used for?

TENS can be used for many chronic and acute pain conditions such as back pain, shoulder pain, arthritis, sciatica, sports injuries, migraine, period pain and post-operative pain.

Precautions and Contraindications

1. Do **NOT** use the Smart TENS if you have a cardiac pacemaker.
2. Check with your medical adviser before using if you suffer from a heart condition, epilepsy, undiagnosed pain, have any metal implants, or any doubts whatsoever.
3. TENS must **NOT** be used before the 37th week of pregnancy.
4. Never use TENS to mask undiagnosed pain since this could require urgent treatment.
5. If you are pregnant, do **NOT** place the electrodes over your abdomen.

General Precautions

1. Do **NOT** use this unit without first reading these instructions.
2. Do **NOT** immerse the Smart TENS in any liquid.
3. Do **NOT** place it close to any source of excessive heat or operate it in the presence of flammable gas.
4. Do **NOT** drop this unit onto a hard surface.
5. Do **NOT** attempt to dismantle the Smart TENS.
7. Only use specified batteries and electrodes.
8. If damaged, do not use. Return to supplier.
9. Remove the batteries when not in use.
10. Do **NOT** use while driving or operating potentially dangerous machinery or while using a microwave.
11. Keep out of the reach of children.
12. Do **NOT** place electrodes on or near the eyes, in the mouth, over the front or sides of the neck, across the head, heart, or an area of broken, inflamed, infected or numb skin. Electrodes should generally only be applied to skin with normal sensation unless under medical supervision.
13. Do **NOT** use in the presence of tuberculosis, malignant tumours, very high or very low blood pressure, epilepsy, high fever or acute inflammatory disease unless under medical supervision.

Controls on the Smart TENS



User display

Load Detector - appears if an electrode becomes detached from skin. Intensity will drop to zero.

Pulse Width Display - ranging from 20-200µ



Low Battery Indicator - flashes when battery power is low

Mode indicator - indicates mode in use

Power Bar - indicates intensity level for each channel

Timer Display

Setting up your Smart TENS

Check you have the following contents:

- 1 x Smart TENS*
- 1 x Pack of 4 self-adhesive electrodes*
- 2 x Leadwires*
- 2 x AA batteries*
- 1 x Neck cord*
- 1 x Carrying pouch*
- 1 x Easy Guide to TENS*

The assembly stage

- a) *Press and rotate the belt clip at the back of the Smart TENS in either direction to reveal the battery compartment (see fig 1, page 7).*
- b) *Release the battery compartment cover and insert 2 x AA batteries (see fig2, page 7), ensuring the positive (+) and negative (-) terminals are correctly positioned as marked in the battery compartment. Replace the cover.*
- c) *Take the two blue leadwires and insert each of the black jack plugs (at one end of each leadwire) into the sockets at the top of the Smart TENS unit (see fig 3, page 7).*
- d) *Now insert the pins (at the other end of the leadwires) into the sockets attached to the sticky electrodes. Do not remove the electrodes from the backing at this stage (see fig 4, page 7).*
- e) *If you wish, attach the easy-release neck cord which enables you to hang the Smart TENS from your neck (see fig 5, page 7).*



Figure 1

Inserting the battery

Press and rotate the belt clip to reveal the battery compartment.



Figure 2

Release the battery compartment and insert the batteries.



Figure 3

Connecting the leads

Insert both black jack plugs into the sockets.

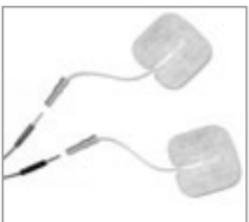


Figure 4

Connecting the Electrode Pads

Insert a red and black pin (at the end of each lead wire) into each pair of electrodes.

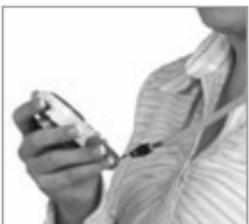


Figure 5

Using the Neck Cord

Thread the loop of the neck cord through the space at the base of the unit. Slip the other end of the neck cord through the loop and pull into position.



Before first use of the Smart TENS, please familiarise yourself with the warnings and contraindications contained on page 4.

Using your Smart TENS

The Smart TENS has 4 TENS modes. Each has been designed to provide a different sensation.

You can use any of the TENS modes to treat your pain. The table below sets out a brief description of the sensation each mode provides:

Mode	Description
CONSTANT	<i>The pulses are continuous. This will feel like a tingly sensation and is based on the Gate Control Theory. Please refer to page 3 of the accompanying book "An Easy Guide to TENS Pain Relief", for a full explanation.</i>
BURST	<i>The pulses are off and on in a regular cycle, i.e. the signal from the unit is emitted in bursts. This will feel like a heart beat, and is based on the Acupuncture like TENS or Endorphin Release Theory. (see page 3 of "An Easy Guide to TENS Pain Relief").</i>
MASSAGE	<i>The pulse decreases and then increases in regular cycles creating a massaging sensation.</i>
MIXED (Dense disperse)	<i>This is a mixed setting – 3 seconds of Constant and 3 seconds of Burst as described above – this cycle is repeated</i>

To commence treatment

1. Carefully peel the electrodes from the plastic backing, using your forefinger and thumb. Place on you body as shown on the diagrams found in your Easy Guide to TENS Pain Relief.
2. Switch the unit on by pressing the On/Off Button. Your unit will automatically start up in the Constant mode the first time you use it.
3. Begin by pressing the CH1+ key. Each time you press this key, a small 'half-moon' shape will appear on the screen increasing in number and size as the intensity is increased.
4. You will begin to feel a tingling sensation. Repeat step 3 with the CH2+ key. You will now feel a sensation in both sets of pads.

5. **The Mode Key.** The Smart TENS has 4 modes as described in the table on page 8. These modes are selected by pressing the Mode Key allowing you to choose whichever you find to be the most comfortable. Varying the modes helps to avoid or delay your body becoming used to any particular setting.
6. **Pulse Width Adjustment:** An added facility giving extra versatility to your TENS unit. Increasing or decreasing the pulse width heightens or lessens the sensation at the site of the electrodes. This is fully adjustable between 20μ and 250μ in steps of 10μ for all modes on the Smart TENS and can be altered by pressing the PW key. (μ = microseconds)
7. **Timer Key:** Allows you to set your length of treatment. There are 5 settings: Continuous, 15mins, 30 mins, 45 mins and 60 mins.
8. Continue stimulating for as long as necessary but preferably for no less than 30 minutes, unless you experience discomfort.
9. Some people achieve pain relief after short periods of time. Others may require to use their TENS for a lot longer.
10. If you continue to stimulate for a number of hours check you to make sure your self-adhesive electrodes have not dried out. If this is the case, dampen them slightly. If electrodes are allowed to dry out this can cause minor skin irritation.
- 11 Always ensure the unit is switched off before you remove the leads. Do not pull the wires. Always remove the jack plugs from their sockets by holding the plugs between the forefinger and thumb.

Additional information

Automatic Power Off - When the unit intensity levels are zero, and it has not been in use for about 5 minutes, the unit will shut off automatically.

Memory function - The Smart TENS has a memory function which will remember the last setting for the next time you use it.

Please refer to your "Easy Guide to TENS Pain Relief" (UK only) for electrode placement charts, troubleshooting and general TENS information.

TENS - Frequently Asked Questions

Q Is it safe?

A Yes, TENS is used widely for pain relief and is recommended by medical professionals.

Q Can I use it with other medications?

A Yes. TENS is drug-free so you can use it with any other medication including paracetamol.

Q What conditions can TENS be used to treat?

A TENS can be used to treat numerous pain conditions. If you are unsure about using TENS please consult your medical adviser or contact Body Clock Health Care on 020 8532 9595.

Q Can I use the Smart TENS for labour?

A This is not recommended as it does not include the boost function required for use during contractions. For information on TENS for use during labour, please visit www.babycaretens.com or call 0845 230 9737.

Troubleshooting Questions

Q Why does the pulse sensation not appear to be as strong after you have used the Smart TENS for a while?

A Increase the intensity, you may have become acclimatised to a lower setting.

Q Why does the pulse sensation feel strong but ineffective?

A You may need to reposition the electrode pads (don't forget to switch the Smart TENS off before doing so).

Q Why does the sensation not feel sufficiently strong even on a high setting?

A The batteries may need replacing.

Technical Data

Display	8 seven segment digits and around 95 segments																				
Operation Mode	<p>Four modes:</p> <ul style="list-style-type: none"> • Constant • Burst - 32Hz-2 bursts per second, 8 pulses per burst • Massage - 100Hz - fixed frequency modulating on pulse width • Mixed - 3 second in mode 1, 3 seconds in mode 2, repeat 																				
	<table border="1"> <thead> <tr> <th></th> <th>Pulse (Hz) Frequency</th> <th>Pulse Width (μs)</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Constant</td> <td>100</td> <td>20-250</td> <td>CONSTANT</td> </tr> <tr> <td>Burst</td> <td>32</td> <td>20-250</td> <td>BURST</td> </tr> <tr> <td>Massage</td> <td>100</td> <td>20-250</td> <td>MESSAGE</td> </tr> <tr> <td>Mixed</td> <td>32 and 100</td> <td>20-250</td> <td>MIXED</td> </tr> </tbody> </table>		Pulse (Hz) Frequency	Pulse Width (μ s)	Display	Constant	100	20-250	CONSTANT	Burst	32	20-250	BURST	Massage	100	20-250	MESSAGE	Mixed	32 and 100	20-250	MIXED
	Pulse (Hz) Frequency	Pulse Width (μ s)	Display																		
Constant	100	20-250	CONSTANT																		
Burst	32	20-250	BURST																		
Massage	100	20-250	MESSAGE																		
Mixed	32 and 100	20-250	MIXED																		
Timer	<p>Countdown timer has 5 settings</p> <ul style="list-style-type: none"> • Continuous • 15 Minutes • 30 Minutes • 45 Minutes • 60 Minutes 																				
Automatic Power Off	5 Minutes																				
Output Channel	Dual Channel																				
Output Voltage	0-60V adjustable in 15 steps (500 Ω load, peak to 0)																				
Output Intensity	0 - 120mA adjustable in 15 steps (500 Ω load). Intensity level will drop back to 0 after mode changes																				
Output Waveform	Asymmetrical bi-phasic rectangular																				
Output Jacks	CE touch-proof jacks																				
Load Detector	Contact detection between the device and human skin																				
Battery	2 x 1.5V AA Battery (Type LR6)																				
Battery Low Detect	2.2V \pm 0.2V																				



Medical Devices Directive 93/42/EEC Annex V

Body Clock Health Care Ltd

*108 George Lane,
South Woodford,
London
E18 1AD
United Kingdom*

Tel (+44) (0)20 8532 9595

Fax (+44) (0)20 8532 9551

www.bodyclock.co.uk

e-mail customercare@bodyclock.co.uk

