

# TENS One

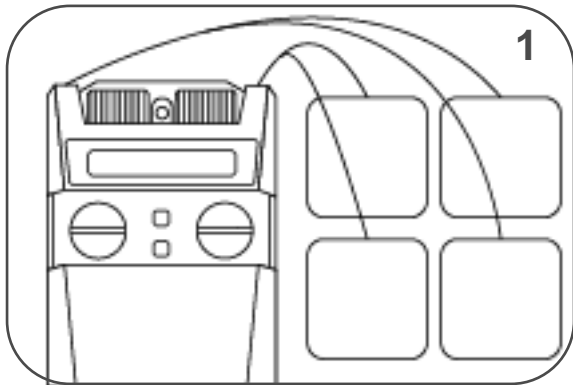


## Instructions For Use

Please Read Carefully

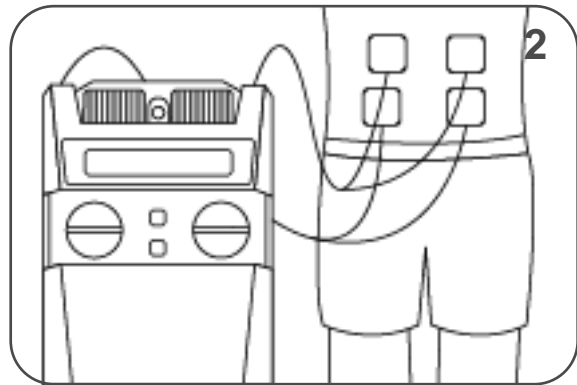
**TensCare™**

## QUICKSTART GUIDE



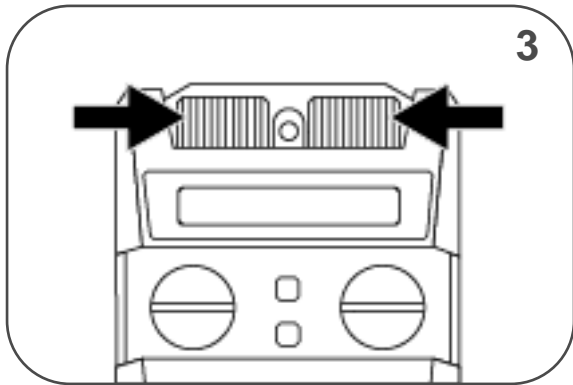
Connect the unit with the electrode pads  
Conecte la unidad con las almohadillas de los electrodos

Connectez l'appareil aux électrodes  
Verbinden Sie das Gerät mit den Elektroden Pads.



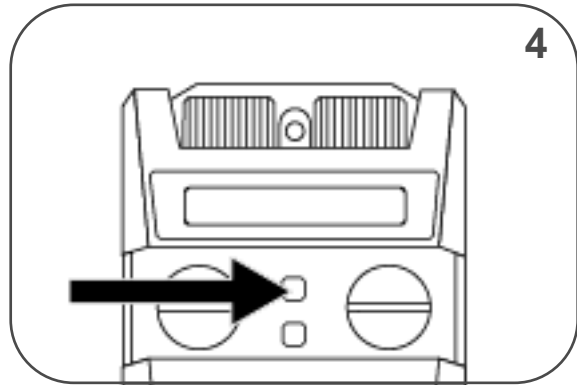
Place the electrode pads around the area of pain  
Coloque las almohadillas de electrodos alrededor del área de dolor

Placez les électrodes autour de la zone douloureuse  
Platzieren Sie die Elektrodenpads um den Schmerzbereich herum



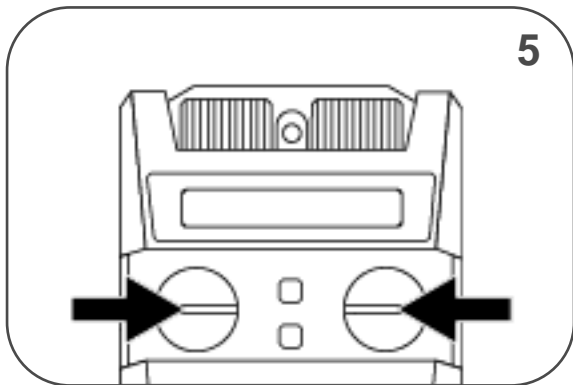
Rotate one of the top control knobs to switch on  
Gire una de las perillas de control superior para encenderla  
Tournez l'un des boutons de commande supérieurs pour allumer l'appareil

Drehen Sie einen der oberen Drehregler, um ihn einzuschalten



Select a mode by pressing the **MODE** button  
Seleccione un modo pulsando el botón **MODE**  
Sélectionnez un mode en appuyant sur le bouton **MODE**

Wählen Sie einen Modus aus, indem Sie die **MODUS**-Taste drücken

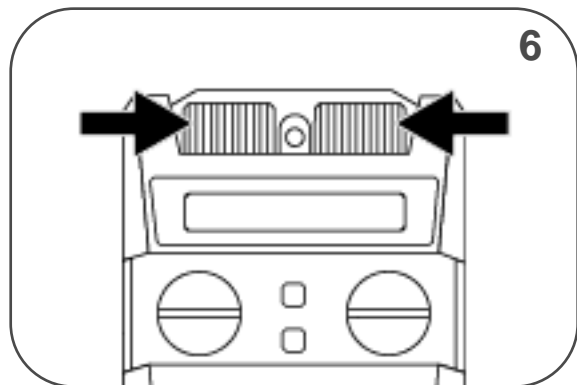


Adjust the settings by rotating the pulse rate and pulse width control knobs

Ajuste los ajustes girando las perillas de control de frecuencia y anchura de pulso

Réglez les paramètres en tournant les boutons de réglage de la fréquence et de la largeur

Passen Sie die Einstellungen an, indem Sie die Regler für Pulsfrequenz und Pulsweite drehen.



Regulate the output intensity with the top control knobs  
Regule la intensidad de salida para cada canal con las perillas de control superiores

Réglez l'intensité de sortie pour chaque canal à l'aide des boutons de commande supérieurs

Stellen Sie die Ausgangsintensität für jeden Kanal mit den oberen Drehreglern ein



Dear Customer,

Thank you for choosing **TENS One**. TensCare stands for high-quality, thoroughly tested products for the applications in the areas of gentle electrotherapy, muscle toning, continence management and pain relief during labour.

Please read these instructions for use carefully and keep them for later use, be sure to make them accessible to other users and observe the information they contain.

Best regards,

Your TensCare Team


















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## SYMBOLS USED



	TYPE BF APPLIED PART: Equipment providing a degree of protection against electric shock, with isolated applied part. Indicates that this device has conductive contact with the end user.
	This symbol on the unit means "Refer to instructions for use".
	Temperature Limitation: indicates the temperature limits to which the medical device can be safely exposed.
	Lot Number: indicates the manufacturer's batch code so that the batch or lot can be identified.
	Humidity Limitation: indicates the humidity limits to which the medical device can be safely exposed.
	Serial Number: indicates the manufacturer's serial number so that a specific medical device can be identified.
	Do not dispose in household waste.
	Catalogue Number: indicates the manufacturer's catalogue number so that the device can be identified.
	Atmospheric Pressure: indicates the atmospheric limits to which the medical device can be safely exposed.
	Manufacturer Symbol
	Date of Manufacture: indicates the date which the medical device was manufactured. This is included within the serial number found on the device (usually in the battery compartment), either as "E/Year/Number" (YY/123456) or "E/Month/Year/Number" (MM/YY/123456).
	This medical device is indicated for home use.
IP22	This medical device is not water resistant and should be protected from liquids. <b>The first number 2:</b> Protected against access to hazardous parts with a finger, and the jointed test finger of 12 mm ø, 80 mm length, shall have adequate clearance from hazardous parts, and protected against solid foreign objects of 12.5 mm ø and greater. <b>The second number 2:</b> Protected against vertically falling water drops when enclosure is tilted up to 15°. Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
	CE Mark
	Medical Device
	Importer Symbol



## 1. INTRODUCTION

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### Device Description & Principles of Design

The **TENS One** is an accurate and versatile, digital TENS unit that is easy to use, with simple settings and rotating strength control knobs. It can help manage the pain from a wide range of conditions.

Chronic pain: Back pain. Lumbago, sciatica pain and arthritic pain.

Musculoskeletal pain: fibromyalgia and injuries (sprains, tears, fractures, muscle strain).

Acute pain: Dental and facial pain, postoperative pain and neuropathic pain (and neuralgias).

TENS machines can be used alone for pain relief or be combined with other treatments.

## 2. INTENDED USE

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**TENS One** is intended for the relief of pain associated with sore or aching muscles of the lower back, arms, or legs due to strain from exercise or normal household and work activities.

The device is suitable for use by all who can control the device and understand the instructions.

Do not use the device for any purpose other than this intended use.



**Warning:** Not suitable for use in children without medical supervision.

## 3. TENS ONE FEATURES

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- **Dual Channel**

Two independent channels with four electrode pads to treat two areas at the same time.

- **Comfortable Stimulation**

Gentle TENS stimulation with 20 steps of intensity. The multi-turn rotary digital control reduces the risk of sudden changes normally associated with this type of control.

- **Manual TENS with 3 Modes**

Including Burst mode (B), Normal/Constant mode (N) and Modulation mode (M).

- **LCD Screen**

Clearly shows the operation of the unit and the programme and intensity being used.

- **Treatment Timer**

The user can manually select a treatment time of C (Continuous) or 15, 30, 45, 60 or 90 minutes.

- **Easy Start Mode Memory**

Automatically starts in the last mode and setting used.

- **Detachable Belt Clip**

Enables the user to clip the unit onto a belt.

## 4. HOW “TENS” WORKS

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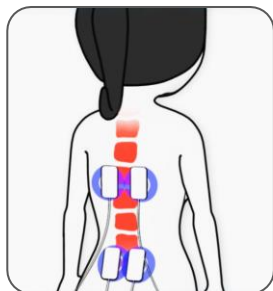
T.E.N.S. stands for Transcutaneous Electrical Nerve Stimulation. T.E.N.S. stimulates your body's own natural defences against pain, namely the release of endorphins. TENS is totally

safe and has been used successfully by thousands of pain sufferers.

**TENS sends a gentle stimulation through the skin which works in TWO ways:**

### **Pain Gate**

It stimulates the sensory nerves, which carry touch and temperature signals. These nerves go to the same connections in the spine as the nerves carrying pain. A strong sensory signal will block the pain signal travelling up the spine to the brain. This is known as closing the "Pain Gate" and takes effect quite quickly after the unit is switched on. When the gate is open, pain messages get through to the brain and we feel pain. When the gate is closed, these pain messages are blocked and we do not feel pain.

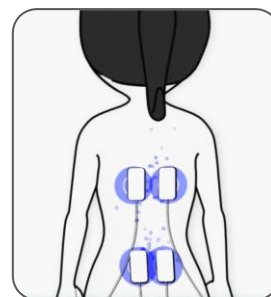


Evidence suggests that TENS produce pain relief in a similar way to 'rubbing the pain better'. The pain gate can be closed by activation of mechanoreceptors through 'rubbing the skin'.

Scientifically, the pain gate works by release of chemical in the synapse at spinal level that inhibits transmission of pain signal.

### **Endorphin Release**

At low frequency settings, and slightly stronger outputs, TENS drives the motor nerves to produce a small repetitive muscle



contraction. This is seen by the brain as exercise, and this promotes the release of endorphins - your body's own natural pain killer. The relief builds up and normally takes about 40 minutes to reach a maximum level which can last for hours after the machine is switched off.

By using TENS, you can expect to achieve a significant reduction in pain - if not complete relief from pain.

- TENS is effective for pain from a very wide range of causes.
- TENS machines can be used to help reduce pain from problems in muscles, joints and nerves.
- It can be also used for people with musculoskeletal pain such as long-term (chronic) back pain or knee joint arthritis. They are also often used for pain relief in the early stages of labour (see **perfect mamaTENS**), particularly whilst a pregnant woman remains at home.
- TENS may also be used to treat many types of pain, such as period pain and endometriosis (see **Ova+**), cystitis, sports injuries, fibromyalgia and neuralgia, plantar fasciitis, post-operative pain, TMJ disorder, diabetic neuropathy, osteo-arthritis and sometimes non-painful conditions such as travel sickness.





- You can use low frequency (<10 Hz) programmes on acupuncture points, to achieve similar effects to acupuncture.
- With neurogenic pain (caused by inflamed nerves) such as neuralgia, TENS may start by increasing the pain. We recommend that you only use TENS for these conditions under medical supervision.
- You can safely use TENS as long as it gives you pain relief. The effect may wear off after a few hours (this is called “accommodation”). If this happens, take a break of an hour or so before trying again. If you use settings that cause muscle movement for more than 40 minutes, you may experience aching muscles a few hours later.

## 5. CONTRAINDICATIONS, WARNINGS & CAUTIONS

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### In this manual:



A **Contraindication** is used when a device should not be used because the risk of use clearly outweighs any foreseeable benefits and may result in serious injury or death.



A **Warning** is used when failure to follow the instructions may result in serious injury or death.



A **Caution** is used when failure to follow the instructions may result in a minor or moderate injury, or damage to the device or other property.



**Notes** are used to provide clarification or recommendation.



### CONTRAINDICATIONS:

**Do NOT use** if you have a pacemaker (or if you have a heart rhythm problem) or with any electronic medical devices. *Using this unit with electronic medical devices may cause erroneous operation of the device. Stimulation in the direct vicinity of an implanted device may affect some models.*

**Do NOT use** during the first three months of pregnancy. *It is not known whether TENS may affect foetal development.*

**Do NOT use** on the abdomen in the later stages of pregnancy. *Stop using immediately if you experience unexpected contractions.*



### WARNINGS:

**Do NOT use** to mask or relieve undiagnosed pain. *This may delay diagnosis of a progressive condition.*

**Do NOT use** if you have, in the area being treated: active or suspected cancer or undiagnosed pain with a history of cancer. *Stimulation directly through a confirmed or suspected malignancy should be avoided as it may stimulate growth and promote spread of cancer cells.*

If you are in the care of a physician, consult with your physician before using this device.

If you have had medical or physical treatment for your pain, consult with your physician before using this device.

If your pain does not improve, becomes more than mild, or continues for more than five days, stop using the device and consult with your physician.

**Do NOT use** electrodes on the front of the neck. Stimulation on the front of the neck can affect your heart rate or cause contraction of the throat.

**Do NOT use** electrodes across the chest. Very strong stimulation across the chest may cause an extra heartbeat and/or rhythm disturbances to your heart, which could be lethal.

**Do NOT use** Tens One while simultaneously connected to high frequency surgical equipment as it may result in burns at the site of stimulator electrodes and possible damage to the stimulator.

**Do NOT use** Tens One in close proximity (e.g. 1 m) to a shortwave or microwave as this may produce instability in the stimulator output.

**Do NOT use** electrodes near the thorax as this may increase the risk of cardiac fibrillation.

Do not apply stimulation when in the bath or shower.

Do not apply stimulation while sleeping.

**Do NOT use** when driving, operating machinery, or similar actions needing muscular control. *Loose electrode pads, damaged leads, or sudden changes in contact may cause brief involuntary muscle movements.*

Consult with your physician before using this device because the device may cause lethal rhythm disturbances to the heart in susceptible individuals.



## CAUTIONS:

TENS is not a substitute for pain medications and other pain management therapies.

TENS devices have no curative value.

TENS is a symptomatic treatment and, as such, suppresses the sensation of pain that would otherwise serve as a protective mechanism.

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

The long-term effects of electrical stimulation are unknown.

The safety of electrical stimulation during pregnancy has not been established.

If you have suspected or diagnosed heart disease, you should follow precautions recommended by your physician.

Use caution if stimulation is applied over the menstruating or pregnant uterus.

**Caution** should be used if you have a bleeding disorder as stimulation may increase blood flow to the stimulated region.

**Caution** should be used if you have suspected or diagnosed epilepsy as electrical stimulation may affect seizure threshold.

**Caution** should be observed when using the device at the same time as being connected to monitoring equipment with body worn electrode pads. It may interfere with the signals being monitored.





**Caution** should be used following recent surgical procedures. Stimulation may disrupt the healing process.

**Caution** Simultaneous connection to high frequency surgical equipment may result in burns and damage to the stimulator.

**Caution** Not intended for use in an oxygen rich environment.

**Caution** Not intended for use in conjunction with flammable anaesthetics or flammable agents.

**Caution** The patient is an intended operator.

**Caution** Do not service and maintain the device while in use.

**Caution** Maintenance and all repairs should only be carried out by an authorized agency. The manufacturer will not be held responsible for the results of maintenance or repairs by unauthorized persons.

If necessary, we will provide circuit diagrams, component part lists or other information that will assist authorized service personnel to repair the device.

**Caution** The operator should not touch the patient at the same time when touching the battery output.

**Caution** Keep away from pets and pests

**Caution** Do not permit use by children unable to understand the instructions or persons with cognitive disabilities, i.e.; Alzheimer's disease or dementia.

**Caution** Keep away from children under 5 years of age. *Long cord - risk of strangulation in infants.*

#### **DO NOT PLACE ELECTRODE PADS:**

- On skin, which does not have normal sensation. *If the skin is numb too*

*great a strength may be used, which could result in skin inflammation.*

- On broken skin. *The electrode pads could encourage infection.*
- On the front of the neck. *This could cause the airway to close, giving breathing problems. May cause sudden drop in blood pressure (vasovagal response).*
- Over the eyes. *May affect eyesight or cause headaches.*
- Across the front of the head. *Effect on patients who have had strokes or seizures is not known. May affect your sense of balance. The effects of stimulation on the brain are unknown.*

#### **ELECTRODE PADS CAUTION:**

**Caution:** Do not ignore any allergic reaction to the electrode pads: *If a skin irritation develops, stop using TENS, as this type of electrodes may not be suitable for you. Alternative electrode pads specially made for sensitive skin are available.*

**Caution:** Do not use this device with leads or electrode pads other than those recommended by the manufacturer. *Performance may vary from specification. Electrodes with smaller surface area may cause tissue irritation.*

**Caution:** Do not use high intensity settings if electrodes are smaller than 50x50mm.

#### **TO KEEP YOUR DEVICE IN GOOD WORKING ORDER, OBSERVE THE FOLLOWING ADDITIONAL CAUTIONS:**

**Caution:** Do not immerse your device in water or place it close to excessive heat such as a fireplace or radiant



heater or sources of high humidity such as a nebulizer or kettle as this may cause it to cease to operate correctly.

**Caution:** Keep the device away from sunlight, as long-term exposure to sunlight may affect the rubber causing it to become less elastic and crack.

**Caution:** Keep the device away from lint and dust, as long-term exposure to lint or dust may affect the sockets or cause the battery connector to develop a bad contact.

**Caution:** Temperature & Relative Humidity of storage: -25°C to +70°C, up to 93% R.H. Temperature & Relative Humidity of transportation: -25°C to +70°C, up to 93% R.H.

**Caution:** There are no serviceable user parts. Do not attempt to open or modify the TENS unit. *This may affect the safe operation of the unit and will invalidate the warranty.*

## 6. INFORMATION ABOUT THE PROGRAMME SETTINGS

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The Frequency and Pulse Width settings can be adjusted which allow for different sensations through the electrode pads and suppress pain in different ways.

- **Frequency (measured in Hz - pulses per second)**

PAIN GATE: A high frequency of 110 Hz is good at blocking pain signals.

ENDORPHINE RELEASE: A low frequency of 4 or 10 Hz allows for the release of endorphins, the body's natural morphine-like substances.

- **Pulse Width (measured in  $\mu$ s - millionths of a second)**

The **TENS One** unit has pulse widths of 50 to 250  $\mu$ s. Generally speaking, the higher the pulse width, the more "aggressive" the stimulation feels, and eventually, if the pulse width is set high enough, it will usually elicit a muscle contraction, which is typically not the desired result with a TENS unit. However, if the pulse width is too low, the patient may not perceive the stimulation. Pulse Rate is important because different frequency settings target different nerve groups and the setting will determine if the "Gate Theory" or "Endorphin Theory" of TENS will be used.

- **Constant and Burst Modes**

Constant mode is when the sensation is continuous versus Burst mode when the sensation, as its name implies, is one of on and off. Constant mode is often used for acute pain via Pain Gate Effect whereas Burst mode is useful in chronic pain relief. Burst gives a combination of Pain Gate and Endorphin Release, but the squeezing feeling may not be as comfortable. The sensation in Burst is more of a 'grabbing', 'clawing' type and usually more by way of muscle twitching than with the high or low frequency modes. The stimulation intensity will need to be relatively high. In Constant mode, the sensation is continuous and is more of a tingling pins and needles type.

- **Modulation Mode**

Modulation is when either the frequency or pulse width sweep across range of settings. In modulation mode, the machine delivers a less regular pattern of TENS stimulation in an attempt to reduce or minimise the



accommodation effects of regular, patterned stimulation. This is potentially most useful for patients who use TENS for several hours a day, if for no other reason than accommodation occurs at a slower rate and therefore less intensity adjustment may be required.



**Note:** If you are using TENS for the first time, it is recommended that you start with a setting of 110 Hz and 50  $\mu$ s.

For more information about which settings to choose for the different type of pain, refer to section 7.3.

## 7. MODES

**TENS One** has three different modes:

- **N:** Constant/Normal stimulation with adjustable parameters
- **B:** Burst stimulation with adjustable settings.  
Two stimulations per second, 250 ms on, 250 ms off; pulse width and pulse rate are selectable.
- **M:** Stimulation with modulated pulse width and modulated frequency.  
Pulse rate modulates from PR1 to PR2 or PR2 to PR1 while pulse width modulates from PW1 to PW2 or PW2 to PW1 within 6 seconds. PR1 and PW1 are adjustable. PR2 is 50 Hz fixed, PW2 is 200  $\mu$ s fixed.

To choose a mode, press the button **MODE**, until you reach the desired mode.

### 7.1. PARAMETERS

Professor Han did research that showed that **P** increased as the

frequency increased – but only tested up to 100 Hz.

And that **E** decreases as the frequency increases.

So, **E** is less effective when the frequency is >10 Hz and **P** is less effective when the frequency is <80 Hz. Most clinical research on **P** has been done at 80 Hz or 100 Hz.

Many professional users believe that the response to TENS varies between individuals, and that you can get the best response by choosing the frequency that suits your nervous system the best. They suggest that you start at 80 Hz or 110 Hz, then try different the frequency until you find one that gives you better pain relief.

### 7.2. SELECTING THE PARAMETERS

Before adjusting the parameters, select the mode of your choice.

- **Frequency:** To increase the frequency (or pulse rate), rotate the pulse rate knob clockwise. To decrease, rotate the knob anti-clockwise. You can select a frequency from 1 to 150 Hz.
- **Pulse Width:** To increase the pulse width, rotate the pulse width knob clockwise. To decrease, rotate the knob anti-clockwise. You can select a pulse width from 50 to 250  $\mu$ s in steps of 10  $\mu$ s.
- **Timer:** For each mode, you can select a treatment duration with the timer button. You can select a duration of C (Continuous), 15, 30, 45, 60 and 90 minutes.

See section 6 for more information on the choice of settings.



### 7.3. RECOMMENDED SETTINGS

The tables opposite are only recommendations.

There is not one programme for a particular condition, and the best choice varies from one person to another, even if they have the same type of pain. Therefore, the selection of both the settings and the positioning of the electrode pads should be performed on an individual basis. You may need to try a few positions/programmes before finding the one that suits you.

### 7.4. MODE USAGE

TENS can be used for as long as it is necessary. Continuous treatment is fine, but the electrode pads should be repositioned regularly (at least every 12 hours) to allow the skin to be exposed to the air.

The Endorphin Release programmes work better when the strength is high enough to cause small muscle contractions. Best results are achieved with a session duration between 15 and 45 minutes. Longer use may cause muscle ache.

## 8. ELECTRODE PADS

### 8.1. PAD POSITIONING

The electrode pads must always be used in pairs (two electrode pads on each channel), so that the signal can flow in a circuit.

- TENS works one vertebra at a time. You need to stimulate the sensory

Long term pain 1				
Pain area	Pulse rate	Pulse width	Mode	Timer (min)
Lower back	80	200	B	C
Sciatica	120	200	B	C
Shoulder / Deltoid	90	150	B	C
Hip & Thigh	90	200	B	C
Wrist pain	110	100	B	C
Knee	100	100	B	C
Calf	110	150	B	C
Ankle / Foot	80	100	B	C
Long term pain 2				
Lower back	2	250	M	45
Sciatica	4	250	C	45
Shoulder / Deltoid	6	250	C	45
Hip & Thigh	8	250	M	45
Wrist pain	10	250	C	45
Knee	5	250	M	45
Calf	4	250	C	45
Ankle / Foot	3	250	C	45
Acute pain				
Lower back	80	200	N	C
Sciatica	120	200	N	C
Shoulder / Deltoid	90	150	N	C
Hip & Thigh	90	200	N	C
Wrist pain	110	100	N	C
Knee	100	100	N	C
Calf	110	150	N	C
Ankle / Foot	80	100	N	C



nerves that enter the spine at the same level as the nerve carrying your pain. Since you don't know exactly where your nerves are, the easiest way is to apply the electrode pads around/near the source of the pain.

- TENS activates the nerves best if it travels along the nerve rather than across it. So place one pad further from the spine than the source of the pain, and one closer.
- The nerves wrap around the limbs and torso, so you may have to try a few positions before you get the best effect.
- If the pain is in, or close to, your spine you can place one pad either side of the spine.
- You may feel more sensation in one pad than the other. This is normal – it depends on where the electrode pads are in relation to your nerves.

For areas that are difficult to reach, why not ask a friend to help you attach the electrode pads?

**Always check that the unit is OFF before attaching or removing electrode pads.**



**Note:** See examples of positioning in the instructions enclosed with your electrode pads.

## 8.2. PAD ADVICE

- The electrode pads supplied are reusable but for single patient use. The adhesive is a peelable hydrogel (water based).

- In order to obtain the best conductivity through the electrode pads always ensure that they are in good condition and tacky.
- Before use make sure your skin is clean and dry.
- Peel the electrode pads from their protective plastic shield by holding and lifting one corner of the pad and pulling. **Do not** pull on the pigtail wire of the pad.
- After use always replace the electrode pads on the plastic liner and replace them in the re-sealable plastic bag.
- If the electrode pads dry out, then it is best to buy a replacement pack. In an emergency, it may be possible to restore some of the tackiness of the pad by adding a tiny drop of water on each pad and spreading around. If too much water is added, the electrode pad will become too soft. If that happens then it is suggested in order to try and re-establish some adhesiveness, to place them sticky side up in a refrigerator for a few hours.
- In very hot weather the gel on the electrode pads may become soft. In such cases place them, still on their plastic liners and in their pouch into a fridge until they return to their normal condition.
- The electrode pads provided are latex-free.
- Replace the electrode pads when they lose their stickiness.  
*Poor connection may cause discomfort and skin irritation.*
- Storage life of an unopened pack of electrode pads is 2 years. This may be affected by very high temperatures or very low humidity.



## 9. CONTENT

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The pack contains:

- 1 x **TENS One** pain relief unit
- 2 x Lead wires (L-CPT)
- 4 x 50x50 mm electrode pads (E-CM5050)
- 2 x AA 1.5V alkaline batteries
- 1 x Detachable belt clip
- 1 x Storage pouch
- 1 x Manual instruction



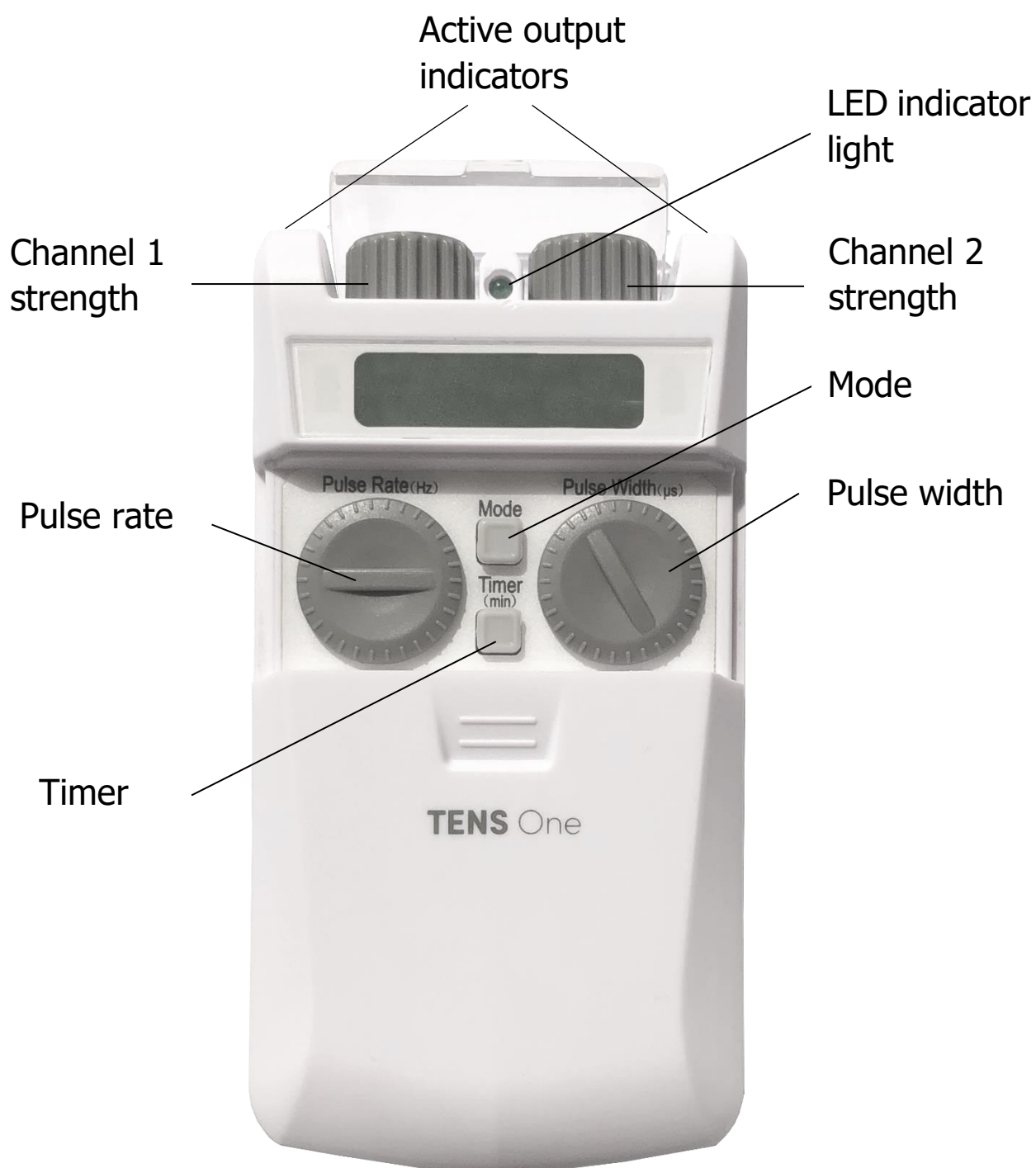


## 10. UNIT INFORMATION

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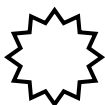
### 10.1. CONTROLS & DISPLAY

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## 10.2. OPERATING INSTRUCTIONS

### ON/OFF



To turn the unit **ON**, rotate one of the control knobs clockwise until you hear a click, the LED indicator will light up (green colour).

To turn the unit **OFF**, rotate one of the control knobs anti-clockwise until you hear a click, the display will stop.

The unit will start with the mode you used last.



**Note:** Always check unit is OFF before applying or removing electrode pads.

### MODE CONTROL

**MODE**

The button marked **MODE** is the mode control. The **TENS One** has three different modes. When the unit is first switched on it automatically enters mode **N**.

Each time you press and release the **MODE** button, the mode changes and the letter is shown on the LCD.

Before changing the mode, it is strongly recommended to bring the intensity back to zero.

Each time you change the mode, the strength level reverts back to zero for three seconds before ramping back up to the previous level of intensity.

### TREATMENT TIMER

**TIMER**

The **TIMER** button can be used to set the session duration. Press and release to change the session time. You can set session

times of C (Continuous) or 15, 30, 45, 60 or 90 minutes.

The LCD shows the session duration next to the min symbol. The unit automatically counts down the minutes set, once it reaches 0 the display will flash until the device is manually switched off.

### PULSE RATE CONTROLS



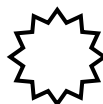
To increase the frequency (or pulse rate), rotate the pulse rate knob clockwise. To decrease, rotate the knob anti-clockwise.

### PULSE WIDTH CONTROLS



To increase the pulse width, rotate the pulse width knob clockwise. To decrease, rotate the knob anti-clockwise.

### STRENGTH CONTROLS



On the top of the unit, there are two rotating control knobs.

The left-hand knob changes strength in the left-hand lead and the right-hand knob changes the right-hand lead.

To increase the strength, turn the knobs clockwise.

To decrease the strength, turn the knobs counter-clockwise.

The strength levels are shown on the LCD.

The unit has 20 levels of strength, each step is 4mA. You may feel nothing over the first few levels. Continue turning the knobs carefully until the sensation is strong but comfortable. Further increases during use may be necessary.





if your body becomes used to the sensation.

The orange LED on the output socket indicates that there is an active output. The LED will remain on as long as the intensity is above 0.

### LOW BATTERY



The LED indicator will flash when you need to change the batteries. The unit will shut down about 2 minutes after this.

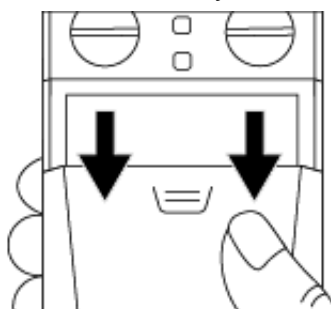
### OPEN CIRCUIT CUTOUT

If the **TENS One** is not correctly connected to your body, the strength in the channel which is not properly connected will automatically reset to zero for 3 seconds and the display will flash. After 3 seconds, the intensity will start ramping back up to the intensity selected. This also happens when changing the mode. This is to prevent sudden changes in sensations.

## 11. SETTING UP AND USING THE TENS ONE

### 11.1. INSTALLATION OF BATTERIES

1) Remove the battery cover.



2) Insert batteries.



Ensure that the batteries are inserted the right way as shown in battery compartment and that the ribbon is behind them.

4) Replace the battery cover.

**Caution:** Remove batteries from your **TENS One** if the unit is unlikely to be used for a long period. *Some types of batteries may leak corrosive fluid.*

### Battery Life

Batteries should last at least 15 hours (whilst using mode M, 100Hz/50us (500Ω)).

Unused batteries have a nominal shelf life of 3 years, but will usually last longer than this.



## Battery Warnings

**Do NOT** pierce, open, disassemble, or use in a humid and/or corrosive environment.

**Do NOT** expose to temperatures over 60°C(140F).

**Do NOT** put, store or leave near sources of heat, in direct strong sunlight, in a high temperature location, in a pressurized container or in a microwave oven.

**Do NOT** immerse in water or sea water, or get wet.

**Do NOT** short-circuit.

**Do NOT** connect the device unless the battery cover is in place.

*If battery leakage occurs and comes in contact with the skin or eyes, wash thoroughly with lots of water and immediately seek medical attention.*

**Warning:** Keep batteries out of the reach of children to prevent them from swallowing them by mistake. If swallowed by child, contact doctor immediately.



**Caution** NEVER attempt to recharge an alkaline battery. *Risk of explosion.*



**Caution** Do not mix old, new or different types of batteries as this may lead to battery leakage or low battery indication.

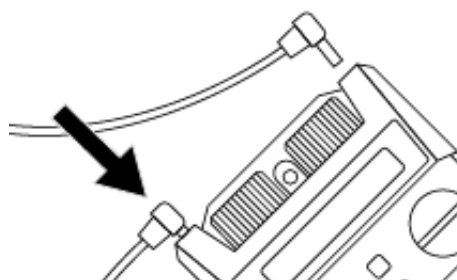
**Disposal:** Always dispose of batteries and device responsibly according to local government guidelines. Do not

*throw batteries onto a fire. Risk of explosion.*

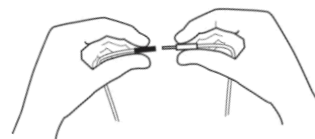


## 11.2. CONNECTING LEAD WIRES

You can choose to use one or two lead wires (two or four electrode pads). **Insert the lead wire plug(s) into the socket(s) on the top of the unit.**



**Attaching the electrode pads to the lead wire.**



Push the pin ends firmly into the pigtail ends of the electrode pads.

The lead wires may be damaged by rough handling, and should be treated with care.

### Lead wire colour coding

The ends of the lead wires are coloured black or red. This coding is provided for some professional uses. For most purposes, the orientation makes no difference, and you can ignore this colour coding.



### 11.3. PREPARING FOR SESSION

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- 1) Before use make sure your skin is clean and dry.
- 2) Place the electrode pads on the skin, see section 8.
- 3) You can use your TENS for several hours, you can attach the unit to your belt using the belt clip.
- 4) You can safely lean on the electrode pads. The sensation might change.



**Warning:** Ensure the **TENS One** is switched OFF before applying the electrode pads on the skin.

### 11.4. TREATMENT SESSION

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- 1) To turn the unit ON, rotate one of the control knobs clockwise until you hear a click, the LED indicator will light up (green colour).  
When switched on for the first time, the **TENS One** will automatically select the mode **N**. Next time, it will automatically select the mode you were using the last time it was switched off.
- 2) You can select from the 3 preset modes. Details in section 7 will help you identify the best mode and parameters to suit you.
- 3) With the required mode and parameters selected, you can adjust the intensity of the stimulation with the two rotating control knobs on the top of the unit until you reach a comfortable level. The LCD display shows the strength of intensity used for each channel.



**Note:** If the sensation becomes uncomfortable, reduce the intensity.

### 11.5. AFTER YOUR TREATMENT SESSION

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When the timer reaches 0, the display will flash until the device is manually switched off.

- 1) To turn the unit **OFF**, rotate one of the control knobs anti-clockwise until you hear a click, the display will stop. Then remove the electrode pads from your skin by holding the pad itself and gently pulling. Be careful not to pull the wires as this may damage them.
- 2) Replace the electrode pads to their protective plastic shield and return them to the re-sealable plastic bag.



**Note:** When removing the electrode pads, **DO NOT PULL ON LEAD WIRES**.



## 12. CLEANING & STORAGE

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Clean the case and lead wires at least once a week by wiping with a damp cloth and a solution of mild soap and water. Wipe dry.

- **Do not** immerse your TENS machine in water.
- **Do not** use any other cleaning solution than soap and water.

### Storage life

- Storage life of an unopened pack of self-adhesive electrode pads is 2 years. This may be affected by very high temperatures or very low humidity.
- The unit has no fixed shelf life.

## 13. EMC

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Wireless communications equipment such as wireless home network devices, mobile phones, cordless telephones and their base stations, walkie-talkies can affect this equipment and should be kept at least a distance  $d = 3,3$  m away from the equipment.

(Note. As indicated in Table 6 of IEC 60601-1-2:2007 for ME EQUIPMENT, a typical cell phone with a maximum output power of 2 W yields  $d = 3,3$  m at an IMMUNITY LEVEL of 3 V/m).



**Note:** For hospital use, full EMC advice tables are available on request.

## 14. DISPOSAL OF WASTE ELECTRICAL AND ELECTRONIC PRODUCTS (WEEE)

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One of the provisions of the European Directive 2002/96/CE is that anything electrical or electronic should not be treated as domestic waste and simply thrown away. To remind you of this Directive all affected products are now being marked with a crossed-out wheellie bin symbol, as depicted below.

To comply with the Directive, you can return your old electro-therapy unit to us for disposal. Simply print a postage-paid PACKETPOST RETURNS label from our website [www.tenscare.co.uk](http://www.tenscare.co.uk), attach this to an envelope or padded bag with the unit enclosed, and post it back to us. Upon receipt, we will process your old device for components recovery and recycling to help conserve the world's resources and minimise adverse effects on the environment.



## 15. ACCESSORIES

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### Expected Service Life

- The machine will often last for more than 5 years, but is warrantied for 2 years. Accessories (lead wires, electrode pads, and batteries) are not covered by the warranty.
- Lead life depends greatly on use. Always handle the leads with care. We recommend to replace the lead



wires regularly (about every 6 months).

- Electrode pads should last 12 to 20 applications, depending on skin condition and humidity.
- Batteries should last at least 15 hours at 50 mA, 300  $\mu$ s, 50 Hz.

Replacement electrode pads, new batteries and lead wires are available from your supplier or distributor (see back cover for contact details), by mail order from TensCare, by telephone using a credit or debit card, or through the TensCare website.

The following replacement parts may be ordered from TensCare at [www.tenscare.co.uk](http://www.tenscare.co.uk) or +44(0) 1372 723434.

E-CM5050	Pack of 4 50x50 mm electrode pads
L-CPT	Lead wire
B-AA	1.5V AA batteries

## 16. WARRANTY

This warranty refers to the unit only. It does not cover, electrode pads, battery, or lead wires.

PRODUCT INFORMATION                      WARRANTY

This product is warranted to be free from manufacturing defects for 2 years from date of purchase.

This warranty is void if the product is modified or altered, is subject to misuse or abuse; damaged in transit; lack of responsible care; is dropped; if incorrect battery has been fitted; if the unit has been immersed in water; if damage occurs by reason of failure to follow the written instructions for use booklet enclosed; or if product repairs are carried out without authority from TensCare Ltd.

We will repair, or at our option replace free of charge, any parts necessary to correct material or workmanship, or replace the entire unit and return to you during the period of the warranty. Otherwise, we will quote for any repair which will be carried out on acceptance of our quotation. The benefits conferred by this warranty are in addition to all other rights and remedies in respect of the product, which the consumer has under the Consumer Protection Act 1987.

Our goods come with warranties that cannot be excluded under the UK consumer Law. You are entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality.

### **Before you send your unit for service**

Before sending in your unit for service, please take a few minutes to do the following:

Read your manual and make sure you follow all the instructions for use.



### **Returning your unit for service**

Should repair be needed within the warranty period, enclose the tear off section of the warranty card (see page 25) and your proof of purchase receipt. Please ensure all relevant details are completed before sending your unit in for service. Please ensure your contact details are still current and include a brief description of the problem you are experiencing together with your purchase receipt.

For hygiene reasons, please do not include used electrode pads. Send only the unit and lead wires.

### **Please return the unit and warranty card (see page 25) at your cost to:**

#### **TensCare Ltd**

PainAway House,  
9 Blenheim Road,  
Longmead Business Park,  
Epsom, Surrey  
KT19 9BE, UK

Should you require any further information please do not hesitate to contact us by calling our number:

+44 (0) 1372 723 434.



## 17. TROUBLESHOOTING

If your TENS machine is not working properly, please check the following:

Problem	Possible causes	Solution
<b>No display</b>	Flat batteries.	Replace batteries.
	Batteries inserted incorrectly.	Remove plastic wrap. Check + / - .
	Damaged springs in battery compartment.	Contact supplier.
<b>Low battery display</b>	Low batteries.	Replace batteries.
<b>No sensation</b>	Intensity is not strong enough.	Increase strength.
<b>No sensation and the display flashes</b>	Open circuit cut-out operating. Lead not connected to body or faulty/damaged.	Ensure machine is attached to your body correctly. Try using the second lead wire. Purchase replacement if necessary.
	(Lead wires can break at the bend where they leave the machine giving no, or intermittent, output).	
<b>Sudden change in sensation</b>	If you disconnect and re-connect a few minutes later, the signal will feel quite a lot stronger.	Always return strength to zero after disconnecting the leads or electrode pads.




If the above review has failed to resolve your problem, or to report unexpected operation or events, or to provide feedback call TensCare or your local supplier or distributor (address on back cover) for advice.

Contact TensCare customer service on +44 (0) 1372 723 434. Our staff are trained to assist you with most issues you may have experienced, without the need to send your product in for service.

European Medical Device Regulation requires that any serious incident that has occurred in relation to this device should be reported to the manufacturer and the competent authority in your country. This can be found at: <https://ec.europa.eu/docsroom/documents/3683/attachments/1/translations/en/renditions/pdf>

## 18. GENERAL SPECIFICATION



Waveform	Symmetrical biphasic or monophasic rectangular
Amplitude (over 500 Ohm load)	80 mA zero to peak +ve in 20 steps. +/- 10%
Output plug	Fully shielded: touch proof
Channels	Dual channel
Batteries	2 x AA alkaline (two AA batteries)
Weight	140 g without batteries
Dimensions	100 x 67 x 32 mm
Safety Classification	Internal power source. Designed for continuous use. No special moisture protection.
Environmental specifications:	
Operating:	Temperature range: 5 to 40°C Humidity: 15 to 93% RH non-condensing Atmospheric pressure: 70 kPa to 106 kPa
Storage:	Temperature range: -25 to +70°C Humidity: Up to 93% RH non-condensing
TYPE BF EQUIPMENT	 Equipment providing a degree of protection against electric shock, with isolated applied part.
	This symbol on the unit means "Refer to Instructions for use".
IP22	The unit is not water resistant, and should be protected from liquids.
	Complies with EU WEEE regulations



**Note:** The electrical specifications are nominal and subject to variation from the listed values due to normal production tolerances of at least 5%.



**Note:** At least 30min required for the device to warm / cool from the minimum / maximum storage temperature between uses until it is ready for intended use.