

# perfect TENS

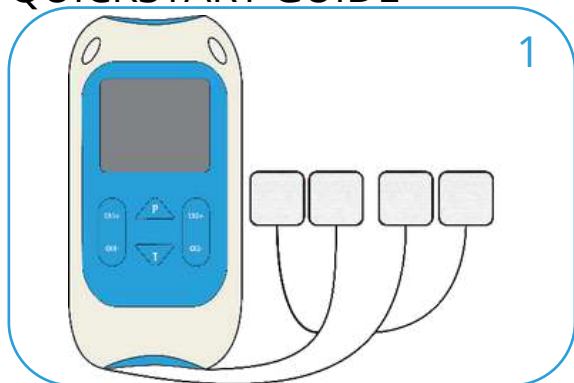


INSTRUCTIONS FOR USE

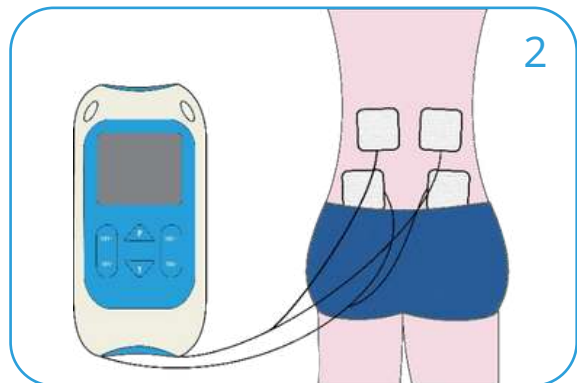
READ CAREFULLY BEFORE USE

**TensCare™**

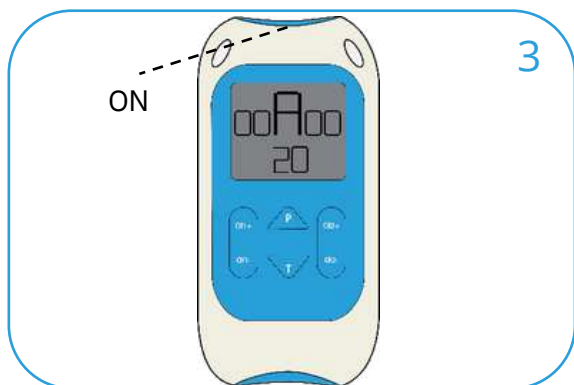
# QUICKSTART GUIDE



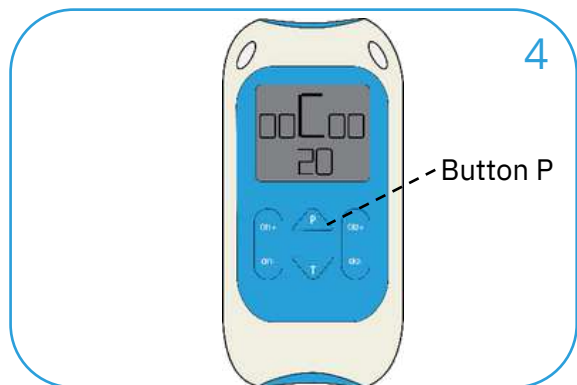
1  
Connect the unit with the electrode pads  
Conecte el dispositivo a los parches  
Connectez l'appareil aux électrodes  
Verbinden Sie das Gerät mit den Elektroden



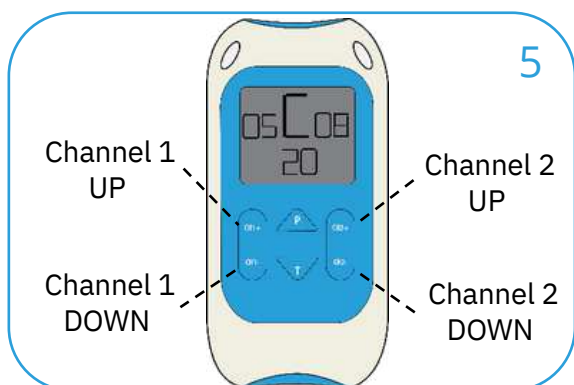
2  
Place the electrode pads around the area of pain  
Coloque los parches alrededor del área del dolor  
Placez les électrodes autour de la zone douloureuse  
Platzieren Sie die Elektroden um den Schmerzbereich



3  
Press and hold the ON button to switch the device on  
Presione y mantenga el botón ON para encenderlo  
Appuyez sur le bouton ON pour allumer l'appareil  
Halten Sie die ON-Taste gedrückt, um einzuschalten



4  
Select the programme by pressing the button P  
Seleccione el programa, pulsando el botón P  
Choisissez le programme avec le bouton P  
Wählen Sie ein Programm mit der P-Taste



5  
Regulate the output intensity for each channel  
Regule la intensidad en ambos canales  
Réglez l'intensité pour chaque canal  
Regulieren Sie die Intensität für jeden Kanal



6  
Press and hold the OFF button to switch the device off  
Presione y mantenga el botón OFF para apagarlo  
Appuyez sur le bouton OFF pour éteindre l'appareil  
Halten Sie die OFF-Taste gedrückt, um auszuschalten



Dear Customer,

Thank you for choosing perfect TENS. 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


















## Contents

1. INTRODUCTION .....	5
2. INTENDED USE .....	5
3. PERFECT TENS FEATURES .....	5
4. HOW “TENS” WORKS .....	6
5. CONTRAINDICATIONS, WARNINGS & CAUTIONS .....	7
6. INFORMATION ABOUT THE PROGRAMME SETTINGS .....	10
7. PROGRAMMES .....	11
7.1. PRESET PROGRAMMES .....	11
7.2. MANUAL PROGRAMME .....	12
7.3. PROGRAMME USAGE .....	13
8. ELECTRODE PADS .....	13
8.1. PAD POSITIONING .....	13
8.2. PAD ADVICE .....	14
9. CONTENT .....	14
10. UNIT INFORMATION .....	15
10.1. CONTROLS & DISPLAY .....	15
10.2. OPERATING INSTRUCTIONS .....	16
11. SETTING UP AND USING THE PERFECT TENS .....	18
11.1. INSTALLATION OF BATTERIES .....	18
11.2. CONNECTING LEAD WIRES .....	19
11.3. PREPARING FOR SESSION .....	19
11.4. TREATMENT SESSION .....	19
11.5. AFTER YOUR TREATMENT SESSION .....	20
12. CLEANING & STORAGE .....	20
13. EMC .....	20
14. DISPOSAL OF WASTE ELECTRICAL AND ELECTRONIC PRODUCTS (WEEE) .....	20
15. ACCESSORIES .....	21
16. WARRANTY .....	21
17. TROUBLESHOOTING .....	23
18. GENERAL SPECIFICATION .....	24



## 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.
<b>IP22</b>	This medical device is not water resistant and should be protected from liquids. The first number 2: Protected against access to hazardous parts with a finger, and the jointed test finger of 12 mm $\varnothing$ , 80 mm length, shall have adequate clearance from hazardous parts, and protected against solid foreign objects of 12.5 mm $\varnothing$ and greater. The second number 2: 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

Perfect TENS is specifically designed to provide safe and effective pain relief in the comfort of your own home. 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, 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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Perfect TENS is a medical device designed to be used in the home healthcare environment to provide safe and effective pain relief. The device can help manage pain from a wide range of conditions and 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. PERFECT TENS 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 60 small steps of intensity (1 mA per step).

### • 8 Preset Programmes

Including Burst, Constant and Modulation (frequency and strength) modes and a HAN Stimulation programme.

### • 1 Manual Programme

Additional programme that allows for all the parameters to be manually adjusted and saved to suit personal needs.

### • Memory

Features 3 functions: programme retention (automatically starts in the last programme used), number of uses and time of usage.

### • Open Circuit Detection

Automatically resets the strength to zero if the electrode pads are not correctly applied.

### • Automatic Keypad Lock

Automatic keypad locking prevents any accidental changes in settings.

### • Detachable Belt Clip

Enables the user to clip the unit onto a belt.

### • Large LCD Screen

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



**i** Note: The electrode pads need to be applied directly to the skin before the intensity increase buttons will operate. If the perfect TENS detects the unit is not properly connected to you (for example if the electrode pads or leads come loose) then the unit switches the intensity to zero. This safety feature prevents any unpleasant changes in output.

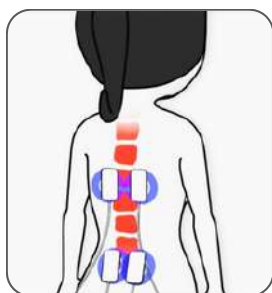
## 4. HOW “TENS” WORKS

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.

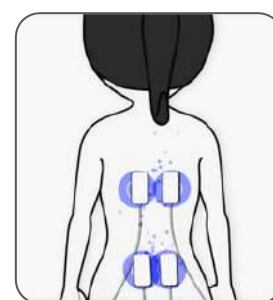


Evidence suggests that TENS produce pain relief in a similar way to ‘rubbing the pain better’. The pain gate can be closed by activation of mechanoreceptors through ‘rubbing the skin’.

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 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:



Contraindication A 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 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.*





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.*

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 Perfect TENS 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 Perfect TENS 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.



#### CAUTIONS:

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 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 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.*



Caution should be observed when using the perfect TENS at high strength settings. Prolonged use at high settings may cause muscle injury or tissue inflammation. The perfect TENS is capable of delivering outputs in excess of 10 mA (RMS) or 10 V averaged over any period of 1 sec. This is indicated by the yellow LED light on the output socket.

#### 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 (see E-696- SS).*

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.



Note: Electrode pads supplied have no measurable latex content.

#### 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, 0 to 93% R.H. Temperature & Relative Humidity of transportation: -25°C to +70°C, 0% 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.*



Note: There are no known side effect to TENS use and long-term TENS use is not harmful.

## 6. INFORMATION ABOUT THE PROGRAMME SETTINGS

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Each programme has its own combination of Frequency and Pulse Width settings 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  $\mu\text{s}$  - millionths of a second)

The perfect TENS unit has pulse widths of 50 to 250  $\mu\text{s}$ . 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 Modes

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. See programmes F and G.

- HAN Stimulation

Invented by Professor Han, it is an alternating mode or shifting between high and low frequencies; stimulation works at a high frequency and a relatively low pulse width; and a low



frequency and a relatively high pulse width. This is thought to produce a better analgesic effect and could be used to relieve both acute and chronic pain.

\* F - The user increases the strength to the desired level in the first 7 seconds. The strength drops down 90% over a period of 6 seconds and then gradually starts increasing again to the original setting over a period of 6 seconds.

\* G - The frequency starts at 2 Hz and after every 3 minutes' shifts to the next frequency setting. After 21 minutes, it returns back to 2 Hz and starts the cycle over again.

Note: Specifications are nominal and subject to variation from the listed values.

## 7. PROGRAMMES

Pr	Output	Frequency Hz	Pulse Width $\mu$ s
A	Constant	110	50
B	Constant	4	200
C	Burst	100 in 2Hz burst	200
D	Constant	10	200
E	Constant	110	200
F	Strength Modulated	110	200
G	Frequency Modulated	2-110 in 7 steps	200
H	HAN Alternating	100/2	100/200

## 7.1. PRESET PROGRAMMES

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.

Each user needs to select both the programme and the positioning of the electrode pads that is best for them. You may need to try a few positions/programmes before finding the one that suits you.

If you are using TENS for the first time, it is recommended that you start with programme A, which gives the gentlest stimulation.

The perfect TENS has 8 preset pain relief programmes.

**P** = Pain Gate. Gives relief when being used. Wears off after a few hours.  
**E** = Endorphin Release. Builds up over 40 mins. Lasts several hours after use.

### Programme A:

**P** - This is the gentlest programme. It is advisable to use for your first trial of TENS while you get used to the feeling which offers tingling/pins and needles sensation. Reduced pulse width is ideal for treating nerve rich areas (tension type headache, facial pain, neck pain, post herpetic neuralgia, migraine).

### Programme B:

**E** - This low frequency is also known as Acupuncture-Like. Use on acupuncture points. Pulsing or tapping sensation associated with muscle contractions. It

is suitable to be used for chronic pains such as back pain & arthritis, but not for injured muscles.

#### Programme C:

P + E – This programme combines P and E, and is thought to be the most effective for radiating pain in arms and legs and deep muscular pain (Osteoarthritic pain in the knee, Sciatica central pain).

This programme uses high frequency in low frequency bursts. Some people find the changes in stimulation uncomfortable.

#### Programme

D: E – This programme provides soothing/relaxing effects and is ideal for treatment of nausea, travel and morning sickness; most successful with placing the electrode pads over the wrist (acupuncture point C6). See the instructions enclosed with the electrode pads.

#### Programme E:

P – Stronger, more penetrating version of programme A and a stronger feel. Could be used everywhere except very sensitive areas.

#### Programme F:

P – This programme continuously modulates the pulse width and gives a pleasant slow relaxing massage sensation. The continuous change helps prevent accommodation occurring.

#### Programme G:

P – This programme constantly varies the sensation, and is ideal for treating chronic pain over long period (example 5+ hours). Neck, shoulder, Elbow pain, Rheumatic pain, Lumbago, Hip pain, Osteoarthritic pain in the knee.

#### Programme H:

P + E – This programme alternates between low and high frequency every 3 seconds and gives 3 seconds of tapping, followed by 3 seconds of tingling sensation. The effective pain relief is provided by a combination of P and E. Some people find the changes in stimulation uncomfortable.

## 7.2. MANUAL PROGRAMME

#### Manual Programme M:

Surprisingly little research has been done on the importance of frequency.

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.

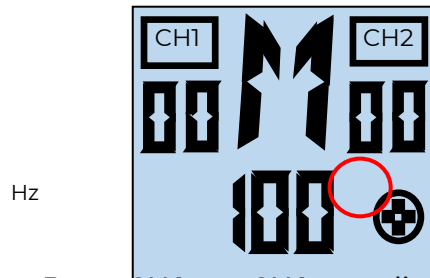
Many professional users believe that the response to TENS varies between individuals, and that you can get the best response by choosing the frequency that suits your nervous system the best. They suggest that you start at 80 Hz or 110 Hz, then try





different the frequency until you find one that gives you better pain relief.

- Press the P key until you reach programme M.
- Press the T key. The Hz symbol will flash next to the number at the bottom centre of the screen.



- Press CH1+ or CH1- to adjust the setting. You can select a frequency from 2 to 150 Hz.
- Press the T key again to save your change and advance to the next setting  $\mu$ s. You can select a pulse width from 50 to 250  $\mu$ s.
- Press the T key to select C or B.  
C = Constant B = Burst
- Finally, you can select the Treatment Timer. Continuous, 10, 20, 30, 40 or 60 minutes.
- Press T once more to return to start using.

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

### 7.3. PROGRAMME 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 20 and 40 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 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.

Perfect TENS resets strength to

zero

if the pad or lead is disconnected from your body. This is to prevent sudden changes in sensation when the pad is re-connected. See examples of the pad positioning in the instructions

Note: 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

The pack contains:

- 1 x Perfect TENS 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, press the

ON/OFF button on the top of the unit and hold for 3 to 5 seconds until the display shows.

To turn the unit OFF, press the ON/OFF button on the top of the unit and hold for 3 to 5 seconds until the display stops

The unit will turn OFF automatically:

- When the Timer reaches zero,
- If it is left at zero strength for more than 5 minutes.

The unit will start with the programme you used last.

At first use, or after changing batteries, the display shows that the unit is automatically set in Programme A at zero strength.

Note: Always check unit is



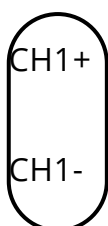
OFF before applying or removing electrode pads.

The backlight will turn off 10 seconds after the last button press.

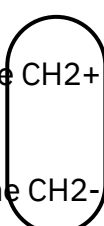
On the front of the unit there are six buttons:

### STRENGTH CONTROLS

The buttons marked , CH1+ and CH2+ are the strength controls.



The left-hand buttons change strength in the left-hand lead, CH1, and the right-hand buttons change the right-hand lead, CH2.



To increase strength in steps of 1 mA, press and release the top part of the two channel buttons, marked CH1+ and CH2+.

The strength levels are shown on the LCD. The strength control buttons will not operate until the unit is properly connected to you. Perfect TENS detects a disconnection and automatically returns the strength to zero.

The unit has 60 levels of strength. If you hold down the button for 3 to 5 seconds, the strength will start scrolling.

You may feel nothing over the first few presses. Continue pressing until the sensation is strong but comfortable. Further increases during use may be necessary if your body becomes used to the sensation.

To decrease the strength, press and release the lower part of the buttons marked CH1- and CH2-.

The yellow LED on the output socket indicates that there is an active output. The display will remain on for 5 seconds after the plug is removed.

### PROGRAMME CONTROL



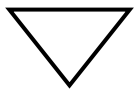
The button marked P is the P programme control. The perfect TENS has eight different, specially developed programmes lettered A to H, plus a manual programme M. When the unit is first switched on it automatically enters programme A.

Each time you press and release the P button, the programme changes and the letter is shown on the LCD.



Each time you change the programme, the strength level reverts back to zero. This is a safety feature to alleviate any sudden feeling of a surge, as each programme gives a different sensation.

### TREATMENT TIMER



The button marked T can be used to set the session duration and to select

manual parameters for adjustment.

When you switch the unit on, it is automatically set at Continuous, (displayed as C) in all programmes but B, C & H, which means that the unit will continue functioning until you switch it off.

When you press the T button, the clock symbol will flash.

You can set session times of 10, 20, 30, 40 or 60 minutes with the CH1+ and CH1- buttons.

Press T again to save your selection.

The LCD shows the session duration next to the clock symbol. The unit automatically counts down the minutes set and switches off when it reaches 0.

### LOW BATTERY



An empty battery symbol will show when you need to change the batteries. The unit will shut down about 2 minutes after this.

### KEYPAD LOCK



If you do not press any keys for 30 seconds, the keypad will lock so that only the keys marked CH1- or CH2- will work. This is to avoid accidental changes in setting.

To unlock, press either CH1- or CH2- keys.

### OPEN CIRCUIT CUTOUT

If the TENS is correctly connected to your body, the strength in the channel which is not properly connected will automatically reset to zero. This is to prevent sudden changes if a broken connection is re-made.

### MEMORY

The perfect TENS has a Memory with three functions:

1) Programme Retention. When you switch the unit on, it will automatically start in the programme which was being used when it was switched off.

2) Usage. Press T and CH2- together and hold down for 3 to 5 seconds. The display will show the number of times used and duration in hours used.

Press the same buttons again to return to normal controls.

3) Memory Reset. To reset memory to zero, hold down the T and CH1- buttons together for 3 to 5 seconds.





# 11. SETTING UP AND USING THE PERFECT TENS

## 11.1. INSTALLATION OF BATTERIES

1) Remove belt clip by sliding down.



2) Remove battery cover by pulling on tag.



3) 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 battery cover and belt clip.



When the batteries are running low, a low battery indicator will show on the screen and it is important to change the batteries as soon as possible.

### Rechargeable batteries

The unit will work with rechargeable batteries, but the display may appear dim.

Caution: Remove batteries from your perfect TENS 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 at 50 mA, 300  $\mu$ s, 50 Hz.

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.*

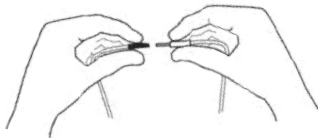
## 11.2. CONNECTING LEAD WIRES

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Insert the lead wire plug into the base 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 white 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 or hang it around your neck using a neck cord (not included). For safety, use thread or wool that will snap easily if the unit snags on something.
- 4) You can safely lean on the electrode pads. The sensation might change.



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

## 11.4. TREATMENT SESSION

---

- 1) Press and hold the ON button on the control unit for 3 to 5 seconds to switch the control unit on.

When switched on for the first time, the perfect TENS will automatically select the programme A. Next time, it will automatically select the programme you were using the last time it was switched off.

- 2) You can select from the 8 preset programmes or the manual programme. Details in section 7 will help you identify the best programme to suit you.
- 3) With the required programme selected, you can adjust the intensity of



the stimulation with the buttons CH1-, CH1+, CH2- and CH2+ 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, your treatment session is complete and the unit turns off.

1) Check that the control unit is OFF. If it is not, hold down the OFF button to switch off 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 wheelie 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

### 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
- E-696-SS Pack of 4 50x50 mm hypoallergenic electrode pads
- Lead wire
- 1.5 AA batteries
- X- BC-PT Replacement belt clip
- Replacement battery cover

## 16. WARRANTY

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

### PRODUCT WARRANTY INFORMATION

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
No display	Flat batteries. Replace batteries.	
	Batteries inserted incorrectly. Check +/-.	Remove plastic wrap.
	Damaged springs in battery compartment.	Contact supplier.
Low battery display	Low batteries. Replace batteries.	
No sensation Intensity is not strong enough. below 20.	Increase strength.	Most users will feel something at a setting
Output will not increase above zero	Open circuit cut-out operating correctly.	Ensure machine is attached to your body
Lead not connected to body or faulty/damaged.	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).		
Sudden change in sensation later, quite a lot stronger.	If you disconnect and reconnect a few minutes later, the signal will feel	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/36683/attachments/1/translations/en/renditions/pdf>



## 18. GENERAL SPECIFICATION



Waveform Asymmetrical Bi-Phasic	
Amplitude 60 mA zero to peak (over 500 Ohm load) +/- 10%	+ve in 60 steps.
Output plug Fully shielded:	touch proof
Channels Dual channel	
Batteries 2 x AA alkaline (two AA batteries)	
Weight 75 g without batteries	
Dimensions 120 x 60 x 20 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 providing a degree of protection against APPLIED PART 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.



PLEASE RETAIN THIS WARRANTY CARD.

RETURN THIS PORTION ONLY WHEN YOU RETURN YOUR PRODUCT FOR REPAIR UNDER WARRANTY.

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

POSTCODE: \_\_\_\_\_

DAYTIME TELEPHONE: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

MODEL: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

ATTACH PROOF OF PURCHASE

DO NOT SEND IN ELECTRODE PADS OR LEADS

RETAILERS NAME: \_\_\_\_\_

RETAILERS ADDRESS: \_\_\_\_\_

RETAILERS POSTCODE: \_\_\_\_\_

BRIEF DESCRIPTION OF PROBLEM YOU ARE EXPERIENCING: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WARRANTY IS VOID UNLESS THE ABOVE INFORMATION IS COMPLETED AND CORRECT.

Distributed by:



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