



# USER MANUAL

## TENS and Powered Muscle Stimulator

Please read the product introduction carefully  
before using the product

**Model TU2124-A**

Device Name: TENS and Powered Muscle Stimulator

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# 1. INTRODUCTION

## FOREWORD

TU2124 is a TENS and EMS machine which is highly effective in relieving pain, different programs suit different parts of the body and pain. Before using, please read all the instructions in this user manual carefully and keep it safe for future reference.

## HOW DOES IT WORK?

TENS - Transcutaneous Electrical Nerve Stimulations  
Transcutaneous Electrical Nerve Stimulations (TENS) are safe, non-invasive, drug-free methods of pain management. TENS is currently one of the most commonly used forms of electro-analgesia. The TENS device relieves pain by sending small electrical impulses through electrodes placed on the skin to underlying nerve fibers.

EMS- Electrical Muscle Stimulation, also known as powered muscle stimulator (PMS).

EMS is an electrically powered device that repeatedly contracts muscles by passing electrical currents through electrodes contacting the affected body area.

## **The intended uses include:**

### **TENS:**

- Temporary relief of pain associated with soreness.
- Aching muscles in shoulder, waist, back, neck and upper extremities (arm).
- Lower extremities (leg) pain caused by exercise strain.
- Lower extremities (leg) pain caused by normal household work activities.

### **EMS:**

- Improve or facilitate muscle performance.

## **STANDARD PACKAGE**

- TENS and Powered Muscle Stimulator\*1 pcs
- Pads\* 1 set
- Set of Lead Wires\*1 set
- USB Cable\*1 pcs
- User Manual\*1 pcs
- Clip\* 1pcs

## **FEATURES**

- 20 intensity levels
- 20-minute default timer, adjustable from 10-90 minutes or continuously
- Rechargeable lithium battery
- 2 outputs with 24 modes

## **WARNINGS:**

### **DO NOT USE THIS UNIT UNDER THESE CONDITIONS:**

Consult with your physician before using this unit. This unit may cause lethal rhythm disturbances in certain susceptible individuals. If you have had a surgery recently, the stimulation may disrupt the healing process. Before using your unit, inspect these things.

1. Cord is not broken.
2. Pad gel is not damaged.
3. Electrode cord connection is not broken.
4. Unit is intact and working.
5. There is no battery leakage.

### **DO NOT USE UNDER THE FOLLOWING CONDITIONS**

- Pregnant women.
- Do not use it on children or infants because the device has not been evaluated for pediatric use.
- Keep out of the reach of young children because the electrode cord could cause strangulation.
- Persons incapable of expressing their thoughts or intentions.

- Persons incapable of operating the unit by themselves.
- Use with caution if you have a tendency to bleed internally, such as following an injury or fracture.
- If you're suspected or diagnosed with heart disease, you should follow precautions recommended by your physician.
- If you're suspected or diagnosed with epilepsy, you should follow precautions recommended by your physician.
- Use with caution if stimulation is applied over the menstruating uterus.
- Use of accessories and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30cm (12 inches) to any part of the ME EQUIPMENT, including cables specified by the manufacturer. Otherwise, it may result in degradation of the performance of this

equipment.

- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



**DANGER:**

**NEVER APPLY THE PADS TO THESE BODY AREAS:**

- The head, the mouth, or any area of the face.
- The neck or any area of the throat because this could cause severe muscle spasms resulting in closure of the airway, difficulty in breathing, or adverse effects on heart rhythm or blood pressure.
- Do not use it near the heart, or on genital area.
- Both sides of the thorax simultaneously (lateral or front and back), or across your chest because the introduction of electrical current may cause rhythm disturbances which could be lethal.
- On the calves of both legs or across the left

and right limbs at the same time, because this may cause cardiac disturbance.

- Open wounds or rashes or over swollen, red, infected or inflamed areas or skin eruptions (such as varicose veins, phlebitis, thrombophlebitis and thrombosis), or on top of or close to cancerous lesions, or over areas of skin that lack normal sensation.
- Don't use the device if you use a high frequency surgical ME EQUIPMENT simultaneously. Such use may result in burns and possible damage to the device.
- Operation in close proximity (e.g.1m) to a shortwave or microwave the ME EQUIPMENT may produce instability in the device output.
- The application of electrodes near the thorax may increase the risk of cardiac fibrillation.

### **NOTICE:**

Caution should be used in the presence of the following:

- When there is a tendency to hemorrhage following acute trauma or fracture.
- Following recent surgical procedures when muscle contraction may disrupt the healing process.



- Over area of the skin which lack normal sensation.
- Some patients may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium. The irritation can usually be reduced by using an alternate conductive medium or alternate electrode placement.
- Electrode placement and stimulation settings should be conducted under the guidance of the prescribing practitioner.
- Do not attempt to move the electrode pads while the device is ON or operating.
- Any electrodes that have current densities exceeding  $2\text{mA}/\text{cm}^2$  may require special attention of the operator.
- Do not use the device around the heart, on the head, mouth, genitals or blemished skin areas, on the front of the neck, or from electrodes placed on the chest and the upper back or crossing over the heart.
- Use caution if the user has a tendency to bleed internally, such as following an injury or fracture.

## **DO NOT USE THIS UNIT DURING THESE ACTIVITIES**

- When in bath or shower;
- While sleeping;
- While driving, operating machinery, or during any activity in which electrical stimulation puts you at risk of injury.

## **PAIN MANAGEMENT WARNINGS**

- The long-term effects of chronic electrical stimulation are unknown.
- If you have had medical or physical treatment for your pain, consult with your physician before using this unit.
- If your pain does not improve, and becomes serious, chronic or severe, stop using the unit and consult with your physician.
- The mere existence of pain functions as a very important warning telling us that something is wrong. Therefore, if you suffer from any serious illness, consult your physician in order to confirm that it is advisable for you to use this Power Relief unit.
- The device is not a substitute for pain medications and other pain management therapies.
- The device is not effective for pain of central

origin (i.e. appendicitis, Hepatitis), including headache.

- The device is an asymptomatic treatment and, as such, suppresses the sensation of pain that would otherwise serve as a protective mechanism.

### **PRECAUTIONS REGARDING THE PADS**

- Do not move the pads to another location while the unit is on.
- Therapy won't work with just one pad. You **MUST USE TWO PADS** at the same time.
- Make sure the components are connected well and the pads are fixed on the part of the body you wish to treat or the therapy may not be effective.
- Pad should not touch any metal object, such as a belt buckle, necklace, or other metal worn under clothing.
- Do not overlap pads or put pads on top of each other. It may weaken or stop therapy, or the unit may stop working. Gel pads may also stick together and cause gel to be removed when separating.
- Do not share pads with another person. This may cause skin irritation or infection. Pads are

intended for one person to use only.

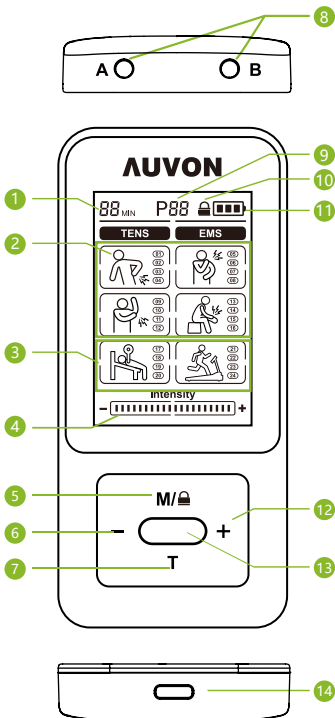
- Do not leave pads attached to the skin after treatment.
- Do not bend or fold because the gel may get damaged and it won't stick or function properly.
- To avoid damaging the adhesive surface of the pads, put the pads only on the skin or on the plastic pad film provided.
- Always place clean pads in accordance with illustrations provided.
- Do not apply ointment or any solvent to the pads or to your skin because it will disrupt the pads from functioning properly. The self-adhesive pads will adhere to your skin.
- Do not use it when the colloid attached to pads becomes less or dry.

## **CONTRAINDICATION:**

- Heart disease;
- Malignant tumor;
- Infectious disease;
- High fever;
- Abnormal blood pressure, coagulopathy or bleeding tendency;
- Spastic paralysis;
- Severe heart, liver and kidney failure;



- There is a spasm period after a cerebrovascular accident;
- Cognitive impairment, consciousness or unclear perception;
- Pregnant women;
- Patients wearing metal built-in devices such as cardiac pacemakers;
- Acute suppurative inflammation site;
- Skin damage or abnormal parts;
- Around the heart, around the head; Near carotid artery; Near the eye;
- Limb bone and joint contracture deformity;
- Abnormal nerve stress;
- Any condition requiring the active supervision of a physician.

## 2. ILLUSTRATIONS OF THE DEVICE AND ACCESSORIES






- ① Time indicator
- ② TENS modes (P1-P16)
- ③ EMS modes (P17-P24)
- ④ Intensity indicator
- ⑤ Master mode selection button/lock button
- ⑥ Intensity decrease button
- ⑦ Time selection button
- ⑧ Two output ports
- ⑨ Mode number indicator
- ⑩ Lock indicator
- ⑪ Battery indicator
- ⑫ Intensity increase button
- ⑬ On / Off switch button
- ⑭ USB port

## MODE DESCRIPTION

Program	Master Mode	Sub-Mode	You could feel
	TENS	P1	Continuous comfortable tingling.
		P2	Comfortable tingling and pulsing sensation.
		P3	Comfortable rhythmic tingling.
		P4	Continuous comfortable tingling.
		P5	Comfortable and slow tingling firstly, then the frequency is significantly increased, and it becomes a noticeable tingling sensation.
		P6	Low frequency beating with a slight tingling sensation.
		P7	Low frequency slight beating firstly and then continuous comfortable tingling.
		P8	Low frequency slight beating firstly and then comfortable pulsing sensation.



	TENS	P9	Comfortable tingling from shallow to deep with 3-4 seconds pause.
		P10	Comfortable pulsing sensation from shallow to deep with 3-4 seconds pause.
		P11	Variable comfortable tingling, slight beating and Scraping sensation.
		P12	Comfortable slight tingling from shallow to deep with 3-4 seconds pause.
	P13	Comfortable tingling and pulsing sensation from shallow to more deep with 3-4 seconds pause.	
	P14	Rhythmic continuous beating.	
	P15	Rhythmic Scraping sensation.	
	P16	Quick slight beating first, then comfortable tingling.	

	EMS	P17	Low frequency slight beating.
		P18	Low frequency beating.
		P19	Beating from low frequency to a little high frequency.
		P20	Muscle twitches at a very low frequency. It feels like a tapping massage.



EMS

P21

This program activates the muscle in a short tingling cycle. It is smoother than P1/P2.

P22

This program gently warms up the muscles prior to exercise; it feels like a rhythmic massage. Increase intensity until you get a strong but comfortable muscle movement.

P23

This program uses a pulse frequency appropriate to fast twitching muscle fibers. It improves their anaerobic capacity and is used for improving maximum muscle strength.

P24

This program gently warms up the muscles prior to exercise; it feels like a rhythmic beating and comfortable tingling. Increase intensity until you get a strong but comfortable muscle movement.

## OPERATING INSTRUCTIONS

### BEFORE USE:

1. Do not use this device during charging (fully charged in 3-4 hours). It is normal that it cannot be turned on while charging.
2. When the device is in no-output status, it will automatically shut down if there is no further action within 5 minutes.

### HOW TO USE

1. Clean your skin before use. Use the pads on clean and flat areas, no sweat and no oil.
2. Attach one pair or two pairs of the electrode pads to the massager area, such as the shoulder and leg.

**Note:** If the stickiness is not good enough after a period of use, please try to add a few drops of water on the pads and dry the pads naturally. It can increase their longevity. Make sure both pads on the skin do not overlap.

3. Connect a pair of electrode pads to one lead wire, and the other end of the wire should be connected to one of the two output ports of the device. Similarly, the other pair of electrode pads should be connected to the other output port of the device through the remaining wire.

4. Turn on the device by pressing the center button of the unit for 1-3 seconds.
5. Choose the mode by pressing “ **M/🔒** ”
6. Press the “+” or “-” button to increase or decrease the intensity.
7. Recommended application is 10-90 minutes or continuous mode. Increase 10 minutes by pressing the “T” button on the device. The remaining time will automatically count down and it will turn off until the time finishes.

**Note:** When the time is set in continuous mode and the channel has output, the massage mode will continue to cycle until the battery is exhausted unless it is manually turned off. If the channel has no output and no operation, the machine will automatically shut down within 5 minutes.

8. Press and hold the “ **M/🔒** ” button for 3 seconds to lock/unlock the screen. Once the machine is locked, the intensity, mode and time could not be changed.

### **AFTER USE**

1. Turn off the device by pressing and holding the CENTER button of the unit for 3 seconds.
2. Remove the lead wire pin from the electrode connector by gently twisting and pulling it out.
3. Lift a corner of the electrode and slowly peel it

away. Avoid touching the gel as much as possible.

**4. DO NOT peel the electrode off by the wire.**

5. Place the electrodes back to the storage film, and reseal them tightly with a zip bag to prevent dry-out. Store them at room or cool temperature and keep out of direct sunlight.

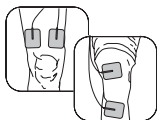
**CHARGING THE BATTERY**

1. Turn off the controller.
2. Connect the controller and the charger (not included) with a USB extension cord. Plug the charger (not included) into any power outlet. The charging process will last approximately 3-4 hours.

Note:

1. Only charge the controller when the battery is completely drained the first 2 times. Do not use the controller when charging.
2. Unplug the charger (not included) from the power outlet when the charging is completed.
3. When the massage intensity drops, it indicates that the device needs to be charged.
4. Recharge it and then continue to use the device.

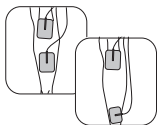
### 3. PLACEMENT OF ELECTRODES



#### **KNEE**

Modes 1,3,7,8,11,14,17,21

Attach both pads above the knee or above and below joint with pain.

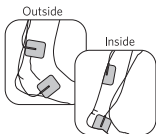


#### **CALF**

Modes 1,2,3,4,7,8,9,10,11,14,17, 18,19,21,22,23,24

Attach both pads on the calf/ leg where you feel pain.

(Do not place electrode pads simultaneously to the calves of both legs.)

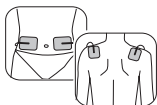


#### **ANKLE/FOOT**

Modes 1,4,11,19,21

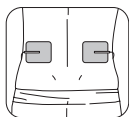
Attach pads per the illustration, on the left/ on the outside of your ankle/foot for pain.

Attach the pads per illustration on the right/ on the other side of your ankle/ foot.



## **WALST/SHOULDER**

Modes 1-4,6-10,12,14,16-24



## **LOWER BACK**

Modes 1-8,11,14-19,21-24



## **SCIATIC**

Modes 1,3,4,5,6,11,14,17,21,23



## **DELTOID**

Modes 2,3,4,11,14,17,22

Attach one pad in front and one in back of the muscle.



## **UPPER ARM & THIGH**

Modes 1-5,6-24

Attach both pads on either side of the area with pain.



## 4. TROUBLESHOOTING

If your device works improperly, please check below for common problems and the corresponding suggested solutions. If the recommended action does not solve your problem, please contact the seller.

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
One pad feels stronger than the other.	This is normal. Different areas of your body will react differently.	Nothing needs to be done. Make sure the pads are moist and make good contact.
The skin turns red or the skin feels irritated.	The adhesive on the surface of the pads is dirty or dry.	Wash adhesive the surface of pads gently with your fingertips for about 3 seconds under slow running water.
	The therapy time is too long or the intensity is set too high.	Reduce the application time or reduce the intensity.
	The electrode pad surface is worn out .	Replace electrode pad.

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
The intensity is not felt with a very weak intensity level.	Pads are not attached to the body firmly.	Attach both pads firmly to the skin.
	The transparent films are still stuck to the pads.	Peel off film on the adhesive surface of pads.
	The pads stack together or overlap.	Do not stick pads together or overlap pads.
	The cord is not properly connected to the unit.	Connect cord correctly into the jack.
	The intensity of the setting is getting weak.	Increase the intensity level.
	The battery capacity is low.	Charge the battery.
No power source; no display on LCD.	The battery is drained.	Charge the battery.

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
It is difficult to attach the pad to the skin.	Did not remove the transparent film from the pad.	Peel off film on the adhesive surface of pads.
	Apply the pads immediately after cleaning them.	Dry the pad.
	The adhesive on the surface of the pad is damaged.	Replace the pad.
Power cuts off during use.	The battery is weak.	Charge the battery.
	The cord is broken.	Replace the cord.
Could not turn on the device.	The unit is charging.	Stop charging the unit and try to turn it again.

Problem	Possible Cause	Solution
Adhesive on the surface of pads is not sticky.	Pads get deteriorative.	Contact the vendor for replacements.
	The pads were stored under high temperature, high humidity, or direct sunshine.	Replace the pad.

If you feel the intensity changes suddenly and dramatically:

### Possible Cause

1). Different areas of your body will react differently. When at a lower intensity, you may not feel the intensity at first. If you continue to increase the intensity rapidly, it may cause the strength to increase suddenly and become unbearable.

**Solution:** It is recommended that for each increase in the intensity level, feel for 1-2 minutes and then slowly increase the intensity per the situation.

2). Each mode is different.

If the frequency or intensity of the mode increases significantly from a lower level during the middle or later stages of the massage, further increases in

intensity may be unbearable.

**Solution:** Be careful to increase the intensity when you feel a significant increase in frequency or intensity in the middle and later stages. If you have a slight discomfort, do not continue to increase the intensity.

## 5. CLEAN AND MAINTENANCE

### Clean:

Clean the device with a small amount of water or neutral detergent firstly, and then wipe it again with a dry cloth.

### Note:

1. The host device shouldn't get wet to avoid damaging the device or reducing the safety and performance of the device.
2. Please do not clean or maintain the device when it is working.
3. The host device should be cleaned with a soft cloth dampened with a small amount of water at least once a month.

### Maintenance:

1. When you've finished using the device, turn it off and take off the pads. Store the unit in a cool, dry place for next use.
2. After use, please cover the pads with the protective film and put them back in their zip lock bags.







**NOTE: Reseal tightly can prevent dry-out and increase their longevity.**

3. Charge the unit at least every 3 months in case it is not used regularly. You can also charge the unit directly from your computer with the USB cable.

## **6. DISPOSAL METHOD**

1. Please do not open the device enclosure, only the personnel authorized by the manufacturer can maintain it.
2. When the accessories of the device are damaged or fail, only the personnel authorized by the manufacturer can replace the accessories.
3. Dispose of battery properly; following any applicable local battery disposal laws.
4. Dispose of device properly; following any applicable local device disposal laws.


## 7. SYMBOLS

	Date of manufacture
	Enclosure protection degree
	Afraid of rain
	Manufacturer information
	No throwing into the trash cans
	Serial number

## 8. CUSTOMER SERVICE

 24-Month Limited Warranty

 Lifetime Technical Support

 +1(678)829-7256

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AUVON-US-TU2124-A-sms-v1.2-220518-70×120mm.