



GIMA

PROFESSIONAL MEDICAL PRODUCTS

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TENS 30 PROGRAMMI - 4 CANALI TENS 30 PROGRAMMES - 4 CHANNELS TENS 30 PROGRAMMES - 4 CANAUX TENS 30 PROGRAMAS - 4 CANALES TENS 30 PROGRAMAS - 4 CANAIS

Manuale d'uso - User manual - Manuel de l'utilisateur
Guía de Uso - Guia para utilização



ATTENZIONE: Gli operatori devono leggere e capire completamente questo manuale prima di utilizzare il prodotto.

ATTENTION: The operators must carefully read and completely understand the present manual before using the product.

AVIS: Les opérateurs doivent lire et bien comprendre ce manuel avant d'utiliser le produit.

ATENCIÓN: Los operadores tienen que leer y entender completamente este manual antes de utilizar el producto.

ATENÇÃO: Os operadores devem ler e entender completamente este manual antes de usar o produto.

REF

28365 / AD-2040



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No. 3 JinPing, YaAn Road, Nankai District, Tianjin 300190, China
Made in P.R.C.

CE0197

EC REP

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EXPLANATION OF EMS

Principle of Electrical Muscle Stimulator

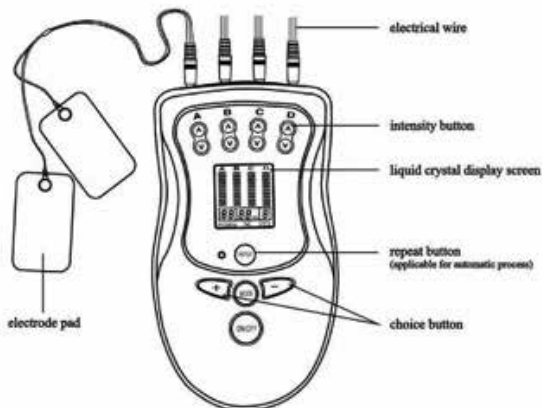
This Electrical Muscle Stimulator has two main functions:

Firstly, to help develop muscle and to improve or consolidate the overall appearance of body, meanwhile to stimulate and to strengthen muscle, thereby enhance your exercise program.

Secondly, to alleviate, remove, and therapy the pain, such as joint pain, muscle pain, and spasm, sprain, cramp and so on.

This machine through the certain frequency and wave pattern can stimulate and massage your muscles to contract and to relax. When the muscle contract as a result of the localized electronic Stimulation, the chemical change taking place within the muscle are very similar to those that occur as a reaction to contraction either through active exercise or through passive Electrical Muscle Stimulator, utilize glycogen, fat and other nutrient stored in the muscle and enable an individual to tone, strengthen and shape muscle, finally to develop strength, endurance and enable an individual to tone, strengthen and shape muscle, finally to develop strength, mediator is of major significance the potassium and histamine released after cells are destroyed, the bradykinin and slow bradykinin formed when protein is dissolving. The "p" material as well as 5-hydroxytryptophane and acid metabolite released when the nervous system is enhanced, these substances can be rapidly removed or diluted, as a result, pain can be removed or alleviated, and a longer time stimulation of certain frequency impulse current can also promote the releases of morphine-like peptide (such as endorphin and enkephalin), which has the function to ease pain and tranquilize the patient.

CONTENTS AND DISPLAY INDICATORS



INTENDED USE

- help to develop muscles of body and to improve the overall appearance of body.
- stimulate and strengthen the muscle, thereby enhance your exercise program.
- effective to alleviate the symptoms of cervical spondylosis, scapulohumeral periarthritis, arthritis, and lumbar muscle strain.
- promote blood circulation.
- remove fatigue.

CONTRAINDICATION

The device is safe for all people, with the following exceptions:

1. People with acute disease.
2. Cancer patients.
3. People with infectious skin wounds.
4. People who are in menstrual period or pregnant woman.
5. People with heart disease.
6. People with high fever.
7. People with abnormal blood pressure.
8. people with abnormal skins, for example no feeling skin.
9. People with abnormal feeling of their body except the above cases.
10. People who use the regulator of rhythm of the heart or artificial heart, pacemaker, ECG or ECG alarm and other embedded electronic medical equipment.
11. People who use the got-up machine breathing or life kept by the electronic medical appliances.

PRODUCT DESCRIPTION


The AD-2040 Electrical Muscle Stimulator is a battery operated pulse generator that sends electrical impulses through electrodes to the body and reaches the underlying nerves or muscle group. The device is provided with four controllable output channels, each independent of each other. An electrode pair can be connected to each output channel.

The electronics of the AD-2040 Electrical Muscle Stimulator create electrical impulses whose Intensity, Pulse Width and Pulse Rate may be altered with the switches to the different program.

The AD-2040 corresponds to the below standards:

IEC 60601-1:2005/EN 60601-1:2006/AC:2010 (Medical electrical equipment -- Part 1: General requirements for basic safety and essential performance).
EN 60601-1-2:2007 (Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance) - Collateral standard: Electromagnetic compatibility - Requirements and tests.

SPECIFICATIONS

1. Product name: Electrical Muscle Stimulator
2. Model: AD-2040
3. Number of treatment program: 30 programs
4. Pulse frequency: 2-2000Hz
5. Range of output voltage: 37V±20%
6. Classification: Internally powered, Type BF applied part, IPX0, No AP or APG, Continuous operation
7. Machine size: 169mm(L) x 96mm(W) x 37mm(H)
8. Weight: approx. 200g (exclude batteries ,electrode pads)
9. Power source: DC 6V 800mA, batteries: 4 × 1.5V  SIZE AA
10. Environmental temperature for operation: 10°C~40°C
11. Environmental humidity for operation: <85% RH
12. Environmental temperature for storage and transport: -5°C~50°C
13. Environmental humidity for storage and transport: <85% RH
14. Environmental pressure: 80KPa~105KPa
15. Battery life: Approx. 2 months with new alkaline batteries and 30-min. usage per day.

Note: These specifications are subject to change without notice.

NOTICE

1. Read all of the information in the operation guide and any other literature in the box before operating the unit.
2. When you feel unwell or your skin is abnormal in using the EMS, please stop using it immediately and ask for and follow the advice from the doctor.
3. Before you are to shift the electrode pad to the other position in using the apparatus, you must turn off the power first
4. Do not make any sharp kinks in the connecting leads or electrodes.
5. Do not use the device if you are connected to, or in the vicinity of, high-frequency surgical or industrial equipment. This may cause burn injuries on the skin under the electrodes, as well as problems with the stimulator.
6. Observe caution when using the device in the immediate vicinity of cellular phones that are switched on.
7. Please do not let children or persons who are incapable of expressing their own will use the EMS; Do not put it where it is easily reachable; Otherwise, it may lead to incident or make one feel unwell.
8. Please do not use the EMS in bathroom or other place in high humidity. Otherwise one may receive fierce stimulation.
9. Please do not use it when driving , Otherwise, it may lead to incident
10. Please do not it in sleep
11. In the process of stimulating and therapy, please do not get the metal part of leather belt, wristwatch or necklace touch the leaf electrode pads.
12. Please do not use it for other purpose than treatment.
13. The device might not meet its performance specifications or cause safety hazard if stored or used outside the specified temperature and humidity ranges in specifications.
14. Please do not use it at the heart, private parts or skin disease parts.
15. User who with implanted electronic equipment, such as pacemakers and intracardiac defibrillators has not got the doctor's advice must not use the device. Pregnant women should not use the device during the first trimester, and should always consult a doctor, midwife or physiotherapist prior to use.
16. Simultaneous connection of a PATIENT to a h.f. surgical EQUIPMENT may result in burns at the site of the STIMULATOR electrodes and possible damage to the STIMULATOR.
17. Operation in close proximity (e.g. 1 m) to a shortwave or microwave therapy EQUIPMENT may produce instability in the STIMULATOR output.
18. Medical AC adapter which output is DC 6.0V 800mA and complied with IEC 60601-1/EN 60601-1/UL 60601-1 and IEC 60601-1-2/EN 60601-1-2/UL 60601-1-2 is suitable for this monitor, such as FW7575M/EU/6/08 or (input: 100-240V~, 50/60Hz, 200mA; output: DC 6V, 800mA).













Please note that the monitor jack size: hole \varnothing 3.5mm, center pin \varnothing 1.1mm.

Please pay attention to polarity.

19. Application of electrodes near the thorax may increase the risk of cardiac fibrillation.
20. Please do not knock down, repair, and rebuild it privately.
21. Please do not use the electrode pads other than supplied by the manufacturer, otherwise it may bring biocompatible hazard and might result in measurement error.
22. Please do not share the electrode pads with other infective person to avoid cross-infection.
23. Do not use it with HF surgical equipment.
24. Do not use it in close proximity a shortwave or microwave therapy equipment.
25. The output wave parameters are not be influence by load resistance, except output voltage. When the value of load resistance increased, the output voltage will increase.
26. Avoid strong magnetism interference, such as mobile telephone, microwave oven, etc.
27. Information regarding potential electromagnetic or other interference between the electrical muscle stimulator and other devices together with advice regarding avoidance of such interference please see part ELECTROMAGNETIC COMPATIBILITY INFORMATION.


SETUP AND OPERATING PROCEDURES


1. Battery loading

- a. Open battery cover at the back of the machine.
Load four “AA” size batteries. Please pay attention to polarity. The polarity of the batteries should match the “+” or “-” signs inscribed in the battery housing
- b. Close the battery cover.
 -  Take out the dry batteries if the apparatus is not used for along time lest that liquid should flow out.
 -  Please do not mix use new and old dry batteries or different type of dry batteries.
 -  The batteries offered along with the apparatus are of the trial product used to identify the functions of the EMS. Their lifetime is probably no longer than 2 months.
 -  Please do not throw dry battery into fire.
 -   The machine, the batteries and the electrode pads, must be disposed of according to local regulations at the end of their usage.
 -  Avoid the battery fluid to get in your eyes. If it should get in your eyes, immediately rinse with plenty of clean water and contact a physician.
- c. If you use the AC adapter, please make sure the monitor turn off or no batteries. Put the connector plug of the adapter into the socket, Then plug the adapter to AC outlet. When disconnect the AC Adapter: Remove the AC Adapter from the electrical outlet;
Remove the AC Adapter plug from the monitor socket.
 -  Do not plug or unplug the power cord into the electrical outlet with wet hands.
 -  Do not overload power outlets. Plug the device into the appropriate outlet.
 -  If the AC adapter is abnormal, please change the adapter.
 -  Do not pull out the adapter when you are using the monitor!
 -  Do not use any other type of AC adapter as it may harm the monitor!

2. Attachment of electrode lead wires

- The wires provided with the AD-2040 insert into the jack sockets located on top of the device. Holding the insulated portion of the connector, push the plug end of the wire into one of the jacks; one or two sets of wires may be used.
- After connecting the wires to the stimulator, attach each wire to an electrode.
Use care when you plug and unplug the wires. Jerking the wire instead of holding the insulated connector body may cause wire breakage.
- Place the electrode on your body as directed by your physician.

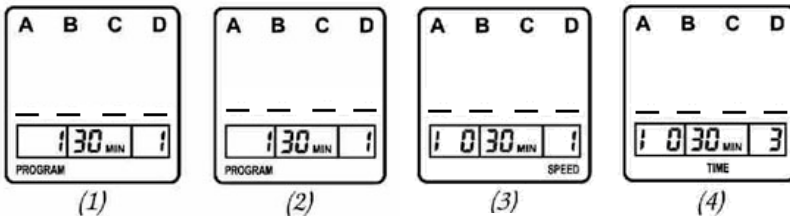
 Clean the wires by wiping with a damp cloth.

 Wires stay away from babies and children, prevent the winding neck causing suffocation and death.

3. Start

Press the  button, and backlight is light. LCD value initiated.
See picture 1.

Note: the backlight will be turn off automatically in 20 seconds after your last operation. And then press any button the backlight will be light again.)



4. Program, speed, time

Press the  button to chose the PROGRAM, SPEED , TIME function.

1 PROGRAM

See picture 2, when program display on the LCD, press + or – button, you can chose the different program, total 30 programs.

2 SPEED

See picture 3, when speed display on the LCD, press + or – button, you can chose the different speed, from 1-9total 9 degrees.

3 TIME

See picture 4, when time display on the LCD, press + or – button, you can chose the different time, from 1-99 total 99 minutes.

5. Intensity

Press the intensity button \triangle or ∇ button to respectively adjust intensity of A,B,C,D channel. Each channel has 0-10 intensity.

Note: when one of electrode pads of four channels doesn't stick properly on the part of body this channel intensity will be "0", and cannot be adjusted.)

REPEAT Button

When the program is one of them from 13-30, press REPEAT button, machine only repeat present program, simultaneously the backlight turn on automatically. Press the REPEAT button again, stop to the present repeat program, and keep on former program.

6. Program Indication for AD-2040 (backlight) Electrical Muscle Stimulator

First part: single frequency and wave pattern

Depend on your requirement to choose different program in order to stimulate, massage, and shape your body.

- P1. Relax:** Evacuation of toxin and improvement of blood flow and venous return.
- P2. Stretch:** To optimise the effect the voluntary technique of stretching, by means of a reduction of muscular tonus obtained by specific activation of the antagonist of the stretched muscle.
- P3. Thump:** Improve the nervine exciting of subcutaneous tissue.
- P4. Press:** Deepen and consolidate the nervine exciting of subcutaneous tissue.
- P5. Chop:** Increase antagonism of muscle.
- P6. Knead:** Relieve and ameliorate the tension of muscle.
- P7. Vibrate:** Improve the reflexion of the capillary vessel of the subcutaneous tissue.
- P8. Tighten:** Tighten the muscular fiber, and improve the muscle elasticity.
- P9. Acupuncture:** Improve the exciting of the deep cells and nerves, unblock the transmission of nerves.
- P10. Tap:** Improve reflexion of the muscle.
- P11. Strength:** Increase maximum strength increase rate of muscular contraction.
- P12. Bonny:** Increase the integumentary temperature, and accelerate integumentary blood circulation.

Second part: complex frequency and wave pattern

Depend on your requirement to choose different program in order to stimulate, massage, and shape your body.

- P13. Back:** Analgesic action through the releasing of endorphin, increase blood flow.

- P14. Waist:** With insufficiently used muscle stimulated, a reduction of muscular tonus is obtained by specific activation of the antagonist of the stretched muscle.
- P15. Arm:** Improvement of the contractile quality of insufficiently used muscle.
- P16. Shoulder:** Increase the supply of oxygen and blood to muscle; shape the muscle of shoulder and improve the harmonization between the bone and muscle of shoulder.
- P17. Leg:** Increase venous return. Increase supply of oxygen to muscle. Decrease muscular tension. Elimination of tendency to have cramp.
- P18. Chest:** Increase diameter and capacity of muscle fibers, and restoration of muscle volume in order to shape and strengthen the muscle.
- P19. Belly:** Stimulate the muscle, strengthen the contraction of muscle; expend the mass of fat in order to get more nutrition for muscle.
- P20. TENS:** Block transmission of pain by the nervous system, such as spasm and sprain, cramp of body after the action.
- P21. Calorie:** To increase the calorie expenditure.
- P22. Feet:** Increase the number of white blood cell, and improve its engulf function. Improve the resistance of inflammation in order to recover the energy of body, reconcile and improve the internal secretion system, increase capacity of subcutaneous capillary vessel, increase the supplying of blood.
- P23. Joint:** Improve the environment of articular cavity. Regulating the secretion of synovia. Recover the elasticity of ligament, simultaneous therapy injure of joint.
- P24. Reinforce:** Increase the strength of a muscle previously atrophied. Increase the strength of muscle affected by a pathological process. Shape the body appearance after through the practice and sculpting of muscle.
- P25. Face:** Unblock the blood vessel, reconcile the secretion of gland, and reduce the sediment of pigment, reduce wrinkle, and recover the elasticity of skin.
- P26. Sculpt:** To define and sculpt the body when the muscles are already firm.
- P27. Buttock:** Reduce and decompose the extra fat in order to shape a new appearance.
- P28. Explosive:** Increase the speed at which the level of strength is attained, improve efficiency of explosive action.
- P29. Phlegmon:** Protect the loose connective tissue and reduce the rate of infection, rebuild this area of tissue.
- P30. Loosen:** After the intensive action loose your muscle, evacuation of toxin and improvement of blood flow and venous return, and recover your energy of body rapidly.

7. Usage Diagram

1 Back

Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program 1, 3, 7, 9, 11, 13, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.

Sticking Diagram

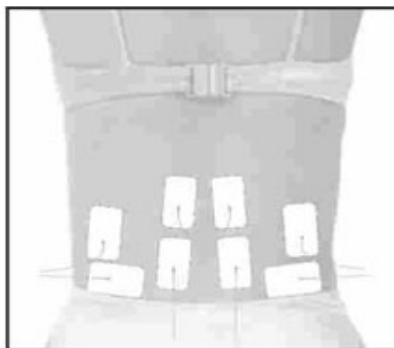


2 Waist

Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program 1, 2, 3, 9, 10, 12, 14, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.

Sticking Diagram

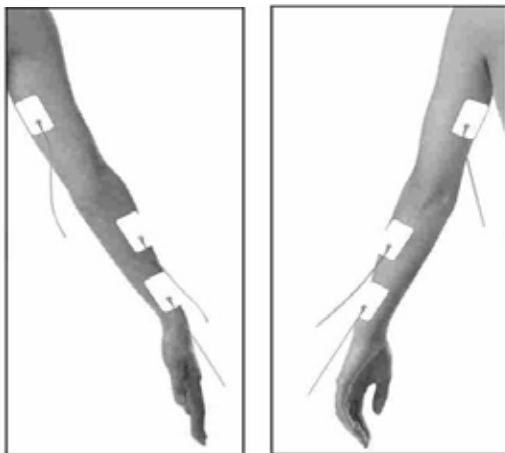


3 Arm

Examples for using the electrode pad of the Electrical Muscle Stimulator:

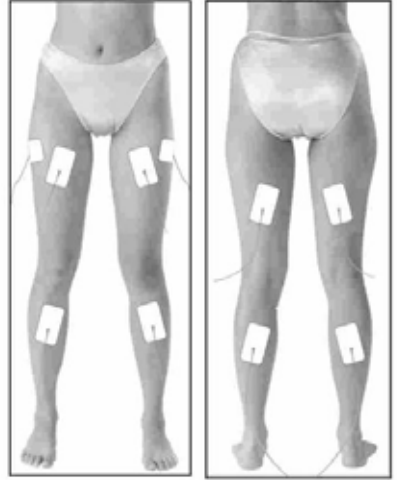
Suggest adopting program 1, 2, 3, 4, 5, 15, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.

Sticking Diagram



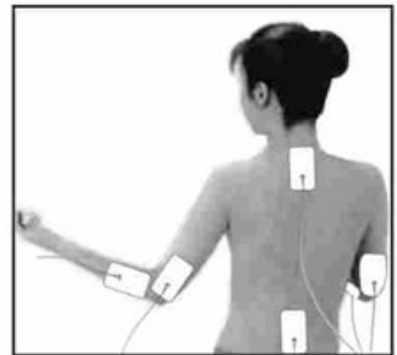
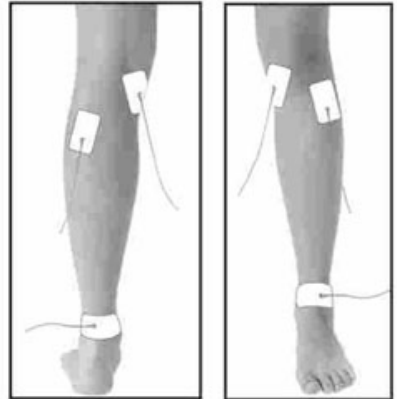
4 Leg

Examples for using the electrode pad of the Electrical Muscle Stimulator:
Suggest adopting program 1, 2, 3, 6, 7, 8, 17, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.
Sticking Diagram



5 Joint

Examples for using the electrode pad of the Electrical Muscle Stimulator:
Suggest adopting program 3, 4, 7, 22, 24, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.
Sticking Diagram

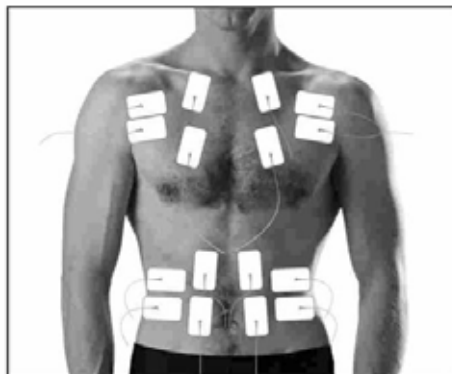


6 Chest

Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program

4, 5, 7, 18, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.



7 Belly

Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program

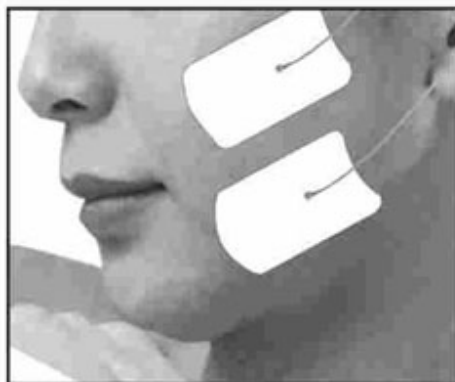
3, 4, 5, 7, 19, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect. Sticking Diagram

8 Faces

Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program

1, 4, 5, 7, 25, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect. Sticking Diagram



9 Shoulder

Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program

1, 2, 3, 9, 16, 21, 24, 26, 27, 28, 30 to stimulate, massage, and shape your body, simultaneous to get a curative effect.

Sticking Diagram



10 Adductor and Gluteus

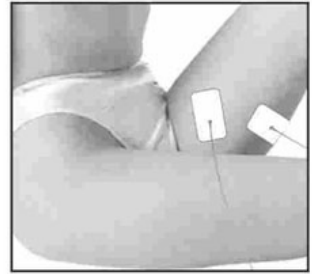
Examples for using the electrode pad of the Electrical Muscle Stimulator:

Suggest adopting program

1, 2, 3, 9, 21, 24, 26, 27, 28, 30

to stimulate, massage, and shape your body, simultaneous to get a curative effect.

Sticking Diagram



11 Feet

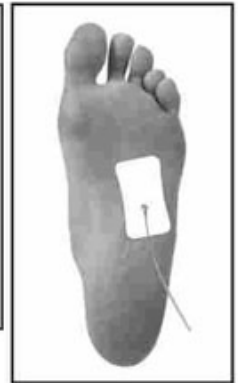
Examples for using the electrode pad of the Electrical Muscle Stimulator:


Suggest adopting program


2, 4, 6, 7, 22, 30 to stimulate,

massage, and shape your body, simultaneous to get a curative effect.

Sticking Diagram



 You should hold the plug when pulling it out. Please do not pull the wire.

 Please use clear water to wash or use wet cloth (instead of facial tissue) to gently wipe up the electrodes when cleaning them. Do not use brush or fingernail to do it lest that the surface of the electrodes should get scratched.

If you want to end the treatment, press the ON/OFF button to switch off the device.

PROBLEMS AND SOLUTIONS

Problem	Cause	Solution
You have no feeling of stimulus.	<ol style="list-style-type: none"> 1 Are the batteries exhausted? 2 Are the batteries properly loaded? 3 Is the wire properly connected? 4 Have you torn off the transparent protection film over the electrode pad? 	<ol style="list-style-type: none"> 1 Replace the batteries 2 Correctly load the batteries 3 Firmly connect the wire
Stimulus is weak.	<ol style="list-style-type: none"> 1 Do the electrode pads closely stick to the skin? 2 Are the electrode pads overlapped ? 3 Are the electrode pads dirty? 4 Is intensity too weak? 5 Are the electrode pads position proper? 	<ol style="list-style-type: none"> 1 Closely stick the electrode pad to the skin. 2 Separate the electrode pad and stick them to the skin again. 3 Please clean the electrode pad 4 Turn the intensity regulation dial to regulate it. 5 Change the position of the electrode pad.
<ol style="list-style-type: none"> 1 The skin becomes red. 2 You feel stabbing pain. 	<ol style="list-style-type: none"> 1 Is the therapeutic time too long? Are the electrode pads too dry? 2 Do the electrode pad closely stick to the skin? 3 Are the electrode pads dirty? 4 Are the surface of the electrode pads scratched? 	<ol style="list-style-type: none"> 1 Control it within 10-15 minutes a time. 2 Please gently wipe them up with wet cloth and then use them again. 3 Please closely stick the electrode pad to the skin. 4 Please clean the electrode pad. 5 Please replace them with new electrode pad.
<ol style="list-style-type: none"> 1 Power source is cut off in the therapeutic process. 	<ol style="list-style-type: none"> 1 Have the electrode pads come off the skin? 2 Are the wire disconnected? 3 Have the batteries been exhausted? 	<ol style="list-style-type: none"> 1 Turn off the power and stick the electrode pad firmly to the skin. 2 Turn off the power and connect the wire. 3 Please replace them with new ones.

Please stop using it!

If abnormal circumstance appears and the faults are unable to be solved, it is necessary to call the maintenance people of this company to check and repair it.

MAINTENANCE

General Precautions

1. Read all of the information in the operation guide and any other literature in the box before operating the unit.
2. If you feel uncomfortable or abnormal of skin, please stop using. Consult with doctors and follow doctor's advice.
3. Before you are to shift the electrode pad to the other position in using the apparatus, you must turn off the power first.
4. Please don't use it in the bathroom or other place with high humidity.
5. Please don't use it when driving or sleeping.

6. Do not make any sharp kinks in the connecting leads or electrodes.
7. Please don't use it for other purposes except treatment.
8. In the process of stimulating and therapy, please do not get the metal part of leather belt, wristwatch or necklace touch the leaf electrode pads.
9. Do not use the device if you are connected to, or in the vicinity of, high-frequency surgical or industrial equipment. This may cause burn injuries on the skin under the electrodes, as well as problems with the stimulator.
10. Observe caution when using the device in the immediate vicinity of cellular phones that are switched on.
11. Do not use the device in the direct vicinity of short-wave or microwave equipment, since this may affect the output power of the stimulator.
12. This TENS Device is designed for adults and should never be used on infants or young children. Consult your physician or other health care professionals before use on older children.
13. The device might not meet its performance specifications or cause safety hazard if stored or used outside the specified temperature and humidity ranges in specifications.
14. Please do not use it at the heart, private parts or skin disease parts.
15. User who with implanted electronic equipment, such as pacemakers and intracardiac defibrillators has not got the doctor's advice must not use the device. Pregnant women should not use the device during the first trimester, and should always consult a doctor, midwife or physiotherapist prior to use.
16. Simultaneous connection of a PATIENT to a h.f. surgical EQUIPMENT may result in burns at the site of the STIMULATOR electrodes and possible damage to the STIMULATOR.
17. Operation in close proximity (e.g. 1 m) to a shortwave or microwave therapy EQUIPMENT may produce instability in the STIMULATOR output.
18. Application of electrodes near the thorax may increase the risk of cardiac fibrillation.
19. Please do not knock down, repair, and rebuild it privately.
20. Please do not use the electrode pads other than supplied by the manufacturer, otherwise it may bring biocompatible hazard and might result in measurement error.
21. Please do not share the electrode pads with other infective person to avoid cross-infection.
22. Information regarding potential electromagnetic or other interference between the TENS Device and other devices together with advice regarding avoidance of such interference please see part ELECTROMAGNETIC COMPATIBILITY INFORMATION.
23. The therapy time should not be more than 30 minutes in each session if the electrode pads are on the same part of the body.

Cautions

- Be sure not to move the electrode pads to another part of your body without turning off the power first.
- Avoid contact of the electrode pads with anything made of metal, such as belts or necklaces.
- After using the device, please remove plug out of output socket and re-attach the pads to the protective transparent film.
- Do not twist or pull the output cables.
- Please do not use any chemical to clean the main unit or electrode pads. In case you need to clean them, please wipe with a damp cloth.

EXPLANATION OF SYMBOLS ON UNIT



Symbol for “THE OPERATION GUIDE MUST BE READ”
(The sign background colour: blue. The sign graphical symbol: white)



Symbol for “WARNING”(The sign background colour: yellow)



Symbol for “TYPE BF APPLIED PARTS”
(The electrode pad is type BF applied part)



ENVIRONMENT PROTECTION – Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local Authority or retailer for recycling advice.



Symbol for “MANUFACTURER”

CE 0197

Symbol for “COMPLIES WITH MDD93/42/EEC REQUIREMENTS”



Symbol for “DATE OF MANUFACTURE”

SN

Symbol for “SERIAL NUMBER”



Symbol for “KEEP DRY”



Symbol for “KEEP AWAY FROM SUNLIGHT”



Symbol for “EUROPEAN REPRESENTATION”

ELECTROMAGNETIC COMPATIBILITY INFORMATION

Table 1

For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture's declaration - electromagnetic emissions		
The AD-2040 is intended for use in the electromagnetic environment specified below. The customer or the user of the AD-2040 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The AD-2040 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The AD-2040 is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

Table 2

For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer's declaration - electromagnetic immunity			
The AD-2040 is intended for use in the electromagnetic environment specified below. The customer or the user of the AD-2040 should assure that it is used in such an environment.			
IMMUNITY test	IEC 60601test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Note: U_T is the a.c. mains voltage prior to application of the test level.

Table 3
For ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING


Guidance and manufacturer's declaration - electromagnetic immunity			
The AD-2040 is intended for use in the electromagnetic environment specified below. The customer or the user of the AD-2040 should assure that it is used in such an environment.			
IMMUNITY test	IEC 60601test level	Compliance level	Electromagnetic environment - guidance
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	<p>Portable and mobile RF communications equipment should be used no closer to any part of the AD-2040, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p> $d = 1.2 \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = 2.3 \sqrt{P} \quad 800 \text{ MHz to } 2,5 \text{ GHz}$ <p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the AD-2040 is used exceeds the applicable RF compliance level above, the AD-2040 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the AD-2040.</p> <p>b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V1] V/m.</p>			

Table 4
For ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and the AD-2040			
The AD-2040 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the AD-2040 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the AD-2040 as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2,5 GHz $d = 2.3 \sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be determined using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.



***Disposal:** The product must not be disposed of along with other domestic waste. The users must dispose of this equipment by bringing it to a specific recycling point for electric and electronic equipment. For further information on recycling points contact the local authorities, the local recycling center or the shop where the product was purchased. If the equipment is not disposed of correctly, fines or penalties may be applied in accordance with the national legislation and regulations.*

GIMA WARRANTY CONDITIONS

Congratulations for purchasing a GIMA product. This product meets high qualitative standards both as regards the material and the production. The warranty is valid for 12 months from the date of supply of GIMA. During the period of validity of the warranty, GIMA will repair and/or replace free of charge all the defected parts due to production reasons.

Labor costs and personnel traveling expenses and packaging not included. All components subject to wear are not included in the warranty.

The repair or replacement performed during the warranty period shall not extend the warranty. The warranty is void in the following cases: repairs performed by unauthorized personnel or with non-original spare parts, defects caused by negligence or incorrect use. GIMA cannot be held responsible for malfunctioning on electronic devices or software due to outside agents such as: voltage changes, electro-magnetic elds, radio interferences, etc.

The warranty is void if the above regulations are not observed and if the serial code (if available) has been removed, cancelled or changed.

The defected products must be returned only to the dealer the product was purchased from. Products sent to GIMA will be rejected.