GLOBUS

ELECTROSTIMULATORS

User Manual

PREMIUM 400

CE
0476

DEAR CUSTOMER

THANK YOU FOR CHOOSING A GLOBUS PRODUCT. WE REMAIN AT YOUR ENTIRE DISPOSAL FOR ANY ASSISTENCE OR ADVICE YOU MAY NEED

☐ **Premium 400**

The electrostimulators GL4 (Premium 400) are manufactured and distributed by:

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This product has been manufactured according to the technical regulations in force and is certified according to Directive 93/42/EEC updated by 2007/47 directive for medical devices, by CERMET Scrl (authorization n. 0476), in order to ensure the product safety.

Table of contents

TECHNICAL FEATURES

Device

Size:	160x99x35.4 mm
Weight:	404 g
Case:	in Food Grade ABS
Protection level:	IP 22
Storage and transportation temperature:	from -10°C to 45°C
Max. relative humidity:	30% - 75%

The values indicate the limits allowed if the product or its accessories are not in the original package.

Use conditions

Temperature:	from 0°C to 35°C
Max. relative humidity:	from 15% to 93%
Atmospheric pressure:	from 700 hPa to 1060 hPa

Technical features of the currents

EMS and TENS:

Channels available:	Channels 1-2-3-4
Constant current:	Yes
Intensity:	0-120 mA with 1000 Ohm load
Wave form:	Rectangular, biphasic, symmetrical, compensated
Working frequency:	0.3-150 Hz
Recovery frequency:	0.3-150 Hz
Pulse amplitude:	50-450 µs
Working time:	from 1 to 30 seconds
Recovery time:	from 0 to 1 minute
Frequency mod. range:	continuous variation from 1 to 150 Hz
Min. modulation time:	3 seconds
Amplitude modulation range:	continuous variation from 50 to 450 µseconds

Microcurrents:

Channels available:	Channels 1-3
Constant current:	Yes
Min. frequency:	5Hz
Max. frequency:	200Hz
Min. Intensity:	0 µA/1000 Ohm Step 10 µA

Max. Intensity:	800 µA/1000 Ohm
Amplitude value:	included between 1 and 250 µseconds

Ionophoresis:

Channels available:	Channel 1
Constant current:	Yes
Min. Intensity:	0 mA/1000 Ohm
Max. Intensity:	10 mA/1000 Ohm step 0.1 mA/1000 Ohm
Min. time:	1 minute
Max. time:	99 minutes

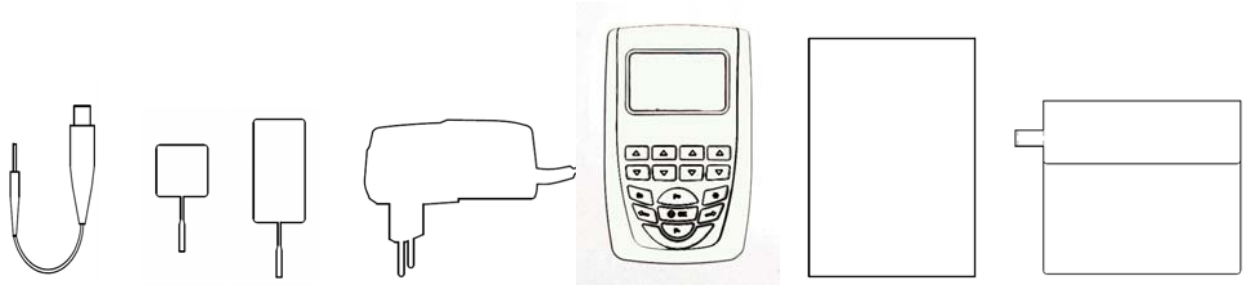
Charger

Brand:	FLO
model:	DKT-088-0200-EU
Input:	100-240V~ 50-60Hz 0, 2A
Output:	8,8 Vd.c. 0.2A
Polarity:	

Battery

Battery pack:	Ni-MH 7,2 V 1,8 Ah

EQUIPMENT



A-B C-D E F G H

The electrostimulator is supplied complete of cables and electrodes to use: therefore, opening the package, it is necessary to check that the basic equipment is complete. If some elements should be missing, contact immediately the authorized retailer where you purchased the product.

Control carefully the integrity of the device and its electrodes.

A. 4 colored electrode connection cables (for EMS and TENS treatments)
B. 2 gray cables for electrode connection (for MICROCURRENT and IONOFORESIS treatments)
C. A bag containing 4 reusable self-adhesive electrode (50 x 50 mm)
(Use these electrodes for small areas such as upper limbs, calves, cervical...)
D. A bag containing 4 reusable self-adhesive electrode (50 x 90 mm)
(Use these electrodes for big areas such as thighs, abdomen and glutei...)
E. Charger (See technical features)
F. GL4 Unit (Premium 400)
G. User manual and warranty
Carrying bag

All the supplied information can be modified without previous notice.
The device can be used with some optional accessories (it is possible to see their features on the website www.globuscorporation.com). If you are interested in buying these accessories, please contact the retailer.

Accessories not included (available on charge)

- Find Motor point pen
- Kit of 8 elastic bands for legs and thighs
- Kit of 4 elastic bands for thighs
- Electrodes for ionophoresis (60x85 mm)
- Face electrodes
- Kit Y cables

Fast band

- Fast pad
- Sonde anali e vaginali

INTENDED USE

The after sales service is guaranteed for 5 years. We suggest having a check of the device every 2 years for the maintenance and to ensure the safety. The numbers of treatments depends on the battery charge. The duration of the battery is 6 months, we suggest replacing it after that period.

The electrostimulators are designed to be used in the following operating environments:

- domestic environment;
- clinics;
- physiotherapy centers;
- rehabilitation centers;
- general pain treatments;
- beauty and sport purposes.

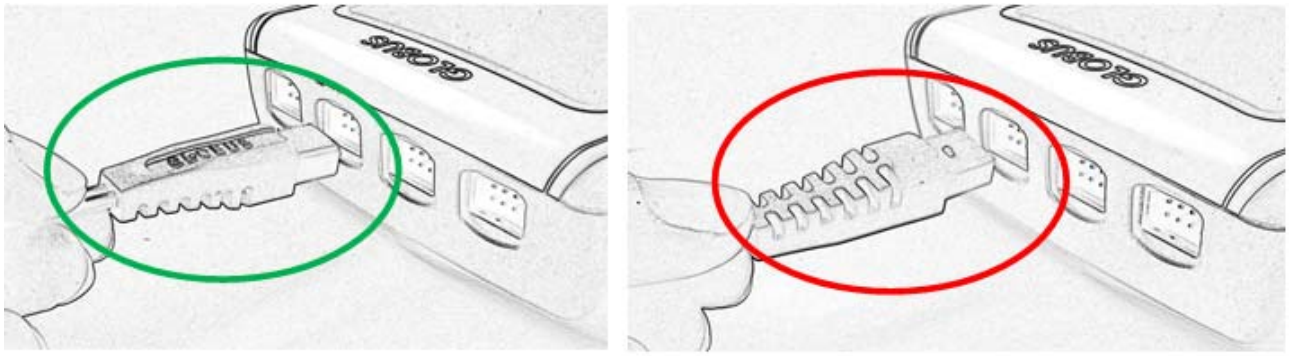
The use of this device is permitted to the patient (appropriately informed about the use conditions of the device) and to medical staff.

CONNECTIONS

Cable connection outlets and power supply

Attention:
If the package, the cable or the connector of the charger show signs of wear or damage, replace it instantly.

How to connect the cables



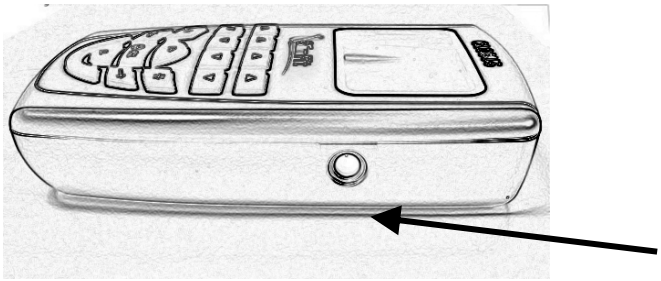
To connect the cables to the device, plug them in the intended inlets in the upper part of the unit (see picture). **Insert the cables with the grooves facing downwards.** The inlets are placed exactly under the corresponding channels.

NOTE: For EMS and TENS currents use indifferently the 4 channels with colored cables. For microcurrents use only channels 1 and 3. For ionophoresis use only channel 1.

Electrode application

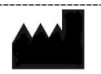
Take the electrodes from the original package; all new electrodes have a seal on the package. Be sure that the device is off. To start, connect the two cable plugs to the electrodes, then disconnect the electrodes from their position and apply them on the skin. To place the electrodes correctly, see the pictures included in this manual.
After the use, place the electrodes in their original position again.
ATTENTION: Do not unplug the electrodes if the unit is working.

Battery: how to charge the batteries



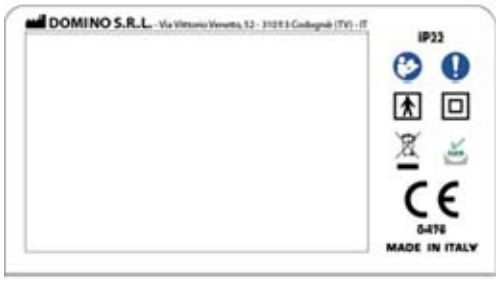
The device is supplied with a set of rechargeable nickel-metal hydrate batteries (7.2V, 1.5Ah), which have high performance without storage effect.
Recharge the batteries when the battery indicator on the display indicates ¼.
To charge the batteries, turn off the electrostimulator and disconnect the electrodes, then connect the elctrostimulator to the charger provided by inserting the plug in the appropriate inlet (see picture above).
Do not use a different charger from the one provided with the device. To replace the electrostimulator's batteries, contact the authorized service center.

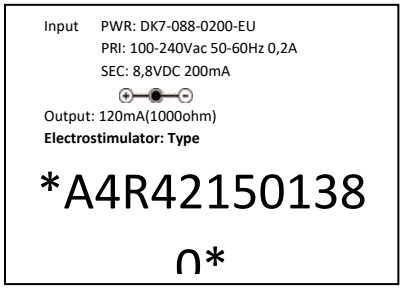
LABELLING AND SYMBOLS

	It refers to the manufacturer
	Warning
	This symbol on your device indicates that it complies with the directives on medical devices (93/42/CEE 47/2007CEE). The number of the notified unit is 0476.
	It indicates that this is a II class device.
	It indicates that this device has type BF parts.
	It indicates that the product has been produced respecting the directive 2011/65/EEC.
	WEEE symbol (Waste of Electrical and Electronic Equipment). Recycling symbol. The WEEE symbol used for this product indicates that the device may not be disposed of as a household product. Properly dispose of the product to help protect the environment. For more information on recycling this product, contact the local competent department, the household waste management company or the store in which the product was purchased.
	It indicates the optimal temperatures for the storage and transportation of the product.
	It informs the operator that before using the device he must read the manual.
IP22	It indicates the water protection degree
	It informs the operator of a compulsory conduct
	It refers to the pressure of the storage and transport environment where the device and its accessories are used

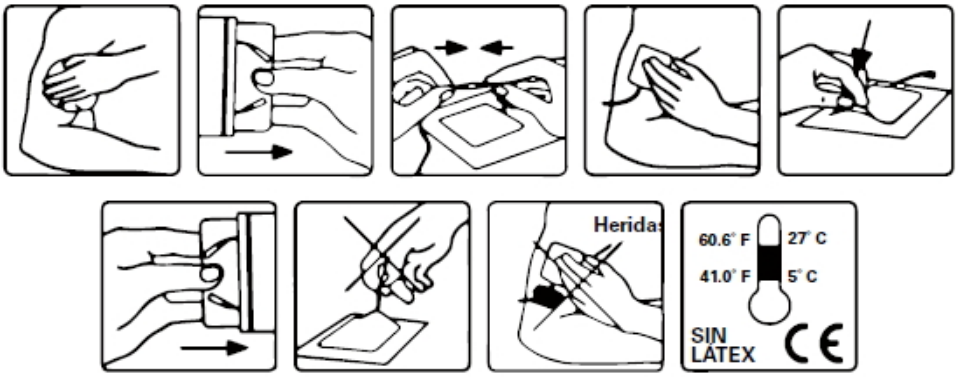
	It refers to the humidity of the storage and transport environment where the device and its accessories are used.
Output Power	It indicates the output power of the device
Input	Input: it indicates the value of the mains voltage for the power supply unit
Output	Output: - it indicates the power supply unit outbound voltage - it indicates the maximum power value of the magnetic field emitted by the device - it indicates the range of frequencies of the magnetic field emitted by the device"
Type	It indicates the device type
Power	It indicates the power supply unit model of the device
Battery	It indicates the battery pack inside the device
	It refers to the expiry date
	It refers to the production lot
	It refers to the manufacturing date
	Polythene symbol

Device



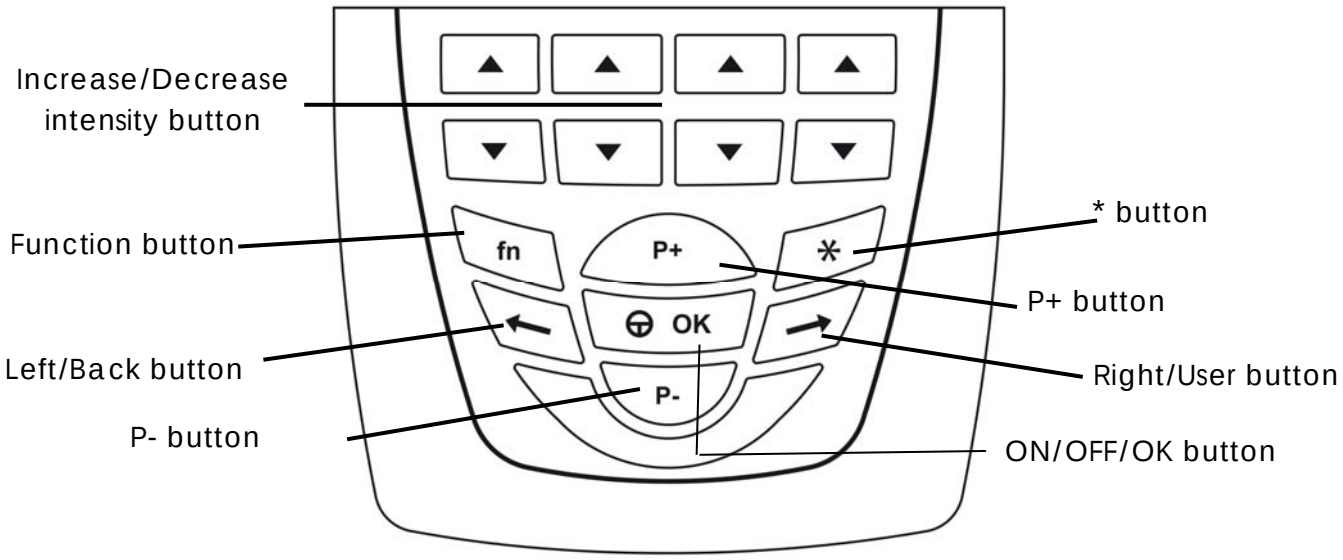


Electrodes



The electrodes supplied can be used on a single patient. They are self-adhesive, reusable and do not require gel. The electrode cable is female. The electrodes are labeled "CE" in compliance with Directive 93/42/EEC for medical devices. All the supplied information can be modified without previous notice.

PANEL AND KEYBOARD

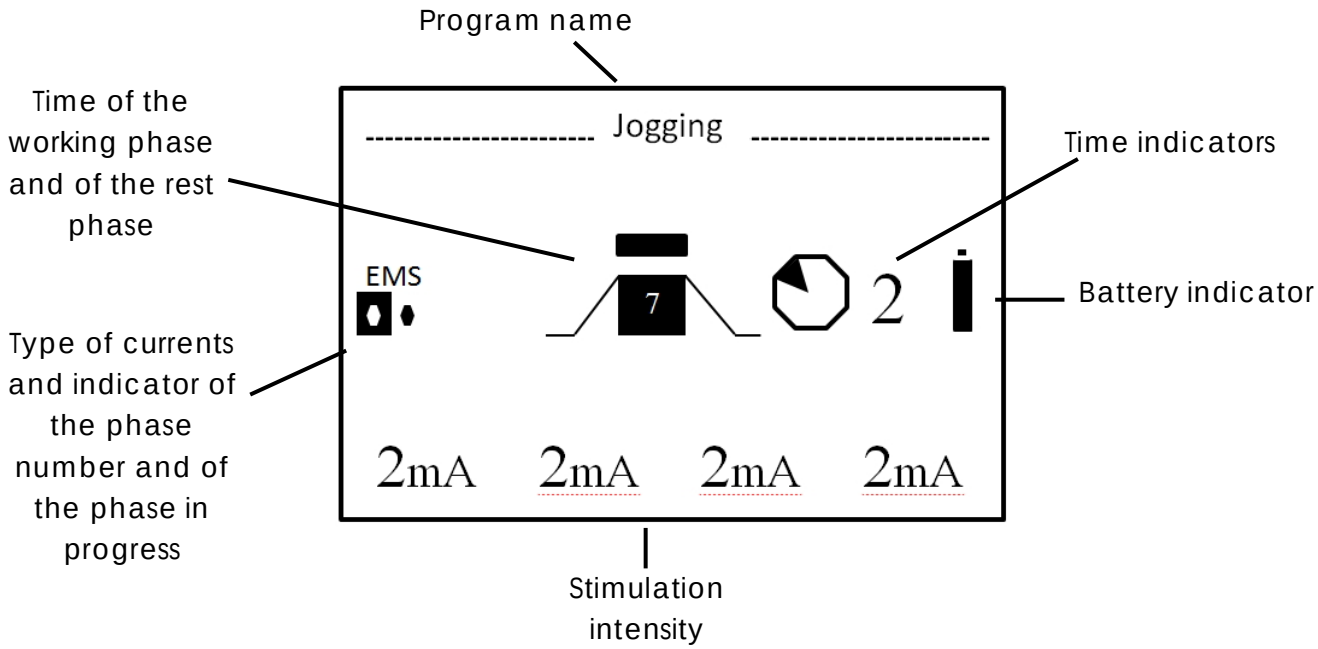


NOTE : When the 3" message appears, it means that pressing the button for 3 seconds the function is activated.

ON/OFF/OK Button	To confirm the selection. While a program is running, it activate the pause. *3"* = ON/OFF.
Left/BACK Button	To move the selection to the left. To go back to the previous selection. *3"* = While a program is running, it returns to the previous phase.
P+/SAVE Button	To move the selection upwards. While a program is running, it increments the intensity of the 4 channels simultaneously.
P-/DEL Button	To move the selection downwards. While a program is running, it decrements the 4 channels intensity simultaneously.
Right/USER Button	To move the selection to the right. 3" = While a program is running, it goes to the next phase.
*** Button**	To start and stop the contraction during the execution of the "Action Now" programs (in the devices that have these functions).
fn (Runtime)	Pressed together with other buttons, it modifies their function, while pressed alone during the stimulation, it permits to access to the Runtime function (to modify time, frequency and amplitude).

Intensity button To increase/decrease the stimulation intensity of the corresponding channel.

Display and interface



ALARMS

Compliance

Certifications: CE MDD certificate.
The sound and acoustic signals are in compliance with directive 60601-1-8.

Meaning of the “Electrode error” alarm

If one or more cables are not connected to the mains, or if microcurrents cables are used to an EMS program, on the display the following alarm will appear: "Electrode error"

WARNINGS AND CONTRAINDICATIONS

Mandatory behavior

For safety reasons, the device must be used in the prescribed manner and within the limits of use explained in this manual.
The manufacturer declines any responsibility due to a different use from what it is indicated in this manual.
No part of this manual (texts and photos) may be reproduced by electronic or mechanical manner without the prior written authorization of the manufacturer.
Do not carry out any treatments in case of skin lesions.
If the package, the cable or the connector of the charger show signs of wear or damage, replace it instantly.
The unit should be connected to the mains by its power supply unit. Before starting the treatment, make sure that the power system specifications comply with the directives in force within your country. Make sure that the power supply unit will be in a comfortable position and that it will be easy to be removed.

Warnings before use

We suggest avoiding the use of the device together with other electronic devices, especially with those used to maintain vital functions. For a correct use of the Electromedical device, refer to the tables attached. If it is necessary to use the device near or together with other devices, pay attention to its working.
- It is recommended to read carefully the entire operating manual before using the device; keep carefully this operating manual.
- The device can emit current value above 10mArms.
- Before each use always check the integrity of the unit. This is a fundamental requirement for carrying out therapies, do not use the unit if either the buttons or cables are defective or malfunctioning.
- It must be used only from people over 18 who are able to understand and take action.
- It should not be used for purposes other than transcutaneous neuromuscular stimulation.
- It must be used following the indications and under the physician or physiotherapist's control.
- It must be used with the supplied electrodes intended for transcutaneous neuromuscular stimulation.
- It must be kept out of the reach of children.
- ECG monitoring devices may not operate properly when electrostimulation is working.
- Do not use the device in transthoracic modality because it may cause cardiac arrhythmia, imposing its frequency over the heart one. Do not stimulate the pectoral and dorsal muscles simultaneously.

- If there is any health problem, it must be used only after seeing a doctor.
- A simultaneous connection of the patient to a high frequency electrosurgery device can cause burns where the electrodes are placed and the electrostimulator can result damaged.
-After turning on the device, make sure that in the display the software version and the model of the device appear, it means that the device is working and it is ready to be used.
If not, or in the display all the segments do not appear, turn it off and on again. If the problem persists, contact the service center and do not use the device.
- An unexpected switching-off of the device means that the battery has run-down. Charge it according to the instructions in the paragraph: how to charge the batteries.

Warnings during the use

While using the electrostimulator some warnings should be followed:
- In case of damaged cables, they must be replaced with original parts and no longer used.
- Use only Globus branded electrodes.
- Pay particular attention when the current density for every electrode is above 2mA/cm2 (effective value).
- The device must be kept out of the reach of any pet that could damage it and contaminate electrodes and other accessories with parasites.
- The cables of the electrostimulation should not be wrapped around people's neck to avoid any risk of strangulation and suffocation.
- The mobile and fixed radio communications devices could influence the functioning of the electromedical device: see the tables attached to this manual.
Preventative measures to take using the device for incontinence treatments.
- Patients with extra-urethral incontinence should not be treated with the electrostimulator.
- Patients suffering excessive incontinence due to evacuation problems should not be treated with the electrostimulator.
- Patients with severe urinary retention to the upper urinary passages should not be treated with the stimulator.
- Patients with total peripheral denervation of the pelvic floor should not be treated with the stimulator.
- Patients suffering of a total/subtotal prolapse of the uterus/vagina should be stimulated with extreme care.
- Patients with infections to the urinary passages should be treated for these symptoms before starting the stimulation treatment.
- Before removing or touching the probe it is necessary to turn off the stimulator or to regulate the intensity of both the channels on 0,0 mA.

- The treatment is a personalized medical prescription: do not borrow the stimulator to other persons.

Side effects

Isolated incidents of skin irritation may occur in subjects with high epidermal sensitiveness.
In case of an allergic reaction to the electrode gel, suspend the treatment and contact a specialist.
If during the treatment signs of tachycardia and extrasystole appear, suspend the treatment and contact your physician.

Contraindications

Do not use the device in the following cases:
- Stimulation of the front part of the neck (carotid sinus).
- Pacemaker weavers.
- Patients with tumor diseases (see your oncologist).
- Stimulation of the brain region.
- Pains whose etiology is unknown.
- Sores and dermatological diseases.
- Severe traumas.
- Stimulation on recent scars.
- Pregnancy.
- It is strictly forbidden to use the electrostimulator in the ocular area.
- Near body areas with metallic implants or infratissue metals (prostheses, osteosynthetic devices, coils, screws, orthopedic plates), when using monophasic current, interferential, or continuous current, ionophoresis.

It is recommended to use the device with caution in people with capillary fragility, as an excessive stimulation could cause capillary ruptures.

MAINTENANCE AND CLEANING

Device

- In case of damaged case, this should be replaced and no longer used.
- In case of real or alleged malfunction, do not tamper with the device or try to repair it yourself.
- Do not intervene on the device and do not open it. Only specialized and authorized centers can repair it.
- Avoid violent impacts that may cause damage and malfunctions to the device even if undetectable immediately.
- Use this device in a dry environment and in an open space (not wrapped in any materials).
- Clean the device and accessories only with disinfectant with sodium hypochlorite or quaternary ammonium salt diluted with distilled water equal to 0.2-0.3%. After cleaning/disinfecting it, dry the device and its accessories with a clean cloth.
- It is recommended to clean/disinfect the parts after every use.
- Always use the device and its accessories with clean hands.
- It is recommended to use the device in a clean room, to avoid the contamination of the device with dust and dirt.
- It is recommended to use the device in a ventilated space, with regular air change.

Battery

Battery info

The device is equipped with a menu that can visualize the charge of the battery, the values and the conditions of the end of the charge.
It is recommended to access to this menu only after a complete charge of the batteries.
From the main menu choose "Advanced", then "Setup" and finally "Battery info".
Six codes will be visualized with the following meanings:
COD1 = 0 expected voltage threshold reached.
COD1 = 1 max. charge time reached.
COD2 value of the battery voltage at the start of the charge.
COD3 value of the battery voltage at the end of the charge.
COD4 charge duration (from 1 to 840 minutes, ideal time 720 minutes).
COD5 charger/power supply unit connection duration.
COD6 Battery pack voltage value.
According to the values above described, it is recommended to replace the battery when COD1 = 1 and COD3 < 7,4 volts. Or when COD3-COD2 >= 2 volts and COD4 <600. Or when COD6 is lower than 5,8 volts.

Furthermore it is recommended to replace the battery pack after 3 months in which the device has not been used. After that period, batteries generally lose their ability to charge making the recharge dangerous.

Accessories

Use and storage of the electrodes and the cables.

In case of wear of cables or electrodes, they must be replaced and no longer used.
Before applying the electrodes on the skin, we suggest cleaning it.
After using the multi-purpose single patient and/or single-use electrodes, they must be stored using their plastic film and placed in the plastic bag.
Avoid that the electrodes touch each other or that they overlie one over the other.
Once the package has been opened, the electrodes can be used for 25-30 applications.
The electrodes must be always used with clean hands and they must be replaced if they are not perfectly in contact with the skin.
If using non self-adhesive electrodes we suggest cleaning the surface with proper cleansers that respect the requirements described in the manual.
The electrodes must be stored in their bag and in an environment that respects the requirements described in the manual.
After the end of a treatment, unplug the cables from the connectors and clean them carefully with proper cleansers that respect the requirements described in the manual.
After cleaning and drying them, they must be folded up and placed in the plastic bags supplied with the cables.

Disposal of the device

Do not throw the device or part of it in the fire, but dispose of the product in the specialized centers and respecting the directives in force within your country.
When the product has to be disposed of, the user can give it back to the retailer when purchasing a new unit.
A correct separate waste collection or following what above mentioned contribute to avoid possible negative effects on environment and health and promote the reuse and/or recycle of materials of which the device is composed.
The illegal disposal of the product by the user involves the application of the administrative fines according to the current regulations.

INSTRUCTIONS FOR USE

For a correct use of the device, the user should proceed as follows:
- Connect the cables to the outlets on the unit.
- Connect the electrodes to the connectors at the end of the cables.
- Place the electrodes on the skin.

Turning on

Turn on the electrostimulator by pressing the ON/OFF/OK button for 3 seconds until hearing a sound alarm.
The unit name and software version appear on the lower right-hand corner of the display.
Depending on the purchased model, the entries of the main menu are shown.
Use the P+ and P- buttons of the keyboard to move inside the menu:

"Program List" menu

When selecting "Program List", the following areas, according to the model, are shown:

- SPORT
- SPECIAL SPORTS
- FITNESS-PHYSICAL SHAPE
- BEAUTY-AESTETHICS
- MEDICAL CURRENTS
    - MICROCURRENTS
    - PAIN-ANTALGIC
    - IONOPHORESIS
    - REHABILITATION
- ACTION NOW
- SERIAL SEQUENTIAL STIMULATION

Program selection

- Area selection:

With the P+ and P- buttons of the keyboard, move the cursor on the desired area.
Press OK to confirm.
Press the left (Back) button to return to the previous screen.

- Program selection.
- Body part selection (when available)

How to start a program

Once you have selected a program, the following entries will appear:

- Start;
- Electrode placementi;
- Save in Favorites (see “Favorites” menu);
- Save in Treatments (see “Treatments” menu);
- Continue with 2+2 (see 2+2 mode).

To start the program, confirm with Start and in the following screen increase the channel intensity.

Increase/decrease intensity

To increase/decrease the intensity of the single channel, press the Up and Down buttons of the correspondent channels.

To increase/decrease the intensity of all channels simultaneously, press the P+ or P- buttons of the keyboard.

Run Time functions

Once a program has started, it is possible to modify:

- time
- frequency
- amplitude

To modify the parameters of the phase in progress, press the Function button. A new screen appears and the phase time is highlighted.
Modify the time pressing the P+ and P- buttons of the keyboard.
The new time will be automatically confirmed after 5 seconds or by pressing the FN button.
Move to the other parameters that you want to modify by pressing the LEFT/RIGHT buttons and repeat the above mentioned process.

Visualization during a program execution

While a treatment is executing, the display shows the program name (top), the indicator of the phase number and of the phase in progess, the remaining time of the phase in progress and the type of the wave used (EMS, TEN, MICROC...) For programs with intermittent stimulation, the working and the rest phase are graphically represented together with the time countdown.

How to pause a program

To pause a program, press the OK button. Press OK again to return to the program.
The intensity indicators will start from zero every time you start or stop a treatment.

How to stop a program

If you need to stop a program before its end, turn off the instrument by pressing and holding the OK button for about 3 seconds.

How to skip a phase

In order to pass to a next phase before the end of the one in progress, press and hold the RIGHT button for 3 seconds.
To return to the previous phase, press the left (back) button for 3 seconds.

"Last 10" menu

The electrostimulator stores the last 10 executed programs, so that these are available for rapid and easy execution.
The storage occurs automatically at the end of each program. When the memory is full, older programs are automatically deleted.
When the device turns on, select "Last 10" and then confirm with OK.
Select the program you wish to execute by pressing the P+ and P- buttons.
(If no programs are stored on memory, the message EMPTY appears).

After confirming, three entries are displayed:
a. - Start
b. - Electrode placement
c. - Delete from the list

a. It is possible to execute the selected program by placing the cursor on "Start"

b. 

Placing the cursor on "Electrode placement", a brief guide for correct electrode placement is displayed.
For further information on the electrode placement, see the picture included in the end of this manual.

c. Placing the cursor on "Delete from the list", the selected program will be no longer present in the "Last 10 executed programs" area.

The "Last 10" programs memory refers to a specific user. Thanks to the USER SELECTION (multi-user) function, different users (up to 10, plus default user, called USER 0) can have their own program memory of "Last 10.

"Favorites" menu

This menu enables the user to save the most used programs in a specific memory, up to 15 per user. To save a program, choose the program you want to save from the "Program List" menu. Before execution, select "Save in Favorites" and confirm with OK. The selected programs can be easily executed from the "Favorites" menu.
NOTE: In Mode 2+2, it is not possible to store favorite programs.

"Treatments" menu

The "Treatments" menu (**Stim lock**) enables the user to lock the device in order to permit only the use of the programs that have been saved with the special function "Save in..." in the screen previous to the execution of the program.
This function is especially thought for the rent of the unit to inexpert users and/or to patients that have to carry out only some special programs that have been chosen by the specialist.

Activation of the STIM LOCK function

Press and hold the buttons fn and --> (RIGHT button) for at least 3 seconds until the area where the treatments have been saved appears. After the activation of the STIM LOCK function, the unit will have limited functions.

Deactivation of the STIM LOCK function

Press and hold the fn and <-- buttons (LEFT button) for at least 3 seconds until the main menu appears.
NOTE: If the main menu does not appear, when the unit has been turned on, verify that the Stim lock function is not activated.
Try to deactivate it.
If the problem persists, contact the customer service.

"Programming" menu

The Electrostimulator offers the possibility to create/ modify new programs.
This makes the device highly flexible and adaptable to all users' requirements.
From the "Programming" menu it is possible to create new programs (when the message EMPTY appears) and to execute already personalized programs. These

programs can be modified at any time (see the section "How to modify a program" below).
The programs created with this function are the same for all USERS and cannot be stored in the "Last 10" menu nor in the "Favorites" menu.

How to create a new program

Use the P+ and P- buttons to select a number (from 1 to 10) for the program you wish to create and confirm with OK.

Program name insertion

To name the new program, use the LEFT and RIGHT buttons to select letters and confirm with OK. To delete a letter, move the cursor on “Delete”. After inserting the program name, select “Continue”.

Parameters setting

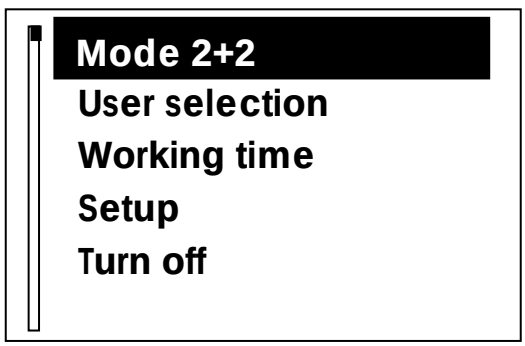
STEP 1. Press P+ and P- buttons to select the type of stimulation desired.
STEP 2. Press P+ and P- buttons to select the program phase number.
STEP 3. After setting the phase number of which the program is composed, different screens will appear where it is possible to select the desired parameters. Use P+ and P- to carry out the selection.
The procedure executed until now is the same for every type of program you wish to create.
If the program presents more phases, the next phase will be automatically proposed at the end of the insertion of a phase.
NOTE: The programmed stimulation types vary according to the model.

How to modify or delete a program

Inside the “Programming” menu, it is possible to modify or delete the programs previously stored.
Press and hold “fn” + P+” buttons to modify and “fn” + “P-“ to delete.
NOTE: it is not possible to set mixed multi-phase programs. (e.g. EMS+TENS program).

“Advanced” menu

The advanced menu is composed of the following entries:



Mode 2+2

The device permits to execute two different programs (Ems or Tens) at the same time, permitting the simultaneously treatment of two patients or two muscular groups. How to set multiple treatments

To execute simultaneously two different programs, there are two possibilities:

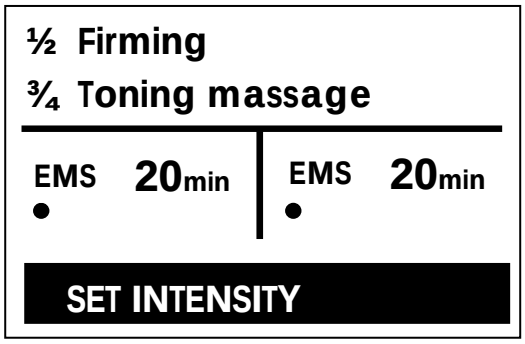
a. From the advanced menu selecting “Mode 2+2”

b. From the “Program list” menu;

a) From the main menu, select "Advanced -- Mode 2+2" and confirm with OK. Select the area and the name of the first program. Now, it is possible to select the name and the area of the second program.

b) From the Program list” menu select the area and the desired program. Now select “Continue with 2+2” and select the second program.

NOTE: During the Mode 2+2 the following screen will appear:



The program on the left works on channels 1 and 2, while the program on the right works on channels 3 and 4.

User Selection

It permits to use the special menus ("Last 10", "Favorites") in a personalized manner.

To access to the favorite programs and to “Last 10” programs, the user should select his/her own user. Only that specific user can use the programs stored in the “Favorites” memory.

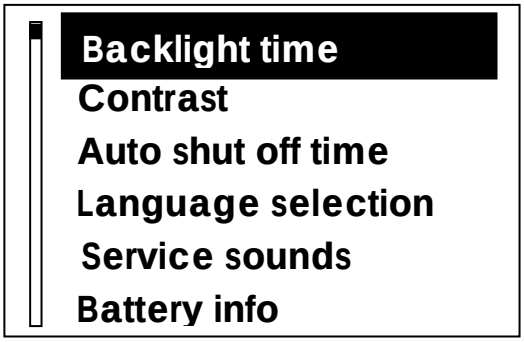
NOTE: Every time the device has been turned on, the last user will be displayed.

Working time

It indicates the total time the device has been used for stimulation treatments.

Setup

By selecting setup, the following screen will appear:



- **“Backlight time” function**

It permits to modify with the P+ and P- buttons the duration of the backlight during the stand-by phases.

- **“Contrast” function**

It permits to modify with the P+ and P- buttons the contrast level in the display.

- **“Auto shut off time” function**

It permits to set with the P+ and P- buttons, a period of time (in minutes) after which the device, if not used, automatically turns off.

- **“Language selection” function**

It permits to choose among 5 different languages for the navigation using the P+ and P- buttons. Confirm the selection with OK.

- **“Service sounds” function**

It permits to enable (ON) or disable (OFF) the acoustic tones emitted by the unit.

- **"Battery info" function** (see p. 20)

Turn off

It permits to turn off the device.

ACTION PRINCIPLES

Muscular electrostimulation

Electrostimulation is a technique that, by means of electric pulses that act on the muscle's motor points (motoneuron), causes muscular contraction responses similar to voluntary contractions.
Most of human body muscles belong to the striated or voluntary muscle category, with approximately 200 muscles on each side of the body (about 400 in all).

The physiology of muscular contraction

The skeletal muscle performs its functions through the contraction mechanism.
When a person decides to make a movement, the motor center of the brain sends an electric signal to the muscle that is to contract.
When the electric signal reaches the muscle, the motor plaque of the muscle surface produces the depolarization of the muscle membrane and the release of CA++ ions inside it. The Ca++ ions, interacting with the actin and myosin molecules, activate the contraction mechanism which leads to the shortening of the muscle.
The amount of energy needed for the contraction is provided by the adenosine triphosphate (ATP) and is supported by an energy recharging system based on aerobic and anaerobic energy mechanisms which use carbohydrates and fats. In other words, electric stimulation is not a direct source of energy but it works as a tool that causes a muscular contraction.
The same type of mechanism is activated when the muscular contraction is produced by the EMS; they have the same function of a pulse naturally transmitted by the motor nervous system. When the contraction is over, the muscle relaxes and returns to its original state.

Isotonic and isometric contraction

An isotonic contraction occurs when, during a movement, the interested muscles exceed outside resistance by shortening, thus provoking a constant state of tension in the ends of the tendons. When outside resistance impedes its movement, the muscular contraction, instead of provoking a shortening effect, causes an increase in the tension at the extremes; this is called isometric contraction. In the case of electrostimulation a stimulation for isometric conditions is normally used because it permits a more powerful and efficient contraction.

The distribution of different types of fibers in the muscle

The relation between the two main categories (type I and type II) can vary noticeably.
There are muscular groups that are typically made up of type I fibers, like the soleus, and muscles which are made up of only type II fibers, like the orbicular muscle, but the majority of the human body muscles are composed of a combination of the two types. Studies on the distribution of fibers in the muscle mass have highlighted

the close relationship between the motoneuron (tonic or phasic) and the functional characteristics of the fibers it innervates and they have shown as a specific motor activity (particularly sports) can bring about a functional adaptation of fibers and a change in their metabolic characteristics.

Motor unit type	Contraction type	Contraction frequency
Tonic ST	Slow contraction I	0 - 50 Hz
Phasic FT	Fast contraction II	50 - 70 Hz
Phasic FTb	Fast contraction II b	80 - 120 Hz

Stimulation intensity

The current intensity necessary to obtain muscular contraction is personal and depends on the position of the electrodes, the underlying adipose tissue, sweating, the presence of hair on the area to be treated, etc.. For these reasons, the same current intensity can generate different feelings from person to person, from day to day, and from the right side to the left side of the body. During the same working session, it will be necessary to regulate the intensity in order to obtain the same level of contraction because of the accommodation phenomena. The current intensities recommended in the different phases are proposed as indicative values, and each person should modify these levels according to his/her personal needs.

- Moderate intensity. The muscle does not tire, not even during prolonged treatments. The contraction induced is tolerable and pleasant. This is the first level on the graphic representation of intensity.
- Intermediate intensity. The muscle is visibly contracted but the stimulation does not cause the joints to move. This is the second level on the graphic representation of intensity.
- Elevated intensity. The muscle is contracted substantially. The muscular contraction will cause the extension or bending of the limb if this is not blocked. This is the third level on the graphic representation of intensity.
- Maximum intensity. The muscle is contracted maximally. This is an intense treatment that should be performed only after having executed different applications at lower intensity.

Moderate		*From 10 mA to 20 mA*
Intermediate		*From 20 mA to 30 mA*
Elevated		*Above 30 mA*
Maximum		*At the maximum level of tolerance, but below the pain threshold*

In the descriptions of the treatments, the best levels of intensities are recommended.
NOTE: The recommended levels of current are only indicative.
NOTE: For Microcurrents programs, it is not necessary to set an intensity value (in mA) because this is preset and automatically activated for all phases.

Open circuit

The device has a check of power emissions. If the operator increases the intensity level above 10 mA and the circuit is open (cables are not connected to the device and electrodes are not applied to the skin), the electrostimulator brings immediately the intensity to 0 mA. Therefore, before starting a program, make sure that the cables are connected to the device and that the electrodes are not worn, as this could decrease their conduction capacity. NOTE: Use the Microcurrents programs only on channels 1 and 3 with the gray cables supplied. If the cables are not connected or they are of the wrong type, the program will not start. Check the cables and the connections.

❖ Tens

Transcutaneous Electrical Nerve Stimulation (TENS) is a selective stimulation of the large fibers of the peripheral nerves favoring the closing of the gate entrance for the pain pulses and increasing the release of endorphinic substances, reducing in this way the pain intensity. Therefore with TENS we want to treat the severe and chronic pain due to the main musculoskeletal pains.
The pain decrease following to the TENS currents application is due to these factors:
a. Gate control theory
b. Endorphin secretion
c. Different sedative effects in relation with the frequency

Gate theory

If the electric signals that lead to the brain information about pain are stopped, also the pain perception is eliminated. If, for instance, we hit our head into an object the first thing we do is massaging the area affected by the trauma. In this way we stimulate the receptors related to touch and pressure. TENS in continuous mode and in frequency modulation can be used to generate signals similar to the ones of touch and pressure. If their intensity is enough, their priority is so high that it prevails on the pain signals. Once the priority is gained, the gate related to the sensory signals is opened and the pain one is closed, impeding in this way the passage of these signals to the brain.

Endorphin secretion

When a nervous signal proceeds from the pain area to the brain, it spreads through a chain of connections joined together called synapse. The synapse can be seen as the space between the end of a nerve and the start of another. When an electric signal reaches the end of a nerve, it produces some substances called neurotransmitters that pass through the synapse and activate the start of the next nerve. This process repeats for all the length needed to the signal to reach the brain. The opioids involved in the pain reduction have the task to insinuate in the synapse space and impede the neurotransmitter propagation. In this way a chemical block of the pain signals occurs. The endorphins are opioids naturally produced by the body to tackle the pain and they can act both on the marrow and on the brain, in this way they are effective analgesics. Tens can increase the natural production of endorphins and, thereby, they act decreasing the pain perception.

Different effects in relation with the frequency

Depending on the frequency used, it can occur antalgic effects of immediate effect but with no long duration (higher frequencies), or more progressive effects but also longer in time (low frequencies).

❖ Microcurrents

Compared with conventional electrostimulation, which uses electrical current in the milliampere (mA) range, microcurrent electrostimulation uses currents whose intensity is included between 10 and 500 µA (microamperes,i.e. an ampere millionth). Numerous studies showed that the currents in microamperes are the ones that increase the APT synthesis.

Usually the MENS therapy has two different phases, the first one has the aim to reduce the pain sensation perceived from the patient, while the second one promotes the protein and APT synthesis, accelerating the tissue reparative processes. Usually the treatment duration is included between 15 and 30 minutes as for the first phase and between 5 and 10 minutes as for the second phase. MENS are an interesting instrumental therapy that can be used in many pathologies, and the use of MENS together with other instrumental therapies such as for example laser and TENS can provide excellent clinic results that are usually difficulty to reach.

❖ Ionophoresis

Ionophoresis is an electrotherapy form that acts transmitting pharmacological substances inside the tissue thanks to a continuous electric current of unidirectional type.

Ionophoresis bases on the capacity of ionic dissociation of some medicated substances, of very low molecular weight, after being dissolved in water.

It is really important to know that the active part of the medicine has, after being dissociated under ionic form, positive or negative charge, with the aim to place it correctly according to the direction of the electric flux.

The ions of the medicated substance are transmitted inside the organism through cutaneous areas that oppose a low resistance to the current reaching in this way the cellular membranes that are thereby electrically modified.

PROGRAM LIST

Sport Program List

Capillarization
Decontracting
Warm-up
Pre-competition warm-up
Active recovery
Maximum strength
Endurance strength
Explosive strength
Reactivity
Post-competition recovery
Hypertrophy
Aerobic endurance
TOTAL 53

NOTE: some programs are divided according to body areas.
CE0476 does not refer to non-medical treatments.

Special Sports program List

Cross country skiing
Running
Martial arts
Tennis
Soccer
Bike-riding
TOTAL 44

NOTE: some programs are divided according to body areas.
CE0476 does not refer to non-medical treatments.

Fitness-Physical Shape Program List

Firming
Bio-Pulse firming
Sculpting
Bio-Pulse sculpting
Toning
Mass Building
Body sculpting
Definition
Jogging
Anaerobic fitness
Aerobic fitness
Cramp prevention
TOTAL 58

NOTE: some programs are divided according to body areas.
CE0476 does not refer to non-medical treatments.

Beauthy-Aestethics Program List

Drainage
Bio-pulse drainage
Lipolysis
Toning massage
Connective massage
Swollen arms
Face capillaries
Lifting effect
Skin tone improvement
Post-pregnancy drainage
Post-pregnancy lipolysis
Post-pregnancy firming
Breast firming
Breast sculpting
TOTAL 36

CE0476 does not refer to non-medical treatments.

Medical currents – Microcurrents Program List

The following programs are medical

Epicondylitis
Scapulohumeral periarthritis
Muscle restoration
Contusion
Edema
Skin ulcer
Sciatica
Lumbago
Brachial neuralgia
Acute pain
Articular pain
Stiff neck
Whiplash
Cervical spondylosis
Shoulder sprain
Carpal tunnel
Knee sprain
Osteoarthritis
Ankle sprain
Achilles tendon inflamation
Patellar tendon inflammation
Rotator cuff inflammation
Tendon inflammation
TOTAL 23

Because of the presence of clinical programs, this product is a medical device. Therefore it is certified by the CERMET Body n°. 0476 according to 93/42/CEE directive for medical devices. The certification covers clinical applications.

NOTES ON THE USE OF MICROCURRENT PROGRAMS

This paragraph refers to the use of microcurrent programs.

The microcurrent programs differ from normal TENS and EMS programs as follows:

- While conventional electrostimulation (e.g. TENS) uses current in the milliamperes range, microcurrent electrostimulation uses currents in the microampere range that are imperceptible by humans. During Microcurrents programs, **it is normal that the user does not discern any stimulation**.
- When running a Microcurrents program, **use exclusively the special gray cables connected to the outlets of channels 1 and 3**. If the cables are not

connected or are of the wrong type, it will not be possible to start the program. Check the connections and the cables.

- **The Microcurrents programs have prefixed intensity levels**, therefore it is not necessary to set them. When a Microcurrent program is activated, the electrostimulator automatically brings the intensity to the correct level. This value should not be altered during the execution of the program.
- The Microcurrents programs cannot be run in the "2+2 mode" with multiple treatments. If one tries to select a Microcurrents program in "2+2 mode", the electrostimulator will emit an error tone.

If, according to your therapist, you wish to modify the treatment protocol altering the intensity, press and hold the UP and DOWN button for 3 seconds.

Medical currents-Pain Antalgic (Tens) Program List

The following programs are medical

Menstrual pain
Modulated antalgic Tens
Scapulohumeral syndrome
Endorphinic Tens
Chronic pain
Muscle pain
Chronic lumbago
Cervical pain
Bursitis-tendinitis
Osteoarthritis
Knee pain
Conventional antalgic Tens
Total 12

Because of the presence of clinical programs, this product is a medical device. Therefore it is certified by the CERMET Body n°. 0476 according to 93/42/CEE directive for medical devices. The certification covers clinical applications.

Medical currents-Rehabilitation Program List

The following programs are medical

Quadriceps atrophy
Recovery after ACL surgery
Shoulder subluxation
Total 3

Because of the presence of clinical programs, this product is a medical device. Therefore it is certified by the CERMET Body n°. 0476 according to 93/42/CEE directive for medical devices. The certification covers clinical applications.

Incontinence program list (inside the Rehabilitation area)

The following programs are medical

Mixed incontinence
Stress incontinence
URGE incontinence
TOTAL 3

Because of the presence of clinical programs, this product is a medical device. Therefore it is certified by the CERMET Body n°. 0476 according to 93/42/CEE directive for medical devices. The certification covers clinical applications.

Type

The urology programs require the use of specific endovaginal and endorectal electrode probes, certified according to the Directive for Medical Devices 93/42/EEC. These are bipolar probes with a 2-mm female adapter which attaches to 2-mm male cables.

Warnings

Urological electrostimulation is a medical application, which must be carried out under medical supervision.

Use

To correctly use the probe electrode, follow the instructions provided by the manufacturer and given by the physician.

Maintenance

For cleaning, sterilization and disinfection, refer to the manufacturer's instructions.

Suggestions

In case of deterioration of the probe electrode, replace it immediately.

Medical currents – Ionophoresis Program list

The following programs are medical

Ionophoresis
TOTAL 1

The home user can use the ionophoresis treatments only after consulting the specialist who will prescribe the medications to use and give the indications for the type of currents to use.

The current intensity should be regulated as to be barely perceptible.
DO NOT APPLY THE MEDICATION DIRECTLY TO THE SKIN. Apply the medication to the absorbent surface of the electrode corresponding to the medication's polarity; the absorbent surface of the other electrode should be dampened with slightly salted water, to promote conductivity.
- To run the Ionophoresis programs, use exclusively one special gray cable connected to the outlet of channel 1. Either the light gray or dark gray cable may be used.
- The Ionophoresis programs cannot be run in the "2+2 mode" with multiple treatments.
- The IONOPHORESIS programs are memorized in the "Last 10 Executed" menu but cannot be run in AUTO STIM mode.

Because of the presence of clinical programs, this product is a medical device. Therefore it is certified by the CERMET Body n°. 0476 according to 93/42/CEE directive for medical devices. The certification covers clinical applications.

Action Now Program list

Action Now programs are normal EMS programs, with the only difference that each single action will start only after pressing * button. The Action Now programs are particularly useful to link and synchronize the electric stimulation with a voluntary action.

This program is suggested mostly in sport filed, for athletic preparation. It enables to activate the muscular contraction through an external control managed by an operator. In this way it is possible to link the stimulation to the voluntary contraction to obtain a greater recruitment of the muscular fibers and an important coordinating effect.

Operating mode: contraction will start after pressing * button. To interrupt contraction before contraction time is over, it is enough to press again * button. In this case the program will cut the rest period and will place itself at the beginning of the ramp of the next stimulation, waiting for the user to press * button in order to start contraction.

The following programs are not medical.

Action Now program list includes 7 parameter combinations.

Program name	Hz	Ramp-Up time	Contraction time
Action 0,2 - 1 s	50	0,2	1
Action 0,5- 1s		0,5	1
Action 1 - 1 s		1	1
Action 2 - 1 s		2	1
Action 3 - 2 s		3	2
Action 4 - 2 s		4	2
Action 2 - 6 s		2	6
Total 7 programs			

CE0476 does not refer to non-medical treatments.

"3S" Serial Sequential Stimulation Program List

The "3S" programs are characterized by an activation delay of the channels 3 and 4 compared with the channels 1 and 2. The Serial Sequential Stimulation permits to stimulate the musculature in kinetic chain thanks to the differentiated activation times of the muscular groups involved.
In aesthetic field, the 3S programs allow to create a real sequential drainage: the sequential contraction of the different muscular groups produces a deep pressure wave in the musculature involved that causes the interstitial fluid drainage and it favors the return of the venous blood to the heart.

OPERATING MODE:
The operation of these programs is exactly the same as any other EMS programs, with the only difference that a delay in contraction start between the channels will be noticed.

The following programs are not medical.
The 3S program list includes 18 parameter combinations.

Name	Hz	Delay time
SerSeqStim 0,5 s	30	0,5
SerSeqStim 1 s		1
SerSeqStim 2 s		2
SerSeqStim 3 s	80	3
SerSeqStim 4 s		4
SerSeqStim serial	80	11
Total 18 Programs		

"Delay time" refers to the delay seconds that the next pulse needs to start.

NOTE

For further information about the programs you can download from our website a complete guide, where you can find all the indications and suggestions to carry out the treatment in the correct way.

GENERAL NOTES ON ELECTRODE PLACEMENT

The correct electrode positioning and the correct choice of their size are critical aspects for the electrostimulation to be effective.

To choose the size of the electrodes and as for their positioning it is necessary to refer to the images at the end of this manual. For any further information visit our website www.globuscorporation.com where you can find a wide range of images and videos on the electrode placement.

NOTE For all the programs that cause an important muscle contraction (such as, for example, strength, hyperthrophy, toning and firming programs...) it is important to place the electrode on the muscle **motor point**, that is the most sensitive point to stimulation.

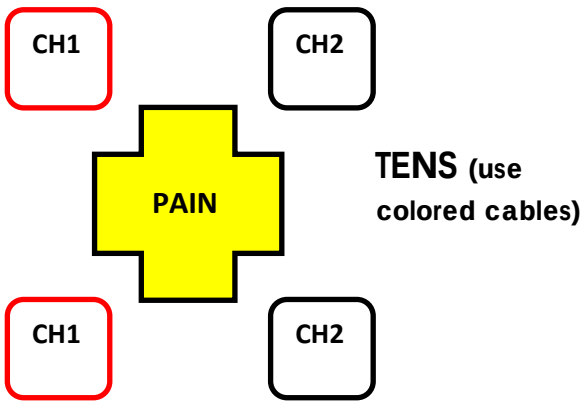
If the electrode is not placed exactly on the motor point, the contraction could be small and/or annoying. In this case it is necessary for the positive electrode to be moved a few millimeters up to feel an effective and comfortable contraction.

The body position during the stimulation

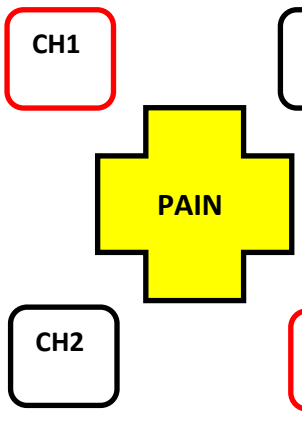
The body position during the elctrostimulation session depends on the body part involved and on the program type that is being carried out. During the treatment execution with high intensities, we suggest blocking the limbs in order to work in isometry. For instance, if you want to treat the quadriceps with a strength program, we suggest carrying out the treatment while sitting with the foot blocked, in order to avoid an involuntary leg extension during the contraction phase.
For all the programs that do not imply high intensity (massages, decontracting, drainage programs) the body position is not important, as long as it is comfortable.

Electrode placement for Tens and Microcurrent programs

In the following pages of this manual you can find the images with the correct electrode positioning for tens and microcurrent treatments. If the localization of your pain is not included in the images represented, you can position the electrodes by forming a "square" on the painful area. Here's an example.

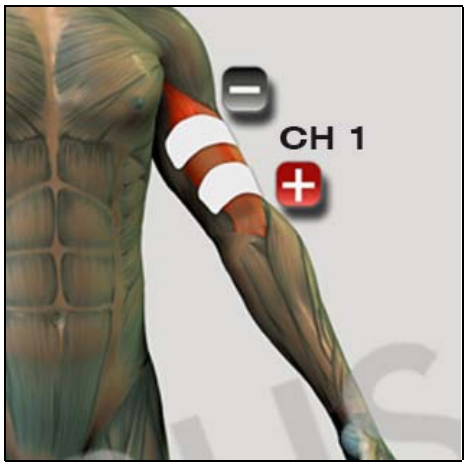


TENS (use colored cables)

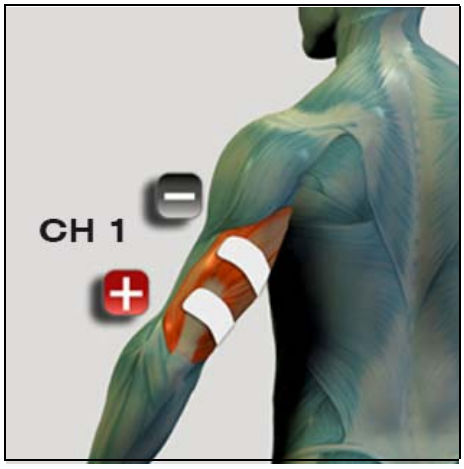


MICROCURRENTS (use gray cables)

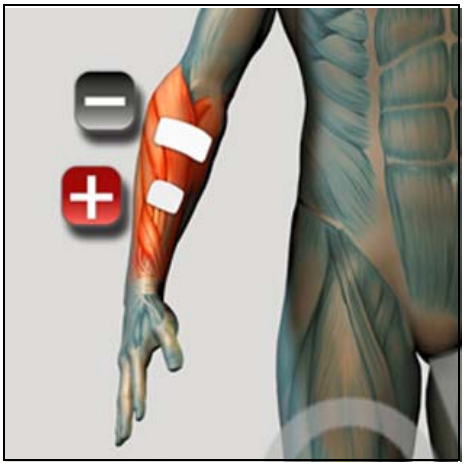
ELECTRODE PLACEMENT



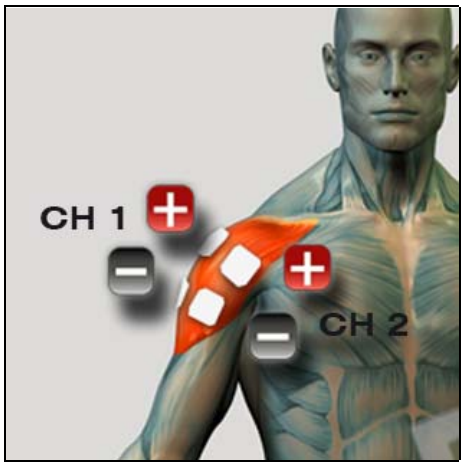
Biceps brachii muscle



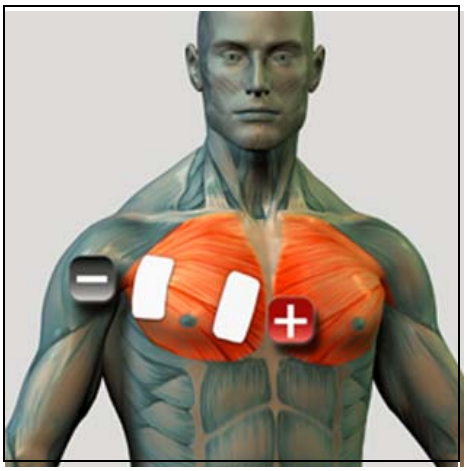
Triceps brachii muscle

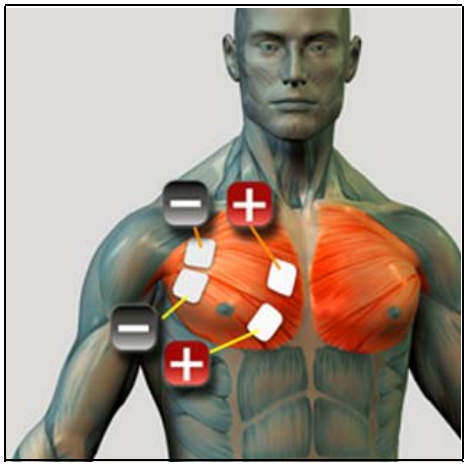

Flexor carpi muscle

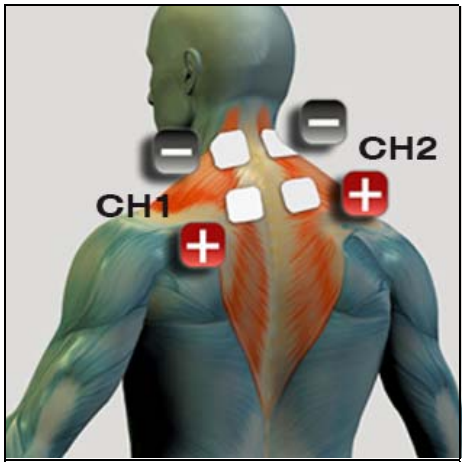

Extensor carpi muscle



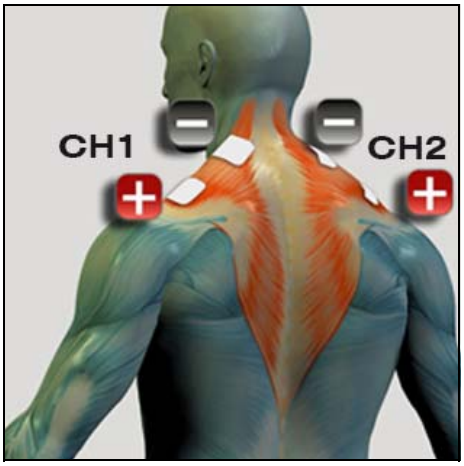
Deltoid muscle


Pectoral muscle


Pectoral muscle

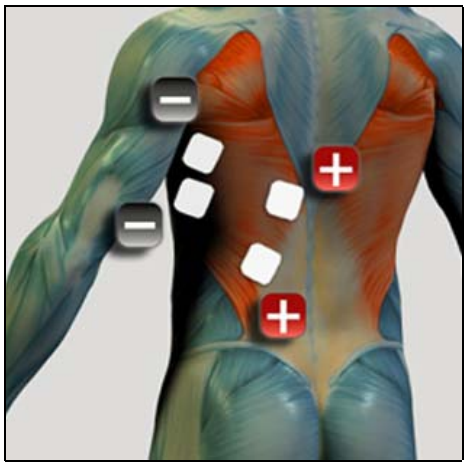


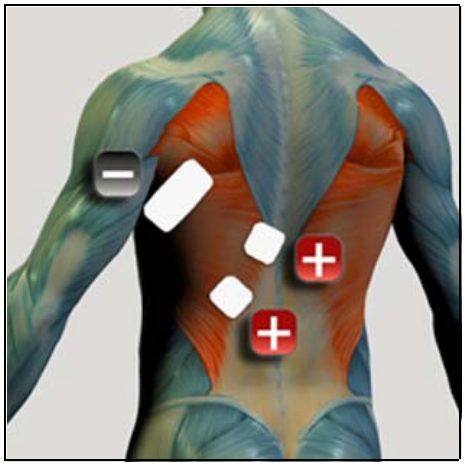
Trapezius muscle

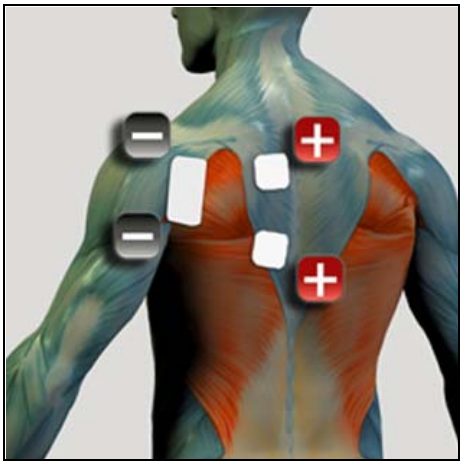


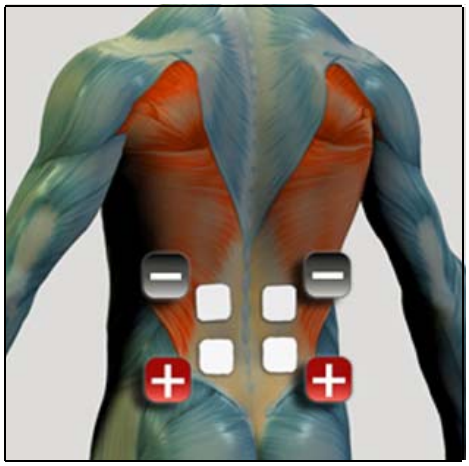
Trapezius muscle

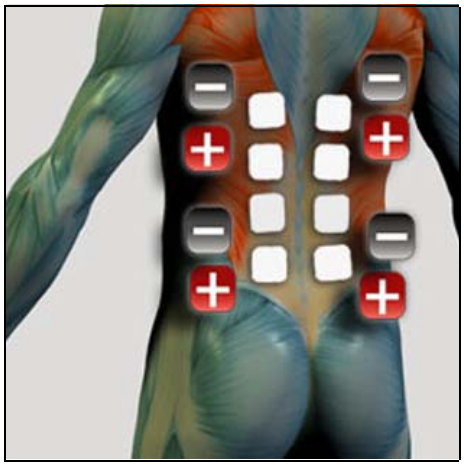
ELECTRODE PLACEMENT

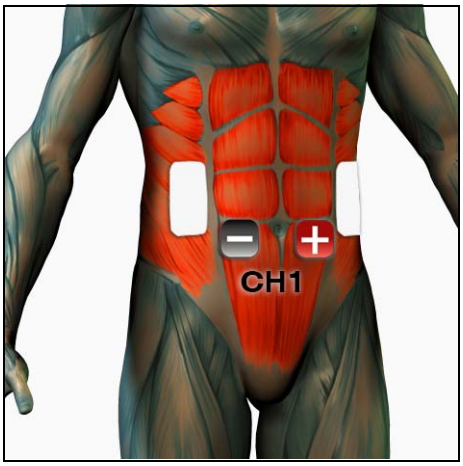

Latissimus dorsi muscle


Latissimus dorsi muscle

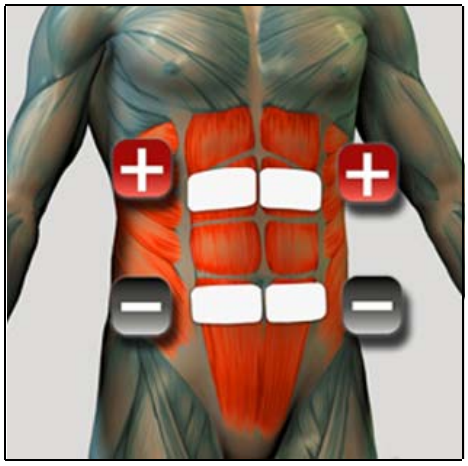

Infraspinatus muscle

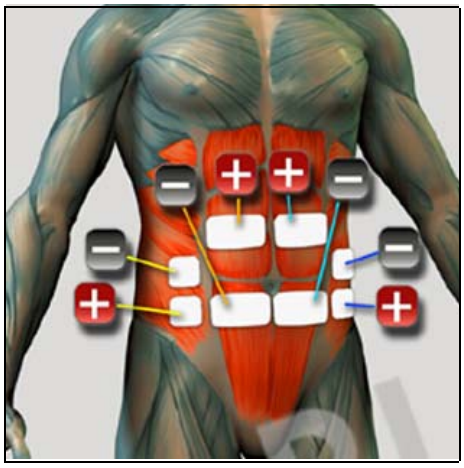

Lumbar muscles

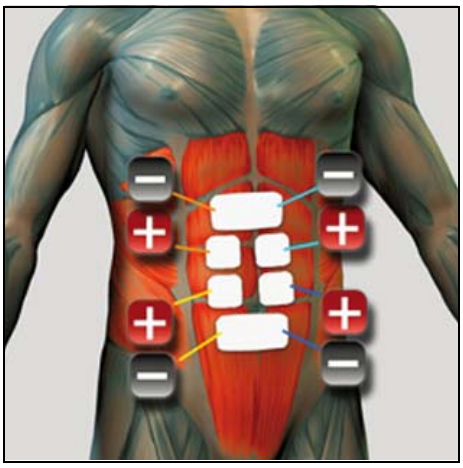

Lumbar/Dorsal muscles



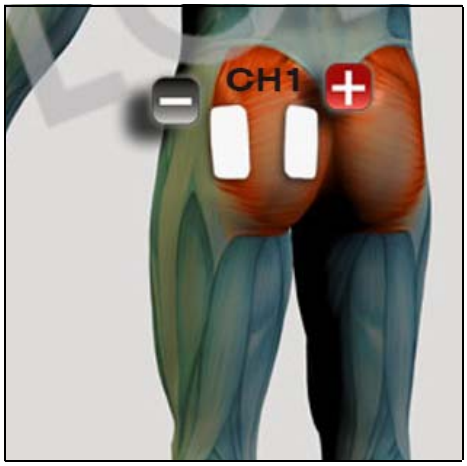
Abdominals


Abdominals

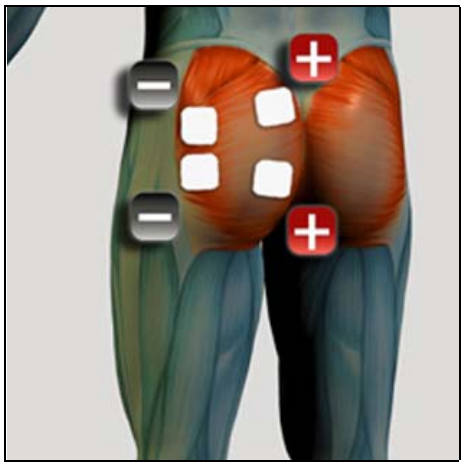

Abdominals

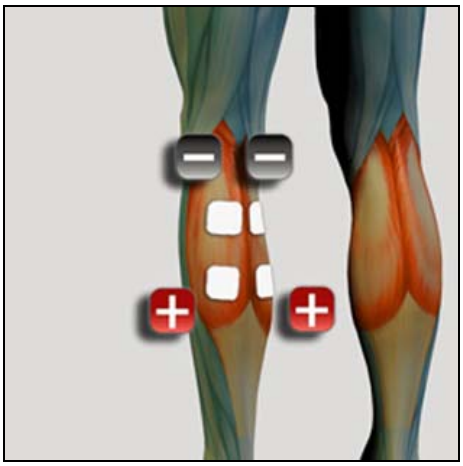

Rectus abdominis muscle

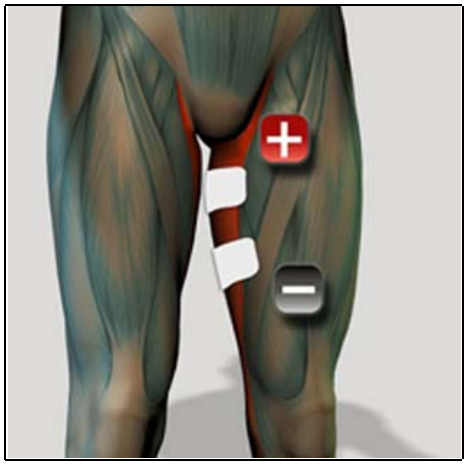
ELECTRODE PLACEMENT

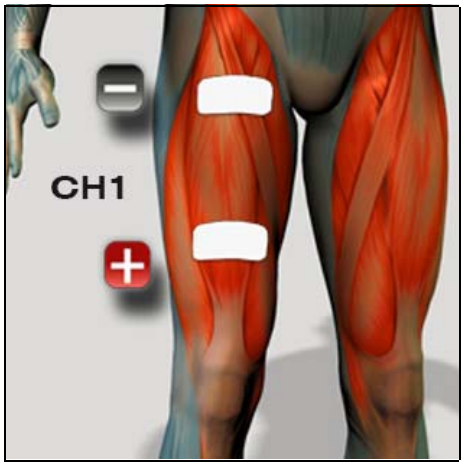


Gluteus

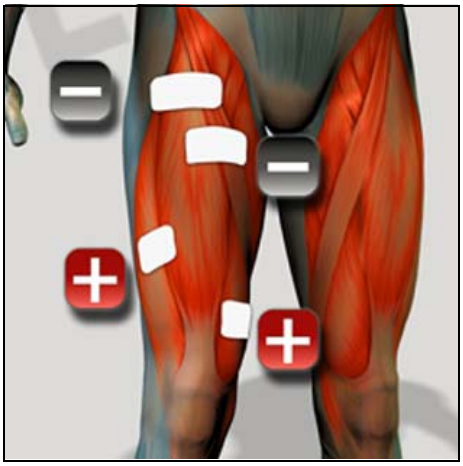

Gluteus

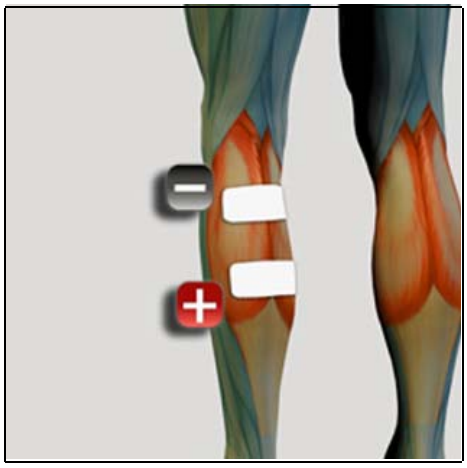

Biceps femoris muscle

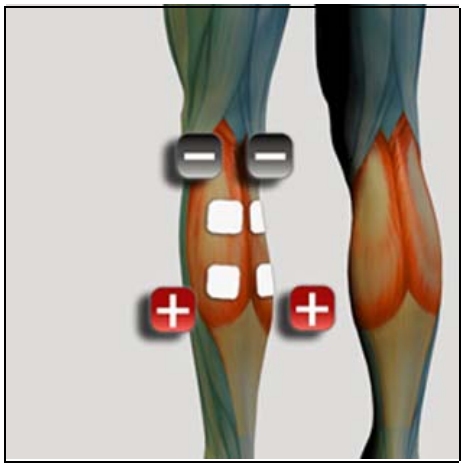

Adductors

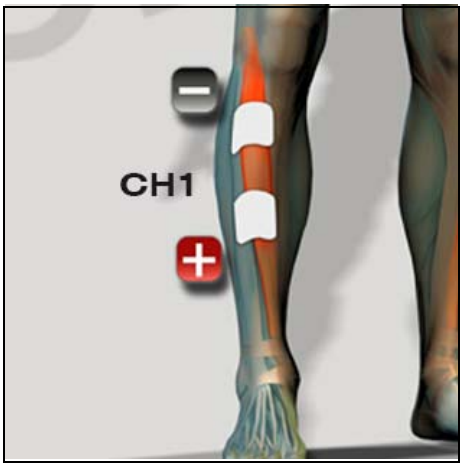


Rectus femoris muscle


Quadriceps

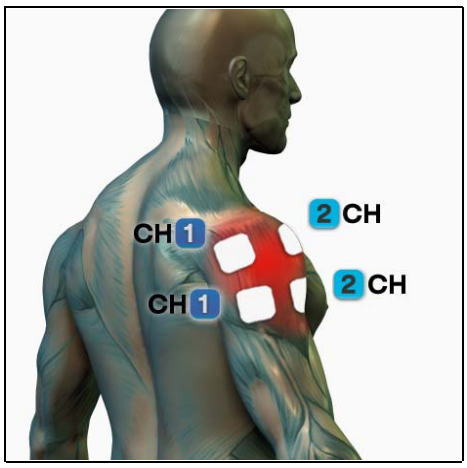

Gastrocnemius muscle


Gastrocnemius muscle

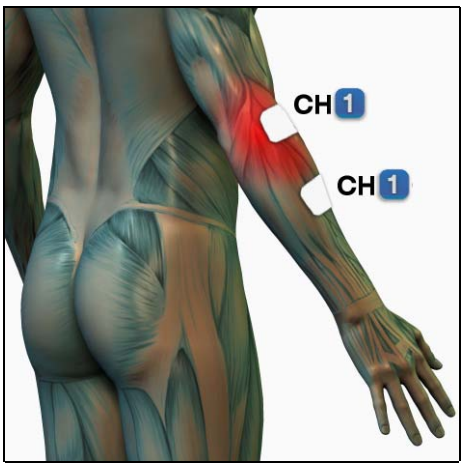


Tibialis anterior muscle

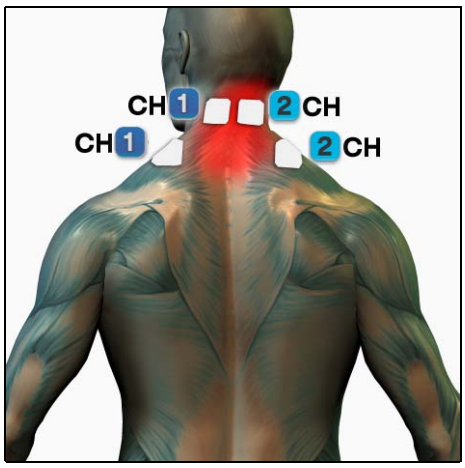
ELECTRODE PLACEMENT FOR TENS TREATMENTS



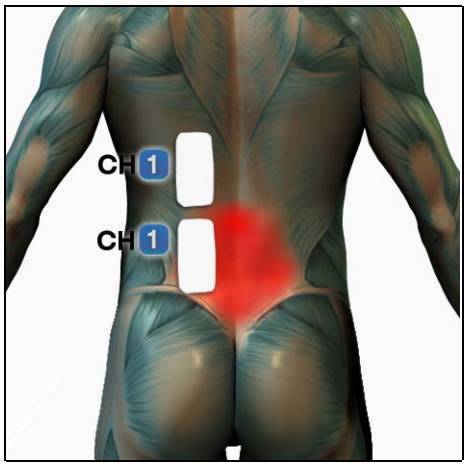
Shoulder pain



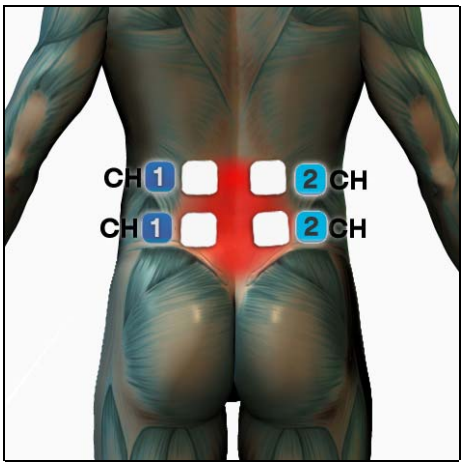
Elbow pain



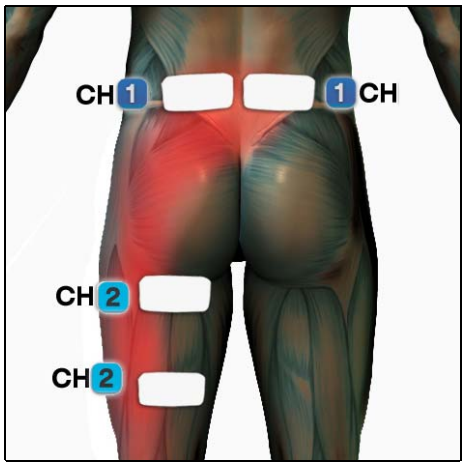
Cervical pain



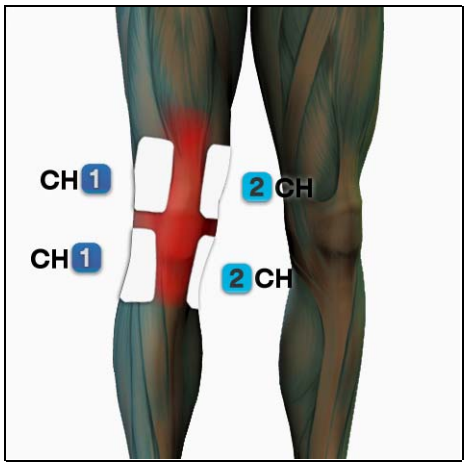
Lumbar pain



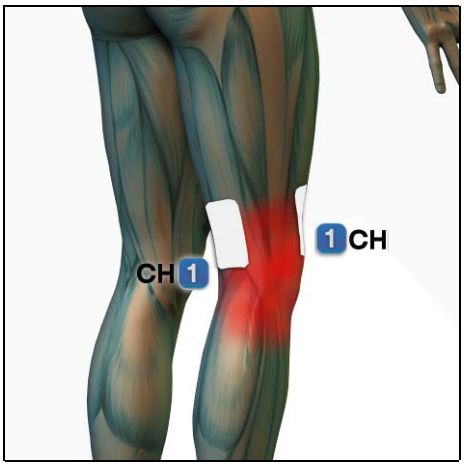
Lumbar pain



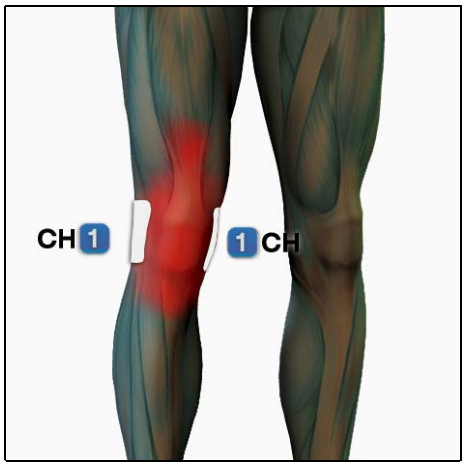
Sciatica



Knee pain

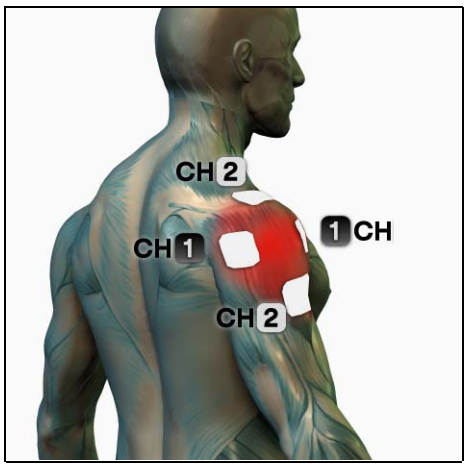


Knee pain

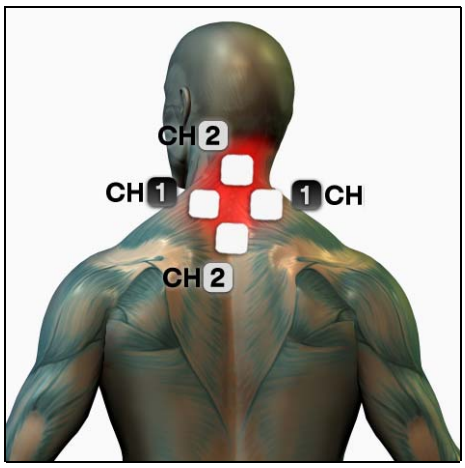


Knee pain

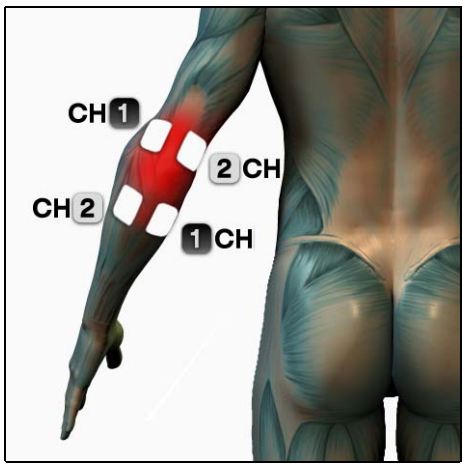
ELECTRODE PLACEMENT FOR MICROCURRENT TREATMENTS



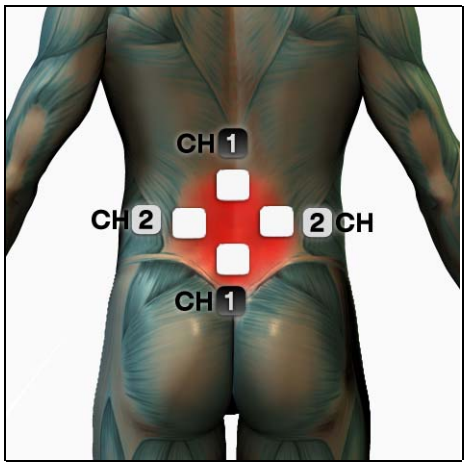
Shoulder pain



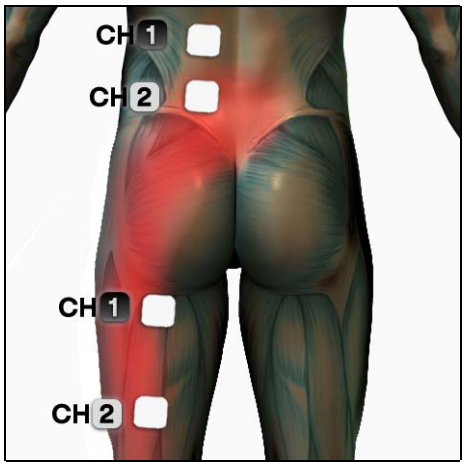
Cervical pain



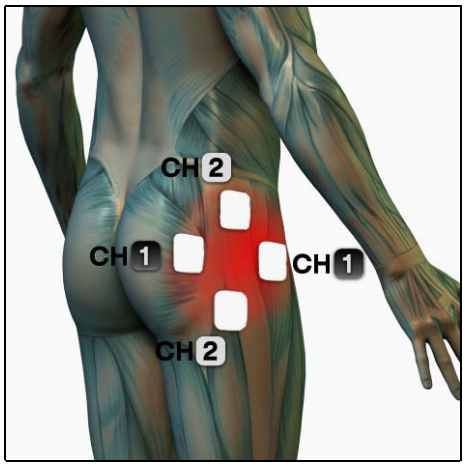
Elbow pain



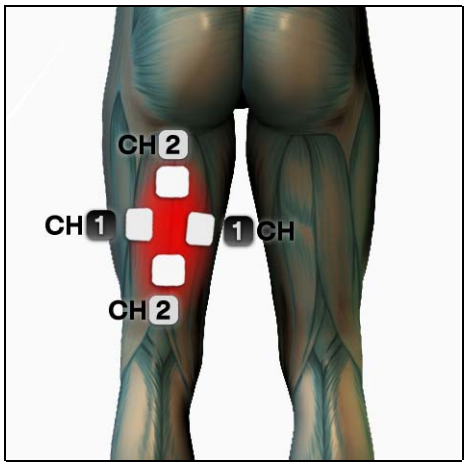
Lumbar pain



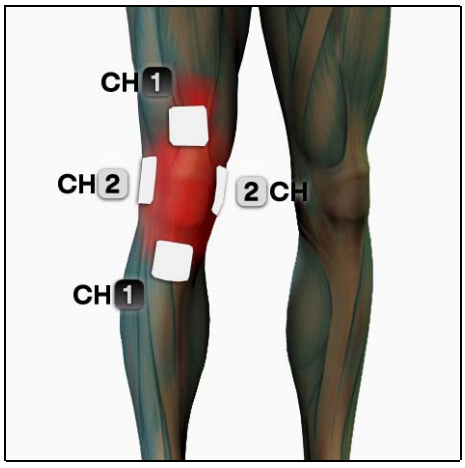
Sciatica



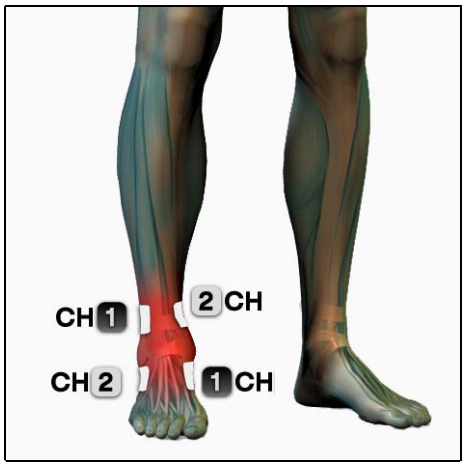
Hip pain



Muscle pain (the electrodes should be placed on the painful are)



Knee pain



Ankle pain

WARRANTY

The device is guaranteed to the first user for a period of twenty-four (24) months from the date of purchase against defects in materials or of the manufacturing, twelve (12) months if the user uses the device for professional purposes, provided that it is used properly and maintained under normal operating conditions.

Warranty coverage is limited in the following cases:

- Six (6) months for supplied accessories subject to wear such as batteries, chargers, power supply units, cables, G-trode handpiece.
- Ninety (90) days for the media containing software such as, for example, CD-ROMs, memory cards, etc...
- No warranty for extendable accessories and materials such as, for example, electrodes, etc..

The warranty is valid and enforceable in the country where the product was purchased. In the event that the product is purchased in any country of the European Community, the warranty is still valid in all its countries.

In order to take advantage of the warranty service, the user must comply with the following warranty clauses:

1. The products, and all accessories, to be repaired must be sent by and at the expenses of the customer in their original packages.
2. The product's warranty is subject to the production of a fiscal document (fiscal receipt, receipted bill or sale invoice), attesting the product's purchase date.
3. The repair work shall have no effect on the original warranty expiry date and shall neither renew nor extend it.
4. If, during the repair work, no defects are found, the costs related to inspection times shall in any case be charged.
5. The warranty becomes void where the fault has been caused by: impacts, falls, erroneous or improper use of the product, use of non-original power supply unit or charger, accidental events, alteration, replacement/detachment of the warranty seals and/or tampering with the product. The warranty does not cover damages caused during transportation when unsuitable packages are used.
6. The warranty does not cover the inability to use the product, other incidental or consequent costs or other expenses incurred by the purchaser.

NOTE: Before returning the device for repairs, we recommend to read carefully the user instructions contained in the manual and visit Globus website.

In case you need to return your product for assistance, contact your dealer or contact Globus Service. The manufacturer reserves the right to make changes without previous notice. The features and dimensions reported in this manual are not binding.

Frequently Asked Questions

What kind of electrodes should be used for electrostimulation?

Use self-adhesive electrodes, which are practical and improve the quality of stimulation. If used with care, they will last for 25-30 applications. The electrodes should be replaced when they have no longer a good connection with the skin.

Where should the electrodes be placed?

In the back of this manual, there is a comprehensive electrode placement guide (it is not necessary to respect the polarities indicated). You can follow this instructions. To verify the correct placement of the electrodes, use the special Find Motor Point Pen program or follow this empirical method: place the electrodes as indicated in the pictures in the back of this manual; start the stimulation; with your hand, move the electrode by sliding it along the muscle without removing it from the skin. You will notice a change in contraction according to the different positions. Once you locate the point where the stimulation is greatest, decrease the channel intensity to zero (0,0 mA), replace the electrode and increase gradually the intensity.

Use of Y cables. This permits to use more electrodes on the same channel.

This permits, for instance, to stimulate vastus medialis and vastus lateralis of the quadriceps with one single channel. They are not recommended for medical applications.

Does the power decrease using Y cables?

The power intensity for each channel does not vary. However, when Y cables are used to split one single channel in two, the current is distributed on a wider muscle area, therefore contraction will be less pronounced. Increase the intensity to obtain the same contraction level.

Can electrostimulation hurt me?

It is very unlikely that electrostimulation damages muscles. In this case it is important to increase intensity gradually while observing the muscle behavior and avoiding to keep the limb completely outstretched. In case of doubt, please contact a specialist.

Is it possible to use the electrostimulator during menstruation cycle?

Electrostimulation may interfere in some way with menstruation, causing anticipation, delay, accentuation or reduction of the cycle; however, these effects are subjective and highly variable. It is recommended to avoid treatments in the abdominal zone during menstruation cycle and immediately before or after it.

Is it possible to use the electrostimulator during lactation?

Until now, no collateral effects regarding lactation have been observed. Nonetheless, during lactation, it is recommended not to stimulate the thoracic region.

Are dermatological diseases (e.g. psoriasis, urticaria) contraindications for electrostimulation?

Yes, do not treat areas affected by dermatological diseases.

When are the first results visible?

Aesthetic results of electrostimulation are always subjective. For Toning program, with a regular program of 3-4 sessions per week, a noticeable result may be observed after 15 days. For Lipolysis and Drainage programs, 40 days of treatment are necessary. Results are obtained more quickly if treatments are combined with good physical activity and a correct life style.

How many sessions can I weekly perform?

For physical training, consult the technical guide that is available on the Globus website. For fitness and aesthetics programs, the number of sessions depends on the type of treatment: 3-4 sessions per week on alternate days are suggested for toning; daily treatments are permitted for Lipolysis and Drainage programs.

TABELLA 1

TABLE 1

GUIDA E DICHIARAZIONE DEL COSTRUTTORE – EMISSIONI ELETTROMAGNETICHE – PER TUTTI GLI APPARECCHI ED I SISTEMI

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC EMISSIONS – FOR ALL EQUIPMENT AND SYSTEMS

Il dispositivo PREMIUM 400 è previsto per funzionare nell'ambiente elettromagnetico sotto specificato. Il cliente o l'utilizzatore del PREMIUM 400 deve garantire che esso viene usato in tale ambiente.

The PREMIUM 400 *is intended for use in the electromagnetic environment specified below. The customer or the user of the* PREMIUM 400 *should assure that it is used in such an environment.*

Prova di emissione ***Emissions Test***	**Conformità** ***Compliance***	**Ambiente elettromagnetico – Guida** ***Electromagnetic environment - Guidance***
Emissioni RF *RF emissions* CISPR 11	Gruppo 1 *Group 1*	Il PREMIUM 400 utilizza energia RF solo per il suo funzionamento interno. Perciò le sue emissioni RF sono molto basse e verosimilmente non causano nessuna interferenza negli apparecchi elettronici vicini. *The* PREMIUM 400 *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.*
Emissioni RF *RF emissions* CISPR 11	Classe B *Class B*	Il PREMIUM 400 è adatto per l'uso in tutti i locali compresi quelli domestici e quelli collegati direttamente ad un'alimentazione di rete pubblica a bassa tensione che alimenta edifici usati per scopi domestici. *The PREMIUM 400 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes*
Emissioni armoniche *Harmonics emissions* IEC 61000-3-2	Classe A *Class A*	
Emissioni di fluttuazioni di tensione/flicker *Voltage fluctuation/flicker emissions* IEC 61000-3-3	Conforme	

TABELLA 2

TABLE 2

GUIDA E DICHIARAZIONE DEL COSTRUTTORE – IMMUNITÀ ELETTROMAGNETICA – PER TUTTI GLI APPARECCHI ED I SISTEMI

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY – FOR ALL EQUIPMENT AND SYSTEMS

Il PREMIUM 400 è previsto per funzionare nell'ambiente elettromagnetico sotto specificato. Il cliente o l'utilizzatore del PREMIUM 400 deve garantire che esso viene usato in tale ambiente.

The PREMIUM 400 is intended for use in the electromagnetic environment specified below. The customer or the user of the PREMIUM 400 *should assure that it is used in such an environment.*

Prova di immunità ***Immunity Test***	**Livello di prova IEC 60601** ***IEC 60601 test level***	**Livello di conformità** ***Compliance level***	**Ambiente elettromagnetico – Guida** ***Electromagnetic environment - Guidance***
Scarica elettrostatica (ESD) *Electrostatic discharge (ESD)* IEC 61000-4-2	±6 kV a contatto_*contact* ±8 kV in aria_*air*	±6 kV a contatto_*contact* ±8 kV in aria_*air*	I pavimenti devono essere in legno, calcestruzzo o in ceramica. Se i pavimenti sono ricoperti di materiale sintetico, l'umidità relativa dovrebbe essere almeno 30%. *Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.*
Transitori/treni elettrici veloci *Electrical fast transient/burst* IEC 61000-4-4	±2 kV per le linee di alimentazione di potenza_*for power supply lines* ±1 kV per le linee di ingresso/uscita_*for input/output lines*	±2 kV per le linee di alimentazione di potenza_*for power supply lines* ±1 kV per le linee di ingresso/uscita_*for input/output lines*	La qualità della tensione di rete dovrebbe essere quella di un tipico ambiente commerciale o ospedaliero. *Mains power quality should be that of a typical commercial or hospital environment.*
Sovratensioni *Surge* IEC 61000-4-5	±1 kV linea – linea *line-line* ±2 kV linea - terra *line - earth*	±1 kV linea – linea *line-line* ±2 kV linea - terra *line - earth*	La qualità della tensione di rete dovrebbe essere quella di un tipico ambiente commerciale o ospedaliero. *Mains power quality should be that of a typical commercial or*

			hospital environment.
Buchi di tensione, brevi interruzioni e variazioni di tensione sulle linee di ingresso dell'alimentazione *Voltage dips, short interruptions and voltage variations on power supply input lines* IEC 61000-4-11	<5% U_T (>95% buco in_*dip in* U_T) per_*for* 0,5 cicli_*cycle* 40% U_T (60% buco in_*dip in* U_V) per_*for* 5 cicli_*cycles* 70% U_T (30% buco in_*dip in* U_T) per_*for* 25 cicli_*cycles* <5% U_T (>95% buco in_*dip in* U_T) per_*for* 5 sec	<5% U_T (>95% buco in_*dip in* U_T) per_*for* 0,5 cicli_*cycle* 40% U_T (60% buco in_*dip in* U_V) per_*for* 5 cicli_*cycles* 70% U_T (30% buco in_*dip in* U_T) per_*for* 25 cicli_*cycles* <5% U_T (>95% buco in_*dip in* U_T) per_*for* 5 sec	La qualità della tensione di rete dovrebbe essere quella di un tipico ambiente commerciale o ospedaliero. Se l'utilizzatore del PREMIUM 400 richiede un funzionamento continuato anche durante l'interruzione della tensione di rete, si raccomanda di alimentare il PREMIUM 400 con un gruppo di continuità (UPS) o con batterie. *Mains power quality should be that of a typical commercial or hospital environment. If the user of the* PREMIUM 400 *requires continued operation during power mains interruptions, it is recommended that the* PREMIUM 400 *be powered from an uninterruptible power supply or a battery*
Campo magnetico a frequenza di rete (50/60 Hz) *Power frequency (50/60 Hz) magnetic field* IEC 61000-4-8	3 A/m	3 A/m	I campi magnetici a frequenza di rete dovrebbero avere livelli caratteristici di una località tipica in ambiente commerciale o ospedaliero. *Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment*
Nota_e U_T è la tensione di rete in c.a. prima dell'applicazione del livello di prova *U_T is the a.c. mains voltage prior to application of the test level*			

TABELLA 4

TABLE 4

GUIDA E DICHIARAZIONE DEL COSTRUTTORE – IMMUNITÀ ELETTROMAGNETICA – PER GLI APPARECCHI ED I SISTEMI CHE NON SONO DI SOSTENTAMENTO DI FUNZIONI VITALI

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY – FOR EQUIPMENT AND SYSTEMS THAT ARE NOT LIFE-SUPPORTING

Il PREMIUM 400 è previsto per funzionare nell'ambiente elettromagnetico sotto specificato. Il cliente o l'utilizzatore del PREMIUM 400 deve garantire che esso venga usato in tale ambiente.

The PREMIUM 400 is intended for use in the electromagnetic environment specified below. The customer or the user of the PREMIUM 400 should assure that it is used in such an environment.

Prova di immunità ***Immunity Test***	**Livello di prova IEC 60601** ***IEC 60601 test level***	**Livello di conformità** ***Compliance level***	**Ambiente elettromagnetico – Guida** ***Electromagnetic environment - Guidance***
			Gli apparecchi di comunicazione a RF portatili e mobili non dovrebbero essere usati più vicino a nessuna parte del PREMIUM 400 compresi i cavi, della distanza di separazione raccomandata calcolata con l'equazione applicabile alla frequenza del trasmettitore *Portable and mobile RF communications equipment should be used no closet to any part of the PREMIUM 400, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.* **Distanza di separazione raccomandata**

			Recommended separation distance
RF condotta *Conducted RF* IEC 61000-4-6	3 Veff_Vrms da 150 kHz a 80 MHz *150 kHz to 80 MHz*	3 V	$d = \left[\frac{3,5}{V_1}\right]\sqrt{P}$
RF irradiata *Radiated RF* IEC 61000-4-3	3 V/m da 80 MHz a 2,5 GHz *80MHz to 2,5 GHz*	3 V/m	$d = \left[\frac{12}{E_1}\right]\sqrt{P}$ da 80 MHz a 800 MHz *80 MHz to 800 MHz* $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ da 800 MHz a 2,5 GHz *800 MHz to 2,5 GHz*
			ove P è la potenza massima nominale d'uscita del trasmettitore in Watt (W) secondo il costruttore del trasmettitore e *d* è la distanza di separazione raccomandata in metri (m). *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 metres (m).* Le intensità di campo dei trasmettitori a RF fissi, come determinato da un'indagine elettromagnetica[a] del sito potrebbe essere minore del livello di

			conformità in ciascun intervallo di frequenza[b] *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].* Si può verificare interferenza in prossimità di apparecchi contrassegnati dal seguente simbolo: *Interference may occur in the vicinity of equipment marked with the following symbol:* 

Note_s:

(1) A 80 MHz e 800 MHz; si applica l'intervallo di frequenza più alto.

At 80 MHz and 800 MHz, the higher frequency range applies.

(2) Queste linee guida potrebbero non applicarsi in tutte le situazioni. La propagazione elettromagnetica è influenzata dall'assorbimento e dalla riflessione di strutture, oggetti e persone.
These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a Le intensità di campo per trasmettitori fissi come le stazioni base per radiotelefoni (cellulari e cordless) e radiomobili terrestri, apparecchi di radioamatori, trasmettitori radio in AM e FM e trasmettitori TV non possono essere previste teoricamente e con precisione. Per valutare un ambiente elettromagnetico causato da trasmettitori RF fissi, si dovrebbe considerare un'indagine elettromagnetica del sito. Se l'intensità di campo misurata nel luogo in cui si usa un PREMIUM 400, supera il livello di conformità applicabile di cui sopra, si dovrebbe porre sotto osservazione il funzionamento normale del PREMIUM 400. Se si notano prestazioni anormali, possono essere necessarie misure aggiuntive come un diverso orientamento o posizione del PREMIUM 400.

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 PREMIUM 400 is used exceeds the applicable RF compliance level above, the PREMIUM 400 should be observed

to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the PREMIUM 400.

b L'intensità di campo nell'intervallo di frequenza da 150 kHz a 80 MHz dovrebbe essere minore di [V_1] V/m

Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V_1] V/m.

TABELLA 6

TABLE 6

DISTANZE DI SEPARAZIONE RACCOMANDATE TRA APPARECCHI DI RADIOCOMUNICAZIONE PORTATILI E MOBILI E PREMIUM 400 PER APPARECCHI O SISTEMI CHE NON SONO DI SOSTENTAMENTO DELLE FUNZIONI VITALI

RECOMMENDED SEPARATION DISTANCES BETWEEN PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT AND THE PREMIUM 400 FOR EQUIPMENT AND SYSTEM THAT ARE NOT LIFE-SUPPORTING

Il PREMIUM 400 è previsto per funzionare in un ambiente elettromagnetico in cui sono sotto controllo i disturbi irradiati RF. Il cliente o l'operatore del PREMIUM 400 possono contribuire a prevenire interferenze elettromagnetiche assicurando una distanza minima fra gli apparecchi di comunicazione mobili e portatili a RF (trasmettitori) e il PREMIUM 400 come sotto raccomandato, in relazione alla potenza di uscita massima degli apparecchi di radiocomunicazione.

The PREMIUM 400 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the PREMIUM 400 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the PREMIUM 400 as recommended below, according to the maximum output power of the communications equipment.

Potenza di uscita massima del trasmettitore specificata ***Rated maximum output power of transmitter*** ***W***	**Distanza di separazione alla frequenza del trasmettitore (m)** ***Separation distance according to frequency of transmitter (m)***		
	Da 150 kHz a_*to* 80 MHz	**Da 80 MHz a_*to* 800 MHz**	**Da 800 MHz a_*to* 2,5 GHz**
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,20	1,20	2,30
10	3,80	3,80	7,30
100	12,00	12,00	23,00

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