Electrotherapeutic Apparatus

HI-E Sonyc

User's manual

For a correct use of the apparatus, please read this manual carefully before use.
After reading it, keep it for future reference.

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CONTENTS

Cap.1 PRECAUTIONS FOR USE

Carefully read and follow the precautions for use exactly as set out, before using the apparatus.

The user manual is necessary for the safe operation of the unit. If the apparatus is lent or sold to any third party, make sure that the manual accompanies it.

1.1 Contraindications

Do not use the unit with the following devices and in the areas specified below.

- Pacemaker devices or other medical devices.
- Ischemic tissue/ischemic subject
- Areas with moderate or larger edema
- Areas considered to be sore by the patient
- Individuals suffering from acute discomfort
- Individuals with heart problems
- Individuals with hemorrhagic diathesis
- Individuals suffering from malignant tumours
- Pregnant women or women in labour
- Skin suffering from abrasions or inflammation
- Febrile patients
- Patients suffering from contagious diseases
- TB patients
- Varicose skin surfaces
- Surface of the skin with atrophic contractures
- Individuals with abnormal blood pressure or vascular disorders
- Other patients deemed to be invalid by the doctor
- Febrile patients
- Areas corresponding to bone growth in adolescents
- Head, eyes, male sexual organs, endocrine glands, spinal cord
- Areas previously treated with X-rays or radioactive isotopes therapy

1.2 Contraindications for combined therapy

- Do not use this apparatus with an electrocardiograph or other medical devices
- Do not use this apparatus with other devices except those specified. Before using this apparatus with other instruments, review the contraindications and precautions
- Do not connect this system to individuals already connected to surgical devices.

Cap.2 INTENDED USE

EMS MODE, RUSSIAN (KOTZ), HIGH VOLTAGE, FARADIC

1. Treatment and relaxation of muscle spasms
2. Prevention or relaxation of atrophy from lack of use
3. Increased local blood circulation
4. Muscle re-education
5. Maintaining or increasing the range of motion
6. Postoperative or post-surgical stimulation of the calf to prevent venous thrombosis

TENS MODE, MENS, INTERFERENTIAL 2 and 4 poles, DIADYNAMIC

1. Symptomatic relief of chronic pain or untreatable pain
2. Controlling acute pain conditions combined with post-operative or post-surgical

EXPONENTIAL MODE, RECTANGULAR, TRIANGULAR

1. Rehabilitation of denervated muscles

DC MODE

1. Iontophoresis, hyperhidrosis

ULTRASOUND MODE

1. Relief from pain
2. Relief from muscle spasms
3. Relief from joint contractures

Cap.3 PRECAUTIONS FOR USE

3.1 General precautions

- Make sure that the patient is in a comfortable position and is relaxed during treatment.
- Do not use accessories from other equipment for the therapy
- Be careful of the electrolysis of the skin under the electrode while using the DC mode
- Do not use this system at less than 1.5 m away from a system of short-wave therapy or microwave therapy. The proximity may change the parameters.
- Follow the instructions below when installing the system:
- Avoid placing the unit where it could be reached by splashing water
- Avoid placing the system where it may be affected by atmospheric pressure, temperature, humidity, sunlight, dust, sulphur or any other adverse factors.
- Ensure that the system is stable. Do not tip the apparatus. Avoid vibrations and impacts (this also applies to the transport).
- Avoid flammable atmospheres, flammable anaesthetic gases combined with oxygen, nitrate, air, flammable detergents or disinfectants combined with air.
- Avoid places where chemicals are stored or where they might leak gas.

- Do not install the system near a fire. Doing so could cause an accident or deformation.
- Always pay attention to the power, voltage and current (power consumption)
- Use a 230V power outlet exclusively.

Cap.4 PRECAUTIONS BEFORE USE

- Do not use this apparatus with an electrocardiograph or other medical devices
- Use extreme caution when using this apparatus with other diagnostic devices, since such use could result in incorrect diagnosis.
- The simultaneous use of this apparatus with other instruments may cause burns on the skin under the electrode stimulation or damage the stimulation unit. Avoid this kind of combined use.
- Except for the ultrasound probe, do not perform treatments with wet hands. This may cause electric shock.
- Designate an administrator in charge of the unit. Only qualified personnel should adjust the device.
- With the exception of the area to be treated, do not place conductive metal parts in contact with the head of the ultrasound probe. This may cause electric shock.

CAUTION When installing the unit, pay attention to the following aspects:

- Avoid placing the system in a location where the apparatus can be reached by splashing water
- Avoid placing the system where it may be affected by atmospheric pressure, temperature, humidity, sunlight, dust, sulphur or any other adverse factors.
- Ensure that the system is stable. Do not tip the apparatus. Avoid vibrations and impacts (this also applies to the transport).
- Avoid flammable atmospheres, flammable anaesthetic gases combined with oxygen, nitrate, air, flammable detergents or disinfectants combined with air.
- Avoid places where chemicals are stored or where they might leak gas.
- Check the voltage, frequency and the allowed current (or energy consumption) for the power supply unit.
- In order to avoid accidents due to a distortion of the main unit and accessories, keep the apparatus away from flames or fire.
- If you use the apparatus at a short distance from a product that generates a loud noise, proximity may change the parameters. Take appropriate action, such as moving the apparatus to a safe distance from such noise.
- Make sure that all cables are connected correctly and securely.
- Do not connect this system to individuals already connected to surgical devices.
- Do not use components from other equipment for the therapy in order not to cause an accident.
- Carefully recheck the probes and electrodes that come into direct contact with the patient.
- If the patient should feel an unusual sensation or suffer from a rash, redness, itching, or other unusual symptoms during treatment, immediately discontinue therapy and take the appropriate action.
- When attaching the plug to the socket, make sure the apparatus is switched off.

Cap.5 PRECAUTIONS DURING USE

General precautions for electrotherapy, ultrasound, and combined therapy.

1-Make sure that the duration and intensity of THE treatment are suitable for the scope of the treatment.
2-Make sure that the patient is able to state if he/she suffers unusual pain sensations during treatment.
3-Set the pulse power so as to ensure optimal levels for therapy.
4- Some patients under anaesthesia may not be able to properly evaluate the intensity of stimulation that could be excessive. Monitor the status of the patient, not only before treatment, but also during treatment.
5- If the sensitivity of the patient's skin has been compromised in any way, evaluate whether it is appropriate to proceed with therapy.
6-Instruct the patient to signal if he/she feels any unusual symptoms during treatment and take the appropriate action, for example immediately discontinue therapy.
7- Take care not to exceed the duration and intensity of the treatment.
8-Continuously monitor the apparatus and the patient for any irregularities. If you should encounter problems, switch off the unit in a way that is safe for the patient.
9-To prevent accidents, ensure that the patient does not touch and does not use the system.
10-To prevent accidents, avoid the use of metallic parts or other objects at the output ports
11-Do not use the apparatus continuously for longer than 60 minutes or in ways not otherwise described in the operating manual. This could damage the skin or cause an accident.
12-Set the impulse to zero if you are not performing any treatment.
13-If the apparatus is operating close to a product with a low electromagnetic shield, the product may be affected resulting in incorrect operation or breaking down.
14-Do not exert too much pressure on the touch screen.
15-Do not perform any treatment with the applicators positioned around the heart. Be careful of the electrolysis of the skin under the electrode while using the DC mode Precautions for ultrasound therapy 1. Use only the indicated ultrasound probe. Using others can cause malfunctions or accidents.
2.In order to avoid malfunctions or accidents, handle the probe with care.
3-Check-metal parts, in particular pacemakers, implanted in areas of the body below the area to be treated.
4-To obtain the desired effectiveness, position the probe properly so that the head is fully in contact with the skin. In case of improper positioning, the head of the probe may even overheat.
5-If the probe head overheats, immediately discontinue therapy. 5
6- If you put too much gel on the surface of the probe while the unit is on, the probe may overheat or have a malfunction. Remove excess gel from the ultrasound probe.
7- This device has an inside technology that continuously control the current supplied to the patient and allow to increase the current only when the value of the current isn’t dangerous for the patient or the device itself. The device also allow to increase the

current value only when the current is pouring into the patient at the maximum value already set. The device show to the user that is not possible to increase the current thanks to a red signal around the intensity indicator. Decreasing is always possible.

Precautions for electrotherapy

1- Use only appropriate electrodes. Using other electrodes could cause burns due to an excess of power or current density.

Cap.6 PRECAUTIONS AFTER USE

1-After use, turn off the switch and store the apparatus in a proper place.
2-Before removing the electrode cable from the connection port, make sure that the unit is turned off
3-When you remove a cable or tube, always hold the plug and not the cord in order to prevent malfunction or damage.
4-Clean the system and accessories before storing in order to avoid problems in subsequent treatments
5-If the unit remains unused for a long time, unplug the power cord from the outlet.

Cap.7 STORAGE CONDITIONS AND MAINTENANCE INTERVALS

- To prevent malfunctions, follow the instructions below when storing the system.
- Avoid locations where the unit can be reached by splashing water
- Avoid placing the system where it may be affected by atmospheric pressure, temperature, humidity, sunlight, dust, sulphur or any other adverse factors.
- Ensure that the system is stable. Do not tip the apparatus. Avoid vibrations and impacts (this also applies to the transport).
- Avoid places where chemicals are stored or where they might leak gas.
- Unplug the power cord if the machine remains unused for long periods of time.

Cap.8 PRECAUTIONS FOR USE

- Never touch the apparatus with wet hands
- Avoid heavy vibrations and strong impact. These may cause hidden damage and eventual malfunctions or accidents.
- Follow and enforce all local regulations on the disposal of waste for the system and its accessories at the end of their working life.

Cap.9 MAINTENANCE AND INSPECTIONS

Precautions

- If the system detects a malfunction, do not try to fix it yourself. Mark the apparatus as non-operating and contact your dealer or the manufacturer for the repair.
- Do not try to change the system
- Never open the system
- To avoid discoloration and deterioration avoid using solvents, diesel fuel, kerosene, gasoline, cleaning powders, hot water or chemicals to clean the unit and its accessories.
- Clean it using a cloth soaked in alcohol, cold or lukewarm water, or a neutral detergent.

Maintenance and inspections performed by the user

- Check the system and accessories every time you use it to confirm that they work perfectly.
- Contact your dealer or the manufacturer if you notice problems (e.g. tears or breaks on the shielding of the power cord or accessories, damaged wires, or defective contacts of the connectors) during the preliminary inspection.
- Refer to the operating manual for information on daily inspections
- Before using the apparatus after a long period of time, inspect it to make sure the system works perfectly and safely.

Maintenance and inspections performed by the dealer

- Ask the dealer to perform a periodic check or inspection (target: annual), inspection to ensure the performance of the system and to ensure safe and appropriate operations.
- Periodically replace worn parts (including accessories) to prevent risks when you use the system and its accessories.

Maintenance/inspections

ITEM	DETAILED INSTRUCTION	METHOD
Aspect and signals	-Check for damages -Check that the signals on the LCD screen are readable	Visual inspection
Operations	-Turn on the switch and make sure that the LCD screen is working correctly -Check that the unit operates as described in the operating manual	Check operation
Accessories	-Check for any damages -Check for any ruptures of the cables	Visual inspection
Safety	-Disconnect the applicator plate from the apparatus or disconnect the power cord of the electrodes while the apparatus is on and check error messages or the stopping of the current - Make sure that the unit locks automatically if you are not performing any treatment for a period of at least three minutes after the ultrasound mode has been imported.	Check operation
Ultrasound inspection	Make sure that a drop of water placed on the ultrasound probe vaporizes when the unit is turned on	Check operation

	Ambient temperature	Humidity	Pressure
Work environment	10/40 °	30/75%	700/1060hPa
Storing environment	-10/60°	30/95%	700/1060hPa
Transport conditions	-10/60°	30/95%	700/1060hPa

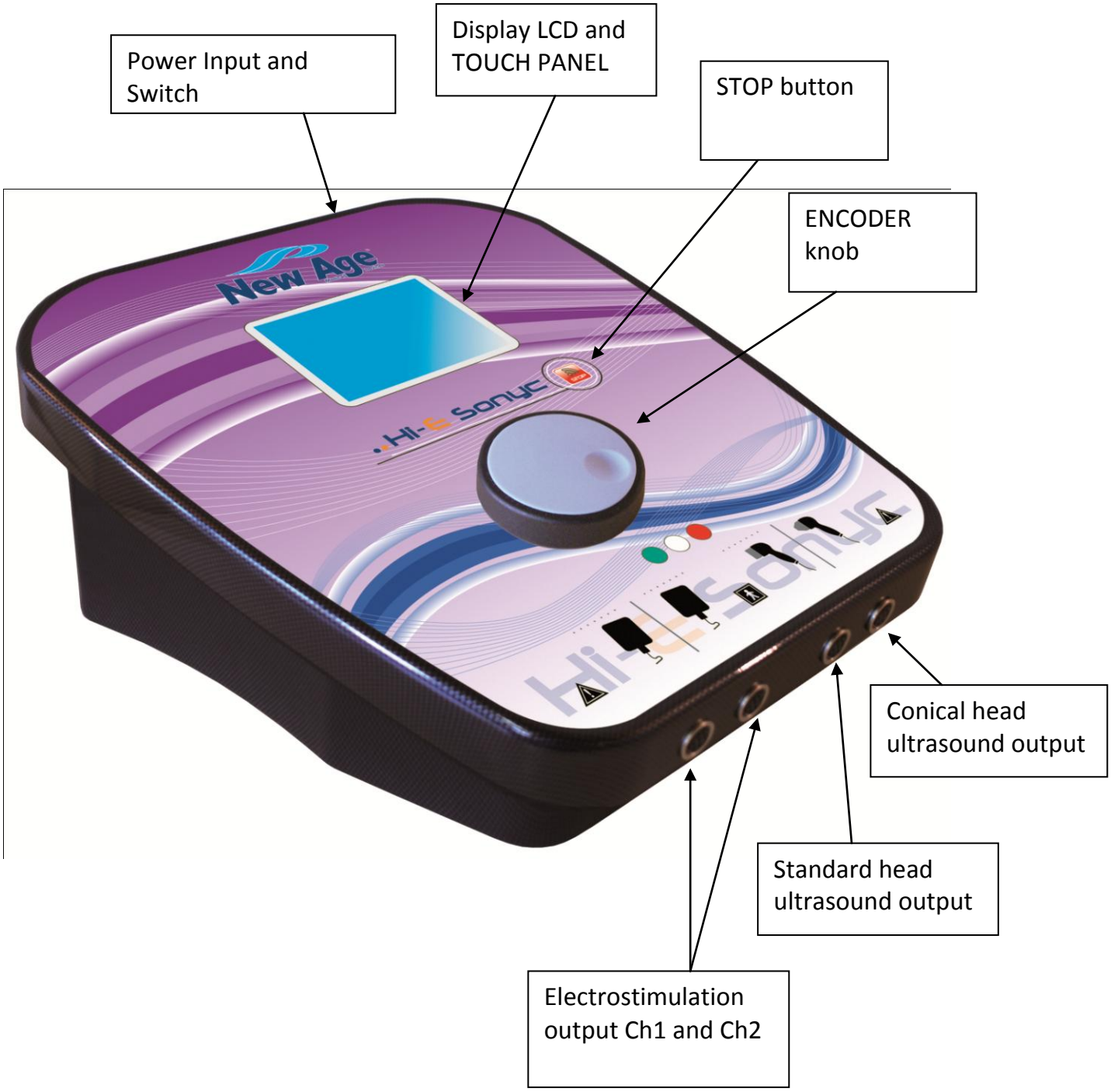
Cap.10 SPECIFICATIONS

Power supply: AC100-240V, 50/60Hz (CE0123 certificate)
Power consumption: 95 VA Safety class:
Class II Type BF Time: Electrotherapy: from 1 to 60 min ± 5. Ultrasound: from 1 to 60 min ± 5.
Frequency oscillation：

（1） Low frequency: from 0.5 to 400Hz±20％
（2） Medium frequency: 2kHz, 2.5kHz, 4kHz, 5kHz （±10％）
（3） Ultrasound: a） large probe :1MHz, 3MHz b） small probe:1MHz, 3MHz

Maximum current emission： 300mA peak（500Ω）
Maximum voltage emission：
（1） Medium-low frequency:150V±20％ (peak value under 500Ω) （2） Interferential : 50V±20％ (peak value under 500Ω)
Maximum ultrasound intensity: continuous 3.00W/cm2
Size: 370 mm x 440 mm x 200 mm Weight: Approx. 5 KG

Cap.11 NAMES OF THE PARTS



Cap.12 PREPARATION

Designate a person that is responsible for this system. This person shall make sure that the apparatus is used according to these operations.

1. Make sure that switch of the main unit is off.

2. Connect the supply cable to the main unit

3. Choose an electrode therapy suitable for the treatment and the area you intend to treat, and connect the cable of the electrodes to the corresponding port of the main unit.

4. Electrodes made of conductive silicone and adhesive electrodes may be also used.

5. Insert the plug into the socket

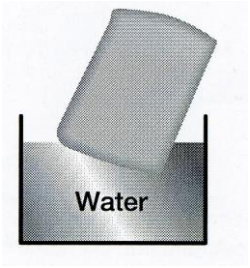
6. Turn on the unit.

12.1 CONDUCTIVE SILICONE ELECTRODES

1. Follow the instructions when setting the system configuration

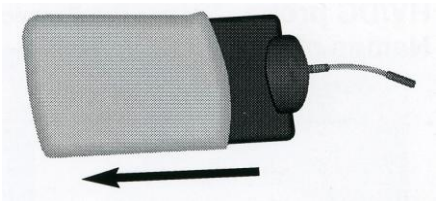
2. Make sure that the unit is switched off.

3. Moisten the sponge of the electrode in water, then squeeze it gently, until no more water drips from the electrode.

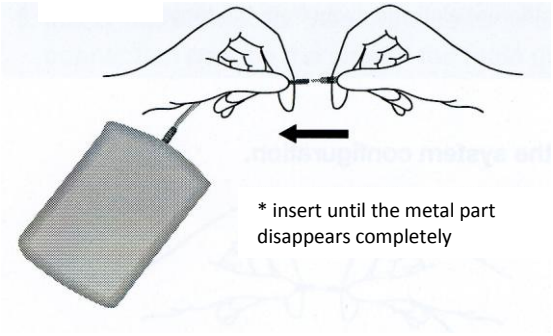


4. Insert the silicone electrode into the sponge

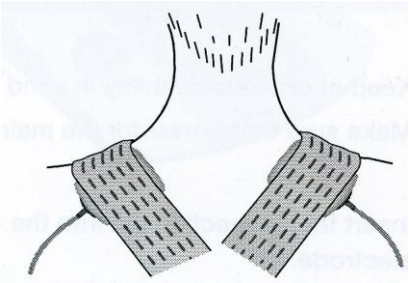
*Insert the entire electrode up to the bottom of the sponge



5. Connect the electrode cable to the electrode



6. Wrap the strips on the area to be treated, then insert the electrode between the strips and the skin.



7. Connect the power cable of the electrode to the main unit into the port on the front of the unit.

12.2 Taking care of the applicator

- Silicone Electrode: After use, clean it with warm water. If necessary, clean it with a more powerful substance, use an alcohol solution of 70% alcohol.
- Electrode sponge: after use, clean with a mild detergent dissolved in warm water, and remove the detergent from the sponge. Make sure the sponge is dry before storing it.

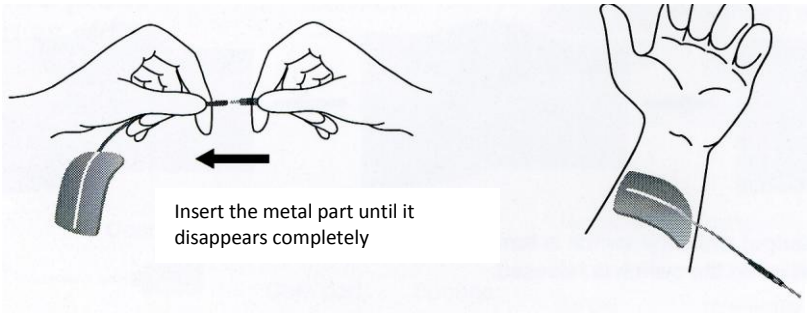
12.3 Adhesive electrode

1. Follow the instructions when setting the system configuration

2. Make sure that the unit is switched off.

3. Insert the connecting pin in the electrode.

4. Attach the electrode firmly to the area to be treated



* If the electrode is not perfectly applied to the skin, an error may occur when treatment is initiated

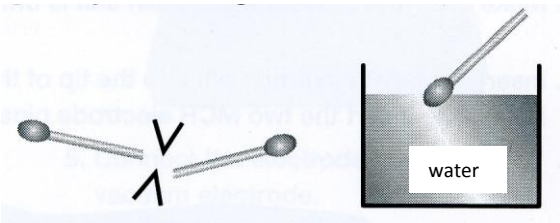
5. Insert the connecting cable for the electrodes in the port on the front of the main unit.

⚠ **CAUTION SELF-ADHESIVE ELECTRODES**

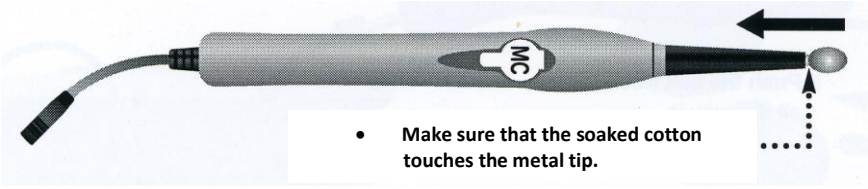
1. **Do not use on damaged skin.**
2. **Immediately discontinue treatment if the skin becomes rough to the touch or burned.**
3. **Residue from skin lotions, oils or other cosmetic substances may interfere with the proper adhesion of the electrodes. Wash skin with soap and warm water and dry it well before attaching the electrodes.**
4. **Insert the mini plug of the electrode until the metal part of the cable is fully inserted.**
5. **When you remove the electrodes from the skin or from the support surface, pull from the edge and slowly lift. Never pull the cord**
6. **Ensure that the electrodes adhere well to the skin. Non-adherent surfaces could increase the stimulation and cause pain.**
7. **Make sure that the unit is turned off when you remove the electrodes from the skin.**
8. **Reposition the electrodes on the support when you remove them from the skin. Hold them at room temperature.**
9. **Adhesive electrodes are replaceable. When the adhesion is decreased (average life is more or less 15/20 applications), replace the electrode with a new one.**
10. **Make sure that the patient to be treated is not suffering from contagious diseases. The infection may be transmitted through the system to other patients.**

12.4 mcr (micro-current) probe - (optional)

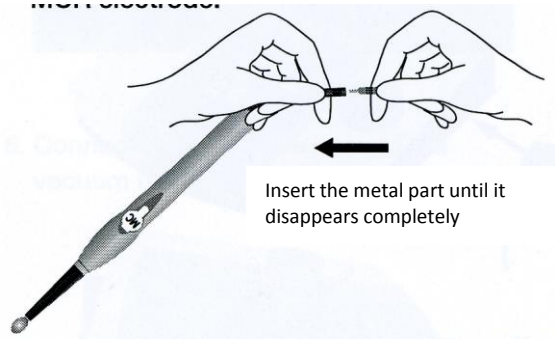
- Use the micro-current probe only in micro current mode. Do not use it in any other way.
- Use the micro-current probes in pairs
- Follow the instructions when setting the system configuration
- Make sure that the unit is switched off.
- Break a cotton swab in half and dip the tip into water.



- Insert half of the cotton swab into the top of the micro current probe.



- Connect the electrode cable to the MCR electrode



- Insert the connecting cable for the electrodes in the entry port located on the side of the main unit.

*The pad dries quickly. Wet it from time to time.
*When the probe is used near the optic nerves (below the corner of the eyes), depending on the intensity, the patient could see a bright light or a flash. This is not dangerous, reduce the power if this bothers the patient.
*Use a cotton swab once, then discard it. Do not use the cotton swab on another patient.

⚠ **CAUTION**

When using the micro current mode for the limbs, trunk or joints for long periods of time, use rubber electrodes or self-adhesive electrodes.

12.5 Microcurrent probe with two poles (optional)

- Use the micro-current probe with two poles only in micro current mode. Do not use it in any other way.

- Follow the instructions when setting the system configuration

- Make sure that the unit is switched off.

- Insert the pin of the MCR electrode into the top of the micro current probe with two poles. Be sure to insert both pins of the MCR electrode.

*Push the pin all the way in

- Insert the connecting cable for the electrodes in the entry port located in front of the main unit.

- Apply gel (optional) to the area to be treated and treat the area covered with gel.

*When the probe is used near the optic nerves (below the corner of the eyes), depending on the intensity, the patient could see a bright light or a flash. This is not dangerous, reduce the power if this bothers the patient.

⚠ **CAUTION**

When using the micro current mode for the limbs, trunk or joints for long periods of time, use rubber electrodes or self-adhesive electrodes.

12.6 Ultrasound probe (optional conical head)

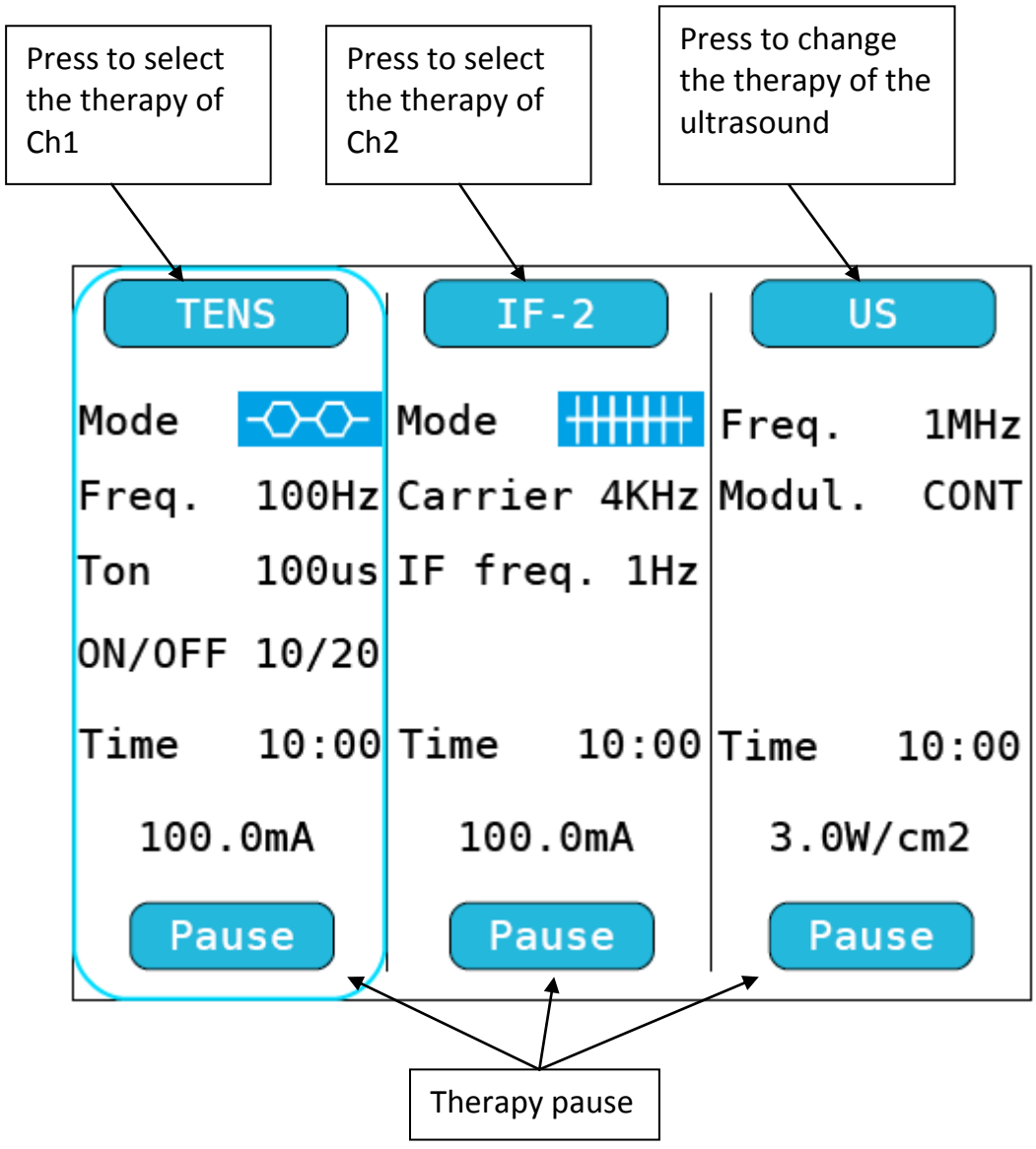
- Follow the instructions when setting the system configuration

- Make sure that the unit is switched off.

- Insert the connecting cable for the electrodes in the entry port located in front of the main unit.

- Apply gel to the area to be treated and treat the area covered with gel.

Cap.13 INITIAL SCREENS



⚠ **CAUTION**

Depending on the current and the configured parameters, the machine may automatically limit the current delivered in order to maintain the safety of the patient and of the device. The machine indicates this situation by flashing the actual current value, which in this situation will be red.

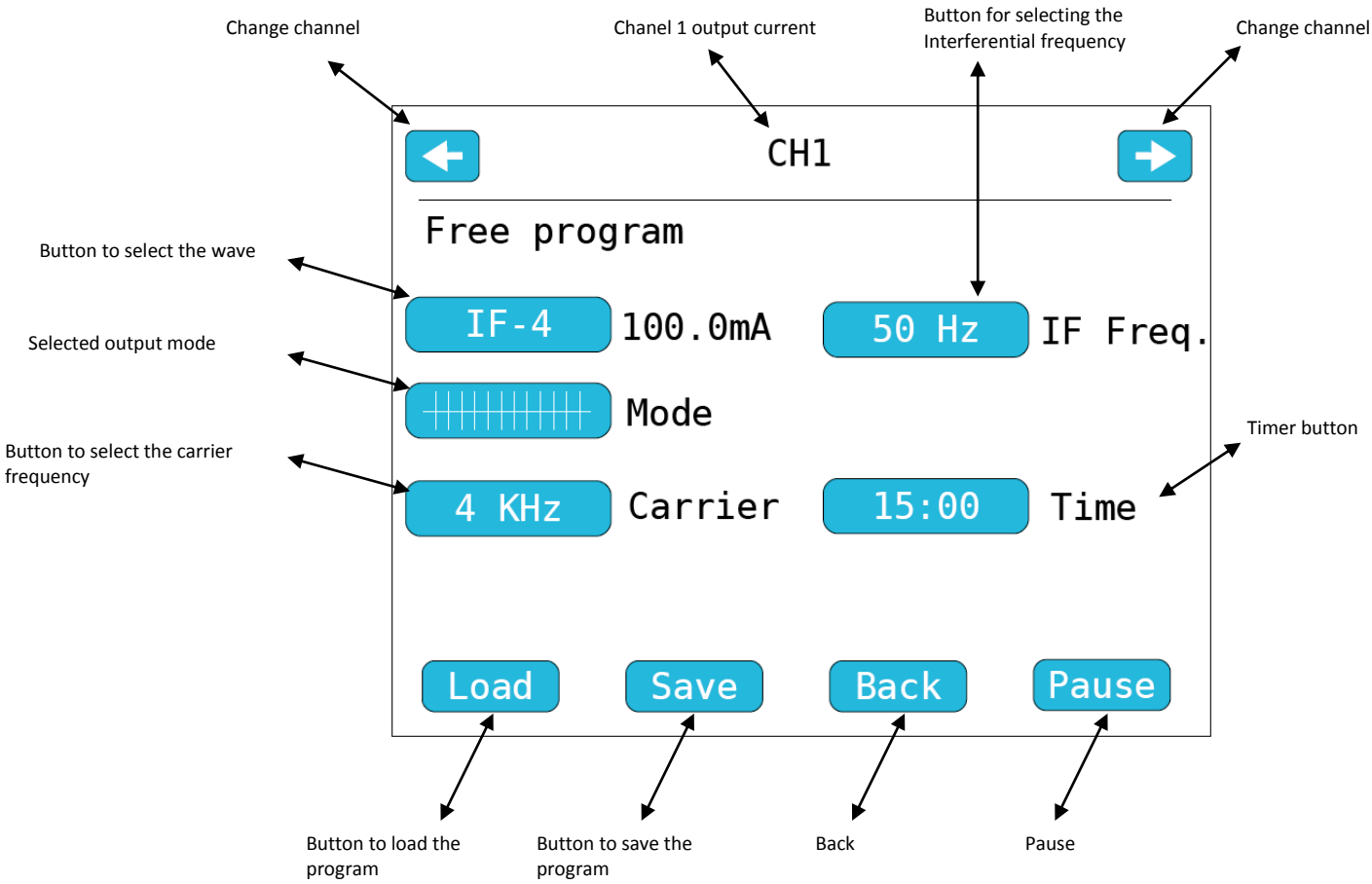
Cap.14 INTERFERENTIAL MODE WITH 4 POLES

14.1 Requirements for use

ELECTRODES Silicone electrode, self-adhesive

COMBINED CHANNELS It can not be combined with any other mode

Display Screen



14.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

3. Tap 

to select the mode.. The selected mode will light up. Tap OK to close the window.

4. Change the setting of the parameter, if necessary.

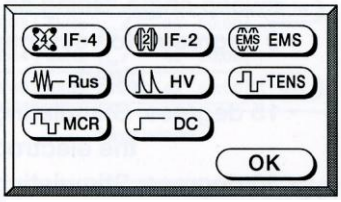
5. Output current mode - Tap the button for the selection of the output current mode to open the sub-window. Tap  Constant Mode or  Ramp up mode. Tap OK to close the sub-window.

6. Carrier frequency - Tap the button for the selection of the carrier frequency 2/4/5 KhZ to open the sub-window.

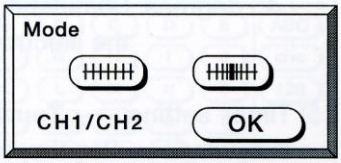
7. Interferential frequency ------ Tap the button for the selection of the interferential frequency to open the sub-window. When the power mode is set to constant, set a value with the control knob for parameter/intensity, then tap OK to close the sub-window.

8. Select the scan mode (sweep) to access the MAX and MIN selection. Tap to select the frequency you want to change, then use the control knob for parameter/intensity to change the value. Tap OK to close the sub-window.

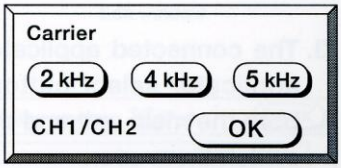
9. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



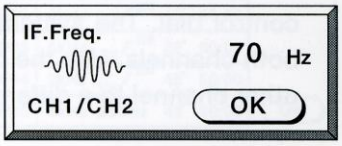
Therapy selection sub-window



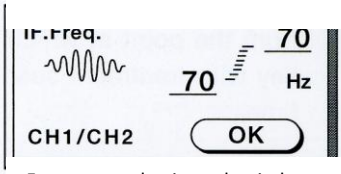
Power selection sub-window



Frequency selection sub-window



Frequency selection sub-window
Interferential (constant mode)



Frequency selection sub-window
Interferential (frequency scan mode)

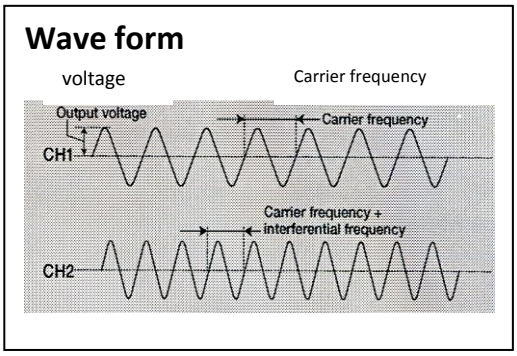
14.3 USING THE INTERFERENTIAL MODE WITH 4 POLES

1. With all the sub-windows closed, turn the intensity control of channels 1 and 2. The system will start automatically on both channels. To stop the treatment, press the Pause button. If the power is increased while the treatment is stopped, the system will resume from zero. Press the pause button with the treatment stopped to return to the timer and set the time. *Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

2. The system will automatically stop when the time elapses.

14.4 PARAMETER INTERVALS OF THE INTERFERENTIAL MODE WITH 4 POLES

Power: Constant/Ramp up (sweep)
Carrier frequency: 2/4/5 kHz
Interferential frequency: from 1 to 250 Hz
(in 1 Hz increments from 1 to 10, and in 10 Hz increments from 10 to 250)
Time: from 1 to 60 min (in a 1 minute increment)
Current: from 0.5 to 100 mA (current peak, in 0.5-mA increments).



Cap.15 INTERFERENTIAL MODE WITH 2 POLES

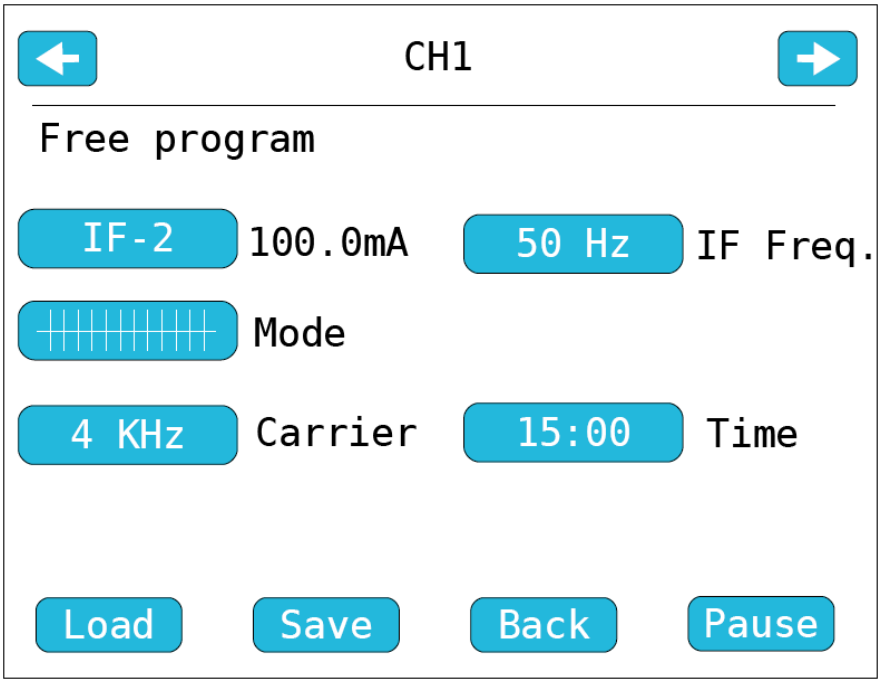
15.1 REQUIREMENTS FOR USE

ELECTRODES Silicone electrode, self-adhesive

COMBINED CHANNELS (*2) Each channel must be used independently

*2 excludes (Co-cont - simultaneous mode) and alternative mode 2 pole IF, EMS, MENS Russian (KOTZ), TENS and High Voltage (HI-V).

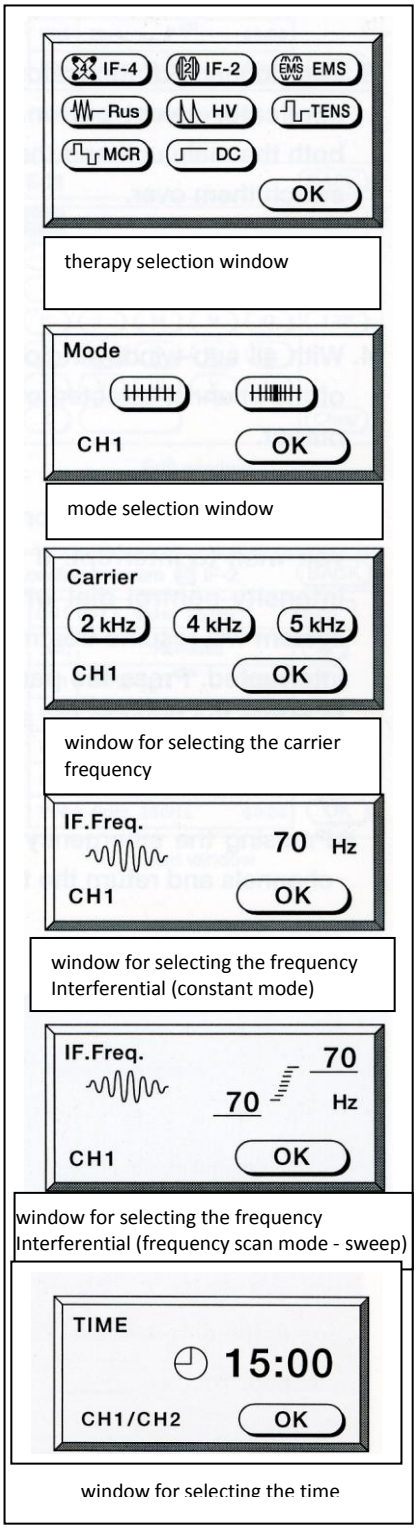
Display Screen



15.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.
2. Tap the button for the selection of the therapy to open the sub-window.
3. Tap 

to select the mode.. The selected mode will light up. Tap OK to close the window.
4. Change the setting of the parameter, if necessary.
5. Output current mode - Tap the button for the selection of the output current mode to open the sub-window. Tap  Constant Mode or  Ramp up mode. Tap OK to close the sub-window.
6. Carrier frequency - Tap the button for the selection of the carrier frequency 2/4/5 KhZ to open the sub-window.
7. Interferential frequency ------ Tap the button for the selection of the interferential frequency to open the sub-window. When the power mode is set to constant, set a value with the control knob for parameter/intensity, then tap OK to close the sub-window.
8. When the current is set to sweep, the MIN and MAX mode can be selected. Tap to flash the frequency you want to change, then use the control knob for parameter/intensity to change the value. Tap OK to close the sub-window.
9. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.
10. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.



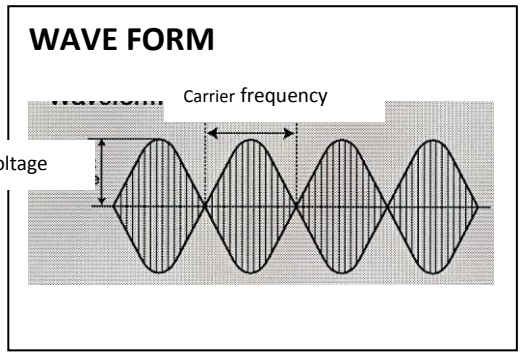
11. To stop the treatment, press the button of the channel you want to stop. If the power is increased while the treatment is stopped, the system will resume from where it was stopped. Press the pause button with the treatment stopped to return to the timer and set the time.

*Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

12. The system will automatically stop when the time elapses.

15.3 PARAMETER INTERVALS OF THE INTERFERENTIAL MODE WITH 2 POLES

Power: Constant/Ramp up (sweep)
Carrier frequency: 2/4/5 kHz
Interferential frequency: from 1 to 250 Hz
(in 1 Hz increments from 1 to 10, and in 10 Hz increments from 10 to 250)
Ramp up: 0/15/30/45 degrees
Time: from 1 to 60 min (in a 1 minute increment)
Current: from 0.5 to 100 mA (current peak, in 0.5-mA increments).



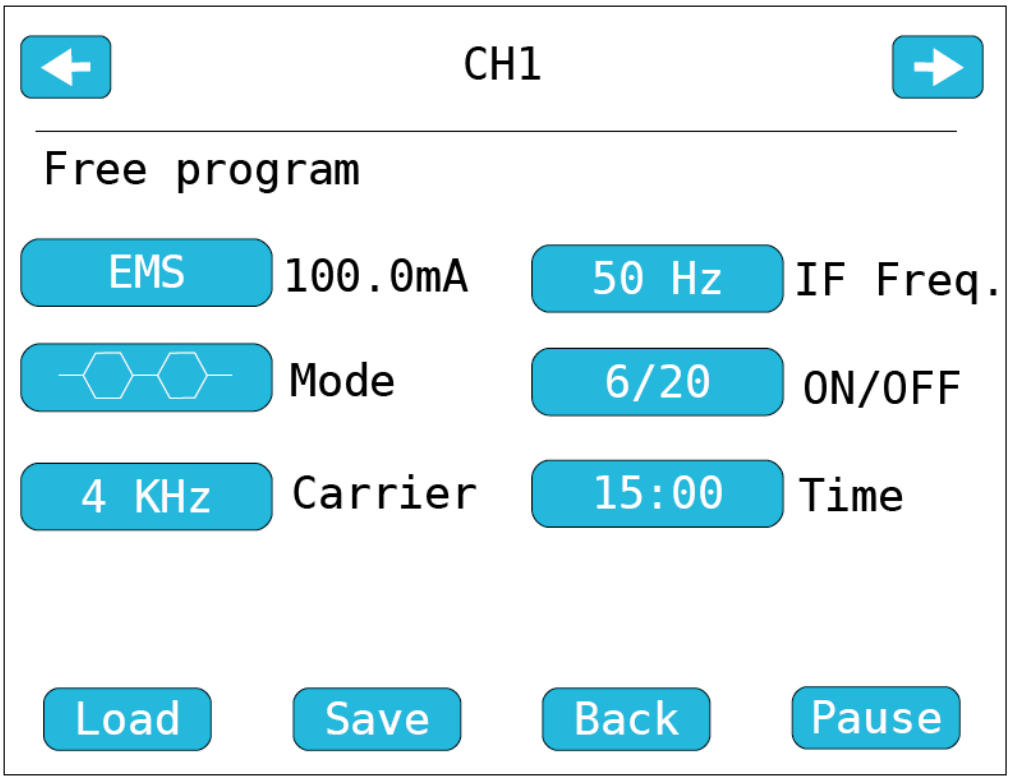
Cap.16 EMS MODE

16.1 REQUIREMENTS FOR USE

ELECTRODES	Silicone electrode, self-adhesive
COMBINED CHANNELS*2	-Independent Operating mode , each channel must be used independently. -Simultaneous mode on two channels or alternative mode on two channels , the channels may be used combined Chanel 1 - Chanel 2.

*2 excludes the simultaneous mode and alternative mode 2-pole IF, EMS, Russian (KOTZ), MENS TENS and high voltage (HI-V).

Display Screen



16.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

3. Tap EMS to select the mode.. The selected mode will light up. Tap OK to close the window.

4. Change the setting of the parameter, if necessary.

5. Output current mode - Tap the button for the selection of the power mode to open the sub-window. Tap CH1/CH2, Co-cont or alternate. Tap OK to close the sub-window.

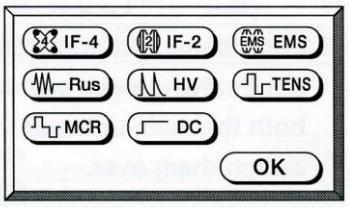
6. Attach the electrodes to each output, as shown below.

7. CH/CH2(chanel1, 2 electrodes, and independent current from each channel): attach an electrode to the motor point and the other in the surrounding area

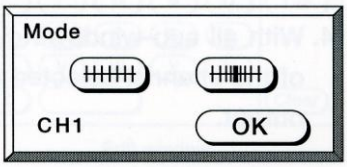
8. Co-Cont (2-channel, 4 electrodes, simultaneous power); attach the electrodes to the muscle area for simultaneous stimulation

9. Alternate (2 channels, 4 electrodes, and alternating current): attach the electrodes to the agonist and antagonist muscles.

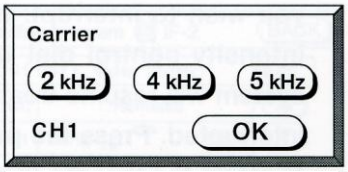
10. Carrier frequency ------ Tap the button for the selection of the carrier frequency to open the sub-window. Select 2kHZ, 4kHz or 5kHz. Tap OK to close the sub-window.



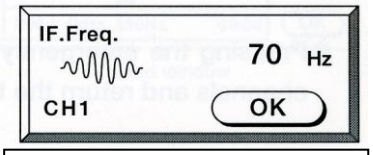
therapy selection window



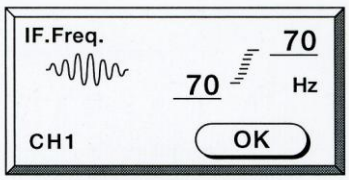
mode selection window



window for selecting the carrier frequency

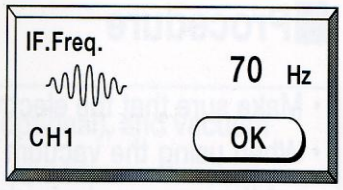


window for selecting the frequency Interferential (constant mode)



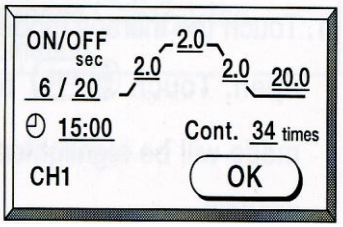
window for selecting the frequency Interferential (frequency scan mode - sweep)

11. Interferential frequency ------ Tap the button for the selection of the interferential frequency to open the sub-window. Set the frequency by using the control knob for parameter/intensity, then tap OK to close the sub-window.



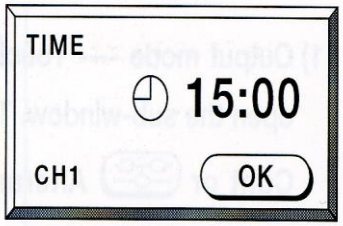
window for setting the interferential frequency

12. Time On/Off ------ Tap On/Off to open the sub-window. Tap to set the time, rise time,
hold time, fall time, time off, time or number of induced spasms. The selected setting will flash. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.



window for setting the on/off time

13. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



timer setting window

14. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

15. When the mode is Co-Cont or Alternate, vary the other intensity from the knob after the power starts to change the set value for the other channel.

16. To stop the treatment, press the PAUSE button. If the power is increased while the treatment is stopped, the system will resume from where it was stopped. Press the pause button with the treatment stopped to return to the timer and set the time.

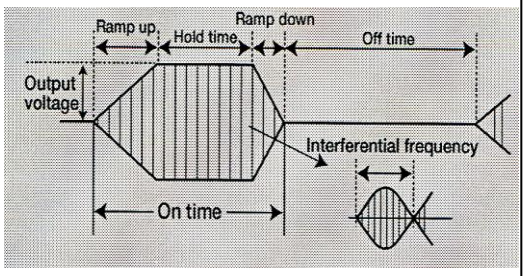
*Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

17. The system will automatically stop when the time elapses.

16.3 PARAMETER INTERVALS OF THE EMS MODE

Power: CH1/CH2, Co-Cont, Alternate
Carrier frequency: 2/4/5 kHz
Interferential frequency: from 1 to 250 Hz
Rise time: from 0 to 3 sec (increment by 0.5 sec)
Holding time: from 0 to 30 sec (increment by 0.5 sec)
Down time: from 0 to 30 sec (increment by 0.5 sec)
Time: from 1 to 99 min (in a 1 minute increment)
Current: from 0.5 to 100 mA (current peak, in 0.5-mA increments).

WAVE FORM



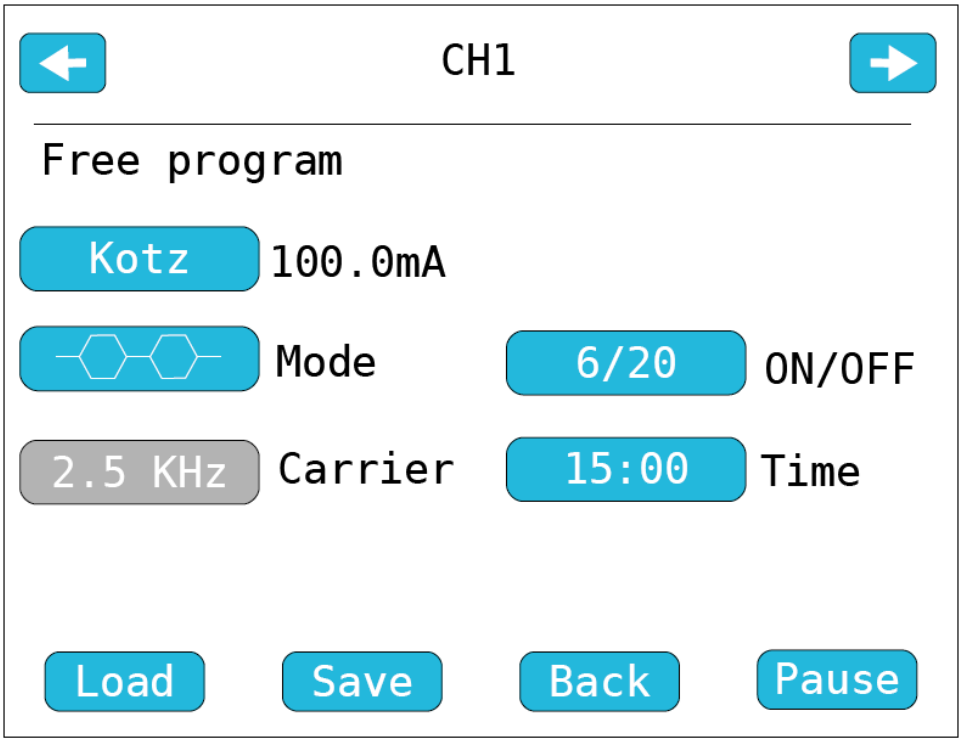
Cap.17 RUSSIAN MODE (KOTZ)

17.1 REQUIREMENTS FOR USE

ELECTRODES	Silicone electrode, self-adhesive
COMBINED CHANNELS*2	-Independent Operating mode, each channel must be used independently. -Simultaneous mode or alternative mode, the channels may be used combined Chanel 1 - Chanel 2.

*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

Display Screen

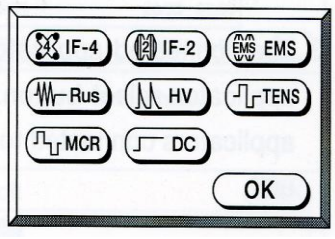


17.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.
3. Tap 

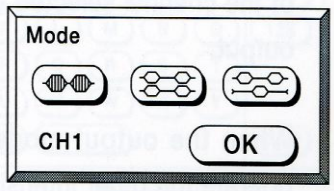
to select the mode.. The selected mode will light up. Tap OK to close the window.



Mode selection setting window

4. Change the setting of the parameter, if necessary.

5. Output current mode - Tap the button for the selection of the power mode to open the sub-window. Tap  CH1/CH2,  Co-cont  or alternate. Tap OK to close the sub-window.



mode setting window

6. Attach the electrodes to each output, as shown below.

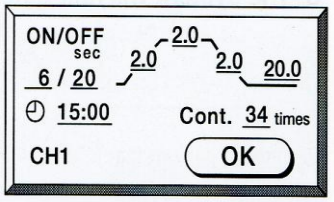
7. CH/CH2(chanel1, 2 electrodes, and independent current from each channel): attach an electrode to the motor point and the other in the surrounding area

8. Co-Cont (2-channel, 4 electrodes, simultaneous power); attach the electrodes to the muscle area for simultaneous stimulation

9. Alternate (2 channels, 4 electrodes, and alternating current): attach the electrodes to the agonist and antagonist muscles.

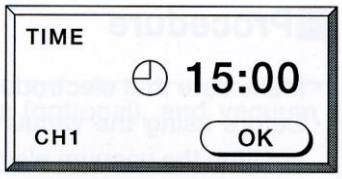
10. Time On/Off ------ Tap On/Off to open the sub-window.

11. Tap to set the time, rise time, hold time, fall time, time off, time or number of induced spasms. The selected setting will flash. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.



window for setting the on/off time

12. Time setting ------ Tap the button for setting the time to open tl sub-window. Set the time with the knob for selecting tl parameter/intensity. Tap OK to close the sub-window.



13. With all the sub-windows closed, turn the intensity control of tl selected channel on the screen. The system will automatically tu on.

14. When the mode is Co-Cont or Alternate, vary the other intensity from the knob after the power starts to change the set value for the other channel.

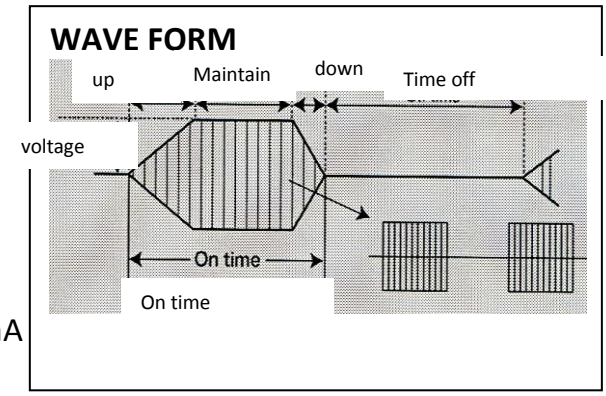
15. To stop the treatment, press the button of the channel you want to stop. If the power is increased while the treatment is stopped, the system will resume from where it was stopped. Press the pause button with the treatment stopped to return to the timer and set the time.

16. Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

17. The system will automatically stop when the time elapses.

17.3 PARAMETER INTERVALS OF THE RUSSIAN MODE (KOTZ)

Power: CH1/CH2, Co-Cont, Alternate
Carrier frequency: 2.5KHz
Interferential frequency: from 1 to 250 Hz automatic
Rise time: from 0 to 3 sec (increment by 0.5 sec)
Holding time: from 0 to 30 sec (increment by 0.5 sec)
Down time: from 0 to 3 sec (increment by 0.5 sec)
Time: from 1 to 60 min (in a 1 minute increment)
Current: from 0.5 to 100 mA (current peak, in 0.5-mA increments).



Cap.18 HIGH VOLTAGE (HI-V) MODE

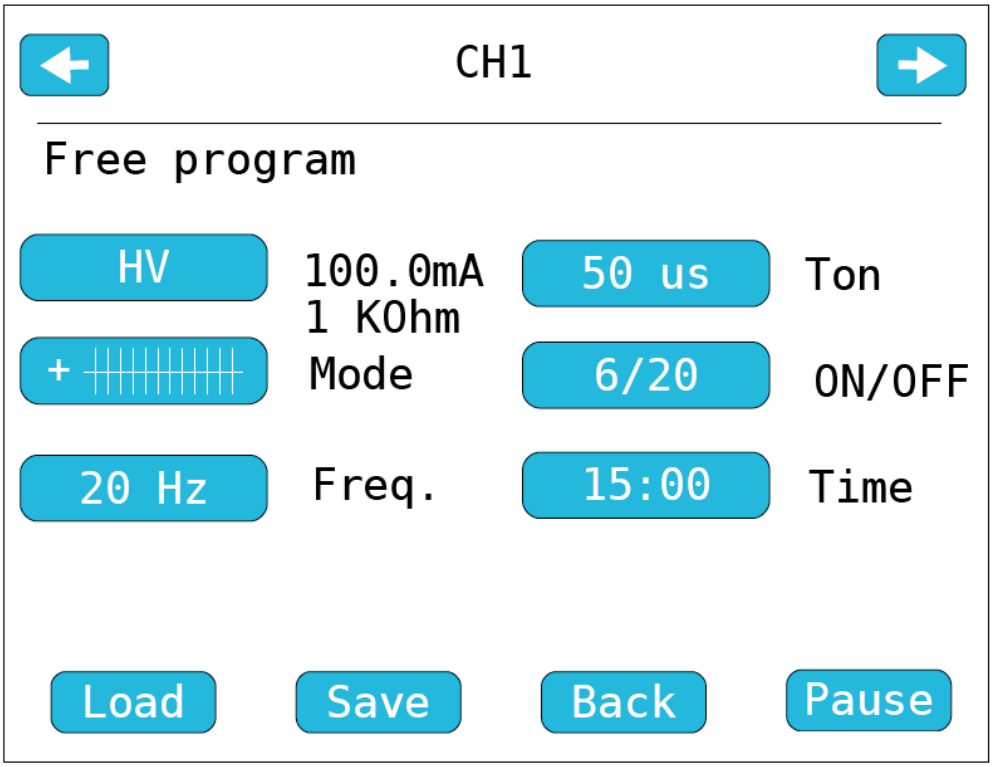
18.1 REQUIREMENTS FOR USE

ELECTRODES Silicone electrode, self-adhesive

COMBINED CHANNELS*2 -Independent Operating mode, each channel must be used independently.
-Simultaneous mode or alternative mode, the channels may be used combined Chanel 1 - Chanel 2.

*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

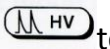
Display Screen



18.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

3. Tap 

to select the mode. The selected mode will light up. Tap OK to close the window.

4. Change the setting of the parameter, if necessary.

5. Output current mode - Tap the button for the selection of the power polarity to open the sub-window. Tap polarity + , - o 

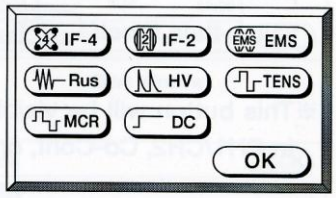
, then tap CH1/CH2, 
Co-cont  or alternate, 
Constant, 
Sweep or 
Intense. Tap OK to close the sub-window.

6. Frequency ------ Tap the button for the selection of the frequency to open the sub-window.

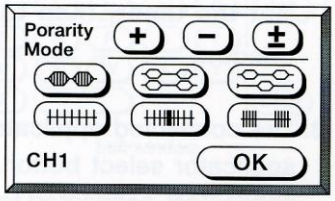
7. When the mode is set to constant, set a value with the control knob for the parameter/intensity, then tap OK to close the sub-window.

8. When the current is set to sweep, the MIN and MAX mode can be selected. Tap to flash the frequency you want to change, then use the control knob for parameter/intensity to change the value. Tap OK to close the sub-window.

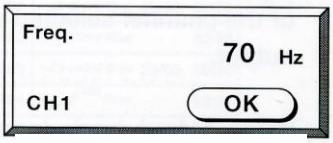
9. Pulsation amplitude ------ Tap the button for the selection of the pulsation amplitude to open the sub-window. Set the frequency by using the control knob for parameter/intensity, then tap OK to close the sub-window.



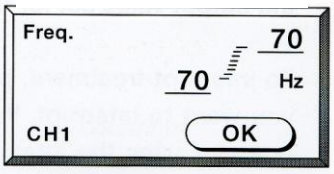
therapy selection window



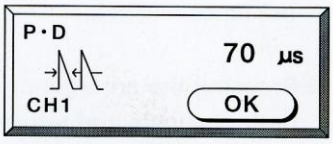
power polarity selection window



window for selecting the frequency (constant mode)



Window for selecting the frequency



Window for selecting the pulsation amplitude

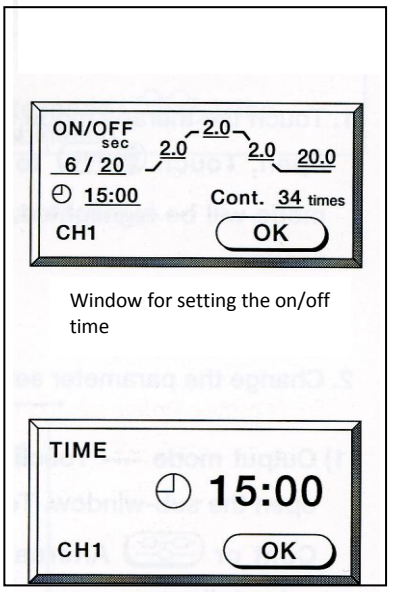
10. In the high voltage mode, to prevent a sudden increase or decrease, there must be a small delay after which the amplitude is changed.

11. Time On/Off ------ Tap On/Off to open the sub-window.

12. Tap to set the time, rise time, hold time, fall time, time off, time or number of induced spasms to flash the current set value. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.

13. This button is only visible and can be changed in Chanel1/Chanel 2 or in the alternating current mode.

14. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



Window for setting the on/off time

15. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

16. When the mode is Co-Cont or Alternate, vary the other intensity from the knob after the power starts to change the set value for the other channel.

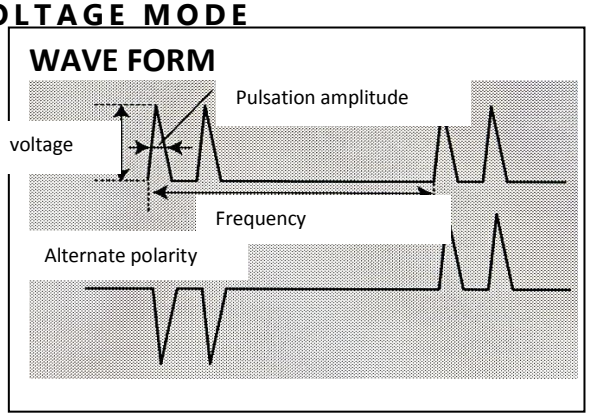
17. To stop the treatment, press the button of the channel you want to stop. If the power is increased while the treatment is stopped, the system will resume from where it was stopped. Press the

18. pause button with the treatment stopped to return to the timer and set the time.

19. Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

20. The system will automatically stop when the time elapses.

18.3 PARAMETER INTERVALS OF THE HIGH VOLTAGE MODE



Power: CH1/CH2, Co-Cont, Alternate, Constant, Sweep and Intense

Frequency: Constant: from 0.5 to 200Hz (0,5.0,7, in increments of 1-Hz and in increments of 10-Hz from 10 to 200)

Intense: from 0.5° 7 Hz (0,5.0,7 and in increments of 1 Hz from 1 to 7)

Sweep: from 1 to 200 hZ (in increments of 1 Hz from 10 to 200)

Chanel1/2, Co Cont and Alternate: from 20 to 200 Hz (in increments of 10 Hz)

Pulsation amplitude: from 10 to 80 µS (increment of 10 µS)

Current polarity: Positive/Negative/Alternate (continuous alternation at every cycle)

Time: from 1 to 60 min (in a 1 minute increment)

Current: from 0 to 100mA

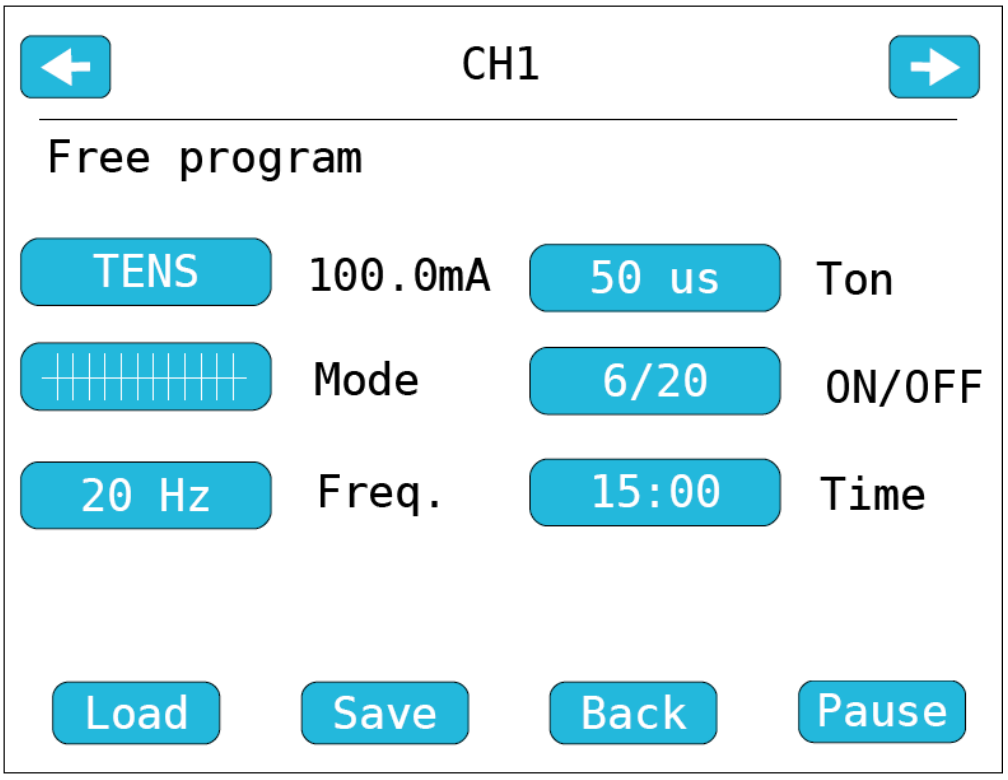
Cap.19 TENS MODE

19.1 REQUIREMENTS FOR USE

ELECTRODES	Plastic electrode, self-adhesive
COMBINED CHANNELS*2	-Independent Operating mode, each channel must be used independently. -Simultaneous mode or alternative mode, the channels may be used combined Chanel 1 - Chanel 2.

*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

Display Screen



19.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

3. Tap 

to select the mode. The selected mode will light up. Tap OK to close the window.

4. Change the setting of the parameter, if necessary.

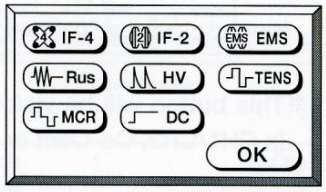
5. Output current mode - Tap the button for the selection of the power polarity to open the sub-window. Tap  CH1/CH2,  Co-cont, alternate  , Constant,  ,Sweep  or Intense  . Tap OK to close the sub-window.

6. Frequency ------ Tap the button for the selection of the frequency to open the sub-window.

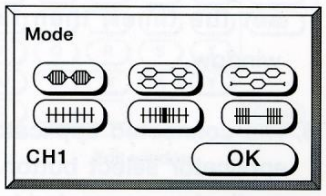
7. Set a value by using the control knob for parameter/intensity, then tap OK to close the sub-window.

8. When the current is set to sweep, the MIN and MAX mode can be selected. Tap to flash the frequency you want to change, then use the control knob for parameter/intensity to change the value. Tap OK to close the sub-window.

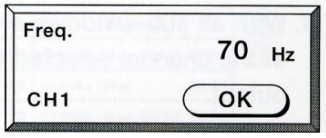
9. Pulsation amplitude ------ Tap the button for the selection of the pulsation amplitude to open the sub-window. Set the frequency by using the control knob for parameter/intensity, then tap OK to close the sub-window.



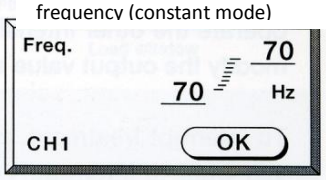
Therapy selection window



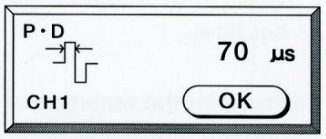
Mode selection window



Window for selecting the frequency (constant mode)



Window for selecting the frequency (sweep mode)



Window for selecting the pulsation amplitude

10. Time On/Off ------ Tap On/Off to open the sub-window.

11. Tap to set the time, rise time, hold time, fall time, time off, time or number of induced spasms to flash the current set value. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.

12. This button is only visible and can be changed in Chanel1/Chanel 2 or in the alternating current mode.

13. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.

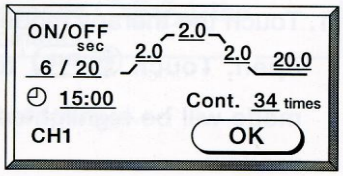
14. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

15. When the mode is Co-Cont or Alternate, vary the other intensity from the knob after the power starts to change the set value for the other channel.

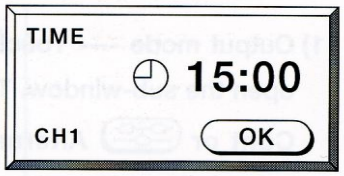
16. To stop the treatment, press the button of the channel you want to stop. If the power is increased while the treatment is stopped, the system will resume from where it was stopped. Press the pause button with the treatment stopped to return to the timer and set the time.

17. Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

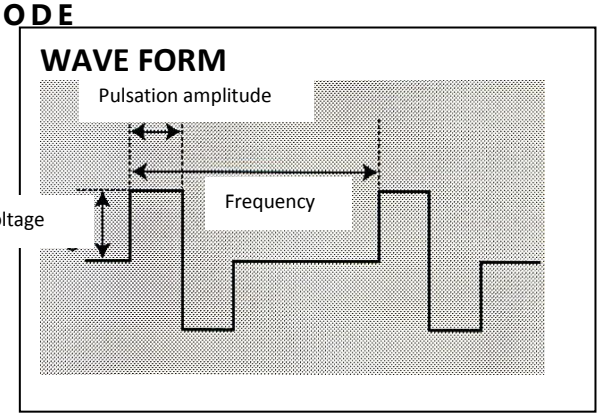
18. The system will automatically stop when the time elapses.



Window for setting the on/off time



19.3 PARAMETER INTERVALS OF THE TENS MODE



Power: CH1/CH2, Co-Cont, Alternate, Constant, Sweep and Intense

Frequency: Constant: from 0.5 to 200Hz (0,5.0,7, in increments of 1-Hz and in increments of 10-Hz from 10 to 200)

Intense: from 0.5° 7 Hz (0,5.0,7 and

in increments of 1 Hz from 1 to 7)

Sweep: from 1 to 200 hZ (in increments of 1 Hz from 10 to 200)

Chanel1/2, Co Cont and Alternate: from 20 to 200 Hz (in increments of 10 Hz)

Pulsation amplitude: from 10 to 300 µS (increment of 10 µS)

Time: from 1 to 60 min (in a 1 minute increment)

Current: from 0.5 to 100mA (current peak, in 0.5-mA increments).

Cap.20 MICROCURRENT MODE - MENS

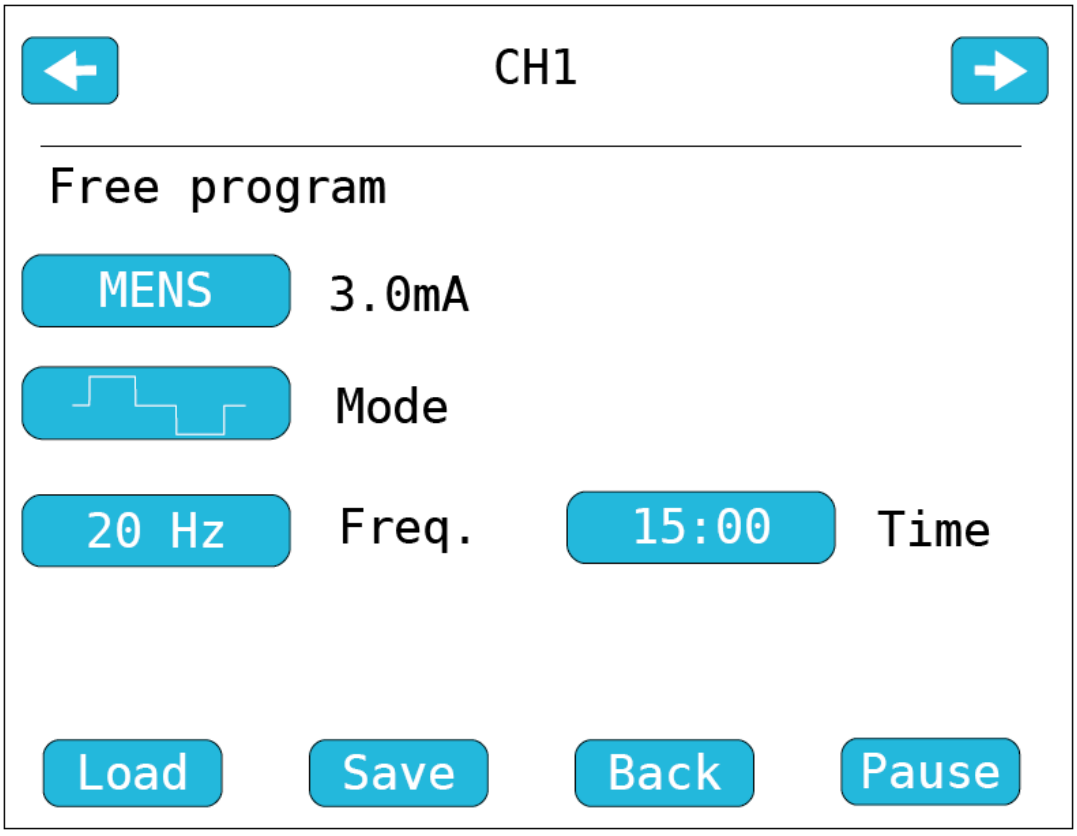
20.1 REQUIREMENTS FOR USE

ELECTRODES Plastic electrode, self-adhesive

COMBINED CHANNELS*2 Each channel must be used independently

*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

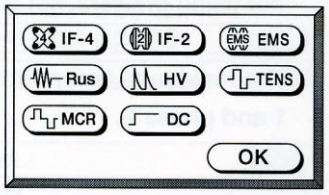
Display Screen



Cap.21 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.



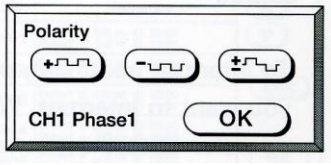
therapy selection window

3. Tap MENS to select the mode.. The selected mode will light up. Tap OK to close the window.

4. Change the setting of the parameter, if necessary.

5. In the microcurrent mode, electric current or different polarity and frequency could provide an output in two stages.

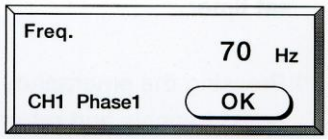
6. Polarity ------ Tap the button for the selection of the polarity phase 1 to open the sub-window. Tap  ,  or  . Tap OK to close the sub-window.



Polarity selection window

7. Frequency ------ Tap the button for the selection of the frequency.

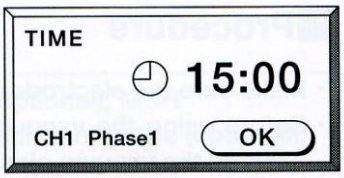
8. Set a value by using the control knob for parameter/intensity, then tap OK to close the sub-window



Window for selecting the frequency

9. Time setting ------ Tap the button for setting the time.

10. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



11. The maximum time that can be set is 60.

12. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

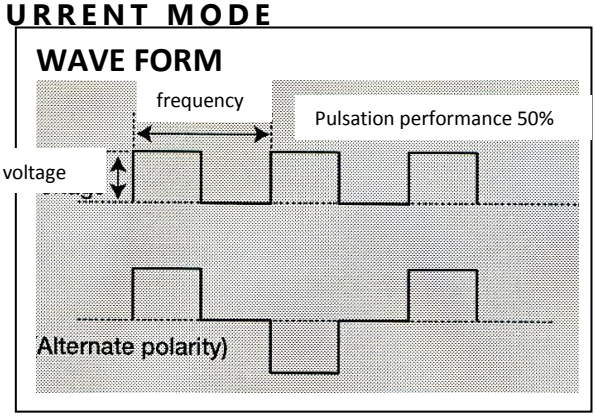
13. To stop the treatment, press the button of the channel you want to stop. If the power is increased while the treatment is stopped, the system will resume from where it was stopped. Press the pause button with the treatment stopped to return to the timer and set the time.

14. Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

15. The system will automatically stop when the time elapses.

21.1 PARAMETER INTERVALS OF THE MICROCURRENT MODE

Power: Only constant
Frequency: from 0.3 to 400Hz (0,3. 0,5.0,7 in increments from 1 to 10, and in 10 Hz increments from 10 to 400)
Polarity: Positive/negative/alternate (automatic alternation at every cycle)
Pulsation amplitude: Fixed performance 50%
Time: from 1 to 60 min
Current: from 1 to 15 mA



Cap.22 DC (DIRECT CURRENT) MODE

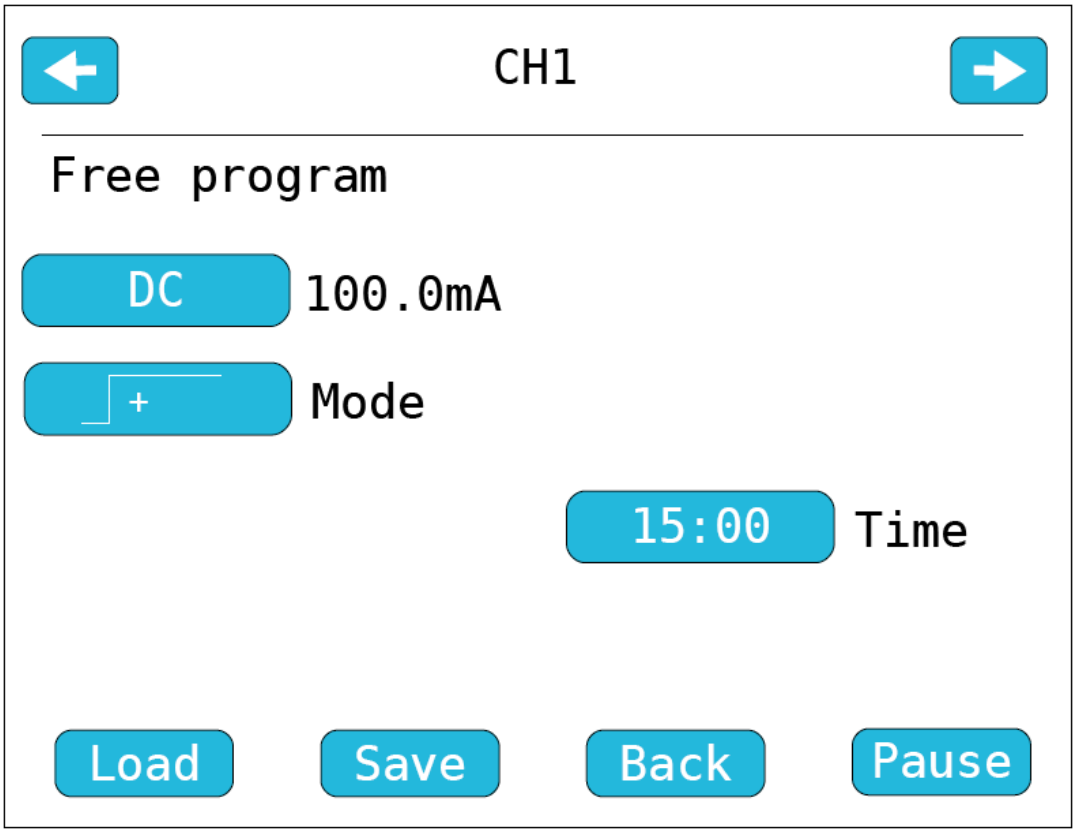
22.1 REQUIREMENTS FOR USE

ELECTRODES Plastic electrode, self-adhesive

COMBINED CHANNELS*2 Each channel must be used independently

*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

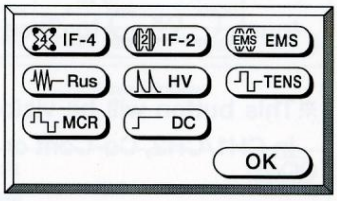
Display Screen



22.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

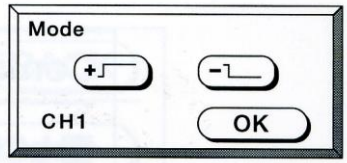


therapy selection window

3. Tap DC to select the mode.. The selected mode will light up. Tap OK to close the window.

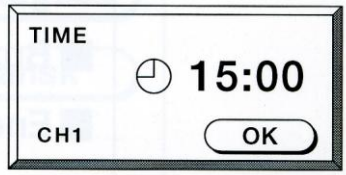
4. Change the setting of the parameter, if necessary.

5. Polarity ------ Tap the button for the selection of the polarity to open the sub-window. Tap, + or − . Tap OK to close the sub-window.



Polarity selection window

6. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



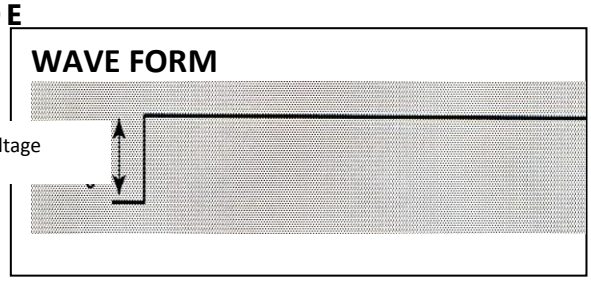
Window for selecting the timer

7. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

8. Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

9. The system will automatically stop when the time elapses.

22.3 PARAMETER INTERVALS OF THE DC MODE



Frequency: only DC
polarity: Positive/negative
Time: from 1 to 60 min (in a 1 minute increment, phase 1+ phase 2 60)
Current: from 0.5 to 100 mA (increment of 0.5-mA)*.
*Current when the probe HV/DC is used: 0.5 to 2mA (increment of 0.5-mA)

Particular attention should be paid to the use of the direct current.
It is recommended not use values greater than 20mA, the continuous current can cause chemical burns on the skin. The normally used values are around 4-6mA

Cap.23 DYNAMIC MODE

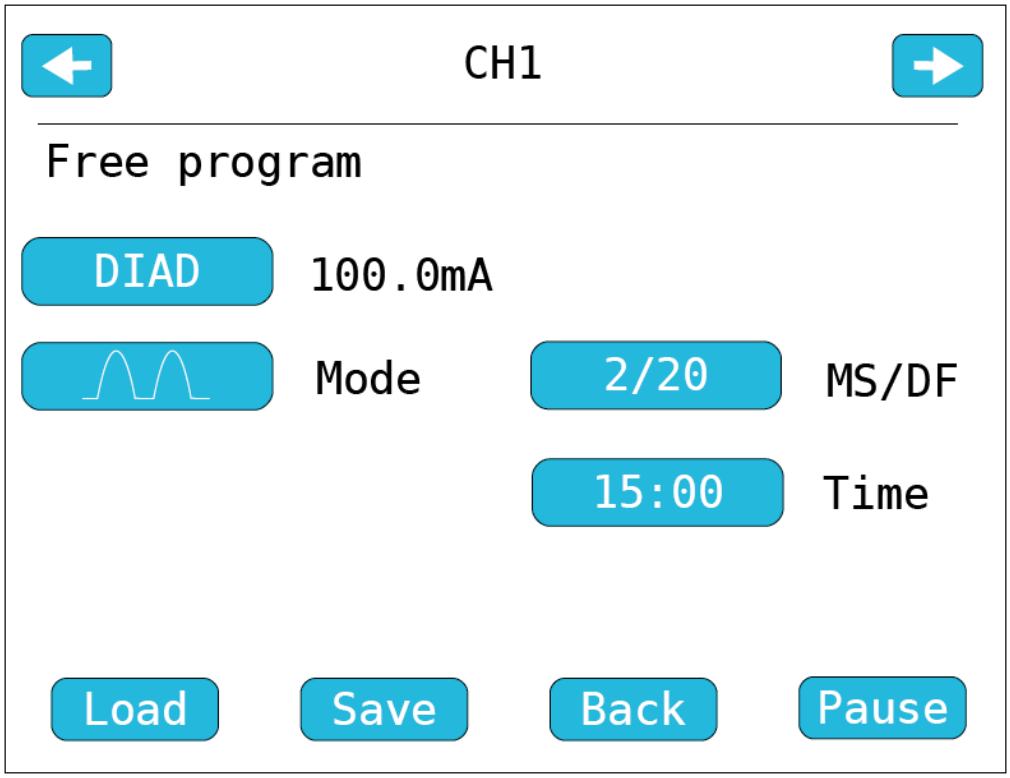
23.1 REQUIREMENTS FOR USE

ELECTRODES	Silicone electrode, self-adhesive
COMBINED CHANNELS*2	-Independent Operating mode, each channel must be used independently. -Simultaneous mode or alternative mode, the channels may be used combined Chanel 1 - Chanel 2.

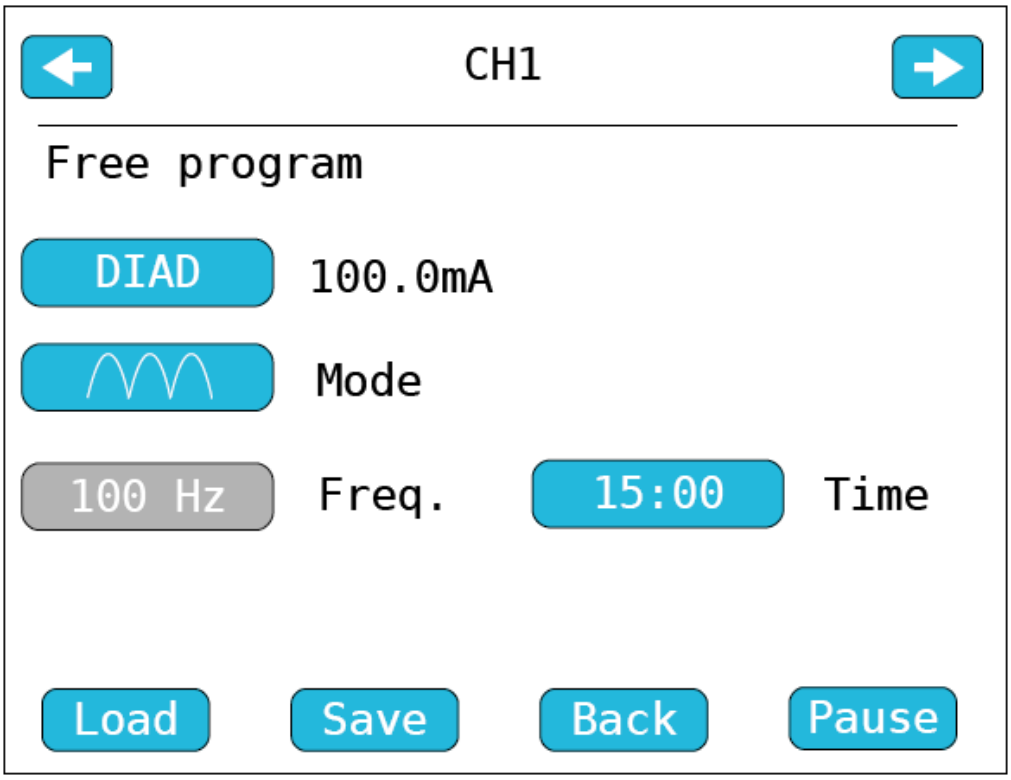
*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

Display Screen

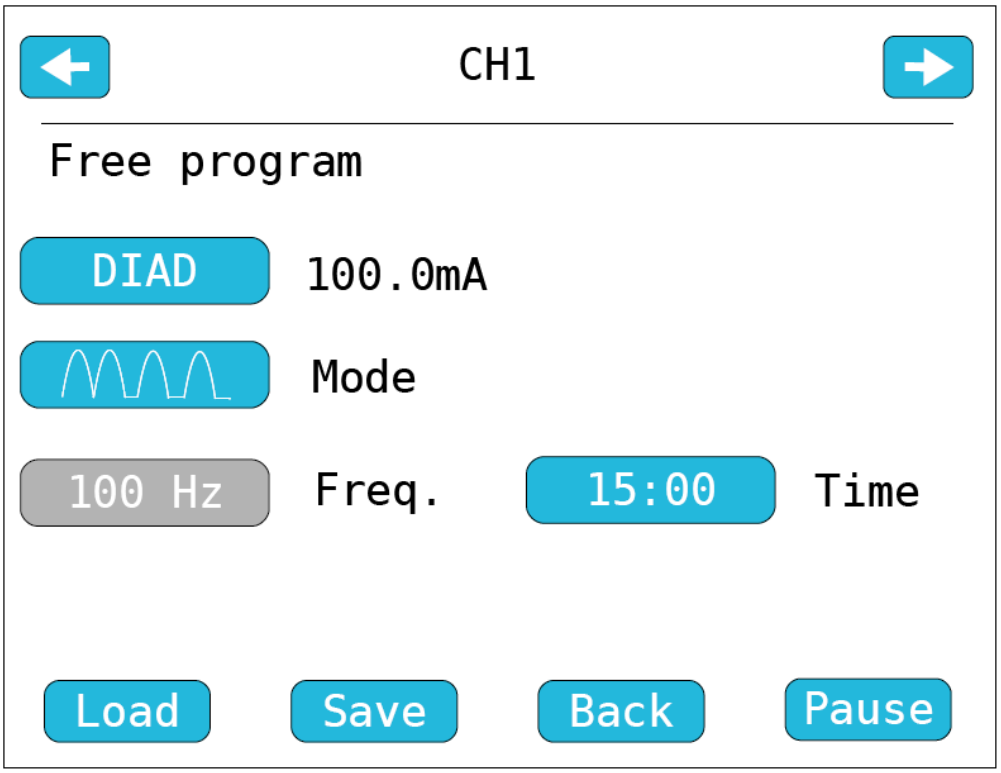
Fixed Single-phase MODE



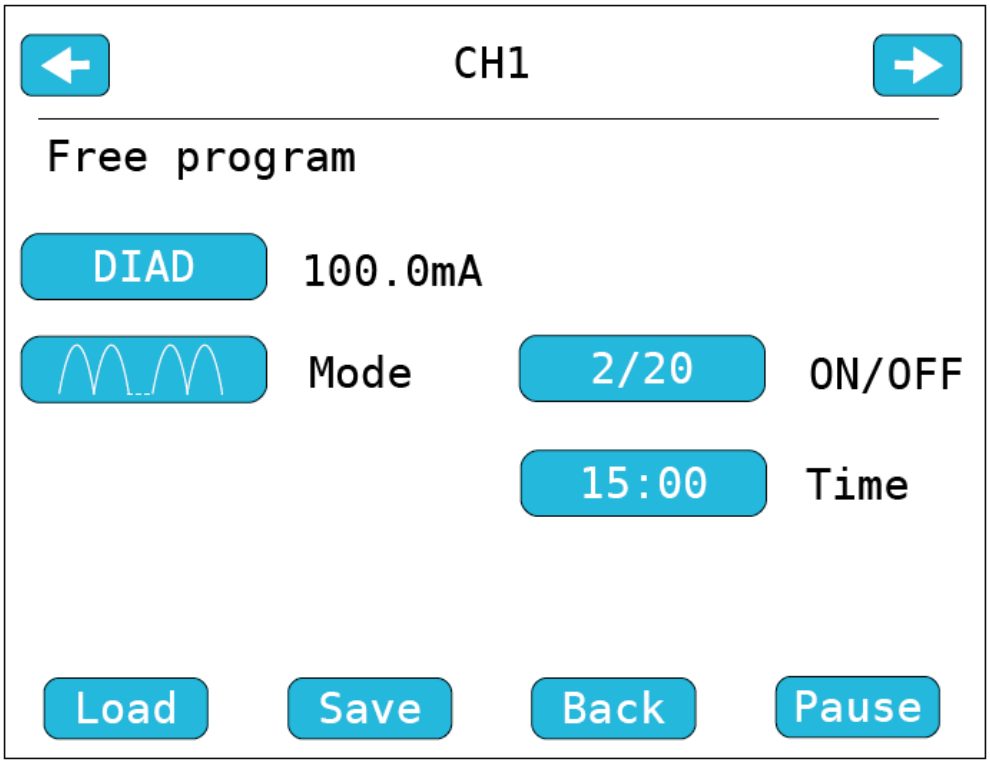
Fixed 2-phase MODE



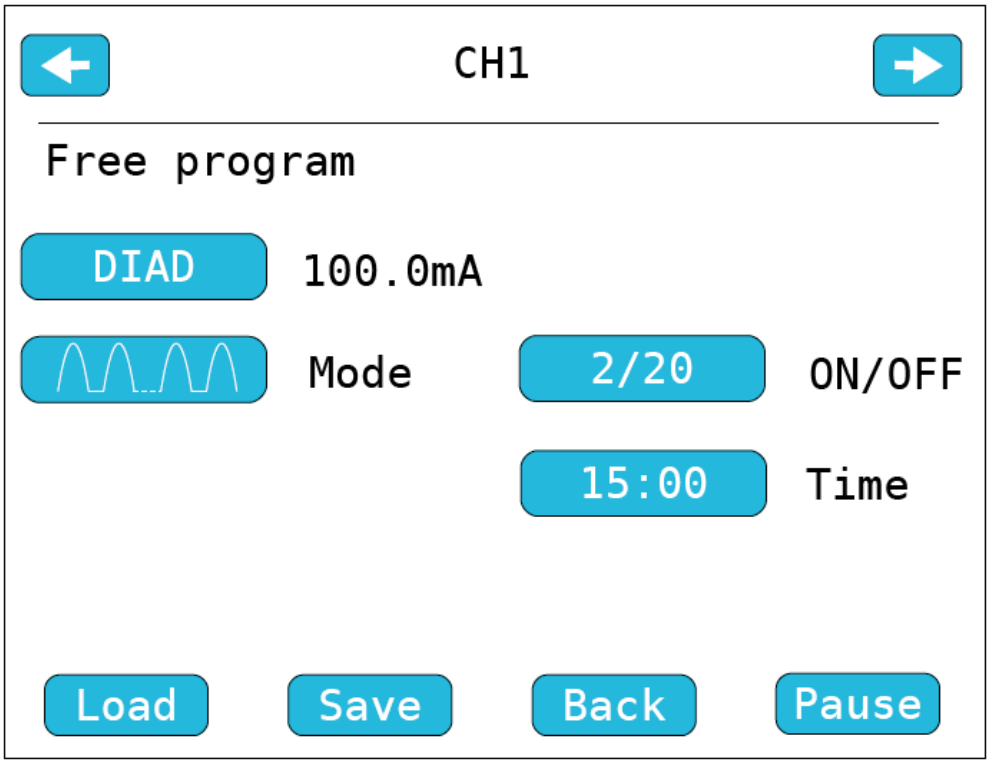
Short Period and Long Period MODE



Interrupted 2-phase MODE



Interrupted Single-phase MODE



23.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

3. Tap DIAD to select the mode. The selected mode will light up. Tap OK to close the window.

4. Change the setting of the parameter, if necessary.

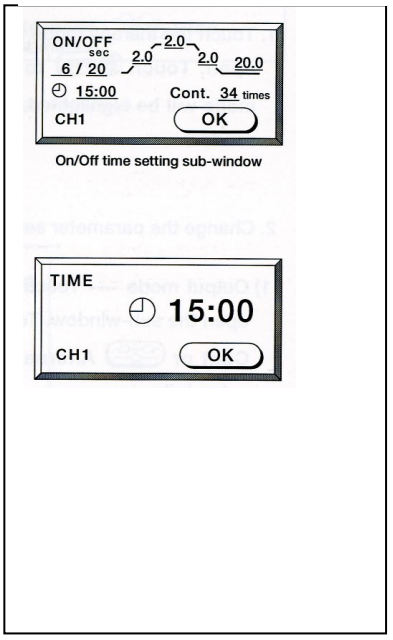
5. Output current mode - Tap the mode button to select the dynamic wave type

6. Frequency ----- The work frequencies cannot be changed. MS has a fixed frequency of 50Hz, DF has a fixed frequency of 100Hz, the other modes are the result of combinations between MS and DF

7. Time On/Off ------ Tap On/Off to open the sub-window.

8. Tap to set the time, rise time, hold time, fall time, time off, time or number of induced spasms to flash the current set value.

9. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.



10. This button is only visible and can be changed in Chanel1/Chanel 2 or in the CP, RS and PS mode.

11. Time setting ------ Tap the button for setting the time to open the sub-window.

12. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.

13. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

14. Pressing the button for the emergency stop, it will stop the power of both channels and return to the timer to select the time.

15. The system will automatically stop when the time elapses.

23.3 PARAMETER INTERVALS OF THE DYNAMIC MODE

Power: CH1/CH2, MS, DF, CP, RS, PS
Frequency: Constant: 50Hz or 100Hz
Chanel1/2, Co Cont and Alternate: from 20 to 200 Hz (in increments of 10 Hz)
Pulsation amplitude: from 5 to 10 ㎳
Current polarity: Positive
Time: from 1 to 60 min (in a 1 minute increment)
Current: from 0 to 100mA

Cap.24 EXPONENTIAL MODE, RECTANGULAR, TRIANGULAR

24.1 REQUIREMENTS FOR USE

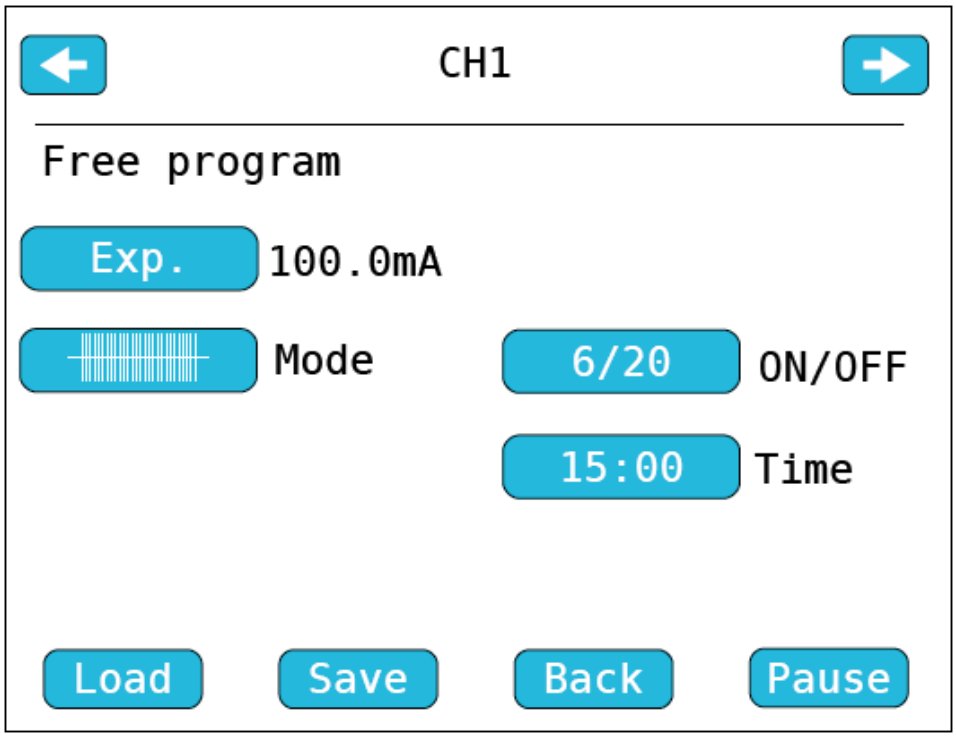
ELECTRODES Silicone electrode, self-adhesive

COMBINED CHANNELS*2 -Independent Operating mode, each channel must be used independently.
-Simultaneous mode or alternative mode, the channels may be used combined Chanel 1 - Chanel 2.

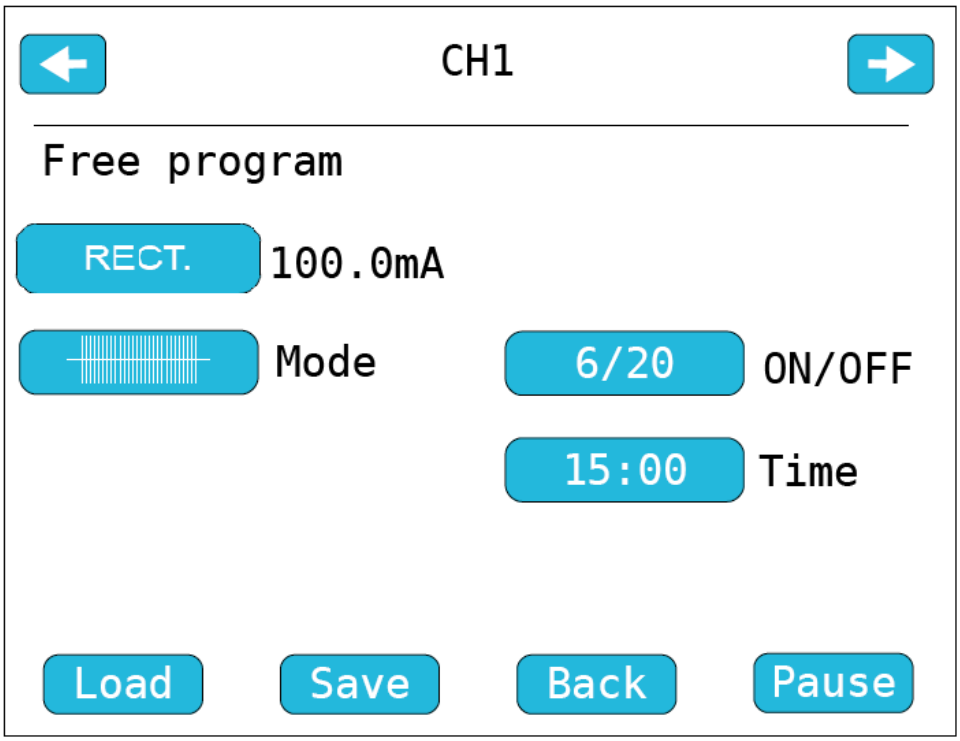
*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ) , MENS, TENS and high voltage.

Display Screen

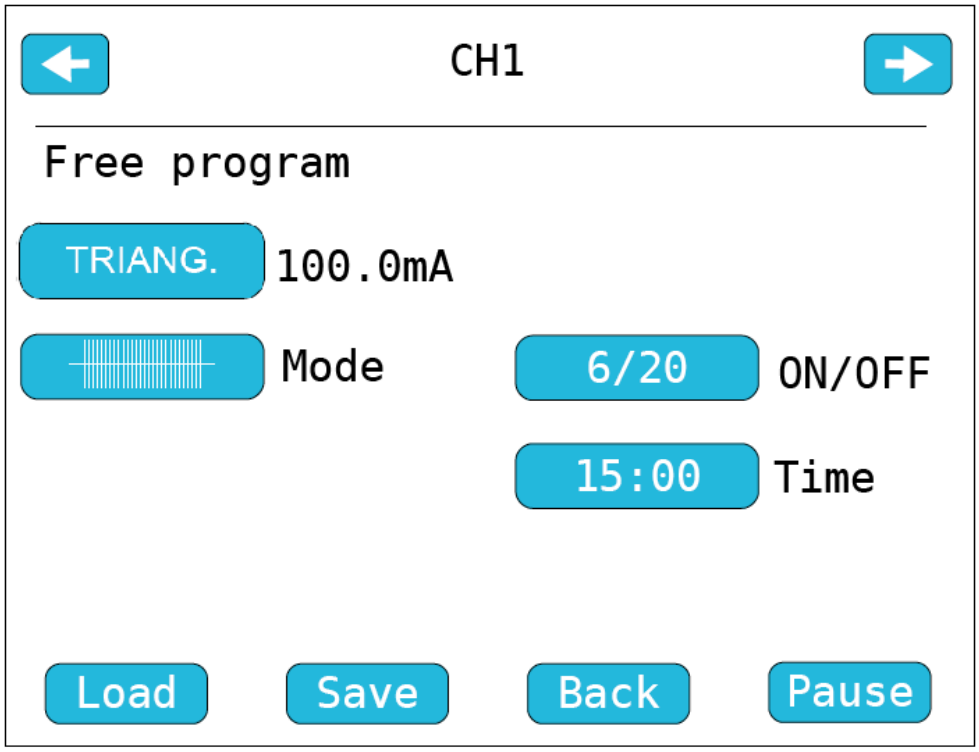
EXPONENTIAL MODE



RECTANGULAR MODE



TRIANGULAR MODE

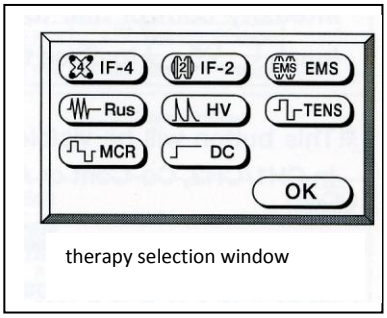


24.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.

2. Tap the button for the selection of the therapy to open the sub-window.

3. Tap EXP or RECT or TRIAN to select the mode. The selected mode will light up. Tap OK to close the window.



therapy selection window

4. Change the setting of the parameter, if necessary.

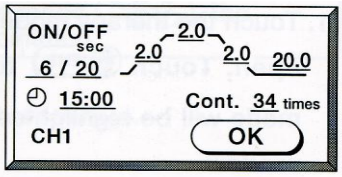
5. Output current mode - the  button indicates the mode for delivering the therapy

6. Pulsation amplitude ------ Tap the button for the selection of the pulsation amplitude to open the sub-window. Set the frequency by using the control knob for parameter/intensity, then tap OK to close the sub-window.

7. Time On/Off ------ Tap On/Off to open the sub-window.

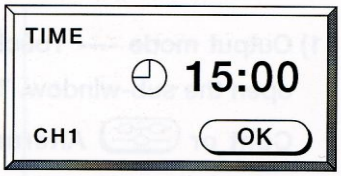
8. Tap to set the time of the single pulse, hold time, fall time, time off, time or number of induced spasms to flash the current set value.

9. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.



Window for setting the on/off time

10. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



11. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

12. The system will automatically stop when the time elapses.

Cap.25 FARADIC MODE

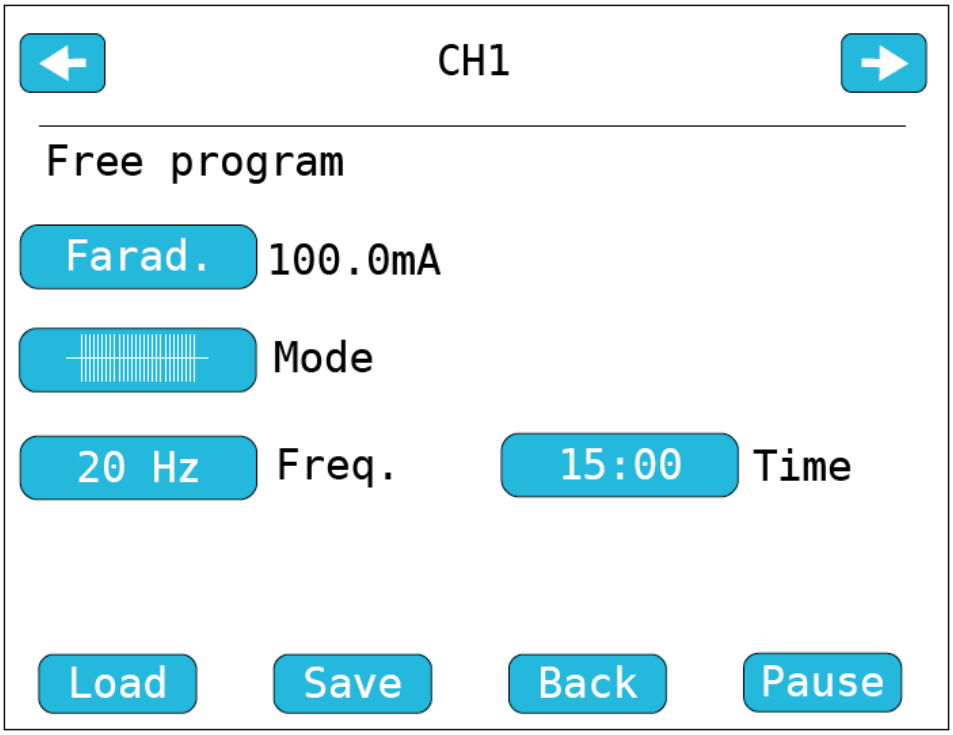
25.1 REQUIREMENTS FOR USE

ELECTRODES	Silicone electrode, self-adhesive
COMBINED CHANNELS*2	-Independent Operating mode, each channel must be used independently. -Simultaneous mode or alternative mode, the channels may be used combined Chanel 1 - Chanel 2.

*2 excludes the Simultaneous Mode and alternative mode 2-pole IF, EMS, Russian (KOTZ), MENSTENS and high voltage.

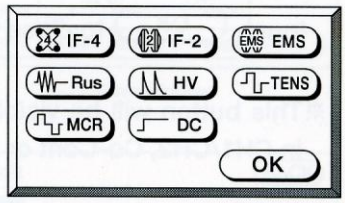
Display Screen

TRIANGULAR MODE



25.2 PROCEDURES

1. Make sure that the electrodes are placed on the area to be treated.



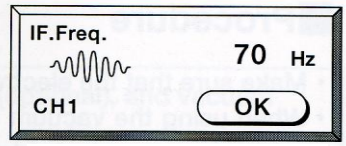
therapy selection window

2. Tap the button for the selection of the therapy to open the sub-window.
   Tap FARAD to select the mode. The selected mode will light up. Tap OK to close the window.

3. Change the setting of the parameter, if necessary.

4. Output current mode - the  CONTINUOUS button and  indicate the mode for delivering the therapy

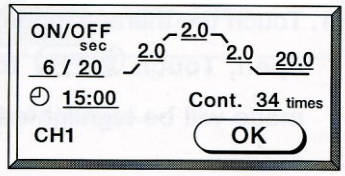
5. pulsation frequency ------ Tap the button for the selection of the pulsation frequency to open the sub-window. Set the frequency by using the control knob for parameter/intensity, then tap OK to close the sub-window.



Window for selecting the frequency

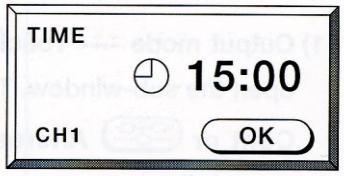
6. Time On/Off ------ Tap On/Off to open the sub-window. Tap to set the time of the single impulse

hold time, fall time, time off, time or number of induced spasms to flash the current set value. Change the desired value by using the control knob for parameter/intensity, then tap OK to close the sub-window.



Window for setting the on/off time

7. Time setting ------ Tap the button for setting the time to open the sub-window. Set the time with the knob for selecting the parameter/intensity. Tap OK to close the sub-window.



8. With all the sub-windows closed, turn the intensity control of the selected channel on the screen. The system will automatically turn on.

9. The system will automatically stop when the time elapses.

Cap.26 LIST OF PROGRAMS FOR ELECTROSTIMULATION

The list below indicates the pre-set programs.

IF FOUR POLES

No.	Mod.Uscita	Freq.portante	Freq.interferenziale	Angolo vett.sweep	T.trattamento
1	Sweep	4 kHz	80—100 Hz	0 Gradi	15 min.
2	Sweep	4 kHz	1—10 Hz	0 Gradi	15 min.
3	Sweep	4 kHz	1—100 Hz	0 Gradi	15 min.
4	Sweep	4 kHz	30—60 Hz	0 Gradi	15 min.
5	Sweep	4 kHz	100—200 Hz	0 Gradi	15 min.
6	Costante	4 kHz	70 Hz	0 Gradi	15 min.
7	Costante	4 kHz	70 Hz	0 Gradi	15 min.
8	Costante	4 kHz	70 Hz	0 Gradi	15 min.
9	Costante	4 kHz	70 Hz	0 Gradi	15 min.
10	Costante	4 kHz	70 Hz	0 Gradi	15 min.

IF TWO POLES

No.	Mod.uscita	Freq.portante	Freq.interferenziale	T.trattamento
1	Sweep	4 kHz	80—100 Hz	15 min.
2	Sweep	4 kHz	1—10 Hz	15 min.
3	Sweep	4 kHz	1—100 Hz	15 min.
4	Sweep	4 kHz	30—60 Hz	15 min.
5	Sweep	4 kHz	100—200 Hz	15 min.
6	Costante	4 kHz	70 Hz	15 min.
7	Costante	4 kHz	70 Hz	15 min.
8	Costante	4 kHz	70 Hz	15 min.
9	Costante	4 kHz	70 Hz	15 min.
10	Costante	4 kHz	70 Hz	15 min.

EMS (IF TWO POLES)

No.	Frequenza portante	Frequenza interferenziale	Tempo	[salita - costante - discesa]	Pausa	T. trattamento
1	2 kHz	80 Hz	5 sec.	[1.0sec. • 3.5sec. • 0.5sec.]	15 sec.	15 min.
2	4 kHz	80 Hz	5 sec.	[1.0sec. • 3.5sec. • 0.5sec.]	15 sec.	15 min.
3	5 kHz	80 Hz	5 sec.	[1.0sec. • 3.5sec. • 0.5sec.]	15 sec.	15 min.
4	2 kHz	20 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	10 sec.	15 min.
5	4 kHz	20 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	10 sec.	15 min.
6	5 kHz	20 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	10 sec.	15 min.
7	2 kHz	50 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	20 sec.	15 min.
8	4 kHz	50 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	20 sec.	15 min.
9	5 kHz	50 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	20 sec.	15 min.
10	2 kHz	50 Hz	10 sec.	[1.5sec. • 8.0sec. • 0.5sec.]	20 sec.	20 min.

RUSSIAN

No.	Azione	(salita - costante - discesa)	Pausa	Tempo trattamento
1	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	10 min.
2	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	30 sec.	8 min.
3	6 sec.	〔1.0sec. • 4.5sec. • 0.5sec.〕	30 sec.	7min.12sec.
4	5 sec.	〔1.0sec. • 3.5sec. • 0.5sec.〕	15 sec.	2min.40sec.
5	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	20 min.
6	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	20 min.
7	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	20 min.
8	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	20 min.
9	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	20 min.
10	10 sec.	〔1.5sec. • 8.0sec. • 0.5sec.〕	50 sec.	20 min.

HIGH VOLTAGE

No.	Polarità	Mod.uscita	Frequenza	Amp.impulso	Tempo	(salita - costante - discesa)	Pausa	T.trattamento
1	+	Impulso	20 Hz	50 µs	7sec.	〔2.0sec. • 4.0sec. • 1.0sec.〕	10 sec.	15 min.
2	+	Impulso	50 Hz	50 µs	7sec.	〔2.0sec. • 4.0sec. • 1.0sec.〕	10 sec.	15 min.
3	+	Impulso	80 Hz	50 µs	7sec.	〔2.0sec. • 4.0sec. • 1.0sec.〕	10 sec.	15 min.
4	+	Sweep	2—5 Hz	50 µs	——	——	——	15 min.
5	+	Sweep	30—60 Hz	50 µs	——	——	——	15 min.
6	+	Sweep	40—100 Hz	50 µs	——	——	——	15 min.
7	+	Sweep	80—130 Hz	50 µs	——	——	——	15 min.
8	+	Costante	70 Hz	50 µs	——	——	——	15 min.

TENS

No.	Mod.uscita	Frequenza	Amp.impulso	Tempo	(salita - costante - discesa)	Pausa	T.trattamento
1	CH1/CH2	20 Hz	200 µs	7 sec.	〔2.0sec. • 4.0sec. • 1.0sec.〕	6 sec.	15 min.
2	CH1/CH2	50 Hz	150 µs	7 sec.	〔2.0sec. • 4.0sec. • 1.0sec.〕	6 sec.	15 min.
3	CH1/CH2	100 Hz	100 µs	7 sec.	〔2.0sec. • 4.0sec. • 1.0sec.〕	6 sec.	15 min.
4	Costante	70 Hz	100 µs	——	——	——	15 min.
5	Costante	70 Hz	100 µs	——	——	——	15 min.
6	Costante	70 Hz	100 µs	——	——	——	15 min.
7	Costante	70 Hz	100 µs	——	——	——	15 min.
8	Costante	70 Hz	100 µs	——	——	——	15 min.
9	Costante	70 Hz	100 µs	——	——	——	15 min.
10	Costante	70 Hz	100 µs	——	——	——	15 min.

MICROCURRENT

	FASE 1			FASE 2		
No.	Polarità	Frequenza	Tempo	Polarità	Frequenza	Tempo
1	±	1Hz	5min.	±	0.3Hz	10min.
2	±	10Hz	5min.	±	0.3Hz	10min.
3	±	80Hz	5min.	±	0.3Hz	10min.
4	±	200Hz	5min.	±	0.5Hz	10min.
5	±	300Hz	5min.	±	0.5Hz	10min.

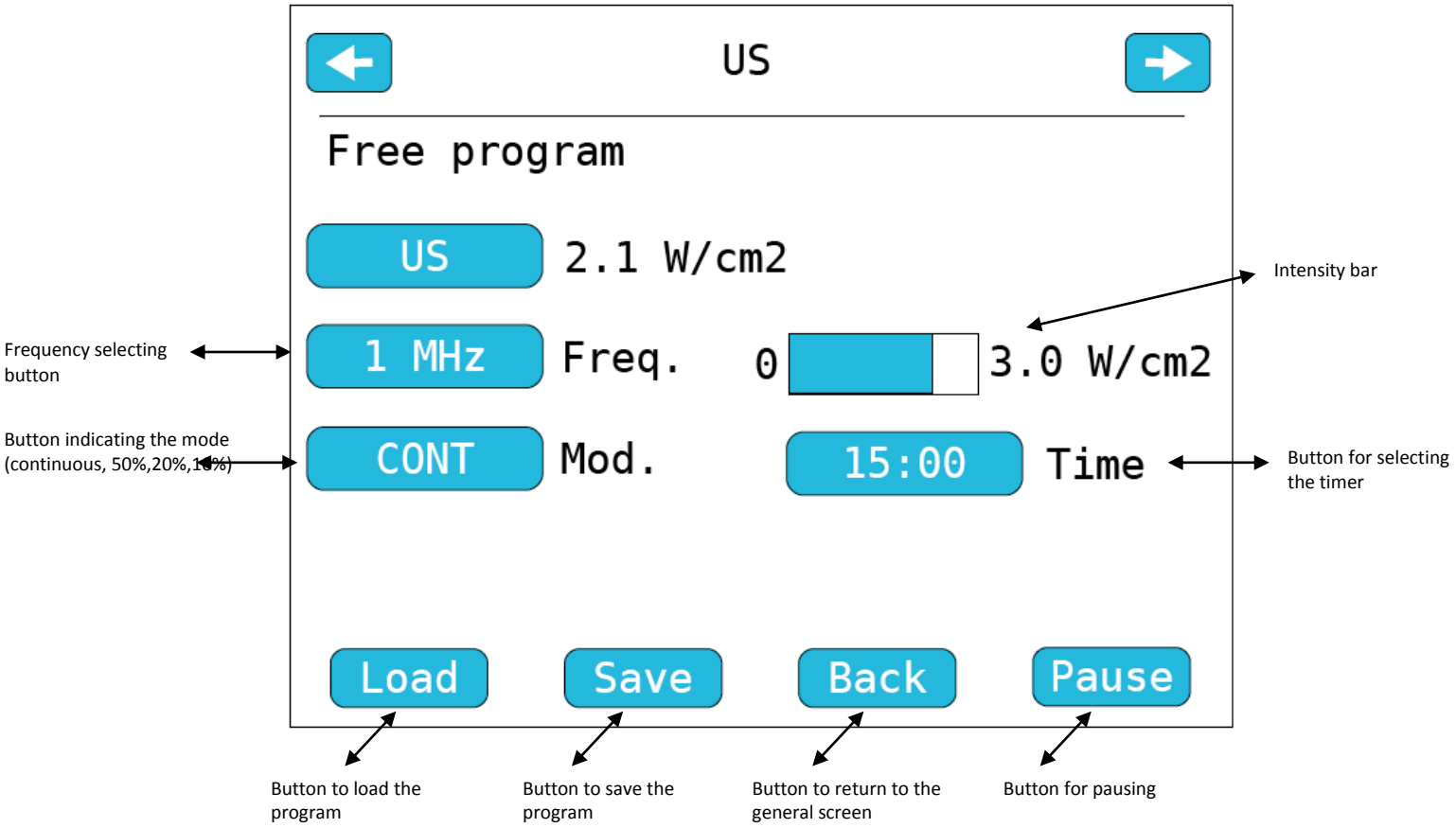
	FASE 1			FASE 2		
No.	Polarità	Frequenza	Tempo	Polarità	Frequenza	Tempo
6	±	200Hz	5min.	±	0.3Hz	10min.
7	±	200Hz	5min.	±	0.3Hz	10min.
8	±	200Hz	5min.	±	0.3Hz	10min.
9	±	200Hz	5min.	±	0.5Hz	10min.
10	±	200Hz	5min.	±	0.5Hz	10min.

Cap.27 ULTRASOUND MODE

27.1 REQUIREMENTS FOR USE

HANDPIECE	Standard handpiece, conical head handpiece
COMBINED CHANNELS	The two ultrasound channels cannot be used simultaneously

Display Screen



27.2 PROCEDURES

10. Ensure that the probe is inserted into the appropriate panel connector.

11. Turn the encoder to set the desired power level.

12. Tap the 

button for the selection of the frequency, once selected press OK.

13. Tap 

to select the mode. Continuous or pulsed. The selected mode will light up. Tap OK to close the window.

14. Tap 

to change the timer, use the encoder to change the value and press OK to confirm.

15. Once all the parameters are set, press the 

button to return to the main work screen.

16. Press the 

button and eventually adjust the intensity with the encoder.

17. Press the 

button to save the current configuration within one of the free memory cell.

18. Press 

to load a program present in the memory.

27.3 PARAMETER INTERVALS OF THE ULTRASOUND MODE

Power: 3W/cm2
Frequency: 1MHz/3MHz
Time: from 1 to 60 min (in a 1 minute increment)

Cap.28 LIST OF PROGRAMS FOR ULTRASOUND

The list below indicates the pre-set programs

Frequency	Progr. no.	Program name
1MHz	1	**Bone atrophy**
	2	**Callus**
	3	**Delays in ossification**
	4	**Osteitis and periostitis**
	5	**Arthritis-Osteoarthritis**
	6	**Joint stiffness**
	7	**Distortions**
	8	**Low back pain**
	9	**Myalgia**
	10	**Spasms**
	11	**Muscle tears**
	12	**Contractures**
	13	**Bruises**
	14	**Tenosynovitis**
	15	**Tendovaginitis**
	16	**Epicondylitis**
	17	**Periarthritis**
	18	**Bursitis**

Frequency	Progr. no.	Program name
3MHz	19	**Distortions**
	20	**Muscle tears**
	21	**Contractures**
	22	**Bruises**
	23	**Tendinitis**
	24	**Epicondylitis**
	25	**Scarring**

(*) Certain programs from 1 MHz were added even to the 3 MHz version with the same parameters (intensity and duration) for surface treatments.

Aesthetic programs	No.	Program name
Cellulite	26	Edematous localized cellulite
	27	Flaccid localized cellulite
	28	Compact localized cellulite
	29	Edematous distributed cellulite
	30	Flaccid distributed cellulite
	31	Compact distributed cellulite
Lymphatic drainage	32	Localized lymphatic drainage
	33	Distributed lymphatic drainage
Weight Loss	34	Localized weight loss
	35	Distributed weight loss
Skin conditions	36	Boils
	37	Granulomas
	38	Local scleroderma
	39	Paravertebral scleroderma
	40	Warts

Cap.29 SETTING WINDOW

Tap SETTING to go to the configuration window
Tap ESC to return to the initial window

In this area it is possible to change the language, contrast and the volume of the buzzer.

Cap.30 EMC

- The electronic instruments are designed to ensure compatibility (EMC).
- These tools must be installed and used in accordance with the EMC information provided in the annex.
- Portable instruments may interfere with the medical electrical equipment.
- Cable length:
  1. Electrode cable: 2.00 m approx.
  2. Power supply unit cable: 2.00 m approx.

If you use replacement parts or accessories that are not original, the emissions of these devices may increase and the immunity may be reduced.

Do not place this apparatus near or over other devices when used. If placed near or over other devices check that it works properly before using it.

Cap.31 MAINTENANCE

If you want the machine to operate properly and safely, even long after the date of purchase, it is important to perform the following maintenance operations.

Cap.32 CLEANING AND MAINTENANCE OF APPLIED PARTS

32.1 Maintenance of pre-gelled electrodes

To maintain the gel layer of the electrodes:

(1) after each use, apply a small amount of water on the adhesive gel, letting it air dry for a few seconds before putting it on the silicone backing;
(2) carefully close the envelope containing the electrodes, to prevent their dehydration;
(3) keep the electrodes at room temperature.

It is important to note that:

1. the duration of the electrodes depends on their maintenance, the cleaning conditions of the skin on which they are applied, and the type and intensity of the applied current;
2. the electrodes must be replaced when they no longer adhere to the skin;
3. they must be applied on perfectly intact skin;
4. in case of allergies or skin irritations, discontinue therapy and see a doctor;
5. the electrodes are designed for personal use;
6. the electrodes are designed for use with an effective current value of not more than 50mA (similar for the non pre-gelled electrodes).

32.2 Maintenance of silicone electrodes

To properly store the electrode it is recommended to:

(1) clean the smooth surface of the electrode, after each use, with a solution of soap and water of 50%;
(2) disinfect the surface with alcohol, if the electrode is used on different patients;
(3) check the state of wear of the electrode surface, at the end of each electrostimulation session;
(4) replace the electrode if the surface has cracks, signs of breakage, even if only partial, to avoid non-uniform distribution of the current, leading to an increased risk of burn

32.3 Maintenance of the wire insulations

Before each stimulation session, you need to check the state of wear of the insulation of the cables, replacing them with the same type of cables as those supplied with the apparatus if signs of wear, such as cuts and/or cracks are on their surface.

32.4 Cleaning the apparatus and the power cord

To clean both the apparatus and the power cord it is recommended to use a damp cloth. Do not use under any circumstances liquids, because the apparatus is not protected against water infiltrations (IP20). You should always check the state of wear of the insulation (cable and connectors) of the power cord before connecting it to the network. If damaged, even if partially, replace them immediately.

32.5 Immediate maintenance

Immediate maintenance by New Age Italia or their experienced authorized personnel, should be performed if:

(1) the apparatus has been subjected to external mechanical stresses, such as serious falls;
(2) the apparatus has been subjected to excessive overheating, for example, if left near a source of intense heat;
(3) you suspect that liquids have infiltrated the apparatus;
(4) the power cord or other parts are damaged, broken or missing;
(5) the functionality of the apparatus seems altered;

⚠ For safety reasons it is recommended not to use other accessories (e.g. electrodes, sponges, handpieces and power supply unit) than those supplied as standard equipment

⚠ The frequency of maintenance, inspection and functional checks of compliance to safety standards EN60601-1 for medical devices, to be performed with secure-testers, is annual. The useful life of the instrument is guaranteed by the company only if such maintenance is performed regularly.

NOTE: it is recommended to perform the checks only with New Age Italia srl, or qualified personnel authorized by it. The apparatus that requires maintenance can be sent directly to the company laboratories or delivered to the retailer where it was purchased.

Cap.33 HELP CENTRE:

New Age Italia s.r.l. - Via De Brozzi, 3 - 48022 Lugo (RA)
Tel:+39 0545 32019; Fax: +39 0545 369028 –
E-mail: asstecnica@newageitalia.it

Cap.34 SYMBOLS

CLASS II APPARATUS

BF TYPE APPARATUS

CAUTION, SEE THE ATTACHED DOCUMENTATION

THIS DEVICE IS MARKED CE ACCORDING TO DIRECTIVE 93/42CEE AMENDED BY 2007/47/CE

Cap.35 WARNINGS

⚠ Use the apparatus only with electrical installations that comply with the Safety Standards in force.

⚠ The apparatus has an IP20 protection (see chap. "Technical characteristics") and is not recommended to use it in the immediate vicinity of liquids, because the apparatus is not protected against infiltrations.

⚠ At the end of the life of the product, in accordance with the WEEE directive 2005/96, deliver the apparatus to an electronic goods authorized disposal centre, or return it to the manufacturer who will dispose of it in accordance with the laws.

⚠ We recommend that you do not use it in the immediate vicinity of mobile phones (keep at least a few feet away).

⚠ Operating in close proximity (e.g. 1 meter) of a device for short-wave therapy, or microwaves, can produce instability in the output of the stimulator.

⚠ Do not simultaneously connect the patient with the stimulator and a HF surgical apparatus, to avoid any danger to the patient and the stimulator.

⚠ The apparatus does not generate electromagnetic fields.

⚠ The faradic currents, diadynamic (Diad.) and direct current (Ion), have a non-zero direct component, so it is recommended to be careful.

⚠ The operator is advised not to simultaneously touch the patient and the active parts.

⚠ In the event of malfunctions and failures, the apparatus shall be sent only to the manufacturer.

⚠Do not operate in close proximity to flammable substances

⚠ Please note that the use of the same electrodes and the same sponge envelopes or the same conductive bands on more patients could favour the phenomena of cross-infection between them.

⚠ Do not use any accessories other than those supplied. For the purchase of spare parts, please contact the manufacturer exclusively.

⚠ It is important to inform the patient about the type of sensations that will be felt during stimulation, in order to intervene immediately, discontinuing the stimulation

from the commands of the instrument or detaching the electrodes, in case the sensations are no longer correct.

⚠ Keep out of reach of children.

⚠ Because of the current density in the electrodes in stimulation phase, one must carefully perform the maintenance operations for the proper use and storage.

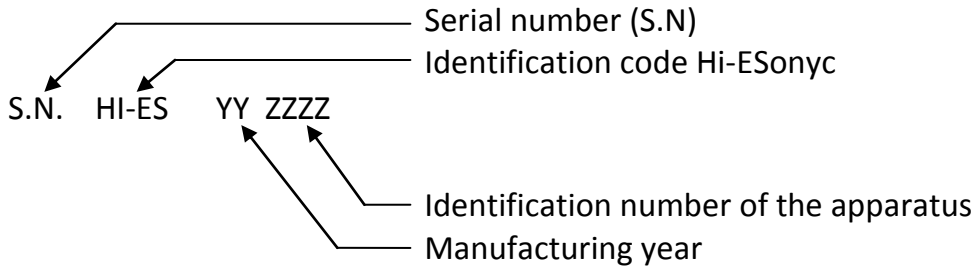
⚠ The anal/vaginal probe shall used only **under medical supervision.**

Cap.36 STANDARDS

Built according to the following standards:

- EN 60601-1 (1998): Medical electrical equipment: General Rules for Safety
- EN 60601-1-4 (1997): Collateral standard: Programmable electrical medical systems
- EN60601-2-10 (2001) – Medical electrical equipment: Particular safety requirements for neuromuscular stimulators.
- EN60601-2-5 (2001) – Medical electrical equipment: Particular safety requirements for ultrasonic stimulators
- EN60601-1-2 (1998) – Collateral standard: Electromagnetic compatibility - Requirements and tests
- IEC 62-84 (1997) – Symbols for electro-medical equipment
- EN60601-1-1 (2002) – Collateral standard: Safety requirements for systems Electromedical

Cap.37 SERIAL NUMBER AND IDENTIFICATION CODE



Cap.38 BASIC EQUIPMENT AND ACCESSORIES

1 User manual
1 Hi-E Sonyc unit
1 Power cord

Basic electrostimulation equipment

2 Output electrotherapy cables
4 Pre-gelled electrodes 50x50 mm
2 Conductive silicone electrodes + 2 sponge envelopes 60x80 mm
2 Conductive silicone electrodes + 2 sponge envelopes 80x120 mm
2 Elastic bands for fixing 70x8 cm

Basic ultrasound equipment

1 Cable + handpiece for ultrasound therapy (standard)
1 Pack of ultrasound GEL

Accessories and consumables available on request (not included)

Pre-gelled electrodes
Conductive silicone electrodes
Y cables
Elastic bands
Anal and vaginal probe
Cable+ultrasound handpiece (Standard or conic)

Cap.39 TABLE WITH ERROR CODES

In case of malfunction, the apparatus can return one of the following errors.
If the error cannot be solved it is recommended to restart the device.
If the error persists, contact the manufacturer for technical assistance.

Errore	Descrizione	Valore	Riprstinabile
E01	timeout seriale	ETO	NO
El. Detach	distacco elettrodi	ENOELECT	SI
E03	sovracorrente	EOVERCURR	SI
E04	impossibile raggiungere la tensione	ENOVSURV	SI
E05	corto circuito	ECC	SI
E100	errore CRC eeprom	ECRCE2	NO
E101	mancato refresh WDT	EWDT	NO
E102	fallimento CRC flash	ECRCFLASH	NO
E201	manipolo ultrasuoni disconnesso	ENOHEAD	SI

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