cefar® myo ˣ²   cefar® activ ˣ²

PRECAUTIONARY MEASURES

- Inspect the equipment prior to use.

- Use the stimulator only as stated in the operating instructions.

- Only Cefar accessories should be used with the stimulator

WARNING!

- People with implanted electronic equipment, such as pacemakers and intracardiac defibrillators, must not be treated with TENS.

- Pregnant women should not be treated with TENS during the first trimester (12 weeks).

- Due to the location of the carotid arteries and the carotid bodies, do not stimulate the front or sides of the neck, since a drop in blood pressure can occur.

- Stimulation should not take place while the user is connected to high-frequency surgical equipment. It may cause burn injuries on the skin under the electrodes, as well as problems with the stimulator.

- Do not use the stimulator in the vicinity of shortwave or microwave therapy equipment, since this may affect the output power of the stimulator.

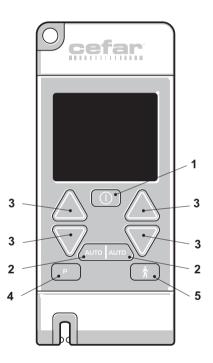- Keep the stimulator out of reach of children.

CAUTION

- Stimulate with precaution while treating angina pectoris.

- The electrodes are only to be placed on healthy skin. Avoid skin irritation by ensuring that good contact is achieved between electrodes and skin.

- Do not place electrodes directly over the uterus or connect pairs of electrodes across the abdomen if you are pregnant. The reason is that, theoretically, the current could affect the foetus's heart (although there are no reports of it being harmful).

- If skin irritation should occur, treatment should be temporarily discontinued. If problems continue, contact your health care provider. Hypersensitivity to tape and gel can occur in isolated cases. The problem usually disappears when the tape or gel is changed to another type.

- Do not use electrodes with a surface < 12 cm^2, as there will be a risk of suffering a burn injury. Caution should always be exercised with current densities > 2 mA/cm^2.

- Observe caution when using electrotherapy at the same time as the patient is connected to monitoring equipment with body worn electrodes. The stimulation might interfere with the signals to the monitoring equipment.

- Never open the battery cover during stimulation in order to avoid electrical shock.

- Turn off the stimulation before removing the electrodes from the skin. If an electrode comes off, turn off the stimulation before picking it up. Getting electrical stimulation through the fingers is unpleasant but not harmful.

- Observe caution when stimulating in the immediate vicinity of cellular phones that are switched on, since this may affect the output power of the stimulator.

- Observe caution if you use the stimulator while driving, unintentional stimulation changes might extract focus from the driving and create a hazardous situation.

OVERVIEW – GET TO KNOW YOUR STIMULATOR

BUTTONS

1. ⏻
Turns the stimulator on and off.
Note! Can be used for terminating the stimulation at all times.

2. AUTO | AUTO
Starts the AUTO test mode.
Confirms the selected amplitude level in AUTO test mode.

3. ▽ △
Decreases or increases the stimulation amplitude (intensity of the stimulation) for each channel.
Note! Always increase the amplitude cautiously.
▽ also deactivates the key lock.

4. P
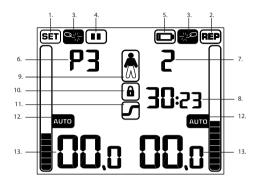Selects the training program.
Also used for pausing the program in progress.

5.
Selects stimulation for lower or upper body.

OVERVIEW – GET TO KNOW YOUR STIMULATOR

DISPLAY SYMBOLS

1. **SETS**
   Total or remaining number of sets in selected program. If SET is not displayed the bargraf illustrates stimulation amplitude for left channel.

2. **REPS**
   Total or remaining number of repetitions in each set. If REP is not displayed, the bargraph illustrates stimulation amplitude for right channel.

3. **BROKEN CIRCUIT**
   Indicates if the circuit (connection between stimulator and electrode) is broken.
   For further information, see *Trouble Shooting*.

4. **PAUSE**
   The stimulation program is paused.

5. **BATTERY STATUS**
   Empty batteries. This symbol is shown when the batteries are almost empty.

6. **PROGRAM NUMBER**
   Selected program number. See *Program Description* for further information.

7. **LEVEL NUMBER**
   Intensity level. See *Program Description* for further information.

8. **REMAINING TIME**
   Remaining program time in minutes and seconds. Time is flashing during timer setting, also counts down the time for break between sets.

9. **BODY PART**
   Selected body part for stimulating, indicated by the filled body part.

10. **KEY LOCK**
    Key lock is activated.

11. **WORK/REST**
    Upper part flashes during work, lower part during rest periods.

12. **AUTO STIMULATION MODE**
    Activated automatic amplitude setting. **"AUTO"** is flashing during test mode and steady during stimulation.

13. **AMPLITUDE LEVEL**
    Selected amplitude in mA (not shown in Auto stimulation mode).

For information about the symbols on the stimulator's back, see section *Key to the Stimulator Symbols.*

READ THIS BEFORE USE

To reach your goal and get the most effective training the stimulation should feel strong but without pain. Since the body initially adapts to the selected intensity of the stimulation, it is necessary to adjust the amplitude gradually to reach the optimal level of stimulation.

CEFAR EASY TOUCH™ - AUTOMATIC AMPLITUDE SETTING (AUTO)

By using CEFAR EASY TOUCH™ the amplitude is automatically set and adjusted during the program, related to the result of the analyse in the TEST that is automatically done when you use the auto mode.

To get the most effective training the amplitude increases gradually during the program. You can leave auto mode any time by pressing the arrow buttons; △ or ▽ .

OPERATIONW

STEP-BY-STEP USE

1. Connect the electrodes to a cable.

2. Attach the electrodes to your body.

   Follow the recommendation in *Electrode Placement Guide*, at the end of this user manual.

3. Connect the cable to one of the stimulator's two channels.

4. Press ⬭ to turn the stimulator on.

5. Press ⬭ to select the stimulation for muscles on upper or lower body.

6. Press ⬭ until desired program number is shown.

   More information about each program and its level is found in the section *Program Description*.

Note! The program can only be changed or selected when the amplitude is 0.0 mA.

To start the training see *'CEFAR EASY TOUCH™ – Automatic Amplitude Setting (AUTO)' (recommended)* or *'Manual Mode'*.

CEFAR EASY TOUCH™ – AUTOMATIC AMPLITUDE SETTING (AUTO)

Prepare the equipment as described in *Step-by-Step Use*, step 1-6

7. Press ⬭ to start the auto test.

   AUTO starts flashing and the amplitude increases gradually.

8. Press ⬭ once again when you see the <u>first visual muscle response</u>.

If you press **AUTO** too late, or want to start again for any reason, press and hold the **AUTO** button for 2 seconds to start over.

9.   The **AUTO** on the other channel starts flashing.

·   If you only use one channel: Wait a few seconds and the **AUTO** stops flashing.

·   If you use both channels: Press the other channel's ⟨ AUTO ‖ AUTO ⟩, to confirm the two channel use. The other channel's auto test starts. Repeat step 8 to set the amplitude.

The amplitude is now optimized for you and the training program will start after a few seconds. When the program is finished the timer flashes "00:00".

△ or ▽ can be used to increase or decrease stimulation amplitude at any time until the stimulation feels pleasant, presumed that the key lock is inactivated. If doing so, the Automatic Amplitude Setting is lost and the stimulator goes to Manual Amplitude Setting.

MANUAL AMPLITUDE SETTING

Prepare the equipment as described in *Step-by-Step Use*, step 1-6

7.   Press △ to set the amplitude and start the stimulation.

8.   Increase or decrease the amplitude using △ and ▽ until you reach a comfortable level. Always increase the amplitude cautiously.

When the program is finished the amplitude automatically returns to 0, and the timer flashes "00:00".

Note: Do not forget to set the amplitude for the Active Rest (in manual mode only), see section *Active Rest.*

PROGRAM GUIDE

CEFAR EASY TRAINING™ – SETS AND REPETITIONS (REPS)

Programs that are physically straining consist of sets and repetitions (reps), just like the regular muscle training principle. Between each set there is a break, and the timer counts down the remaining time until the next set starts. ⌧ indicates if the training is in a work or rest phase, upper part flashes during work, lower part during rest.

ACTIVE REST

In the training programs where the intensity is high enough for muscle contractions, there is stimulation between the contractions, so-called Active Rest. The stimulation should cause muscle vibrations. The aim is to keep the muscle prepared for the next contraction and to decrease muscle soreness afterwards.

Note: Do not forget to set the amplitude for the Active Rest in manual mode. In auto mode the amplitude adjusts automatically in Active Rest.

LEVELS

Some of the programs have 3 different levels: 1, 2 and 3. Use these levels to gradually increase your training load. If you are not physically active, we advice you to start with level 1 and gradually increase the level as you want to increase the workload.

PROGRAM DESCRIPTION

How to read the schedule:

PROGRAM NAME
(P) Program number : (lvl) Training level
Program objective.

CEFAR MYO X2

WARM UP	
P1 : lvl 1	**P2 : lvl 2**
Prepares the muscle for exercise.	

PROGRESSIVE FORCE		
P3 : lvl 1	**P4 : lvl 2**	**P5 : lvl 3**
Series of contractions that increase, then decrease, for strength development.		

MAXIMUM FORCE		
P6 : lvl 1	**P7 : lvl 2**	**P8 : lvl 3**
Strength training and developing muscle mass.		

EXPLOSIVE FORCE

P9 : lvl 1	P10 : lvl 2	P11 : lvl 3

Increases the capacity for instantaneous maximum force.

ENDURANCE

P12 : lvl 1	P13 : lvl 2	P14 : lvl 3

Improves the capacity for enduring a high workload over a prolonged period of time.

RESISTANCE FORCE

P15 : lvl 1	P16 : lvl 2	P17 : lv 3

Improves the capacity to develop a high level of force over a prolonged period of time.

CAPILLARISATION

P18 : lvl 1	P19 : lvl 2

Increases blood flow to the muscle.

RECOVERY

P20

Improves circulation and elimination of lactic acid after a workout.

ACTIVE RECOVERY

P21

Increases the ability to regain muscular capacity after a workout.

MASSAGE

P22

The comfortable vibrations increase circulation and help the muscles to relax.

DRAINAGE

P23

The comfortable vibrations increase circulation and promote elimination of toxins.

TENS CONVENTIONAL

P24

Offer effective pain relief. It can be used at anytime to soothe pain.

TENS ENDORPHIN

P25

Offer effective pain relief.

Note: The TENS program does not always treat the cause of the pain. If the pain persists, seek medical advice.

CEFAR ACTIV X2

WARM UP

P1

Prepares the muscle for exercise.

TONING

P2 : lvl 1	P3 : lvl 2	P4 : lvl 3

Maintaining muscle tone, ideal for people of all physical conditions.

SCULPTING

P5 : lvl 1	P6 : lvl 2	P7 : lvl 3

Produces an intense workout comparable with regular strength training sessions.

STOMACH/BUTTOCKS

P8 : lvl 1	P9 : lvl 2	P10 : lvl 3

A muscle-building program designed specifically for the abdominals and buttocks.

AEROBIC

P11 : lvl 1	P12 : lvl 2	P13 : lvl 3

Increases the aerobic capacity by long sub-maximal training sessions.

RECOVERY

P14

Improves circulation and elimination of lactic acid after a work-out.

DRAINAGE

P15

The comfortable vibrations increase circulation and promote elimination of toxins.

RELAXING MASSAGE

P16

Causes a very effective de-contraction of the muscles.

TENS CONVENTIONAL

P17

Offer effective pain relief. It can be used at anytime to soothe pain.

TENS ENDORPHIN

P18

Offer effective pain relief.

Note: The TENS program does not always treat the cause of the pain. If the pain persists, seek medical advice.

KEY LOCK

The key lock activates, indicated by 🔒, if a stimulation program is active and no buttons are pressed for 10 seconds.

1. To deactivate the keylock, press ▽ .

PAUSING THE PROGRAM

If key lock is on, press any of the **DECREASE** buttons ▽ to deactivate it.

1. Press ⬭P⬭ to pause the program.

2. To resume the stimulation, press ⬭P⬭ once again.

⬓ indicates that the program is paused and no amplitude is generated. If the stimulator is paused more than 5 minutes it turns off automatically to save batteries.

MAINTENANCE

BATTERIES
The 🔋 in the display shows when it is recommended to replace the batteries. The batteries can still be used until the stimulation feels weaker or the stimulator stops working.

1. Make sure the stimulator is switched off.

2. Remove the battery cover, by sliding it downwards and then lifting it upwards.

3. Change the batteries to new ones (type AA 1,5V). Make sure the polarisation placement (+ and -) is correct.

4. Replace the battery cover.

5. Dispose of the exhausted batteries according to local regulations.

CARE INSTRUCTIONS
Taking care of and cleaning CEFAR ACTIV X2 and CEFAR MYO X2 equipment is simple, provided the following instructions are observed.

·   Keep the stimulator and accessories in the original case when not in use.

·   Never expose the stimulator to water. Wipe with a damp cloth if necessary.

·   The cables are best preserved if left attached to the stimulator between sessions.

·   Do not jerk cabels or connections.

·   The electrodes are re-moistened if necessary with a few drops of water and kept air-tight (in a plastic bag) on protective paper when they are not in use.

TROUBLE SHOOTING

The stimulation does not feel the same as usual

·   Check that all settings are correct and make sure that the electrodes are correctly placed.

·   Slightly change the position of the electrodes.

The stimulation feels unpleasant

·   The skin is irritated. For advice on skin care, see section *Precautionary Measures.*

- The electrodes begin to lose their stickiness and do not stick properly to the skin. Moisten the adhesive surface with a few drops of water before placing on the skin.

- The electrodes are worn out and need to be replaced.

- Slightly change the position of the electrodes.

The stimulation feels weak or not at all
- Check if the batteries need to be replaced, see section *Batteries*.

- Electrodes are too old and need replacement.

The broken circuit symbol is shown on the display

The broken circuit symbol indicates that the resistance is too high, or that a cable is broken.
- A too high resistance can be caused by a bad connection between the electrodes and your skin, or that the electrodes need to be replaced.

- A cable breakage can be checked by pressing the cable's pins against one another while increasing the amplitude for the corresponding channel to 11 mA. If the amplitude now drops to 0.0 mA and starts flashing, the cable needs to be replaced.

  Note! Never increase the amplitude above 20 mA when you check for cable breaks, since this can damage the stimulator.

TECHNICAL DATA

CEFAR MYO X2 and CEFAR ACTIV X2 are electrical stimulators with two channels intended for muscle training and pain relief. They can deliver 100 mA of constant current through a resistance load of 1000 ohms. With a change in load from 100 to 1000 ohms, the stimulation current changes less than 10 % from the set value. The stimulator operates on either two non-rechargeable 1.5 V AA batteries or two rechargeable 1.2 V AA batteries, recharged in a separate charger.

Information Related to Electromagnetic Compatibility (EMC)

CEFAR MYO X2 and CEFAR ACTIV X2 are designed to be used in typical domestic or commercial environments and are approved according to the EMC safety standard of EN 60601-1-2.

CEFAR MYO X2 and CEFAR ACTIV X2 emit very low levels in the radio frequency (RF) interval. Therefore they are not likely to cause any interference in nearby electronic equipment (radios, computers, telephones etc.).

CEFAR MYO X2 and CEFAR ACTIV X2 are designed to withstand foreseeable disturbances originating from electrostatic discharges, mains supply magnetic fields and radio frequency transmitters (such as mobile telephones).

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CEFAR MYO X2 & CEFAR ACTIV X2

Number of channels 2
Constant current . . . . .Up to a resistance of 1000 ohms
Stimulation current/channel . . . . .0–100 mA
Waveform. . . . . .Symmetrical biphasic pulse,
                                                                    100 % compensated

Number of preset programs
CEFAR MYO X2 50
CEFAR ACTIV X2 36
Stimulation forms . . . . .Continuous stimulation:
                                                                    Conventional
                                                                    Modulated pulse duration
                                                                    Modulated frequency
                                                                    Intermittent stimulation:
Max pulse duration . . . . .350 µs
Max frequency . . . . .80 Hz
Environment for storage, use and shipping . . . . .Temperature 10 º C–40 ºC
                                                                    Air humidity 30 %–75 %
                                                                    Air pressure 700 hPa–1060 hPa
Power source . . . . .2 x 1.5 V AA non-rechargeable
                                                                    or 2 x 1.2 V AA rechargeable
                                                                    batteries
Current consumption for one
channel, 80 Hz, 30 mA. . . . . .150 mA
I r.m.s. max/channel . . . . .11 mA
Size   . . . . .120 x 50 x 30 mm
Weight   . . . . .ca. 180 g

KEY TO THE STIMULATOR SYMBOLS

⚠

Read the operating instructions before to use.

Patient part type – Body Floating.

Dispose of the worn-out stimulator in accordance with local and national regulations.

One ore more of the following markings may appear on your device:

CE 0413

Complies with the European Medical Device Directive (93/42/EEC).
Notified body Intertek ETL Semko (0413).

MET

Complies with UL 69050-1, SCA C22.2 No. 69050-1.
Certification mark issued by SGS.

The stimulator has a two-year warranty against defects,
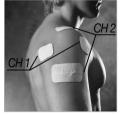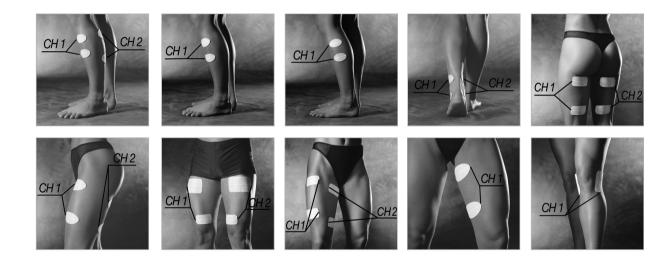on condition that it is used correctly.