

# ELPHA II 3000

## PAIN CONTROL AND MUSCLE STIMULATION

*A New Way to New Strength - the Ultimate Nerve and Muscle Stimulator*

### Pain Control and Muscle Stimulation in Same Unit

The *Elpha II 3000* is like getting two stimulators in one unit. Each channel is completely independent of the other. You can provide stimulation to the patient with different parameters in each channel or provide two totally different modalities simultaneously. Changes in a modality or in one channel will not affect any other settings.

The *Elpha II 3000* is a portable unit, which can be used for treatment either at home or in a clinic. With 4 electrodes and 6 types of stimulation on 2 independent channels the *Elpha II 3000* provides a wide range of treatment options for pain relief therapy and muscle training.

### New Technology

The *Elpha II 3000* comes ready to use in a carrying case with lead wires, battery and electrodes. The lead wires are of the highest quality. Quality components complete the system. Full documentation in an easy to understand users manual is also provided to make training an easy task.

The *Elpha II 3000* is easy to program with a digital on-screen display. The unit delivers exact amounts of current as indicated by the display screen. The step by step display of the waveform on the screen guides the therapist through the set-up of muscle stimulation and pain management protocols.

The individual programmes of the *Elpha II 3000* have been developed in close cooperation with both users and experts within the area of pain relief and training of muscles. The use of the *Elpha II 3000* is not limited to pre-programmed stimulations. All programmes can be set individually to suit every need of individual therapy. These settings will automatically be saved in memory.

Easy operation has been given top priority. Just press the 'ON' button and the treatment begins.

### Application:

- Prevention of Atrophy and Spasms
- Chronic and Acute Pain
- Muscle Tension
- Rehabilitation
- Sports training

### Powerful Output

Tests performed under conditions simulating patient loads (real skin resistance is usually up to 2,500 ohms) show the *Elpha II 3000* provides as much stimulation current as standard units provide at 500 ohm loads. In addition, the *Elpha II 3000* retains the therapeutic integrity of the waveform under these extreme conditions.

The microprocessor controlled output delivers a powerful yet comfortable stimulation regardless of the mode selected. The integrity of the waveform combined with the power of the unit provides quality contractions of even larger muscle groups with up to 100 mA



### Pulsed Galvanic Current

The unique current compensation process on the *Elpha II 3000* provides the advantages of pulsed DC without the complications associated with the skin breakdown common with standard DC stimulators. The modified monophasic waveform delivers constant pulsed DC current which is compensated by short-circuiting the electrodes after each pulse, allowing the current to flow back into the device rather than accumulating in the tissue. This minimizes the ion build up that causes skin breakdown in standard galvanic units while providing the therapeutic value associated with pulsed DC current.

### Muscle Stimulation

Neuro Muscular Stimulation (NMES) has traditionally been used to prevent disuse atrophy in patients unable to exercise their own muscles because of debilitating or traumatic injury. Muscle stimulation is also considered appropriate for range of motion exercises, gait training, hand rehabilitation, pelvic floor therapy, reducing spasms, edema reduction and increasing blood flow. The *Elpha II 3000* can store three different NMES programs.

### TENS

Scientific literature indicates that the Transcutaneous Electrical Nerve Stimulation (TENS) mode of the *Elpha II 3000* provides relief from chronic pain when used as directed. Clinical studies indicate that the unit functions to interfere with the transmission of pain signals to the brain (Melzack and Wall's gate theory) and through the release of endogenous opiates (endorphins) which are the body's own substances for pain relief.

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## Modulated Strength Duration

The combination of increasing and decreasing pulse duration combined with a simultaneous increase or decrease in the current (mA) make the modulated strength duration (SD) mode of the Elpha II 3000 highly effective in reducing pain in conditions affecting a variety of nerve types and sizes. The patient is able to provide a complex treatment protocol effortlessly by utilizing the Elpha II 3000's built in microprocessor and SD treatment protocol. A single setting of the mode selector allows the patient to begin treatment without assistance.

## Burst

The Burst mode of the Elpha II 3000 provides stimulation at a comfortable medium frequency delivered in low frequency bursts. The low frequency burst is thought to facilitate the release of endorphins and to increase local circulation in the area of stimulation. Increased circulation may be beneficial in preventing or alleviating a variety of conditions resulting from a decrease or cessation of blood flow.

## Alpha II 3000 Standard Features

- Effective and comfortable stimulation through the best technology.
- Automatic self-testing of functions for maximum safety.
- Electrode alarm and locking functions.
- Push button operation with logic function.
- Energy Timer (ET) for control of usage (compliance data).
- Repeat Stimulation Programme (RSP) for easy repetition of treatment.
- Well documented and thoroughly tested.

## Technical Specifications

	Program Number	Output Current	Frequency	Pulse Width
<b>Tens</b>	P1	0-60 mA	1-150 Hz	50-250 $\mu$ s
<b>Tens II</b>	P2	0-48 mA modulation: $\pm$ 25%	1-150 Hz	70-200 $\mu$ s (avg) modulation: $\pm$ 25%
<b>Burst</b>	P3	0-60 mA	0.5-5.0 Hz	150-400 $\mu$ s
<b>Muscle 1</b>	P4	0-100 mA	2-100 Hz	100-400 $\mu$ s
<b>Muscle 2</b>	P5	0-100 mA	2-100 Hz	100-400 $\mu$ s
<b>Muscle 3</b>	P6	0-100 mA	2-100 Hz	100-400 $\mu$ s c

*On/off Cycles in Muscle mode: Time on: 2-20 sec, Time off: Min=Time on Max=20 sec, Rise Time: 0.5-2.0 sec. Fall Time 0.5-2.0 sec.*

<b>Number of channels</b>	2 independent
<b>Pulse form</b>	Asymmetrical bi-phasic with discharge
<b>Max output voltage</b>	300 VPP open circuit
<b>Max output current</b>	100 mA constant current at 1 kOhm load
<b>Max charge per pulse</b>	40 $\mu$ s
<b>Tolerance</b>	Stimulation level $\pm$ 5%, Frequency $\pm$ 2%, Pulse width $\pm$ 5%
<b>Timer</b>	5 to 95 minutes, and continuous
<b>Battery</b>	9V alkaline or rechargeable
<b>Battery lifetime</b>	Approx. 40 hours (alkaline) using programmes: P1, 30 mA and P3, 30 mA (default parameters)
<b>Weight</b>	158 g with battery

*The Elpha II 3000 includes an energy timer, a repeat function and a parameter lock feature.*

