

**TENS****NMS****FES****PES****SAMMS®****Self Adapting Multi-Modal Stimulator****PROFESSIONAL****Effective in TENS mode**

Up to 25 basic programs are available, all of which are suitable for pain treatment using the "endorphin-stimulated hyper secretion" mechanism or the "gate control" theory. The different programmes allow the optimal treatment of patients with high, moderate and low sensitivity to electro stimulation, also in relation to the type and area of pain.

**Effective in NMS mode**

As a neuromuscular stimulator, SAMMS® allows the following treatments to be carried out: MUSCULAR WARM-UP, TONICIZING, PREVENTION OF HYPOTONIA, STRENGTHENING, RELAXATION and DECONTRACTURING. 27 basic programs, with pre-set parameters (adjustable), enable the various muscle fibres (Type I, IIa and IIb) to be selectively recruited.

**Effective in FES mode**

As a functional stimulator, SAMMS® provides motor stimulation with an external "trigger" for the re-education of "foot-drop". The trigger can be derived also by an EMG signal (with optional sensor). This means that it is possible to achieve muscular-cognitive re-education in hemiplegic patients, using stimulation activated by voluntary contraction at an incremental threshold. Stimulation is activated at a given level of muscular action potential, generated by voluntary contraction. The activation threshold will be increased at each session. In order to operate in FES mode, it is necessary to order the OA-F1 (1-channel) or OA-F2 (2-channel) output adapter. Both include the heel switch.

**Effective in PES mode**

It can perform perineal stimulation (PES), through intra-cavity probes and Intravesical stimulation (IVES) through urethral disposable sterilized catheters. 28 therapeutic programmes (fully editable) in memory, specifically developed for the treatment of STRESS, URGE and MIXED incontinence. Possibility to "load" an external archive of new protocols for incontinence, through a thematic "Memory Clip" (MCAT). Possibility to exploit protocols based on double circuit stimulation, by means of 4 electrodes probes. Possibility to stimulate simultaneously the agonist muscles (glutei). The "open circuit detector", automatically monitors the conditions of the "probe in place", and warns the user about leads interruption.

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### **SAFE**

The two independent generators (with galvanic insulation) work in “controlled energy” mode and, unlike conventional generators with constant current, assure a greater level of comfort and, above all, a uniform current distribution, all over the electrode surface (constant density). A sophisticated electrode control system interrupts stimulation in the event of an unstable contact or broken circuit. The surface assembly techniques, guarantee a very high level of reliability.

### **Powerful and flexible**

Thanks to the opportunity to use sequential therapeutic protocols, “loaded” from an external Memory Clip® or directly “built” inside a SAMMS® Professional unit, both the using flexibility and the therapeutic success will be tremendously increased. In fact, the sequential combination of more programs having different effects, brings to the synergic summation of the therapeutic effects of each program.

### **The output adapter**

It allows the electrodes to be connected to the main unit and, at the same time, determines the operating mode of the appliance. Different types of OA are available, depending on the use of the appliance in the different modes (TENS-NMS-PES-FES).

### **From professional to patient**

Preparing a custom protocol and saving it on an external Memory Clip®, allows the patient to make direct use of his/her own SAMMS® (including Rentry model), under the full professional control. These features represent a considerable “added value” for the Doctor or Therapist who prescribes electro stimulation with SAMMS®.



### **The MemoryClip**



It is an external memory, which can be added to the SAMMS® unit. MC is available as a thematic archive (MCAT) containing pre-constructed sequential protocols specifically designed for PAIN, ELDERLY, INCONTINENCE, SPORT and FITNESS. Void MC (MCSP) may contain a “tailor-made” protocol prepared using a Professional, and can be used on other SAMMS® units, including the Rentry.

### **Programmable for renting**

By using the specific RENT-IT software, it is possible to program SAMMS® for renting. It is locally or remotely programmable through a serial connection with a personal computer. SAMMS®, units programmed in this way can be “deactivated” after a given number of applications.



- 12 The treatment protocol can be either standard or personalised depending on the prescription.

**TENS****NMS****FES****PES****SAMMS®****PROFESSIONAL*****Programmable for “distributed therapy”***

Through the STIM Wizard software, any SAMMS® can be programmed with a Personal computer. This software is indicated for use in a clinic and suitable for the optimised management of several SAMMS® units, thus implementing the so-called “distributed therapy”. Units programmed in this way are automatically deactivated after any session. Even the less expert users can devise extremely efficacious treatment protocols using guided procedures.

***Differences between the Professional and the Rentry model***

While NiMh rechargeable batteries power the SAMMS® Professional unit, a disposable alkaline 9V battery powers the Rentry model. Although it has the same characteristics as the Professional model, the SAMMS® Rentry has the following restrictions: only 3 programmes for each mode (3TENS-3NMS-3FES-3PES), adjustable — possibility of “reading” a Memory Clip, but not creating or modifying it.

**Package**

SAMMS® is supplied complete with:

- 1x - OA-NT2 - 2-channel adapter for TENS and NMS - consisting of 4 extraflex cables 2-m long terminating in 2mm plugs
- 4x Self-adhering electrodes 50x50 mm with 2mm socket connectors
- 1x FAST CHARGE battery recharger for NiMh batteries
- 1x Carrying case with compartments
- 1x Users manual

***Technical characteristics (Professional model):***

Power supply: internal using rechargeable 4.8 V NiMh 900mAh battery – Autonomy: Professional - min.3 max.10 hours before recharging the battery (recharging time: 2.5 hours) – Output channels: 2 independent, both as intensity and as stimulation parameters. – Output voltage: max 200 V. pp – Output current: max 60 mA on normalised 1 K load. Wave type: bi-phase or monophasic impulses (from 20 usec. to 2 msec.), with “controlled energy”. – Safety class: AI. Int. BF according to CEI 62-5 /62-24 (IEC601-1 /601-2-10) - Dimensions: 71x110x28 mm - Weight: 190 g. including battery.

The CE marking guarantees that the SAMMS® units are fully compliant with EEC directive 93/42, being a Class 2a medical device.