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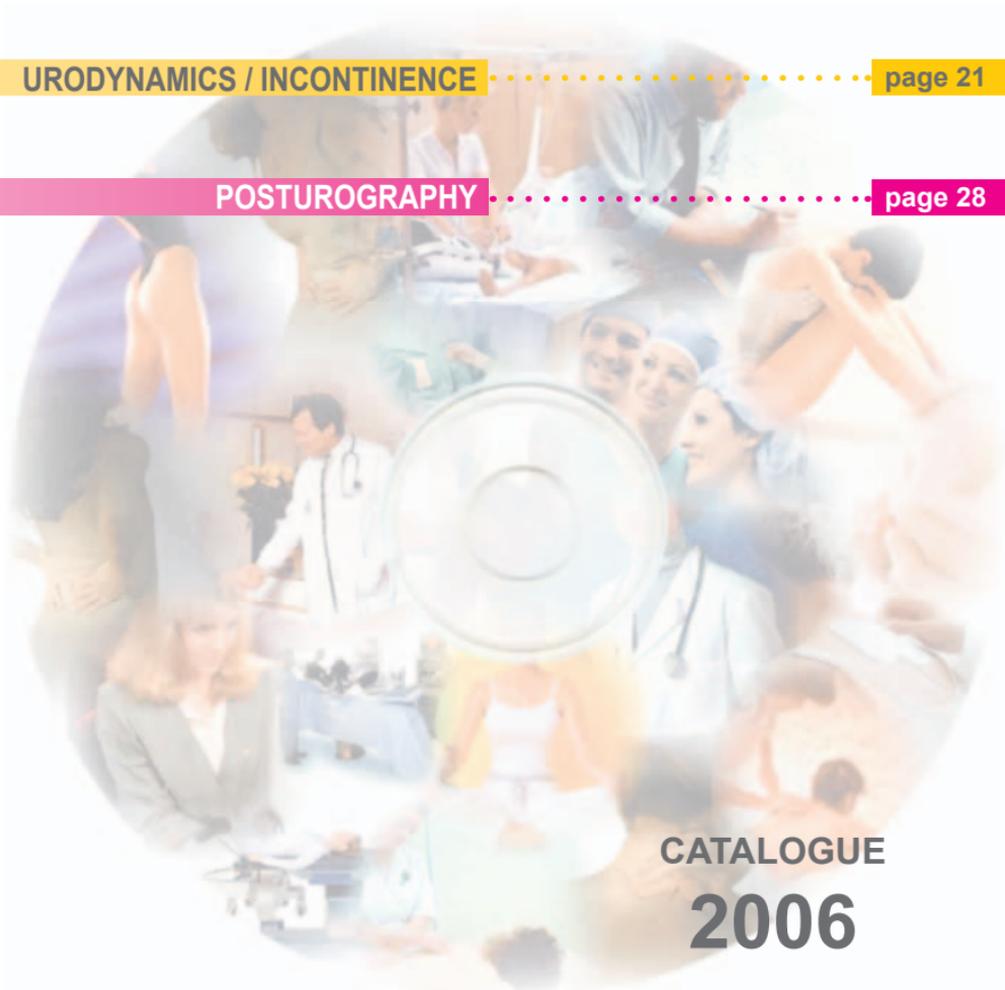
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**2006**







## ELECTROTHERAPY

**TENS** **NMS** **FES** **PES**

PHYSIOTHERAPY

REHABILITATION

*Terms as TENS, NMS, FES and PES are very common in the physiotherapy and rehabilitation medical fields.*

*They concern different ways to perform electro stimulation but they distinguish also different units suitable to perform respectively: pain management, neuromuscular stimulation, functional electro stimulation and functional electro stimulation. Beside galvanic and interferential currents, the low energy electro stimulation (pulsed waveform), by means of sophisticated sequential protocols, allow today obtaining therapeutic results previously unimaginable.*

## BE-28T

Advanced unit for pain management through electrical stimulation.

*We exactly know what you expect by a professional analgesic unit...  
...and we developed... IntelliSTIM® BE-28T*

By a modern analgesic electrical stimulation unit (T.E.N.S.) a professional user expects: effectiveness (for achieving therapeutic aims), friendliness (for avoiding the user to waste his time), flexibility (for allowing to treat any pain situation), durability (to resist for long time).

Further to the above qualities, IntelliSTIM® BE-28T also offers:

- Large LCD display
- Intuitive Operation
- 9 operating programs (editable)
- All parameters shown
- "edit & feel" function
- ACUTE and CHRONIC pain protocols
- 3 Selectable wave shapes



Among the other parameters, on the display, it is also shown the applied analgesic technique, according to the set-up of the unit.

## Package

IntelliSTIM® BE-28T is supplied complete with:

- 1x Therapeutic unit BE-28T
- 2x Connection leads
- 4x Self-adhering electrodes 40x40mm with 2mm socket connectors
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



Advanced professional Neuromuscular (NMS) electrical stimulation unit, with automatic set-up system of time-related parameters.

*Dedicated to demanding users, willing to obtain the best effectiveness, without being obliged to have a deep knowledge in electro-physiology...*

In an electrical stimulation unit, either for professional or personal use, are not required hundreds of pre-set programs, rather the most suitable at the right time. IntelliSTIM® BE-28E with the auto-set-up system, allows building the most suitable program, for any patient, while respecting the muscular physiology, but without requiring special knowledge by the user.

Analgesic TENS treatments can be performed by using manual programs.

### **Advantages of the IntelliSTIM® system**

Until now, preparing effective NMS programs, required arduous and complicated work for parameters set-up and, above all, some basic knowledge of the muscular physiology. Due to the quantity of parameters to be considered, such work was almost exclusive competence of professional users. The automatic set-up of WORK/REST time, according to the pulse rate and the intensity, not only simplifies the job of professional users, it allows also the “non-experts” to optimally exploit the muscular electrical stimulation techniques.

- Intuitive operation
- 4 operating programs TENS-NMS (free)
- 17 programs (NMS) in memory
- Special IntelliSTIM® function, avoiding the user to take care of time-related parameters
- All parameters shown, adjustable in real time, during the session
- 2 wave shapes, allowing to perform uni-lateral or bi-lateral treatments



### **Package**

IntelliSTIM® BE-28E is supplied complete with:

- 1x Therapeutic unit BE-28E
- 2x Connection leads
- 4x Self-adhering electrodes 50x50mm with 2mm socket connectors
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



## BE-28Ug

Therapeutic unit for treating incontinence, using perineal electrical stimulation. Suitable to professional or personal use.

Perineal electrical stimulation, through vaginal or anal probes, is one of most common treatments for many cases of urinary incontinence. The ability to supplement professional treatments with home care sessions can improve success rates. The IntelliSTIM® UG unit, offers the sophisticated advanced features and functional flexibility required for the professional use, but it is also easy for the patient to use.

### Advantages of the IntelliSTIM® BE-28Ug unit

There are pre-set programs in the memory, and also programs where the IntelliSTIM® automatically calculates the time based parameters (ACTION / REST), when the frequency is changed. This allows any professional user, even without a deep skill of electro-physiology, to build perfect customised programs. The 2 output channels and the opportunity to select biphasic or alternating pulses, permit the use probes of all designs.

- Large LCD display
- Intuitive Operation
- 4 free programmes (editable)
- 11 programmes in memory, suitable for different incontinence situations (editable)
- Special IntelliSTIM® function, with auto-adjustment of time-related parameters
- All parameters shown, adjustable in real time, during the session
- 2 selectable wave shapes, allowing the optimal use of probes either with ring or lateral electrodes



## Package

IntelliSTIM® BE-28Ug is supplied complete with:

- 1x Therapeutic unit BE-28Ug
- 2x Connection leads
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



4 The required vaginal or anal probe, may be selected from the range of PERIPROBE® electrodes.

**Easy to operate digital, pain management unit (T.E.N.S.).**

Imagine mixing together: effective easiness, refined technology and ergonomic design, in the same TENS unit; if the result is also inexpensive, it can be only LogiSTIM®TN-11. In fact, it offers, much more than the expected functions of a modern TENS unit and it is EASY to operate.

- Intuitive Operation
- Large LCD display
- 5 operating Modes
- All parameters shown
- “edit & feel” function
- 3 Selectable wave shapes

**Package**

LogiSTIM® TN-11 is supplied complete with:

- 1x Therapeutic unit TN-11
- 2x Connection wires
- 4x Self-adhering electrodes 40x40mm with 2mm socket connectors
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



## 19T

**Analgesic transcutaneous electrical stimulation unit (TENS) with graphical selection of the painful area.**

*You have just to select the painful area...then let it work!*

User friendliness of a product not easily matches with high performances. By means of the graphical programs selection, on the LCD display, according to the painful area, LogiSTIM® 19T allows anyone to apply effective sequential protocols, usually achieved only in the professional field.

- Very Intuitive Operation
- 3 operating modes
- 8 programmes (editable)
- 12 programmes with graphical selection of the painful area
- All parameters shown
- “edit & feel” function
- 3 Selectable wave shapes
- Dual independent channels
- Opens with the program last used
- Count-down timer with switch-off at the end
- Auto-switch-off if not in use
- Accumulative recording of the treatment time (in hours)
- Lock function capability, by the doctor



## Package

LogiSTIM® 19T is supplied complete with:

- 1x Therapeutic unit 19T
- 2x Connection leads
- 4x Self-adhering electrodes 40x40mm with 2mm socket connectors
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



Advanced electrical stimulation unit, specific for muscular localised treatments, with friendly graphic set-up according to the muscle to be treated.

EM-19M

*The "Logic" evolution of electrical stimulation.  
Just decide the aim, then let it work...*

### 1 Select the treatment's aim:

- P10 • WARM-UP
- P11 • AEROBIC RESISTANCE
- P12 • TONE-UP
- P13 • HARDENING
- P14 • FORCE + RESISTANCE
- P15 • FORCE 1
- P16 • FORCE 2
- P17 • FAST FORCE
- P18 • EXPLOSIVE FORCE
- P19 • PROGRESSIVE RECUPERATION



### 2 Decide the muscle to treat:

- PECTORALS • BICEPS • ABDOMINALS • OBLIQUIQUADRICEPS •
- TRICEPS • BIG DORSAL • SPINAL MUSCLES • GLUTEI •
- HAMSTRINGS • CALVES • DELTOID

### 3 Adjust the stimulation intensity:

That is what the user of LogiSTIM® EM-19M is asked to do. Every parameter will be set AUTOMATICALLY and the right position of electrodes will be shown on the screen.

## Package

LogiSTIM® EM-19M is supplied complete with:

- 1x Therapeutic unit EM-19M
- 2x Connection leads
- 4x Self-adhering electrodes 50x50mm with 2mm socket connectors
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



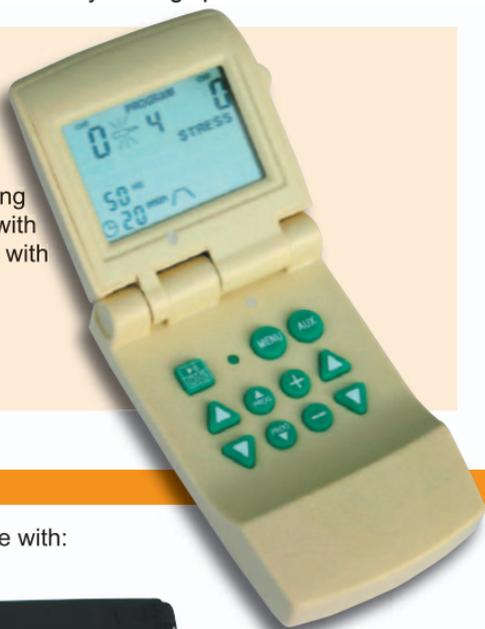
## EM-19Ug

**Dual channels unit for perineal stimulation (PES), through intra cavity probes and Intravesical stimulation (IVES) through urethral disposable sterilized catheters.**

It is suitable to be directly used by the patient (under qualified medical supervisor) but perfectly suitable also to professional use. It offers easiness without compromises for flexibility and high performances.

It offers easiness without compromises for flexibility and high performances.

- Intuitive Operation
- Large LCD display
- 9 pre-set programs
- 1 free programs
- 3 selectable wave shapes, allowing the optimal use of probes either with ring or lateral electrodes but also with urethral catheter for intra-vesical stimulation (IVES)
- All parameters shown
- Open circuit detector



## Package

LogiSTIM® EM-19Ug is supplied complete with:

- 1x Therapeutic unit EM-19Ug
- 2x Connection wires
- 2x Alkaline batteries AA1.5Volt (LR6)
- 1x User guide
- 1x Carrying case



**8** The required vaginal or anal probe, may be selected from the range of PERIPROBE® electrodes.

**Therapeutic unit indicated for the treatment of simple or primary menstrual pain (dysmenorrhoea) caused by muscle spasms responding to the release of prostaglandins.**

The Calmer® applies a small electric current through two electrode patches placed on the lower abdomen. This causes muscles in the uterine area to relax and a calming analgesic effect results. By reducing menstrual pain, Calmer® improves the sense of wellbeing and allows normal activity to resume while it is worn. It is safe, non-invasive, it is drug-free, there are no side effects and it can be worn comfortably while engaging in normal activities.

## Package

CALMER® is supplied complete with:

- 1x CALMER® unit with attached wires
- 1x Belt clip support
- 2x Self-adhering electrodes with snap connectors
- 2x Support for storing the electrodes
- 1x Battery type CR2032
- 1x User guide



## Electrical stimulation units - technical features comparison table

	Main destination of use (d.o.u.): Pain management (TENS)		Main destination of use (d.o.u.): Neuro-Muscular Stimulation (NMS)		d.o.u. Perineal Stimulation (PES)		d.o.u. Period pain management	
	IntelliSTIM® BE-28T	LogiSTIM® TN-11	LogiSTIM® 19T	IntelliSTIM® BE-28E	LogiSTIM® EM-19M	IntelliSTIM® BE-28Ug	LogiSTIM® EM-19Ug	Calmer
<b>Supply</b>	2 alkaline batteries 1.5 V AA (LR6)							
<b>Output max.</b>	130 mA App on a 500 Ohm load							
<b>Pulse width</b>	Max 100 mA App over 1000 Ohm load (using 200µS pulse width)							
<b>Frequency</b>	From 50µS adjustable in steps of 10 µS							
	From 1Hz to 150Hz (1-2-3-4-5-10-12-14-16-18-20-25							
	30-35-40-45-50-60-70-80-90-100-110-120-130-140-150)							
<b>Wave shape</b>	Bi-phasic Symmetrical Pulses - Biphasic Asymmetrical Pulses Monophasic Pulses							
	Bi-phasic Symmetrical Pulses - Monophasic Alternated Pulses		Bi-phasic Symmetrical Pulses - Monophasic Alternated Pulses		Bi-phasic Symmetrical Pulses - Bi-phasic Alternated Pulses		Bi-phasic Symmetrical (Bi-phasic Alternated) (Mono-phasic) Pulses	
<b>Treatment timer</b>	Continuous, 15 min, 30 min, 45 min, 60 min, 90 min selectable							
<b>ACTION / REST time</b>	NO							
<b>Ramp time</b>	From 1 to 40 sec, adjustable in steps of 1 sec.							
<b>Dimensions</b>	138 mm x 68 mm x 28 mm	100 mm x 65 mm x 35 mm	100 mm x 65 mm x 35 mm	138 mm x 68 mm x 28 mm	100 mm x 65 mm x 35 mm	138 mm x 68 mm x 28 mm	100 mm x 65 mm x 35 mm	70 mm x 42 mm x 15 mm
<b>Weight</b>	Approximately 150 g, including batteries							
<b>Channels</b>	2 intensity independent							
	Opens with the program last used							
<b>Additional features</b>	Auto-switch-off if not in use							
	Count-down timer with automatic switch-off							
	Accumulative recording of the treatment time (in hours)							
	Lock function capability, by the doctor							
	NO							
	NO							

TENS

NMS

PES

**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.

**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.



### ***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.

High quality self-adhering solid gel electrodes.

Self-adhering solid gel electrodes are by now commonly used in almost all electrical stimulation applications for their convenience. Despite their similarity, not all the electrodes on the market show the same characteristics of quality and longevity. COMFORT-*blu* electrodes, are made using a special assembly technique, with a silver foil substrate, offering:

- Long life, for a maximum number of sessions
- High electrical conductivity (low resistance)
- High adhesiveness even on humid skin
- High mechanical resistance of the lead
- Homogenous distribution of the impulses over the entire gel surface This avoids current concentrations (hot spots)
- Re-sealable aluminium package

### Technical specifications

Code	EL/CMF 35R	EL/CMF 3838	EL/CMF 50R	EL/CMF 5050	EL/CMF 4590	EL/CMF 100150
N. of electrodes for bag:	4	4	4	4	4	1 double electrode
Single electrode dimensions:	35 mm diameter	38 x 38 mm	50 mm diameter	50 x 50 mm	45 x 90 mm	100 x 150 mm
Plastic liner dimensions:	120 x 130 mm	130 x 180 mm				
Dimensions of the sealed bag:	165 x 180 mm	200 x 270 mm				



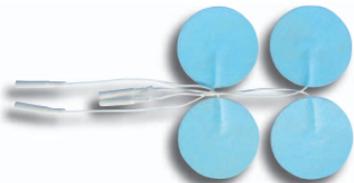
**TENS**

**NMS**

**FES**

**COMFORT**

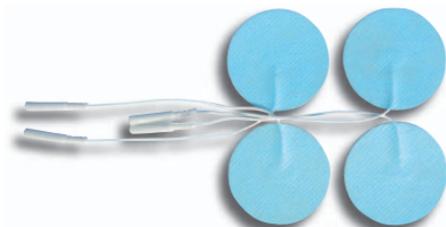
**BLU**



EL/CMF 35R



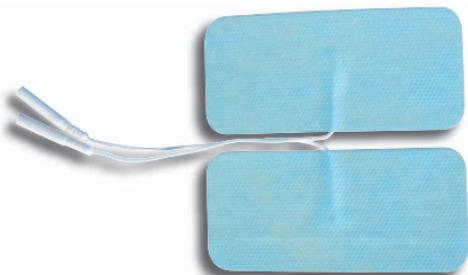
EL/CMF 3838



EL/CMF 50R



EL/CMF 5050



EL/CMF 4590



EL/CMF 100150

*“BIOFEEDBACK” is a medical technique involving apparatuses, which display even small variations in a physiological parameter (e.g. muscular activity, heart rate, cerebral activity, peripheral circulation, emotional state, etc.) to a patient. Thanks to the technique of visualisation, the patient can eventually acquire conscious control over the acquired parameter.*

## BIOFEEDBACK



PHYSIOTHERAPY

REHABILITATION

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*The biofeedback techniques can be applied in many areas of specialized medicine. Biofeedback is extremely useful in PHYSICAL THERAPY, GYNAECOLOGY, UROLOGY, GERIATRICS, PNEUMOLOGY, BEHAVIOURAL THERAPY, and in the treatment of PSYCHOSOMATIC STRESS RELATED SYMPTOMS. The biofeedback is by now an effective therapeutic approach in REHABILITATION. The rehabilitation is a multi-disciplinal process that involves many specialties; when the rehabilitation involves the motivation and the active involvement of the patient... the therapeutic success is nearer.*

# BIOLOOP Pocket

## Wearable dual channels digital biofeedback unit.

It allows acquiring 1 or 2 physiological parameters (normally EMG), their conversion and employment as visual and acoustic feedback. Due to the compactness it is wearable (in a pocket or attached to the belt). The main features making the BIOLOOP Pocket an extremely professional and flexible tool for the rehabilitation are the followings:



- 5 modalities of operation: ASSESSMENT - RELAXATION - RECRUITMENT or CONTRACTION – REPETITION TRAINING - PROGRESSIVE - TRAINING (FOLLOW-me)
- 70 programmes in memory ready to use
- The parameter “End of scale”, which defines the sensibility of every program, can be chosen between 22 values (from 1,5 to 480 $\mu$ V)
- The parameter “ type of acoustic feedback “, which characterizes every program, can be selected between 5 modes (FREQUENCY, PERCUSSION, FREQ.+perc., THRESHOLD, OFF)
- The parameter “ contraction time “, which characterizes the REPETITION TRAINING program, can be set between 1 and 10 seconds
- The parameter “ rest time “, which characterizes the REPETITION TRAINING program, can be set between 2 and 50 seconds
- The parameter “ number of contractions “, which characterizes the REPETITION TRAINING program, can be set between 0 to 99 valid contractions
- The parameter “ signal integration”, which characterizes the programs ASSESMENT - RELAXATION - RECRUITMENT or CONTRACTION can be set between 0.5 and 9 second
- An optically insulated output signal, proportional to the level of acoustic feedback, usable to drive an optional optical or acoustical external device for feedback reinforcement
- Possibility of connection to personal a computer, through optically insulated serial port, allowing a visual feedback on a colour monitor; it is moreover possible to acquire, store and print the graphs
- Availability of vocal suggestion messages (contraction - rest) electronically synthesized (optional)

The visual feedback is obtained through bars-graphs on an alphanumeric back-lighted LCD display. The acoustic feedback consists in a variable frequency sound (5 various selectable modalities), reproduced in a small inner loudspeaker or in headphones connected to a output connection, on the back of the unit. The acoustic feedback threshold is digitally adjustable. Thanks to the signal digital processing the unit can work in relative mode, eliminating the eventual base level of the signal (when required).

# BIOLOOP Pocket

With the EMG sensor in the standard package, the BIO-loop Pocket allows many therapeutic protocols:

- The tensive cephalic management,
- The muscular recovery after-surgery,
- The respiratory rehabilitation,
- The joints R.O.M. (Range Of Movement)
- The perineal rehabilitation for the incontinence

Some optional sensors allow involving different biologic parameters to provide biofeedback: the pressure, the isometric force, the angular position, the skin conductance, the skin temperature, a.s.o.. Without connection to personal a computer, a single signal a time can be exploited (usually EMG). Connecting the BIO-LOOP Pocket to a personal computer, it is possible to simultaneously acquire up to 2 signals (provided that an additional sensor has been purchased). The sensors applied to the input of the BIO-LOOP Pocket, are recognized and the suitable units of measure and sensitivity will be set automatically. The BIO-LOOP Pocket unit can be used also with vaginal or anal probes, allowing the perineal rehabilitation of the incontinence, through EMG or pressure biofeedback (optional pressure sensor is required). BIO-loop Pocket is supplied complete of a high sensitivity, pre-amplified EMG (ElectroMyoGraphyc) sensor (MYOSENSOR Plus).

## Technical characteristics of the unit

- Supply - internal with rechargeable batteries 4,8V
- Autonomy - min. 3 h max. 10 h
- Recharging time - 2h30, with possibility of partial recharging
- Class of safety - Internal supplied / BF (2BF during recharges)
- Dimensions - 71x110x28 millimetres (the apparatus only)
- Weight - 190g approximately (the apparatus only), 1 kg approximately (complete with suitcase and accessories)

## Technical Characteristic of the EMG sensor

- Type of measure - single differential
- Operating Band of frequencies – 8 to 450 HZ
- Input resistance - Min 1 GOHM
- CMRR - Min 100 DB in the band 100-400 HZ
- Noise - Max 1  $\mu$ V



## Package

- 1x - Main unit BIOLOOP Pocket
- 1x - Pre-amplified EMG sensor
- 30x - Self-adhering pads
- 1x FAST CHARGE battery re-charger for NiMh batteries
- 1x Carrying case
- 1x User manual

The diagnostic technique called “urodynamics”, consisting in the recording and in the study of all the parameters (volume, pressure, flow) relative to the filling and voiding phases of the micturition, has reached today a good degree of reliability. Although it must be considered an invasive diagnostic tool (introduction of catheters in the urethra), it can also be considered an elective and often conclusive examination in the diagnosis of the obstructions or of the anomalies in the vesico-urethral urinary system.

## URODYNAMICS / INCONTINENCE



We can define the urinary incontinence as “the unintentional loss of urine due to the individual inability of the individual to postpone the micturition and to fulfil it in socially acceptable circumstances”.

The instrumental re-education of the urinary incontinence has gained by now an important role as complement or in alternative to the classic methods (pharmacological, kinesitherapeutic, surgical).

PHYSIOTHERAPY

REHABILITATION

GYNECOLOGY

UROLOGY



# PERIPROBE®

**ST**

**Smart connection, personal perineal probes for perineal electrical stimulation or EMG perineal biofeedback.**

Make entirely of bio-compatible plastic material, with 2 gold plated transversal ring-like electrodes, totally NICKEL-FREE, they are lightweight (less than 32 gr.). They are suitable for electrical stimulation or EMG biofeedback. They can be used for up to 60 treatments (vaginal model) or up to 20 treatments (anal model) and can be cleaned with tap water and mild soap. They are intended for personal use and cannot be sterilized. They are comfortable due to the special shape and to the good impedance match with vaginal/anal tissues. They have no leads and they are connected to the therapeutic units must be obtained through special adapters (PERIPROBE® ST). The probes are supplied in single packages (non-sterile bag).

## Specifications

	Vaginal model	Anal model
<b>Ordering code</b>	RU-VZST	RU-A2ST
<b>length</b>	110	110
<b>Ø min.</b>	20 mm	10 mm
<b>Ø max.</b>	25 mm	16 mm
<b>weight</b>	31	18

The electrical connection of the PERIPROBE® ST collection to the stimulation/EMG unit is obtained through the special adapter RU-STP. Standard connector is DIN3 and any therapy instrument can be used, providing it supplies bi-phasic pulses (galvanic free).



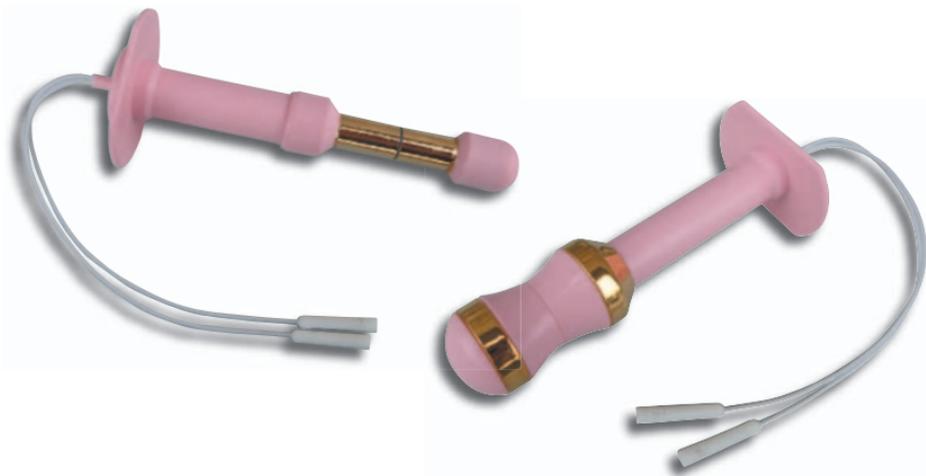
PERIPROBE® probes are medical devices class II<sup>a</sup> according to rule 5 of the 93/42/CEE Directive.

**Lead connection, personal perineal probes for perineal electrical stimulation or EMG perineal biofeedback.**

Re-usable internal electrode for the re-education of incontinence through vaginal or anal stimulation of pelvic floor. Entirely made of plastic material, food-grade quality, with 2 gold plated transversal ring-like electrodes, they are light (32 gr.) and completely NICKEL-FREE. It can be used for up to 60 treatments and it can be cleaned with tap water and mild soap. It is intended for personal use and it cannot be sterilized. They are lightweight, comfortable and they show a better impedance matching vaginal tissue. The electrical connection to the stimulation unit is obtained through two leads with 2 mm socket connectors. The wave shape to be used for electrical stimulation is symmetrical bi-phasic (galvanic free). The probes are supplied in single packages (non-sterile bag).

### Specifications

	Vaginal model	Anal model
<b>Ordering code</b>	RU-V2STW-B	RU-A2STW-B
<b>length</b>	110	110
<b>Ø min.</b>	20 mm	10 mm
<b>Ø max.</b>	25 mm	16 mm
<b>weight</b>	32	20



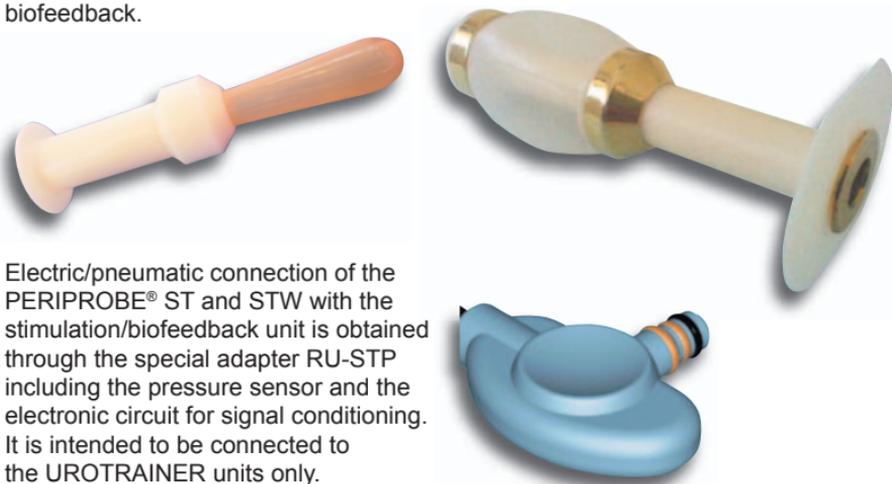
# PERIPROBE®

**STF**

**Smart connection, personal vaginal probe for perineal electrical stimulation or pressure perineal biofeedback.**

Entirely made of bio-compatible plastic material, with 2 gold plated transversal ring-like electrodes, they are lightweight (32 gr. only).

The balloon is made of silicon. PERIPROBE® VAG-2STF is suitable for electrical stimulation or pressure biofeedback. It can be used for up to 60 treatments and can be cleaned with tap water and mild soap. It is intended for personal use and it cannot be sterilized. It is comfortable due to the special shape and to the good impedance match with vaginal tissues. It has no leads and the connection with the therapeutic units must be obtained through special adapters (PERIPROBE® STF). The probes are supplied in single packages (non-sterile bag). Also available is a model for anal biofeedback.



Electric/pneumatic connection of the PERIPROBE® ST and STW with the stimulation/biofeedback unit is obtained through the special adapter RU-STP including the pressure sensor and the electronic circuit for signal conditioning. It is intended to be connected to the UROTRAINER units only.

## Specifications

	Vaginal model	Anal model
<b>Ordering code</b>	RU-V2STF	RU-ABF
<b>length</b>	115 mm	40 mm
<b>Ø min.</b>	25 mm	9 mm
<b>Ø max.</b>	35 mm (balloon)	13 mm
<b>weight</b>	31	18
<b>Standard colour</b>	WHITE/AMBER - PINK	

Leads connections, personal vaginal probe for perineal electrical stimulation or pressure perineal biofeedback.

Re-usable internal probes for the re-education of incontinence through intra-vaginal/anal electrical stimulation or EMG biofeedback. Made entirely of bio-compatible plastic material, with 2 gold plated electrodes, they are extremely lightweight (15 gr. only) completely nickel-free and fit any anatomical form.

They can be used for up to 60 treatments and can be cleaned with tap water and mild soap. They are intended for personal use and cannot be sterilized. The electrical connection to the stimulation unit is obtained through two leads with 2 mm socket connectors. The wave shape to be used for electrical stimulation is the bi-phasic symmetrical (galvanic free).

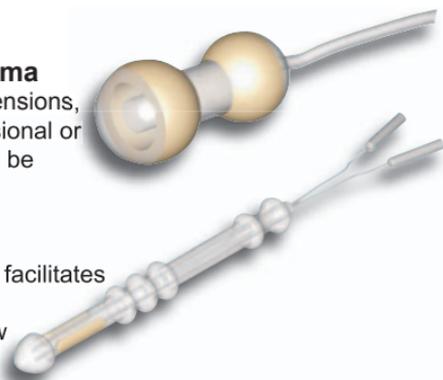
Supplied in single packages (non-sterile).

### The vaginal model PERIPROBE® Minima

With its "plug" shape and the very small dimensions, PERIPROBE® Minima is intended for professional or personal use, with any vaginal anatomy. Can be used with the patient seated or standing.

### The anal model PERIPROBE® Analis

The particular shape of PERIPROBE® Analis facilitates insertion and retention. Shape and the arrangement of the electrodes "bar-like" allow for an effective and comfortable stimulation and a precise acquisition of the EMG signal.



## Specifications

	Vaginal model	Anal model
Ordering code	RU-Minima	RU-Analis
length	65 mm	145 mm
Ø min.	14 mm	10 mm
Ø max.	26 mm	16 mm
weight	?	?
Standard colour	CHRISTAL (TRANSPARENT)	
Options	custom logo printed inside	

PERIPROBE® are medical devices class IIa according to rule 5 of the 93/42/CEE Directive.

# UROTRAINER

2

## Portable professional unit for perineal re-education of incontinence

UROTRAINER 2 is a portable unit for the re-education of the incontinence, by means of electro-stimulation and biofeedback. Despite the compact dimensions, it is a complete professional unit, suitable to treat the incontinence in the better safety conditions and with the best premises for a therapeutic success.

- 2 channels biofeedback (EMG or Pressure)
- 30 electrical stimulation protocols ready for many situations. Other 69 custom protocols can be prepared and stored
- 100 biofeedback programs available and quickly usable; they can be edited and permanently stored



It will be easy to treat the Stress incontinence, Urge incontinence and Mixed incontinence, through electrical stimulation or biofeedback.

The impulses are supplied in “constant energy” mode, so avoiding concentrations of current in small areas (hot-spots), so avoiding any local irritation. An automatic test program allows preliminarily assessing the contractile force a/o endurance of the pelvic floor.

UROTRAINER 2 is a stand-alone unit, but it can link to a Personal Computer, transforming the unit into a computerised therapeutic system and offering to the patient a more effective visual feedback.

### Therapeutic possibilities

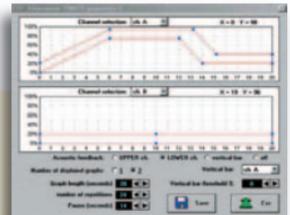
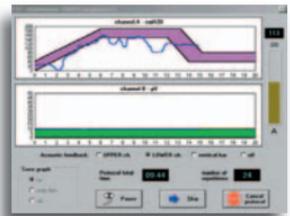
- Perineal stimulation by means of any commercial vaginal or anal probes
- Vaginal stimulation by means of double circuit probes, suitable to recruit simultaneously fast and slow muscular fibres
- Double circuit asymmetrical perineal stimulation by means of double circuit probes, suitable to differentiate the left/right sides parameters
- EMG biofeedback (ElectroMyoGraphic) with internal electrodes
- EMG biofeedback with surface electrodes, on the abdominal muscles, for the treatment of “dyssynergies” (inversion of command)
- Manometric biofeedback by means of internal balloon vaginal probes, with possibility to simultaneously stimulate

- Manometric biofeedback by means of internal balloon probe, with simultaneous surface EMG monitoring of abdominal muscles (this modality need an additional optional EMG Myosensor Plus)
- Vesical electrical stimulation (IVES), suitable to treat the detrusor areflexia, through a urethral catheter



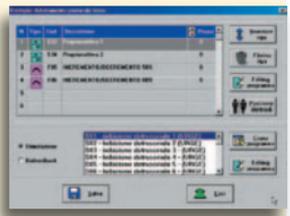
## Standard package

- 1 adapter PERIPROBE® -STP, including the pressure transducer, suitable to use the personal vaginal balloon probes, for manometric biofeedback
- 3 vaginal balloon probes PERIPROBE® VAG-2STF with gold plated plastic electrodes
- 1 adapter PERIPROBE®-ST suitable to use the special probes VAG-2ST for stimulation or for EBG biofeedback
- 3 vaginal probes PERIPROBE® VAG-2ST (low-cost) with gold plated plastic electrodes
- Battery charger, medical insulation grade
- Plastic suit case
- User's manual



## Technical characteristics

- Power supply: - internal by NiMh rechargeable batteries with special battery-charger
- Charge duration: - approx. 5,5 to 7 hours, depending on the using conditions
- Protection fuse on the battery circuit: - 630 mA
- Battery charger: supplied by main 230V. +/- 10% 50/60Hz - Power 10VA fuses on main circuit 100mA
- Output voltage - max. 120 V.pp
- Electrical safety class - type 2 - BF according to IEC601-1/ 601-2-10
- Output waveform - bi-phasic pulse (galvanic free) + mono-phasic pulses
- Dimensions - 190x160x60
- Weight - Kg. 1 therapeutic unit only



**Compact urodynamic unit with embedded medical computer and touch screen interface.**

EUGEN-XP is new a powerful integrated urodynamic system, particularly compact and user friendly, suitable for all the protocols of standardized tests (ICS) and includes all the nomograms suitable for the analysis of urethral obstructions, bladder contractility and the incontinence.

A perfect integration with whichever diagnostic, urological, gynaecological, proctological or generic medical field. Specifically conceived for urodynamic tests, and consequent analysis, following the methods of the well known authors in international literature (Schäffer, Abrams, Griffith, Höfner, ...).

EUGEN-XP is supplied complete with built-in medical computer (no external computer required) Windows XP Professional operating system, advanced analysis software. EUGEN-XP is instantly ready to use, totally integrated on the operating column, close to the patient. The touch-screen monitor, also sensitive to gloves, offers to the operator complete control of the functions, without requiring remote controls. The operator easily interacts with the system simply by "touching" virtual push-buttons that appear on the monitor, according the operating circumstances. Knowledge of or familiarity with keyboards or mouse is not required. The position of the LCD monitor can be easily and firmly adjusted, through a couple of knobs, allowing the operator to have a complete control when either sitting or standing.

## Composition of the unit

The EUGEN-XP unit includes the main unit, the built-in medical computer, motorised column, and a flow meter:

- The main unit incorporates
- The power supply module, providing supply to the built-in medical computer and to the acquisition board
- Peristaltic pump suitable for bladder filling used liquid perfusion catheters
- Acquisition board, the true heart of the system, includes the A/D conversion and conditioning circuits, along with the microprocessor in charge to apply a first elaboration to the transducers information and send them to the medical computer
- Volumetric support/sensor
- The built-in medical grade panel computer is complete with high brightness 15" LCD/TFT monitor, and integrated "touch screen"
- The motorized support column, suitable to adjust the height of the system
- The flow meter is complete with variable height support and a connection cable to the unit

## Operating possibilities

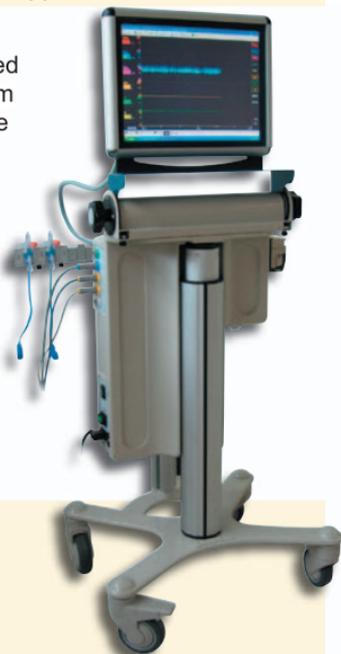
- Bladder filling phase analysis - CYSTOMANOMETRY
- Bladder voiding phase analysis - FLOWMETRY
- Combined analysis of the filling and voiding phases that are to say the SPRESSURE/FLOW STUDY
- Analysis of urethral pressure, that is to say Urethral Pressure Profile in static and dynamic ways (motorized puller required)
- Analysis of the Leak Point Pressure (VLPP and CLPP)
- Advanced analysis of the urethral occlusions including the Pdet/Q plots, base don the Shaefer, Abrams & Griffith, Öfner nomograms and on the URA, A Gn., OCO, DECO, DAMPF, PIP, OBI, WF coefficients
- The motorized puller (optional), with removable bar (sterilizable), can be applied on the main column or on a separate support

## Optional accessories

- Motorized puller, suitable for per UPP, supplied complete with the special multi-articulated arm and complete with the connection cable to the system **Code UEP1200**
- Disposable pressure transducers (in sterile package) minimum 10 pcs - **Code UEP4010**
- Pre-amplified EMG sensor, complete with filtering stages - **Code UEP4020**
- Kit for using coaxial needle EMG electrodes **Code UEP4021**
- Wireless flow meter - **Code UEP5000**
- Expansion to 12 channels - **Code UEP8000**
- Wireless colour printer - **Code UEP9000**

## Technical characteristics

- Supply voltage: 230 V. +/- 10% - 50/ 60 Hz.
- Power consumption: max. 250 VA
- Acquisition system: 5 channels A/D 12bits + 2 channels 16bits. Further 5 channels A/D 12bit optional.
- Sampling rate: 200 Hz (origin), 20 Hz (after filtering).
- Safety class: 1 BF according to (IEC 601-1)
- Dimensions: 470x630x1400 mm
- Total weight: 35 Kg.



The unit is totally compliant to the 93/ 42/ CEE Directive as medical device class IIa (rule 10).

## POSTUROGRAPHY



OTOLARYNGOLOGY

PHYSIOTHERAPY

REHABILITATION

DENTISTRY

*Man maintain itself in an upright position (in balance) thanks to the simultaneous acquisition of several external information coming to our body through the sight, the vestibular apparatus and the proprioceptive apparatus. They determine infinitesimal "corrections" necessary to "compensate" perturbations on balance, caused by the external environment. Posturography gives a substantial contribution in the clinical cases where any standard assessments do not allow formulating an effective therapeutic plan. The stabilometric test allows a more "objective" evaluation of the balance mechanisms.*

# PHYSIONORM balance system

Testing of & Training for BALANCE in a single powerful equipment

N.B.P.

## **Description:**

The PHYSIONORM N.B.P. stabilometric system (N.B.P. stands for Normalised Balance Platform) consists of a 3-point platform, made according to the normalisation criteria established by the French Society of Posturology, and of a specific software (NBP Software). The N.B.P. platform communicates directly with a normal Personal Computer (PENTIUM® Multimedia), as it is equipped with an internal conversion circuit; therefore no other boards or modules are required. The signals picked up by the 3 "strain-gage" sensors are directly converted into digital data and sent to the "computer" via a serial RS232 link (optionally wireless). N.B.P. platform offers the possibility to acquire up to 4 EMG signals, simultaneously with the balance signals. The powerful software, exploiting the intuitive WINDOWS® XP environment, transforms the p.c. into a polygraphic system. An optional auxiliary LCD, supported by the special, adjustable height, motorised column, can be supplied and this represents a very useful accessory. Also available as an option is a special cage, including wire references, for scoliosis evaluation.

## **Practical considerations:**

N.B.P. platform, connected to a normal P.C., allows the analysis and rehabilitation of the physiological functions associated with balance. The computer's monitor may be used to provide feedback to the patient (during rehabilitation) or for data display (during analysis). NBP Software, in addition to total management of patient charts and real time feedback, also provides the following assessment elements, on screen and on reports:

- Statokinesigram
- Axial stabilograms
- Axial velocity
- Surface of the sustaining polygon
- Numerical analysis of data and calculations
- DFT Fast Fourier plot
- Intercorrelations plots, essential to put in evidence eventual SIMULATION attempts, by some subjects

## **Ordering codes:**

- Basic platform complete with software, without p.c. - code BF 107
- Cage with scoliosometer – code BF 117
- Motorised column with patient LCD 17" monitor code BF 127

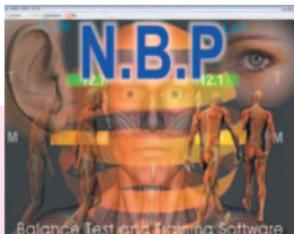


# PHYSIONORM balance system

N.B.P.

## Features:

- Robust structure and platform with large surface area
- Option to use any commercial multimedia computer
- Very useful either for tests or for training, in the rehabilitation phase
- Serial transmission of data to the axial unbalancing
- Self-zero-resetting of transducers
- Multi-medial re-education exercises, characterized by visual and acoustical “events” particularly motivating and of great involvement value for the patient
- Possibility to discover patients attempting to “simulate”
- Evidencing of lower (in blue) or upper (in red) deviations of the acquired values, with respect the limits expected in healthy subjects
- Easy integration with up to 4 EMG signals
- Modular aluminium structure and wide possibility to collect accessories, like cage with scoliosometer, or/and adjustable eight column for the patient monitor



## Technical specifications:

- Supply voltage: 220 V. 50 Hz.
- Power consumption: 10 W max
- Mains protection fuses: 2 da F315 mA
- Detection: through 3 sensors (string gage)
- Maximum distributed load: 300 Kg
- Maximum local load (on each force sensor): 100 Kg
- Local peak load (on each force sensor): 150 Kg
- Converter: 10 bit, internal
- Sampling time: 11 ms
- Bandwidth: 12 Hz
- Computer link: serial RS232
- Offset compensation: automatic
- Working surface: 400 x 400 mm
- Platform weight: 40 Kg
- Dimensions:
  - Platform only > 655mm x 800mm x 120(h)
  - Complete with cage > 700mm x 800mm x 2170mm(h)
  - Complete with cage and adjustable height column > 1200mm x 800mm x 2170mm(h)

