27 years ago we created our first medical device. Over the years the company has become an expert in electrodiagnostics and neurophysiological equipment and now Neurosoft brand is known all over the world. We have been dedicated to supplying our customers with the best possible clinical and research solutions and try to overcome their expectations. This is ensured by continuous feedback obtained from healthcare professionals working in many medical areas. The cutting edge electronics, the know-how design, and the full-featured performance allow speeding up your workflow and focus on your patients and studies, not the technology.

We continue constantly upgrading and developing our equipment to meet the changing requirements of the market. It made Neurosoft a reliable partner and we also try to transform your ideas and wishes to custom-made product. We operate in more than 80 countries through a well-coordinated network of distributors and provide total support and service including lifetime update of the software.

Our quality management system is certified in compliance with ISO 13485 requirements and our devices are approved for sale in Canada, EU, the USA, South Korea, Brazil, China, Japan, Australia, and many other countries. Before leaving our factory all devices are checked and calibrated and all the units pass multiple tests and controls. Neurosoft stands for accuracy, reliability, durability, and high quality.

This catalogue brings together our full product line. If you have any questions, please visit our website www.neurosoft.com, contact us by e-mail or just call us.

+7 4932 24-04-34
info@neurosoft.com
Our distributors

Our devices

New markets

1900 installed magnetic stimulators

6000 installed EMG machines

9000 installed EEG machines
registration certificates across the world
All our products are designed and developed by highly skilled Neurosoft professionals with second to none experience in software engineering, chemistry, physics, acoustics, microelectronics, and power electronics. Our dedicated research and development team stays on top of new equipment and updates to existing equipment thanks to close cooperation with leading medical experts. Fine-tuned at every step of the way, with attention to details, our fruitful ideas are translated into sophisticated solutions.
new automated PCB assembly line (SMT) was launched
Neurosoft products are not only designed and developed by us but also manufactured at our headquarters. Our production areas are equipped in line with technological progress and our staff is true masters in their field. Conscientious approach and continuous quality monitoring guarantee reliability and robustness you look for. Neurosoft possesses tens of unique manufacturing technologies including cold runner molding technique, soldering of miniature electronic components, calibration of auditory and spirometry equipment, high-speed mechanical processing using the machines with CNC.

UV printing was launched in 2018.
Neurosoft actively cooperates with leading research institutions worldwide. These are our unique developments that allow implementing large-scale experiments and conducting the scientific investigation which results are then used as the basis for the new discoveries in different medical fields. Our developers and medical specialists often participate in this research, provide assistance on equipment-related issues and contribute to writing scientific papers.
more than 100 scientific publications

rTMS was applied through a cooled angulated figure-of-eight coil (AFEC-02-100-C) connected to a Neuro-MS/D Therapeutic Variant magnetic stimulator (Neurosoft, Ivanovo, Russia), which provides repetitive biphasic pulses. The coil was held manually in contact with the patient’s scalp and guided through the optical navigation system over the right hemisphere. Submaximal stimuli (about 80% of the maximum stimulator output) were delivered to the primary motor cortex (M1 area) until the ‘hot spot’ inducing the highest surface electromyography potential for the fingers was identified. Once the identified hot spot was located, the stimulation was applied in two 10-trial blocks (T1 and T2). Each block consisted of 300 repetitions with 0.1 Hz frequency and 1-ms inter-trial interval. Immediately after each block, the patient underwent a brief neuropsychological re-evaluation by a trained neuropsychologist (April 2017, T2). Her language was fluent, but affected by frequent anomicies and by an increased within-words latency. Language skills were then re-assessed immediately (T3) and 2 months (T4) after rTMS treatment. The battery included the Boston Naming Test (Kaplan et al., 1983) and the Italian version of semantic and phonemic fluency tests (Novelli et al., 1986).

Aphasic patient, woman, 64 years old. T1-weighted RM sequences 9 months after stroke. The ischemic lesion affected the left (L) basal ganglia and the temporal lobe.
Neurosoft Service Center is a safe pair of hands for customers to rely on. We pride ourselves on providing the full-scope service including medical equipment installation, virtual training, remote Internet setup, software or hardware upgrade. Motivated by customer feedbacks, we always keep up with their needs. We are accessible and answerable by e-mail, live chat or video conferencing. Contact Neurosoft and get it done right the first time!
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NEUROPHYSIOLOGICAL MONITORING
IONM

MAGNETIC STIMULATION
TMS

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STRESS TEST

SPIROMETRY
VC, FVC, MW

CARDIOVASCULAR REFLEX TESTING
HRV ANALYSIS

GAIT AND MOTION ANALYSIS
GAIT ASSESSMENT AND TRAINING
ELECTROENCEPHALOGRAPHY

> 25-YEAR EXPERIENCE

- **1992**
  - NEURON-SPECTRUM FIRST DIGITAL EEG SYSTEM

- **1994**
  - 2ND GENERATION DIGITAL EEG SYSTEM ON THE “HYBRID” TECHNOLOGY BASE

- **1996**
  - FIRST RUSSIAN PORTABLE 8-CHANNEL DIGITAL EEG SYSTEM

- **1998**
  - FIRST COMBINED DIGITAL SYSTEM FOR EEG AND SHORT-LATENCY EP STUDY
  - 4TH GENERATION 8-, 16-, 19-, 21-CHANNEL DIGITAL EEG AND EP SYSTEMS

- **2001**
  - NEURON-SPECTRUM-VIDEO MONITORING SYSTEM FOR VIDEO EEG ACQUISITION

- **2005**
  - CE MARK

- **2006**
  - NEURON-SPECTRUM-5 32-CHANNEL DIGITAL EEG AND EP SYSTEM

- **2012**
  - NEURON-SPECTRUM-AM ANDROID APPLICATION
  - FDA APPROVAL

- **2013**
  - NEUROMONITOR CEREBRAL FUNCTION MONITOR

- **2015**
  - INTEGRATION OF BRAINTRONICS 128-CHANNEL EEG SYSTEM
  - FDA APPROVAL
  - PERSYST, HOLBERG SCORE, AIT, LORETA SOFTWARE SUPPORT

- **2016**
  - NEURON-SPECTRUM-61..65 NEW LINE OF EEG SYSTEMS

- **2019**
  - IP-CAMERA SUPPORT

**EEG**
**NEURON-SPECTRUM**

**EEG AND LTM SYSTEMS**

Neuron-Spectrum digital EEG and EP systems meet the most exacting demands of the customers: routine EEG, LTM monitoring in intensive care units (including pediatric), cerebral function monitoring (aEEG), diagnosis of brain death, long-term video EEG monitoring, EP and PSG studies.

<table>
<thead>
<tr>
<th><strong>NEURON-SPECTRUM-1/2/3/4/4P</strong></th>
<th><strong>NEURON-SPECTRUM-4/EPM</strong></th>
<th><strong>NEURON-SPECTRUM-AM</strong></th>
<th><strong>NEURON-SPECTRUM-5</strong></th>
<th><strong>NEURON-SPECTRUM-61/62/63/64/65</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EEG channels</strong></td>
<td>8/16/19/21</td>
<td>21</td>
<td>21</td>
<td>32</td>
</tr>
<tr>
<td><strong>Extra channels:</strong></td>
<td></td>
<td>1–4</td>
<td>8</td>
<td>9</td>
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<tr>
<td><strong>Included techniques</strong></td>
<td>EEG</td>
<td>EEG, EP, LEP</td>
<td>EEG</td>
<td>EEG</td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td>Video EEG, LEP, PSG, CFM (aEEG), BFB</td>
<td>Video EEG, PSG, EMG, CFM (aEEG), BFB</td>
<td>Video EEG, PSG, CFM (aEEG), BFB</td>
<td>Video EEG, EP, LEP, PSG, EMG, CFM (aEEG), BFB</td>
</tr>
<tr>
<td><strong>Electrode cap connector</strong></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>Wire: USB, LAN</td>
<td>Wire: USB, LAN</td>
<td>Wireless: Wi-Fi, SD card</td>
<td>Wire: USB, LAN</td>
</tr>
</tbody>
</table>

**NEURON-SPECTRUM-1/2/3/4/4P**

**NEURON-SPECTRUM-4/EPM**

**NEURON-SPECTRUM-AM**

**NEURON-SPECTRUM-5**

**NEURON-SPECTRUM-61/62/63/64/65**

**NEURON-SPECTRUM-1/2/3/4/4P**

**NEURON-SPECTRUM-4/EPM**

**NEURON-SPECTRUM-AM**

**NEURON-SPECTRUM-5**

**NEURON-SPECTRUM-61/62/63/64/65**
Routine EEG, long-term video EEG monitoring (LTM), evoked potentials (EP), polysomnography (PSG), invasive EEG, cerebral function monitoring (CFM) or biofeedback training (BFB) are possible with the brand new Neuron-Spectrum 61..65 EEG systems.
To make your choice easier, we offer a few holistic solutions for the effective and comfortable work. Simply choose the one that fully meets your specific needs and you will get the optimal equipment and software combination.

**ROUTINE EEG**

- 19–21 referential EEG channels, 1 ECG channel, 6 differential channels for EOG, ECG, EMG
- Disk, cup and bridge electrodes or electrode caps can be applied
- Long-latency EP acquisition: visual, auditory and cognitive
- Dedicated Ref electrode (21 EEG channels), A1, A2 ear electrodes (19 EEG channels), or Cz central electrode (20 EEG channels) can be used as a reference electrode

**LONG-TERM VIDEO EEG MONITORING**

- 25 EEG channels, dedicated ECG and EOG channels, 6 additional differential channels
- Special electrode caps with built-in electrodes can be applied for long-term EEG monitoring
- Synchronous video monitoring using up to 3 IP cameras
- Automatic spike and other paroxysmal event detection
- 3D localization of pathological activity areas in the brain
CEREBRAL FUNCTION MONITORING

- Up to 11 EEG channels and 4 polygraphic channels for EEG, ECG, respiration, etc.
- Automatic detection of abnormal aEEG patterns
- Specially designed CFM pod with 2-meter cable for convenient placement at a patient’s point-of-care

BIOFEEDBACK TRAINING

- Multi-channel data recording (EEG, ECG, EMG, respiration, SpO2, photoplethysmograms, etc.)
- Audio and visual feedback (animation, photo, music, games, video)
- Continuous training success tracking

POLYSOMNOGRAPHY

- Full range of PSG channels in compliance with AASM* recommendations
- Portable patient unit for quick connection/disconnection
- Synchronous video monitoring
- Manual, semi-automatic and automatic sleep staging and PSG event detection

* AASM — American Academy of Sleep Medicine
NEURON-SPECTRUM-5
32-CHANNEL EEG AND LTM EXPERT-CLASS SYSTEM

- Excellent choice for exam rooms, epilepsy centers, sleep laboratories, and research facilities
- 4 wide-band polygraphic channels to record multi-modality EP, EMG, and EOG
- Built-in stimulators: auditory, photic, pattern, and electrical
- Pre-defined configuration for functional tests (background EEG, photic stimulation, auditory stimulation, hyperventilation, etc.)
- Automated EEG acquisition workflow
NEURON-SPECTRUM-AM
AMBULATORY WIRELESS EEG/PSG RECORDER

- User-friendly design, portability and a new level of patient’s comfort in examination rooms, epilepsy and sleep centers, hospital rooms
- All-in-one: digital EEG system, EEG recorder, PSG system
- Saving of all recorded EEG data to SD memory card with simultaneous data transfer via Wi-Fi allows a patient moving freely within inpatient or outpatient settings with the possibility of signal review during the acquisition
- Separate recording of EEG/PSG data to a memory card and video data using any camera with the following high-precision synchronization make it possible to perform an exam at patient’s location
NEUROMONITOR
CEREBRAL FUNCTION MONITOR WITH TOUCHSCREEN INTERFACE

- Trolley-based system for intensive care units
- Fast and convenient to use by neurologists and neonatologists
- Quickly transformed to full-function 8-32-channel (depending on the amplifier model) EEG system for long-term video EEG monitoring
- Synchronous high-resolution video recording
- Automatic detection of abnormal aEEG patterns
- Motion-triggered video recording

All recorded data is saved to a single database. The raw EEG can be reviewed by EEG specialist, if it is required.
NEURON-SPECTRUM.NET
SOFTWARE FEATURES

- EEG acquisition, reviewing, and analysis
- Working with LORETA and sLORETA
- Brain mapping and bar charts of EEG analysis results
- Automatic detection of spikes and sharp waves
- Trends of EEG parameters
- Graphs of EEG spectral and coherent analysis results
- Automatically generated report
NEURON-SPECTRUM-VIDEO
LONG-TERM VIDEO EEG MONITORING SYSTEM

• Compatible with any Neurosoft EEG system
• Synchronous video recording from up to 3 cameras
• Day and night video recording with infrared lighting
• LAN connection of EEG amplifier to ensure patient mobility
• Motion-trigged mode for video recording

Neuron-Spectrum-Video is a system for synchronous long-term recording of EEG, video and audio data with a user-friendly interface and easy-to-use electrode system for enhanced patient comfort. Neuron-Spectrum-5 and Neuron-Spectrum-65 EEG and LTM systems with Neuron-Spectrum-Video software are the best clinical solutions for epilepsy centers. Neuron-Spectrum-AM with ambulatory video monitoring equipment allows recording EEG not only at various healthcare facilities but at patient’s home as well.
DUAL-MONITOR MODE

EEG TRACES

EEG TRENDS AND VIDEO

TABS WITH OPENED EXAMS

TOOLBAR FOR EEG ACQUISITION, REVIEW AND ANALYSIS

STATUS BAR

TRACE AREA

EEG ANALYSIS WINDOWS

SYNCHRONOUS VIDEO REVIEW

2D AND 3D AMPLITUDE AND SPECTRUM MAPPING
OPTIONS

**Neuron-Spectrum-LEP**
Software and equipment to study long-latency EP using multi-channel montage with brain mapping

**Neuron-Spectrum-EP**
Software and equipment for short- and long-latency EP study using wide-band polygraphic channels

**Neuron-Spectrum-EMG**
Software and equipment for EMG, NCS and SEP

**Loreta**
Automatic data export to LORETA and sLORETA

**Neuron-Spectrum-ERG**
Software and equipment for electroretinography

**Neuron-Spectrum-BFB**
Software for biofeedback therapy

**Poly-Spectrum-Rhythm**
Heart rate variability analysis equipment and software

**Persyst**
Integration with Persyst* quantitative EEG system

* Persyst is a Persyst company product (the USA)

**3D localization of pathological activity areas in the brain**
Integration with EpiSource, EpiSpike and NeuroTrend software (AIT, Austria)

**Standardized report generation**
Integration with SCORE EEG software (Holberg EEG, Norway)

In addition, Neurosoft company has collaborated with many well-known manufacturers of systems for EEG analysis, such as NeuroGuide (ANI, USA), BESA (Germany), Epilog (Belgium), QEEGPro (the Netherlands), iSyncBrain (Korea).
Polysomnography
> 10-Year Experience

**2007**
Neuron-Spectrum-4P
First clinical PSG system
(Type I according to AASM*)

**2016**
Turkey: Over 100 sleep units equipped with Neurosoft PSG systems

**2012**
Neuron-Spectrum-AM/PSG
First ambulatory portable PSG recorder (Type I or II sleep monitor according to AASM)

**2019**
Neuron-Spectrum-65/PSG
New clinical PSG system
(Type I sleep monitor according to AASM)

Neuron-Spectrum-AM/CRM
Cardiorespiratory monitor
(Type III sleep monitor according to AASM)

* equipment type according to the American Academy of Sleep Medicine (AASM)
# Polysomnography Systems

Digital systems for PSG and CRM studies

## Neuron-Spectrum-65/PSG
- **Type:** Clinical PSG system (Type I sleep monitor)
- **PSG channels:** Full range of PSG channels in compliance with AASM recommendations
- **Expandable for multi-channel EEG:** +
- **Video monitoring:** +

## Neuron-Spectrum-AM/PSG
- **Type:** Clinical PSG system and ambulatory portable PSG recorder (Type I or II sleep monitor)
- **PSG channels:** Full range of PSG channels in compliance with AASM recommendations
- **Expandable for multi-channel EEG:** +
- **Video monitoring:** +

## Neuron-Spectrum-AM/CRM
- **Type:** Cardiorespiratory monitor (Type III sleep monitor)
- **PSG channels:** ECG, respiration, chest and abdominal movements, snoring, \( \text{SpO}_2 \)
- **Expandable for multi-channel EEG:** +
- **Video monitoring:** +

---

**PSG**

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During in-lab PSG study the sensors can be connected to the recorder through the portable patient unit. This allows a patient to disconnect quickly from the recorder (for example in case of bathroom needs) and then connect the sensors back to resume the recording.

**NEURON-SPECTRUM-65/PSG**

CLINICAL PSG SYSTEM (TYPE I SLEEP MONITOR)

- Ready-made solution for your PSG lab
- Full range of PSG channels in compliance with AASM recommendations
- Connection to a portable patient unit
- Synchronous video monitoring
- Sleep staging and detection of sleep-related events
- Advanced analysis methods to speed up PSG data interpretation
Thanks to the exceptional quality of the recording, Neuron-Spectrum-AM/PSG can be reasonably considered as high-end PSG solution. 24 channels allow performing all kinds of PSG studies. Compact and lightweight, the electronic unit is easily attached to a patient and is unnoticeable during the exam. The supplied software helps a specialist to interpret PSG easily and correctly in just a few moments.

- Full range of PSG channels in compliance with AASM recommendations
- Synchronous video monitoring
- Removable memory card for examination storage
- Wireless interface for data transfer to PC
Neuron-Spectrum-AM/CRM is specially designed for cardiorespiratory monitoring at night and allows detecting and analyzing respiratory events (apnea and hypopnea), heart rate and blood oxygen saturation during sleep. The electronic unit also features built-in body position sensors and a light sensor.

- Expandable to a stand-alone PSG recorder (Type I or II sleep monitor)
- Detection and analysis of respiratory events, heart rate, SpO₂, and body position
- Up to three days of continuous work in the stand-alone mode
- Removable memory card for examination storage
- Wireless interface for data transfer to PC

Upon customer request, Neuron-Spectrum-AM/CRM can be expanded up to Type I or II PSG recorder that allows for more detailed analysis of sleep-related disorders.
ELECTRONEUROMYOGRAPHY
> 20-YEAR EXPERIENCE

- **1996**
  - NEURO-MEP FIRST DIGITAL EMG AND EP SYSTEM

- **1999**
  - 8-CHANNEL DIGITAL EMG AND EP SYSTEM

- **2002**
  - NEURO-MEP-MICRO DIGITAL EMG AND EP SYSTEM

- **2004**
  - WIRELESS DEDICATED KEYBOARD

- **2005**
  - CE MARK

- **2006**
  - NEW VERSION OF NEURO-MEP-MICRO WITH GRAPHICAL DISPLAY

- **2007**
  - NEW NEUROSOFT EMG ELECTRODES

- **2009**
  - AUTOMATIC DETECTION OF MUP

- **2011**
  - FDA APPROVAL OF NEURO-MEP-MICRO (FOCUS) MACHINE

- **2012**
  - NEW DEDICATED KEYBOARD

- **2015**
  - BATTERY OF TMS TESTS IN NEURO-MEP.NET SOFTWARE

- **2016**
  - SKYBOX 5-CHANNEL NCS, EMG AND MULTI-MODAL EP SYSTEM

- **2019**
  - LITEBOX 3-CHANNEL NCS, EMG AND EP SYSTEM
Neuro-MEP EMG, NCS and EP systems are supplied with 2-, 3-, 4-, 5- and 8-channel amplifiers. Reliable connectors, low-noise amplifier, wireless keyboard for fast control of any exam stage and advanced Neuro-MEP.NET software are the distinct advantages of Neurosoft EMG and EP systems.

<table>
<thead>
<tr>
<th></th>
<th>NEURO-MEP-8</th>
<th>NEURO-MEP-4</th>
<th>SKYBOX</th>
<th>NEURO-MEP-MICRO</th>
<th>LITEBOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMG/EP channels</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Electrical stimulation channels</td>
<td>1–2</td>
<td>1–2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Design</td>
<td>Modular architecture: all units conveniently arranged at workplace are connected via USB and make optimal configuration of your own</td>
<td>All-in-one: connection to PC and power supply via USB cable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Smooth, quick and simple as one, two, three: record motor response using the first channel, sensory response using the second channel and needle EMG using the third channel. No more cable reconnection, let them serve much longer!

**LITEBOX**

**3-CHANNEL NCS, EMG AND EP SYSTEM**

- NCS and needle EMG according to international standards
- 3 acquisition channels for quickest examination ever
- All-in-one: stimulators, amplifier, keyboard in single compact and lightweight box
- Electrical stimulator with unipolar and bipolar pulse waveforms
- Premium signal quality due to innovative circuits for sophisticated filtering, noise suppression and stimulus artifact reduction

* if additional Neuro-EP software module is available
SKYBOX
5-CHANNEL DIGITAL EMG, NCS AND EP SYSTEM

- EMG according to international standards
- All you need is within a lightweight compact case: stimulators, acquisition channels, and dedicated controls
- Over 50 EMG and EP techniques
- 4 minutes per one nerve study
- All EP modalities in the base delivery set
- 2 independent electrical stimulators

LESS THAN 1 KG WEIGHT
POWERED BY NOTEBOOK

2 INDEPENDENT ELECTRICAL STIMULATORS WITH 4 OUTPUTS
AUDITORY STIMULATOR
VISUAL STIMULATOR
PATTERN STIMULATOR

5 ACQUISITION CHANNELS
ERGONOMIC KEYBOARD

EMG/EP
35
**NEURO-MEP-4/8**

4- OR 8-CHANNEL NCS, EMG AND MULTI-MODALITY EP SYSTEM WITH WIRELESS KEYBOARD

- Modular architecture
- 4 or 8 high-quality acquisition channels
- Easy-to-use EMG system of expert class
- EMG according to international standards
- Multi-modality EP in base delivery set

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**MODULAR ARCHITECTURE**

All electronic units are connected to computer via USB. It allows combining them flexibly to arrange a configuration corresponding to your own requirements. For example, connect one more 4-channel amplifier to Neuro-MEP-4 to get 8-channel system. To study motor and sensory conduction collision, plug in the second electrical stimulator.
NEURO-MEP-MICRO

2-CHANNEL ULTRAPORTABLE EMG AND NCS SYSTEM WITH A BUILT-IN KEYBOARD

- 2 channels are optimized to perform quickly motor and sensory conduction tests and needle EMG
- All-in-one compact and lightweight system: stimulators, acquisition channels, controls, and display
- High acquisition quality: sampling rate – up to 100 kHz
- Electrical stimulator with ultra-fast switching between two outputs
- Display showing stimulation parameters and electrode placement quality

* if additional Neuro-EP software module is available
NEURO-MEP.NET SOFTWARE FEATURES

**NEURO-MEP.NET TECHNIQUES**

- NCS (motor and sensory conduction velocity, F-wave, H-reflex (also including paired stimulation), motor and sensory inching)
- EMG (spontaneous activity, interference pattern, motor unit potentials (MUP), macro EMG, QEMG)
- Neuromuscular junction (repetitive stimulation, jitter (single fiber EMG))
- Motor unit number estimation (MUNE) including MUNIX
- Additional EMG techniques (blink reflex, sacral reflex, bulbocavernosus reflex, tremor, T-reflex*, galvanic skin response, RIII)
- Somatosensory evoked potentials (SEP)
- Flash and pattern-reversal visual evoked potentials (VEP)
- Auditory evoked potentials (AEP)
- Vestibular evoked myogenic potentials (VEMP)
- Cognitive evoked potentials (P300, MMN, CNV, MRCP, N400, P50)
- Transcranial magnetic stimulation (TMS)**
- Intraoperative neurophysiological monitoring (IONM)
- Heart rate variability (HRV)***
- Electroretinography (ERG, mfERG)***

* if tendon hammer for T-reflex recording is available
** if magnetic stimulator is available
*** if corresponding equipment is available

Motor and sensory conduction study

Simultaneous acquisition of motor and sensory responses from one stimulus

Quantitative EMG (QEMG)

Acquisition and analysis of spontaneous EMG activity, interference pattern and MUP in one window. Automatic classification of activity phenomena during spontaneous activity analysis

Report editor

Exam results can be presented in a report generated automatically. Report is edited easily and customized according to individual demands
Using our EMG, NCS and EP systems you can perform almost all known EMG and EP techniques. In recent decades the technique standards have been accepted and established. These are special algorithms to study different pathologies, calculations intended for each test, reference values, etc. It is very important for a specialist to be equipped with all the techniques, even if some of them are not used very often.
NEURO-TOX
DEVICE FOR EMG/STIM-GUIDED INJECTIONS
AND NEUROMUSCULAR STIMULATION

- Electrical stimulator and EMG recorder in one unit
- Application in neurology, therapy, and anesthesiology
- 2 AA batteries operated
- Touch-proof connectors to plug in electrodes and injection needles
- Operation indicators and built-in speaker
INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING

> 15-YEAR EXPERIENCE

IONM

2002
EMG AND EP SYSTEMS ARE USED FOR IONM FOR THE FIRST TIME

2015
NEURO-IOM 32-CHANNEL SYSTEM FOR INTRAOPERATIVE MONITORING

2012
NEURO-IOM 16-CHANNEL MODULAR SYSTEM FOR INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING
NEURO-TES TRANSCRANIAL ELECTRICAL STIMULATOR

2017
NEURO-IOM 32-CHANNEL MULTI-MODALITY SYSTEM FOR INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING (EXPANDABLE TO 64-CHANNEL SYSTEM)

2016
CE MARK

2013
NEURO-IOM.NET SOFTWARE (DEVELOPMENT)

2018
STIMULATION PROBE WITH CONTROLS FOR DIRECT NERVE STIMULATION
NEURO-IOM (V. 2)
MULTI-MODALITY SYSTEM FOR INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING

- 32 amplifier channels expandable up to 64 channels
- Motor, somatosensory, auditory and visual evoked potentials, EMG, direct nerve stimulation, EEG, ECoG — more than 10 IONM modalities
- Monitoring during spine, brain, vascular, otolaryngology, and oral and maxillofacial surgeries
- Transcranial electrical stimulator (up to 1000 V)
- Two-in-one: IONM device and 2-channel EMG/EP system

VIDEO FROM UP TO 3 CAMERAS OR MICROSCOPE

OPTIONAL AMPLIFIER TO EXPAND THE IONM CHANNEL NUMBER TO 64

32/16-CHANNEL ELECTRONIC UNIT IN BASE DELIVERY SET

SMOOTH-RUNNING TROLLEY TO MOVE THE SYSTEM EASILY

DATA PRINTING DURING MONITORING

EASY-TO-USE STIMULATOR AND ACQUISITION PODS WITH 5 M CABLES

BOX FOR DOCUMENTS AND PAPER

IONM
NEURO-IOM (V. 2) CONFIGURATIONS

The system can be supplied in one of four configurations depending on the needs of neurophysiologists and surgeons.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>IONM channels</th>
<th>Dedicated channels for routine EMG, NCS and EP</th>
<th>Electrical stimulator channels</th>
<th>Low current stimulator channels</th>
<th>Transcranial electrical stimulator channels</th>
<th>ES detector channels</th>
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</thead>
<tbody>
<tr>
<td>64/B</td>
<td>64</td>
<td>4</td>
<td>16</td>
<td>3</td>
<td>4</td>
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<tr>
<td>32/B</td>
<td>32</td>
<td>2</td>
<td>12</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>32/S</td>
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<td>4</td>
<td>1</td>
<td>–</td>
<td>2</td>
</tr>
<tr>
<td>16/S</td>
<td>16</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>–</td>
<td>2</td>
</tr>
</tbody>
</table>

OVER 150 SYSTEMS WORLDWIDE
USB CONNECTION
DEDICATED CHANNELS FOR AUDITORY, VISUAL AND PATTERN STIMULATION
NEURO-TES
TRANSCRANIAL ELECTRICAL STIMULATOR

- Stimulus intensity – up to 1000 V
- Motor EP acquisition during intraoperative monitoring
- Synchronization with diagnostic systems of Neurosoft or other manufacturers
- 4-channel electronic switch (4 pairs of outputs with electronic switching)
- Neuro-TES software to control stimulator
- Stimulation modes: train, double train, train + pulse, asymmetric double train

The stimulator has a built-in electronic switch that allows switching anode and cathode of the electrical stimulator to any output of the pod which can be located in patient’s area at 5 m distance from stimulator and control PC. The switching is performed with Neuro-TES or Neuro-IOM.NET software.
MAGNETIC STIMULATION
> 20-YEAR EXPERIENCE

- **2003**: Magnetic Stimulator with External Control Unit
- **2006**: CE Mark
- **2008**: Neuro-MS/D Magnetic Stimulator with Cooling and Extension Units
- **2010**: Neuro-MS/D Magnetic Stimulator with Extra Power Supply Unit
- **2012**: "TRANSCRANIAL MAGNETIC STIMULATION" HANDBOOK BY MOACYR ALEXANDRO ROSA AND MARINA ODEBRECHT ROSA
- **2014**: FDA Approval of CloudTMS (NEURO-MS/D)
- **2015**: Neuro-MS Monophasic Magnetic Stimulator
- **2017**: Cooled coil for small animals
- **2019**: Neuro-MSx New Magnetic Stimulator

- **1997**: Neuro-MS First Russian Magnetic Stimulator
- **2009**: Placebo Coil
- **2011**: Neuro-MS.NET Software
- **2016**: Application of Triple Monophasic Stimulation in Utrecht University
- **2019**: In Neural Navigator System

TMS
Transcranial magnetic stimulation (TMS) has proven therapeutic effect in treatment of a wide range of psychiatric and neurological disorders. It can be also used for peripheral stimulation, including pelvic floor stimulation.

### NEURO-MS/D
- Number of supported coils: 10
- Stimulation frequency at maximal intensity, Hz: 5
- Coil cooling: +
- Maximal stimulation frequency, Hz: 30
- Theta burst stimulation (TBS): –
- Stimulation modes: repetitive, train

### NEURO-MSX
- Number of supported coils: 18
- Stimulation frequency at maximal intensity, Hz: 20
- Coil cooling: +
- Maximal stimulation frequency, Hz: 100
- Theta burst stimulation (TBS): +
- Stimulation modes: repetitive, train, burst

**NEURO-MSX**
- Number of supported coils: 18
- Stimulation frequency at maximal intensity, Hz: 15
- Coil cooling: +
- Maximal stimulation frequency, Hz: 100
- Theta burst stimulation (TBS): +
- Stimulation modes: repetitive, train, burst, ramp, sweep frequency

**(2 kHz for burst mode)**
Neuro-MS diagnostic magnetic stimulator is available in two configurations: single- or paired-pulse stimulation. It can be used in neurology and neurosurgery, for electrodiagnostics and research.

### NEURO-MS

<table>
<thead>
<tr>
<th></th>
<th>SINGLE-PULSE STIMULATION</th>
<th>PAIRED-PULSE STIMULATION</th>
<th>TRIPLE-PULSE STIMULATION*</th>
<th>QUADRI-PULSE STIMULATION*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstimulus interval, ms</td>
<td>–</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Peak magnetic field, T</td>
<td>3.2</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Stimulation frequency at maximal intensity, Hz</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Diagnostic TMS (single-pulse stimulation)</td>
<td>MEP, MT, CMCT, SP, recruitment curve</td>
<td>MEP, MT, CMCT, SP, recruitment curve</td>
<td>MEP, MT, CMCT, SP, recruitment curve</td>
<td>MEP, MT, CMCT, SP, recruitment curve</td>
</tr>
<tr>
<td>Advanced diagnostic TMS (paired-pulse stimulation)</td>
<td>–</td>
<td>SICI, LICI, ICF, SICF, LICF, IHI</td>
<td>SICI, LICI, ICF, SICF, LICF, IHI, SICI/LICI, SICI/LICF, triple pulse test</td>
<td>SICI, LICI, ICF, SICF, LICF, IHI, SICI/LICI, SICI/LICF, triple pulse test, QPS</td>
</tr>
</tbody>
</table>

* these configurations are not registered as medical ones and can be used only for research purposes
NEURO-MS/D
TRANSCRANIAL MAGNETIC STIMULATOR FOR DIAGNOSTICS, THERAPY AND RESEARCH

- Application: psychiatry, neurology, rehabilitation, and sports medicine
- 20 Hz stimulation with 100% intensity
- Theta burst stimulation (TBS)
- Advanced cooling technology guarantees continuous operation without coil overheating
- Neuro-MS.NET software to manage patient database and control treatment courses and stimulation sessions

Main unit is intended to control the stimulator operation. It is connected to PC via USB

Cooling unit helps to avoid coil overheating during stimulation

Extra power supply unit allows increasing stimulation frequency up to 100 Hz

EXPANSION UNIT
Neuro-MS/D magnetic stimulator can be supplied with an expansion unit which allows increasing induced magnetic field by 40% and performing paired-pulse monophasic stimulation.
The repetitive magnetic stimulation is widely used for therapeutic treatment and rehabilitation. The delivery of a large number of pulses may result in coil overheating which explains the need to use cooled coils. Thanks to our breakthrough cooling system solution you can forget of overheating, whereas the variety of our coil shapes will guarantee the best results in each individual case.

**ANGULATED FIGURE-OF-EIGHT COIL**
For focused stimulation of the brain. The anatomical shape of the coil, congruent to the shape of the head, provides a higher fit and avoids displacement of the stimulation point.
Coil winding diameter — 100 mm.

**DOUBLE CONE COIL**
For deep stimulation of the brain. Ideal for stimulation of DLPFC, cerebellum and motor cortex areas controlling the muscles of lower limbs, lower torso and pelvic floor.
Coil winding diameter — 125 mm.

**FIGURE-OF-EIGHT COIL**
Suitable for focused and precise stimulation of cortex, peripheral nerves and muscles.
Coil winding diameter — 100 mm.

**RING COIL**
For stimulation which doesn’t require high accuracy or focused stimulus but a large depth of penetration is expected. Perfect for peripheral stimulation, including pelvic floor stimulation in urology and colorectalology.
Coil winding diameter — 150 mm.
NEURO-MS.NET SOFTWARE FEATURES

Neuro-MS.NET software manages patient database and controls treatment courses and stimulation sessions. You can perform stimulation according to pre-defined protocols as well as create your own or edit the preset stimulation programs. Neuro-MS.NET interface is designed to support touchscreens.

PRE-DEFINED PROTOCOLS

PSYCHIATRY
Treatment of depression, posttraumatic stress disorder, schizophrenia, obsessive-compulsive disorder, mania, addiction, anxiety disorders, etc.

NEUROLOGY
After-stroke rehabilitation, treatment of spasticity, pain syndrome, migraine, Parkinson disease, tinnitus, dystonia, essential tremor, Tourette syndrome, amyotrophic lateral sclerosis, multiple sclerosis, epilepsy, Alzheimer disease, etc.
**NAVIGATED TMS**

Neurosoft magnetic stimulators can be integrated with Neural Navigator navigation system which allows using MRI data for precise coil positioning and motor and visual cortex mapping.

**ACCESSORIES**

- **COIL POSITIONING TOOL**
- **COMFORTABLE TMS CHAIR**
- **PATIENT CAP**

To achieve the maximum treatment efficiency, it is required to determine the stimulation spot precisely. The specially designed coil positioning tool allows you to find this spot quickly and position the coil over this area accurately. This spot is marked on the patient cap. It is very convenient as you will not have to determine it again.

The chair specially designed for long-term treatment sessions:
- 2 independent motors for adjustment of backrest and legrest
- Individual positioning of neck rest and footrest
- Remote control for accessing basic positions
- 4 twin-wheel castors with/without central locking

The use of individual patient cap to mark the points saves your time usually spent for coil positioning during each next session.
NEW MAGNETIC STIMULATOR

- Application: psychiatry, neurology, rehabilitation, and sports medicine
- 35 Hz stimulation with 100% intensity
- Theta burst stimulation (TBS)
- Advanced liquid cooling technology
- New generation of ergonomic cooled coils with stimulation controls at your fingertips
- Built-in memory for preset protocols

NEW STIMULATION PROTOCOLS

- sweep frequency mode with adjustable rising, falling and plateau frequency
- ramp mode with adjustable ramp up, ramp down and plateau time

It is possible to store treatment/rehabilitation protocols that can be edited anytime when necessary in the built-in memory. Performing the treatment is very easy. Just choose the desired protocol with pre-defined settings and start the stimulation!
STIMULATION CONTROL USING ANDROID AND iOS DEVICES

Web interface allows protocol selection and stimulation parameter setup using a tablet or smartphone.
NEURO-MS
MONOPHASIC MAGNETIC STIMULATOR

- Powerful monophasic stimulus
- Ergonomic and lightweight coils of different shapes and sizes
- Configurations for single-, paired-, triple- or quadri-pulse stimulation (QPS)
- Compatible with EMG/EEG machines of many world-known manufacturers

APPLICATION
Electrodiagnostics, neurology, neurosurgery, and research
NEW GENERATION COILS

We offer new generation coils of different sizes and shapes as the best match for our new magnetic stimulators. You can choose any of them depending on the stimulation target. All coil models have enhanced ergonomics and are equipped with controls and positioning grid that maximizes the coil placement accuracy.

**RC-03-125, RC-03-125-C**
**BIG RING COIL**
- cortical and peripheral nerve stimulation (cervical, lumbosacral nerve roots, pudendal nerve)
- stimulation of deep nerves

**FEC-03-100, FEC-03-100-C**
**FIGURE-OF-EIGHT COIL**
- focused cortical and peripheral nerve stimulation
- gold standard for TMS

**AFEC-03-100, AFEC-03-100-C**
**ANGULATED FIGURE-OF-EIGHT COIL**
- anatomic shape being congruent to head shape ensures closer fitting to the patient’s head
- deep cortical stimulation
- accurate focusing

Positioning grid for precise coil placement

Buttons to increase/decrease stimulus intensity

“Trigger” button

Handle with enhanced ergonomics
Neurosoft is the only company in the industry which produces both TMS machines and professional EMG/NCS systems. It means that integration between TMS and EMG can be done at a very deep level.

Neuro-MEP .NET includes a battery of different TMS tests.

**NEURO-MEP.NET SOFTWARE FEATURES**

Neurosoft is the only company in the industry which produces both TMS machines and professional EMG/NCS systems. It means that integration between TMS and EMG can be done at a very deep level. Neuro-MEP.NET includes a battery of different TMS tests.

- Silent period (SP)
- Study of motor evoked potentials (recruitment curve)
- Tripple stimulation test (TST)
- Study of central motor conduction time (CMCT)

To work with TMS machines, Neurosoft offers 2-channel EMG system with high noise immune hardware ensuring perfect signal quality. The delivery set includes high-performance accessories and professional Neuro-MEP.NET software that is in perfect synch with the device and manages the stimulation parameters.

The new line of Neuron-Spectrum-61..65 EEG systems allows EEG recording during magnetic stimulation (combined TMS-EEG). This technique is used for post-stroke rehabilitation monitoring, as well as for different research purposes.
2001
NEURO-AUDIO DIGITAL SYSTEM FOR ABR

2005
DPOAE FUNCTION

2008
NEURO-AUDIO-SCREEN PORTABLE ALL-IN-ONE ABR, DPOAE AND TEOAE HEARING SCREENING SYSTEM

2011
2ND GENERATION OF NEURO-AUDIO-SCREEN WITH TOUCHSCREEN

2014
NEW LEVEL-SPECIFIC CHIRP STIMULUS (CHIRP-LS)

2015
FDA APPROVAL OF NEURO-AUDIO

2017
AUDIO-SMART PORTABLE SYSTEM FOR OAE, ABR, IMPEDANCE TESTING AND HEARING SCREENING ENHANCED CALIBRATION MODES

2019
BONE VIBRATOR AMPLIFIER

2020
METROLOGICAL LABORATORY FOR AUDIOMETER CALIBRATION

2021
CE MARK

2022
OAE/ABR FUNCTION

2023
2ND GENERATION OF NEURO-AUDIO-SCREEN WITH TOUCHSCREEN

2024
FDA APPROVAL OF NEURO-AUDIO

2025
AUDIO-SMART PORTABLE SYSTEM FOR OAE, ABR, IMPEDANCE TESTING AND HEARING SCREENING ENHANCED CALIBRATION MODES

2026
BONE VIBRATOR AMPLIFIER

2027
METROLOGICAL LABORATORY FOR AUDIOMETER CALIBRATION

2028
CE MARK

2029
OAE/ABR FUNCTION

2030
2ND GENERATION OF NEURO-AUDIO-SCREEN WITH TOUCHSCREEN

2031
FDA APPROVAL OF NEURO-AUDIO

2032
AUDIO-SMART PORTABLE SYSTEM FOR OAE, ABR, IMPEDANCE TESTING AND HEARING SCREENING ENHANCED CALIBRATION MODES

2033
BONE VIBRATOR AMPLIFIER

2034
METROLOGICAL LABORATORY FOR AUDIOMETER CALIBRATION

2035
CE MARK

2036
OAE/ABR FUNCTION

2037
2ND GENERATION OF NEURO-AUDIO-SCREEN WITH TOUCHSCREEN

2038
FDA APPROVAL OF NEURO-AUDIO

2039
AUDIO-SMART PORTABLE SYSTEM FOR OAE, ABR, IMPEDANCE TESTING AND HEARING SCREENING ENHANCED CALIBRATION MODES

2040
BONE VIBRATOR AMPLIFIER
aSCREEN

TINY OAE DEVICE

- Smallest in the world, yet powerful
- TEOAE and DPOAE in one device
- Bluetooth communication for data transfer and result printing
- Easily customizable test templates
- Android compatible

aScreen is the next generation of OAE hearing screening devices. It works with the list of Android-based smartphones and tablets with USB On-The-Go feature. All you need is to choose a device with the screen size and battery capacity you are comfortable with.
NEURO-AUDIO

2-CHANNEL ABR, OAE, VEMP, ASSR AND ECochG SYSTEM

- Complete solution for auditory EP and OAE acquisition
- ABR & CAEP according to International Evoked Response Audiometry Study Group (IERASG) and British Society of Audiology (BSA) guidelines
- Electrical ABR (eABR) via trigger input
- Automatic multi-ASSR test
- VEMP with biofeedback
- Pure tone audiometry (PTA) screening

DPOAE STIMULUS UP TO 12 KHZ
ABR, AEP, OAE AND PTA IN ONE DEVICE
POWERED FROM NOTEBOOK
TRIG IN/OUT
IMPEDANCE INDICATORS
HEADPHONES OAE PROBE BONE VIBRATOR

OAE/ABR 59
NEURO-AUDIO.NET
SOFTWARE FEATURES

Auditory evoked potentials (ABR, MLR, LLR/CAEP)

Transient evoked otoacoustic emission (TEOAE)

Distortion product otoacoustic emission (DPOAE)

Vestibular evoked myogenic potentials (VEMP)

Electrocochleography (ECochG) with SP/AP area ratio calculation

ASSR and multi-ASSR

Pure tone audiometry (PTA)

Cognitive event-related potentials (P300, MMN)
Neuro-Audio-Screen Manager software allows a user to upload patient list to the device, download test results from the device, and print test reports.

- True hybrid: OAE, ABR and tympanometry in one powerful device
- OAE and automated-ABR hearing screening
- Really portable middle ear analyzer
- High-frequency tympanometry
- ABR test with wave V Jewett marker
- Simple and user-friendly touchscreen interface
Audio-SMART is a lightweight, compact device that can be easily placed in a specialist's gown pocket. It ensures quick examination right at the bedside. Powerful battery ensures continuous operation during the whole day.

**AUDIO-SMART**

**FIRMWARE FEATURES**

- **Transient evoked otoacoustic emission (TEOAE)**
- **Tympanometry**
- **Automated auditory brainstem response (AABR)**
- **Auditory brainstem response (ABR) with wave V marker**
ELECTRORETINOGRAPHY

> 15-YEAR EXPERIENCE

🌟 2001
NEURO-ERG DIGITAL ERG SYSTEM

CE 2005
CE MARK

2003
MINI-GANZFELD STIMULATOR
SPECIAL HOOK- AND LOOP-SHAPED ERG ELECTRODES

KFDA APPROVAL (SOUTH KOREA)

2008

2016
MULTIFOCAL ELECTRORETINOGRAPHY (mfERG)

ERIC
NEURO-ERG
DIGITAL SYSTEM FOR ERG AND VISUAL EP STUDY

- Clinical electrophysiological testing of vision: objective assessment and analysis of retinal function and visual pathways at all levels
- Diagnostics of initial (preclinical) retinal changes
- Set of specially designed electrodes
- Mini-ganzfeld stimulator
- Penlights with concentrators for focal ERG tests

5 VISUAL STIMULATORS

- Cone ERG
- Flicker ERG
- Maximal ERG
- Focal ERG
- Simultaneous acquisition of VEP and ERG
- Multifocal ERG
Poly-Spectrum product line combines the accuracy of analog ECG systems and the advantages of digital recording including filter and protocol customization and automatic interpretation.

**ECG leads**
- 12 (POLY-SPECTRUM-8)
- 12 (POLY-SPECTRUM-8/E)
- 12 (POLY-SPECTRUM-8/EX)
- 12 (POLY-SPECTRUM-8/G)
- 15* (POLY-SPECTRUM-12/E)

**Transesophageal ECG leads**
- - (POLY-SPECTRUM-8)
- - (POLY-SPECTRUM-8/E)
- - (POLY-SPECTRUM-8/EX)
- - (POLY-SPECTRUM-8/G)
- 2 (POLY-SPECTRUM-12/E)

**Automatic report generation**
- - (POLY-SPECTRUM-8)
- + (POLY-SPECTRUM-8/E)
- + (POLY-SPECTRUM-8/EX)
- + (POLY-SPECTRUM-8/G)
- + (POLY-SPECTRUM-12/E)

**Interface**
- Wire: USB (POLY-SPECTRUM-8)
- Wire: USB (POLY-SPECTRUM-8/E)
- Wireless: Bluetooth (POLY-SPECTRUM-8/EX)
- Wireless: Bluetooth, GSM (POLY-SPECTRUM-8/G)
- Wire: USB (POLY-SPECTRUM-12/E)

**Pacemaker pulse detection**
- + (POLY-SPECTRUM-8)
- + (POLY-SPECTRUM-8/E)
- - (POLY-SPECTRUM-8/EX)
- - (POLY-SPECTRUM-8/G)
- + (POLY-SPECTRUM-12/E)

**Application**
- Resting ECG (POLY-SPECTRUM-8)
- Resting ECG with interpretation (POLY-SPECTRUM-8/E)
- Stress test, resting ECG with interpretation, cardiac rehabilitation, HRV (POLY-SPECTRUM-8/EX)
- Telemedicine, resting ECG with interpretation (POLY-SPECTRUM-8/G)
- Resting ECG with interpretation, transesophageal ECG (POLY-SPECTRUM-12/E)

* 14 ECG channels and 1 respiratory channel
Poly-Spectrum-8/EX is the best choice for exercise stress testing as ECG of a patient is transmitted via Bluetooth for up to 7-meter distance. The device is placed on a patient’s body, so you can use short ECG cable and its vibrations will not impact ECG quality anymore.
Ergopoint is a high-performance system designed to solve multiple tasks such as diagnostics of coronary artery disease (CAD), study of rhythm disturbances under workload, assessment of exercise tolerance, diagnostics of heart and respiratory failures, and evaluation of exercise performance in apparently healthy individuals (in sports medicine).

**ADVANTAGES**

Ergopoint ensures integration with gas analysis systems MetaLyzer 3B (Cortex, Germany) and Ergostik (Geratherm, Germany) to perform cardiopulmonary stress test. Ergopoint is compatible with exercise equipment of other world-known manufacturers (GE Healthcare, HP Cosmo, Kettler, etc.).
ERGOPOINT
EXERCISE STRESS TEST SYSTEM WITH TREADMILL

- Exercise stress test with continuous 1- to 12-channel ECG acquisition
- Full battery of exercise test protocols including ramp protocol
- ST segment assessment for coronary heart disease diagnostics
- Treadmill with side handrails and 0÷25% elevation
- Automatic report generation

TREADMILL OPTIONS

<table>
<thead>
<tr>
<th>Speed, km/h</th>
<th>Smooth start</th>
<th>Elevation, %</th>
<th>Allowed patient weight, kg</th>
<th>Interface</th>
<th>Side handrails</th>
<th>Treadmill weight, kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lode Valiant</td>
<td>0.5÷20</td>
<td>+</td>
<td>0÷25</td>
<td>&lt;160</td>
<td>USB</td>
<td>+</td>
</tr>
<tr>
<td>T 2100</td>
<td>0÷22.5</td>
<td>+</td>
<td>0÷25</td>
<td>&lt;204</td>
<td>COM</td>
<td>+</td>
</tr>
</tbody>
</table>
ERGO SPIROMETER
PROFESSIONAL SYSTEM FOR CARDIOPULMONARY EXERCISE TESTING (EXERCISE STRESS TEST WITH GAS ANALYSIS)

- Cardiopulmonary exercise test with 1- to 12-channel ECG acquisition
- Wireless ECG transfer — clear ECG traces
- Full battery of exercise test protocols including ramp protocol
- Ongoing monitoring of all training parameters
- Lode bike ergometer with blood pressure module
- Flow/volume measurement and inhaled/exhaled gas analysis (O₂/CO₂)
- Real-time displaying of O₂/CO₂ levels

ECG stress test
Averaged QRS complexes of the whole record
ST trend
Automatic exam report generation
Software and equipment for stress testing on bike ergometer or treadmill
Software and equipment for cardiopulmonary exercise test
Software and equipment for acquisition and analysis of ventricular late potentials
Software for QT interval dispersion analysis
Software and equipment for acquisition and analysis of pulse wave velocity
Software for ECG measurement and interpretation
Software for ECG acquisition, review and printing
Software and equipment for heart rate variability analysis
POLY-SPECTRUM-AM
LONG-TERM ECG AMBULATORY MONITORING SYSTEM

- 2- or 3-channel ECG acquisition
- Automatic, semi-automatic and manual arrangement of QRST fiducial points, automatic clustering of QRS complexes, extended classification of rhythm events
- Quick navigation and editing of ECG record with event filters
- Bluetooth for recorder setup and real-time ECG monitoring
- Recording of patient’s audio comments
- 12-channel record support in the SW (obtained from other compatible recorders)
- P wave detection
- PQ, QT, HRV, blood pressure and heart rate turbulence analysis modules

POLY-SPECTRUM-AM.NET SOFTWARE FEATURES

Record preview
Clusters of QRS complexes
Arrhythmia analysis
Report generation
CARDIAC REHABILITATION
RECENT DEVELOPMENTS

2014
MULTITRAINER DIGITAL SYSTEM FOR CARDIAC REHABILITATION WITH BFB

2019
TRAINING PROTOCOLS ACCORDING TO INTERNATIONAL STANDARDS

2015
SpO2, CHANNEL
MULTITRAINER
CARDIAC REHABILITATION SYSTEM WITH BIOFEEDBACK

- Load/HR-controlled training
- Cardiac rehabilitation of up to 16 patients simultaneously (up to 80 sessions per day in total)
- Physiological parameter monitoring (ECG, ST, BP, SpO₂, PVC, etc.)
- More than 10 different models of ergometers and treadmills are supported
- Training protocol customization, creation of comprehensive rehabilitation programs
- Ergonomic interface: maximum useful information is displayed for the specialist during the training session
- Training protocols according to international standards
- Exercise test module for exercise HR determination and rehabilitation result assessment at the end of rehabilitation course

MULTITRAINER SOFTWARE FEATURES

- Miniature view: displaying training sessions of several patients in one window
- Pre-defined protocol customization
- Full screen: overall information on one patient for maximum convenience
- Comparison of training sessions

AUTOMATIC EVENT NOTIFICATION
80
80 REHABILITATION SESSIONS PER DAY
SPIRO-SPECTRUM
DIGITAL SPIROMETER WITH EXTRA MEASUREMENT ACCURACY

- High accuracy of lung volume and airflow rate measurement
- Automatic control of reproducibility and acceptance of respiratory maneuvers
- Demountable construction of flowmeter for quick and proper disinfection
- 3-liter calibration syringe according to international standards
- Inhalation tests with automatic comparison of results
- Motivational animation for kids
- Convenient flowmeter holder

SPIRO-SPECTRUM SOFTWARE FEATURES

Vital capacity (VC) test
Forced vital capacity (FVC) test
Test comparison
Configurable test report

TEMPERATURE, HUMIDITY AND PRESSURE SENSORS
3-LITER CALIBRATION SYRINGE
43 PARAMETERS INCLUDED
CARDIOVASCULAR REFLEX TESTING
> 20-YEAR EXPERIENCE

1996
ECG-MICRO PC-BASED ECG DEVICE

2001
FIRST DEVICE FOR ECG TRANSMISSION BY RADIO CHANNEL
RESPIRATORY CHANNEL

2006
CE MARK

2010
POLY-SPECTRUM.NET SOFTWARE

HRV ANALYSIS

1997
HRV ANALYSIS SOFTWARE

2001
First device for ECG transmission by radio channel
Respiratory channel

2005
Digital ECG system with Bluetooth interface

2008
Special algorithm for automatic 24-hour HRV analysis

2010
Poly-Spectrum-Am system for long-term ambulatory ECG monitoring

2015
Beat-to-beat real-time HRV
VNS-MICRO
NEUROPATHY ANALYZING SYSTEM

- Complex study of autonomic nervous system
- Simultaneous respiratory rate and heart rate variability (HRV) acquisition
- Cardiovascular reflex tests according to D. Ewing — the gold standard
- Portable
- Automatic report generation

POLY-SPECTRUM.NET FEATURES

Simultaneous heart rate and respiratory rate recording
Rhythmogram
Spectrogram
The key to effective rehabilitation of patients with gait disorders is the accurate and objective assessment of gait function. Until recent times, instruments for gait assessment were cumbersome, expensive and unintuitive. But now we present you a brand new gait analysis system.

Requiring minimum preparations to be done on the patient before the examination, the Assessment configuration of Steadys features the advantages of the most sophisticated gait analysis systems: a variety of gait parameters to assess, evidence-based technology to record gait and EMG data, and uncompromising performance to rely on.

- Gait assessment with/without treadmill
- Real-time assessment of gait parameters
- Everfast 2-minute examination
- Smart, portable, easy-applied IMU sensors
- Clever report showing detailed gait assessment results and the need for specific gait parameter compensation

The Neurosens inertial measurement unit (IMU) sensors are miniature watch-sized electronic devices positioned on a patient. They record acceleration and angular velocity by three axes (ensured by built-in 3D gyroscope and 3D accelerometer) and also EMG from two differential channels.
Learning how to walk properly is very difficult and toilsome. It demands time and cost expenditures and is impossible without highly qualified specialists. With Steadys you can forget of all such troubles! The software detects any slight deviations in gait pattern and informs patient on them that streamlines routine work of a specialist. The virtual walking environments involve a patient in training and prompt achieving better results.

Completed with a body weight support system, Steadys ensures an early start of rehabilitation for every patient. Treadmill with handrails guarantees comfort and safety for those who are not yet confident of walking independently and helps to keep balance during the training.

- All-in-one: gait assessment and training system
- Targeted gait rehabilitation in the motivating virtual environment
- Manual and automatic adaptation of training difficulty
- Streamlined workflow and enhanced functionality

<table>
<thead>
<tr>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neurology</strong></td>
</tr>
<tr>
<td><strong>Trauma, orthopedics, and etc.</strong></td>
</tr>
<tr>
<td><strong>Angiology</strong></td>
</tr>
<tr>
<td><strong>Geriatrics</strong></td>
</tr>
</tbody>
</table>
TREADMILLS AND BODY WEIGHT SUPPORT SYSTEMS

Steadys can work with any medical treadmill and body weight support systems. If you have already purchased them, we can equip them with sensors, electrodes, and software. If you don’t have them yet, choose the proposed configurations or select your own one.

<table>
<thead>
<tr>
<th></th>
<th>Lode</th>
<th>h/p/cosmos</th>
<th>Meden-inmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking surface</td>
<td>150x50 cm</td>
<td>150x50 cm</td>
<td>140x52 cm</td>
</tr>
<tr>
<td>Speed range</td>
<td>0.1 to 12 km/h</td>
<td>0.1 to 22 km/h</td>
<td>0.2 to 25 km/h</td>
</tr>
<tr>
<td>Speed adjustment step</td>
<td>0.1 km/h</td>
<td>0.1 km/h</td>
<td>0.1 km/h</td>
</tr>
</tbody>
</table>
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