CATALOGUE

Neurosoft

neurosoft.com

MEDICAL EQUIPMENT FOR ELECTRODIAGNOSTICS, NEUROPHYSIOLOGY, AUDIOLOGY AND REHABILITATION

NEUROSOF

neurosoft.com

DEAR COLLEAGUES!

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 distributers and provide total support and service including lifetime update of the software.

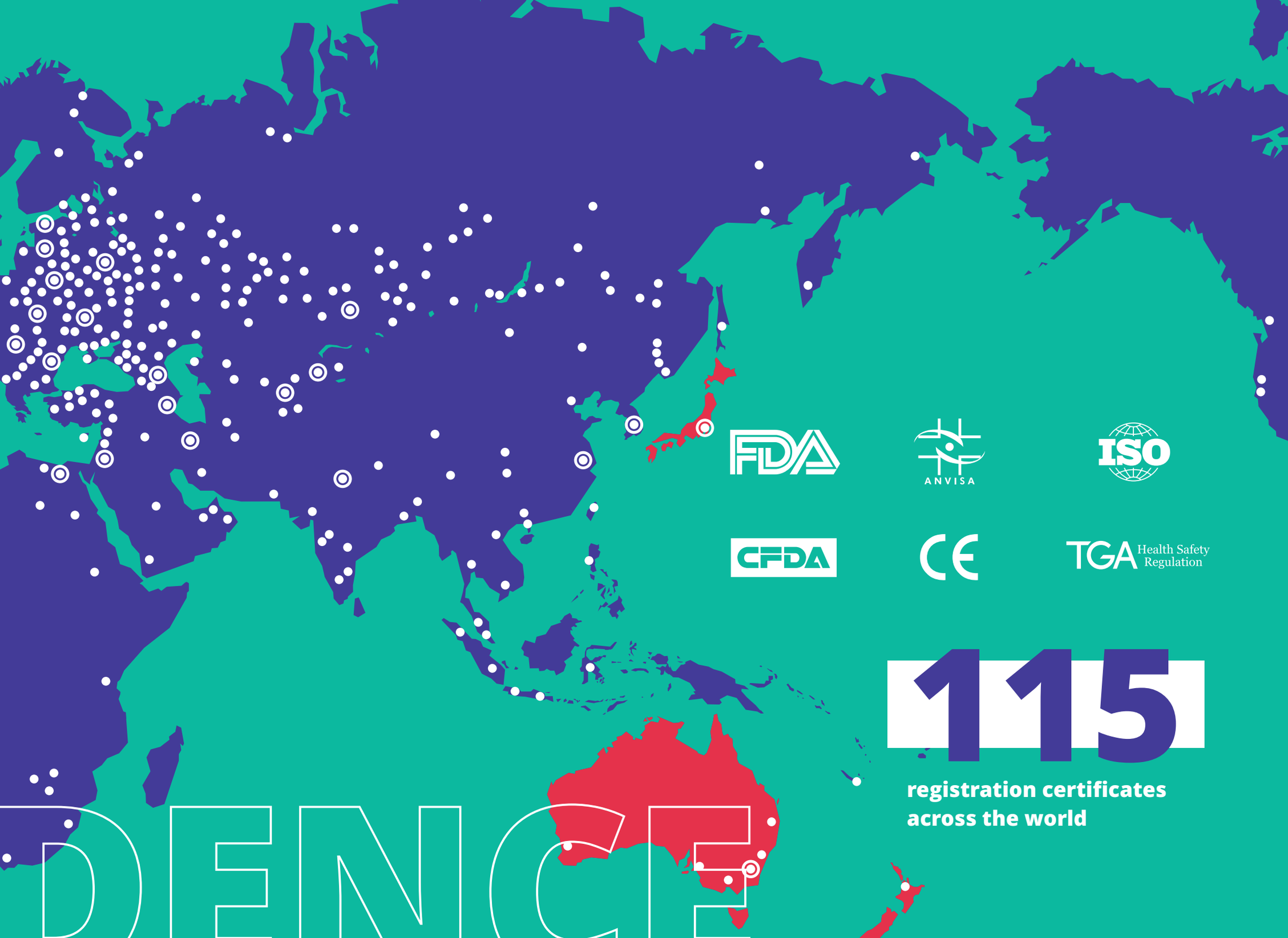
Our quality management system is certified in compliance with ISO 13485 requirements and our devices are approved for sale in Canada, EU, the USA, South Korea, Brazil, China, Japan, Australia, and many other countries. Before leaving our factory all devices are checked and calibrated and all the units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


EXPANDING
WORLDWIDE
Our distributors
Our devices
New markets
1900
installed magnetic stimulators
6000
installed EMG machines
9000
installed EEG machines
CONEI


FDA
ANVISA
ISO
CFDA
CE
TGA Health Safety Regulation
115
registration certificates
across the world
DENCE

DEVELOPMENT

INNOV

270 employees

60% are engineers

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.

ATION

PRODUCTION

2017

new automated PCB assembly line (SMT) was launched

PROG

2018

UV printing 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.

RESS

RESEARCH

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.

Lomonosov Moscow State University

Monash Alfred Psychiatry Research Centre

The St. Petersburg Bekhterev Psychoneurological Research Institute

Pirogov Russian National Research Medical University

National Aviation Academy of Azerbaijan Republic

The Chinese University of Hong Kong

Austrian Institute of Technology

All India Institute of Medical Sciences

Erasmus University Rotterdam

Institute of Human Brain

University of São Paulo

I.M. Sechenov First Moscow State Medical University

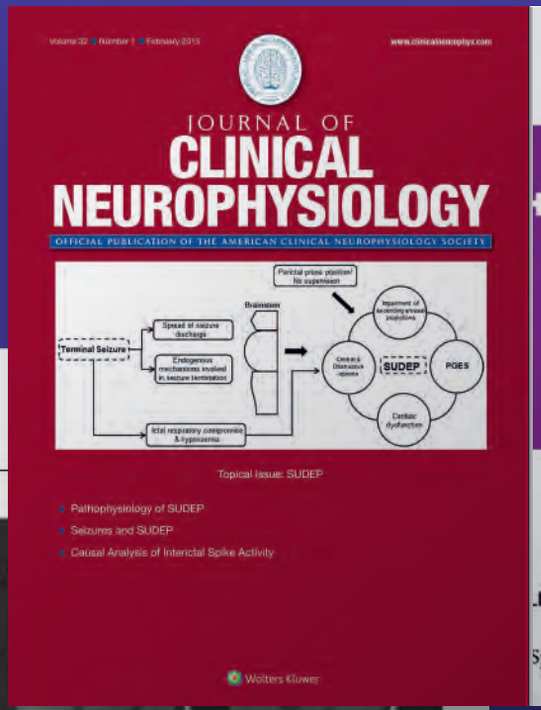
Polenov Neurosurgical Institute

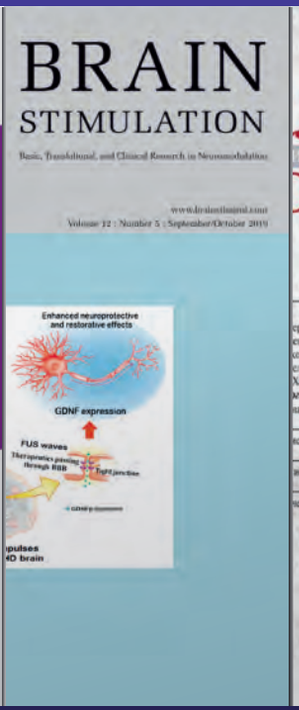
Sklifosovsky Research Institute of Emergency Medicine

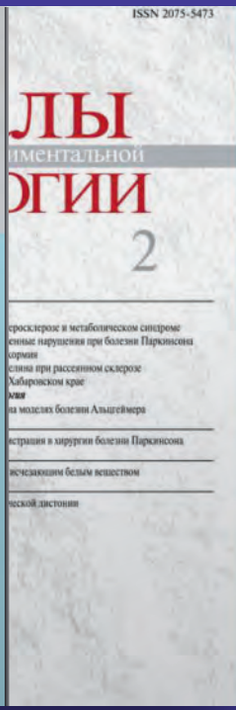
SCIE

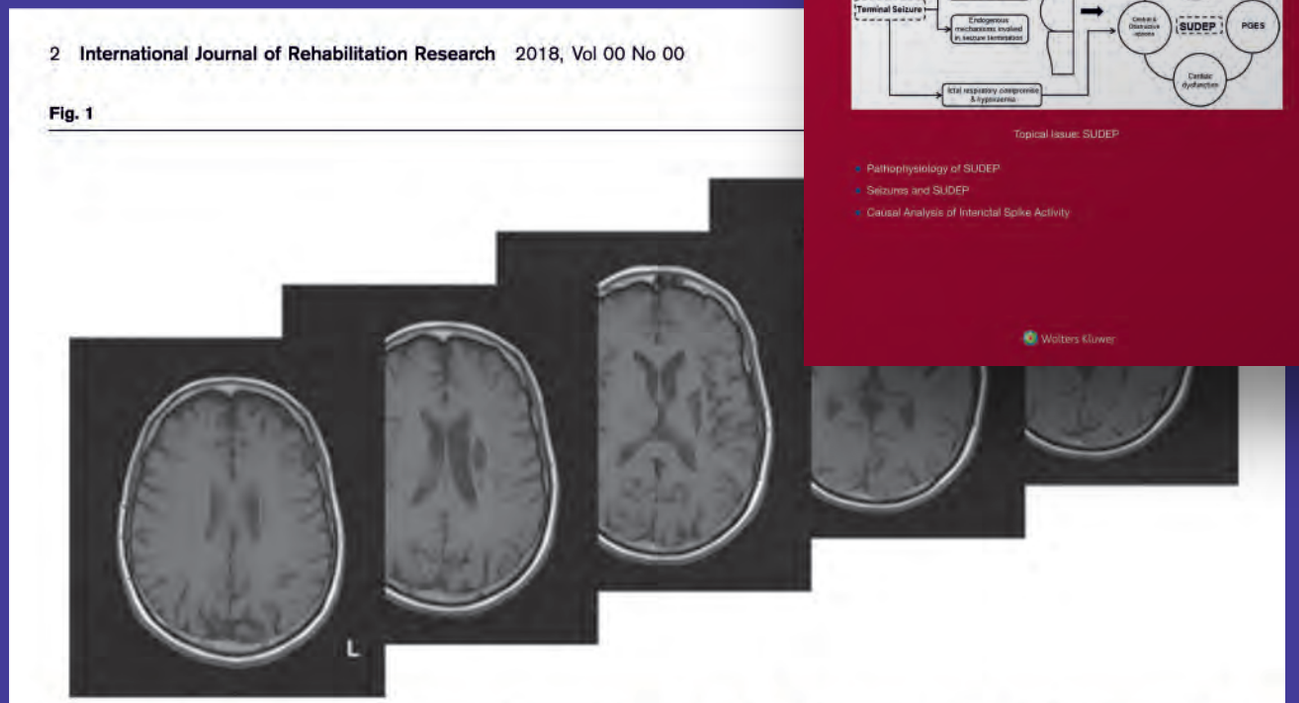
100

more than 100 scientific publications









2 International Journal of Rehabilitation Research 2018, Vol 00 No 00

Fig. 1

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.

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. Supraliminal 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 from the first dorsal interosseous in the left hand could be localized.

underwent a brief neuropsychological re-evaluation by a trained neuropsychologist (April 2017, T2). Her language was fluent, but affected by frequent anomies 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).

To exclude a nonspecific effect of the stimulation, the

CUSTOMER-FOCUSED SUPPORT

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!

CONTENTS





ELECTROENCEPHALOGRAPHY
> 25-YEAR EXPERIENCE

EEG

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

NEURON-SPECTRUM-AM
AMBULATORY WIRELESS
EEG/PSG RECORDER

2013
NEUROMONITOR
CEREBRAL FUNCTION
MONITOR

2015
FDA APPROVAL

INTEGRATION OF
BRAINTRONICS
128-CHANNEL
EEG SYSTEM

2016
PERSYST, HOLBERG
SCORE, AIT, LORETA
SOFTWARE SUPPORT

2017
IP-CAMERA
SUPPORT

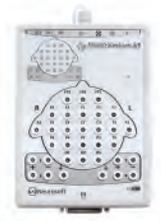
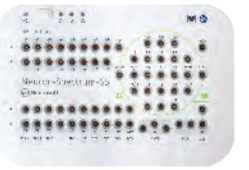
2019
NEURON-SPECTRUM-61..65
NEW LINE OF EEG SYSTEMS

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.

IMPEDANCE INDICATION ON FRONT PANEL

	NEURON-SPECTRUM-1/2/3/4/4P	NEURON-SPECTRUM-4/EPM	NEURON-SPECTRUM-AM	NEURON-SPECTRUM-5	NEURON-SPECTRUM-61/62/63/64/65
					
EEG channels	8/16/19/21	21	21	32	11/19/21/25/39
Extra channels: EMG, ECG, EOG, etc.	1–4	8	9	8	4/4/6/6/8
Included techniques	EEG	EEG, EP, LEP	EEG	EEG	EEG
Options	Video EEG, LEP, PSG, CFM (aEEG), BFB	Video EEG, PSG, EMG, CFM (aEEG), BFB	Video EEG, PSG, CFM (aEEG), BFB	Video EEG, EP, LEP, PSG, EMG, CFM (aEEG), BFB	Video EEG, LEP, PSG, CFM (aEEG), BFB, TMS-EEG
Electrode cap connector	+	+	+	+	+
Interface	Wire: USB, LAN	Wire: USB, LAN	Wireless: Wi-Fi, SD card	Wire: USB, LAN	Wire: USB, LAN

PREMIUM SIGNAL QUALITY

IMPEDANCE INDICATION AT THE INPUTS

CONTINUOUS IMPEDANCE MONITORING

NEURON-SPECTRUM-61..65

A NEW LINE OF EEG SYSTEMS

- Continuous impedance monitoring during acquisition
- Electrode impedance indication at the lead inputs
- Referential and differential channels can work both in AC and DC modes
- Mode button and LED mode indicator (impedance/monitoring/acquisition) on the front panel
- Compatible with Neurosoft magnetic stimulators

NEW

IMPEDANCE/MONITORING/ACQUISITION MODE BUTTON

DIFFERENTIAL CHANNELS FOR ANY PHYSIOLOGICAL SIGNAL TYPE ACQUISITION

ELECTRODE CAP CONNECTOR

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.

SOLUTIONS

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

NEURON-SPECTRUM-63

- 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

NEURON-SPECTRUM-64

- 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

NEUROMONITOR

- Up to 11 EEG channels and 4 polygraphic channels for EOG, 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

NEURON-SPECTRUM-61/BFB

- Multi-channel data recording (EEG, ECG, EMG, respiration, SpO_2, photoplethysmograms, etc.)
- Audio and visual feedback (animation, photo, music, games, video)
- Continuous training success tracking

POLYSOMNOGRAPHY

NEURON-SPECTRUM-65

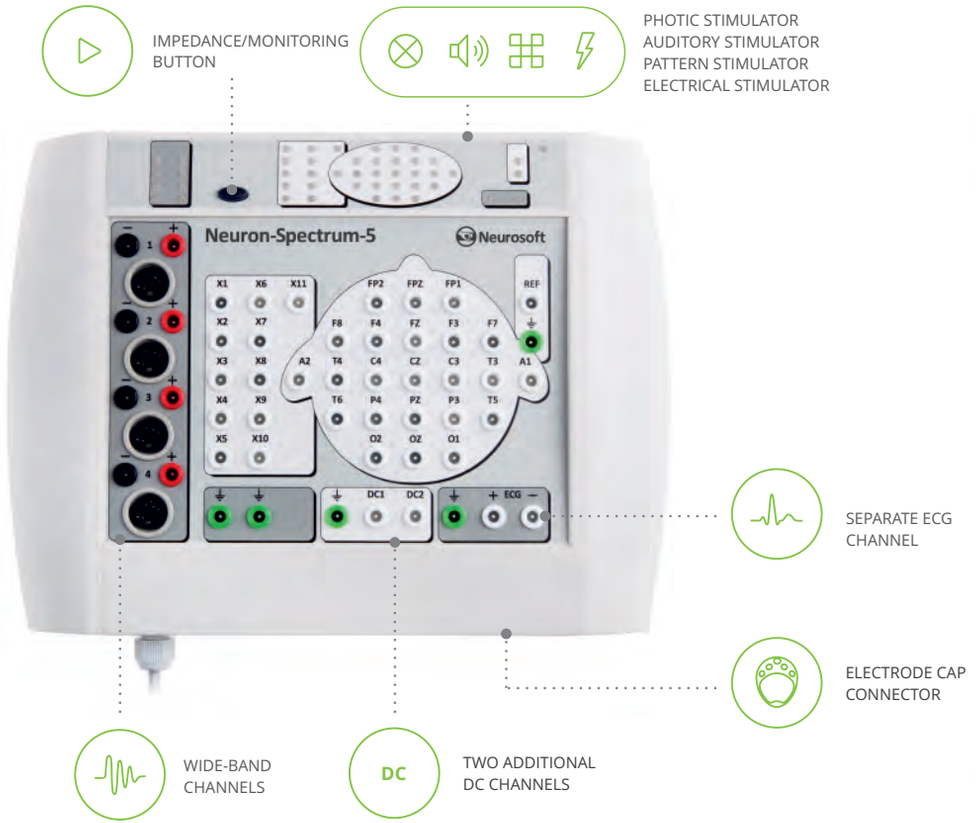
- Full range of PSG channels in compliance with AASM* recommendations
- Portable patient unit for quick connection/disconnection
- Synchronous video monitoring
- Manual, semi-automatic and automatic sleep staging and PSG event detection

* 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



CONTINUOUS IMPEDANCE MONITORING

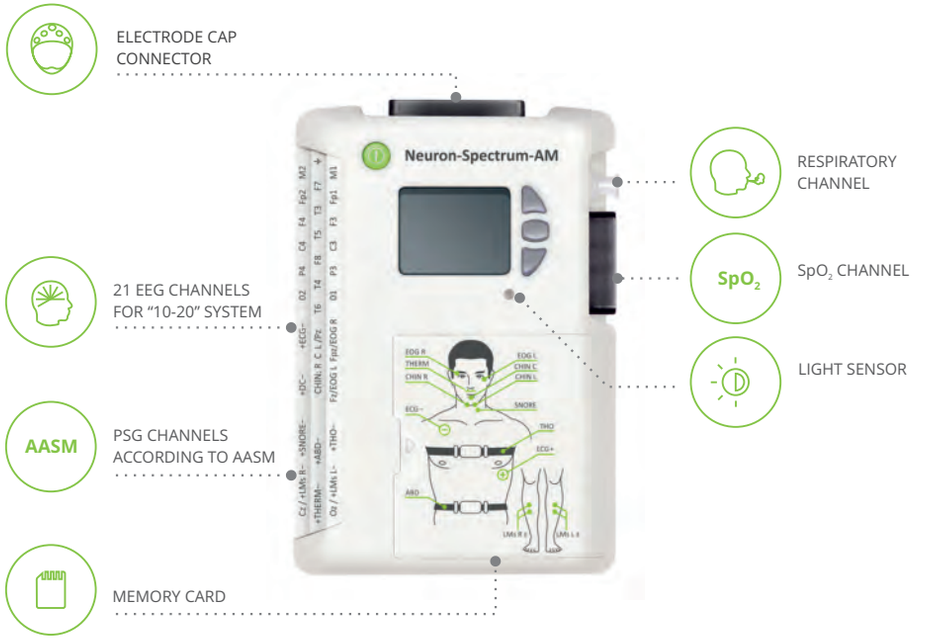
WI-FI COMMUNICATION

HANDHELD

NEURON-SPECTRUM-AM

AMBULATORY WIRELESS EEG/PSG RECORDER

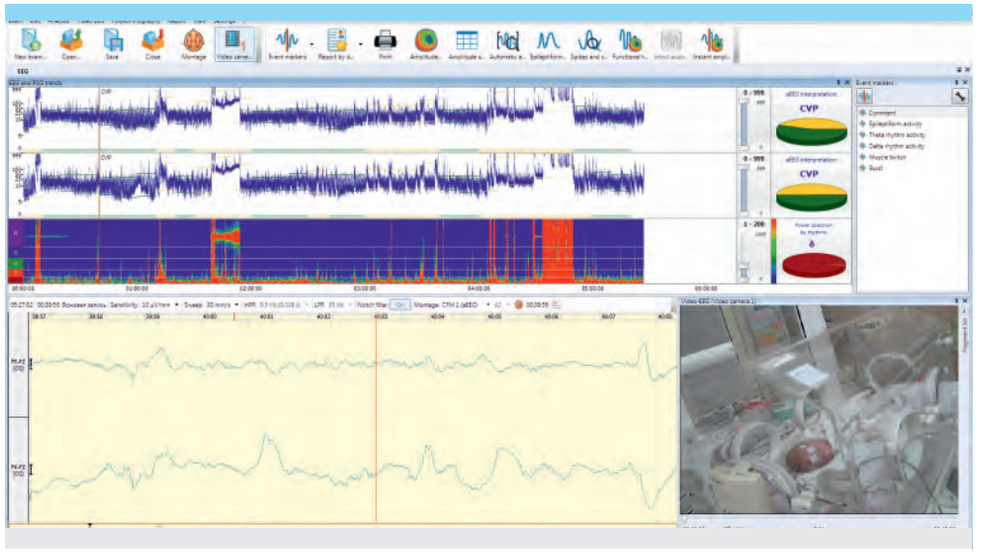
- User-friendly design, portability and a new level of patient's comfort in examination rooms, epilepsy and sleep centers, hospital rooms
- All-in-one: digital EEG system, EEG recorder, PSG system
- Saving of all recorded EEG data to SD memory card with simultaneous data transfer via Wi-Fi allows a patient 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



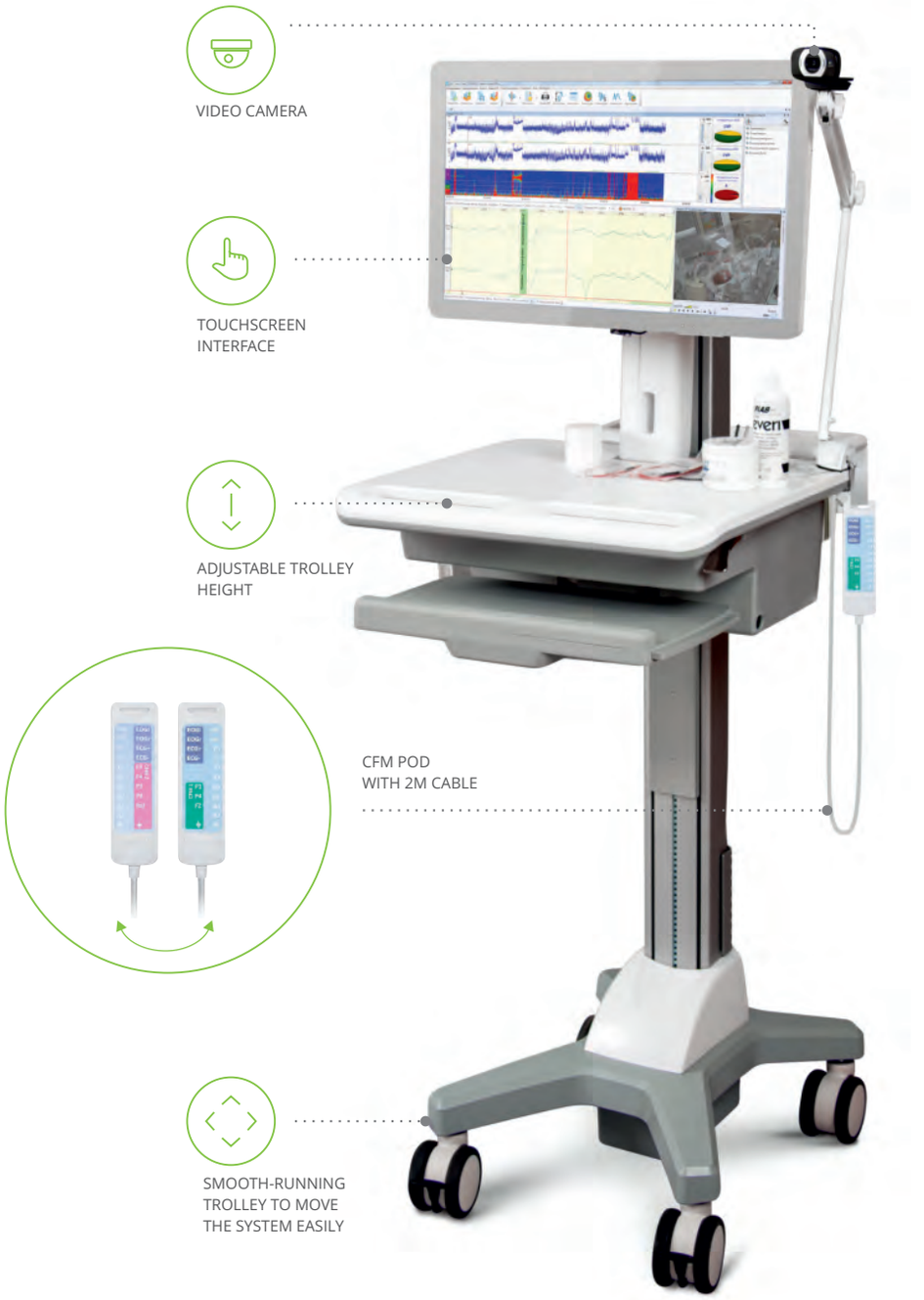
NEUROMONITOR

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.

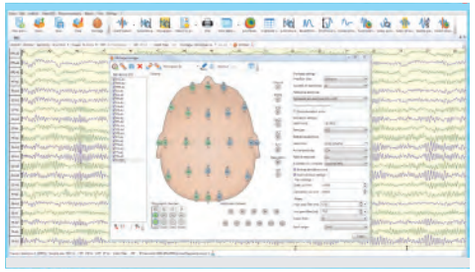


QUICK MONTAGE SWITCHING

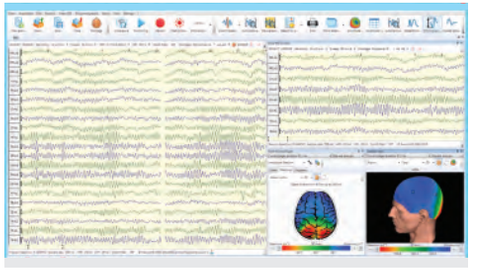
BRAIN MAPPING

DUAL-MONITOR MODE

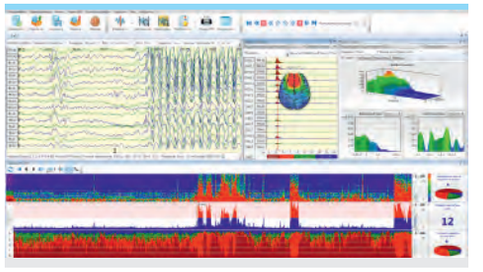
NEURON-SPECTRUM.NET SOFTWARE FEATURES



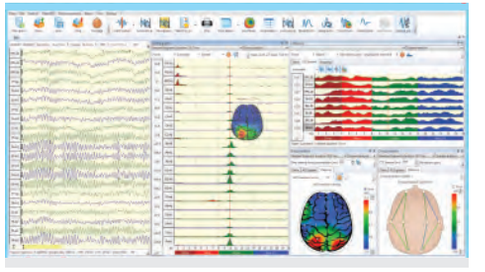
Creation and editing of EEG montages



EEG acquisition, reviewing, and analysis

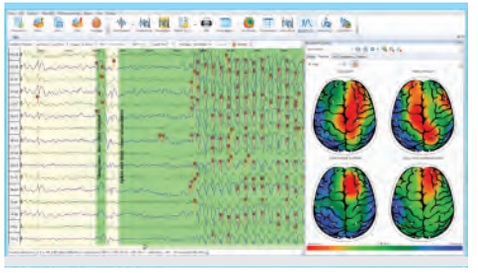


Trends of EEG parameters



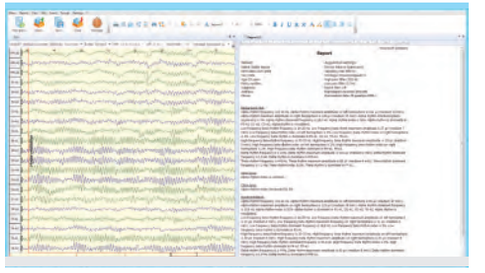
Graphs of EEG spectral and coherent analysis results

Brain mapping and bar charts of EEG analysis results



Automatic detection of spikes and sharp waves

Working with LORETA and sLORETA



Automatically generated report

NEURON-SPECTRUM-VIDEO

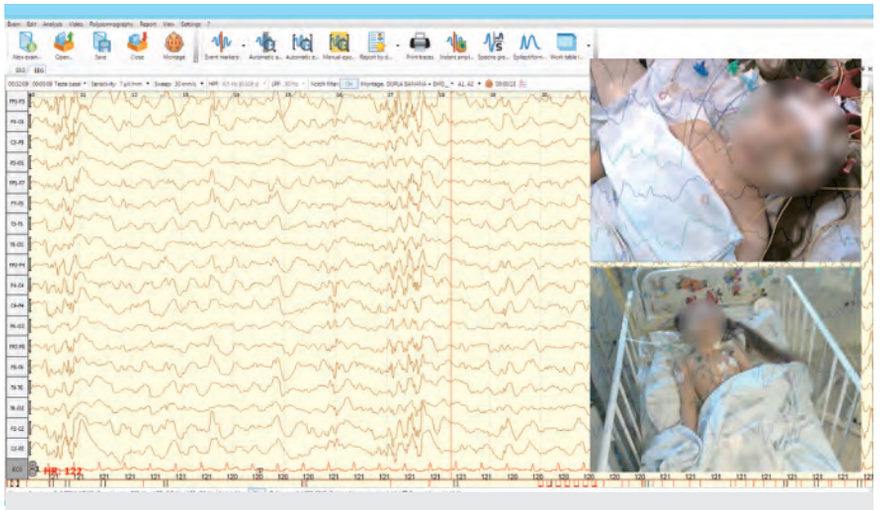
LONG-TERM VIDEO EEG MONITORING SYSTEM

- 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

1 FRAME SYNCHRONIZATION ACCURACY

EXPORT TO REMOVABLE MEDIA

NETWORK CAMERA SUPPORT



Synchronous EEG and 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

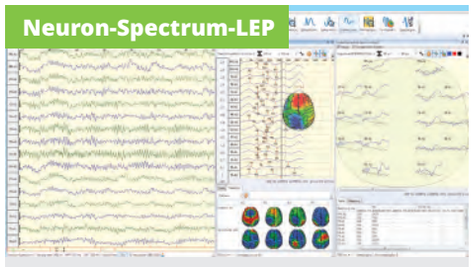
EEG TRENDS AND VIDEO

OPTIONS

15 OPTIONS

EVOKED POTENTIALS

Neuron-Spectrum-LEP

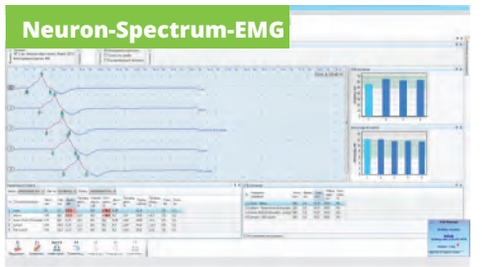


Software and equipment to study long-latency EP using multi-channel montage with brain mapping

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

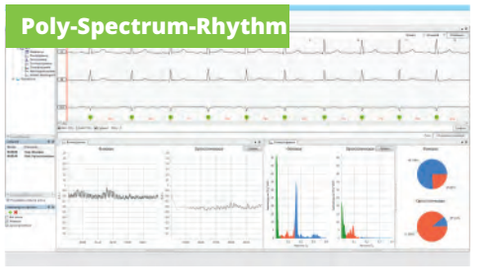
Neuron-Spectrum-ERG

Software and equipment for electroretinography

Neuron-Spectrum-BFB

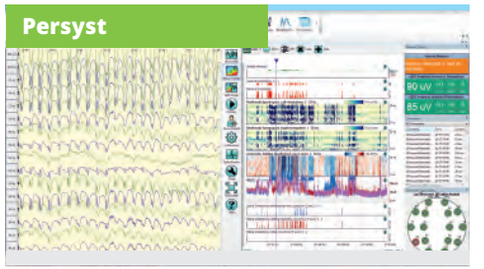
Software for biofeedback therapy

Poly-Spectrum-Rhythm



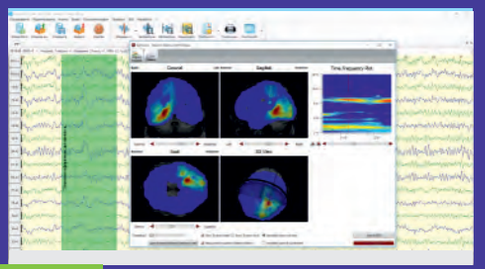
Heart rate variability analysis equipment and software

Persyst



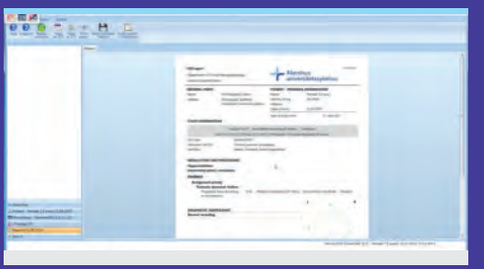
Integration with Persyst* quantitative EEG system

* 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-4/P
FIRST CLINICAL PSG SYSTEM
(TYPE I ACCORDING TO AASM*)

2012

NEURON-SPECTRUM-AM/PSG
FIRST AMBULATORY PORTABLE
PSG RECORDER (TYPE I OR II SLEEP
MONITOR ACCORDING TO AASM)

2016

TURKEY: OVER 100 SLEEP
UNITS EQUIPPED WITH
NEUROSOFT PSG SYSTEMS

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)

PSG

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

POLYSOMNOGRAPHY SYSTEMS

DIGITAL SYSTEMS FOR PSG AND CRM STUDIES

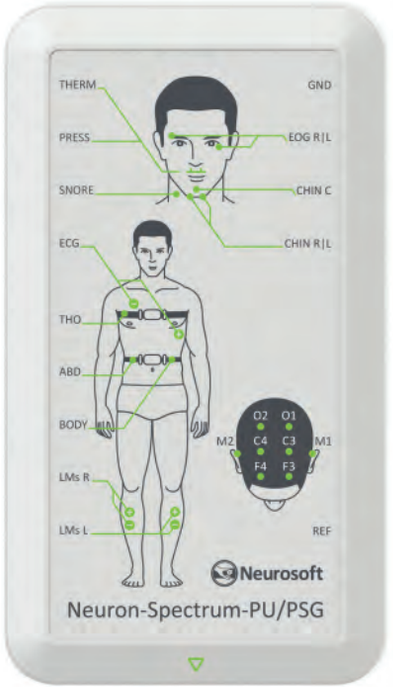
COMPLIANT WITH AASM RECOMMENDATIONS

	NEURON-SPECTRUM-65/PSG	NEURON-SPECTRUM-AM/PSG	NEURON-SPECTRUM-AM/CRM
			
Type	Clinical PSG system (Type I sleep monitor)	Clinical PSG system and ambulatory portable PSG recorder (Type I or II sleep monitor)	Cardiorespiratory monitor (Type III sleep monitor)
PSG channels	Full range of PSG channels in compliance with AASM recommendations	Full range of PSG channels in compliance with AASM recommendations	ECG, respiration, chest and abdominal movements, snoring, SpO_2
Expandable for multi-channel EEG	+	+	+
Video monitoring	+	+	+

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



PATIENT UNIT

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-AM/PSG

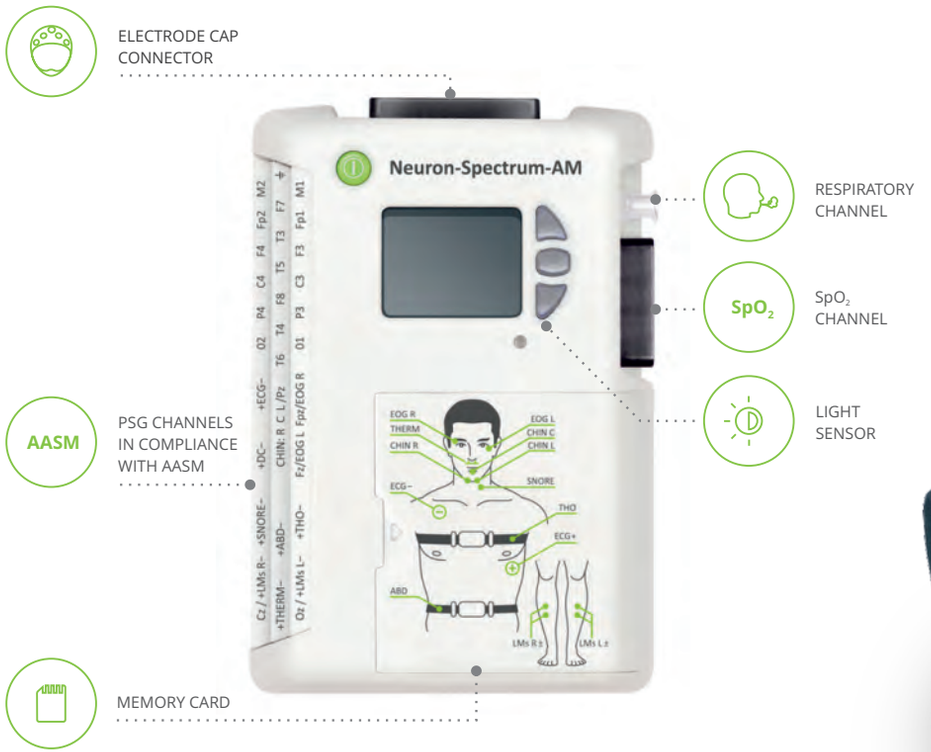
CLINICAL PSG SYSTEM AND AMBULATORY PORTABLE PSG RECORDER
(TYPE I OR II SLEEP MONITOR)

DELAYED START

EXAM BACKUP

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

CARDIORESPIRATORY MONITOR (TYPE III SLEEP MONITOR)

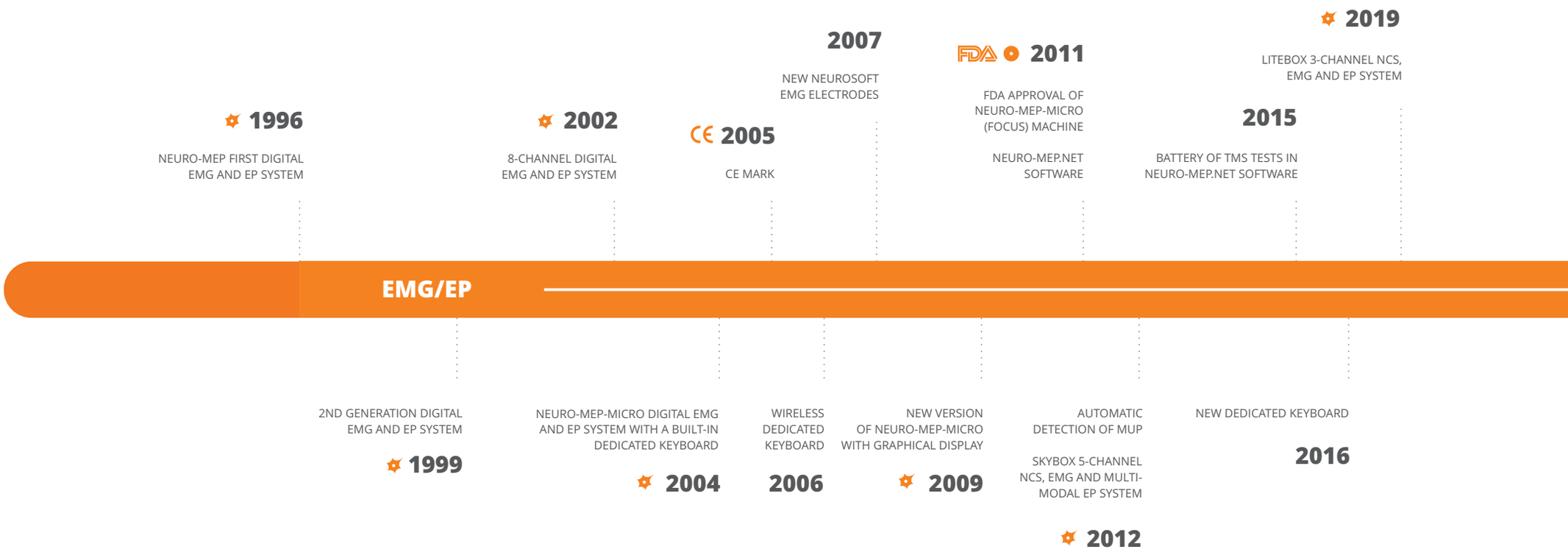
Neuron-Spectrum-AM/CRM is specially designed for cardiorespiratory monitoring at night and allows detecting and analyzing respiratory events (apnea and hypopnea), heart rate and blood oxygen saturation during sleep. The electronic unit also features built-in body position sensors and a light sensor.

- Expandable to a stand-alone PSG recorder (Type I or II sleep monitor)
- Detection and analysis of respiratory events, heart rate, SpO_2, 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



4 MINUTES PER ONE NERVE STUDY

NEURO-MEP

EMG, NCS AND EP SYSTEMS

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.

	NEURO-MEP-8	NEURO-MEP-4	SKYBOX	NEURO-MEP-MICRO	LITEBOX
					
EMG/EP channels	8	4	5	2	3
Electrical stimulation channels	1–2	1–2	2	1	1
Included techniques	EMG, EP	EMG, EP	EMG, EP	EMG	EMG
Design	Modular architecture: all units conveniently arranged at workplace are connected via USB and make optimal configuration of your own		All-in-one: connection to PC and power supply via USB cable		

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

HANDHELD

NEXT LEVEL OF ARTIFACT REDUCTION

EP ACQUISITION*

AUDITORY STIMULATOR
VISUAL STIMULATOR
PATTERN STIMULATOR

ELECTRICAL STIMULATOR WITH TWO SWITCHABLE OUTPUTS

NEW

3 ACQUISITION CHANNELS

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!

* if additional Neuro-EP software module is available

LESS THAN 1 KG WEIGHT

POWERED BY NOTEBOOK

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

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

WIRELESS DEDICATED KEYBOARD DK-02

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.

HANDHELD

POWERED BY NOTEBOOK

EP ACQUISITION*

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

67 TECHNIQUES INCLUDED

4 MIN PER ONE NERVE STUDY

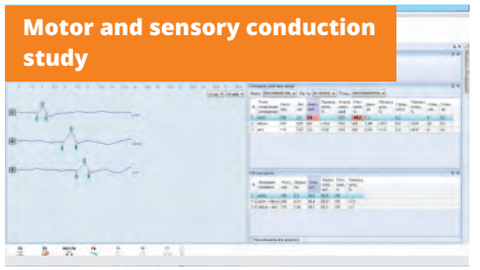
IMAGES FROM ANY MEDIA CAN BE ADDED TO THE REPORT

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)***

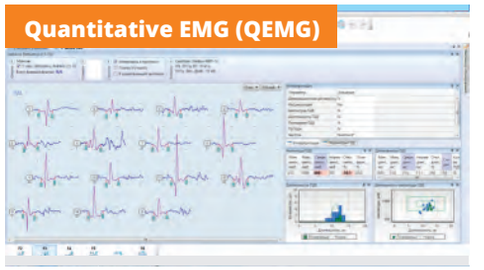
* if tendon hammer for T-reflex recording is available
** if magnetic stimulator is available
*** if corresponding equipment is available

Motor and sensory conduction study



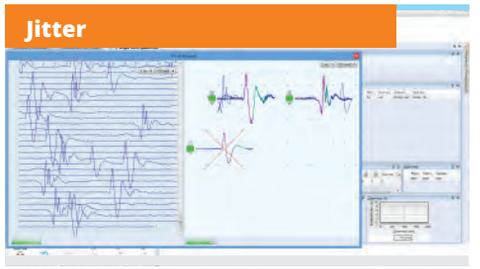
Simultaneous acquisition of motor and sensory responses from one stimulus

Quantitative EMG (QEMG)



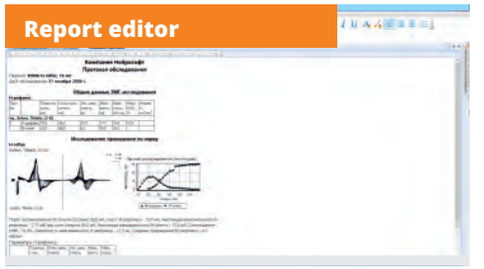
Acquisition and analysis of spontaneous EMG activity, interference pattern and MUP in one window. Automatic classification of activity phenomena during spontaneous activity analysis

Jitter



Neuro-MEP.NET provides the breakthrough algorithm of automatic jitter detection. Now there is no need to think about a trigger. The program just detects the potentials itself and shows them on the screen

Report editor



Exam results can be presented in a report generated automatically. Report is edited easily and customized according to individual demands

OPTIONS

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.

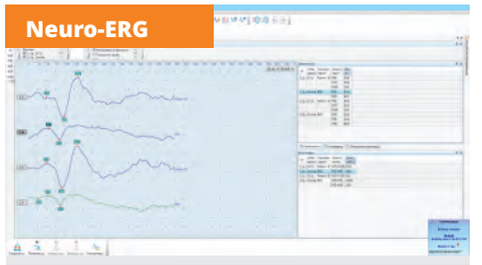
Neuro-EP

Software and equipment for visual, auditory, somatosensory and cognitive (P300, MMN, CNV, MRCP, P50, N400) EP study

Neuro-Audio

Software and equipment for auditory evoked potential and transient evoked otoacoustic emission study

Neuro-ERG

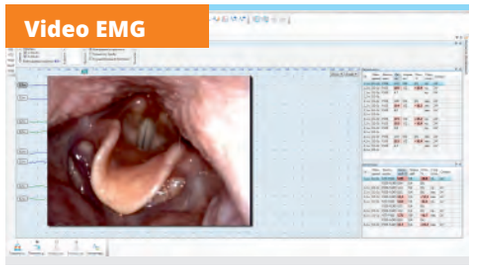


Software and equipment for electroretinography study

Neuro-MS

Diagnostic monophasic transcranial magnetic stimulator

Video EMG



Synchronous EMG recording and reviewing together with video image including those obtained from laryngoscope and other endoscopes

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

>24-HOUR OPERATION

HANDHELD

EMG/EP LOUDSPEAKER
FOR EMG PLAYBACK

INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING

> 15-YEAR EXPERIENCE

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 NEUROPHISIOLOGICAL MONITORING (EXPANDABLE TO 64-CHANNEL SYSTEM)

IONM

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

2002

NEURO-IOM.NET SOFTWARE (DEVELOPMENT)

2013

CE MARK

CE **2016**

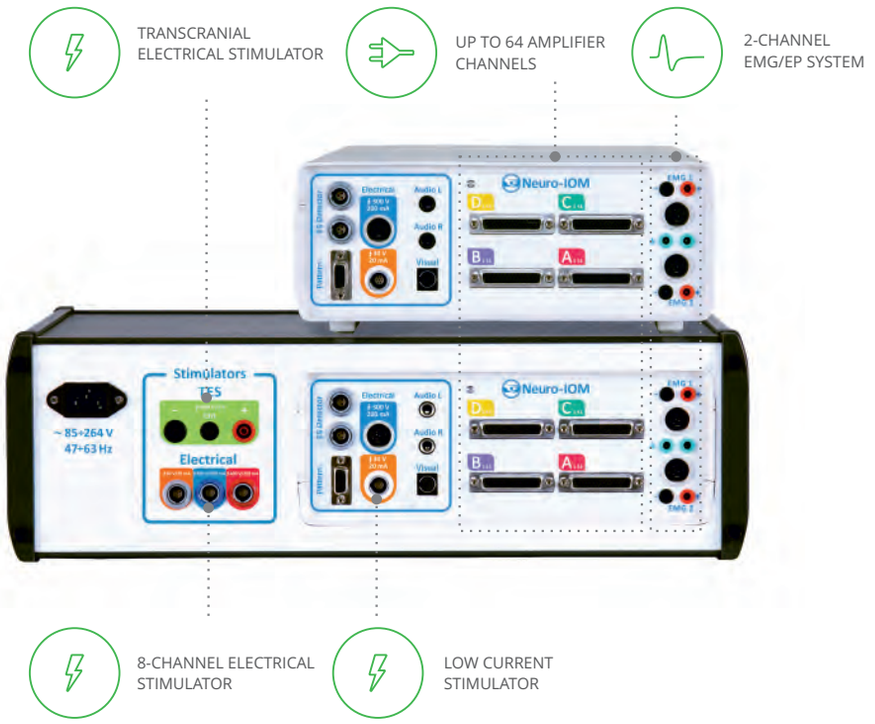
STIMULATION PROBE WITH CONTROLS FOR DIRECT NERVE STIMULATION

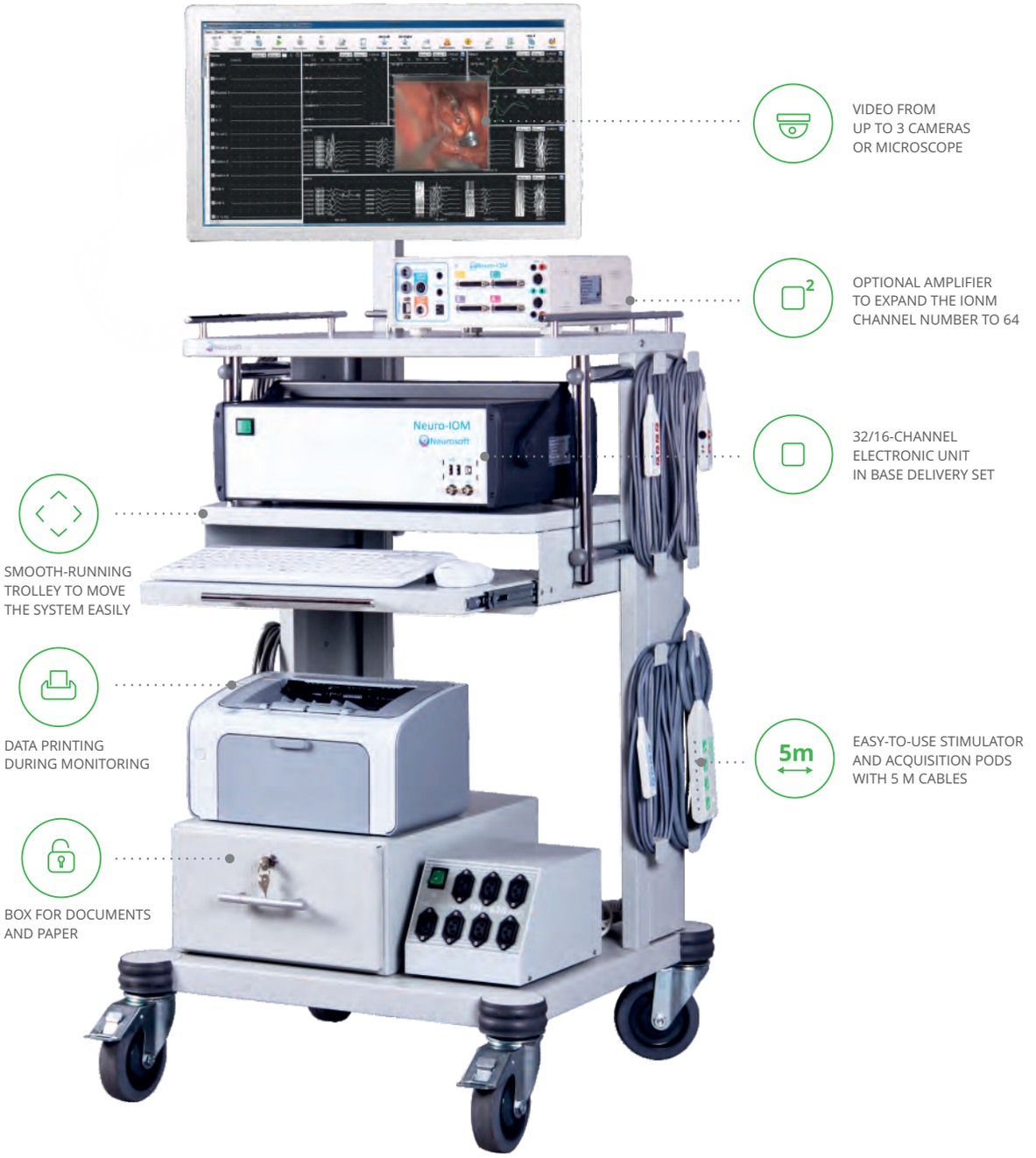
2018

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





150

OVER 150 SYSTEMS WORLDWIDE

USB CONNECTION

DEDICATED CHANNELS FOR AUDITORY, VISUAL AND PATTERN STIMULATION

NEURO-IOM (V. 2) CONFIGURATIONS

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

	64/B	32/B	32/S	16/S
				
IONM channels	64	32	32	16
Dedicated channels for routine EMG, NCS and EP	4	2	2	2
Electrical stimulator channels	16	12	4	4
Low current stimulator channels	3	2	1	1
Transcranial electrical stimulator channels	4	4	–	–
ES detector channels	4	2	2	2

NEURO-TES

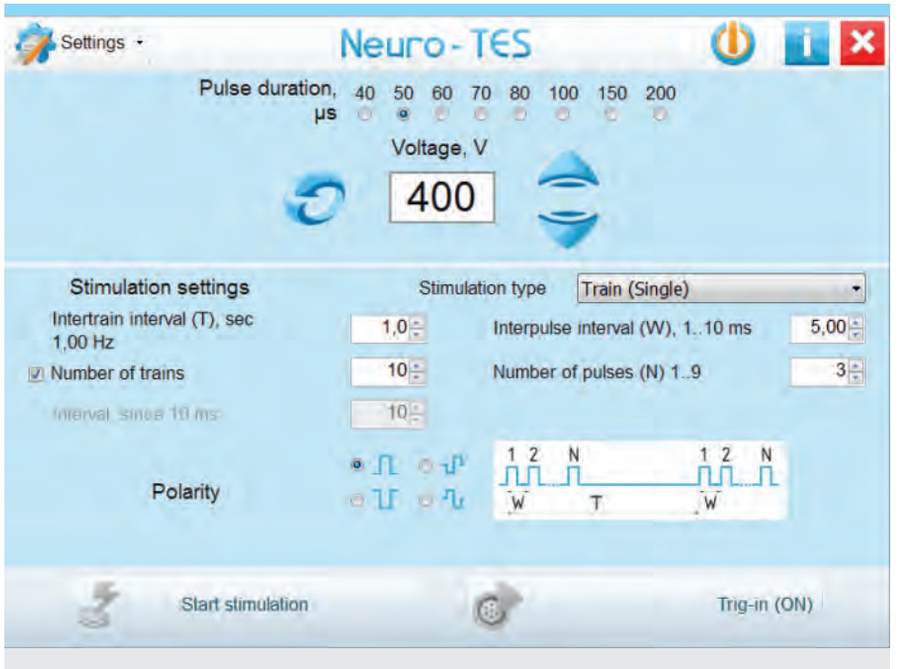
TRANSCRANIAL ELECTRICAL STIMULATOR

- 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

POWERED VIA USB

4

4-CHANNEL ELECTRONIC SWITCH



NEURO-TES software

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

TMS

1997
NEURO-MS
FIRST RUSSIAN
MAGNETIC STIMULATOR

2003
MAGNETIC STIMULATOR
WITH EXTERNAL CONTROL UNIT

2006
CE MARK

MAGNETIC STIMULATOR WITH
BUILT-IN CONTROL UNIT

2008
NEURO-MS/D MAGNETIC
STIMULATOR WITH COOLING
AND EXTENSION UNITS

NEURO-MS SOFTWARE

2009
PLACEBO COIL

2010
NEURO-MS/D MAGNETIC
STIMULATOR WITH EXTRA
POWER SUPPLY UNIT

2011
NEURO-MS.NET SOFTWARE

2012
"TRANSCRANIAL MAGNETIC
STIMULATION" HANDBOOK
BY MOACYR ALEXANDRO ROSA
AND MARINA ODEBRECHT ROSA

2014
DOUBLE CONE COIL

INTEGRATION WITH
NEURAL NAVIGATOR SYSTEM

2015
NEURO-MS MONOPHASIC
MAGNETIC STIMULATOR

2016
FDA APPROVAL OF
CLOUDTMS (NEURO-MS/D)

APPLICATION OF TRIPLE
MONOPHASIC STIMULATION
IN UTRECHT UNIVERSITY

2017
COOLED COIL
FOR SMALL ANIMALS

2019
NEURO-MSX NEW
MAGNETIC STIMULATOR

THERAPEUTIC

TRANSCRANIAL MAGNETIC STIMULATORS

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

NEURO-MSX

	THERAPEUTIC	ADVANCED THERAPEUTIC	THERAPEUTIC	ADVANCED THERAPEUTIC
				
Number of supported coils	10	10	18	18
Stimulation frequency at maximal intensity, Hz	5	20	15	35
Coil cooling	+	+	+	+
Maximal stimulation frequency, Hz	30	100	100	100 (2 kHz for burst mode)
Theta burst stimulation (TBS)	–	+	+	+
Stimulation modes	repetitive, train	repetitive, train, burst	repetitive, train, burst, ramp, sweep frequency	repetitive, train, burst, ramp, sweep frequency

DIAGNOSTIC

MONOPHASIC MAGNETIC STIMULATOR

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

	SINGLE-PULSE STIMULATION	PAIRED-PULSE STIMULATION	TRIPLE-PULSE STIMULATION*	QUADRI-PULSE STIMULATION*
				
Interstimulus interval, ms	–	10	10	10
Peak magnetic field, T	3.2	4.5	4.5	4.5
Stimulation frequency at maximal intensity, Hz	0.3	0.3	0.3	0.3
Diagnostic TMS (single-pulse stimulation)	MEP, MT, CMCT, SP, recruitment curve	MEP, MT, CMCT, SP, recruitment curve	MEP, MT, CMCT, SP, recruitment curve	MEP, MT, CMCT, SP, recruitment curve
Advanced diagnostic TMS (paired-pulse stimulation)	–	SICI, LICI, ICF, SICF, LICF, IHI	SICI, LICI, ICF, SICF, LICF, IHI, SICI/LICI, SICI/LICF, triple pulse test	SICI, LICI, ICF, SICF, LICF, IHI, SICI/LICI, SICI/LICF, triple pulse test, QPS
Integration with Neurosoft diagnostic systems	Neuro-MEP, Neuron-Spectrum	Neuro-MEP, Neuron-Spectrum	Neuro-MEP, Neuron-Spectrum	Neuro-MEP, Neuron-Spectrum

* 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

24/7
CONTINUOUS AND FLAWLESS OPERATION

100
UP TO 100 HZ STIMULATION

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.

OPERATION WITHOUT OVERHEATING

ANATOMICAL SHAPE

DEEP STIMULATION

COILS

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	DOUBLE CONE COIL	FIGURE-OF-EIGHT COIL	RING 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.	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.	Suitable for focused and precise stimulation of cortex, peripheral nerves and muscles.	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 coloproctology.
Coil winding diameter — 100 mm.	Coil winding diameter — 125 mm.	Coil winding diameter — 100 mm.	Coil winding diameter — 150 mm.

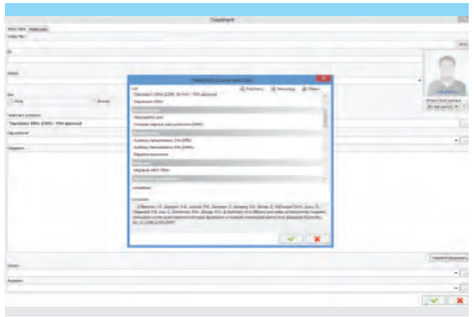
NEURO-MS.NET SOFTWARE FEATURES

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.

SEMI-AUTOMATIC AND AUTOMATIC MT DETERMINATION

OVER 30 PRE-DEFINED PROTOCOLS INCLUDED

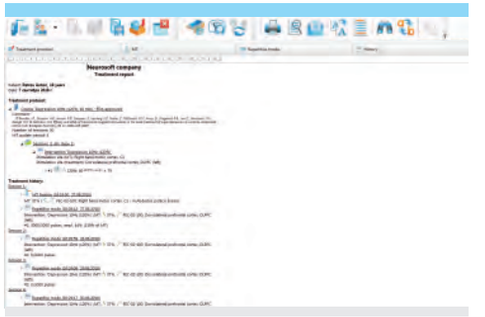
TOUCHSCREEN-ADAPTED



Treatment course selection

Semi-automatic motor threshold (MT) determination using patient button

Repetitive stimulation (treatment session)



Automatic report generation

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.

< 2 MM NAVIGATION ACCURACY

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

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.

COMFORTABLE TMS CHAIR

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

PATIENT CAP

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

NEURO-MSX

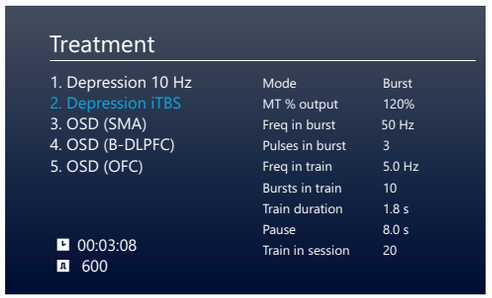
NEW MAGNETIC STIMULATOR

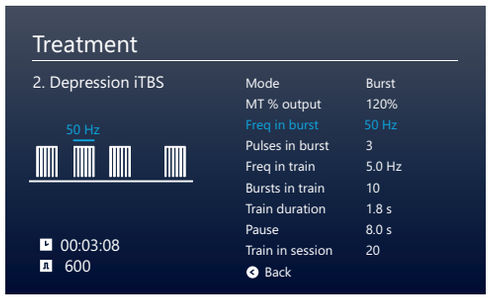
NEW

- 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!

CAN OPERATE WITHOUT PC

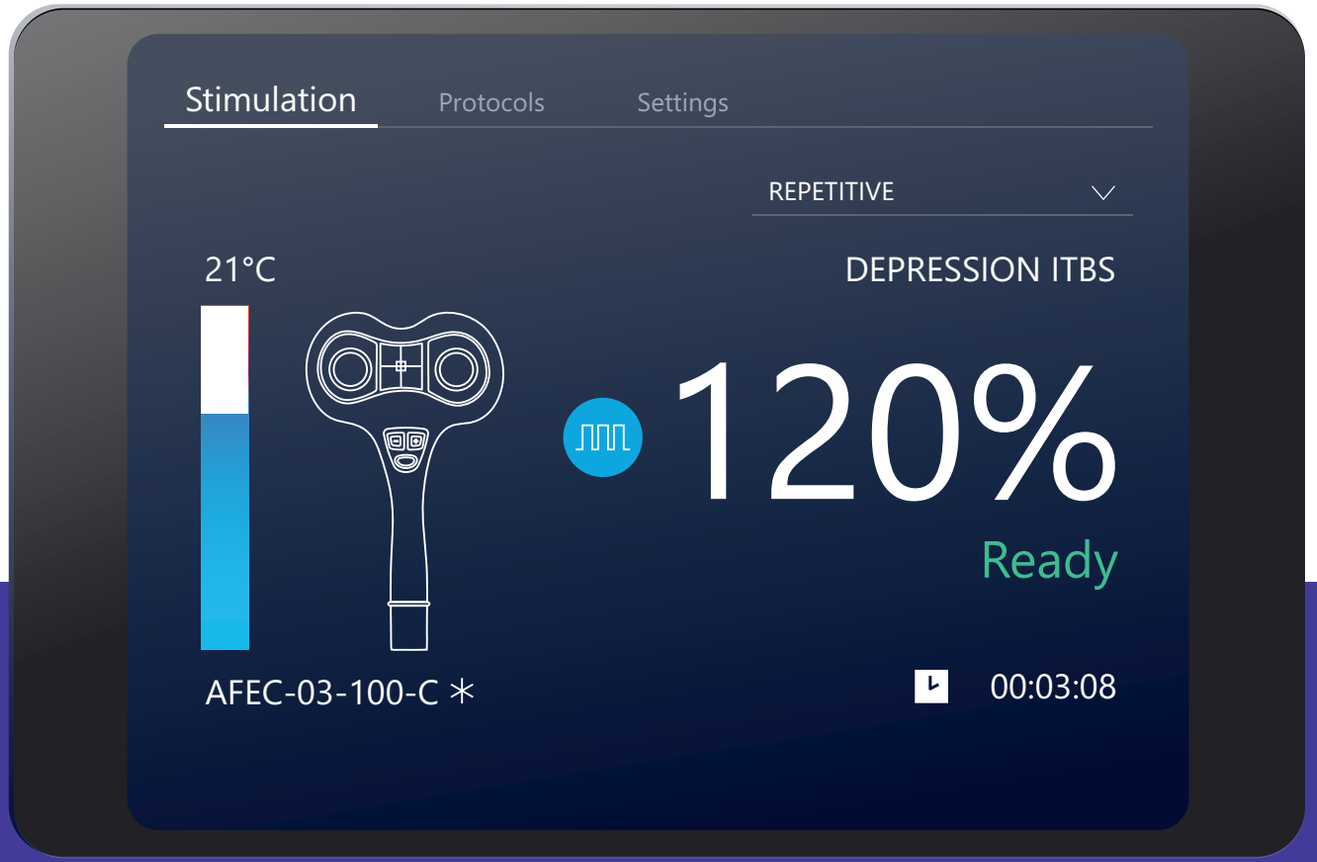
RAMP SWEEP

NEW TYPES OF PROTOCOLS

Wi Fi

WI-FI DATA TRANSFER

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

ELECTRICAL SILENCE

60% MORE POWERFUL STIMULUS

PAIRED STIMULATION USING 1 OR 2 COILS

APPLICATION

Electrodiagnostics, neurology, neurosurgery, and research

COOLED AND
NON-COOLED COILS

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

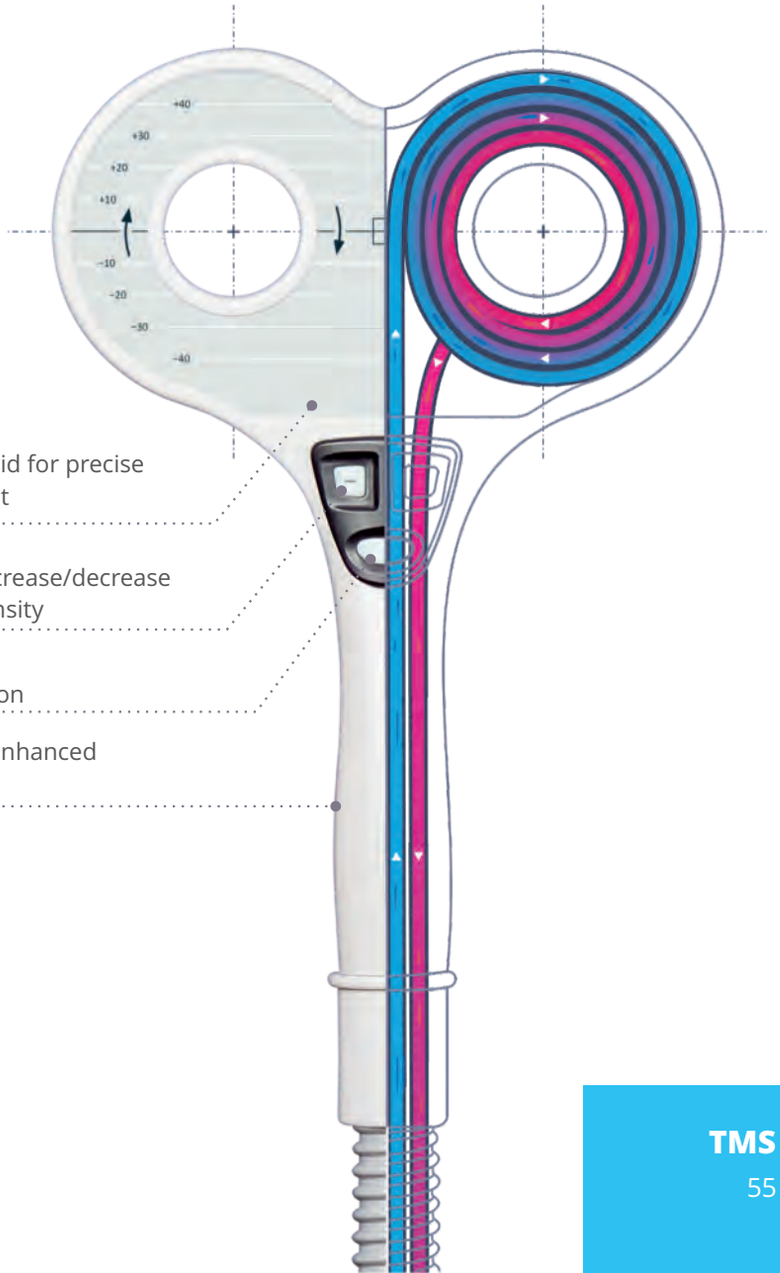
- cortical and peripheral nerve stimulation (cervical, lumbosacral nerve roots, pudendal nerve)
- stimulation of deep nerves

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



OPTIONS

NEURON-SPECTRUM-61..65

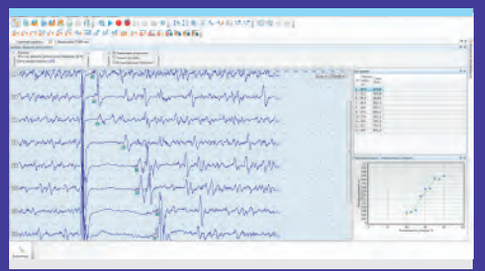
The new line of Neuron-Spectrum-61..65 EEG systems allows EEG recording during magnetic stimulation (combined TMS-EEG). This technique is used for post-stroke rehabilitation monitoring, as well as for different research purposes.

NEURO-MEP-MICRO

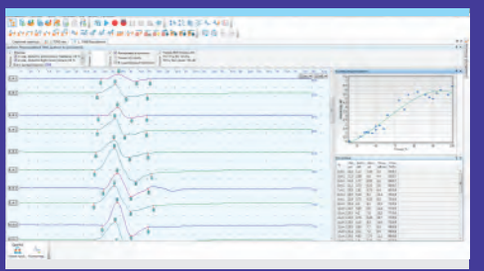
To work with TMS machines, Neurosoft offers 2-channel EMG system with high noise immune hardware ensuring perfect signal quality. The delivery set includes high-performance accessories and professional Neuro-MEP.NET software that is in perfect synch with the device and manages the stimulation parameters.

NEURO-MEP.NET SOFTWARE FEATURES

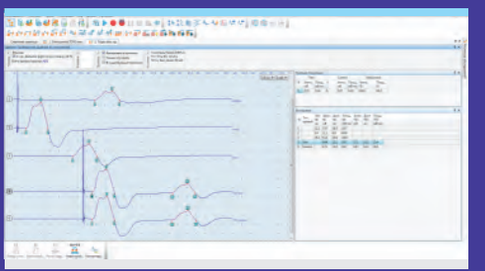
Neurosoft is the only company in the industry which produces both TMS machines and professional EMG/NCS systems. It means that integration between TMS and EMG can be done at a very deep level. Neuro-MEP.NET includes a battery of different TMS tests.



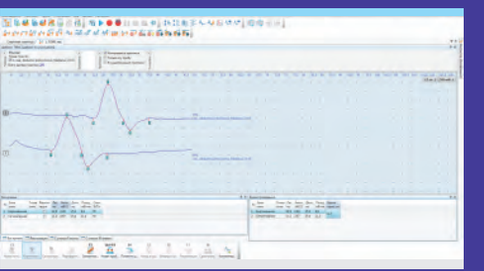
Silent period (SP)



Study of motor evoked potentials (recruitment curve)

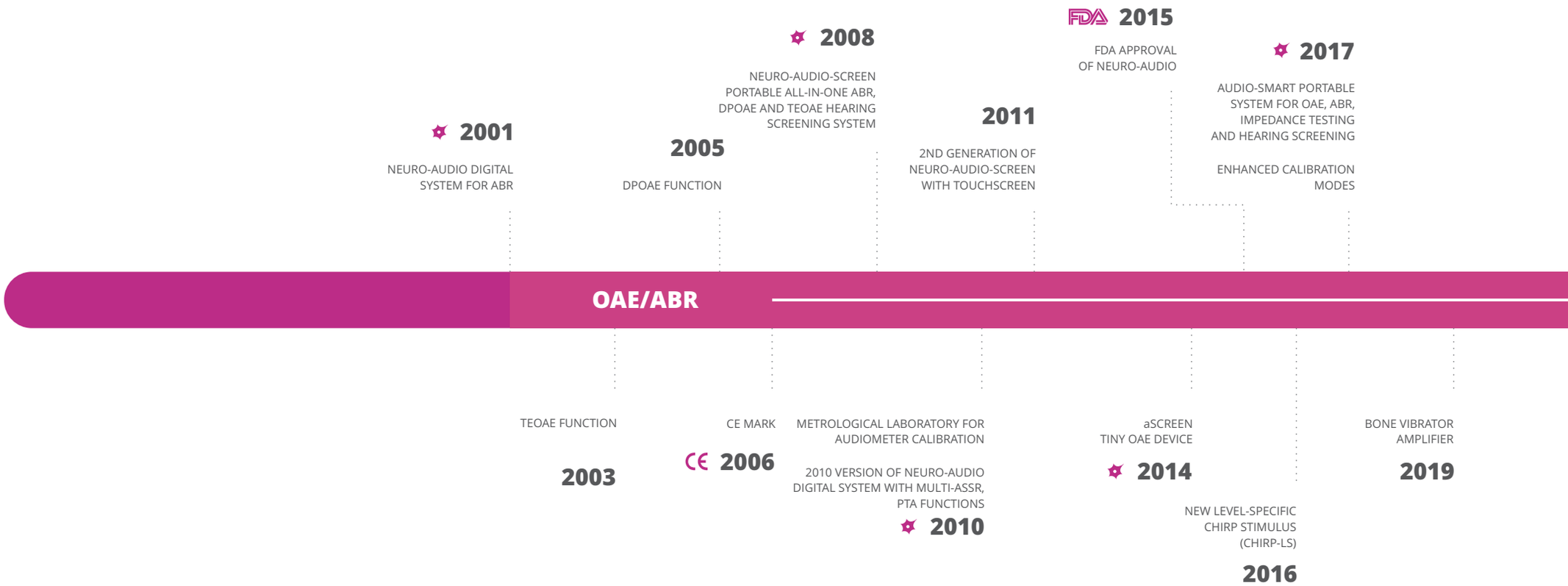


Tripple stimulation test (TST)



Study of central motor conduction time (CMCT)

AUDIOLOGY
> 15-YEAR EXPERIENCE



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

COMPACT

WIRELESS DATA TRANSFER

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

12
DPOAE STIMULUS UP TO 12 KHZ

ABR, AEP, OAE AND PTA IN ONE DEVICE

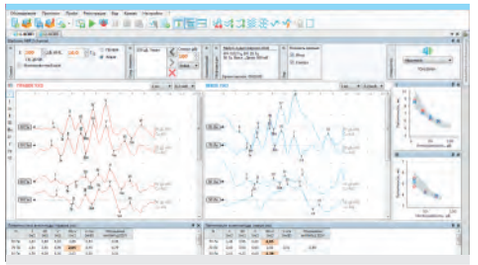
POWERED FROM NOTEBOOK

NEURO-AUDIO.NET SOFTWARE FEATURES

FAST NON-SEDATED ABR IN CHILDREN

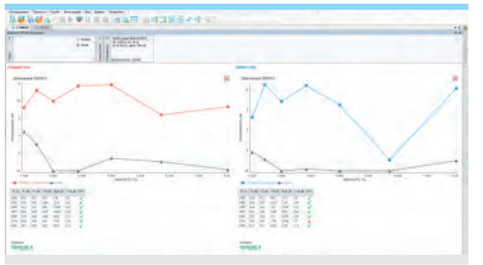
FOR CLINICS AND RESEARCH

CHIRP STIMULUS

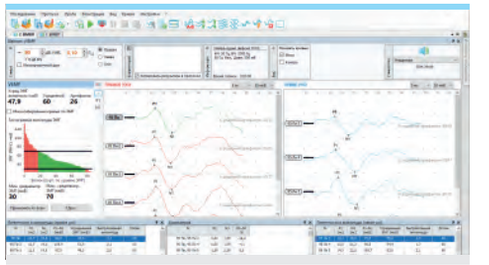


Auditory evoked potentials (ABR, MLR, LLR/CAEP)

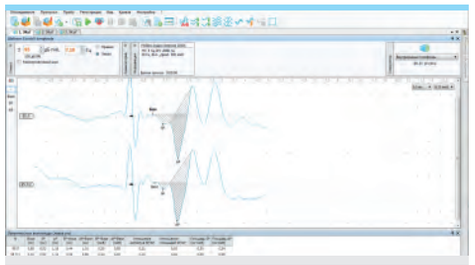
Transient evoked otoacoustic emission (TEOAE)



Distortion product otoacoustic emission (DPOAE)



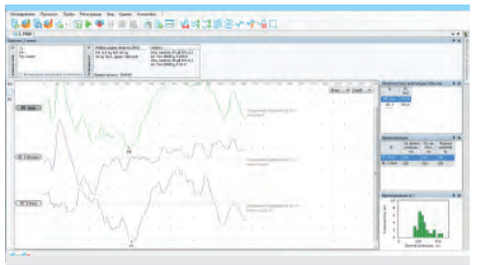
Vestibular evoked myogenic potentials (VEMP)



Electrocochleography (ECochG) with SP/AP area ratio calculation

ASSR and multi-ASSR

Pure tone audiometry (PTA)



Cognitive event-related potentials (P300, MMN)

AUDIO-SMART

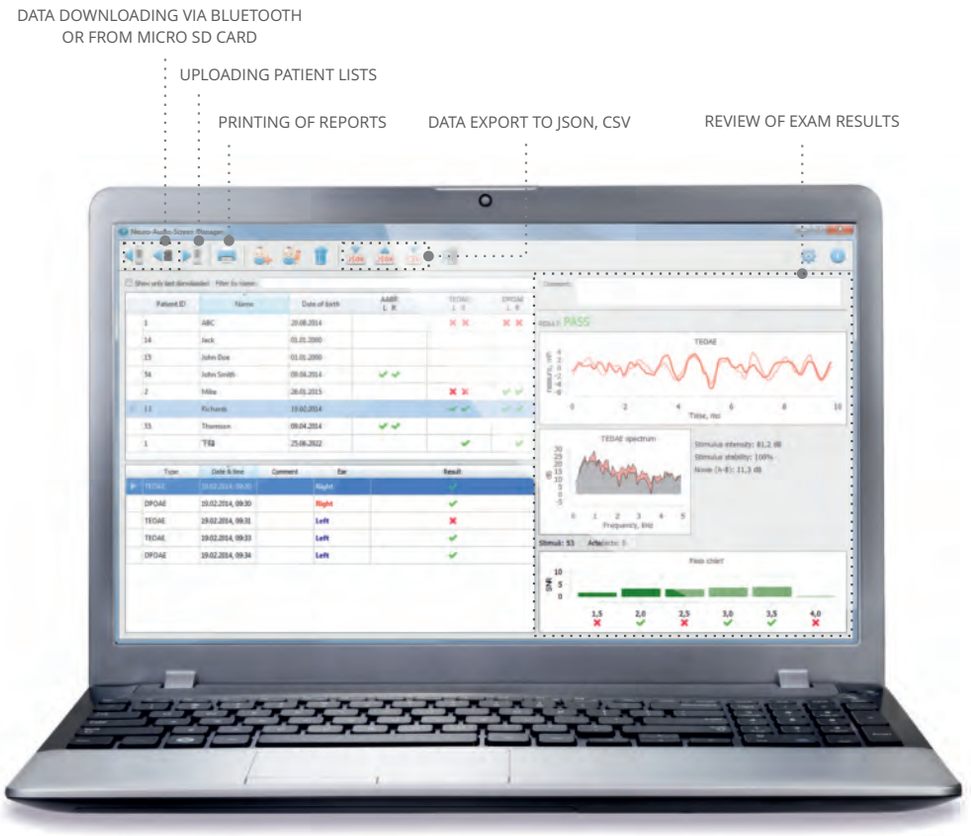
PORTABLE SYSTEM FOR DIAGNOSTICS AND SCREENING

- 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

> 24-HOUR OPERATION

WIRELESS DATA TRANSFER

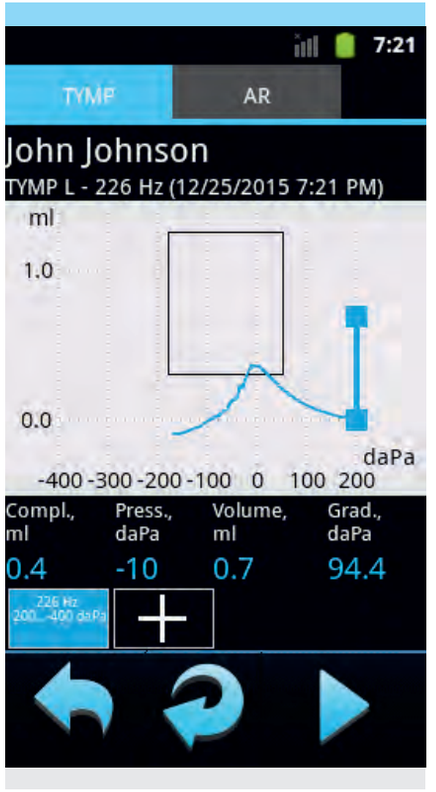
Neuro-Audio-Screen Manager software allows a user to upload patient list to the device, download test results from the device, and print test reports.



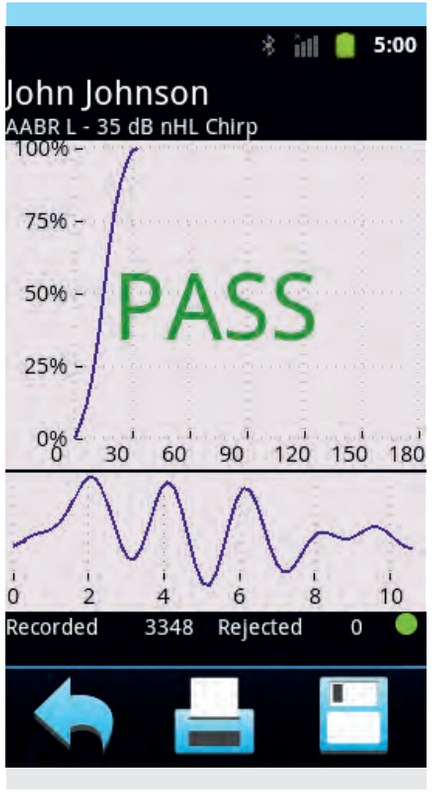
AUDIO-SMART FIRMWARE FEATURES

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.

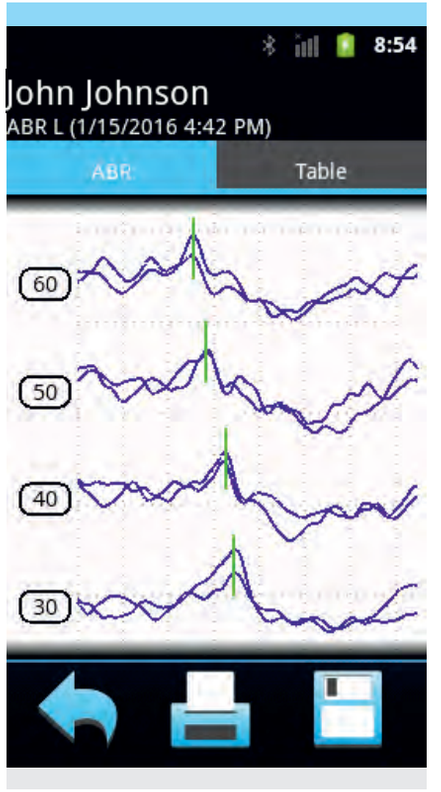
Transient evoked otoacoustic emission (TEOAE)



Tympanometry

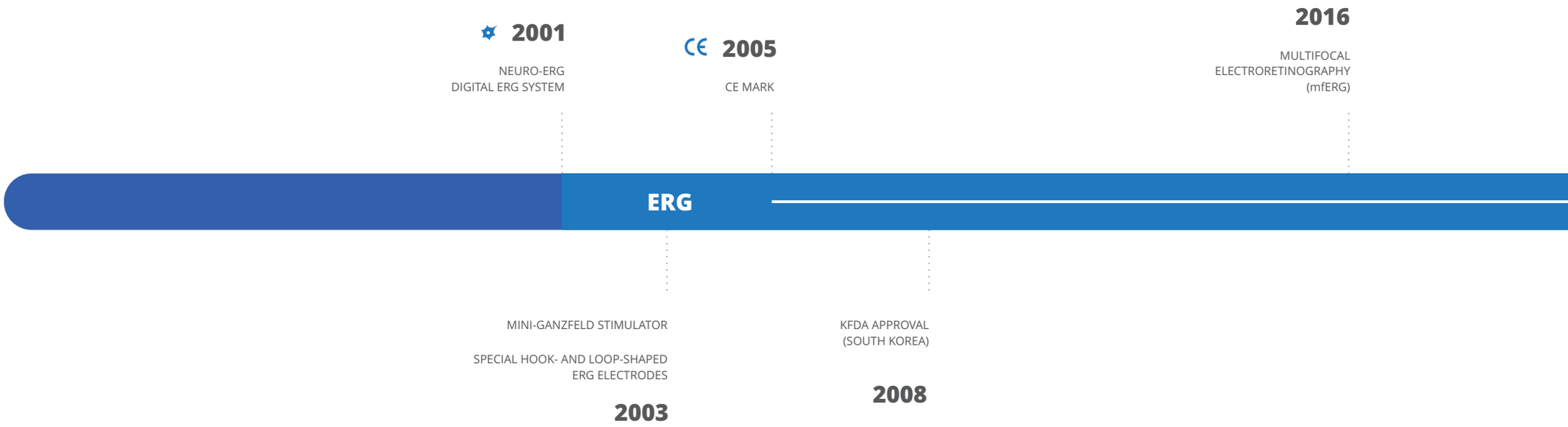


Automated auditory brainstem response (AABR)



Auditory brainstem response (ABR) with wave V marker

ELECTRORETINOGRAPHY
> 15-YEAR EXPERIENCE



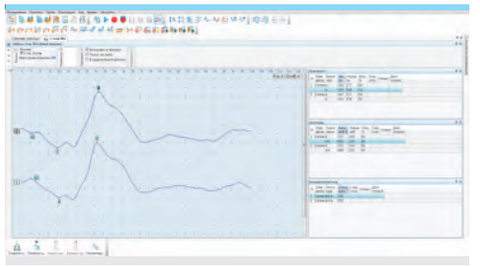
NEURO-ERG

DIGITAL SYSTEM FOR ERG AND VISUAL EP STUDY

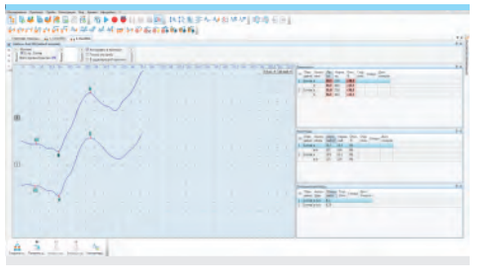
- Clinical electrophysiological testing of vision: objective assessment and analysis of retinal function and visual pathways at all levels
- Diagnostics of initial (preclinical) retinal changes
- Set of specially designed electrodes
- Mini-ganzfeld stimulator
- Penlights with concentrators for focal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

5

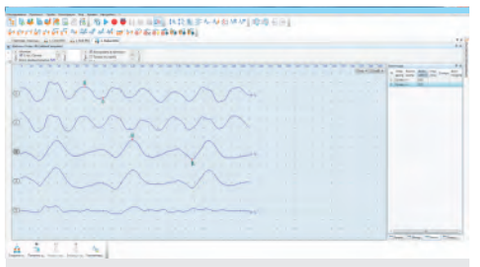
5 VISUAL STIMULATORS



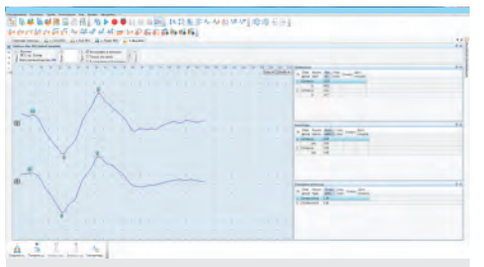
Cone ERG



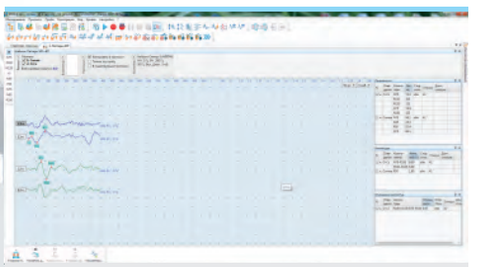
Maximal ERG



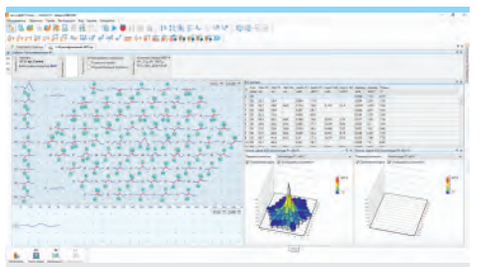
Flicker ERG



Focal ERG

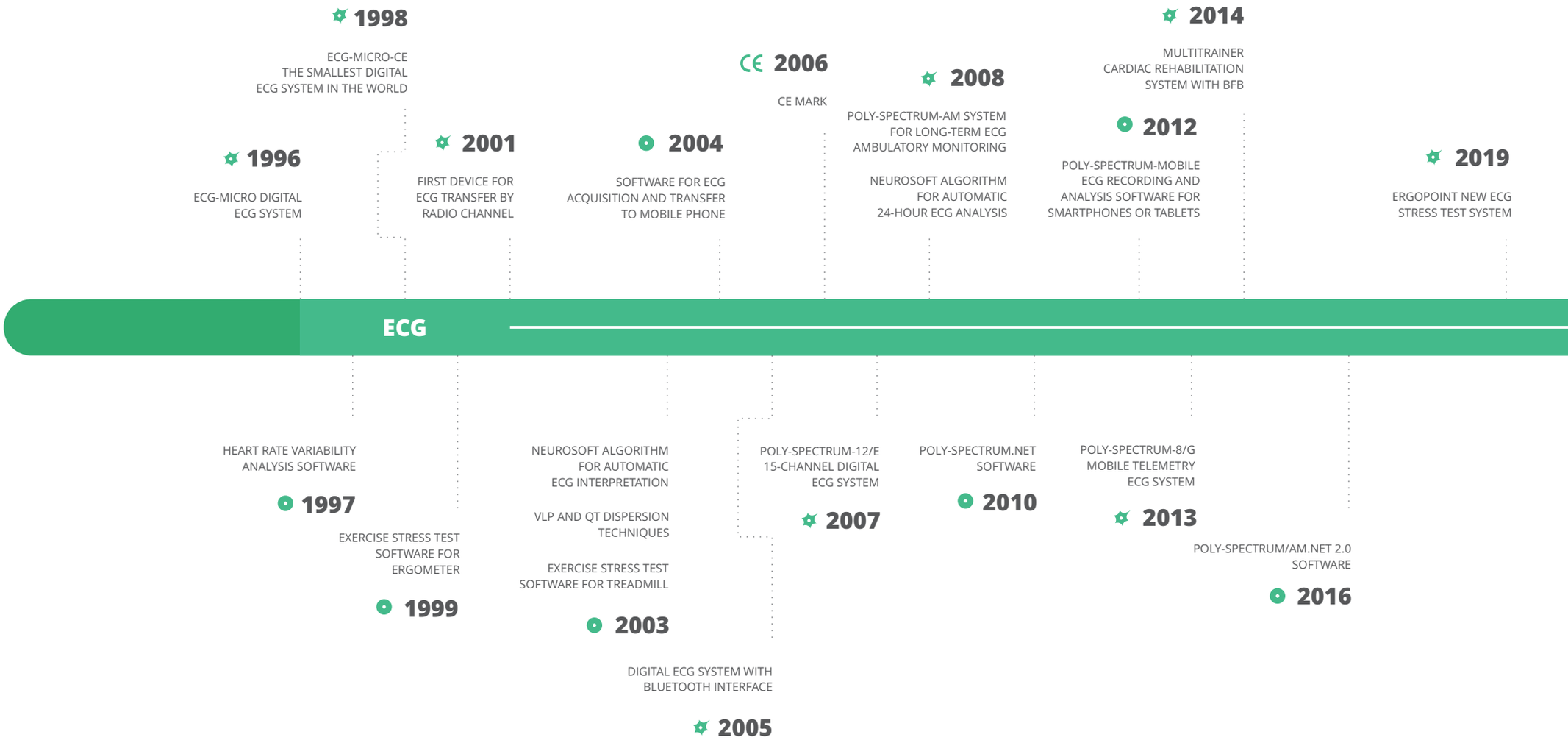


Simultaneous acquisition of VEP and ERG



Multifocal ERG

ELECTROCARDIOGRAPHY
> 15-YEAR EXPERIENCE



POLY-SPECTRUM

DIGITAL ECG SYSTEMS

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.

PLAIN PAPER PRINTING

STANDARD ECG CABLE

	POLY-SPECTRUM-8	POLY-SPECTRUM-8/E	POLY-SPECTRUM-8/EX	POLY-SPECTRUM-8/G	POLY-SPECTRUM-12/E
					
ECG leads	12	12	12	12	15*
Transesophageal ECG leads	–	–	–	–	2
Automatic report generation	–	+	+	+	+
Interface	Wire: USB	Wire: USB	Wireless: Bluetooth	Wireless: Bluetooth, GSM	Wire: USB
Pacemaker pulse detection	+	+	–	–	+
Application	Resting ECG	Resting ECG with interpretation	Stress test, resting ECG with interpretation, cardiac rehabilitation, HRV	Telemedicine, resting ECG with interpretation	Resting ECG with interpretation, transesophageal ECG

* 14 ECG channels and 1 respiratory channel

HANDHELD

WIRELESS ECG TRANSFER

POLY-SPECTRUM-8/EX

12-CHANNEL MINIATURE WIRELESS DIGITAL ECG SYSTEM

- 12-channel high-quality ECG
- Portable and wireless
- Operates with Android devices
- Best choice for exercise stress test
- PC software stores raw ECG
- 8-hour operation without battery replacement

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

ECG STRESS TEST SYSTEM

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).

MULTISTAGE AND RAMP PROTOCOLS

	BIKE ERGOMETER	TREADMILL	ERGOSPIROMETER
			
Interface	Bluetooth	Bluetooth	Bluetooth
Exercise equipment	Bicycle ergometer	Treadmill	Bicycle ergometer or treadmill
Blood pressure module	+	–	+
CPET (cardiopulmonary exercise test)	–	–	+

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.).

Please note that supplied exercise equipment may differ from the one shown in this catalogue

MULTISTAGE AND RAMP PROTOCOLS

WIRELESS ECG TRANSFER

ERGOPOINT

EXERSISE 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

	Speed, km/h	Smooth start	Elevation, %	Allowed patient weight, kg	Interface	Side handrails	Treadmill weight, kg
Lode Valiant	0.5÷20	+	0÷25	<160	USB	+	149
T 2100	0÷22.5	+	0÷25	<204	COM	+	181

ERGOSPIROMETER

PROFESSIONAL SYSTEM FOR CARDIOPULMONARY EXERCISE TESTING (EXERCISE STRESS TEST WITH GAS ANALYSIS)

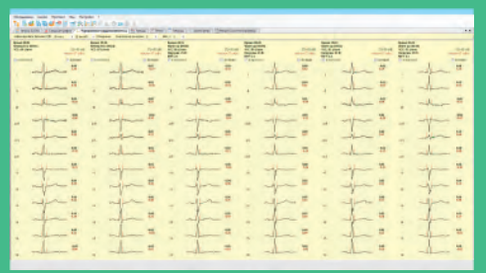
- Cardiopulmonary exercise test with 1- to 12-channel ECG acquisition
- Wireless ECG transfer — clear ECG traces
- Full battery of exercise test protocols including ramp protocol
- Ongoing monitoring of all training parameters
- Lode bike ergometer with blood pressure module
- Flow/volume measurement and inhaled/exhaled gas analysis (O_2/CO_2)
- Real-time displaying of O_2/CO_2 levels

BLOOD PRESSURE MODULE

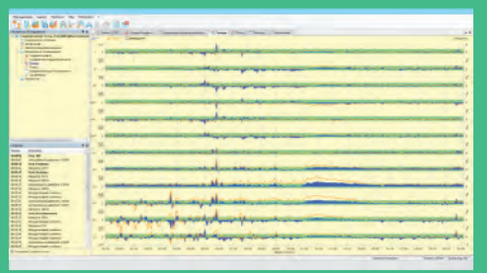
WIRELESS ECG TRANSFER

POLY-SPECTRUM.NET/ERGO SOFTWARE FEATURES

ECG stress test



Averaged QRS complexes of the whole record



ST trend

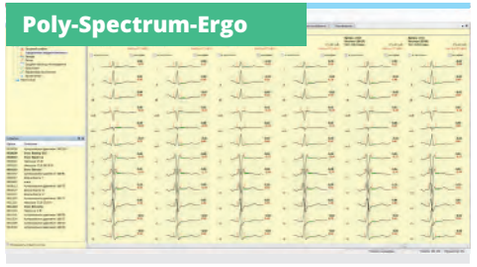
Automatic exam report generation

8

8 ADDITIONAL MODULES

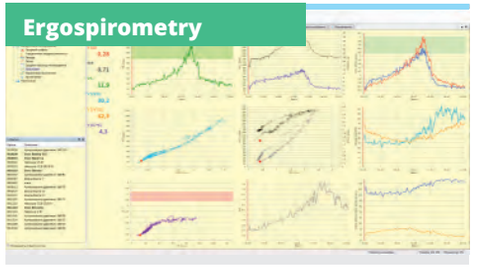
OPTIONS

Poly-Spectrum-Ergo



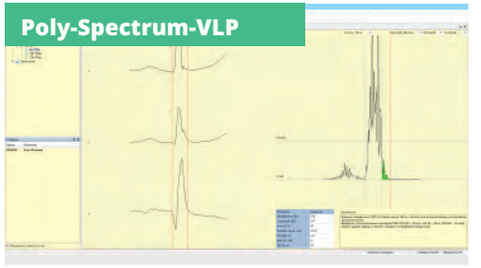
Software and equipment for stress testing on bike ergometer or treadmill

Ergospirometry



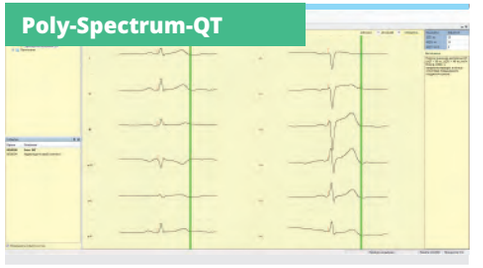
Software and equipment for cardiopulmonary exercise test

Poly-Spectrum-VLP



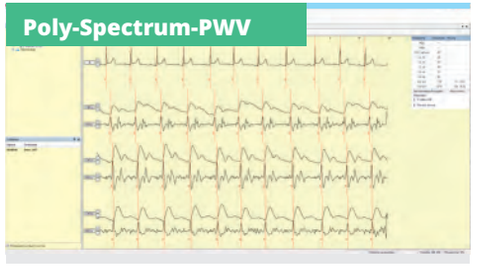
Software and equipment for acquisition and analysis of ventricular late potentials

Poly-Spectrum-QT



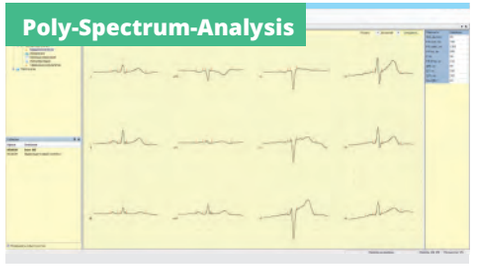
Software for QT interval dispersion analysis

Poly-Spectrum-PWV



Software and equipment for acquisition and analysis of pulse wave velocity

Poly-Spectrum-Analysis

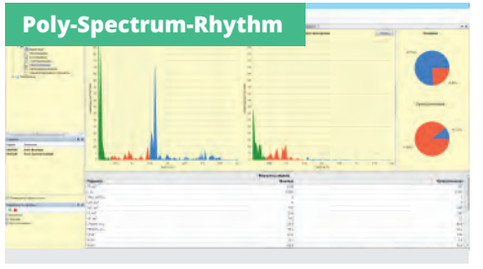


Software for ECG measurement and interpretation

Poly-Spectrum-Express

Software for ECG acquisition, review and printing

Poly-Spectrum-Rhythm

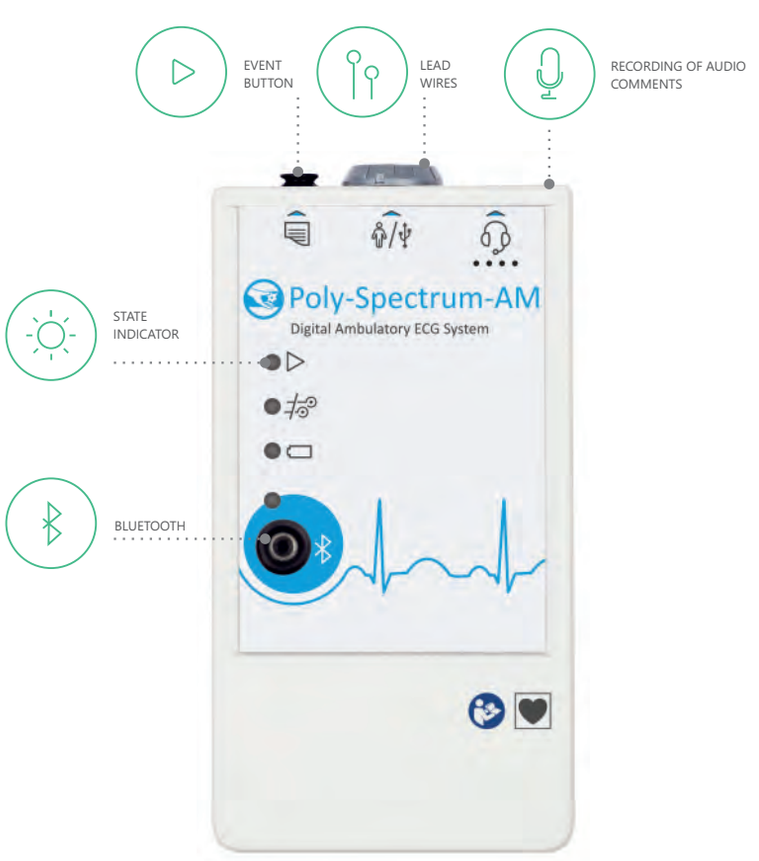


Software and equipment for heart rate variability analysis

POLY-SPECTRUM-AM

LONG-TERM ECG AMBULATORY MONITORING SYSTEM

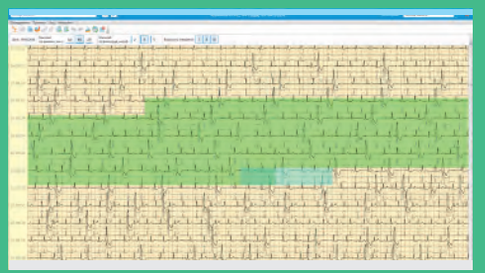
- 2- or 3-channel ECG acquisition
- Automatic, semi-automatic and manual arrangement of QRST fiducial points, automatic clustering of QRS complexes, extended classification of rhythm events
- Quick navigation and editing of ECG record with event filters
- Bluetooth for recorder setup and real-time ECG 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



LONG-TERM BP MONITORING MODULE

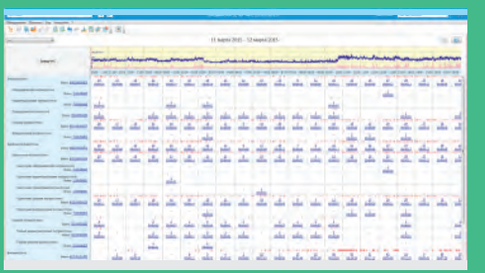
DUAL-MONITOR MODE

POLY-SPECTRUM-AM.NET SOFTWARE FEATURES

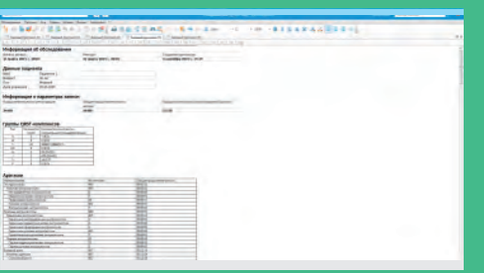


Record preview

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

CARDIAC REHABILITATION

SpO_2 CHANNEL

2015

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, SpO_2, 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

AUTOMATIC EVENT NOTIFICATION

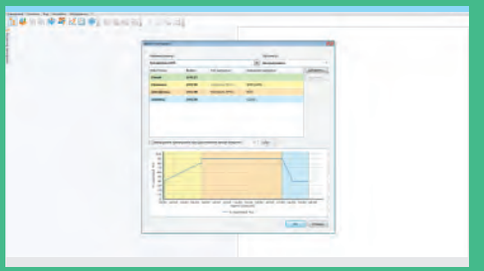
80

80 REHABILITATION SESSIONS PER DAY

MULTITRAINER SOFTWARE FEATURES

Miniature view: displaying training sessions of several patients in one window

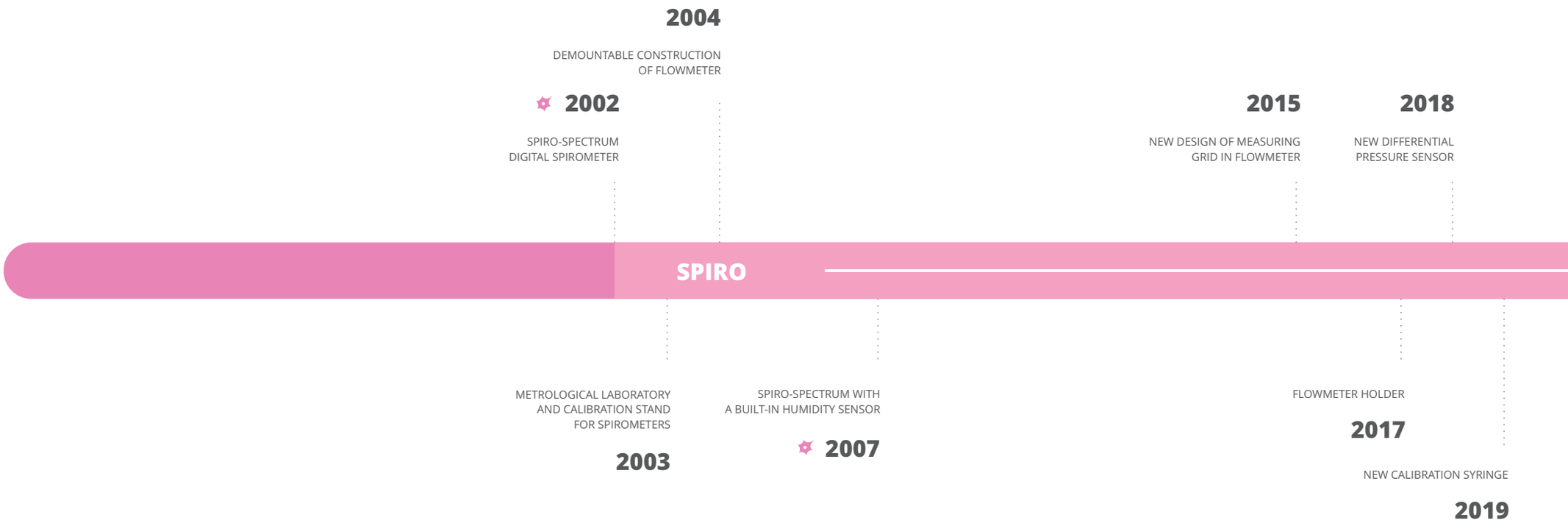
Full screen: overall information on one patient for maximum convenience



Pre-defined protocol customization

Comparison of training sessions

SPIROMETRY
> 15-YEAR EXPERIENCE



SPIRO-SPECTRUM

DIGITAL SPIROMETER WITH EXTRA MEASUREMENT ACCURACY

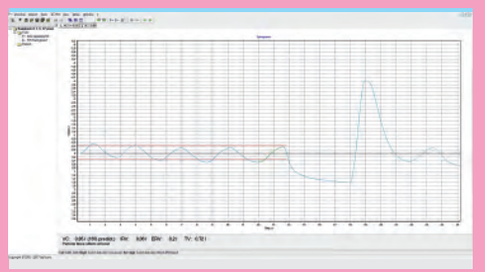
- High accuracy of lung volume and airflow rate measurement
- Automatic control of reproducibility and acceptance of respiratory maneuvers
- Demountable construction of flowmeter for quick and proper disinfection
- 3-liter calibration syringe according to international standards
- Inhalation tests with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

TEMPERATURE, HUMIDITY AND PRESSURE SENSORS

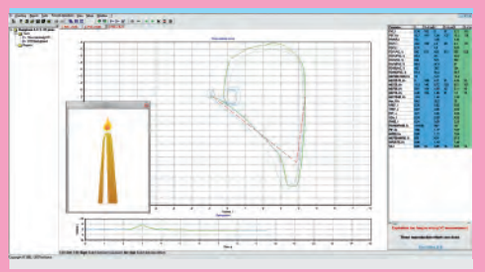
3-LITER CALIBRATION SYRINGE

43 PARAMETERS INCLUDED

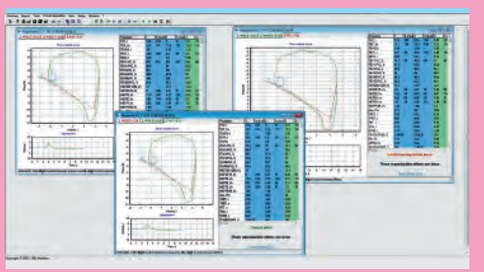
SPIRO-SPECTRUM SOFTWARE FEATURES



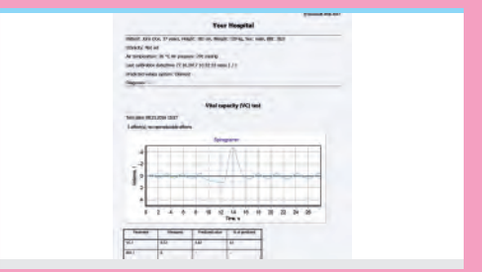
Vital capacity (VC) test



Forced vital capacity (FVC) test



Test comparison



Configurable test report

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

HRV ANALYSIS SOFTWARE

1997

DIGITAL ECG SYSTEM WITH BLUETOOTH INTERFACE

2005

POLY-SPECTRUM-AM SYSTEM FOR LONG-TERM AMBULATORY ECG MONITORING

SPECIAL ALGORITHM FOR AUTOMATIC 24-HOUR HRV ANALYSIS

2008

BEAT-TO-BEAT REAL-TIME HRV

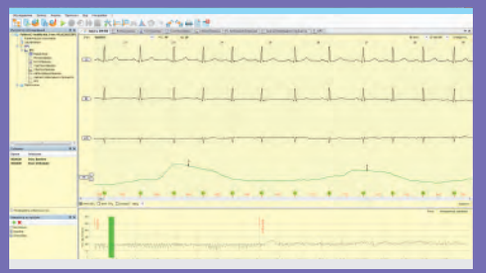
2015

VNS-MICRO

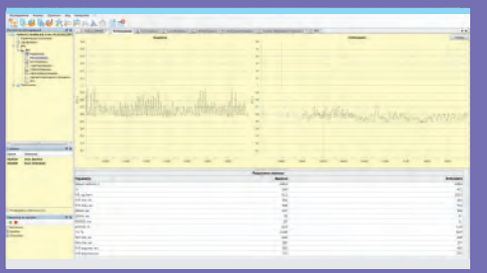
NEUROPATHY ANALYZING SYSTEM

- 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

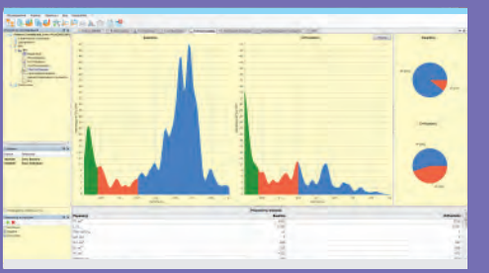
POLY-SPECTRUM.NET FEATURES



Simultaneous heart rate and respiratory rate recording



Rhythmogram



Spectrogram

GAIT AND MOTION ANALYSIS
RECENT DEVELOPMENTS

2017

STEADYS GAIT ASSESSMENT AND
TRAINING SYSTEM WITH BIOFEEDBACK

GAIT AND MOTION ANALYSIS

CE MARK

2019

STEADYS

GAIT ASSESSMENT

NEW

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

Fe

SIGNAL ACQUISITION IS NOT AFFECTED BY THE SURROUNDING METAL CONSTRUCTIONS

20

20 GAIT PARAMETERS

Wi Fi

DATA EXCHANGE VIA WI-FI

THE SAME IMU SENSOR FOR ACQUISITION OF GAIT PARAMETERS AND EMG

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.

SIGNAL ACQUISITION IS NOT AFFECTED BY THE SURROUNDING METAL CONSTRUCTIONS

DATA EXCHANGE VIA WI-FI

ALL-IN-ONE: GAIT ASSESSMENT AND TRAINING

STEADYS

GAIT TRAINING WITH BIOFEEDBACK

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

APPLICATION

Neurology	After stroke, cerebral or spinal cord injuries, multiple sclerosis (MS), cerebral palsy (CP), Parkinson disease (PD), etc.
Trauma, orthopedics, and etc.	After traumas, amputation, endoprosthetic replacement of the lower extremity joints, scoliosis surgery, etc.
Angiology	Obliterating vascular diseases of lower extremities
Geriatrics	Fall risk reduction

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.

	Lode	h/p/cosmos	Meden-Inmed
			
Walking surface	150x50 cm	150x50 cm	140x52 cm
Speed range	0.1 to 12 km/h	0.1 to 22 km/h	0.2 to 25 km/h
Speed adjustment step	0.1 km/h	0.1 km/h	0.1 km/h

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2019