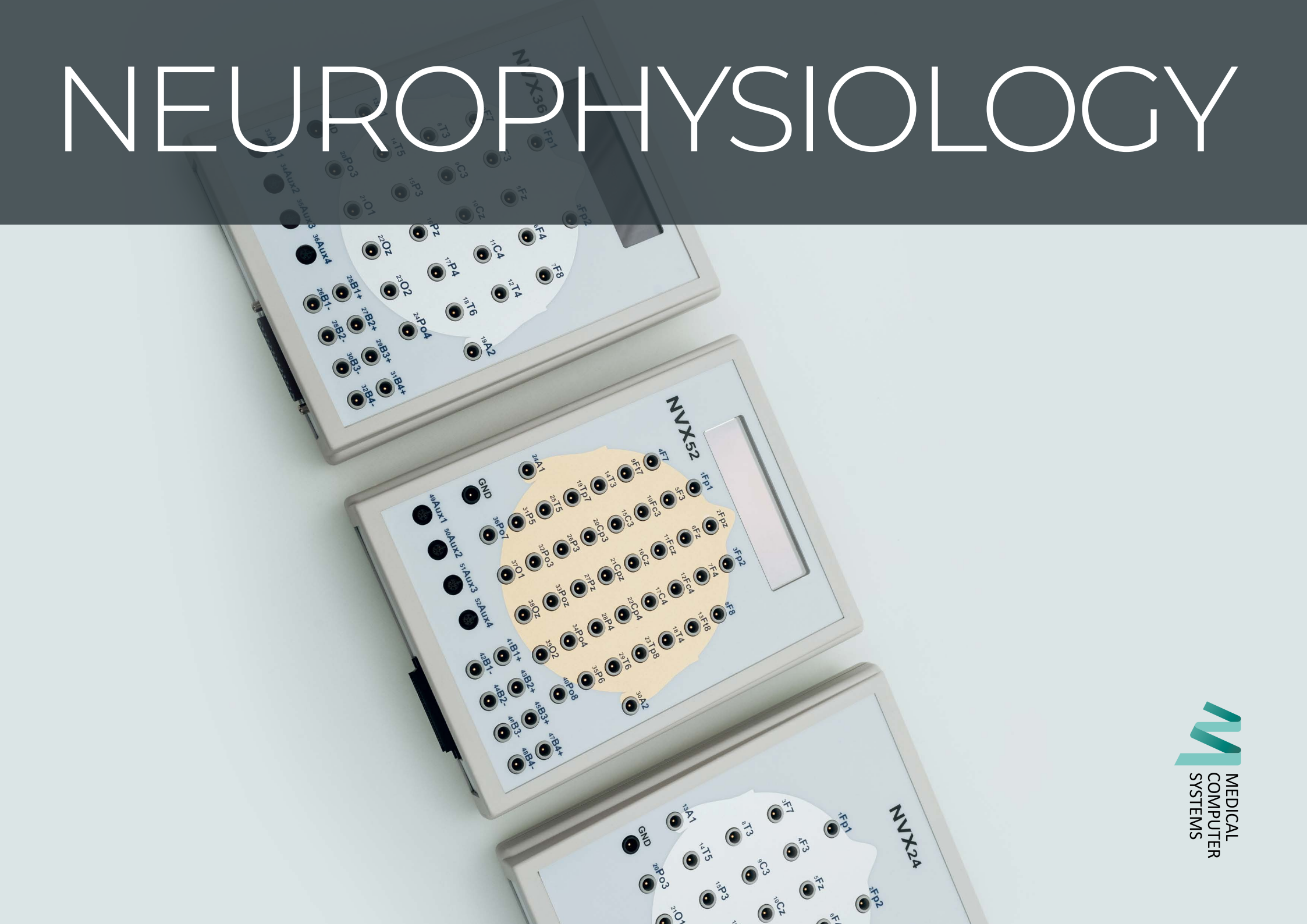
NEUROPHYSIOLOGY



MEDICAL COMPUTER SYSTEMS

CONTENT

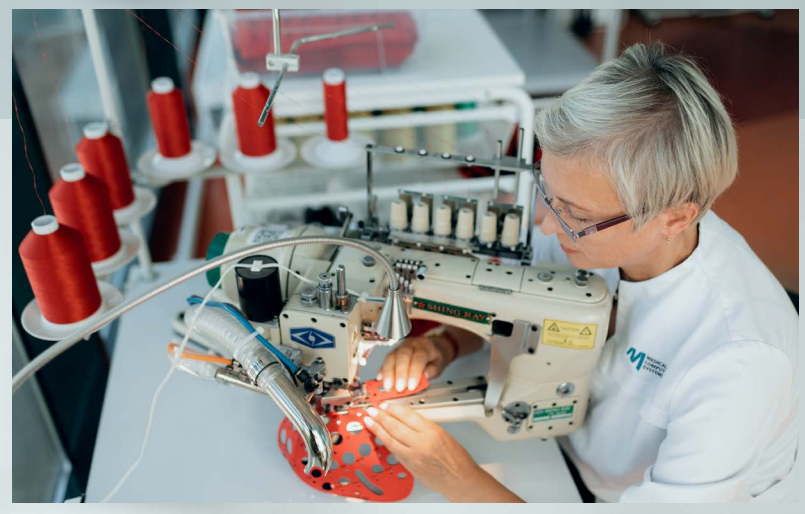

NVX24

About us

Since 1993 year company Medical Computer Systems Ltd. successful design and manufacture high-tech devices and accessories for medical and research applications.

Projects include a wide spectrum of diagnostic and therapeutic equipment:
DC EEG amplifiers for clinic and research, including Multichannel MR-compatible EEG amplifiers and wireless EEG amplifiers, tES systems, ECG screening systems, EEG and ECG accessories, etc.

Video about us



Partners of Medical Computer Systems Ltd. are leaders of EEG equipment for scientific research and medical world market. Company supports the international quality system ISO 9001, ISO 13485 and manufactures many products with CE mark.

Medical Computer Systems Ltd. provides a complete engineering solution in the medical & research devices outsourcing development and production as OEM.

Multi-disciplinary team of experienced engineering and researchers, continuous progress in the developments and production technologies allow to stay company on top of innovation.


ПРОХОД
№5

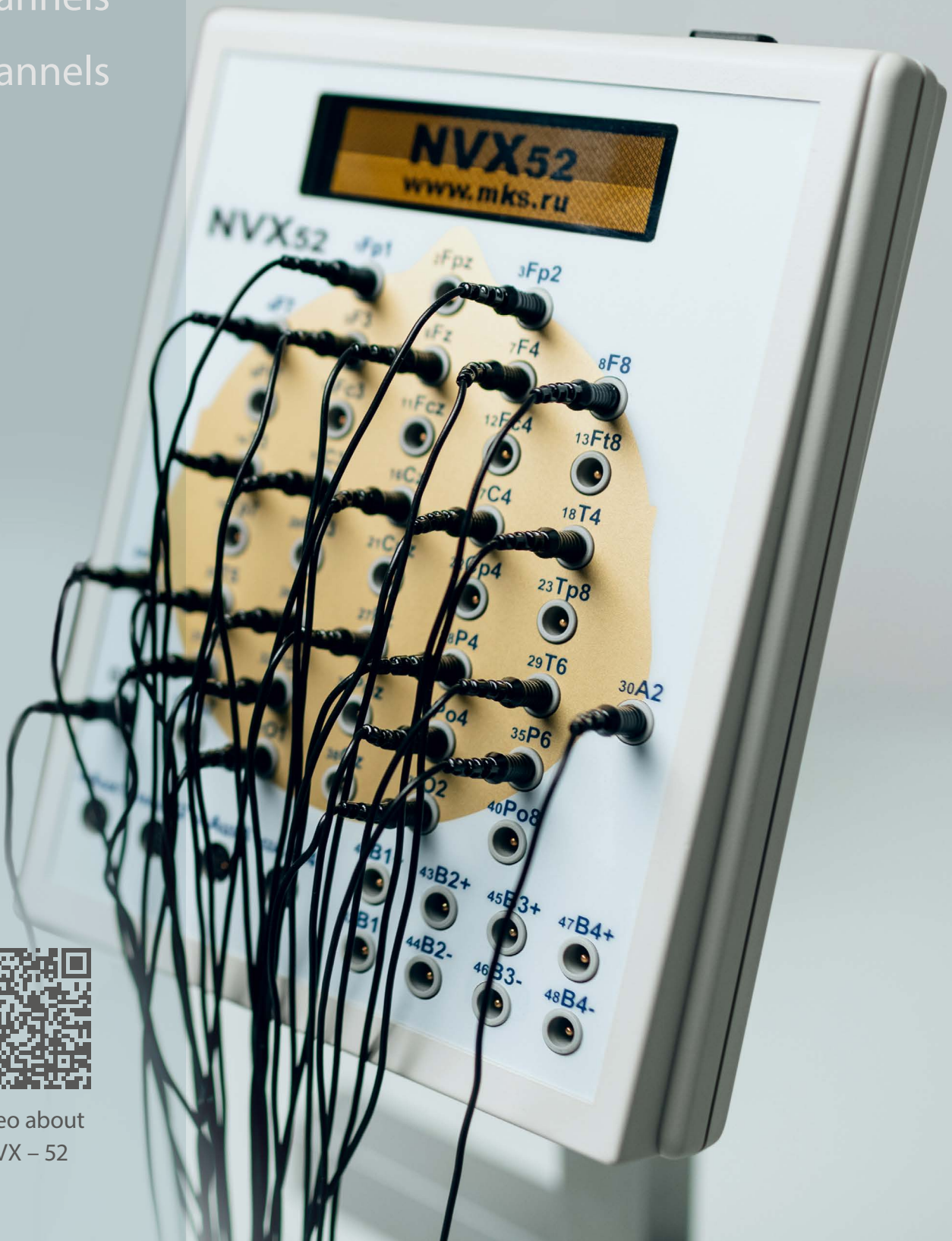
NVX – 24 / 36 / 52

DC EEG

24 channels

32 channels

48 channels



Video about
NVX – 52

NVX is DC amplifier with 24, 32 or 48 monopolar EEG channels and 4 auxiliary bipolar channels for sensors NeoSens. The device is used in training systems, clinical and scientific research as a part of computer-based research system for short-term recording of the electrophysiological signals, primarily EEG. The amount of channels and presence of auxiliary channels depends on models.

NVX amplifiers is used with NeoRec application software. NeoRec is software for the acquisition of EEG and other biomedical signals during the process of scientific or medical research. The program records the signals in various file formats for further analysis and processing by third-party software.

Supported file formats: EDF+, BDF+, GDF, Brain Vision.

For viewing or processing the recorded data, the following third-party programs and software packages are recommended: EEGLAB, ERPLAB, OpenViBE, BioSig.

Specification

Model	NVX 24	NVX 36	NVX 52
EEG DC monopolar channels	24	32	48
AUX bipolar channels	–	4 galvanically isolated from EEG for probes	
TTL triggers	1 input / 1 output	9 input / 1 output	
Display	–	Graphic OLED	
EEG dynamic range	±400 mV		
EEG channel's input impedance	more 100 MOhm @ DC		
EEG channel's noise	less 0.9 uV p-p @ 0,1...30 Hz		
EEG test signal	200 µV (±1%), 1 Hz		
Electrode impedance measurement range	1...120 kOhm (±10%) @ 30 Hz		
AUX channel's dynamic range	0...+4 V		
AUX channel's input impedance	more 100 MOhm @ DC		
AUX channel's noise	less 15 uV p-p @ 0,1..30 Hz		
AUX probe powering	+5 V (±5%). Up to 15 mA per probe with electronic protection		
Digitalization	24 bit, 6th order delta-sigma modulator with 64x oversampling, one converter per each channel		
Sampling rate	250, 500, 1000, 2000 Hz @ all channels 5000 Hz @ 24 EEG monopolar or bipolar channels 10000 Hz @ 16 EEG monopolar or bipolar channels 50000 Hz @ 4 EEG monopolar or bipolar channels		
Lower cutoff frequency	0 Hz (DC)		
Upper cutoff freguency	75 Hz (-3dB @ 250 Hz); 175 Hz (-3dB @ 500 Hz); 300 Hz (-3dB @ 1000 Hz); 500 Hz (-3dB @ 2000 Hz); 1650 Hz (-3dB @ 5000 Hz); 4900 Hz (-3dB @ 10000 Hz); 16000 Hz (-3dB @ 50000 Hz)		
Control and powering	from USB +5V, 450 mA		
Safety	IEC 60601-1, IEC 60601-2-26, class IIa, type BF		
Size	155 x 110 x 45 mm		
Weight	less 650 gr		

NEUROvisor

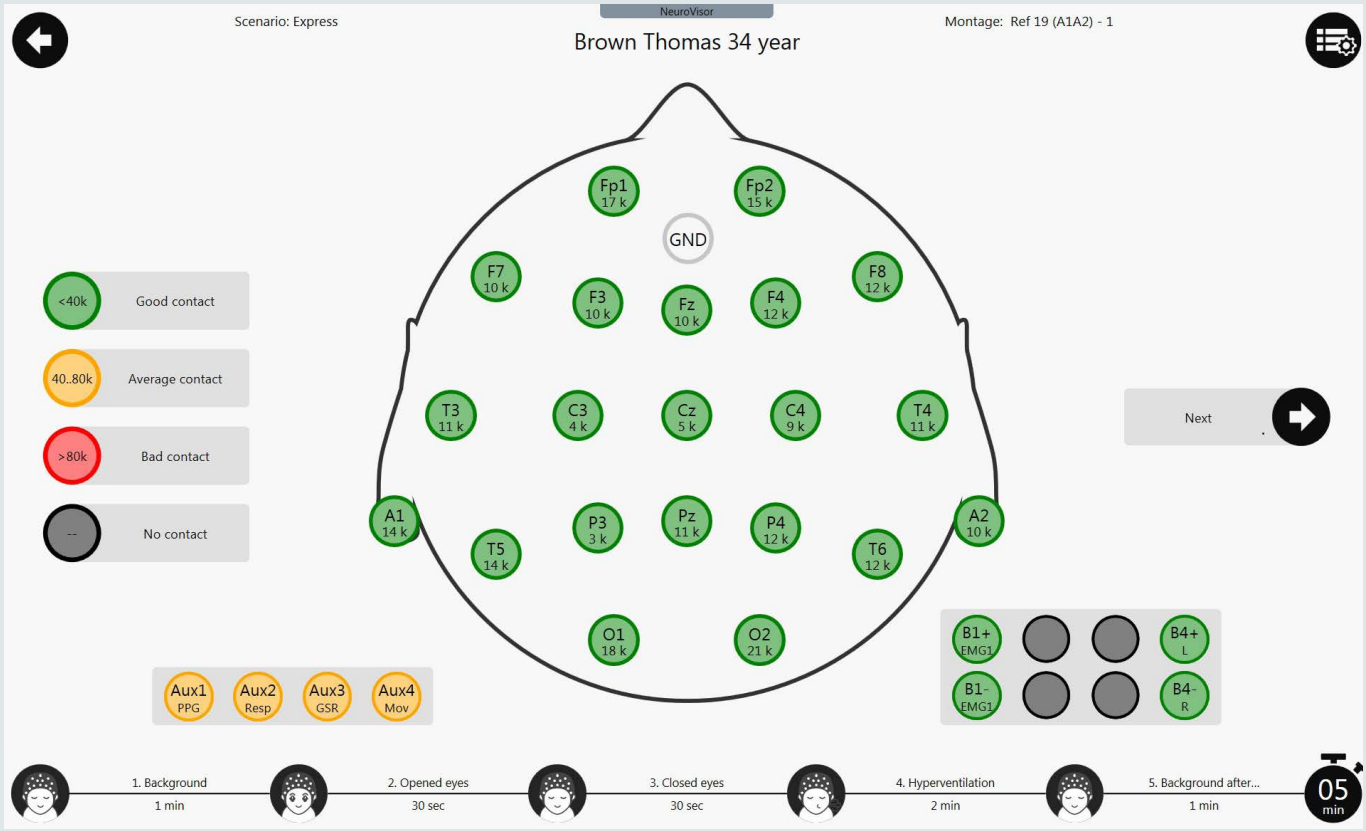
clinical

DC EEG

Video about
NeuroVisor

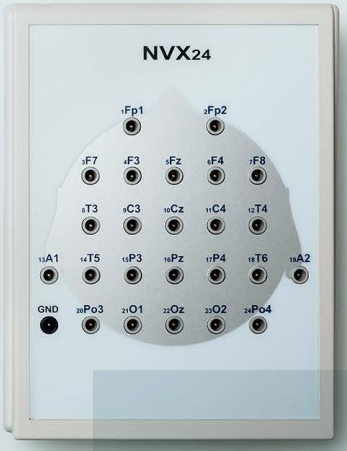
The most friendly clinical EEG system

Based on NVX amplifiers it has been developed a clinical EEG system NEUROVISOR for use in functional diagnostics rooms, medical departments of multidisciplinary and neurological hospitals, health centers, clinics and research institutes.



NVX24

24 EEG channels
Clinical EEG



DB25 connector
for EEG cap

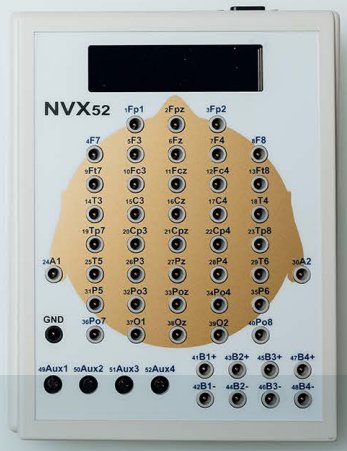
NVX36

32 EEG channels
4 AUX channels for probes
OLED display
Clinical EEG
EP/ERP

DB25 connector
KEL50 connector
for EEG cap

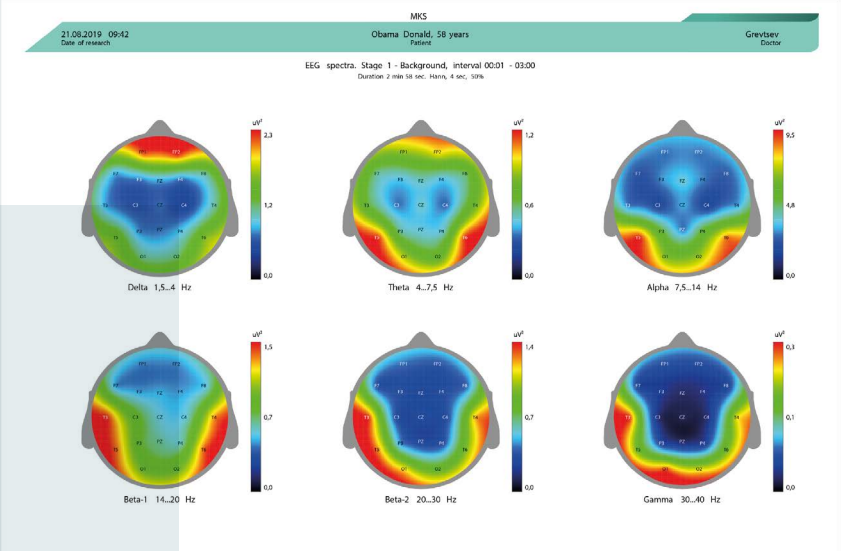
NVX52

48 EEG channels
4 AUX channels for probes
OLED display
Clinical EEG
EP/ERP



KEL50 connector
for EEG cap

SOFTWARE



EEG maps in spectral bands

EEG spectrums for each lead

EEG signals, video frame, automatic conclusions

Digital DC EEG ampliers

- Full DC channels,
- 24 bit resolution,
- ±400 mV dynamic range of EEG channels,
- 500 or 2000 Hz sampling rate for clinical EEG,
- 2000, 10000 or 50000 Hz sampling rate for EP/ERP.

Software advantages

- one button solution,
- standard montages and examination scenarios according to IFCN guidelines,
- automatic or semi-automatic examination procedure with voice prompts,
- automatic artifact rejection using ICA method,
- automatic generation of reports with manual editing capability.

Quantitative EEG

- amplitude-frequency analysis of the main EEG rhythms,
- spectral analysis (charts and maps),
- independent component analysis.

System includes

- EEG amplier NVX with 5m USB cable,
- photic stimulator with 5m USB cable,
- EEG electrode cap (size 54-60 cm) with common connector,
- 2 leads ECG cable with electrodes,
- user manual,
- soft ware on USB fash.

PC with Windows 10 64 bit or higher is reguired for installation.

Options

- stand for amplifier,
- stand for photic stimulator,
- EP/ERP package* (software license, optical trigger sensor, audio stimulator, response keyboard).

Original probes for AUX channels*

- photoplethysmography finger probe,
- 3D accelerometric probe,
- breath thermometric probe,
- galvanic skin response probe.

* Intended for NVX36 and NVX52 amplifiers only

EP / ERP set

Evoked Potentials

Event-Related Potentials

Video about ER/ERP

EP/ERP set is intended for recording and analysis the potentials of the human brain, caused by the presentation of sound or visual stimuli.

EP/ERP is used by professionals in the neuroscience, cognitive psychology, cognitive sciences, and psychophysiological research. Module methods are well suited for studying the rate of neural activity.

In clinical research, EP/ERP is used to treat neurological conditions such as ADHD, dementia, Parkinson's disease, multiple sclerosis, head trauma, stroke obsessive-compulsive disorder, etc.

EP/ERP set supports more than 60 different tests.

P300

ERP component elicited in the process of decision making

VN400

ERP component elicited to visual inclusion of meaningful words in sentence contexts

MATHEMATICS

test of brain's reaction in the process of solving mathematical tasks

ECPT

test to assess the ability to focus on constant activity

GONOGO

test of variation of decisions about spatial complexity or functional connectivity of visual objects by EEG

VCPT

test to assess the ability to focus on visual stimulus

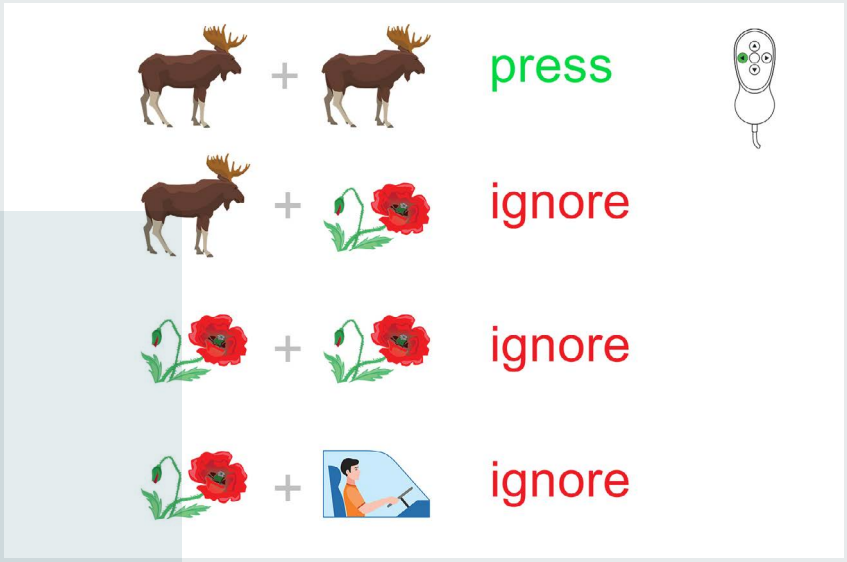
VISUAL EP

a flashing chessboard to detect damage or injury to the visual system

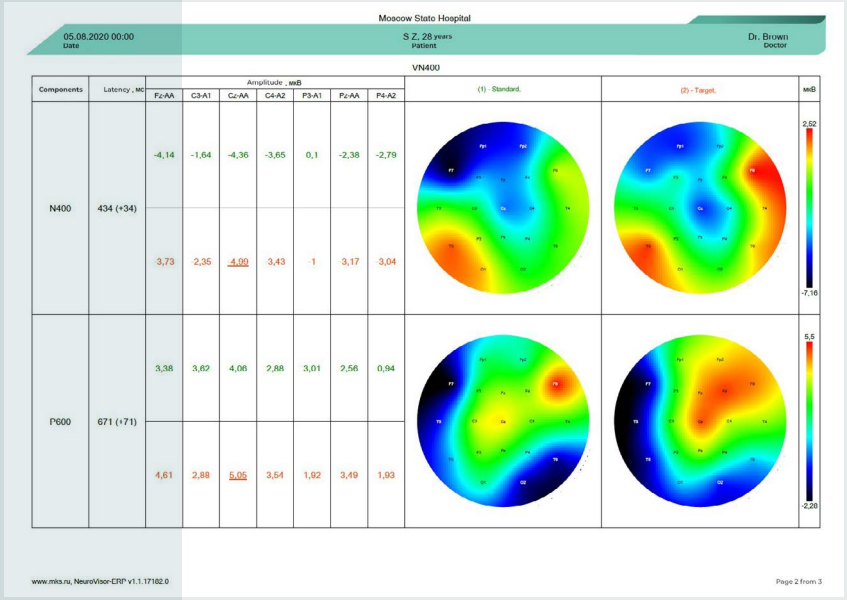
VCPT ERP

continuous performance test. Target and non-target stimuli appear on the screen in the form of cartoon images without letters and numbers

SOFTWARE



VCPT test

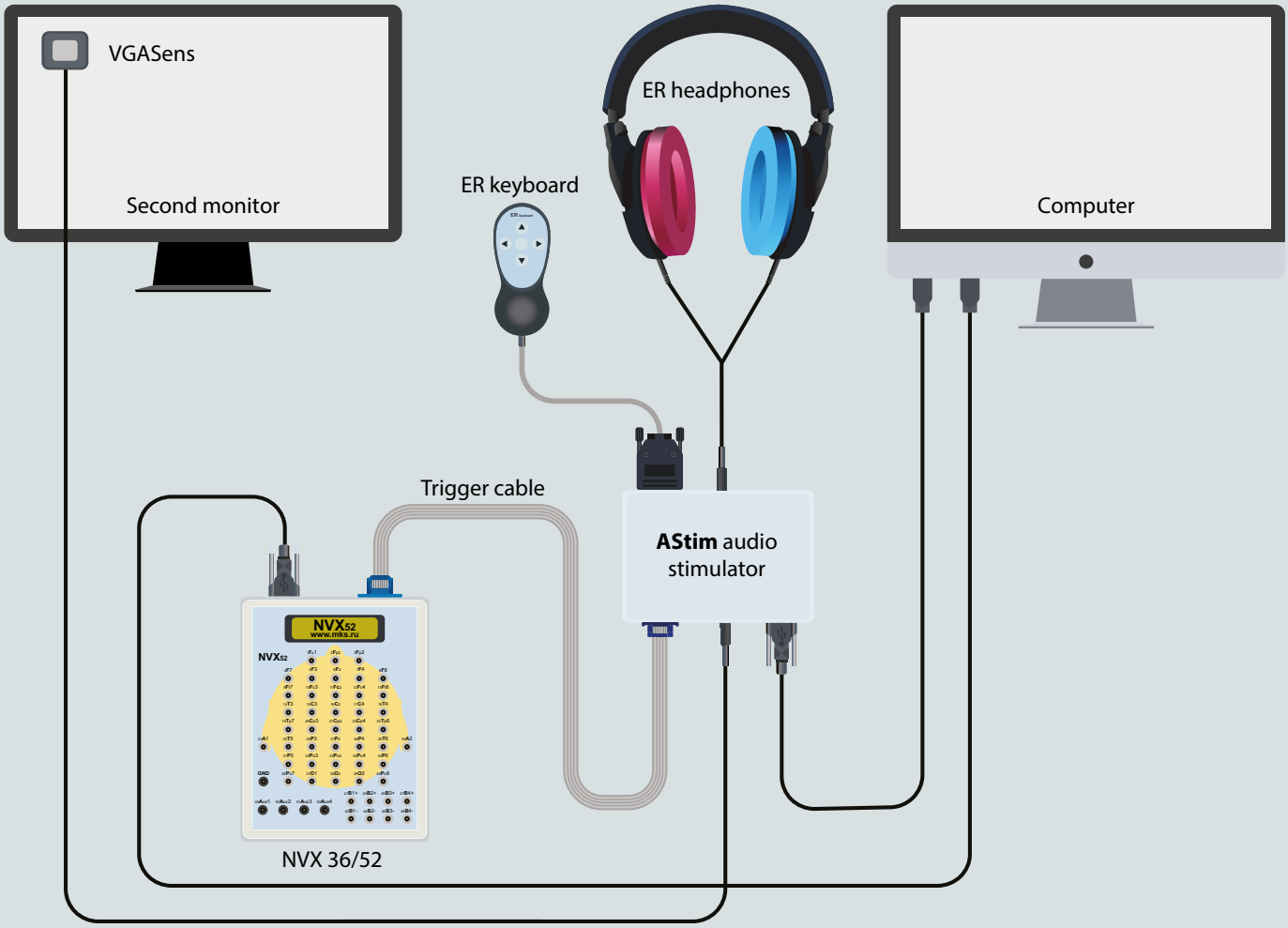


VN400 test

P300 test

EP/ERP set provides precise positioning of the stimulus label on the EEG when recording evoked potentials. Set is designed for use with NVX EEG amplifiers with Neurovisor software, as well as with other amplifiers and software. Set includes an audio stimulator with the ability to synchronize event marks, headphones, a keyboard for recording the response of the subject, and an optical sensor for synchronizing the presented visual stimuli.

EP/ERP set connection diagram



System includes

- ASTIM acoustic stimulator with 5m USB cable,
- ER headphones,
- ER keyboard,
- VGASENS optical trigger sensor,
- trigger cable for connec tion to EEG amplier NVX,
- user manual,
- software license.

EP/ERP package is an option for NEUROVISOR clinical EEG system. EEG amplier NVX36/NVX52 is not included in the EP/ERP package.

PC with Windows 10 64 bit or higher is reguired for installation.

NVX – 72 / 136 / 272

DC MR EEG

Multichannel

72 channels

136 channels

272 channels

Video about
NVX – 136

EEG for researchers
up to 272 channels
MR compatible

Uncompromising device for EEG acquisition

NVX – 72/136/272 are designed for a medical-biologic researching in scientific and educational institutions.

Each channel has a direct current input and individual 24-bit analog-to-digital converter for measuring the EEG signal up to 100 thousand times per second.

Possible to extend up to 272 channels by connecting two amplifiers to the media converter, which gives a single clock frequency for all ADCs and ensuring synchronous channels conversion.

Software for planning of experiment and recording signals to EDF+ 16bit, BDF+ 24bit, GDF 32bit.

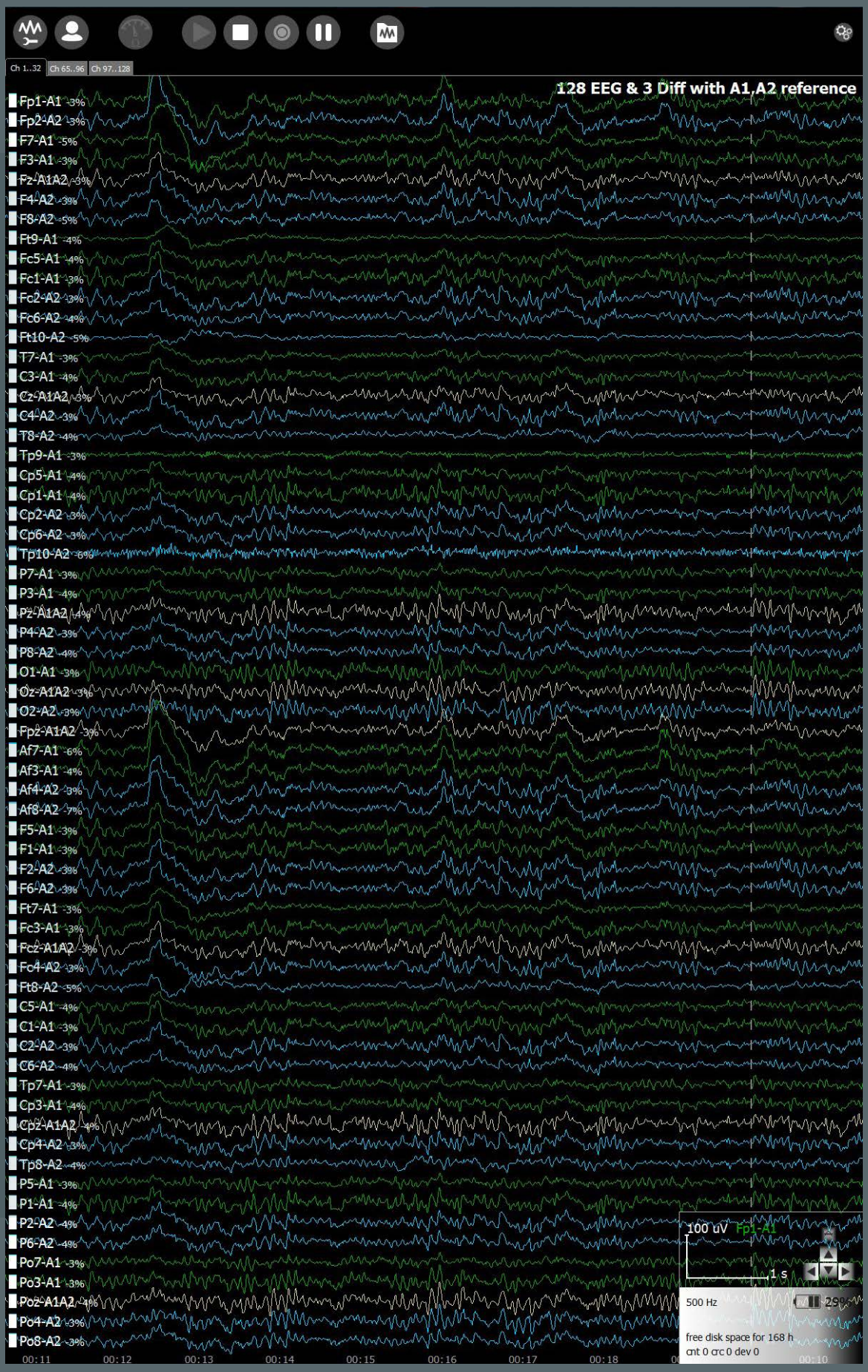
NVX-272 DC EEG MR system includes

- NVX – 136 DC EEG system base - 2 pcs,
- Electrode cap MCScap PROFESSIONAL MR, size L 54-60 cm.

NVX-136 DC EEG system base includes

- NVX136 DC EEG amplier,
- NVX136 media converter,
- NVX136 battery module,
- NVX136 charger,
- optical cable 1 m,
- optical cable 10 m,
- NVX136 transport suitcase.

SOFTWARE


Ch 1..32
Ch 65..96
Ch 97..128
128 EEG & 3 Diff with A1,A2 reference
Fp1-A1
Fp2-A2
F7-A1
F3-A1
Fz-A1A2
F4-A2
F8-A2
Ft9-A1
Fc5-A1
Fc1-A1
Fc2-A2
Fc6-A2
Ft10-A2
T7-A1
C3-A1
Cz-A1A2
C4-A2
T8-A2
Tp9-A1
Cp5-A1
Cp1-A1
Cp2-A2
Cp6-A2
Tp10-A2
P7-A1
P3-A1
Pz-A1A2
P4-A2
P8-A2
O1-A1
Oz-A1A2
O2-A2
Fpz-A1A2
Af7-A1
Af3-A1
Af4-A2
Af8-A2
F5-A1
F1-A1
F2-A2
F6-A2
Ft7-A1
Fc3-A1
Fcz-A1A2
Fc4-A2
Ft8-A2
C5-A1
C1-A1
C2-A2
C6-A2
Tp7-A1
Cp3-A1
Cpz-A1A2
Cp4-A2
Tp8-A2
P5-A1
P1-A1
P2-A2
P6-A2
Po7-A1
Po3-A1
Poz-A1A2
Po4-A2
Po8-A2
00:11
00:12
00:13
00:14
00:15
00:16
00:17
00:18
100 uV
Fp1-A1
1 s
500 Hz
free disk space for 168 h
ant 0 arc 0 dev 0

Specification

Number of DC EEG channels	136
Dynamic range	not less ±400 mV
Input impedance	more 1 GOhm @ DC / 30pF max
EEG channels noise	less 0.9 uVp-p @ 0,1..30 Hz
Voltage measurement error	less ±0.5%
DC channels of number, connected via AUX	8 monopolar (4 connectors x 2 channels) or 4 bipolar (4 connectors x 1 channels) set by application SW
Additional dynamic range for channels, connected via AUX	not less ±2000 mV, set by application SW
Analog-to-digital conversion	24 bit, 6th order delta-sigma modulator with 64x oversampling, one converter per each channel
Sampling rate of amplifier (high cut off frequency at -3dB)	For 64 EEG channels 100 000 Hz (16 000 Hz) For all channels: 50 000 Hz (16 000 Hz), 25 000 Hz (9 000 Hz), 10 000 Hz (4 900 Hz), 5 000 Hz (1 600 Hz), 2 000 Hz (650Hz), 1 000 Hz (300 Hz), 500 Hz (160 Hz), 250 Hz (80 Hz)
Low cutoff frequency at -3dB, set by application SW	set individually for each channel from a range of 0..100Hz or selected from the series 0, 0.001, 0.05, 0.1, 0.5, 1, 2, 5, 10 Hz
High cutoff frequency at -3dB, set by application SW	set individually for each channel from a range 5000..1 Hz or selected from the series 500, 300, 100, 70, 50, 30, 20, 10, 5, 1 Hz
TTL triggers input / output	8 / 8, not galvanically isolated from PC
Electrode impedance measurement range (absolute error)	1..120 kOhm (±10%), at 30 Hz
Test EEG signal	square wave 200 uV (±1%), 1 Hz
Input for external synchronization of ADCs	5..100 MHz, 50 Ohm sin / square wave
Aux sensor powering	5V, up to 100 mA for all sensors with electronic protection
Connecting amplifier – media converter	Optical plastic cable 10 m (option 20 m)
Connecting media converter – PC	USB V2.0 High-speed 480 MBod
Powering of amplifier	from accumulator module 6 V, 7A ·h; current consumption: less 1400 mA for sampling rates of 25 000..100 000Hz, less 500 mA for another sampling rates, less 3 mA in standby mode
Powering of media converter	from USB 5 V; less 400 mA in active mode, less 5 mA in standby mode
Sizes and weight of amplier	195x140x35 mm, 1200 gr.
Sizes and weight of accumulator module	195x140x48 mm, 2500 gr.
Sizes and weight of media converter	90x112x58 mm, 300 gr.

NeoRec cap

DC EEG

Mobile

16 channels

21 channels

Video about
NeoRec cap

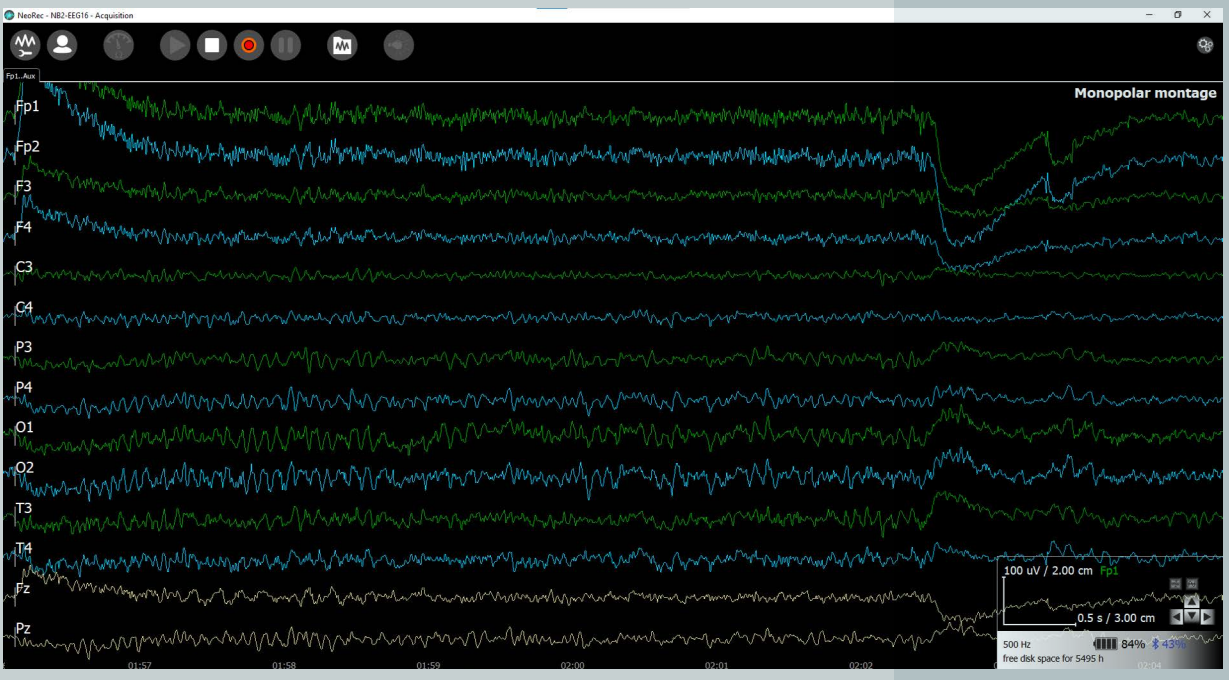
NeoRec cap – EEG cap with 17 pre-installed Ag/AgCl sintered electrodes and 16-channel DC mobile EEG amplifier with a built-in accelerometer.

EEG amplifier is designed to record EEG and other bioelectrical signals with wireless real-time data transfer to a PC.

NeoRecCap can be used for education, research and development in EEG, neuro-computer interfaces (brain-computer interface, direct neural interface, brain interface), bio-feedback (BCI), neuromarketing, neurogaming, brain fitness.

Advantages

- 16/21 DC EEG channels for biomedical and research applications,
- 24 bit resolution,
- BLE wireless for PC and mobile application,
- lightweight and small EEG amplifier,
- 12 sizes of cap cover from 24 cm up to 66 cm of head circumference,
- quality Ag/AgCl sintered electrodes,
- wide range of EEG accessories (different types of electrodes, adapters, etc.).



NeoRec cap is intended to record EEG and 3D acceleration events to files of different formats (EDF+ 16 bit, BDF+ 24 bit, GDF 32 bit) or transmit it online via stream LSL (Lab Streaming Layer) for analyze by third-party software as MATLAB / EEGLAB, OpenViBE etc.

SOFTWARE

System NeoRec cap can includes a different types of electrode caps MCScap.

for using with EEG gel & solid gel

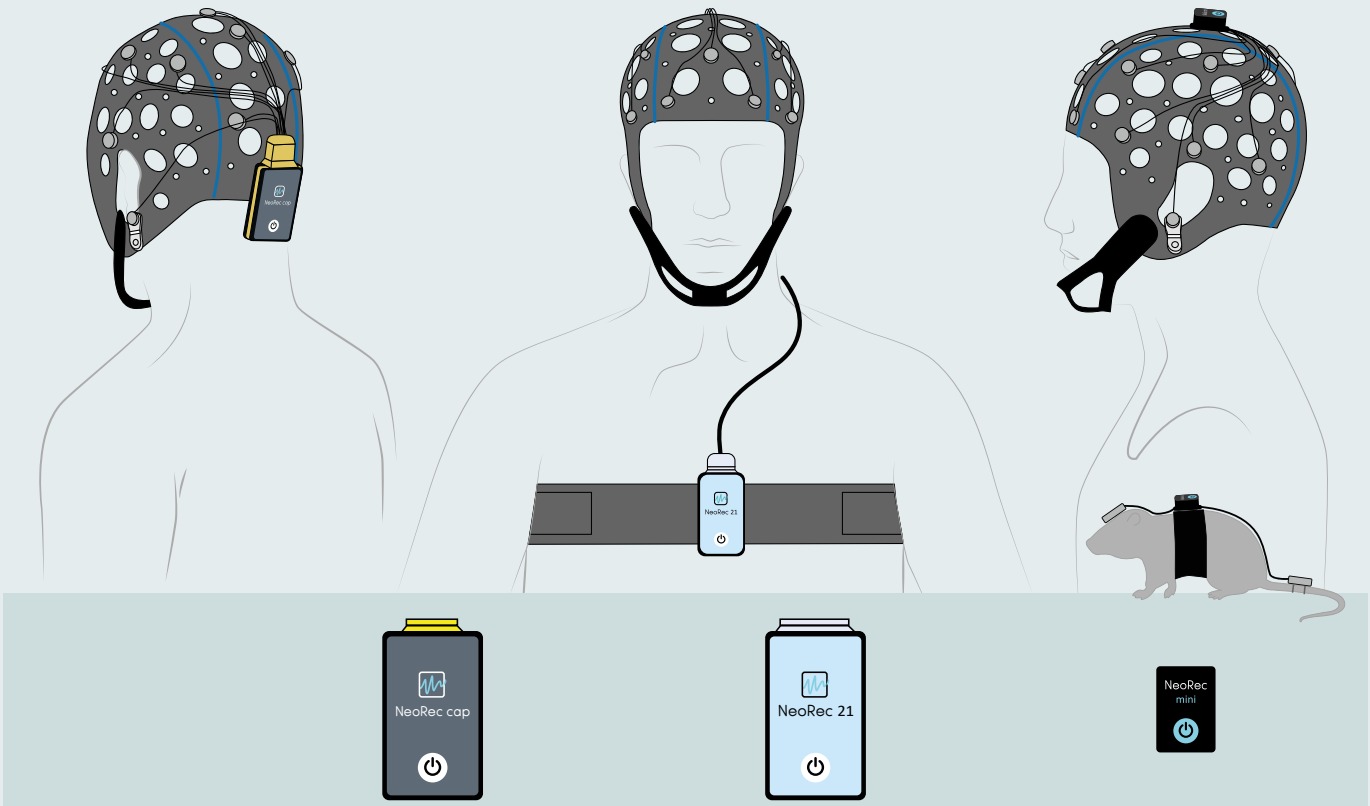
for using with EEG gel

for using with dry SoftPulse sensors

System includes

- EEG amplifier NB2-EEG16,
- Electrode cap PROFESSIONAL/BASE/DRY for amplifier NB2-EEG16, size by choose,
- Ear electrodes PROFESSIONAL/BASE/DRY with ear fixator,
- USB charger cable, User manual, Plastic box for storage,
- NeoRec software for Windows 10 PC (Internet loading).

Specification



Model	NeoRec cap	NeoRec 21	NeoRec mini
DC EEG channels relative to GND	16	21	21
Dynamic range	±150, ±300 mV	±150, ±300 mV	±150, ±300 mV
Resolution	24 bit	24 bit	24 bit
Sampling rate	125, 250, 500, 1000 Hz	125, 250, 500, 1000 Hz	125, 250, 500, 1000 Hz
Input impedance at DC	more 1 GOhm	more 1 GOhm	more 1 GOhm
Self-noise @ 0.1-30Hz	2 µV p-p	2 µV p-p	2 µV p-p
Impedance measurement	1..140 kOhm	1 ..5000 kOhm (dry electrode check)	1 ..5000 kOhm (dry electrode check)
Events	activity (4 steps), change orientation, free fall, button	activity (4 steps), change orientation, free fall, button	activity (4 steps), change orientation, free fall, button
Offline data recording	no	yes, to microSD card	yes, to microSD card
Active electrodes support	yes	yes, with digital control	yes, with digital control
Working time	more than 15 hours	more than 12 hours	more than 2,5 hours
Wireless interface	BLE 4.2	BLE 5.2	BLE 5.2
Wireless certification	CE, FCC USA, Canada, Japan, Korea, Taiwan	CE, FCC USA, Canada, Japan, Korea, Taiwan	CE, FCC USA, Canada, Japan, Korea, Taiwan
Firmware update	wireless by mobile application	wireless by mobile application	wireless by mobile application
Size	67 x 38 x 16 mm	67 x 38 x 16 mm	33 x 23 x 18 mm
Wight	40 g	40 g	14 g

NVX – 36T

DC EEG

36 channels

tDCS

tACS

tRNS

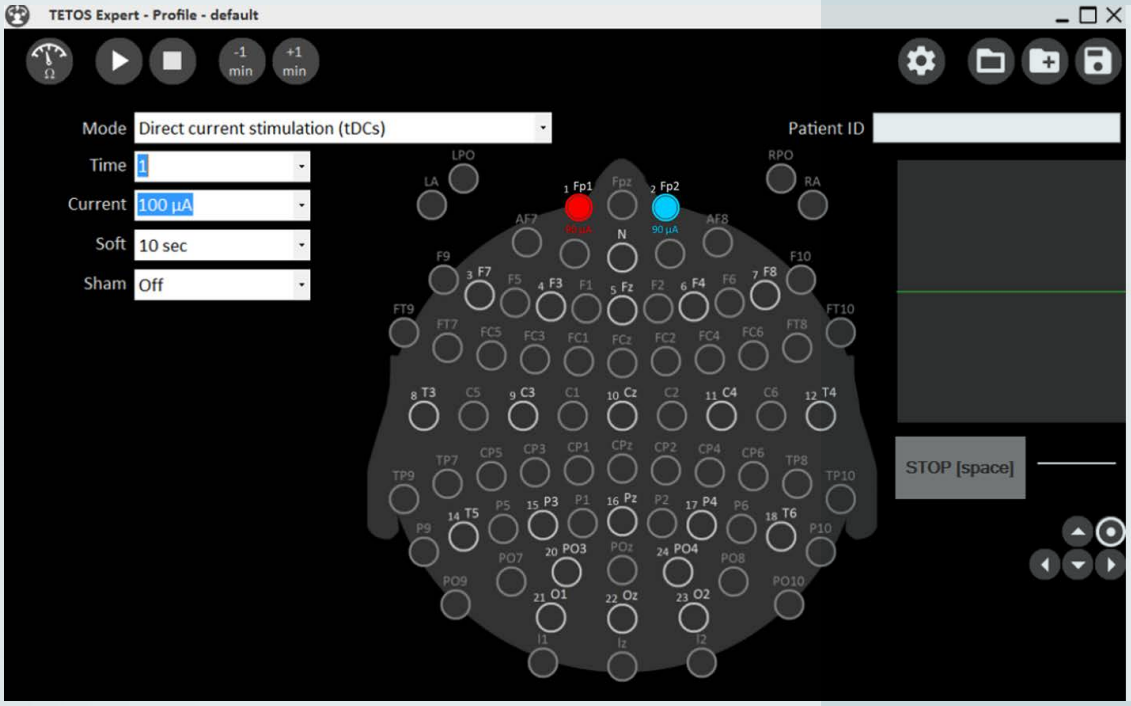
Research system for DC EEG acquisition and transcranial electrical stimulation (tDCs/tACs/tRNS)

Advantage

- 32 EEG DC monopolar channels, 4 DC AUX bipolar channels for probes, 9/1 input/output triggers, OLED display, AC/DC DDS current generator. Stimulate using up to 31 electrodes.
- Dual use electrodes for EEG acquisition and stimulation. Used big-area sintered Ag/AgCl electrodes and innovative textile cap.

Flexible EEG acquisition and transcranial current stimulation

NVX-36T amplifier is used in training systems, clinical and scientific researches as a part of computer-based system. Each channel has a DIRECT CURRENT input cascade and individual 24-bit ADC for EEG sampling up to 10000 times per second. Internal high resolution Direct Digital Synthesis (DDS) current stimulator for producing DC or AC current via any EEG electrode or a set of electrodes.
Application software for settings of experiment, recording to EDF+, BDF+ and stimulation.
Software library for self-design of user application.



System includes

- NVX-36T DC EEG amplifier & tES stimulator (tDCs/tACs/tRNS),
- USB cable 5 m,
- NVX-T EXPERT software (LSL server & tES),
- NEOREC software,
- Electrode kit,
- Stand for NVX amplifier (optional).

SOFTWARE

Specification

EEG recording mode	
EEG monopolar channels	32
Auxillary connectors for sensors;	4 galvanically isolated from EEG
TTL triggers (input / output)	9 / 1
Display	OLED; 3.2», 256 x 64 px
Dynamic range of EEG channels	not less than ± 400 mV
Input impedance of EEG channels	more 100 MOhm @ DC
Self-noise of EEG channels	< 1 µV p-p (0.15 RMS) @ 0.1-30 Hz
EEG test signal	square 250 µV (±1%), 1 Hz
Electrode impedance measurement range (absolute error)	1-120 kOhm (±10%) @ 30 Hz
Dynamic range of Aux channels	0-4 V
Input impedance of Aux channels	more 100 MOhm @ DC
Self-noise of Aux channels	< 15 µV pk-pk (2.5 µV RMS) @ 0.1-30 Hz
Powering of sensors	+5 V (±5%). up to 15 mA per channel with electronic protection
Digitalization	24 bit, 6th order delta-sigma modulator with 64x oversam pling, one converter per each channel
Low cutoff frequency	From 0 Hz (DC) followed by filtering by application software
Signal sampling frequency	500, 1000, 2000 Hz (TETOS Expert); 250, 500, 1000, 2000, 5000, 10000 Hz (NeoRec); 250-2000 Hz for all channels: 5000 Hz for the first 24 channels; 10000 Hz for the first 16 channels;
Real time data transmission protocol	Lab Steaming Layer (LSL)
Stimulation mode	
Number of current generators	1
Number of stimulation channels	up to 31 (30 EEG + GND, switching to channels A1 and A2 is not available), each electrode can be connected to the anode or cathode of the generator
Current generator	16 bit Direct Digital Synthesis (DDS)
Stimulating range	from 10 µA to 3.9 mA
Maximum output voltage of the current generator	30 V
Stimulation current modes	Direct current (tDCS), Alternating current (tACS), Alternating current monopolar (tACMS), Random noise (tRNS), Custom stimulation mode
Stage duration	up to 60 min
Smooth start/end of stimulation	Off, 10, 20, 30 sec
Sham stimulation	Off, 10 / 20 / 30 sec. at the beginning, 10 / 20 / 30 sec. at the beginning and at the end
Stimulus shapes in tACs and tACMs mode	Sine, square, random noise, ramp, trap, sinc, Gauss, Lorentz, haversine, exponential, custom

Loading an external stimulus	from a specially prepared WAV file
Current generator sampling rate	8000 Hz
Maximum frequency for a periodic signal	1000 Hz
Measurements during stimulation	Total generator current; Total load impedance; Local current for each electrode (for all electrodes in AC mode, for the anode in DC mode)
Stimulation indication	In the program, sound signal, light indicator, output trigger, on the LED screen of the device
Other	
Connector for electrode cap	TouchProof 1.5 mm (DIN 42 802-BU) for individual electrodes DB-25F (24 channels) KEL 8830E-040 (32 channels)
Control	USB only
PC interface	USB, V1.1, 2.0, 3.0 type B, Plug And Play
Cable length	5 m
OS	Windows 10 (64 bit)
Power	5 V, 450 mA max from USB in active mode, current consump tion up to 450 mA, in standby mode up to 5 mA
Time of continuous work	not less than 8 hours
Average lifetime	5 years
Dimensions (LxWxH)	200 x 155 x 40 mm
Net weight	< 650 g
Safety	IEC60601-1, IEC60601-1-6, IEC60601-2-10, IEC60601-2-26 class II, type BF

Electrode kit includes

- Ag/AgCl sintered electrodes MCScap-NTC – 33 pcs.
- Ag/AgCl electrodes MCScap-CS22 – 33 pcs.
- Stainless steel electrodes MCScap-CS22SS – 33 pcs.
- Set of ear Ag/AgCl sintered electrodes with fixators – 2 pcs.
- Textile cap MCScap 10-10, size L (54-60 cm) – 2 pc.
- Textile cap MCScap 10-10, size M (48-54 cm) – 2pc.
- Textile cap MCScap 10-10, size S (42-48 cm) – 2 pc.
- Elastic textile belt, size L (54-60 cm) – 2 pc.
- Elastic textile belt, size S (42-48 cm) – 2 pc.
- Starter kit (conductive gel, syringe, needles, brushes for cleaning).

tES4me

8 electrodes

personal

mobile

tDCS

tACS

tRNS

tES4me is a personal system for transcranial electrical stimulation intended for physiotherapy and rehabilitation of patients with neurological and psychiatric diseases by means of transcranial electrical stimulation (tES) in accordance with stimulation protocol prescribed by the attending physician.

Weak constant or pulsating electrical stimuli from surface electrodes are delivered to the brain during tES procedure. It is known that properly selected tES procedure improves the quality of life and corrects such clinical conditions as anxiety, depression, insomnia, addiction and can also be used to create a state similar to chemically induced anesthesia.

tES4me can be used by the patient independently at home after preliminary programming of the personal stimulator by the doctor.

Advantages

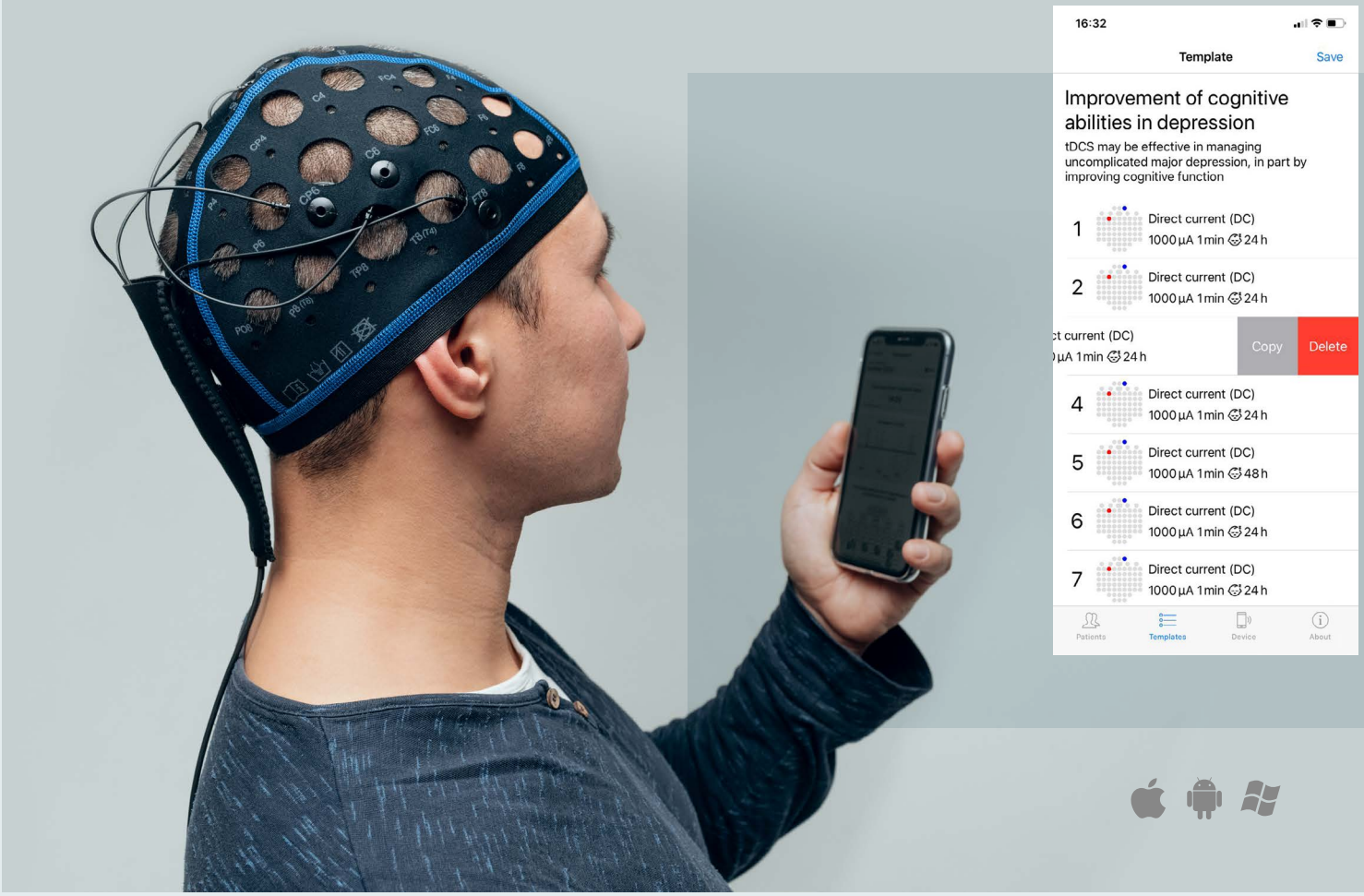
- Programming scenarios up 30 unique procedure, up to 5 stages in the procedure;
- From 2 up to 8 electrodes can be connected to current generator poles in arbitrary order;
- Individual tES modes for each stage:
    - tDCS - Transcranial direct current stimulation,
    - toDCS - Transcranial oscillatory direct current stimulation,
    - tACS - Transcranial alternating current stimulation,
    - tPCS - Transcranial pulsed current stimulation,
    - tRNS - Transcranial random noise stimulation,
    - HD-tES - High density transcranial electrical stimulation,
    - Sham stimulation.
- Current generation with direct digital synthesis (DDS) up to 4 mA;
- Precise current adjustment 1 µA;
- Smooth increasing and decline of stimulation current;
- Continuous impedance measurement during TES procedure;
- Simple device operation – one button solution.

System includes

- tES4me stimulator,
- Adapter tES4me with 8 electrodes,
- textile cap MCScap light,
- Sponge D22 (50 pcs.),
- USB cable for tES4me,
- User manual,
- tES4me box.

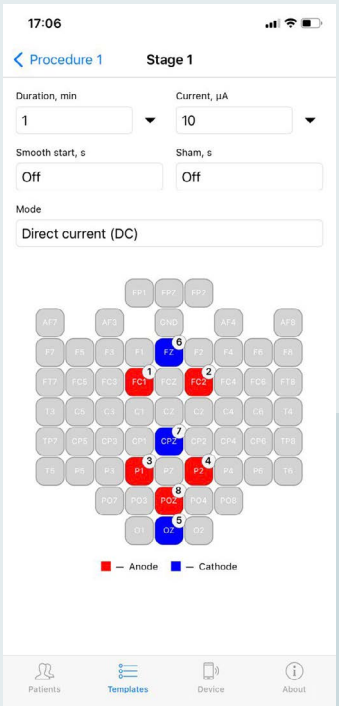
Specification

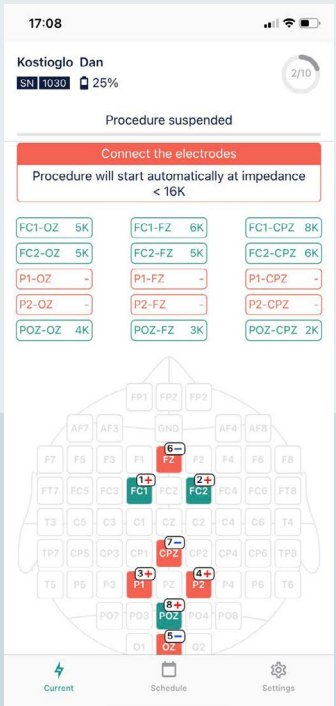
Number of procedures in the course / stages in the procedure	1-30 / 1-5
Duration of the procedure / stage	1-60 min.
Setting of minimum rest time after the procedure. Device is blocked during this time	0, 1, 6, 12, 24, 48, 72 hours
Smooth rise and fall of stimulation current	Off, 10, 20, 30 sec.
Stimulation current	10-4 000 µA
tES modes	tDCS, toDCS, tACS, tPCS, tRNS, HD-tES, Sham stimulation
Maximum allowable impedance for maximum stimulation current/generator voltage	9.5 kΩ /38 V
DDS generator sampling frequency/digit capacity	8 kHz / 13 bit
Checking of the electrode connection before stimulation	Impedance less 8 kΩ @ 30 Hz, measurement current 30 µA
Shape (for tACS and toDCS modes)	Sine, Random, Square, Ramp, Trap, Sin(X)/X, Gauss
Frequency (for tACS and toDCS modes)	1-1 000 Hz
Lower cutoff frequency for tRNS mode @-3dB	10 Hz, 50 Hz, 100 Hz, 200 Hz, 300 Hz, 500 Hz
Upper cutoff frequency for tRNS mode @-3dB	50 Hz, 100 Hz, 200 Hz, 300 Hz, 500 Hz,1000 Hz
Wireless interface	BLE 4.2
Wireless certification	CE, FCC USA, Canada, Japan, Korea, Taiwan
Battery charging	2.5 hours from USB 5V ⎓ 2A(max)
Dimensions (LxWxH)	87 x 56 x 17 mm
Net weight	65 g
Operation system	iOS, Android, Windows
Main functions of the doctor application	Programming of stimulation courses and course templates, uploading of protocols and condition assessments, operation with a patient database
Main functions of the patient application	Schedule of procedures with mark after completion, assessment of the state after procedure (1-5 points), indication of stimulation process
Diameter / surface area of electrode CS22-SS	22 mm / 3.80 cm^2
Diameter / surface area of electrode CS13-SS	13 mm / 1.32 cm^2
Available cap sizes	XL (60-66 cm), XL/L (57-63 cm), L (54-60 cm), L/M (51-57 cm), M (48-54 cm), M/S (45-51 cm), S (42-48 cm), S/XS (39-45 cm), XS (36-42 cm)

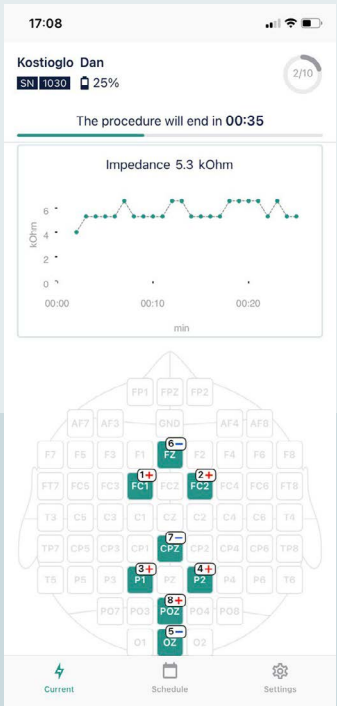


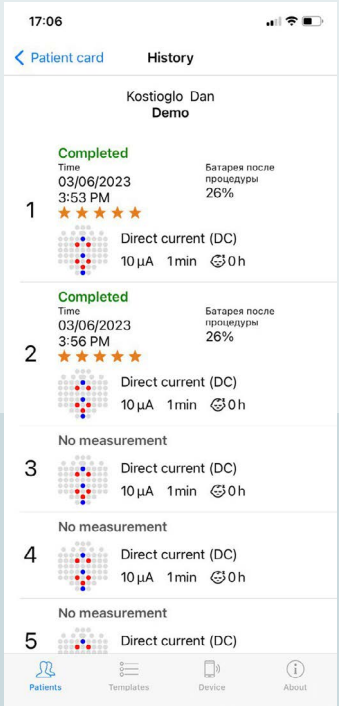
Doctor mobile application for setting up the protocol of stimulation.

Patient mobile application for online monitoring of stimulation procedure parameters.









Offline operation by pre-configured and loaded protocol into the internal memory of the device.

MCScap

Accessories

EEG

tES

EEG electrode caps

EEG electrode caps MCScap are ready solutions for any EEG examinations.

- quality of EEG signal acquisition,
- comfortable for patient,
- easy and fast installation,
- convenience for doctor/operator,
- long durability.

Textile caps for EEG electrodes

Textile cap MCScap is made of elastic material that provides the most comfortable fit of the electrodes and the right positions without additional adjustment. Numerous big holes are intended for the opportunity to push the hair and prepare the skin for examination, and also for better ventilation.

Textile caps have a marked holes for electrodes according to international systems 10-20, 10-10, 10-5.

12 sizes of cap cover the head sizes from 24 cm to 66 cm head circumference. Color material or color seams helps to make a quick choose of the right size.

The material does not allow the gel or paste to dry out under electrodes fast.

EEG electrodes

Reusable passive electrodes MCScap are based on high-quality Ag/AgCl and Ag/AgCl sintered sensors which guarantee:

- a high quality signal
- a long-term stable electrical contact
- a low noise reference electrode
- a minimum electrode polarization
- an excellent low frequency response

All MCScap electrodes can be integrated into textile cap MCScap. Electrodes can have TouchProof connectors or can be preinstalled in the Electrode cap with common connector. All electrodes have special holes for conductive gel.

Video about MCScap

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Brochures

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