MEDICOM MTD

Research & Development Company

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Medical diagnostic equipment - brief catalogue

Neurophysiology and psychophysiology

CE 0086

Cerebral function monitor "Encephalan-CFM"

Dynamics of changes in the newborn brain activity, which cannot be traced during short-term EEG study, is clearly represented during continuous EEG monitoring in the form of amplitude-integrated EEG trends (aEEG), compressed spectrum and other quantitative parameters of the central nervous system along with the native EEG signal in low number of channels (3 to 5).

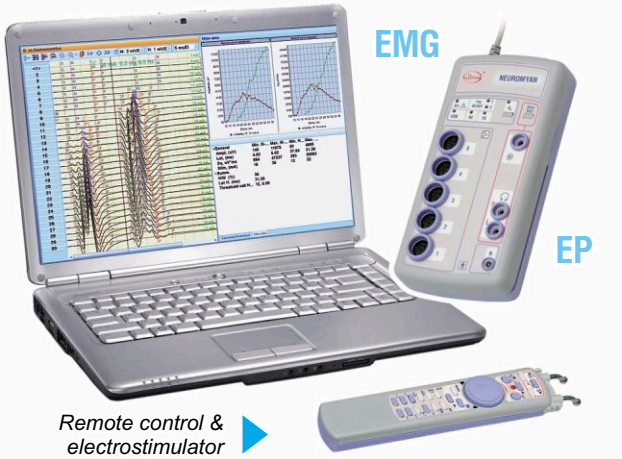
- Number of EEG channels – 5;
- Noise level – less than 1 μV;
- ADC – 24 bit;
- Wireless data transmission – Bluetooth®;
- Memory card – microSD®;
- Power – 1 rechargeable battery AA; or mains /USB adapter;
- Weight – up to 110 g.

Optionally:

- defibrillation proof connector;
- wireless photophonostimulator;
- oxygen saturation monitoring (SpO_2);
- synchronous videomonitoring;
- simultaneous data monitoring of up to 4 patients with representation of results at a doctor's workplace.

Neuromyoanalyzer NMA-4-01 "Neuromyan"

2, 4 or 5-channel modifications and various versions of the software for quality record of myographic signals and evoked potentials provide selection of both not expensive on-budget and elite expert class devices.



Remote control & electrostimulator

Electromyographic studies:

- F-wave and H-reflex;
- Motor unit potential;
- Blink reflex;
- Motor and sensory nerve velocity;
- Surface EMG express;
- Needle EMG;
- Surface multichannel EMG.

Evoked potentials studies:

- Brainstem auditory evoked potentials;
- Middle and long latency auditory EP;
- Flash visual and pattern reversal EP;
- Short and long latency somatosensory EP.

The original remote control is an equivalent of a functional keyboard – it simplifies the carrying out of multiple standard tests without the use of a computer keyboard and mouse.

Objective psychological analysis and testing system "Egoscop"

www.egoscop.ru

It uses the original, innovative technology, which includes autodocumentation of a testing process, hand motility analysis of a subject, additional synchronous recording of psychophysiological parameters (pictopolygraphy) and provides a new level of psychological and psychophysiological diagnostics

The subject answers questions using the touch-screen tablet as in common tests of paper forms

- The possibility of independent **creation of scenarios** for the psychological tests (projective techniques), psychophysiological and cognitive tests in different languages on the basis of tools (embedded software and scripts), allowing the use of text and graphics, audio and video files when creating scenarios.
- **Synchronous autodocumentation** of processes of psychological and psychophysiological testing and parameters of motor activity of the subject on the touch-screen tablet, which uses electromagnetic resonance technology and reflects psychomotor and physiological reactions during the test process.
- The software builds additional **profiles of psycho-emotional responses** in relation to different semantic clusters of the performed scenario and evaluates individual emotional significance of various semantic categories.
- The **export** of native physiological signals and calculated psychophysiological and psychomotor parameters **into common formats** (ASCII, Excel) .
- An extensive and expandable **library of psychophysiological scenarios.**

Electroencephalographs

CE 0086

Transformable multifunctional electroencephalographs "Encephalan-EEGR-19/26" with HD videomonitoring kit

modification "Mini"

main modification

Mobile application

20 channels

32 channels

Stationary application

Electroencephalograph-recorder "Encephalan-EEGR-19/26" for short-term and continuous EEG studies in a doctor's room, in a hospital room or at the patient's home.

Modification "Mini" – basic patient transceiver-recorder ABP-10:

- 9 channels for EEG/EP record (including A1-A2) and slow cortical potential;
- 1 polygraphic channel (ECG, EMG, respiratory effort, etc.);
- 1 body position channel.

Main modification – basic patient transceiver-recorder ABP-26:

- 20 (32) channels for EEG and slow cortical potential;
- 2 EOG;
- 1 ECG;
- 2 EMG;
- 1 respiratory effort channel.

Multifunctional diagnostic system

- With Bluetooth® wireless technology, basic patient transceivers-recorders can be supplemented with modules for recording various signals (movement activity, SpO2, temperature, EMG, GSR, etc.) by the polygraphic channels (4, 10 or more).

Encephalan-Video

Kit of video equipment for EEG videomonitoring and software "Encephalan-Video" provides long-term EEG monitoring synchronized with the video recording of a patient (up to 4 IP cameras) in hospital rooms specially equipped for EEG videomonitoring, patient's ward, ICU, resuscitation department or at the patient's home.

Synchronous recording of EEG/PSG and video data is the "gold standard" for epilepsy diagnosis in newborns and adults.

Autonomous EEG-recorder (Holter EEG)

Electroencephalograph-recorder "Encephalan-EEGR-19/26", main modification

Continuous record of electroencephalogram (over 48 hours) onto the memory card integrated into the patient transceivers-recorders ABP-26 or ABP-10 and a special set of electrodes "Encephalan-ES" provide comfortable carrying out of autonomous EEG studies (Holter EEG) in natural patient environment, both in a hospital ward or at home, during active wakefulness and sleep.

Continuous autonomic EEG-study is effective for:

- evaluation of undefined genesis disorders of not defined genesis, which are manifested under conditions of natural environment and behaviuor;
- detection of pathological manifestations, such as paroxysmal epileptic states, transient ischemic attacks and others;
- differential diagnosis of epilepsy, types of seizure and syndromes, especially in irregular and illdefined paroxysm.

During autonomous study the device provides a unique opportunity for periodic functional tests in the telemetric mode required to induce controlled pathological manifestations.

Mobile kits of equipment for continuous EEG videomonitoring

Electroencephalograph-recorder "Encephalan-EEGR-19/26", main modification
Videomonitoring kit and software "Encephalan-Video"

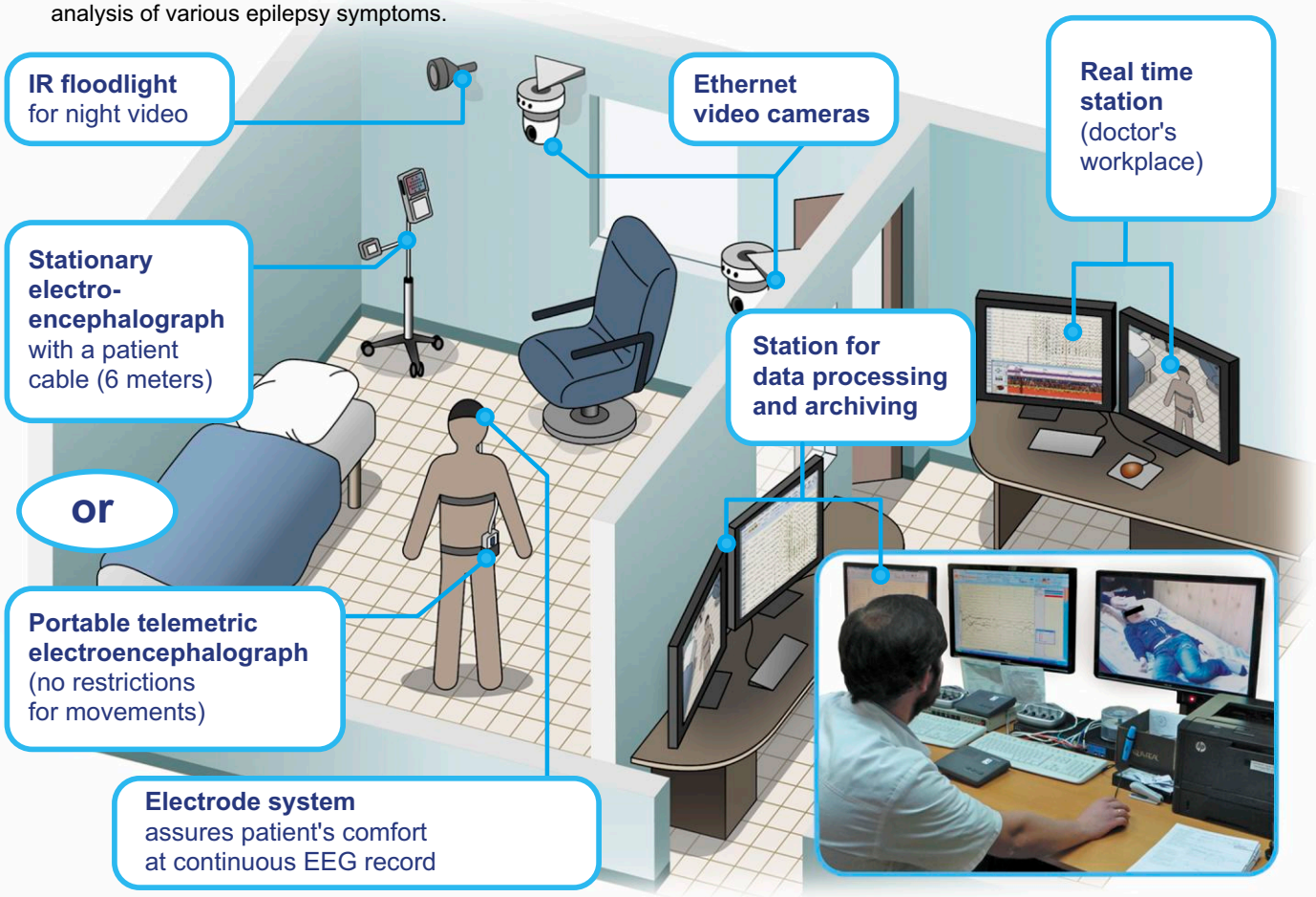
The mobile kit for continuous EEG videomonitoring conducted at patient's home (or in any medical department) fits into one or two compact carrying cases, is easily transported by one person and includes a telemetric portable electroencephalograph-recorder, a photostimulator, an EEG electrode set, a portable PC and the kit of video equipment.

Studies are carried out in patient-friendly environment. Patients can sleep, eat, read, watch TV, play, etc. A doctor or an assistant monitors their state, operation of the equipment and recording quality.

For the first time the company provides an autonomic video equipment kit for synchronized video record with the EEG data onto the internal video memory card of a recorder.

Stationary complex for continuous EEG videomonitoring

The complex provides audio and video record synchronized with EEG data from high-quality IP cameras (up to 4). Stationary complex for continuous EEG videomonitoring is the gold standard for differential diagnosis and subtle analysis of various epilepsy symptoms.



Biofeedback and neurofeedback equipment

CE 0086

Psychophysiological telemetric system "Rehacor-T"

"Rehacor" Software for Functional Biocontrol with Biofeedback and Neurofeedback Training

The main features of psychophysiological telemetric system "Rehacor-T" are:

- effective procedures for training self-regulation skills and psychophysiological state as well as for correction of different psychosomatic disorders using wide range of physiological parameters and their combination;
- wireless connection to PC, self-contained power supply, multichannel record (8 channels) that allow carrying out biofeedback procedures without restricting patient's activity that is particularly effective in sport, occupational medicine and educational technologies.

Electroencephalograph-recorder "Encephalan-EEGR-19/26"

The main features of the electroencephalographs are:

- multiparameter record (10 or more), which allows create and use more effective scenarios of biofeedback procedures in sport, education, science and for special training and rehabilitation;
- great possibilities for biofeedback and neurofeedback procedures by EEG and superslow electrical brain activity using quantitative methods of analysis (qEEG, aEEG);
- professional neurophysiological support using software for electroencephalograpical studies and additional software of electroencephalograph.

Polysomnographs

CE 0086

Sleep signals recorder "ApnOx-04"

Type IV AASM

for respiratory screening – 3 channels

Signals and parameters:

- oxygen saturation (SpO_2);
- photoplethysmogram, pulse rate, perfusion index, respiratory rate and conventional respiratory amplitude (based on SpO_2);
- pressure airflow;
- snore and airflow velocity (based on the airflow data);
- body position and total movement activity (integrated accelerometer sensor);
- CPAP Pressure.

Recording modes:

- autonomous – data record onto the memory card;
- telemetric – data transmission into computer via wireless Bluetooth® channel.

Sleep screening at home becomes easier, more accessible and more accurate!

Basic modules ***"ApnOx-04" and "ApnOx-10"***

Over 10-hour record of physiological data

Synchronous sleep video-monitoring

As a result of the study, necessary reports on sleep statistics are generated based on automatically detected events

www.apnox.com

Type III AASM

Sleep signals recorder "ApnOx-10"

for cardiorespiratory monitoring – 7 and more channels

Additional wireless module ***Poly-4***

Signals and parameters:

- thoracic and abdominal respiratory effort;
- electrocardiogram;
- heart rate (based on ECG);
- pulse wave transit time (based on ECG and PPG);
- snore (accelerometer sensor);
- airflow (thermistor airflow sensor);
- motility;
- skin conductance;
- signals from DC-inputs.

Laboratory-based or ambulatory (mobile) polysomnographic system

Type II AASM

Electroencephalograph-recorder "Encephalan-EEGR-19/26", modification "Mini" with "Encephalan-PSG" software for somnological studies (patient transceiver-recorder ABP-10)

Registration of signals and parameters for common and extended cardiorespiratory monitoring, evaluation of the restless legs syndrome severity and sleep structure analysis by 2, 6 or 9 derivations (EEG, EOG and EMG):

Four main variants of polysomnographs:

Basic variant – analysis of phasic sleep structure by 2 EEG derivations and cardiorespiratory monitoring.

Optimal variant – analysis of sleep structure by 6 EEG derivations and cardiorespiratory monitoring.

Professional variant – analysis of sleep structure by 6 EEG derivations, extended cardiorespiatory monitoring (3 ECG channels) in relation to respiratory disorders, evaluation of the restless legs syndrome severity.

Telemetric or autonomous (EEG/PSG Holter) modes and combination of HD record with maximum patient comfort during sleep.

Synchronized EEG-PSG videomonitoring provides quality differential diagnosis of epilepsy – detection of epileptic patterns and classification of spike-and-wave activity in relation to sleep structure.

Laboratory-based (stationary) polysomnographic system

Type I AASM

Electroencephalograph-recorder "Encephalan-EEGR-19/26", main modification with "Encephalan-PSG" software for somnological studies (patient transceiver-recorder ABP-26)

Registration of signals and parameters for common and extended cardiorespiratory monitoring, evaluation of the restless legs syndrome severity, sleep structure analysis, advanced EEG analysis by 12, 20 or 32 derivations. Additional polygraphic channels (4 or 10).

Four main variants of polysomnographs:

Basic variant – analysis of sleep structure by 12 EEG derivations and cardiorespiratory monitoring.

Optimal variant – analysis of sleep structure by 20 EEG derivations and cardiorespiratory monitoring.

Professional variant – analysis of sleep structure, advanced EEG analysis by 20 derivations, extended cardiorespiatory monitoring in relation to respiratory disorders, evaluation of the restless legs syndrome severity, polygraphic channels.

Professional 32-EEG variant – analysis of sleep structure, advanced EEG analysis by 32 derivations, cardiorespiatory monitoring.