

NEUROMONITOR^{*}

Cerebral Function Monitor with Touchscreen Interface



point-of-care system
for intensive care units



easy and convenient to use
by neurologists
and neonatologists



can be transformed to 8-32-channel
digital EEG system for long-term
video EEG monitoring**



ensures synchronous
HD video recording



can automatically detect
pathological aEEG patterns
with different type notifications

EEG

* digital system of Neuron-Spectrum series
in Neuromonitor configuration

** depending on amplifier type

TECHNIQUE DESCRIPTION

At present the perinatal hypoxic-ischemic brain injury is the main cause of neurological deficits in newborns. That is why early detection of such injuries has very important prognostic value. The optimal technique to assess the central nervous system state of a patient in intensive care unit (ICU) is cerebral function monitoring with amplitude-integrated EEG (aEEG).

Neuromonitor is intended for long-term aEEG monitoring and control of cardiac and respiratory functions (respiration, oxygen saturation, electrocardiogram). Due to simplified acquisition system, the exam result can be interpreted by neonatologist without involving neurologist. However, if it is required, Neuromonitor can be transformed to full-function EEG system of expert class.

Besides diagnostics of CNS abnormalities in term-born infants and assessment of brain maturation in premature infants, Neuromonitor is used to assess CNS state in adults staying in intensive care units.

APPLICATIONS



Intensive care

- ▶ determination of status epilepticus
- ▶ estimation of anesthesia efficacy
- ▶ monitoring of brain functioning in patients with:
 - traumatic brain injury
 - stroke
 - coma



Neonatology

- ▶ assessment of brain maturation in term-born and premature infants
- ▶ diagnostics and prognosis of perinatal hypoxic-ischemic encephalopathy (HIE)
- ▶ detection of seizures (single, multiple, status epilepticus) and also estimation of antiepileptic therapy efficacy
- ▶ sleep-wake cycle assessment as a predictor of favorable neurological outcome
- ▶ control of infant's state undergoing therapeutic hypothermia



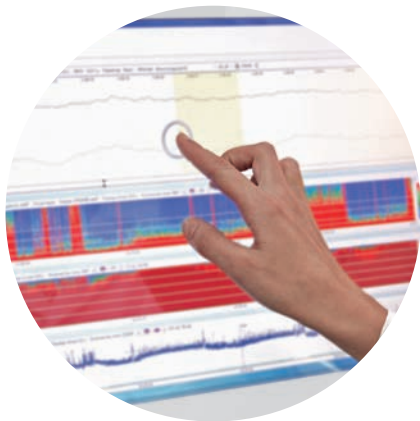
EASY AND CONVENIENT TO USE



Specially designed CFM pod with 2-meter cable can be easily placed at a patient’s point-of-care (for example in infant incubator). It ensures fast and convenient electrode placement. In complex cases Neuromonitor can be easily transformed to full-function EEG system for long-term EEG video monitoring to record EEG, video and audio information with spike detection and mapping, etc.



Optional video monitoring set allows to record video information and review it simultaneously with traces. Miniature HD camera positioned at a holder can be easily fixed near a patient. High definition of camera images makes it possible to distinguish the slightest seizures. The video monitoring is essential for visual detection of record artifacts, for example, patient movement events.



User-friendly interface is focused on touchscreen controls. Intuitive navigation ensures fast access to data. Versatile software settings are easily customizable.



The smooth-running trolley makes the system mobile and easy-to-move.

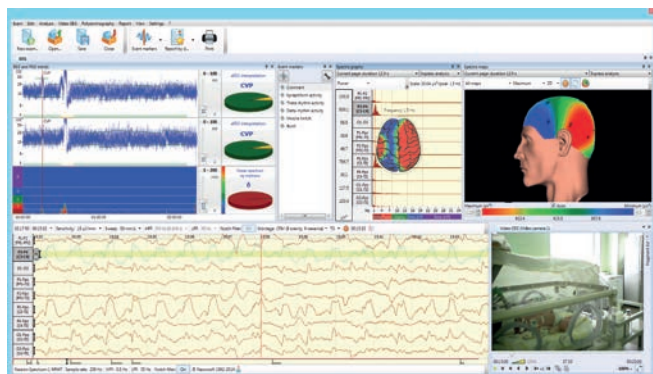


All performed exams are stored in single database. If it is required, native EEG can be interpreted by neurologist.

SOFTWARE FEATURES

①

Long-term monitoring of cerebral function (from 2 to 32 EEG channels) and also respiratory and cardiovascular events, oxygen saturation, etc.

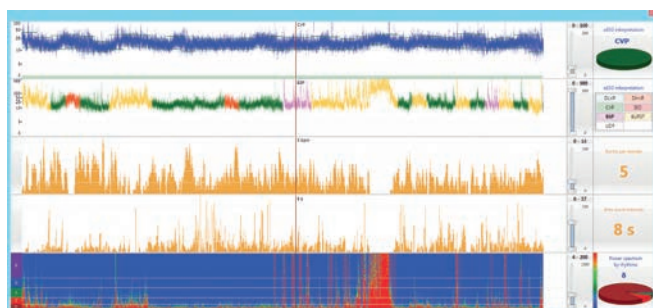


②

Acquisition and assessment of aEEG and native EEG.

③

aEEG trends allow reviewing long-term record fragment. The trend interpretation is done automatically or manually by certain patterns. The patterns can be color-coded.



④

Automatic detection and highlighting of record artifacts, seizure events, spikes, sharp waves, burst-suppression events, etc.

⑤

The system ensures electrode impedance indication at any record fragment both during acquisition and exam review.

⑥

Calculation of trends is done automatically during EEG acquisition. In case vital parameters go beyond the reference values, the software generates text notifications that can be sent by e-mail.

⑦

Video monitoring of a patient with synchronous record of video signal allows to identify record artifacts and detect patient's seizures during exam.

⑧

Possibility to equip the reviewing station to follow several exams simultaneously***.

⑨

Automatically generated report can include any trends, native trace fragments and other analysis results.

*** requires LAN connection.



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