Neuromaster

Intra-Operative Monitoring System MEE-1000

Fighting Disease with Electronics

NIHON KOHDEN

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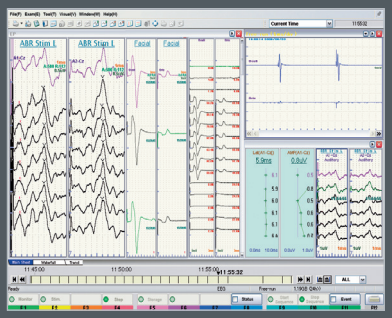
The Neuromaster has been designed specifically for the demands of monitoring neurophysiological signals in the operating room. It supports recordings such as EP, EEG, MEP and EMG, each of which comes with its own appropriate set of analysis modules. Strong emphasis is placed on the flexibility and configurability of the system to allow usage of the various settings. The hardware's excellent signal processing qualities provide a reliable recording, even in the adverse surroundings of an operating theatre.

System features

- 16 or 32 recording channels for any electrophysiological signal (sensitivity from 0.05 uV–50 mV)
- 5 to 20 electrical stimulators for peripheral electrical stimulation (up to 100 mA or 300 V)
- Up to 2 stimulators for intracranial low voltage stimulation, monopolar or bipolar
- Optional transcranial stimulator to record motor evoked responses available (up to 1,000 V, minimum pulse interval 1 ms)
- Video capture option

Freedom of operation

The requirements of the procedure determine the different ways you can use the system, not the other way round. Due to the many different recording protocols that are common for intra-operative monitoring, Neuromaster allows you up to 100 different protocols, each of which can have 10 different views (workspace configurations) on your raw data, trend graphs, etc. for a given procedure. In a similar way all montages and recording sequences can be switched during the procedure.



Monitoring of AEP and facial nerves

Monitoring of MEP and SEP

Modes of stimulation

Electrical stimulation: Single stimulus or train with a maximum frequency of 50 Hz; the stimulation pulse can be monopolar or bipolar and be constant current or constant voltage. The internal stimulators may be directed to up to four stimulation breakout boxes, which can be conveniently placed next to the stimulation site.
High-voltage stimulation for transcranial stimulation: The external stimulator for motor evoked responses can be fully controlled from the system software, which makes for a truly integrated system.
Low voltage stimulation: This allows for complex stimulation patterns directly on the cortex.
Acoustic and visual stimulation: For auditory and visually evoked potentials you have a stimulator available that is already built into the system.

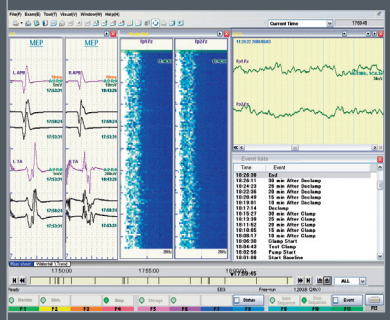
Data evaluation

Graphical and numerical trends of the latencies, amplitudes and area values are available for the different evoked responses. The EEG is evaluated for edge frequency, frequency spectrums and signal power in various display modes as well. For documentation purposes, all of these data can be printed.

Amplifier simulation unit

Integration into a network

A remote view via a network, which enables the neurophysiologist to monitor the waveforms without even being present in the operation room, is available. The Neuromaster data can be administered in the same SQL database that is used in other neurodiagnostic devices from Nihon Kohden, and which acts as an interface with external hospital information systems via HL7.



Monitoring of MEP and DSA Trend of EEG

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