

Intra Operative Nerve Monitoring System

The system should be a portable, laptop based Intra-operative 32 channel Neuro-monitoring system, with capability to monitor critical neural pathways during critical surgeries.

The system should be capable of:

- Surgeon directed and neurophysiologist –support capabilities in one system.
- Portable Laptop-based system.
- Integrated remote monitoring capabilities.
- Electronic or hard copy screen shot storage.
- Electronic data storage of the entire procedure including EMG audio.
- Electro-surgery unit (ESU) interference muting.
- 32 channel neurological monitoring for intraoperative and ICU applications.
- Comprehensive EEG, EP and EMG monitoring with up to 32 independent channels.
- Up to 128 traces (64 per modality) can be displayed.
- All EP modalities including SSEP, MEP, AEP, BAEP, VEP.
- Should have built –in pulse oximeter.
- Should be a minimalist system.
- Should have biphasic stimulation for TcMEP.
- Should have 2DVR feeds.
- Should SD +NS.
- Stimulators run all electric modalities.
- EMG audio is able to be recorded and reviewed.

Should at least support below mentioned surgeon-directed features.

- 8-Channel EMG, MEP and train of four modalities.
- 2-channel pulse Ox recording.
- Automated report generation for pedicle screw stimulation.
- Fully surgeon controllable from the sterile field.
- Probe's multicolor LED indicates test results.
- Multiple manual and triggered EMG modes of operation
- Audible and visual surgeon feedback.

Should at support below mentioned neurophysiologist –support features.

- Simultaneous 32-channel EP (MEP, SSEP, VEP, BAEP, Etc.), EMG and EEG monitoring.
- Built-in , fast –charge TcMEP with double –train stimulation.
- 2-channel Pulse Ox capability.
- Automated pedicle screw testing.
- Surgeon's microscope view.
- Simultaneous multisite remote monitoring and review.

Should at least support below mentioned Nerve Proximity test Screen.

- Provide audio tone feedback indicating proximity to a nerve root.
- Program automatically changes stimulation intensity while searching for an EMG response.

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Should at least support below mentioned screw test capabilities.

- Designed to quickly and automatically verify proper positioning of pedicle screws.
- Simulation intensity automatically increases until a response is generated.
- Algorithm confirms response to avoid false test results.

Should have Nerve Root Test Screen.

- Used to locate and quantify the health of a nerve root.
- Simulation intensity automatically increases until a response is generated.

Should have following surgeon –Directed Disposables.

- Surgeon directed ball tip probe.
- Gives surgeon full control from the sterile field.
- Buttons on probe allow surgeon to increase or decrease current, change the monitoring test mode and print reports.
- Multicolor LED display test result.
- Includes two ball –tip probes and one flush –tip probe.
- Up to 16 multimodality sets can be defined within test protocol.
- Free running, averaged or signal triggered data collection modes.
- All trace parameters (Filter, amplifier gain, artifact rejection, time base, display scale, Etc) should be fully user adjustable and independent.
- Data can be saved manually or automatically as continuous EEG, free run EMG, Triggered EMG, EMG Audio , Updated averaged EP, Screen snapshots and video.
- Previously saved data can be reviewed while monitoring. Review data locally or remotely via network, modem or internet.
- Standard test protocols are provided and can be modified and saved by user.
- All patients connections are both software and hardware and hardware protected against faults.
- Automatic pedicle screw integrity test mode.
- Module for easy EMG & MEP testing from the sterile field.
- Built in Pulse oximeter.
- Independent, high and low electrical stimulators for peripheral and direct nerve monitoring. Extensive stimulus triggering including repetitive, non-repetitive, single pair and train.
- Fast and slow charge TCeMEP stimulation mode.
- Data can be saved automatically (continuously, at predefined intervals or event triggered) or manually.
- Remote monitoring via modem, LAN or internet.
- Reports can be automatically generated for every test and contain all necessary test information and additional user –specified information.
- Complete range of accessories and disposables for all monitoring modalities.



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