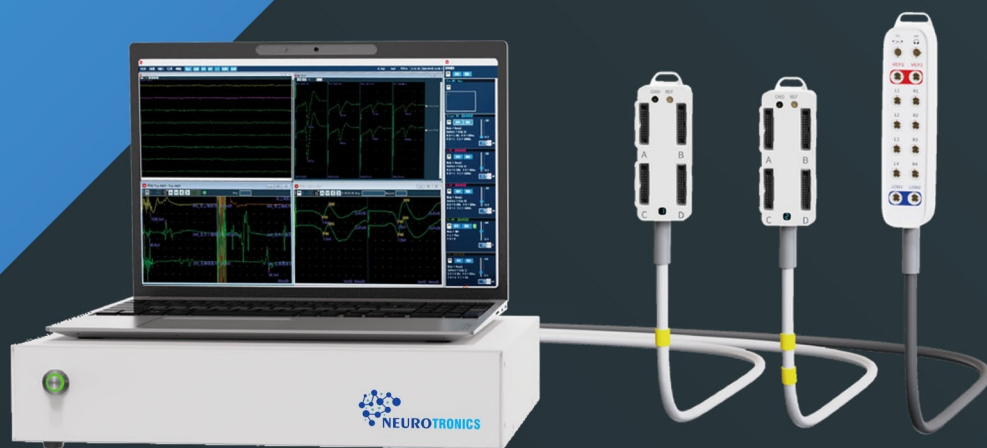


Intra Operative Neuro Monitoring (IONM) System

Available in 16/32
Channels

Compact, Light weight
design

Flexible configuration of
measurement modalities,
including EMG, MEP, SEP,
BAEP, VEP, EEG, TOF,
Pedicle screw etc



Intra Operative Neuro Monitoring (IONM) System

Input channels

16

32

Stimulation channels

9

Main Functions:

EMG | EEG | SEP

MEP | VEP | BAEP



Neuro Tronics IONM system is a professional intraoperative neuromonitoring system which helps reduce the risk of nerve damage during various types of surgery and identify the integrity of nerve function before the end of surgery through objective evaluation indicators of central nerves, peripheral nerves, muscles and narcotics. It has flexible configuration of measurement modalities (EMG, MEP, SEP, EEG, BAEP, VEP etc.) and has the ability to combine a wide variety for different kinds of spinal surgery or neurosurgery.

PRODUCT FEATURES

- Available in 16/32 Channels;
- Compact and light weight design for easy portability with 23 inch handy suitcase;
- Flexible configuration of measurement modalities, including EMG, MEP, SEP, BAEP, VEP, EEG, TOF, Pedicle screw etc. to meet different surgical needs of spinal surgery or neurosurgery;
- Equipped with high-performance computers to ensure the quality of acquisition

● SPECIFICATION

Amplifier:

Sampling Frequency: 24kHz

A/D conversion ≥ 24 bit

Noise Voltage level: $\leq 2.0 \mu\text{V}$ p-p

Sensitivity: $0.1\mu\text{V/D}$ to

30mV/div step control

Input impedance: $\geq 3000\text{M}\Omega$

CMRR: $\geq 120\text{dB}$

Electrical Stimulator:

High-voltage stimulus (MEP Mode):

- Stimulation intensity: 1000V, 1000mA
- Pulse train frequency: 100Hz $\sim$ 1000Hz;
- Pulse train count: 1-10;
- Stimulation polarity: positive phasic, negative phasic, biphasic

Regular stimulus(Normal Mode):

- Stimulation intensity: 400V, 100mA
- Pulse train frequency: 1Hz $\sim$ 1000Hz;
- Pulse train count: 1-200;
- Stimulation polarity: positive phasic, negative phasic, biphasic

• SOFTWARE FEATURE

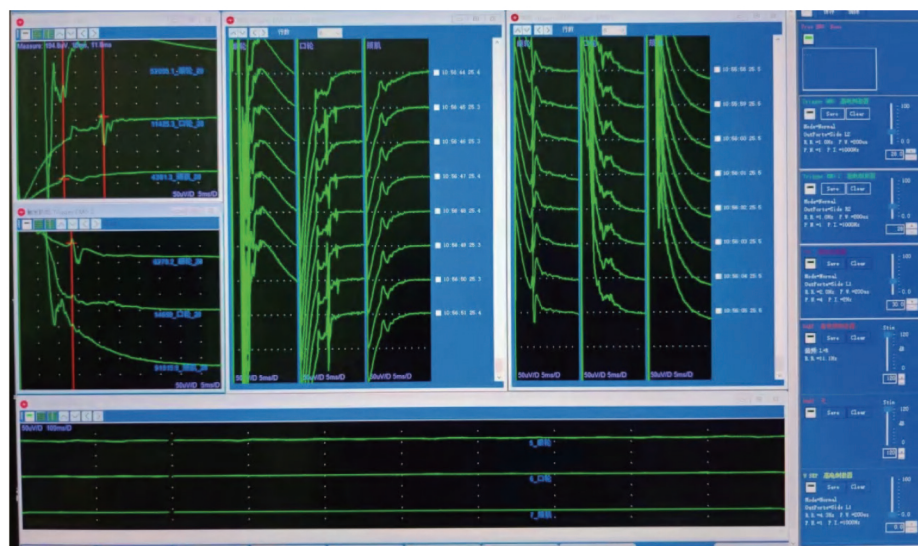
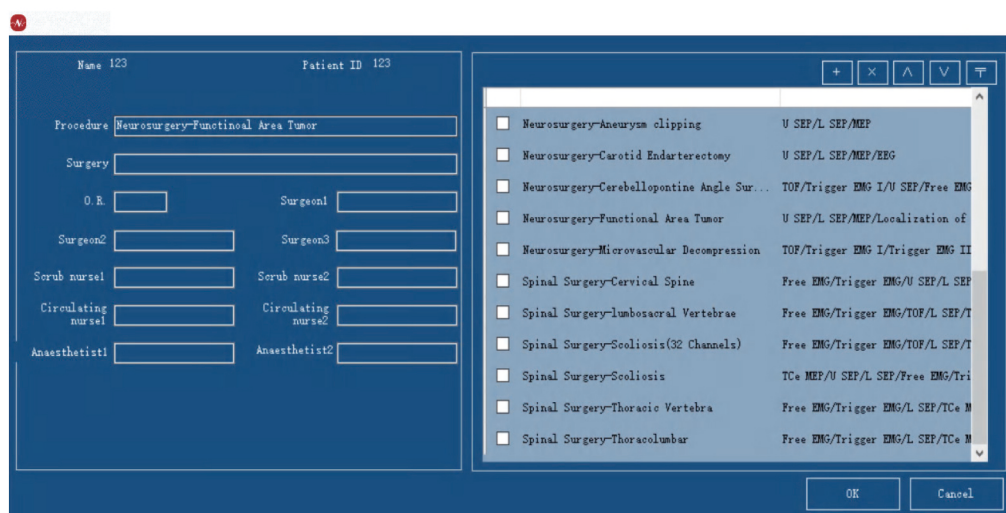
Monitoring Mode Type	Main Function
SEP	Monitoring upward conduction pathway
TCE MEP	Monitoring downward conduction pathway
Facial MEP	Monitoring central nerve conduction pathway
Free EMG	Reactive nerves have been provoked
Trigger EMG	Identify and find nerve pathway
TOF	Monitoring the metabolism of muscle relaxants
Pedicle Screw	Pedicle screw detection
BCR	Evaluation of anal sphincter function
BAEP	Monitoring auditory conduction pathway and brainstem function
EEG	Monitoring Brain Activity
Motor Mapping	Locate Motor Area of the brain
Speech Mapping	Locate Speech Area of the brain
D-Wave	Monitoring the integrity of the spinal cord downstream pathway
H-Reflex	Monitoring of anterior horn of the spinal cord motor nerve pathway
VEP	Monitoring visual conduction pathway

Various Monitoring Mode

- ▶ Different Type of Monitoring Mode help to protect patient's nerve better during surgery.

Surgical Monitoring Template

- ▶ Available to a variety of surgical monitoring templates, and able to add and edit the existing templates, such as acoustic neuroma, microvascular decompression surgery, scoliosis orthopaedic surgery and so on.

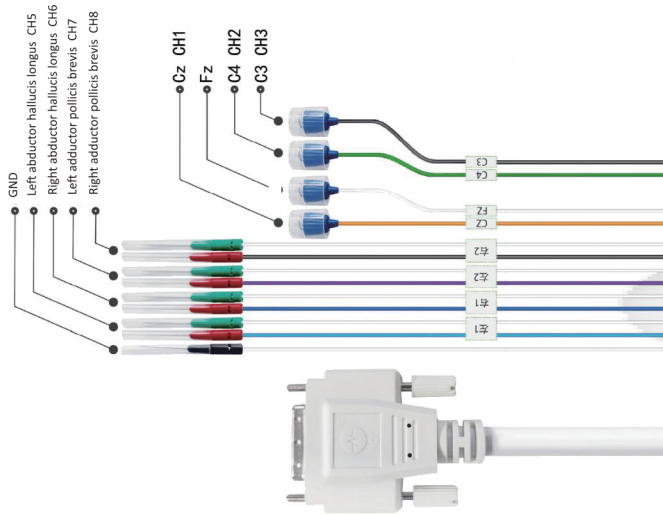
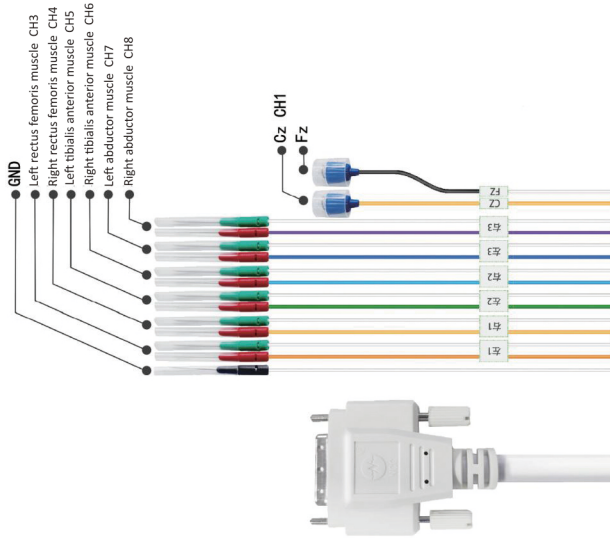


Various Mode Display at Same Screen

- ▶ Multiple inspections are carried out simultaneously on the same screen and can be switched freely.

SPECIAL CONSUMABLES

SPECIALISED IN ORTHOPAEDICS



SPECIALISED IN NEUROSURGERY

● Integrated Design

Multiple consumables are integrated into one connector and can be connected in one go.

Combination of Needle and Corkscrew electrode to meet different surgery needs.

Help reduce workload and almost achieve zero-error operation during connection process.

● Specialised consumable

Different design of consumable specialised for different surgery.

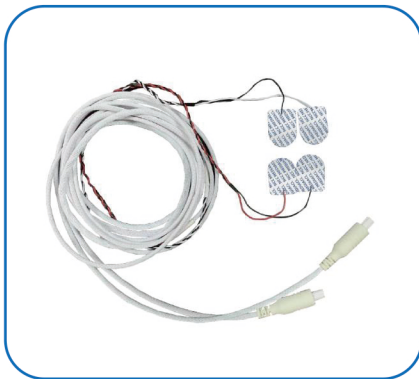
● Anti-interference Capability

Super anti-interference capability help increase waveform fidelity.

● Firm Connection

Lock catch connection way help firmly connected cable with the box and not easily to come off.

OTHER ACCESSORY



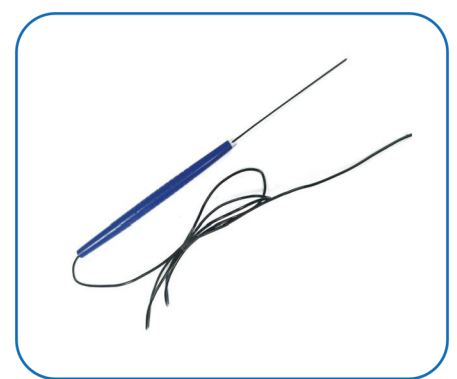
Surface electrode

- For SSEP monitoring Mode
- Output Stimulation current



Corkscrew needle electrode

- For MEP monitoring Mode
- Output Stimulation current



Monopolar Probe

- Exclusive handheld probe for surgeon

CLINICAL APPLICATION



The Main Area Of Application in Spine Surgery

Cervical Spine Surgery(Typical ACDF & PCDF Surgery)

e.g. U SEP, Free EMG, Trigger EMG, Tce MEP, Pedicle Screw

Scoliosis Orthopedics Surgery

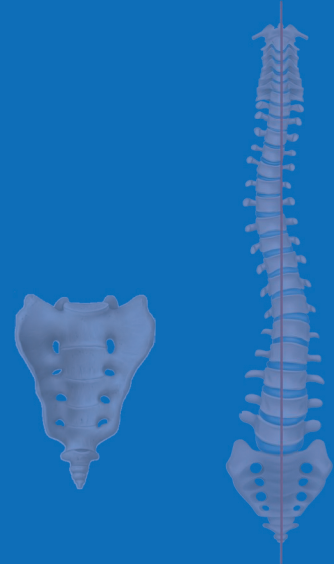
e.g. USEP, LSEP, Free EMG, Trigger EMG, Tce MEP, Pedicle Screw

Thoracolumbar Surgery

e.g. L SEP, Free EMG, Trigger EMG, Tce MEP

Sacrococcyx Surgery

e.g. L SEP, Free EMG, Trigger EMG, Tce MEP



The Main Area Of Application in Neurosurgery

Carotid Endarterectomy(CEA) Surgery

e.g. U SEP, L SEP, TCEMEP, EEG

Microvascular Decompression Surgery

e.g. U SEP, L SEP, Tce MEP

Cerebellopontine Angle Tumors (CPA) Surgery

e.g. Free EMG, Trigger EMG, Facial MEP, BAEP, U SEP

Hemifacial spasm surgery

e.g. Free EMG, Trigger EMG BAEP

Functional area glioma

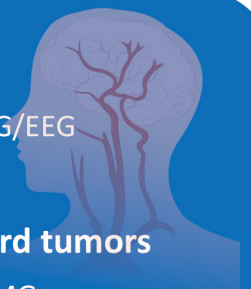
e.g. Tce MEP/U SEP/Free EMG/EEG
Motor mapping

Intramedullary spinal cord tumors

U SEP, L SEP, Tce MEP, Free EMG
Trigger EMG, Pedicle Screw, BCR

Epilepsy focus excision surgery

U SEP L SEP, Tce MEP, Trigger EMG.





NEUOTRONICS

Medical Solutions for Surgical Intervention
Neuro & Orthopedic Surgery

DISTRIBUTORS OF:

SCALPELS

EMG TUBES

IONM DEVICES

IONM CONSUMABLES

IMPLANTS & INSTRUMENT SETS



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