

NMT - Neuromuscular Transmission

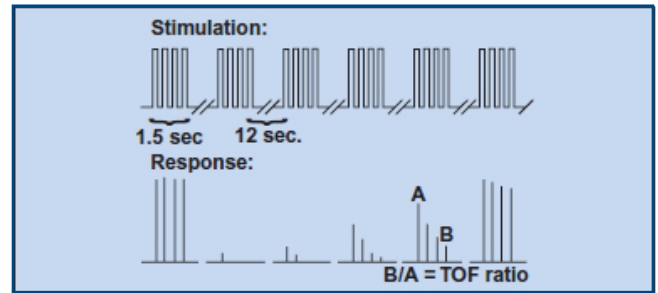
Interface of Organon TOF Watch SX to Vitalogik & Menntor Monitors

VitaLogik patient monitors have interface with Organon TOF Watch SX for monitoring of Neuro Muscular Transmission (NMT) using the Train of Four (TOF) stimulation mode of the TOF Watch SX.

The TOF Watch SX consists of a nerve stimulator, and an Accelerometer to measure the response to the nerve stimulation.



TOF Response



Neuro Muscular Transmission is evaluated by stimulation of the Ulnar nerve, using surface electrodes attached to the wrist above the nerve. The movement of the thumb in response to Train Of Four (TOF) stimulation is measured noninvasively, by an accelerometer sensor attached to the thumb.

The response to each of the stimulation trains is displayed on the TOF Watch and on the VitaLogik monitor. Changes of the TOF response, as a function of time, are displayed by the VitaLogik monitor in both graphic and numeric trend.

Technical specifications of TOF Watch SX

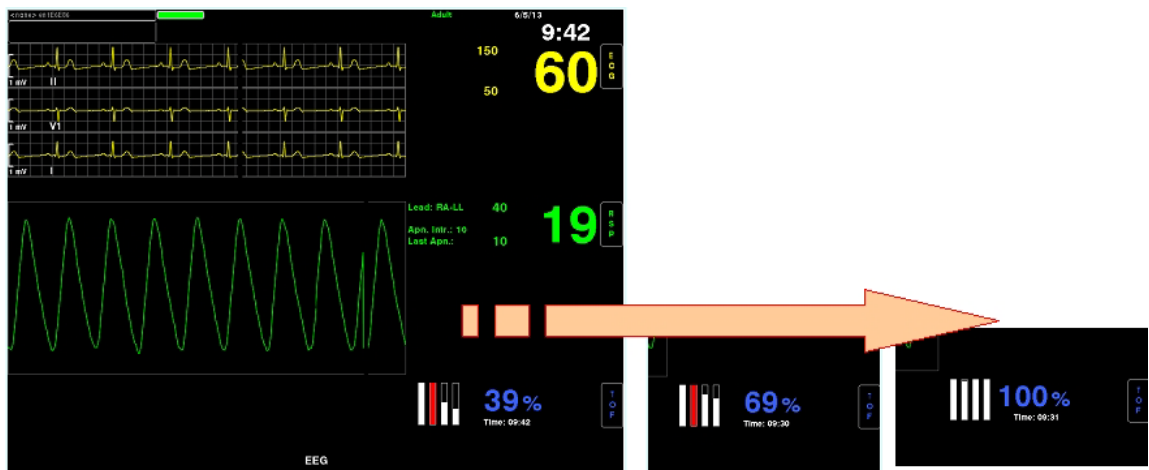
- Automatic calibration: Automatic adjustment for optimal gain and 100%
- Stimulation modes: TOF (Train Of Four)
- TOF s (Train Of Four) with programmable repetition time.
- Output (accuracy $\pm 5\%$ of full scale value):
- Surface electrodes Constant current, 0 - 60 mA (0 - 12/18 μC) up to 5 kOhm.
- Monophasic, 200 μs or 300 μs pulse width.
- Monophasic, 40 μs pulse width.
- Acceleration transducer: (accuracy $\pm 5\%$ of full scale value).
- Battery: 9V Alkaline or NiCd (6LR61 / 6AM6).
- Supply voltage: 9V=, 110 mA max.
- Type: BF
- Weight: Approximately 250 gram with battery.
- Dimensions: 200 x 90 x 50 mm.
- Safety: Complies with IEC60601-1.
- EMC: Complies with EMC directive, 89/336/EEC, § 10 part. 1

Interface to Vitalogik & Menntor Monitors

A peripheral nerve stimulator, TOF WatchR SX , is used to assess neuro-muscular transmission when neuro-muscular blocking agents (NMBAs) are given to block musculoskeletal conduction, during surgical procedures, under anaesthesia.

By assessing the depth of neuromuscular blockade, peripheral nerve stimulation can ensure proper medication dosing. Measuring the muscle response to "Train Of Four" (TOF) stimulation of the feeding nerve, provides a measure of the degree of neuro-muscular conduction.

On the VitaLogik Monitor you can easily follow up the patient's degree of muscle relaxation, in parallel with his other vital signs. The response ratio of the fourth and first stimulus from the TOF provides visual and numerical measurement of the level of neuro-muscular conduction. The VitaLogik Monitor gives the Trend of the TOF during the procedure and can be shown afterwards as well.



The VitaLogik gives the Trend of the TOF throughout the procedure and afterwards.