



# Research and Production Company DX SYSTEMS

e-mail:sales@dx-sys.com.ua  
http://www.dx-sys.com.ua

Ukraine, Kharkov, Tobolskaya str, 42  
fax: +380(57) 719-55-14, tel: +380(57) 719-46-58



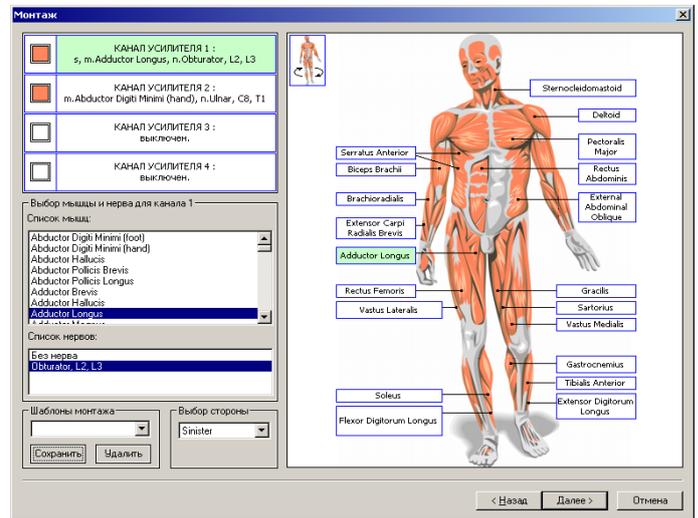
**Electroneuromyographs M-TEST for examination of neuromuscular system by means of muscle and peripheral nerves potentials registration.**

## Brief description

Computer electromyograph M-TEST allows to register electromyogram by 1,2 or 4 channels according to EMG-investigation chosen method. At the same time sequence and set of used methods for patient's investigation are defined by doctor at his/her will according to pathology.

High technical device's characteristics and special software tools, realized in system, allow to obtain electromyogram record of high quality in any premise.

During electromyogram registration and review amplitude and temporal scanning can be changed and set EMG printing.



The system is projected for researcher in such a way in order to get necessary information quickly for analysis and review. Results of analysis can be represented in tables, diagrams and graphs, which make information perception easier.

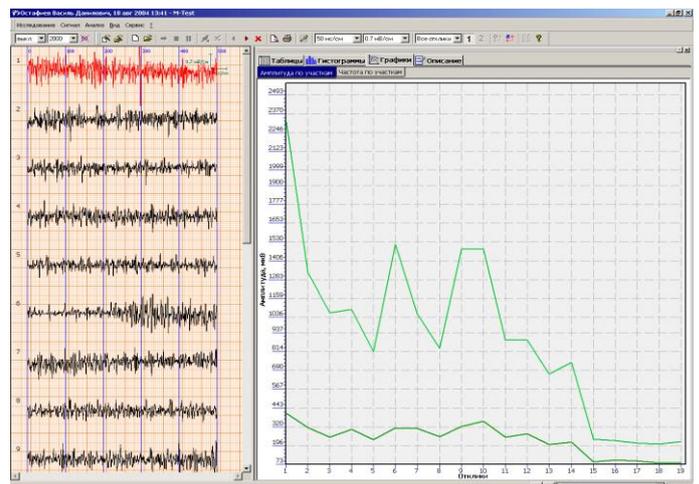
Simple and convenient program interface, pictorial representation of contents and results of EMG-investigation, automatic description, medical database, possibility of their editing these are system "M-TEST" characteristics, aimed for providing of researcher's efficient work.

## Perfunctory EMG method

Registration of spontaneous muscles activity with superficial leading electrodes with regulating or stationary center-to-center distance between plows..

Basic parameters of interferential EMG are defined in system:

- sum frequency of electrical muscles activity;
- maximal signal's amplitude;
- mean signal's amplitude.

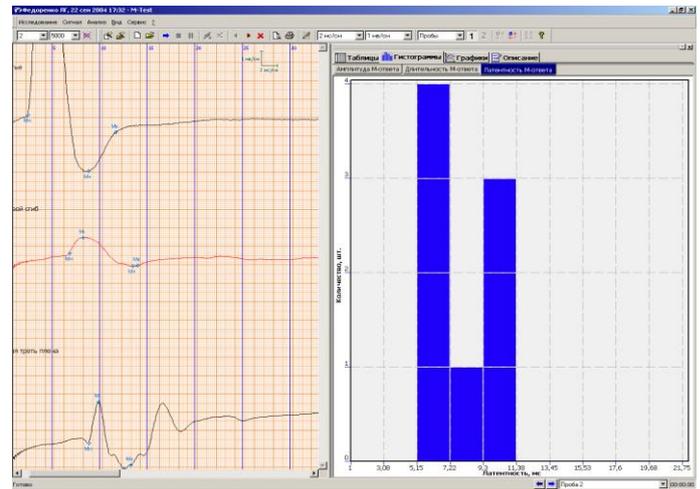


## Stimulating EMG method

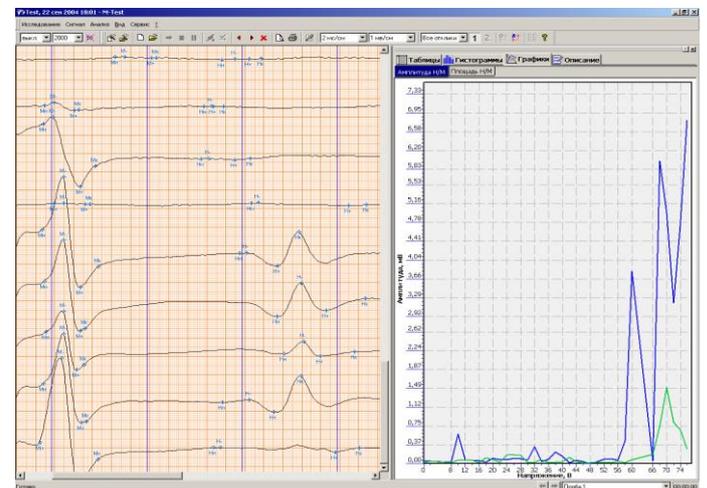
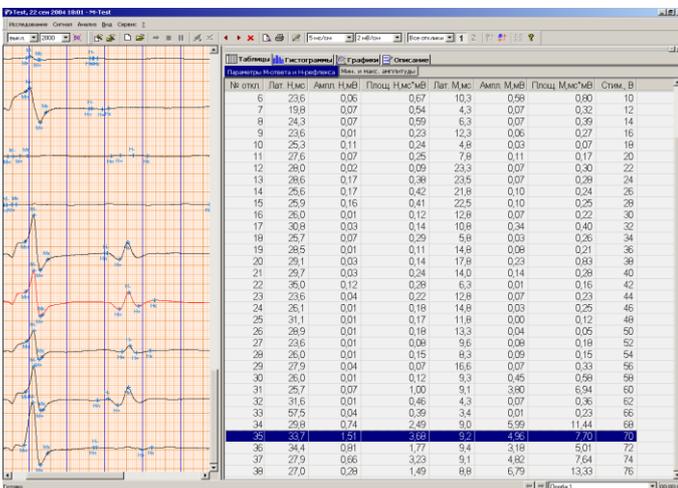
Registration of induced muscle reaction as a result of electrical stimulation of peripheral nerve by stimulating electrodes.

Characteristics analysis in the system "M-TEST" provides defining of oscillation threshold, latent time, amplitude, duration and space, calculation of residual latency value and impulse conducting speed through motor fiber, dynamic value definition.

For evaluation of conductivity through sensory nerve fibers it is provided research of nerve potential with calculation of speed of stimulation conductivity through sensory fibers.



Research of late reaction for stimulation includes analysis of F-wave characteristics (latency, motor conductive speed, chronodispersion, tachedispersion, amplitude F-wave mean speed, ratio of F- and M- reaction values) and analysis of H-reflex parameters during single and paired stimulus (latency, amplitude, H-reflex oscillation threshold, ratio of H-reflex dynamics and M-reaction dynamics).



## Needle (local) EMG method

Registration of spontaneous activity of investigated muscle and potentials of motor units with the use of needle leading electrodes. The research includes analysis of spontaneous activity (potentials of spontaneous activity, definition of mean frequency potentials), pointing and review of parameters of motor units, e.g. duration, amplitude and shape definition. Method of turno-amplitude analysis of interferential EMG is also realized in the system.

## Method of nervous muscle transmission investigation

EMG registration during rhythmic stimulation with M-reaction decrement definition. Making pharmacological and loading tests for making clearer the character of nervous muscle transmission dysfunction including tetanization and survey of posttetanic phenomena.

## Method of evoked potentials investigation

There is registration and analysis of short latent acoustical, visual and somatic sensory evoked brain potentials in the system "M-TESTneuro".

## **Data storage**

Information about patients, recorded electromyogram and processing results is saved in database. There is a full set of functions in database for convenient and fast work with electromyograms archives of big size. Examination data transferring by LAN or Internet is possible.

## **Decision generation and printing**

Representation of analysis results in the form of tables, graphs and bar charts. Automatic description of examination results.

## **Supply set**

power unit;	Ground electrode;
EMG amplifier;	Disk with software;
Current stimulator;	Electrode gel, 260 g;
Interface cables;	Medical application instructions;
Electrode EMG superficial;	User manual.
Stimulating electrode;	

---