

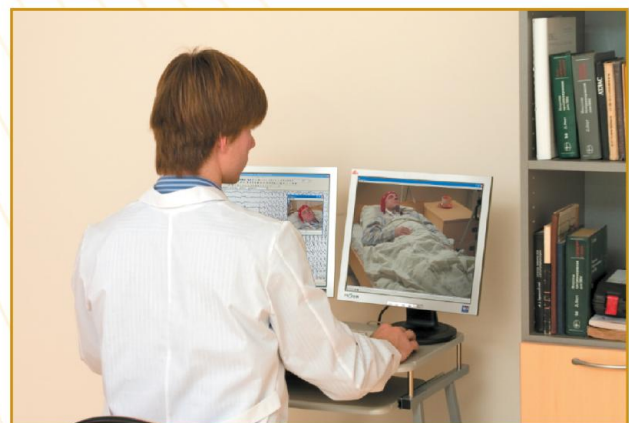
# Neuron-Spectrum-Video

Long-term Video EEG Monitoring System



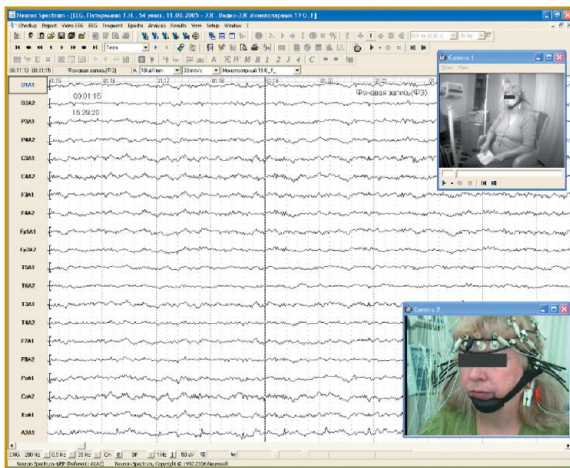
**Neuron-Spectrum-Video** software module allows to perform the synchronous long-term recording of EEG, polygraphic channels, video from one or two cameras, which position and zoom are controlled from computer, and audio information from one or two microphones. The spheres of application are epileptology and polysomnography.

The recorded video EEG can be reviewed with normal, increased speeds or by frames. In the process of synchronous review the mutual position of EEG and video in a moment is possible. The program features also include the digital zoom in/out of the image fragments and editing of both EEG and video fragments. The module allows to create the disk with different fragments that are "cut" out the long record, save them on CD or DVD together with the built-in review software. Such disk can be reviewed on any computer.

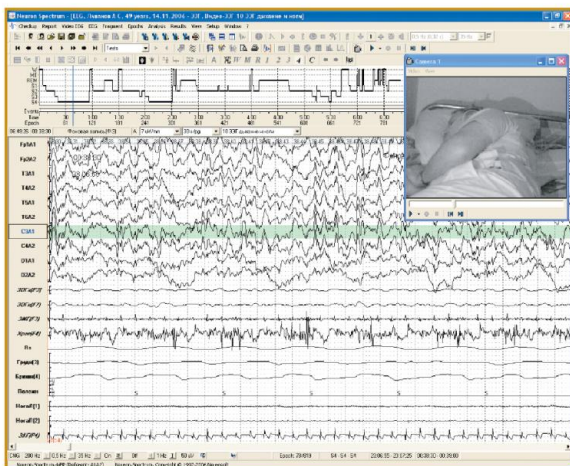


Medical Diagnostic Equipment Development and Manufacture

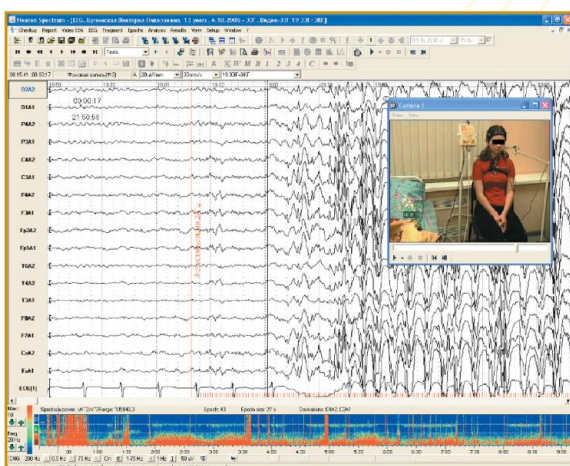
# Neuron-Spectrum-Video Features



Review of EEG and video from two cameras



Review and analysis of polysomnogram\*



Review of EEG, video and spectral trend

- Synchronous long-term recording of EEG, video from one or two cameras, audio information from one or two microphones. The synchronization accuracy is 1 frame
- Control of camera position ("tracking") and zoom from computer, programming of up to 6 preliminary presets of camera position
- Night video monitoring with the use of special video camera or infrared highlighting
- Instantaneous video image and audio information compression
- Marking of arbitrary events during the recording
- Synchronous review of the recorded EEG and video information on one (PiP) or two monitors with the normal or increased speeds, by frames
- Instantaneous positioning of video image by EEG temporary slice, electroencephalogram by video frame, instantaneous positioning to the selected event marker, video fragment or time slice
- Digital zoom in of video record fragments during the review
- Compressed (on one screen) representation of the recorded EEG (as trends of EEG parameters or pseudo-3D spectrum), instantaneous positioning on electroencephalogram with one mouse click on trend graph
- Storing of video records archives on CD or DVD disk
- Wide capabilities of video record and both video record and EEG editing. The review program is distributed freely. Automatic review of recorded disks on any computer

\* **Neuron-Spectrum-Video** software is included in delivery set of **Neuron-Spectrum-PSG** program for polysomnography study

# Extra Delivery Set

## Cameras



- Analog color video camera with optical zoom and possibility of zoom wired remote control (is included in base delivery set)



- Analog color domical video camera with possibility of position remote control via IR or computer



- Analog black-and-white video camera



- Analog black-and-white video camera for night video monitoring



- Analog color video camera with optical zoom and possibility of zoom and camera position remote control via IR or computer

## Accessories

- IR projector on a stand
- PCI video capture card
- USB video capture external unit
- PCMCIA video capture card
- Patient's microphone on a stand
- Doctor's microphone

## Electrode systems

It is possible to supply the electrode systems based on the following electrode caps:

- Electrode cap "Electro-Cap" for **19-channel** EEG recording (USA)  
(one of sizes for choice: 42-46, 46-50, 50-54, 54-58, 58-62)
- Electrode cap "Comby EEG" for **19-channel** EEG recording (Croatia)  
(one of sizes for choice: 32-37, 37-42, 42-47, 47-52, 52-57, 57-62)
- Electrode cap for **21-channel** EEG recording (Russia)  
(one of sizes for choice: 42-46, 46-50, 50-54, 54-58, 58-62)
- Electrode cap for **32-channel** EEG recording (Russia)  
(one of sizes for choice: 42-46, 46-50, 50-54, 54-58, 58-62)

# Delivery Set

- Analog color video camera (on a holder) with optical zoom and possibility of zoom wired remote control
- PCI video capture card
- Electrode system for long-term EEG recording:
  - Electrode cap for **19-channel** EEG recording (one of sizes for choice: 42-46, 46-50, 50-54, 54-58, 58-62)
  - Body harness
  - Special needle for the electrodes fulfillment with gel
  - Electrode gel (250 g)
- Software
- User manual



## Specifications

Number of simultaneously working cameras	1 or 2
Number of channels for audio information transfer	1 or 2
Possibility of night recording	yes (using infrared projector or camera with night mode)
Format of recorded video storage	MPEG-4
EEG and video synchronization accuracy (when recording 25 frames per second)	1 frame (40 $\mu$ s)
Maximum resolution of video picture	640x480
Operating system	Windows XP
Available ports for video capture	PCI, USB, PCMCIA
Zoom lens remote control	supported by program if camera control functions are available
Camera position remote control	supported by program if camera control functions are available
Digital zoom in of video image in recording and review modes	yes
Possibility of video EEG recording on CD and DVD	yes
Possibility of simultaneous operation on two monitors (the first one for EEG and polygraphic signals recording from patient, and the second one is for video monitoring)	yes
Video displaying modes	PiP, 2PiP, two-monitor



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January 2007