

Neuron-Spectrum-PSG

Software and equipment
for polysomnography studies



Neuron-Spectrum-PSG system complements digital EEG systems of **Neuron-Spectrum** series by transforming EEG systems to polysomnographers. Long-term synchronous recording of EEG, polygraphic channels, video and audio information, sleep stage analysis and analysis of sleep-disordered breathing arrange a combination required for high-quality PSG study. The convenience and the simplicity for use make **Neuron-Spectrum-PSG** an indispensable helper during PSG recording and scoring. This system provides new possibilities for diagnostics, prevention and treatment of such widespread diseases as essential hypertension, obesity, arrhythmias, infarctions, strokes.

Applications: somnology, cardiology, neurology, epileptology.



Medical Diagnostic Equipment Development and Manufacture

- Long-term recording of the following channels during a sleep which allow to analyze both the sleep structure (sleep stage) and sleep-disordered breathing include EEG, EOG, EMG from chin area, ECG, airflow, chest movements, abdominal movements, body position, snoring, SpO₂, EMG from limbs (limb movements), etc.
- Manual sleep stage scoring, hypnogram creation, automatic calculation of the large number of sleep parameters, construction of bar chart of sleep stage distribution.
- Automatic search and classification of apnea and hypopnea events, desaturation, snoring, limb movements and periodic limb movements events. HR, body position, SpO₂ trends visualization.
- Calculation of indices of sleep-disordered breathing and desaturations, parameters of snoring, heart rate variability, change of body position during a sleep, indices of sleep-disordered breathing in different body positions during a sleep.
- Generation of PSG checkup report including graphic data (hypnogram, trends, sleep-disordered breathing, desaturation, snoring, limb movements and periodic limb movements events), calculation results of sleep parameters and sleep-disordered breathing parameters, bar charts of sleep stage distribution.
- Possibility of the synchronous recording of video and audio information during PSG recording and also synchronous review of video and audio during PSG scoring as **Neuron-Spectrum-Video** software is included in **Neuron-Spectrum-PSG** delivery set.
- Quick disconnection and connection of the patient and the recording equipment which do not result in electrodes position removal if you use the additional switching patient's unit **Neuron-Spectrum-PEU4*** or **Neuron-Spectrum-PEU5*** (for example, to provide the patient possibility to go to the lavatory).

* are not included in the base delivery set and supplied optionally.



The removable patient's unit allows the patient to feel herself/himself more comfortable during the night monitoring.

Delivery Set

- Cup electrode with cable:
 - for four-channel EEG recording – 8 pcs.
 - for two-channel EOG recording – 2 pcs.
 - for one-channel EMG recording – 2 pcs.
 - for one-channel ECG recording from chin
- Airflow sensor with cable
- Snoring sensor
- Chest respiratory efforts sensor
- Abdominal respiratory efforts sensor
- Body position sensor
- External unit for SpO₂ recording
- Finger sensor for SpO₂ recording
- Analog black-and-white video camera (on holder) for night video monitoring
- Highly sensitive patient's microphone on holder
- PCI video capture card
- Software
- Software protection key
- User manual
- Technical manual
- Transportation bag



FFG unit is not included
in the base delivery set

Use with Neuron-Spectrum Different Models

	Number of channels					Possibility of performing	Sleep stage scoring				Possibility of performing	Monitoring of sleep-disordered breathing							
	EEG	Polygraphic channels	Breath (airflow) channels	Direct current (DC) channels	SpO ₂		EOG	EMG	ECG	Available EEG channels		Airflow	Chest movements	Abdominal movements	Snoring	SpO ₂	Body position	Limb movements	Available EEG channels**
Neuron-Spectrum-1	8	1	1	-	1*	+	2	1	1	5	-	1	-	-	-	1*	-	-	5
Neuron-Spectrum-2	16	1	1	-	1*	+	2	1	1	13	-	1	-	-	1	1*	-	2	7
Neuron-Spectrum-3	19	1	1	-	1*	+	2	1	1	16	-	1	-	-	1	1*	-	2	10
Neuron-Spectrum-4	21	1	1	-	1*	+	2	1	1	18	-	1	-	-	1	1*	-	2	12
Neuron-Spectrum-4/P	21	4	1	2	1*	+	2	1	1	18	+	1	1	1	1	1*	1	2	14
Neuron-Spectrum-4/EP	21	4	1	2	1*	+	2	1	1	18	+	1	1	1	1	1*	1	2	14
Neuron-Spectrum-5	32	5	1	2	1**	+	2	1	1	30	+	1	1	1	1	1**	1	2	26

* if the external unit for SpO₂ recording is available

** if the external or built-in unit for SpO₂ recording is available

*** number of available EEG channels during PSG recording for both sleep stage scoring and sleep-disordered breathing



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