POLY-SPECTRUM-AM

Long-term ECG Ambulatory Monitoring System

✓ 2 or 3-channel Holter monitoring solution

✓ wireless connection with clinician's workstation

✓ one button acquisition start

✓ fast data downloading to computer

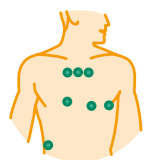✓ software package for long-term ECG monitoring with PQ, QT, HRV, ABP, ST, HRT modules

ECG • PQ • QT • HRV • ABR • ST • HRT

Neurosoft

**3 CHANNELS —
ROUTINE PRACTICE IN
HOLTER MONITORING**

**LARGE NUMBER OF
RECORDERS ON ONE
WORKSTATION**

**DUAL-MONITOR
OPERATION MODE**

**7 DETECTION AND
ANALYSIS ALGORITHMS:
PQ, QT, ST, HRV, ABP, HRT,
AND ARRHYTHMIAS**

POLY-SPECTRUM-AM

Poly-Spectrum.NET software performs the automatic analysis of long-term ECG record to detect QRS complexes and rhythm abnormalities dividing them to ventricular and supraventricular ones and pauses, to measure ST segment elevation/depression, and to calculate heart rate (HR) with maximum possible accuracy! We verified our algorithms using the recommended ECG databases (AHA, MIT-BIH, ROHMINE*) and obtained excellent results:

SENSITIVITY, %	SPECIFICITY, %
ROHMINE	
99,98	99,98
MIT-BIH	
99,92	99,78
AHA	
99,96	99,89

* Russian Society of Holter Monitoring
  and Non-invasive Electrophysiology

Poly-Spectrum-AM
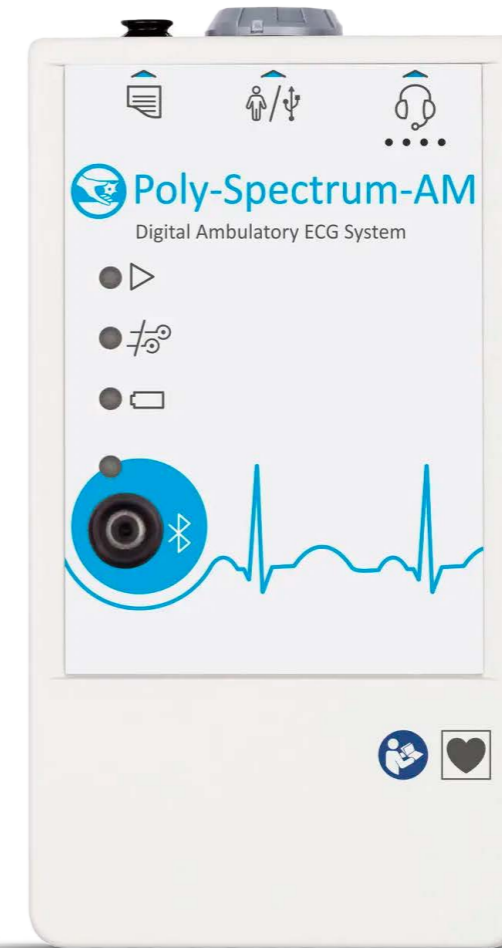Digital Ambulatory ECG System

PATIENT BUTTON

BLOOD PRESSURE MONITOR CONNECTION

DEVICE STATE INDICATION

2 BATTERIES OF AA TYPE

CABLES FOR 2- AND 3-CHANNEL ACQUISITION

RESPIRATORY CHANNEL

ACTIVITY AND BODY POSITION CHANNELS

PACEMAKER PULSE DETECTION

CLINICAL APPLICATION

- heart rate and conduction abnormalities
- evaluation of antiarrhythmic therapy efficacy
- study of the autonomic regulation (heart rate variability)
- detection of ischemic changes
- evaluation of sudden cardiac death risk
- assessment of cardiac pacemaker functioning
- evaluation of cardiac activity in children and adolescents

POLY-SPECTRUM-AM.NET FEATURES
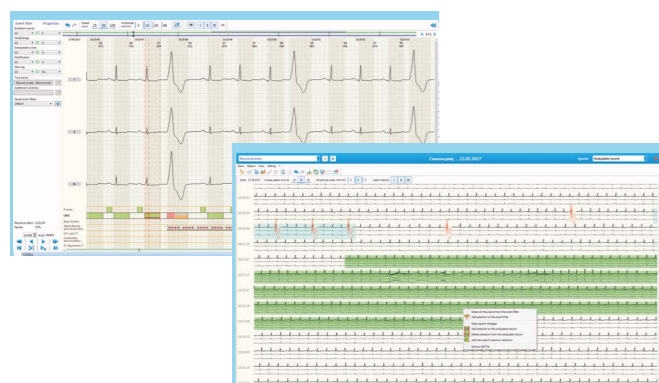
Record Preview

To obtain the higher accuracy of ECG findings during the automatic analysis, you can review the record and exclude the artifacts from it.
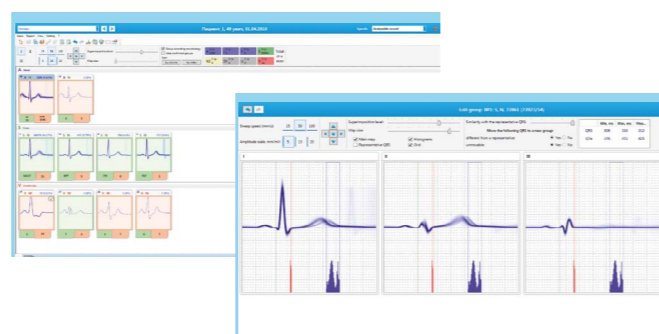

Clusters of ECG Complexes

During the analysis the identified QRS complexes are clustered together. Just view two dozens of clusters and get impression on hundred thousand of QRS complexes. Each QRS complex and cluster can be edited manually! The battery of integrated on-screen tools allows both combining, dividing and removing clusters and also arranging the QRS complexes by their similarity. Even the visualization of normal and premature QRS complexes is color-coded that streamlines the assessment.

These advanced features allow clinician to select precisely the most representative clinical ECG data and make a fast and accurate diagnosis.

HRV Analysis

The results of time domain and frequency-domain analyses of heart rate variability (HRV) are presented as spectrograms, bar charts and scattergrams. The time-frequency representation of power spectrum shows the autonomic changes during 24 hours. Most of the graphs and trends are live and you can capture on-the-fly the related QRS complex on the smart ribbon.
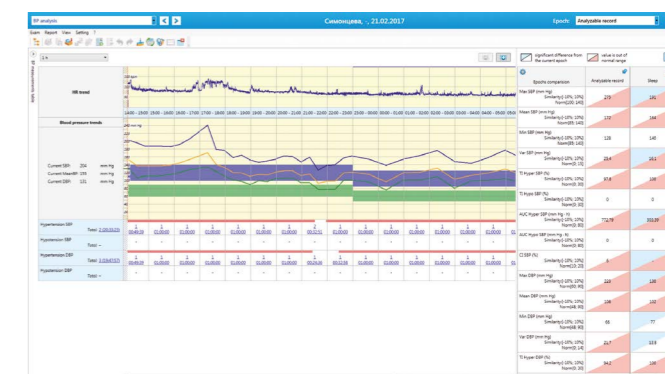
ABP Analysis

The software can simultaneously analyze the obtained ECG and ABP data. The ABP results are recorded with BPLab system. The ABP findings can be compared with ECG ones using ABP trends, tables with BP values and loads.

SUPPORT
OF 12-CHANNEL
RECORDER

Smart Ribbon to Review and Edit the Record and to Customize the Event Filters

The smart ribbon is a forward-thinking tool to review and edit the QRS complexes and arrhythmia events. You can arrange the markers, define the QRS complex type and morphology, and also review all QRS complexes clustered with user or automatic filters in fast scroll mode. You can customize the event filters and also create your own ones using the multiple parameters.

Analysis of Arrhythmias, PQ, QT, ST, HRT

Using the arrhythmia analysis window you can review the heart rate statistics, including the one for each rhythm abnormality. The data on "PQ analysis", "QT analysis", "ST analysis" and "HRT" pages is clearly shown as trends, graphs and tables. The specially developed tool ensures the color-coded comparison of epochs and also matches them with the reference values. All obtained findings are interactive. Position the mouse cursor to the particular point on graph and you are automatically switched to the related QRS complex.
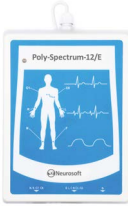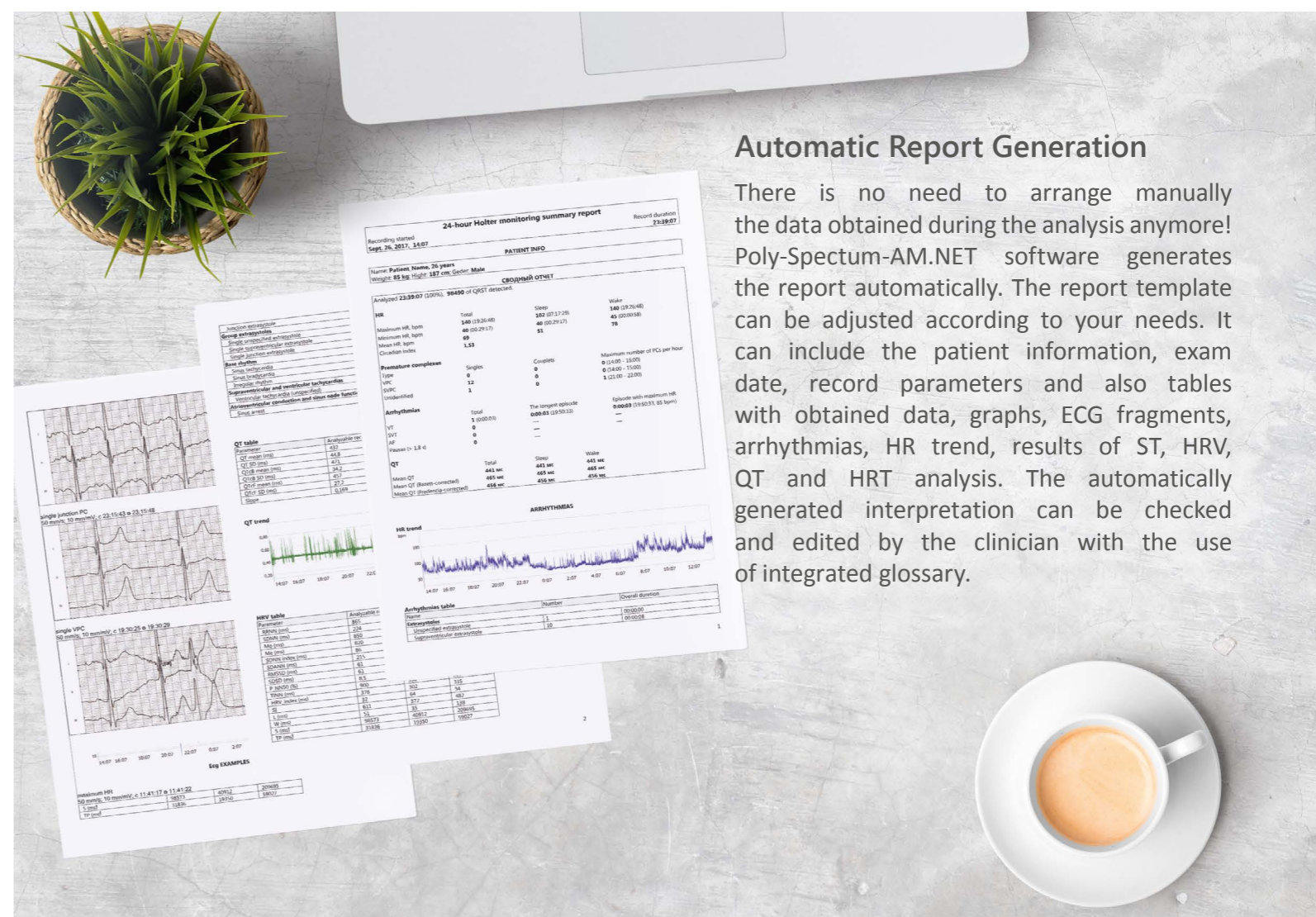

Automatic Report Generation

There is no need to arrange manually the data obtained during the analysis anymore! Poly-Spectrum-AM.NET software generates the report automatically. The report template can be adjusted according to your needs. It can include the patient information, exam date, record parameters and also tables with obtained data, graphs, ECG fragments, arrhythmias, HR trend, results of ST, HRV, QT and HRT analysis. The automatically generated interpretation can be checked and edited by the clinician with the use of integrated glossary.

ECG PRODUCT LINE

	ECG Leads	Transesopha-geal Leads	Automatic Interpreta-tion	Detection of Cardiac Pacemaker Pulses	Interface	Application
Poly-Spectrum-8	12	–	–	+	Wire: USB	Routine ECG test
Poly-Spectrum-8/E	12	–	+	+	Wire: USB	Routine ECG test with measurement and interpretation, QT, HR, PWV
Poly-Spectrum-8/EX	12	–	+	–	Wireless: Bluetooth	Routine ECG test with measurement and interpretation, evaluation of autonomic status (HRV), stress ECG, QT, HR, PWV
Poly-Spectrum-8/G	12	–	+	–	Wireless: Bluetooth, GSM	Telemedicine
Poly-Spectrum-12/E	14	2	+	+	Wire: USB	Routine ECG test with measurement and interpretation, transesophageal ECG, stress ECG, QT, PWV