HRV Live!

HEALTH ASSESSMENT

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Key Features

- Sympathetic and parasympathetic tonus
- Compliance with short-term HRV analysis standards
- Continuous monitoring of changes in HRV
- Time markers during monitoring process
- Detection of sudden changes in autonomic balance
- HRV data comparison to the population norms
- Autonomic balance zone for continued comparison
- Multiple comparisons of marked data
- Various HRV session report capabilities: graphs, bars, spectrum, etc.
- Import/Export data in software specific formats
- Export data in Excel or ASCII format
- Automatic detection of connected device
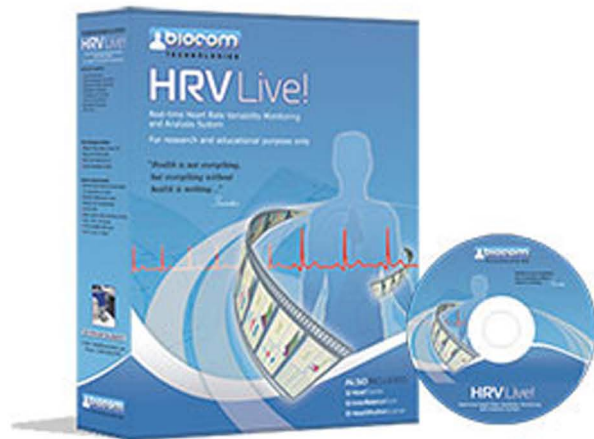
Continuous HRV Monitoring system

In the USA for non-medical use only

The HRV Live! represents a new approach in Heart Rate Variability analysis that is performed repetitively and continuously over extended period of time. It performs real-time recording of the electrocardiograph (ECG) or photoplethysmograph (PPG) signal, its analysis and display of HRV data providing valuable information about dynamic changes in autonomic regulation.

HRV Live! allows to show full dynamics of changes in the regulatory tonus of both the parasympathetic and sympathetic nervous systems and autonomic balance over a prolonged period of time. When monitoring, HRV Live! performs a full HRV analysis of the last 5 minutes of data and updates live displays every half a second.

Assessment details in HRV Live!

HRV Live! software allows for **unlimited monitoring and recording of raw signal** (ECG or pulse wave - PPG), heart rate and HRV data. Later these records can be reviewed and edited. The software allows for creating unlimited number of event markers during data recording. Later those markers can be reviewed and multiple HRV profiles (single set of HRV data calculated on preset time interval - typically 5 minutes) associated with those markers derived from data recording. **Unlimited number of special data picks** can be created to derive similar HRV profiles. A special comparison report can be generated and printed out showing all details on all available HRV profiles showing absolute HRV readings as well as their respective % of change relative to preselected reference point. All data are displayed in both numerical and graphical formats.

Contact Information

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Full dynamics of changes in the regulatory tonus of both the parasympathetic and sympathetic nervous systems

The HRV Live! software was developed according to the standards and mathematical procedures for short-term HRV analysis set forth by:

- **The European Society of Cardiology**
- **The North American Society of Pacing and Electrophysiology**
- **Association for the Advancement of Medical Instrumentation**

Normative database included

Software provides analysis of HRV assessment results based on a large population normative database.

Hardware Options

Electrocardiographs (ECGs)

ECG BC-4000 (USB)

ECG BC-5000 (Bluetooth-wireless)

Photoplethysmographs (PPGs)

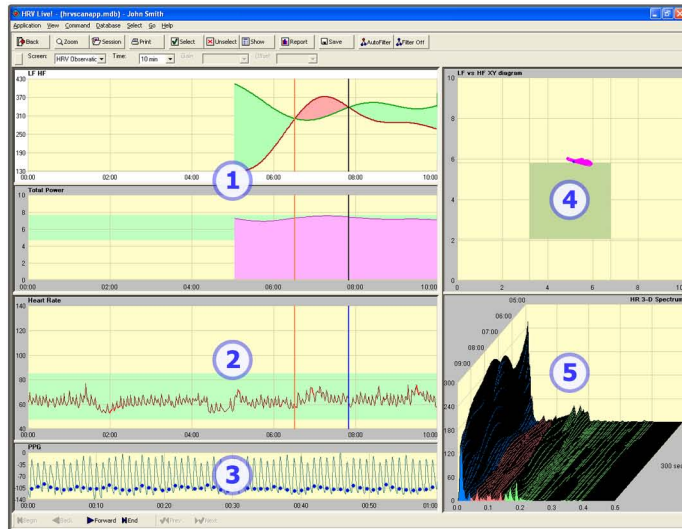PPG BC-1200 (USB)

PPG HRS-08WE (Bluetooth-wireless)

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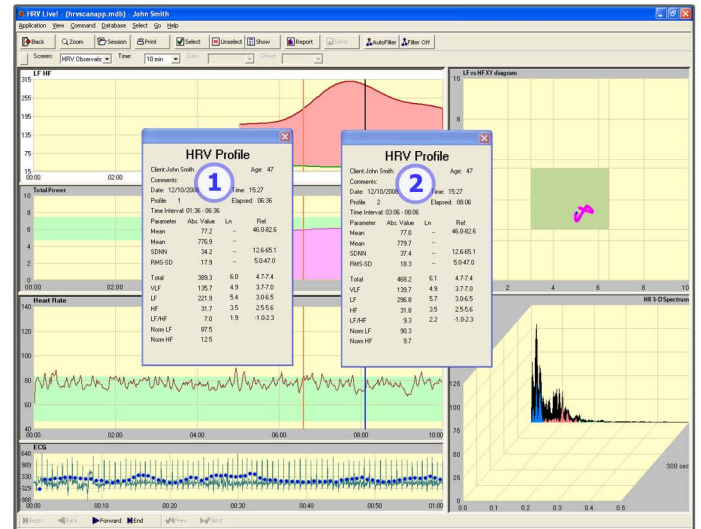TECHNOLOGIES

Health Assessment Reports

Examples of some most popular reports are shown.
The HRV Live! also creates many other types of reports. Please visit our website for more information.

HRV Observation View Report

HRV Profile Report

① The graph shows dynamic changes of frequency-domain HRV parameters (LF, HF and Total Power) calculated every second.

② The graph shows Heart Rate during the recorded session.

③ The graph shows PPG signal with Heart Rate detected dots.

④ The diagram shows dynamic changes in Autonomic Balance compared with normal range.
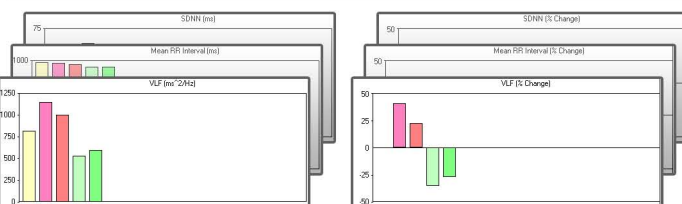
⑤ The graph shows 3-D Power Spectrum of RR intervals.

The numeral charts show time-domain and frequency-domain HRV parameters calculated for first ① and second ② event markers and their normal range.

The program allows unlimited number of markers for researcher's convenience.

Short-term Heart Rate Variability Assessment Report

Short-term Heart Rate Variability Assessment Report

Client:	John Smith	①	Date:	03/12/2006
Age:	49		Time:	19:38
Gender:	Male		Duration:	50:00

Session Comments

		②
00:05:05	Baseline	
00:06:59	Event A	
00:07:50	Event B	
00:10:02	Event C	
00:12:21	Recovery	

Selected Heart Rate Variability Profiles

Name	Time	Mean HR bpm	Mean RIR ms	SDNN ms	RMS-SD ms	Total Power ms^2/Hz	VLF ms^2/Hz	LF ms^2/Hz	HF ms^2/Hz	LF/HF	LFnorm	HFnorm
REF: Marker 1	00:05:05	61.2 100.0%	980.7 100.0%	63.7 100.0%	48.5 100.0%	1355.5 100.0%	814.5 100.0%	131.2 100.0%	409.8 100.0%	0.3 100.0%	24.3 100.0%	75.7 100.0%
Marker 2	00:06:59	61.5 100.5%	975.8 99.5%	61.3 96.3%	47.6 98.0%	1806.1 133.2%	1144.6 140.5%	364.0 277.4%	297.6 72.6%	1.2 381.9%	55.0 226.8%	45.0 59.4%
Marker 3	00:07:50	62.2 101.7%	964.0 98.3%	64.7 101.6%	44.5 91.7%	993.3 73.3%	336.8 122.0%	338.2 256.7%	1.0 82.5%	1.0 310.9%	49.9 205.7%	50.1 66.2%
Marker 4	00:10:02	63.8 104.3%	940.6 95.9%	58.9 92.4%	45.8 94.3%	1137.4 83.9%	526.6 64.6%	264.8 201.8%	346.0 84.4%	0.8 239.0%	43.4 178.8%	56.6 74.8%
Marker 5	00:12:21	63.8 104.3%	940.3 95.9%	49.8 78.2%	45.8 94.5%	1115.7 82.3%	592.5 72.7%	178.3 135.9%	345.0 84.2%	0.5 161.4%	34.1 140.5%	65.9 87.0%

SDNN (ms) / Mean RIR Interval (ms) / VLF (ms^2/Hz) — SDNN (% Change) / Mean RIR Interval (% Change) / VLF (% Change)

① Patient personal information.

② List of session comments associated with event markers created during the session.

③ The numerical table shows all HRV parameters for all data pickers / event markers including their absolute values and % of change from reference point.

Users of HRV Live!

- Clinical Researchers
- Stress Management Counselors
- Alternative Therapy Specialists
- Biofeedback Therapists
- Physiology Class Teachers
- Physical / Occupational / Recreational Therapists
- Cardiovascular Rehabilitation Specialists

System Requirements

- CPU Pentium 4, 1.6 GHz (or equivalent)
- 1 Gb of RAM
- Video card with at least 1024x768 and High-Color resolution
- 1 Gb of free hard disk space
- CD ROM drive
- One available USB port, version 1.1 or higher
- Windows Me/2000/XP/Vista or 7 Operating system

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