

Analyze Heart Rate Variations from humans or animals using five specialized plots.

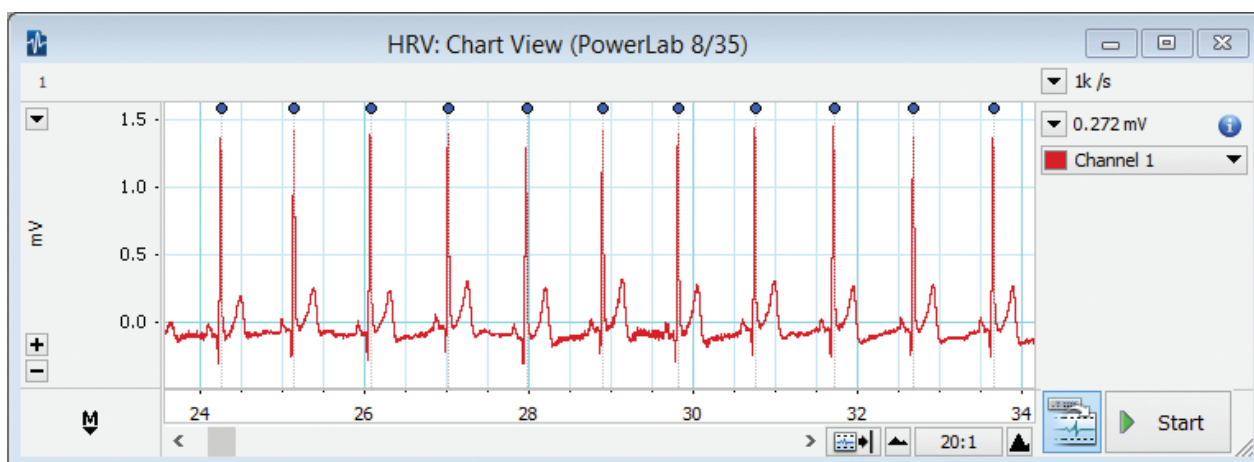
The Heart Rate Variability (HRV) Module for LabChart analyses beat-to-beat interval variation from ECG or arterial pulse signal data.

Quickly detect and extract RR intervals offline using existing recordings or online with live recordings. Distinguish between normal and ectopic beats automatically with in-built or custom detection settings. The easy to use interface displays RR interval variations continuously, including while investigating the effects of stress or exercise. Edit in any window and all windows are automatically updated.

Export graphs from five specialized plots derived from RR interval: Tachogram Plot, Poincaré plot, Power Spectrum, Period Histogram, and Delta RR Histogram. Generate reports with recording details, subject details, and clinically-accepted statistical parameters.

Applications

- Psychophysiology
- Sleep studies
- Telemetry studies for wireless monitoring of animal biopotential
- Langendorff and working heart studies



Above: HRV Chart View automatically detects peaks in ECG traces.

HRV Module

Settings

- Adjust artifact/ectopic interval beat classification limits
- Exclude or include beats in the analysis on an individual basis
- Delete or add RR intervals
- Adjust the histogram bin size
- Add R waves, or delete R waves that have been incorrectly identified due to short artifacts

Analysis Plots

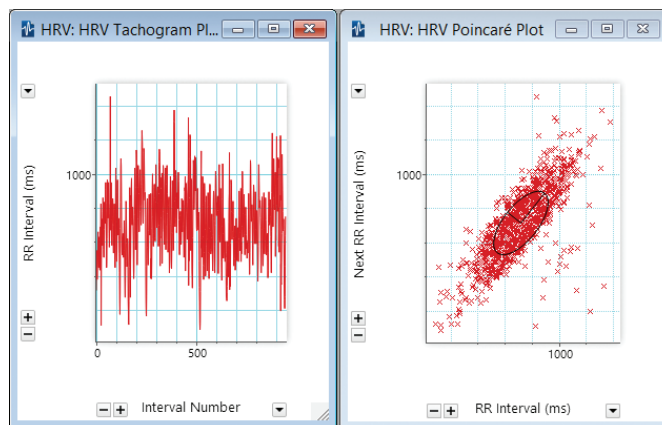
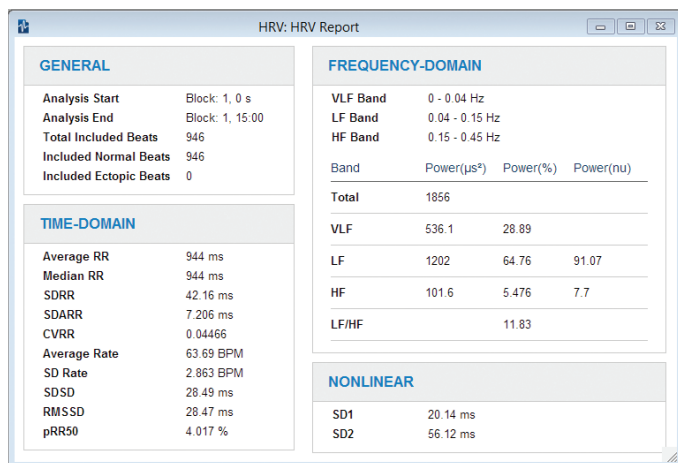
Specialized HRV data analysis plot windows derived from RR interval data include:

- **Tachogram Plot:** A line chart displaying successive RR interval values over time.
- **Poincaré Plot:** A scatter plot evaluating each RR interval against the prior interval to determine how well each interval predicts the next. Tighter data clusters indicate lower variability.
- **Spectrum:** View how the power of the HRV is distributed across frequency. Use movable lines to indicate low-frequency and high-frequency regions of the spectrum.
- **Delta RR Histogram:** Displays the distribution of RR intervals based on the length of time for each interval.
- **Period Histogram:** Displays the frequency distribution of RR intervals.

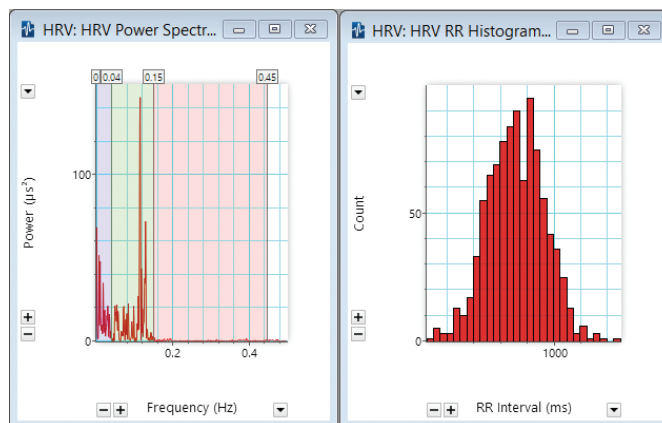
Data Export/Reporting

You can generate exportable and printable reports displaying information about data recording, details of subject and HRV analysis statistical results.

Below: HRV Module Report



Above left: HRV Tachogram Plots *Above right:* HRV Poincaré Plot



Above left: HRV Power Spectrum *Above right:* HRV RR Histogram

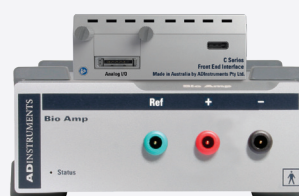
Ordering Information

The HRV Module for LabChart can be purchased individually as an Add-On for LabChart 8 (MLS310/8, Windows or Mac), or as part of LabChart Pro (MLS260/8).

LabChart Pro includes LabChart software and all LabChart Modules, providing powerful data acquisition and analysis capabilities (available for Windows or Mac).

C Series HRV System

High-performance data acquisition hardware, re-engineered for unparalleled flexibility.



The C Series HRV System includes all the HRV devices, software and sensors you will need to perform Heart Rate Variability Studies.

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