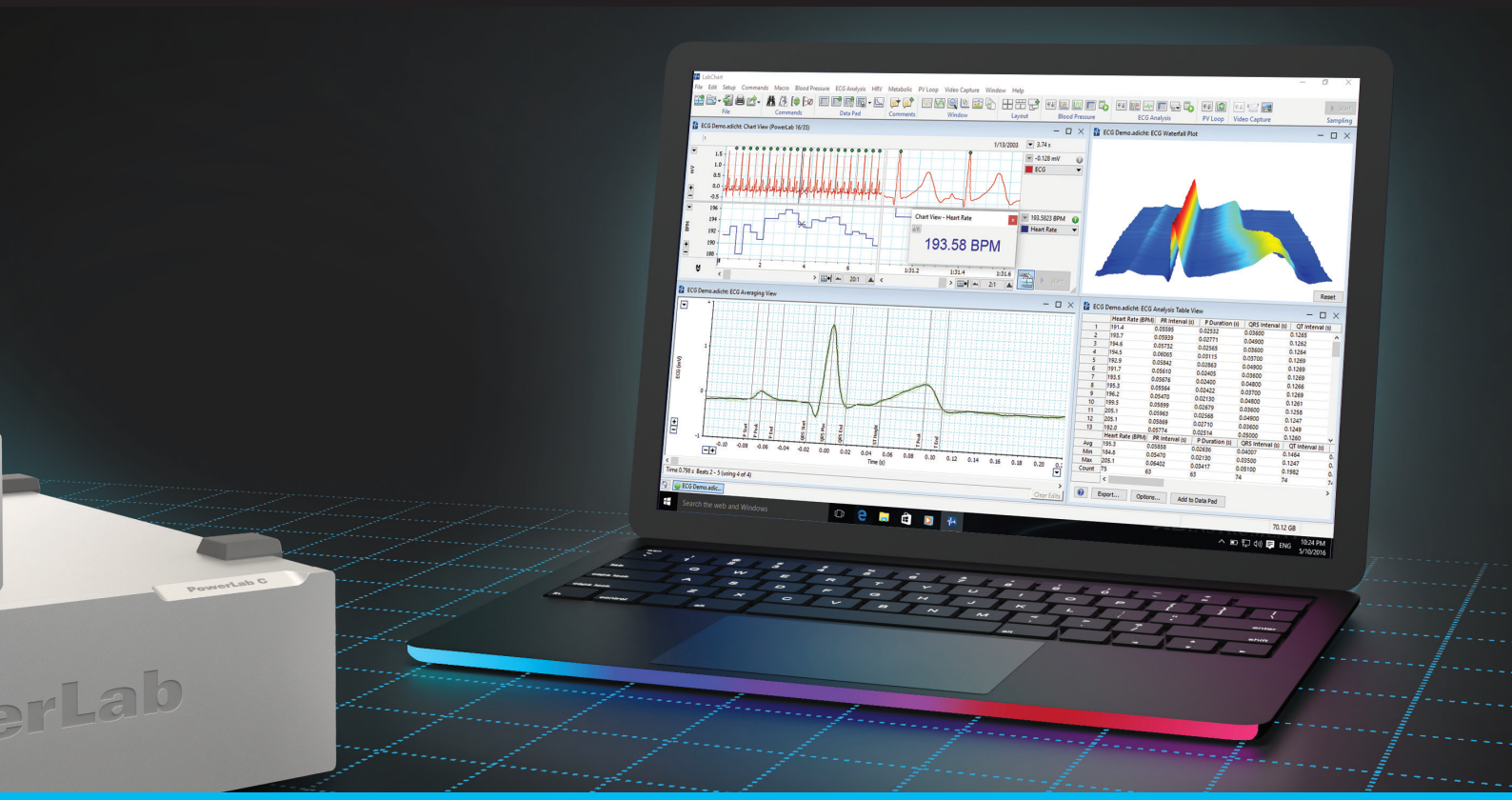
ADINSTRUMENTS
making science easier

Electrocardiography

Module for LabChart and PowerLab



Automatically detect each component of the PQRST complex, including onset, amplitude, and intervals.

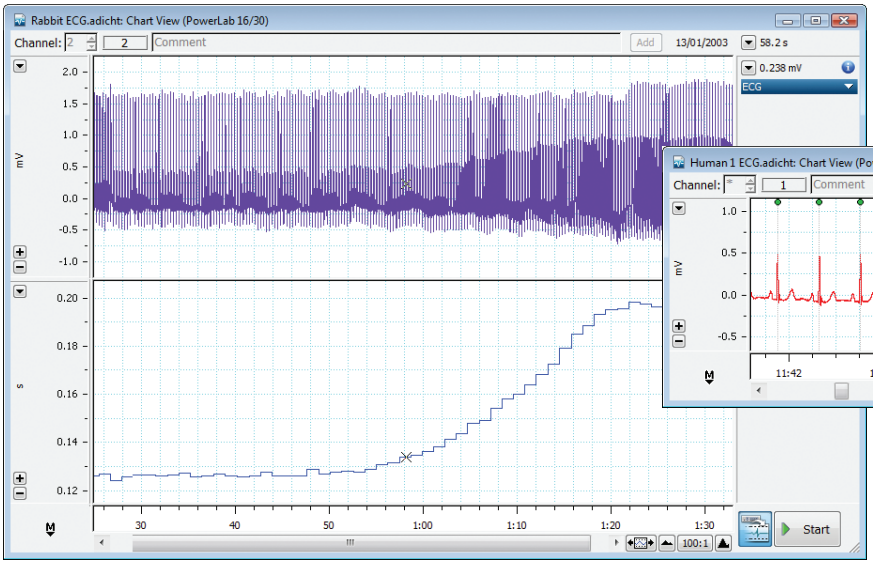
Assess heart function with the Electrocardiography Module for LabChart using real-time recordings or saved ECG traces.

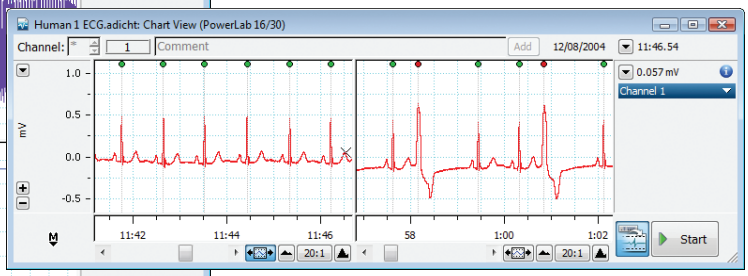
Use one of the presets designed for species-specific ECG cycles and beat ranges (Human, Guinea pig, Pig, Dog, Mouse, Rat, or Rabbit), or customize your own. Utilize the beat averaging feature to reduce noise and artifacts from any number of heartbeats. Exclude atypical or noisy waveforms with the ECG Beat Classifier.

Save ECG analysis independently of raw data. Visualize data with tabular and graphical PQRST complex start, end, amplitude, and interval reports. Export QT/RR, QT/time, RR/time, or waterfall ECG graphs.

Applications

- Pharmacokinetics
- Drug Trials
- Isolated Heart Studies
- Hemodynamic Measurements
- Cardiac Physiology





Left: Use Chart View to record ECG data and calculate QT interval in real-time.

Below: Use the Split Bar to view two data blocks at once, live or offline.

ECG Analysis Module

ECG Beat Classification

Categorize beats according to activity and isoelectric noise. Easily visualize QRS complexes and RR interval variance. Remove artifacts caused by movement, electrical interference, or baseline drift. Exclude atypical beats, such as extrasystole and supraventricular arrhythmias.

ECG Averaging View

Select which beats you want to average with ECG Averaging View and easily visualize the mean PQRST trace before and after an experimental intervention. Automatically label complex components or manually adjust labels as desired. Generate tabular data and graphs for individual traces, or mean trace start, end, amplitude, or PQRST interval.

ECG Table View

Calculate and record the parameters of each averaged ECG beat. Export this table to LabChart Data Pad or other software.

- RR, PR, QT, and QRS Intervals
- QTc
- T, P, and R Amplitudes

Analysis Plots

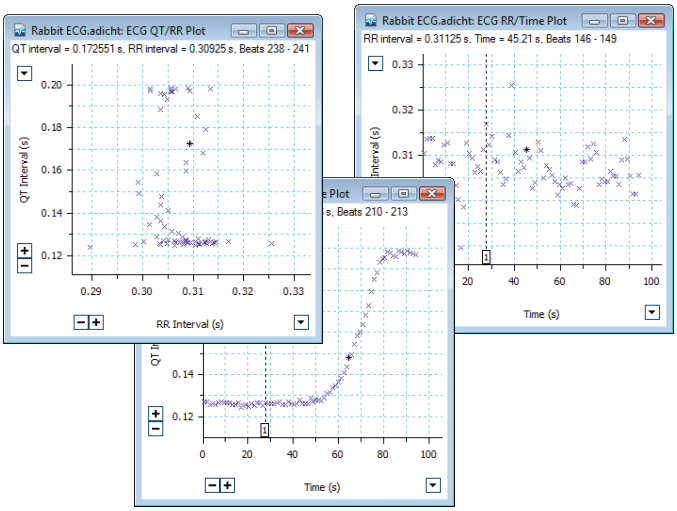
Generate scatter plots for presentation and posthoc analysis. Display selected data in several graph types:

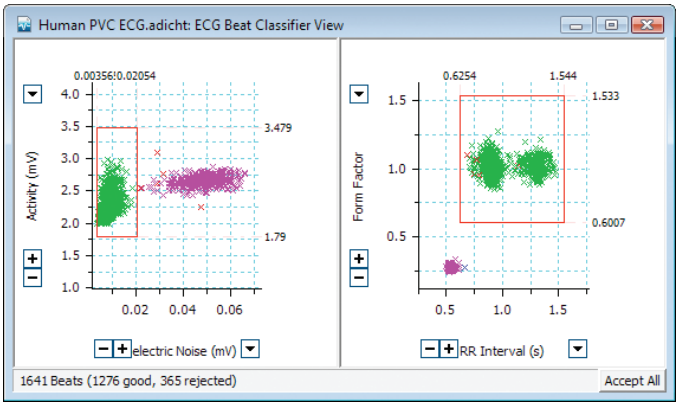
- QT/RR Plot (QT Interval vs. RR Interval)
- QT/Time Plot (ideal for pharmacokinetics)
- RR/Time Plot (indicates HR variance)
- Waterfall Plot (3D waveform analysis)

Expedient workflow

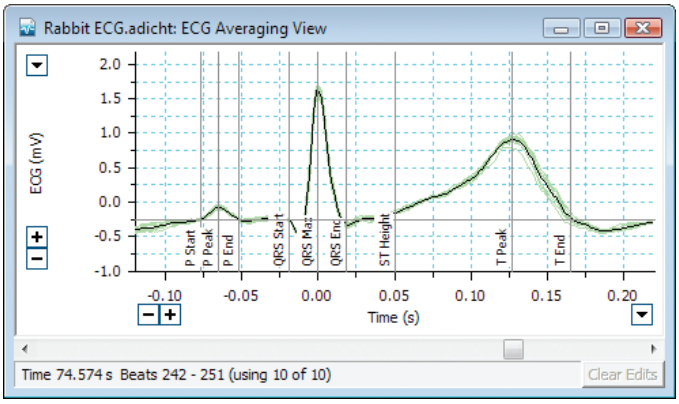
Navigate to your data point of interest from any screen, with linked Chart, Beat Classification, Table, and Averaging Views. Quickly identify edited data marked in red.

Below: Visualize your data in automatically generated Analysis Plots.

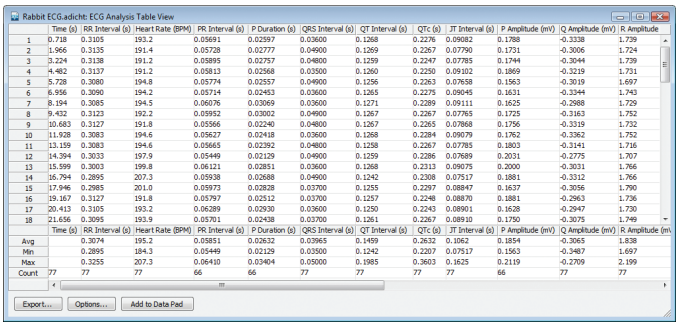




Above: ECG Beat Classifier categorizes beats based on noise and form factor parameters.



Above: ECG Averaging View displays the mean PQRST trace from this Rabbit ECG, highlighting each wave component.



Above: Export data from Table View or add it to LabChart Data Pad.

Ordering Information

The ECG Analysis Module for LabChart can be purchased individually as an Add-On for LabChart 8 (MLS360/8, Windows), 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).