

# PowerLab

Data with  
integrity

## High performance data acquisition hardware trusted for a wide range of life science applications.

Cited in more than 20,000 research papers in peer-reviewed journals, PowerLab systems for research provide the full utility of a multi-channel, real-time chart recorder, XY plotter, digital voltmeter and storage oscilloscope with the benefits of easy data handling, high resolution, and variable sampling speeds.

### PowerLab data acquisition units provide:

- 16 Bit resolution on all gain ranges
- Variable sampling and online computation speeds of up to 200 000 samples/second per channel (400 kHz aggregate across all channels or 2x 200 kHz on two channels)
- Fast processor for real-time data acquisition without data loss
- Integrated pod ports for wider amplifier and transducer choice
- Digital inputs and outputs for external instrument control and triggering
- AC/DC coupled inputs
- Independent stimulator outputs
- High-pass, low-pass and anti-aliasing filters
- Available with 4, 8 or 16 channels
- Supplied with LabChart software

PowerLab is simple to set up, connecting directly to Windows and Macintosh computers via USB port, and is automatically detected by LabChart.



### Signal conditioners and instruments

ADInstruments manufactures a wide range of software controlled preamplifiers that are automatically identified and configured by PowerLab. All settings are automatically stored with data files for easy repeating of experiments.



### Transducers and accessories

We offer an extensive selection of instruments, transducers and accessories made by ADInstruments and world-leading brands. Products are fully compatible with PowerLab recorders and signal conditioners.

PowerLab and LabChart are trademarks of ADInstruments Pty Ltd. All other trademarks are the property of their respective owners. Products supplied by ADInstruments are intended for use in research and teaching applications and environments only.



Visit our website or contact your local ADInstruments salesperson for more information

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# LabChart

All your analysis  
in one place

## Easily develop an integrated and customized set-up for your unique research requirements.

LabChart data analysis software creates a platform for all your recording devices to work together, allowing you to acquire biological signals from multiple sources simultaneously and apply advanced calculations and plots as your experiments unfold.

With LabChart analysis software, you can record and display up to 32 channels of data in real time, performing online calculations at high sampling rates, giving you full control of your research.

### Simple to use

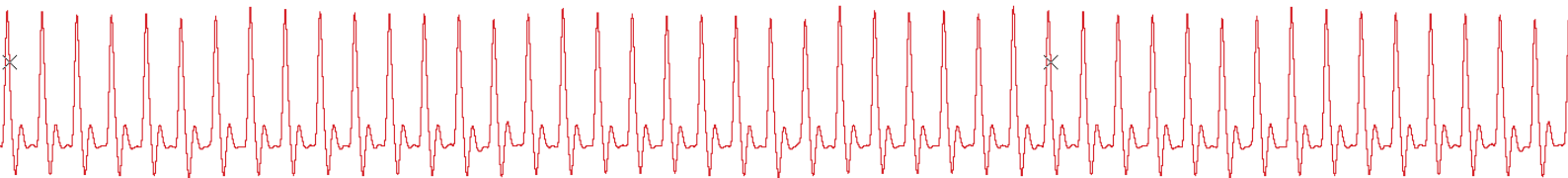
- Pre-configured settings files for one-touch recording
- Change recording settings in seconds
- Recall data and experimental settings
- Annotate data with comments
- Smart detection of ADI peripheral devices

### Customize your workflow

- Scripting and automation
- Custom arithmetic
- Import/export data in various formats
- Manual or event-driven sampling
- Generate customized stimulus outputs

### Feature rich

- Wide range of sophisticated add-ons purpose built for life science
  - Extensions eg. Spirometry
  - Modules
  - Device enablers
- Record from multiple PowerLabs or from LabChart compatible devices



## Specialized analysis with Add-On modules

Get the full suite of modules with LabChart Pro (some modules are not available on Mac). Range includes:

<b>Cardiac Output</b>	Calculates cardiac output from a LabChart recording of a thermodilution curve measured in animals
<b>Metabolic</b>	Provides real-time measurements of parameters such as $V_{CO_2}$ , $V_{O_2}$ , $V_E$ and RER
<b>Blood Pressure</b>	Automatically detects, analyzes and reports parameters from arterial or ventricular pressure recordings
<b>Spike Histogram</b>	Detects, discriminates and analyzes extracellular spike activity generating a range of plots and statistics
<b>ECG Analysis</b>	Detects and reports the onset, amplitude and interval times of PQRST from human and animal ECG signals

<b>Dose Response</b>	Generates dose response curves, EC50 values and additional parameters
<b>Heart Rate Variability</b>	Displays and analyzes variation in the interval between heartbeats in human and animal ECG
<b>Video Capture</b>	Allows the synchronized recording and playback of a QuickTime movie and LabChart data file
<b>Peak Analysis</b>	Automatic detection and analysis of multiple, but not overlapping, signal waveforms from recording
<b>DMT Normalization</b>	Calculates and standardizes optimal vessel pretension conditions using the wire myograph
<b>PV Loop</b>	Analyzes left ventricular pressure and volume data, calculates loop area and a wide range of hemodynamic parameters

LabChart PowerLab 1-Sheet-A4 V1-0-1



## Maximize your potential

ADInstruments' global training and support systems mean that there is always help at hand to support you with your endeavours and help you learn 'best practices' to move your research forward faster.