

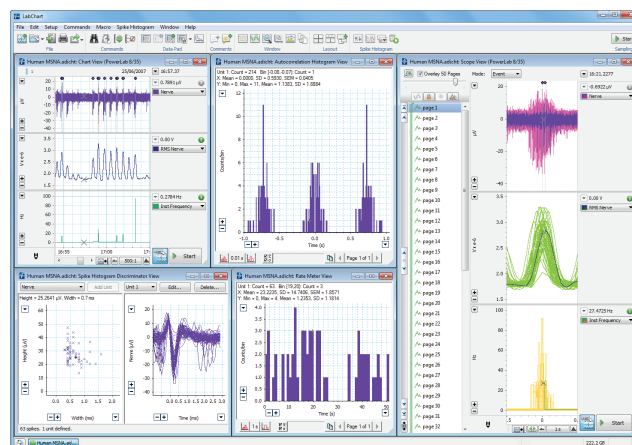


Create customized setups with cutting-edge technology and flexible analysis options for human autonomic and neuroscience research.

ADInstruments offers flexible, customizable systems to collect and synchronize a wide range of cross application signals. We also offer the only human approved neuro amp on the market - Neuro Amp EX. Easily compare, clarify and evaluate all your data in one place using LabChart, with the option of customizable analysis options or standard features such as Peak Analysis, Scope View and Arithmetic - you are free to experiment with confidence.

Benefits of Autonomic and Neuroscience research with ADInstruments:

- Blood pressure analysis tailored for our range of high fidelity transducers
- Analyze your ECG and heart rate in real time with Cyclic Measurements
- Compare nerve recordings with physiological function
- Mix and match products for a custom solution
- Integrate multiple data streams in one place
- High quality hardware and software for accurate timing
- Fast and robust averaging and artifact rejection



Typical studies:

- Sleep and seizure studies
- Learning and memory
- Classic and operant conditioning
- Baroreflex sensitivity
- Vascular resistance
- Shock
- Stroke
- Heart rate variability
- Exercise and metabolic studies
- Monitoring peripheral circulation
- Neural respiratory control
- Magnetic stimulation
- Peripheral motor neural activity
- Sensory functions

Analyzing SNA signal in LabChart

Applications include:

Blood Pressure • ECG • Evoked Responses and Stimulation • Extracellular Recording • HRV

Microneurography

Directly record and analyze peripheral nerve activity from humans using microneurography techniques.

C Series Microneurography System RSBC002

The C Series Microneurography System provides the core elements required to get started with a Microneurography study for Human Autonomic research. This system provides all the essential microneurography amplifiers and equipment for the recording and analysis of spikes from peripheral nerves (such as MSNA), muscle activity (EMG), and continuous non-invasive blood pressure waveforms and electrical nerve stimulation in human subjects.



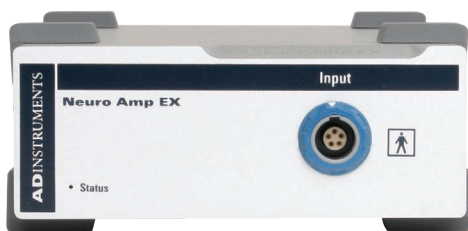
+ Microelectrodes of your choice (not stocked by ADInstruments)

System includes:

- One PowerLab C
 - One Neuro Amp EX (supplied with a Neuro Amp EX headstage and six male Amphenol connectors)
 - One Stimulus Isolator
 - One single channel Bio Amp
 - 3 x C Series Front End Interfaces
 - The Human NIBP Nano System (includes a Human NIBP Nano Wrist Unit, one Human NIBP Nano Height Correction Unit (HCU), and the Human NIBP Nano Interface)
- LabChart Pro Software (with a copy of the Human NIBP Device Enabler software included)

Neuro Amp EX FE285

Measure nerve activity using the microneurography technique with the Neuro Amp EX in combination with a PowerLab system. The Neuro Amp EX is a low noise, high gain neural amplifier that is fully isolated and suitable for both animal and human use. It also provides audio output to listen to neurological signals.



Supplied with:

- Neuro Amp EX Headstage
- Six male Amphenol Connectors for customization of microelectrodes adapters (*microelectrodes not supplied*)
- Grounding Cable (Snap Lead)

Stimulus Isolator FE180

A human-approved isolated stimulator for superficial detection and activation of nerves. Produces isolated, adjustable, constant-current pulses suitable for applications in vivo and in vitro. Electronically isolated for subject safety and designed to work with a PowerLab.



Supplied with:

- A set of shrouded plugs (one red, one black) for customizing one's own stimulating electrodes

Also available:

Stimulator rod with cable MLA265

Used in deep nerve stimulation experiments in humans when used with an isolated stimulator.



Stimulating bar electrode MLADDF30

Suitable for nerve or muscle stimulation experiments in humans when used with an isolated stimulator.



EEG

Record non-invasive brain activity including changes during different stages of sleeps or in response to stimulation by the external environment.

Record surface EEG activity from up to 32 cortical sites using our EEG Electro-cap systems, PowerLab and our full line of Bio Amplifiers that are fully tested and certified for human subjects.

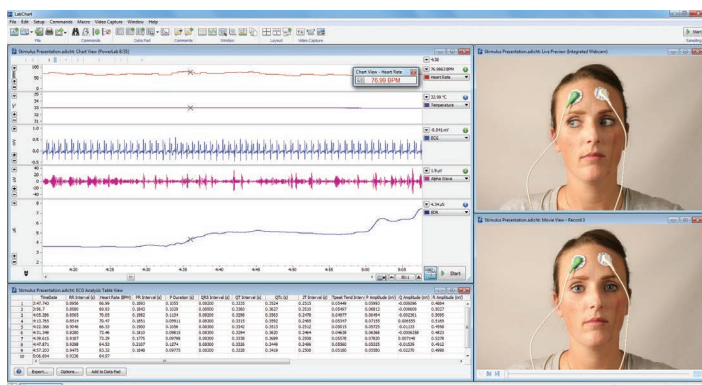
Bio Amps

Our range of isolated, high performance differential biological amplifiers are optimized for measuring biological signals such as EEG.



EEG Electro-cap systems MLAEC

Includes cap(s), adapter and body harness as well as electrodes, gel, and other accessories.



LabChart Video Capture

Stimulus Presentation

Run stimulus protocols for your behavioural and cognitive neuroscience research and synchronize these events with voluntary responses and psychological response data such as skin conductance response, ECG, EEG, EOG, and EMG.

With the combination of SuperLab and StimTracker from Cedrus with PowerLab and LabChart, you can create an integrated system with simple media management, tracking and complete control of your research data.

Relevant Products:

- SuperLab
- StimTracker Duo
- StimTracker Quad
- Skin temperature probe
- Push Button Switches
- Response Meter
- Response pads
- White or Black light sensors (both included with StimTrackers)



Human NIBP

Monitor trends in blood pressure continuously and non-invasively in humans. Reliably record and monitor trends in response to interventions on finger arterial pressure, systolic, diastolic, mean arterial, heart rate and interbeat interval.

Human NIBP Nano System

Stream data directly into LabChart or LabChart Lightning for easy analysis of continuous blood pressure signals from an adult human via our non-invasive dual finger cuff system. Cuffs, available in a variety of sizes, and LabChart, are sold separately.



ECG

Examine heart rate, heart rate variability, analysis of the waveform morphology and other similar functions using our human approved Bio Amps with ECG electrodes.

Alternatively, you can easily sample wireless ECG alongside other physiological signals such as nerve activity, blood pressure, or other signals as part of your integrative physiology protocols.

Bio Amps

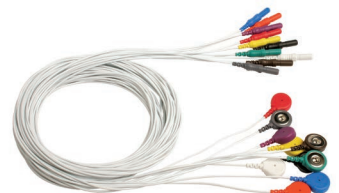
(single, dual and octal)

Our range of isolated, high performance differential biological amplifiers are optimized for measuring biological signals such as ECG.



Biopotential Electrodes and Lead Wires

We offer a range of lead wires, plus disposable, reusable, and chest ECG electrodes.



Wireless physiological monitoring in humans

Wireless monitoring allows you to record a wide range of signal types simultaneously whilst providing freedom of movement for your subjects, ensuring you are observing realistic human activity in your research.

Equival Wireless Physiological Systems

Record a range of signals via a compact and unobtrusive sensor belt plus ancillary options. A long battery life and comfortable design support long sampling periods, and with both live data streaming and access to offline data logging in LabChart for single or multiple subjects - it's the perfect solution for exercise research through to sleep studies. Single or multi-belt starter packs are available.

LabChart and ancillary devices are sold separately.

Signal options include:

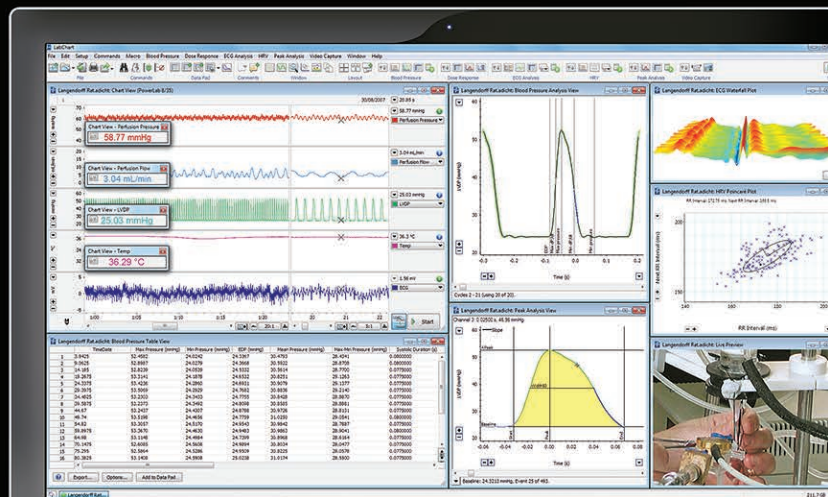
- ECG (2 channel)
- Skin temperature
- Breathing trace
- GSR
- Accelerometer (3 axis)
- SpO₂



Additional accessories are also available. Find out more at adi.to/equivital

LabChart

All your analysis
in one place



LabChart 8, our traditional data analysis software provides a streamlined platform for all of your recording devices to work together, so you can acquire signals from multiple sources simultaneously.

LabChart tracks every recorded action and never modifies your raw data, allowing you to easily analyze your recorded data and apply advanced calculations as your experiments unfold.

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

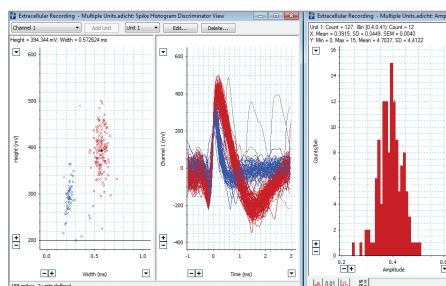
- Wide range of sophisticated add-ons purpose built for life science
 - Extensions eg. Spirometry
 - Modules
 - Device enablers
- Record from multiple PowerLabs or from LabChart compatible devices

Key Features and Modules*

We've built LabChart to be easily adapted and customized to your needs. As your research grows, Add-Ons and customizations allow LabChart to grow with you.

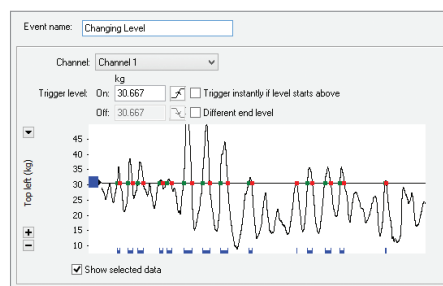
- Spectrum
- Scope View
- Cyclic Measurements
- Peak Analysis*
- Spike Histogram*
- ECG Analysis*
- Blood Pressure*
- Video Capture*
- Cardiac Output*
- Metabolic*
- Dose Response*
- Heart Rate Variability*
- DMT Normalization*
- PV Loop*

* All Modules are included with LabChart Pro, or download and purchase separately.



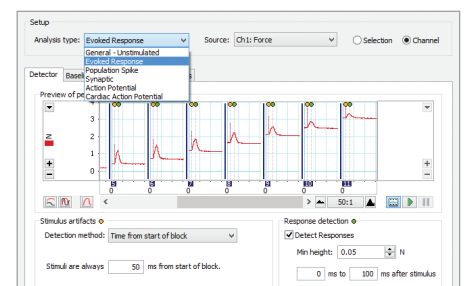
Spike Histogram

Detects, discriminates and analyzes extracellular spike activity generating a range of plots and statistics.



Blood Pressure

Automatically detects, analyzes and reports on parameters from arterial or ventricular pressure recordings.



Peak Analysis

Automatic detection and analysis of multiple (but not overlapping) signal waveforms from a recording.

Find out more: adi.to/labchart



LabChart
LIGHTNING

Data acquisition and analysis re-imagined



LabChart Lightning is the latest iteration of our 34 year history of creating easy to use data acquisition and analysis software. LabChart Lightning empowers innovative researchers to make unique scientific discoveries with unlimited freedom and flexibility.

Unlimited Channels and Overlays

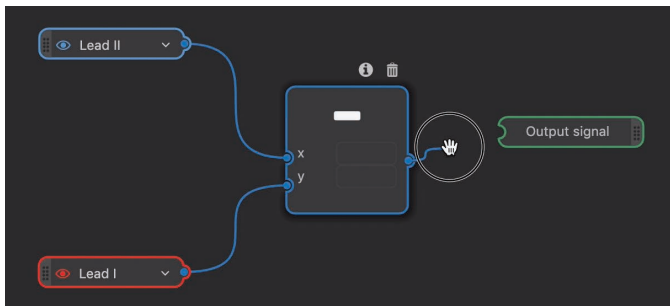
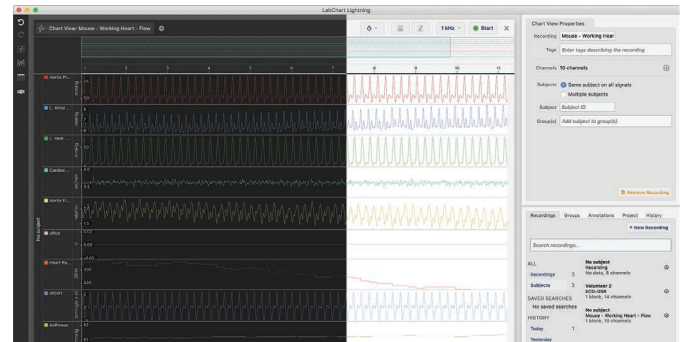
Record data into an unlimited number of channels. Create as many calculated signals as you like. Overlay signals by dragging and dropping them between channels.



Overlay channels with drag and drop.

Dark View and Light View

Switch between dark view and light view to help reduce eye strain and for research applications where controlled lighting is important.



Custom Calculations

Create custom calculations by dragging and dropping functions from our extensive function library. See the effect of custom calculations on your original data. Optimize and share your calculations with colleagues.

More Features

- Cross Platform 
- PowerLab integration
- Readouts
- User based licensing

Third-Party Device Integration



LabChart Lightning enables the integration of multiple devices for data acquisition and analysis. Device manufacturers can follow our SDK available on GitHub to create a TypeScript plugin for their

Cross-Recording Analysis

Analyze data across multiple recordings within a project. Organize recordings and channels by subjects or groups. Convert time-based data from recordings to discrete values to use in statistical analysis.

Organize data by groups and subjects and assign group data by regions.

Table View									
	Baseline			Wall Sit			BRS		
	Systemic Mean mmHg	RI Mean ms	Systemic Mean mmHg	End Value ms	Mean ms	End Value ms	Mean ms	End Value ms	Mixed units
Female									
Mean	143.3	833.6	175.6	28.67	633.6	-72.50	-	-2.529	
01	148.1	740.5	189.0	25	506.0	-50			
02	137.2	881.6	103.8	31	608.8	-25			
03	149.3	709.7	178.0	15	530.4	15			
05	131.1	800.5	154.4	28	587.7	10			
06	166.3	768.6	202.4	60	536.1	-30			
08	129.9	1,040±3	175.9	13	782.5	-855			
Male									
Mean	128.2	826.8	181.6	29.40	565.9	-68		-2.313	
04	107.0	828.7	172.8	43	606.4	15			
07	101.1	861.8	203.7	68	576.0	-155			

- Import / export
- History and autosave
- Data tagging annotations and regions

Sign up for a 30-day free trial at adi.to/lightning



PowerLab

High-performance data acquisition hardware

PowerLabs are capable of high speed sampling and are compatible with instruments, signal conditioners, and transducers supplied by ADInstruments and many other leading brands.

Developed in 1985, PowerLab has been a reliable data acquisition tool for an entire generation of scientists and educators. It has always offered a simple and flexible solution for almost all types of analog physiological data acquisition. With the addition of PowerLab C for research, we are excited to continue supporting a whole new generation of scientists with unparalleled flexibility for both analog and digital data acquisition.

PowerLab C and C Series Interfaces

PowerLab C is a digital data acquisition device that provides adaptive mains filtering, power management for peripheral devices (max 100W via USB-PD) and sub- μ S time synchronization for up to four C Series compatible USB-C devices.

Front End Interface

Converts analog data from ADInstruments Front-Ends such as Bridge Amps and Bio Amps so that they can be digitally sampled by the PowerLab C.

Instrument Interface

Provides 4 channels of input capability from any analog instrument to PowerLab C.

Configuration Options

Both C Series interfaces are designed to work with PowerLab C for adaptive mains filtering and sub- μ S time synchronization with other C Series compatible devices. Alternatively, for simple setup requirements, you can connect them directly to a computer.



Modular system



Powerful and portable



Analog compatible



Digital framework for the future



26 Series PowerLabs

Highly functional and adaptable for even the most demanding of applications, there is a research PowerLab to suit your requirements. Available in 2 and 4 channels, PowerLab can sample from virtually any analog signal.



PowerLab 2/26

PL2602  

For those who require minimal channels the 2/26 is an ideal entry option. Maximum sampling rate of 100 kHz per channel. Independent ADCs for each channel to keep data perfectly in sync.

PowerLab 4/26

PL2604  

Our entry level research grade DAQ system, the 4/26 provides 4 analog input channels and has a maximum sampling rate of 100 kHz per channel. Independent ADCs for each channel to keep data perfectly in sync.

Find out more at adi.to/powerlab

ADInstruments Training and Support

Our global support and flexible training options mean that there is always help at hand to streamline your experiments and reach your research goals faster. Whether you are already a career scientist or just starting out, we can help you master best practice techniques for your research.



We provide training at three different levels:

- Level I:** The basics of data acquisition
- Level II:** Improving signal processing and data analysis
- Level III:** Automation and advanced analysis

Software Training

Our software training courses are designed to get you up to speed with relevant, useful skills and knowledge, as quickly as possible.

Training courses are hands-on and delivered by our team of experienced scientists and teach professional best practices to immediately improve data accuracy, problem solving, workflow, and efficiency.

Customized Onsite Training

Increase efficiency with tailored training courses, delivered at your facility. We can customize our curriculum to suit your needs, and teach the hardware and software best practices for your unique requirements.

Our hands-on training fast-tracks learning, to immediately improve output and efficiency, so you can achieve your research goals, sooner.



Application Workshops

ADInstruments partners with world class universities, institutes and leading researchers to develop training directed at specific protocols, techniques and applications.

Our hands-on workshops teach you to use our systems in the most relevant, effective and efficient way for your needs.

Live Product Demonstration

Showcasing powerful and flexible solutions for research. Experience how our integrated hardware and software solutions could help enhance your work.

Take the opportunity to talk to one of our expert team about how we could help you reach your specific goals.



A comprehensive range of product, application, and customer webinar videos are available from our online library. Visit adi.to/training to sign up for one of our upcoming live webinars.

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