

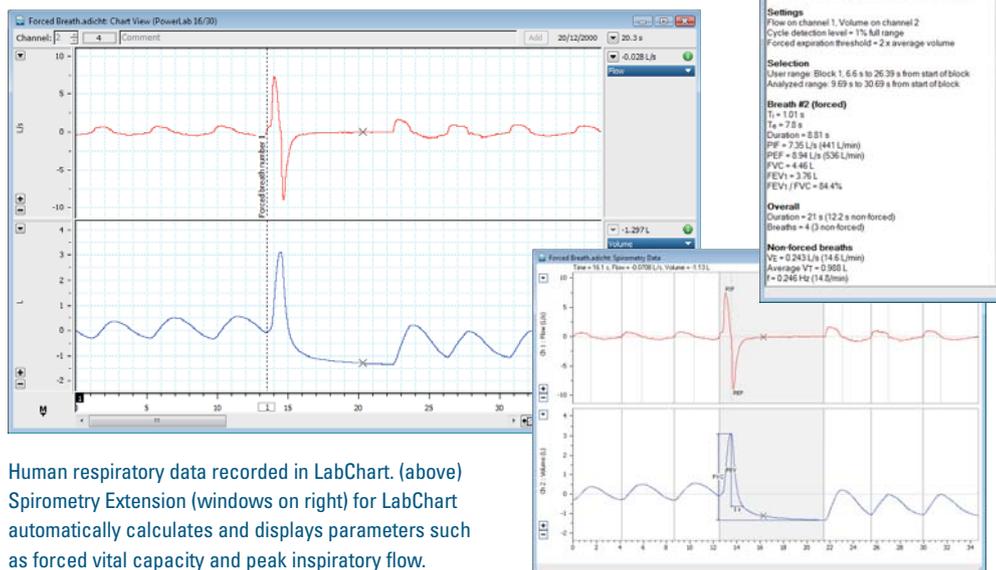
PowerLab® LabChart® Teaching Systems

Research-Grade Solutions at Life Science Education Prices



ADInstruments teaching systems provide flexible teaching and learning tools for today's life science laboratories. At the core of the PowerLab LabChart Systems is the renowned PowerLab data acquisition unit with LabChart, Scope™ and LabTutor® software. The powerful and easy-to-use systems allow students to record and analyze data in a wide range of life science experiments including physiology, exercise, biology and pharmacology. This makes them the preferred system for any classroom setting – from introductory through to advanced curriculums.

Experiment set up is quick and straightforward. With the robust, reliable hardware and intuitive software, students can concentrate on the science rather than the equipment. These user-friendly tools develop students' practical skills, promote scientific curiosity and independence all combined to enhance the learning process and experience.



Human respiratory data recorded in LabChart. (above) Spirometry Extension (windows on right) for LabChart automatically calculates and displays parameters such as forced vital capacity and peak inspiratory flow.

Features & Benefits

- Durable, reliable, easy-to-use data acquisition systems
- Suitable for all teaching levels
- Included teaching materials that can be easily modified
- Wide range of complete systems for life science classroom curriculums
- For use with the latest Mac and Windows operating systems and computers

Quality & Safety

PowerLab systems are manufactured under the ISO 9001:2000 certified quality management system and have a three year warranty.

PowerLab systems meet the European EMC directive, which is equivalent to the FCC Class B standard in the United States.

All biopotential signal conditioners are approved to the IEC 60601-1 patient safety standard, making them safe for use with human subjects.



Teaching Systems

26 Series Teaching Systems



ML826 PowerLab 2/26
(supplied with LabChart & Scope)



ML846 PowerLab 4/26
(supplied with LabChart & Scope)

These units contain either 2 or 4 inputs with two independent analog outputs.

Features include:

- Software selectable gain ranges
- 100 000 samples/s per channel
- Low Pass filters (1 Hz to 2 KHz)
- Adaptive mains filter
- USB interface
- Used with Windows or Mac OS
- Anti-aliasing filter
- LabChart & Scope software



PTB262 Intermediate Teaching System

The Intermediate Teaching System features the PowerLab 26T, which is ideal for measurements of cardiovascular signals (ECG, pulse, blood pressure), muscle (EMG) and breathing.



ML856 PowerLab 26T with human approved dual bio amp, low-voltage and human isolated stimulator, trigger and two to four general-purpose inputs. (Supplied with LabChart, Scope and LabTutor)

-  MLT1010/D Pulse Transducer
-  MLT1132/D Respiratory Belt Transducer
-  MLT1100/D Sphygmomanometer
-  MLA92/D Push Button Switch
-  MLA2540 5 Lead Shielded Bio Amp Cable
-  MLA2505 Shielded Lead Wires
-  MLA700 Reusable ECG Electrodes
-  MLA1010 Disposable ECG Electrodes
-  MLAWBT9 EEG Flat Electrodes
-  MLA1093 Abrasive Gel
-  MLA1090 Electrode Cream
-  MLA1095 Electrode Paste
-  MLAYDG Dry Earth Strap
-  MLADDF30 Stimulating Bar Electrode
-  MLA1094 Alcohol Swabs

Teaching Systems

PTB263 Advanced Teaching System

The Advanced Teaching System features a PowerLab 26T which is ideal for conducting human cardiovascular (ECG, pulse, blood pressure), muscle (EMG) and nerve response as well as respiratory experiments.



ML856 PowerLab 26T with human approved dual bio amp, low-voltage and human isolated stimulator, trigger and two to four general-purpose inputs. (Supplied with LabChart, Scope and LabTutor)

- MLT1010/D Pulse Transducer
- MLT1132/D Respiratory Belt Transducer
- MLT1100/D Sphygmomanometer
- MLA92/D Push Button Switch
- MLA2540 5 Lead Shielded Bio Amp Cable
- MLA2505 Shielded Lead Wires
- MLA700 Reusable ECG Electrodes
- MLA1010 Disposable ECG Electrodes
- MLAWBT9 EEG Flat Electrodes
- MLA1093 Abrasive Gel
- MLA1090 Electrode Cream
- MLA1095 Electrode Paste
- MLAYDG Dry Earth Strap
- MLA1250 Headphones
- MLT003/D Hand Dynamometer
- MLADDF30 Stimulating Bar Electrode
- MLT201 Cardio Microphone
- MLA1094 Alcohol Swabs

PTK10 Human Respiratory Kit

-  ML311 Spirometer Pod
-  MLT1000L Respiratory Flow Head
-  MLA1011A Clean Bore Tubing & Adapter
-  MLA145 Student Respiratory Kit

PTB264 Ultimate Teaching System

The Ultimate Teaching System contains all of the items included in the PTB263 with the addition of the PTK19 Nerve and Muscle Kit II. This extends the experiment list to include studies using isolated animal tissue.



ML856 PowerLab 26T with human approved dual bio amp, low-voltage and human isolated stimulator, trigger and two to four general-purpose inputs. (Supplied with LabChart, Scope and LabTutor)

- MLT1010/D Pulse Transducer
- MLT1132/D Respiratory Belt Transducer
- MLT1100/D Sphygmomanometer
- MLA92/D Push Button Switch
- MLA2540 5 Lead Shielded Bio Amp Cable
- MLA2505 Shielded Lead Wires
- MLA700 Reusable ECG Electrodes
- MLA1010 Disposable ECG Electrodes
- MLAWBT9 EEG Flat Electrodes
- MLA1093 Abrasive Gel
- MLA1090 Electrode Cream
- MLA1095 Electrode Paste
- MLAYDG Dry Earth Strap
- MLA1250 Headphones
- MLT003/D Hand Dynamometer
- MLADDF30 Stimulating Bar Electrode
- MLT201 Cardio Microphone
- MLA1094 Alcohol Swabs

PTK10 Human Respiratory Kit

PTK19 Nerve and Muscle Kit II

-  ML301 Bridge Pod
-  MLT500/A Force Transducer
-  MLA0320 Animal Nerve Stimulating Electrode
-  MLA1605 Shielded Lead Wires
-  MLA013 Muscle Holder
-  MLA40 Manipulator & Stand
-  MLT012/B Nerve Chamber with Cables

Teaching Systems

PTB265 Psychophysiology Teaching System

The Psychophysiology Teaching System offers a PowerLab 26T together with signal conditioners and transducers specifically configured for psychophysiology experiments.



ML856 PowerLab 26T with human approved dual bio amp, low-voltage and human isolated stimulator, trigger and two to four general-purpose inputs. (Supplied with LabChart, Scope and LabTutor)

PTB266 Neurobiology Teaching System

The Neurobiology Teaching System includes the PowerLab 4/26 as well as amplifiers and headstage required for intracellular and extracellular electro physiological recordings.



ML846 PowerLab 4/26 is a four channel data acquisition system with four BNC or Pod Inputs, trigger and low-voltage stimulator. (Supplied with LabChart, Scope and LabTutor)

-  ML116 GSR Amp with MLT116F finger electrodes
-  ML309 Thermistor Pod
-  MLT1010/D Pulse Transducer
-  MLT1132/D Respiratory Belt Transducer
-  MLT409/A Skin Temperature Probe
-  MLA2540 5 Lead Shielded Bio Amp Cable
-  MLA2505 Shielded Lead Wires
-  MLADDF30 Stimulating Bar Electrode
-  MLA700 Reusable ECG Electrodes
-  MLA1010 Disposable ECG Electrodes
-  MLAWBT9 EEG Flat Electrodes
-  MLAYDG Dry Earth Strap
-  MLA92/D Push Button Switch
-  MLA1093 Abrasive Gel
-  MLA1090 Electrode Cream
-  MLA1095 Electrode Paste
-  MLA1094 Alcohol Swabs

-  MLT012/B Nerve Chamber with Cables
-  MLA285 Differential Pod
-  Input Cables (2)
-  MLA270 Stimulator Cable
-  AM3100 Intracellular Amplifier
-  AM3000H Differential Amplifier
-  MLA015 Alga Chamber

Items listed below are supplied with PowerLab LabChart Teaching Systems:

- LabChart, Scope and LabTutor Software
- LabTutor Experiments: Human, Animal, Exercise Physiology, Biology and Pharmacology Experiments
- LabChart Teaching Experiments for both Windows and Macintosh operating systems
- Student Quick Reference Guide



Teaching Resources

www.ADIstruments.com/education

Use this one-stop location for materials and ideas that will help prepare your life science laboratory courses. Browse through the latest equipment and software options, download ready-to-use experiments, learn about multimedia teaching and get the most out of your ADInstruments Teaching System.

Best of all, ADInstruments teaching resources are available FREE to all registered PowerLab users.



As well as downloading LabChart and LabTutor experiments, educators can be inspired by the dozens of education applications and techniques that extend their system's use.

LabChart Experiments

LabChart experiments allow students to use research-grade software in a structured and easy to follow manner. A suite of pre-written experiments contain all the information and guides you and your students need to perform an extensive range of experiments using ADInstruments Teaching Systems with LabChart software. Each experiment includes:

- **Instructor guides:** hardware and software hints, additional exercises and lab report answers
- **Student protocols:** documents containing aims, background information and step-by-step experimental instructions
- **Settings files:** configured LabChart or Scope software files with selected software and hardware settings; students open and simply start recording
- **Sample data files:** examples of acquired experimental data
- **Lab reports:** laboratory reports with questions and exercises for students to complete

Teaching Experiments can be easily customized to suit individual course requirements if necessary. The flexible and powerful LabChart software can be used across a wide range of teaching applications and course levels.

LabTutor Experiments

LabTutor experiments integrate background scientific information and experimental protocols with real-time data acquisition in a single software interface. The functions of a chart recorder, spreadsheet, graph generator and other presentation tools are combined into one seamless laboratory experience. Students follow protocols, record data, analyze recordings, complete and submit electronically laboratory reports all from within the one program. LabTutor software and experiments are supplied with every ADInstruments Teaching System and the latest updates with current and new experiments are available to download from our website.

Tailor LabTutor Experiments with LabAuthor

LabAuthor provides easy-to-use software tools for creating and editing LabTutor experiments. You can make changes to any preconfigured LabTutor experiment, or create a new experiment to suit your students' abilities, your laboratory classroom's facilities and your curriculum's learning outcomes. LabAuthor licenses may be purchased with or without onsite educator training and support packages.

Additional Teaching Resources

In addition to teaching experiments, a vast amount of information is available on our website. Browse through the teaching application pages to get ideas and equipment suggestions for additional experiments. Download the latest experiment lists, view application notes, find out about the latest software and hardware, and more.

Teaching Kits

Each Teaching Kit extends a Teaching System's experiment range into new subject areas and disciplines.

PTK10 Human Respiratory Kit

Used for measuring respiratory flow and volume.



PTK15 EOG Kit

Configured for recording human eye movements.



PTK12 Psychophysiology Kit

Measures GSR and skin temperature.



PTK17 Reflex Kit

Used for stimulating and measuring human reflexes.



PTK13 Pharmacology Kit

For pharmacological studies using isolated tissues.



PTK18 Biochemistry Kit

For recording pH, oxygen, temperature and volumes.



PTK14 Exercise Physiology Kit

For respiratory gas and metabolic analysis.



PTK19 Nerve and Muscle Kit II

Allows recording of isolated nerve and muscle activity.



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PowerLab systems and signal conditioners meet the European EMC directive. ADInstruments signal conditioners for human use are approved to the IEC60601-1 patient safety standard and meet the CSA C22.2 No. 601.1-M90 and UL Std No. 2601-1 safety of medical electrical equipment standards.



GLP
21CFR Part 11
Compliance



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ISO 9001:2000 Certified Quality Management System

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