LAFAYETTE POLYGRAPH

Excellence in polygraph science, engineering, and manufacturing
CONTENTS AND SPECIAL OFFERS

Lafayette Instrument Company is the world’s leading manufacturer of Polygraph instrumentation and equipment, distributing credibility assessment solutions to private examiners, government, and military organizations around the world. Our representatives would be happy to assist you with any questions about our products or services.

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SPECIAL OFFERS FOR NEW POLYGRAPH SYSTEMS

Upgrade to a Lafayette System from an Axciton, Stoelting, or Limestone Computerized System and receive a $1,500.00 discount.

Upgrade to a Lafayette System from a Voice Stress Analysis (CVSA) System and receive a $1,500.00 discount.

Upgrade to an LX5000 or LX6 from an LX4000 or LX3000 and receive a discount of $2,000.00 or more.
LX6 POLYGRAPH SYSTEM

LX6 FEATURES

- 10 data channels
- 32-bit analog to digital conversion
- Superior quick release Fischer Connectors
- Recessed pneumatic ports
- Durable and easy to grip molded cables
- Rugged molded and textured enclosure
- Improved port layout and labeling
- Enclosure designed for added stability
- 360 samples/second across all channels
- Best in industry electronics and EDA
- Selectable GSR or GSC channel
- PPG channel included
- New and improved Blood Pressure Cuff exclusively for the LX6
- Compatible with current/future Lafayette software

TECHNICAL SPECIFICATIONS*

| Size       | 8.1" x 3.22" x 1.21" (20.6 x 8.2 x 3 cm) |
| Weight     | 0.52 lbs (235g)                           |
| Power Requirements | Receives all required power via USB   |
| Transfer Rate  | 360 samples/second per channel          |
| Resolution   | 32-bit analog to digital conversion     |
| Isolation    | 5000Vrms for the full system            |
| Temperature  | Operating: 32°F to 125°F (0°C to 50°C), Storage: -40°F to 150°F (-40°C to 66°C) |
| Relative Humidity | 20% to 80% Non-condensating  |

* Minimum Computer System Requirements are available on page 5.

SENSOR CHANNELS

<table>
<thead>
<tr>
<th>Input</th>
<th>Channels</th>
<th>Type / Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardio</td>
<td>1</td>
<td>0 to 140 mmHg</td>
</tr>
<tr>
<td>Pneumatic Pneumo</td>
<td>2</td>
<td>Extended pressure range</td>
</tr>
<tr>
<td>EDA</td>
<td>2</td>
<td>GSR: 4 μA constant current, range of 10 kΩ to 2.3 MΩ, GSC: Range of 5 kΩ to 4.0 MΩ, Isolation: additional 2500Vrms</td>
</tr>
<tr>
<td>PPG</td>
<td>1</td>
<td>PPG finger clip: 0.47 second time constant, 940 nm</td>
</tr>
<tr>
<td>Activity Sensor</td>
<td>4</td>
<td>0 to 4 V Analog Input</td>
</tr>
</tbody>
</table>

LX6-S BUNDLE INCLUDES

- LXSoftware including the Objective Scoring System (OSS), the Lafayette Drug Reference, and APL’s PolyScore® scoring algorithm
- Comprehensive Instruction Manual
- Activity Sensor
- Pneumo Chest Assembly, silver
- Pneumo Chest Assembly, blue
- 50 Disposable and 2 Reusable Snap EDA Electrodes
- Blood Pressure Cuff
- Pump Bulb w/ Gauge
- All necessary cabling
- Choice of Targus carrying case or backpack
- Exclusive 5 Year Warranty on Data Acquisition System
- 1 Year Warranty on Accessories
- Lifetime Technical Support
**LX5000 FEATURES**

- Data transfer rate up to 360 samples/second across all channels
- 24-bit analog to digital conversion
- Expandable: can add up to 9 additional channels
- Extended measurement ranges
- Selectable GSR or GSC channel
- Dedicated PLE/PPG channel
- Durable yet compact design makes transport and storage easy
- Operates with our trusted, state-of-the-art LXSoftware

**TECHNICAL SPECIFICATIONS**

- **Size**: 7.375”W x 2.75”D x 1.375”H (20cm x 6.98cm x 3.49cm)
- **Weight**: 0.52 lbs (235g)
- **Power Requirements**: Receives all required power via USB
- **Transfer Rate**: Up to 360 samples/second per channel
- **Resolution**: 24-bit analog to digital conversion
- **Temperature**: Operating: 32°F to 125°F (0°C to 50°C), Storage: -40°F to 150°F (-40°C to 66°C)
- **Relative Humidity**: 20% to 80% Non-condensating

*Minimum Computer System Requirements are available on page 5.*

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<td>1</td>
<td>0 to 140 mmHg</td>
</tr>
<tr>
<td>Pneumatic Pneumo</td>
<td>2</td>
<td>Upper and lower chest assembly w/ extended pressure range</td>
</tr>
<tr>
<td>EDA</td>
<td>2</td>
<td>GSR: 4 μA constant current, range of 10 kΩ to 2.3 MΩ GSC: Range of 5 kΩ to 4.0 MΩ Isolation: 2 KV RMS</td>
</tr>
<tr>
<td>PPG</td>
<td>1</td>
<td>PPG finger clip: 0.47 second time constant, 940 nm</td>
</tr>
<tr>
<td>Activity Sensor</td>
<td>3</td>
<td>0 to 4 V Analog Input</td>
</tr>
</tbody>
</table>

**LX5000-S BUNDLE INCLUDES**

- LXSoftware including the Objective Scoring System (OSS), the Lafayette Drug Reference, and APL’s PolyScore® scoring algorithm
- Comprehensive Instruction Manual
- Model 76879S Activity Sensor
- Model 76513A-T Pneumo Chest Assembly, silver
- Model 76513A-B Pneumo Chest Assembly, blue
- Model 76640A-5L 50 Disposable and 2 Reusable Snap EDA Electrodes
- Model 76530A-5 Standard Blood Pressure Cuff
- Model 76506A-5 Pump Bulb w/ Gauge
- All necessary cabling
- 3 Year Warranty on Data Acquisition System
- 1 Year Warranty on Accessories
- Lifetime Technical Support
Our software offers unparalleled ease-of-use and proven reliability, and it is Windows® 10 compatible. LXSoftware is bundled with the PolyScore® and Objective Scoring System scoring algorithms. The Lafayette Polygraph System Software utilizes an intuitive, graphical Windows interface and features pull-down menus, mouse capability to initiate commands and functions, easy to use dialog boxes, and context-sensitive help.

**LXSOFTWARE v11.7 FEATURES**

**Compatible with Windows Vista, Windows 7, 8, and 10**

- Mac support via Parallels® or other virtualization software

**New Respiration Line Excursion (RLE) Tool**

- The RLE Tool measures the ratio of the relevant response divided by the comparison response and produces a suggested pneumograph score. As the examiner selects a relevant question, the tool normalizes it to all other questions on the chart and displays the R/C measurement ratio.

**PLE Pulse Amplitude Tool**

- A virtual sensor derived from the PLE sensor providing a visual comparison of the pulse amplitude changes in the PLE data around the question onsets.

**ESS Report Generator**

- Uses scores from the manual score sheet to formulate a printable report and summary conclusion to describe the test results of event-specific and multi-issue exams.
- Report includes both a categorical result and a statistical classifier in the form of a p-value, confidence level or odds ratio, and also includes the manual scores and information about test accuracy.

**EDA Design: 6 EDA choices (GSR or GSC - manual, detrended, and automatic)**

- Automatic: Optimized high-pass filter solution to EDA signal processing. Keeps the trace centered on a common baseline for smooth appearance and easy management.
- Manual: The examiner manages the sensor trace via centering, sensitivity and slope adjustments. The slope may be adjusted via a slider control under the sensor arrow.
- Detrended: Accurately reproduces all trace excursions above the baseline, but does not permit the trace to dip below its corresponding sensor arrow.

**Additional New Features in v11.7**

- Added Administrative Opinion to the Final Call options
- Multimedia Bar displays duration of multimedia presented
- Ability to see unique serial number of attached DAS
- Can expand Memory Ping to conduct more customized CIT tests and structured interviews (see page 11 for details)

**MINIMUM SYSTEM REQUIREMENTS**

- Operating System: Windows Vista, 7, 8, or 10
- CPU: 1.5 GHz
- System Memory: 3 GB RAM for 32-bit OS or 4 GB RAM for a 64-bit OS
- Hard Disk: 80 GB with 20 GB free space (for video recording)
- Graphics Card: 128 MB of VRAM, DirectX9, 32-bit, Pixel Shader 2.0
- DVD-RW drive
- Keyboard and Mouse or compatible device
- Available USB 2.0/3.0 Ports
- Digital sound card required for multimedia capabilities
- Digital video camera required for video capture. Logitech or Microsoft web cameras recommended. Many popular IP (networked) cameras are supported by LXSoftware.†
- External Microphone may be required to record high quality audio.

* Additional resources may be required for certain video devices. Always consult the documentation for any selected video device to ensure the host computer meets the stated system requirements.

† IP cameras may experience audio/video lag or other undesirable behavior. The use of a directly-attached camera is preferred.
ACCESSORIES

PHOTOELECTRIC PLETHYSMOGRAPH (PLE/PPG)*
Model 76604A-5L
The Photoelectric Plethysmograph is a finger sensor used to measure the rapidly occurring relative changes in pulse blood volume.
- Rubber padding cushioned for added examinee’s comfort
- Smaller diameter and more flexible (cable only)

* LX4000 users will also require a Model 76604ADP PLE/PPG Adapter

MASSETER HEADPHONE SYSTEM
Model 76879HM-A
The Masseter Headphone System is designed to detect and record movements in the Masseter muscle of the mandibular region during the recording phase of a polygraph examination, sensing activities of the tongue, clenching of teeth, and other jaw-line actions. The Headphones are fitted with highly sensitive transducers that allow for on-screen observation and recording of Masseter muscle activity.

The MHS provides high-quality sound, a comfortable fit, and listening/audio-recording versatility. Issues with outside distractions and examiner’s voice fluctuation are mitigated by the system’s ability to play prerecorded questions through the noise suppressing headphones.

DELUXE FOREARM CUFF
Model 76531BR
The Deluxe Forearm Cuff consists of two components: a tapered forearm cuff and a plastic stand. During a polygraph examination the stand is placed upon the arm of the polygraph chair and the subject’s forearm (with the cuff on) rests upon it. The design allows for the elimination or reduction of pressure applied on the cuff by the arm’s weight, and reduces the restriction of blood flow.

SNAP-ON EDA ELECTRODES
Model 76642SP
- Interchangeable with the Disposable Ag/AgCl EDA Electrodes
- Requires only one cable to attach the two finger plates (cable not included)

DISPOSABLE Ag/AgCl EDA ELECTRODES
The Electrodes are completely disposable, pre-gelled, easy to use, one size fits all, and less susceptible to movement artifacts.

Model 76640A-5
- Kit includes: Package of 50 Disposable Electrodes, set of metal Snap-On EDA Electrodes, and Electrode Cable

Model 76642R
- Pack of 50 Disposable Electrodes only
ACCESSORIES

HD USB WEBCAM*
Model LX-WEBCAM

• Full HD video recording (up to 1920 x 1080 pixels)
• Built-in dual stereo mics with automatic noise reduction
• Automatic low-light correction
• Tripod-ready universal clip fits laptops, LCD or monitors
• Capable of recording entire test from arrival to departure

* Provided Webcam subject to change without prior notice.

FINGERPRINT AND SIGNATURE SCANNER
Model LXSIGPRINT

High-quality, high-resolution Electronic Signature pad and integrated fingerprint sensor. It will capture and recognize signature and fingerprint imaging. Designed for ergonomic and natural finger and thumb scanning from the front of the touch pad.

COMPUTERIZED POLYGRAPH FUNCTIONALITY CHECK DEVICE
Model 76740LX

This device is used in conjunction with an LX4000/LX5000 and LXSoftware to check the functionality of EDA, Cardio and Pneumograph components Lafayette Instrument Company recommends performing a Functionality Check when the examiner suspects a functionality problem.

ONLINE POLYGRAPH EXAMINATION GUIDES

Lafayette’s Polygraph Examination Guides cover important techniques, questions, and topics. These guides are available free of charge via our website for users with a Lafayette Instrument web account. Visit www.lafayettepolygraph.com/guides or follow the QR Code below.

Featured Topics
• Acquaintance Tests
• Adjunct Techniques
• Comparison Questions
• EPPA
• Numerical Scoring
• PCSOT
• Quality Assurance
• Utah Technique
• Federal Zone Comparison Technique
• Empirical Scoring System (ESS)
• Interview Route Maps
**STORAGE AND TRAVEL CASES**

**PORTABLE CARRYING CASE**
*Model LX-1050*

This portable fabric case can hold laptops up to 17” along with your polygraph accessories. Lightweight and sturdy, its compartments allow you to store your instrumentation securely when moving from home, office, or any other examination area.

**STORAGE BACKPACK**
*Model LX-1050BP (not pictured)*

This backpack fits laptops with up to 17” screens and also includes a spacious file compartment, small zip pocket for keys or other quick access items, two water-bottle pockets, and a number of accessory compartments.

* Case manufacturer or model subject to change without prior notice.

**PROTECTIVE STORAGE POUCH: LX5000 OR LX4000 DAS**
*Model LX-5000P (LX5000) (not pictured)*
*Model LX-4000P (LX4000)*

Soft pouch that protects your LX5000 or LX4000 DAS when being transported.

**SMALL PELICAN CASE †**
*Model LX-1060*

The Small Pelican Case is rugged, crushproof, watertight, airtight, dustproof, chemical resistant and corrosion proof. It is the ultimate way to store, protect, and transport your polygraph system. The case includes a versatile padded divider with changeable compartment sizes.

**Dimensions**
- Inside: 14-13/16” x 10-3/8” x 6’’ (37.6cm x 26.3cm x 15.2cm)
- Weight: 6.40lbs (2.9kg)
- Outside: 16’’ x 13’’ x 6-7/8’’ (40.6cm x 33cm x 17.4cm)

**LARGE PELICAN CASE WITH WHEELS †**
*Model LX-1065*

This Large Pelican Case is rugged, crushproof, watertight, airtight, dustproof, chemical resistant and corrosion proof. The front handle and convenient extension handle, with its effortless release latch, makes the case convenient for travel. The padlock protectors provide added strength and extra security against cutting and theft.

**Dimensions**
- Inside: 20-3/8” x 15-7/16” x 9” (51.79cm x 39.17cm x 22.86cm)
- Weight: 21lbs (9.5kg)
- Outside: 22-1/16” x 17-15/16” x 10-7/16” (56cm x 45.52cm x 26.44cm)

† Made in the USA, these tough cases are designed with an automatic purge valve that equalizes air pressure, a watertight silicone O-ring lid, over-molded rubber handles and stainless steel hardware. The simple and strong double-throw latches keep the lid closed in the roughest handling. The Pelican cases come with a Lifetime Warranty against breakage or defects in workmanship.
ACTIVITY SENSORS

ACTIVITY SENSOR SEAT PAD
Model 76879S

ACTIVITY SENSOR ARM PADS
Model 76879A

ACTIVITY SENSOR FOOT PADS
Model 76879F

Our pneumatic activity sensors for the seat, arms and feet are designed with an air inflated bladder and movement causes a shift of the air inside the bladder that is displayed in real time on the chart’s movement sensor channel(s).

When used with our 76877P chair, the Seat Sensor can be placed inside the seat cushion for covert operation.

Activity Sensor Pad Models
76879S, 76879A, 76879F
(Shown with Portable Subject’s Chair
Model 76877P sold separately)
**CHAIRS**

**CUSHIONED PORTABLE SUBJECT’S CHAIR**  
Model 76877P  
This portable chair is ideal for the mobile polygraph examiner. The chair is comfortable, durable, and it supports up to 300 lbs. The chair easily folds flat so it can be attached to a rolling case and easily transported. The chair weighs only 21.5 lbs.

**CUSHIONED PORTABLE SUBJECT’S CHAIR WITH SEAT ACTIVITY SENSOR**  
Model 76877CS  
This chair is the same as the 76877P, but it also includes a Seat Activity Sensor pad that fits inside the seat of the chair.

**ADJUSTABLE ARM SUBJECT’S CHAIR**  
Model 76870V  
This chair is built to orthopedic standards to ensure proper posture and back support. The chair is available completely in black naugahyde. This chair comes with all the tools that are required and is easily assembled in a matter of a few minutes. Shipping weight: 115lbs

**ADJUSTABLE ARM SUBJECT’S CHAIR (with Seat, Arm, and Feet Activity Sensors)**  
Model 76870VASF  
These chairs are specialized versions of the Adjustable Arm Subject’s Chair, Model 76870V that have any combination of seat, arm, and feet activity sensors built-in and prewired.
Memory Ping is a Windows®-based software and sensor solution which, when combined with our training, allows investigators to conduct testing of suspects to determine their involvement in the crime under investigation. The software includes an algorithm to guide decisions.

Memory Ping detects the presence of information in the suspect’s memory. There are uncontrollable physiological reactions in a guilty suspect when crime details are mentioned, reactions that do not occur in those who do not know those details. Memory Ping makes it easy for you to find out who knows this information.

**FAST**
The Memory Ping training program is conducted in a week of lectures and hands-on exercises. When training is complete, a Memory Ping test can be conducted almost anywhere in 30 minutes or less and the results are displayed immediately.

**ACCURATE**
Memory Ping leverages proven technology, testing methodology and known physiological reactions to recognition and deception.

**APPROACHABLE**
Analysis of the data can be performed automatically with Memory Ping’s validated algorithm. It is based on decades of published research from several respected scientists. The algorithm can score the data, show the user what it is scoring, and will produce a decision along with a probability statement.

**EXPANDABLE**
Using LXSoftware*, Memory Ping can conduct even more customized CIT tests and structured interviews.

**AFFORDABLE**
Subtle and involuntary signals are detectable using Memory Ping sensors on the hand or fingers. The Memory Ping software can run on a laptop, desktop, or even a tablet. It allows the user to set up and conduct a test, watch the data scroll on the screen in real time, evaluate the data offline, and send the case electronically to another investigator.

* Requires LXSoftware v11.6.4 or greater (See page 5 for more information).

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**SENSOR**

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<tbody>
<tr>
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<td>1</td>
<td>GSR: 3.59μA Constant Current&lt;br&gt;Range: 10kΩ - 2.5MΩ&lt;br&gt;Isolation: 5KV&lt;sub&gt;ring&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

**MINIMUM SYSTEM REQUIREMENTS**
Memory Ping hardware and software was designed and optimized to be used with the Microsoft Surface™ Pro tablet.
- Operating System: Windows 7 or better (tablet, PC, or laptop)
- Display: 10” or larger
- Hard Drive: 64GB or larger
- RAM: 4GB or higher
- Processor: 1.50GHz or better
- USB: Full-size USB 3.0
- Touch: Multitouch input recommended
- Camera: 1.3MP or higher recommended
- Internet Connectivity: Recommended

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