"Designed by Scientists for Scientists"

Startle Response Test Systems

SR-HLAB™

Human Startle Response System – Used extensively in the investigation of schizophrenia, drug dependency and PTSD

SR-HLAB EMG System

Features & Benefits

- Complete solution for a wide variety of startle applications
- Lightweight system transports easily from laboratory to offsite test facilities
- EMG electrodes or photoelectric cell (PEC) sensors
- Point & Click software controls cues and response recording
- USB interface makes laptops available to run the system
- Protection circuits limit excessive sound
- Available with optional heart rate sensor

PRODUCT OVERVIEW

The SDI SR-HLAB™ Startle response system plays a key role in the investigation of the pharmacology and physiology of schizophrenia, drug dependency, post traumatic stress and other disorders.

The SR-HLAB™ Startle Response System measures startle response by recording the eyeblink reflex via electromyographic (EMG) or photoelectric cell (PEC) recording. SR-HLAB is a complete hardware and software solution for a wide variety of startle applications. Intuitive yet powerful features cater to users from the educated non-specialist to the sophisticated behaviorist.

SR-HLAB is portable, making it the first startle analysis system that can be easily transported from the laboratory to offsite test facilities. The complete system weighs only 8 pounds and comes with a carrying case. SR-HLAB takes full advantage of the Windows® operating system with data organization and management software that combines power and flexibility with ease of use.

SR-HLAB COMPONENTS

The basic SR-HLAB system includes the following:

- Software
- Stimulus and Response modules
- EMG electrodes or headband with PEC sensors
- Calibrated headphones
- All cables and connectors

SR-HLAB MODELS

SR-HLAB is available in two models: SR-HLAB EMG and SR-HLAB PEC. The EMG model uses electrodes positioned over the subject's Orbicularis Oculi muscle to capture the eyeblink reflex. The PEC model uses a photoelectric cell monitoring the eyelid to capture the eyeblink reflex. Lid closure reflects an LED ray back to an adjacent photoelectric cell; millivolt output increases with blink initiation, decreases with blink completion, and a waveform is produced. The PEC model was developed to meet the needs of researchers who need reduced setup time or have subjects that will not accept EMG style electrodes. Both models utilize the same software and scoring algorithms.

SR-HLAB™ PEC System

RESPONSE MODULE

The SR-HLAB Response Module is contained in a portable chassis and includes response amplification, filter and isolation circuits. The basic chassis may contain up to two response amplifiers. An optional 'daughter' chassis enables the Response Module to expand to eight amplifiers.

STIMULUS MODULE

The SR-HLAB Stimulus Module contains sound generation and auxiliary stimulus circuits. Selectable auditory stimuli allow you to choose between white noise or 1kHz of pure tone. The Stimulus Module provides 1 ms resolution for the timing of all stimulus parameters. A relay output/solenoid driver is built in to control auxiliary stimulus devices (e.g. air puff for tactile startle, etc.) The hardware protection circuit limits excessive sound amplitude and sound duration to the subject. Calibration settings allow you to adjust for response standardization and headphone testing.

CONTROL PORT OPTION

The Control Port option provides up to 16 output ports to control additional stimuli, to add a 'slaved' mouse for controlling a second computer and more. The SR-HLAB software includes the commands for utilizing the Control Port option.

SR-HLAB SOFTWARE

The SR-HLAB software applications include Test Administration, Reports and the View Wave analysis tool.

Test Administration & Report Programs – The SR-HLAB administration and report programs store test data immediately to a secure disk file. Full, 12 bit resolution (ranging from 0 to over 4000 mv) records the full range of stimulus responses. Summary data reports can easily be printed and data files transferred into spreadsheets or other statistical programs for later use.

View Wave – This post session data analysis tool allows you to fully verify your startle response data. You can view the complete waveform for every response to verify the calculated numeric data. With the use of the Programmable Scoring Parameters, you can greater refine data via settable parameters that include baseline, onset window start, end analysis and onset criterion.

SR-HLAB™ SPECIFICATIONS

Dimensions	8" (W) x 9 ½" (D) x 6" (H)
Weight	8 lbs.
Maximum # Stations	1
Standard Cable Length	6 ft.
Certifications	CE and FDA CFR Part 11 compliant
Stimuli Options	Tone, Air

SR-HLAB SYSTEM COMPUTER REQUIREMENTS

Windows 2000/XP compatible computer system with available PCI slot. Minimum disk and memory sizes specified to support Windows 2000/XP are acceptable.

SDI CONFIGURED COMPUTERS

SDI offers high performance Cobalt™ Configured Computers that are pre-installed with the Windows® operating system and applicable SDI software. If required, SDI will pre-install PC Interface cards and all relevant drivers. Each computer is fully tested with your system prior to shipment. When your SDI system arrives, all you have to do is unpack it, attach the cables and begin testing.

SDI STARTLE RESPONSE TEST SYSTEMS

- SR-LAB™
- SR-HLAB™

FOR MORE INFORMATION

To learn more about SDI behavioral testing systems, please visit **www.sandiegoinstruments.com.** If you have any questions or would like to request a quote please call **(858) 530-2600** or email us at **sales@sandiegoinstuments.com.**

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