



# Eyeblink Conditioning System



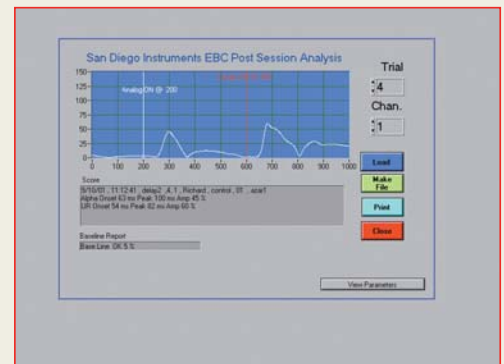
Eyeblink Conditioning System

SDI's Eyeblink Conditioning System is used widely in basic learning studies, psychopharmacology research and the examination of the behavioral consequences of Alzheimer's and other diseases. SDI's Eyeblink Conditioning System employs an integrated photoelectric cell with an integrated air tube to monitor the eyeblink reflex and deliver the air puff under software control. For complete portability the Portable Air Puff Unit with built in compressor is available, eliminating the need for an air tank. SDI's Eyeblink Conditioning System takes full advantage of the Windows® operating system with data organization and management software that combines power and flexibility with ease of use.

The Eyeblink Conditioning System's software enables you to control all system operations easily through menu driven choices.

## Features & Benefits

- A complete, computer-integrated turn key testing unit for eyeblink conditioning
- Lightweight system transports easily from laboratory to offsite test facilities
- USB interface makes laptops available to run the system
- Point & Click software controls cues and response recording
- View Wave™ for data analysis and validation
- Lightweight and comfortable subject headset
- System adapts for eyeblink conditioning in rabbits and sheep



Response Waveform Analysis

# Eyeblink System Components

- Tactile Delivery & Photo Response Head Gear
- Stimulus Module
- Response Module
- Eyeblink software
- PC interface board
- Calibrated Headphones
- User manual
- All cables and connectors
- Eyeblink Visual Indicator (optional)



*Eyeblink Visual Indicator*

## EYEBLINK TACTILE DELIVERY & PHOTO RESPONSE HEADSET

The Eyeblink Tactile Delivery & Photo Response Unit is used to administer low pressure air puffs and for recording eyeblink responses. It is a lightweight, comfortable headset which contains a low power IR Photobeam set and an air puff tube that can be switched between the subject's right and left eye. The Photobeam measures the amount of light reflected as the eyelid closes. The headset is designed so that you may have an unobstructed view of the subject's eyeblink responses. Fully graded responses are recorded.

## EYEBLINK STIMULUS MODULE

The Eyeblink Stimulus Module delivers software-controlled auditory and air-puff stimuli. Auditory stimuli can be administered as either a white noise or 1k Hz pure tone in the right, left or in both earphones. The Eyeblink Stimulus Module provides precise control (1 millisecond resolution) for all stimuli timings. The sound amplitude and sound duration are limited by the hardware protection unit.

## EYEBLINK RESPONSE MODULE

The Eyeblink Response Module provides response amplification, filter and isolation circuits. The basic portable unit contains one mounted amplifier with adjustable amplification ranges. A second amplifier can be added to the basic portable unit. An 'optional' daughter unit enables expansion to 8 amplifiers. Subject isolation is designed according to ANSI/AAMI standards.

## CONTROL PORT OPTION

The Control Port option provides up to 16 output lines to control additional stimuli, to add a 'slaved' mouse for controlling a second computer and more. The Eyeblink Conditioning Software includes the commands for utilizing the Control Port option.

## VISUAL INDICATOR UNIT OPTION

The SDI Eyeblink Conditioning System software records a subject's full range of responses to auditory and air puff stimuli. The Eyeblink Visual Indicator Unit was designed to complement the Eyeblink software for researchers who want to videotape their trials in order to actually see the subject's eyeblink response.

During testing, the Visual Indicator Unit is placed close to the subject being videotaped. After testing, when the researcher studies the test data collected by the Eyeblink software in combination with the videotape, he can actually see when the subject responded to auditory and air puff stimuli. The Eyeblink Visual Indicator Unit shows the Trial Number (in the LCD counter), and the Start/Stop of the conditioned (acoustic) and unconditioned (airpuff) stimuli represented by Bit1/LED1 and Bit2/LED2 going on and off. The status of the LEDs and the advancement and resetting of the LCD counter are established by the researcher by using the Port command.

## EYEBLINK SOFTWARE

The Eyeblink Conditioning System includes Test Administration & Report software and Special Analysis software.

### Eyeblink Test Administration & Report Software

The Eyeblink Test Administration & Report software records the test subject's full range of responses (from 0 to over 4000 millivolts) utilizing full 12 bit resolution. Test data is immediately stored to a secure disk file in standard data file format that can later be used in spreadsheets or other statistical programs. Summary data is available from the Eyeblink system in printed report format.

### Eyeblink Special Analysis Software

The Eyeblink Special Analysis software utilizes standardized response evaluation protocols to redisplay a complete response waveform. Responses are classified as 'alpha, CS or US' in both on-screen displays and printed reports. The Special Analysis software automatically examines the response waveform for secondary peaks. Responses may be selectively saved to composite secondary data files. The operator can define boundaries to identify alpha, CS and US responses and set the response amplitude threshold.

"Designed by Scientists for Scientists"

# Eyblink System Specifications

	Eyblink Unit	Air Puff Unit	Visual Indicator
Dimensions	9 ¼" (W) x 9 ⅜" (D) x 5 ⅞" (H)	9 ¼" (W) x 9 ⅜" (D) x 5 ⅞" (H)	5 ¼" (W) x 5 ¼" (D) x 2" (H)
Weight	4 lbs.	4 lbs.	2 lb.
Maximum # Stations	1	1	1
Standard Cable Length	6 ft.	6 ft.	6 ft.
Stimuli Options	Tone, Air	N/A	N/A

## EYEBLINK 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.

## FOR MORE INFORMATION

To learn more about SDI behavioral testing systems, please visit [www.sandiegoinstruments.com](http://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@sandiegoinstruments.com](mailto:sales@sandiegoinstruments.com).

## SDI HUMAN TESTING SYSTEMS

- SR-HLAB™
- SDI Eyblink Conditioning System



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