



Eyetracking

Applied Science Laboratories

The ASL Mobile Eye

Opening new worlds of applications

Features

- Completely mobile – small, rugged and compact
- Lightweight and unobtrusive optics mounted on stylish pair of safety glasses
- Accurate point of gaze
- Works in various lighting conditions
- Indoor or outdoor use
- Easy to set up and operate
- Offline data analysis

Benefits

- ⊕ Wearable, portable device allowing participants to freely maneuver in any situation
- ⊕ Immediate feedback throughout calibration
- ⊕ Unconstrained eye, head and hand movements under variable lighting conditions
- ⊕ Record audio as they view their environment

Visualize the Possibilities

Why do some people react differently than others in certain situations? Would you like to see what they see, know where they are focused and measure what draws their attention?

Now you can with the Mobile Eye – a truly tetherless device that combines highly accurate point of gaze with the ability to record what respondents are saying as they view their natural environment. For military applications, using the eye tracker for training and simulation exercises allows you to pinpoint how certain soldiers react from moment to moment, and by recording this awareness you can replicate the skills of the more advanced combatants. In addition to improving human performance eye tracking can also provide valuable feedback on equipment design and usability.



175 Middlesex Turnpike
Bedford, MA 01730 - Tel.: 781-275-4000
www.asleyetracking.com

Specifications

Sampling and output rates:	30Hz
Measured principle:	Pupil-corneal reflection
System accuracy:	0.5 degrees visual angle
Resolution:	0.10 degrees visual angle
Head movement:	Unlimited
Visual range:	50 degrees horizontal, 40 degrees vertical
System:	Compact system contained in one 16" x 13" x 6" canvas bag: Laptop computer Spectacles with mounted optics and head mounted scene camera (color) Modified portable DVCR and EyeVision software Total weight in case: 18 lbs.

Data

Data output:	Recordable video with adjustable point of gaze indicators, data log file (ASCII data file), x and y coordinates, pupil radius in eye image pixels, eye direction with respect to the scene image, and mouse cursor position with respect to scene image
--------------	---

Data Analysis Tools

Gazemap Package

Gazemap, developed specifically for the Mobile Eye is a revolutionary software package that allows researchers to streamline their data analysis from a moving participant viewing stationary surfaces. The software is flexible and allows the researcher the ability to add, delete or occlude Areas of Interest. Visualization of gaze points on the Areas of Interest is presented with a Heatmap as well as graphical and statistical charts. Once the environment and areas of interest have been identified, the software processes the data without manual supervision. The software provides statistics on percentage of time and

dwells per Areas of Interest. The order of Areas of Interest is also provided. All data is available in .csv file or easy exporting to Excel.

Gazetracker Package

This comprehensive analysis software is designed to render scan path, fixations, and pupil graph. The numerical data of fixations and pupil diameter is processed with a Mobile Eye .csv file. This data is available within minutes and can be exported to Excel. Matching fixations to user-defined Areas of Interest (Look Zones), requires viewing the Mobile Eye avi through Gazetracker and drawing Look Zones around each Area of Interest. Look

Zones are individually drawn and processed. Once Look Zones are created, various output options, including a Look Zone Order chart, are available.

Mangold Interact for Mobile Eye

Interact is a specialized software solution for the coding and analysis of multimedia and sensor data. The user defined coding system creates a very structured data collection of events. The easy and accurate navigation between recorded data and original video footage assures data quality. The data is stored in standard ASCII files and can be exported and processed in nearly any other program easily.

