



Model H-BN6

High Speed Binocular Eye Tracking System

ASL Model H-BN6 is a complete eye tracking system for use in situations where the subject can wear lightweight, headmounted optics and must have unrestricted freedom of movement. It includes all necessary equipment to begin work immediately. The system control unit is compact in size. The optics are lightweight and mounted on an adjustable headband. The scene is recorded with a color camera that can be mounted on the headband or on a fixed tripod. The images from the eye and scene cameras are displayed on three external 9" monitors. ASL EYEPOS operating software and EYENAL off-line data analysis software programs are provided for installation on a PC or laptop computer.

Data Output

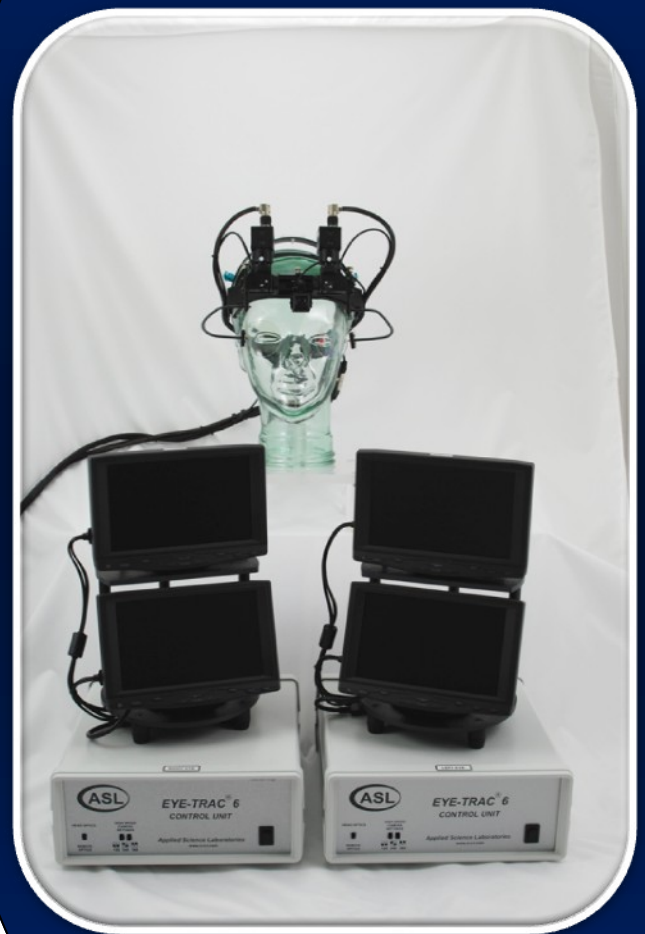
The model H-BN6 is designed to measure a subject's eye line of gaze with respect to the head. The measurement is displayed as 2 cursors or sets of cross hairs designated L and R superimposed on the image of the scene camera. A videotape of this image can be created as a permanent record and used for data analysis.

Recorded data include time, x and y position coordinates, and pupil diameter. External data events/marks can be recorded along with the eye tracker data. If the Model H-BN6 includes the optional magnetic head tracker, head position and orientation are also recorded.

Model H-BN6 EYEPOS operating software provides the system operator with the ability to enter calibration and subject data, and specify the operating parameters of the Model H-BN6. EYEPOS also converts the eye tracker data records into ASCII format for transmission to other computers or for off-line spreadsheet analysis.

Applied Science Laboratories
175 Middlesex Turnpike, Bedford MA 01730 USA

Tel.: (781) 275-4000 Fax: (781) 275-3388 www.asleyetracking.com Email: asl@asleyetracking.com





EYEHEAD™

Combining Head Tracking

Data is available directly from the Model H-BN6 control units through a serial port (RS232). The model H-BN6's interface PC can be connected to an Ethernet network, permitting data analysis from remote locations.

Data Analysis Software

Developed and designed for Applied Science Laboratories, ASL Results is an integrative software solution created to streamline your eye tracking results. ASL Results allows the user to view AOIs with dynamic heat maps, gaze trails and fixation plots. The user is able to gather data and statistics instantly generating graphs and tables based on the data collected.

Eye Head Integration

When combined with an optional head tracking device and ASL's EYEHEAD integration software, the Model H-BN6 can also measure a subject eye line of gaze with respect to stationary surfaces in the environment. Data files generated contain the identification numbers of the surfaces being viewed (maximum of 20 surfaces can be defined), line of sight coordinates on that surface, distance from the eye to the surface being viewed, and pupil diameter. These data files can be analyzed by ASL Results.

Additional Features

The model H-BN6 binocular system can be used as two separate monocular head mounted systems, when not being used in the binocular mode. The only additional requirement is a second head band and mounting bracket. In situations where the subject is to have considerable freedom of movement, a mobile configuration is available. In situations where it is not desirable for the subject to wear head mounted optics, and where complete freedom of movement is not required, the Model H-BN6 can be configured with a remote optics accessory, both monocular and binocular.

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Training & Technical Support

ASL is committed to assisting researchers before, during and after the eye tracking data acquisition.

Unlimited technical support and free access to updates on the interface software are available at all times. Multiple licenses of the interface program are available at no additional charge.

ASL offers free scheduled training at our Bedford, MA (Boston) location for the life of the equipment. On site training is also available.

Control Unit Technical Specifications

Dimensions	3" /9.75"/10.25"
Weight	4.25 lbs.
Power	100-240 VAC 25 Watts
Display	9" b&w monitors for eye and scene cameras

Head Mounted Optics Technical Specifications

Sampling and Output Rates	120Hz, 240Hz, or 360Hz
Measurement Principle	Pupil Corneal Reflection
System Accuracy	.5 Degree Visual Angle
Resolution	.25 Degree Visual Angle
Head Movement	Unlimited
Visual Range	50 Degrees Horizontally 40 Degrees Vertically
Weight	20 oz or 567 grams Including Headband, Optic Modules, Monocles and Scene Camera

Included Equipment

2 Series 6,000 Control Unit
Headband Mounted Optics
Head Mounted Scene Camera (Color)
Display Monitors X3, Black & White
EYEPOS Operating Software
ASL Results Data Analysis Software