

Model D6HS

Desktop Eye Tracking System

The Model D6HS is ASL's newest and most robust high speed desktop remote eye tracking. It is designed to quickly and accurately track the eyes of all subjects, from infant to senior citizen. It is used in situations where the stimulus presented to the subject is restricted to a single surface such as a computer or video monitor and when head mounted optics are not desirable. The system allows the subject approximately one square foot of head movement which eliminates the need for head restraint.

The advantages of the D6HS desktop remote system over the competition are many:

- The only system that uses bright pupil technology, giving superior capture and contrast.
- Software development Kit, which provides access to eye tracker controller port, serial out port and data files recorded by ASL interface program.
- Very fast and accurate head movement compensation.
- Custom calibration to handle "challenging subjects"
- Auto-calibration that allows calibration without operator intervention
- Auto-thresholding that set eye and corneal reflection thresholds without intervention.

© Data Output

The Model D6HS is designed to measure a participant's eye line of gaze with respect to a single stationary surface in the environment. This measurement is displayed as a cursor or set of cross hairs superimposed on the image from a remote mounted scene camera or other video source showing the subject's field of view. A videotape or digital recording of this image can be created as a permanent record.

Recorded data include time, x and y eye position coordinates and pupil diameter. External data events/marks can be recorded along with eye tracker data. Eye position coordinates correlate to specific areas on the surface being viewed. The Model D6HS can be configured to include a video head tracker allowing compensation for head position movement.



Model D6HS EYEPOS operating software provides the system operator with the ability to enter calibration and participant data and specify the operating parameters of the Model D6HS. EYEPOS also converts the eye tracker data records into ASCII format for transmission to other computers or to off-line spreadsheet analysis. Real-time digital data is available directly from the R6 control unit through a serial port (RS232). The Model D6HS's interface PC can be connected to an Ethernet network, permitting data analysis from remote locations.

☉ Data Analysis Software

EYENAL data analysis software is a set of off-line analysis programs for displaying and processing eye position and pupil diameter data that have been recorded with the Model D6HS. EYENAL programs identify fixations, plot scan patterns, let the user define areas of interest on the stimulus scene, tabulate pupil diameter and compute various statistical parameters.

☉ Optional Equipment

The Model D6HS is part of the ASL Eye-trac Series can be used with a variety of ASL optics. eq

- A head tracking device can be added to enhance the automatic tracking provided by the remote optics.
- An additional tracking device can be added to track hand, head and eye coordinates.
- GazeTracker software can be added for stimulus presentation and/analysis of dynamic

SPECIFICATIONS

- ☉ Control Unit: Dimensions (H/W/D): 4.75 in/10 in/10.50 in
 Weight: 9.75 lbs
 Power: 100-240 VAC, 25 watts

- ☉ Desktop optics: Sampling and Output Rates: 120 Hz and 240 HZ
 Measurement principle: pupil-corneal reflection
 System accuracy: 0.5 degree visual angle
 Resolution: 0.25 degree visual angle
 Head movement: one square foot
 Min/Max distance optics to eye: 20 in to 40 in
 Visual range: 50 degrees horizontally, 40 degrees vertically

- ☉ Real-time data outputs: 2 analog outputs, x and y gaze coordinates
 Digital data output , x and y gaze coordinates and
 pupil diameter via RS232 serial port

- ☉ SDK: Provides access to:
 - Eye tracker controller port
 - Serial out port
 - Data files recorded with ASL interface program

- ☉ Included equipment: EYE-TRAC 6 Control Unit with real time Eye
 And Scene images
 Remote Mounted Optics
 Scan converter
 EYEPOS operating software
 EYENAL data analysis software
 Software Development Kit