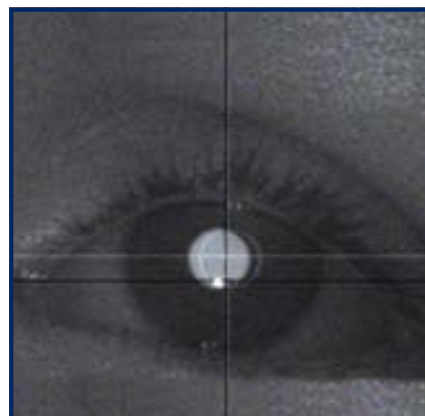# D6 Optics

Desktop Eye Tracking Solutions

The D6 Optics is ASL's newest and most robust desktop remote eye tracking solution. It is designed to quickly and accurately track the gaze position on all participants, from infant to senior citizens. The stimulus can be presented on a single stationary surface, such as a computer or video monitor, or can be stationary real world objects. The system allows the participant approximately one square foot of head movement which eliminates the need for head restraint.

The advantages of the D6 desktop remote solution are many:

- The only head free solution that uses bright pupil technology, giving superior capture and contrast.
- Quick and accurate head movement compensation.
- Constant visual feedback throughout entire tracking sessions.
- Automated procedures with manual overrides for challenging participants.
- Auto-calibration can be performed without operator intervention.

- Versatility in stimulus display devices– monitor, TV, projected image, even real world objects.
- Software Development Kit (SDK), which provides access to eye tracker controller port, serial out port and data files recorded by ASL interface program.

Data Output

The D6 Optics is designed to measure a participant's eye line of gaze with respect to a single stationary surface in the environment. You can also configure the system to track participants viewing real objects. ASL solutions provide you with constant feedback on the eye tracking system and your participant's eye gaze. The gazepoint is displayed as a cursor or cross hairs superimposed on the image being viewed. 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 event markers can be recorded along with eye tracker data. Eye position coordinates correlate to specific areas on the surface being viewed. The D6 Optics includes a video head tracker, allowing head position to be recorded as well. The video head tracker does not require any equipment to be placed on the participant.

The D6 EYE-TRAC®6 operating software provides the system operator with the ability to enter calibration and participant data and specify the operating parameters of the D6 Optics. The provided software also converts data to text format for input to spreadsheets or other third party applications.

Real-time digital data is available directly from the EYE-TRAC®6 control unit through a RS232 serial port.

D6 Optics

Optional Equipment

The D6 Optics is part of the ASL EYE-TRAC®6 Series. The ASL EYE-TRAC®6 Series offers the most eye tracking configuration options. This provides the greatest flexibility for your research requirements today and tomorrow.

- The EYE-TRAC®6 Control unit will work with all of the ASL EYE-TRAC®6 Optics options.

- New optics can be added at any time.

- System components and software can be shared among collaborators for greater allocation of time, funding, and resources.

*All eye camera optics are configurable with control unit

D6 optics are portable and can be configured with a laptop as well as a PC.

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 software are available at no additional charge.

We offer free scheduled training at our Bedford, MA (Boston) location for the life of the equipment. On site training is also available. Please check out our website for upcoming training sessions.

ASL Results

The ASL Results application allows the researcher to reduce data to a list of fixations. The parameters used to compute fixations can be adjusted to meet the researcher's definitions and interpretations of events. Other important features include the ability to plot scan path patterns, define areas of interest on the stimulus display as well as compute many statistical parameters. For more detailed information, please feel free to request our ASL Results brochure.

Data Analysis Tools

ASL Results

A comprehensive eye tracking data analysis package is available with each EYE-TRAC ®6 series. ASL Results quickly reduces raw data to user definable fixations and matches those fixations with Areas of Interest (AOI). Includes several statistical parameters as well as creative meaningful visualization of data including heatmaps.

Gazetracker

Gazetracker 8.0's user interface includes:
- Time line view– Superimposes a variety of information, including Look Zones, website entrance and exit, input events and pupil data onto a single graph
- Spotlight– The inverse of a heat map bringing increased clarity where users focus the most attention

Interact

INTERACT 8-ASL Edition streamlines frame by frame video analysis providing meaningful eye tracking data. This software solution is consistent with ASL's commitment to expand and enhance the use of eye tracking.

Technical Specs

Sampling rate:	60Hz
Measurement Method:	Pupil-cornea reflection
Accuracy:	0.5° Visual Angle
Resolution:	0.25° Visual Angle
Head Range:	17 ” x 8 ” x 14”
	43.2cm x 20.3cm x 35.6cm
Distance Range:	20 ” to 40 ”
	50.8 to 101.6cm
Dimensions:	4.5 ”/9.75 ”/10.25 ”
H/W/D	11.43/24.765/26.035cm
Visual Range:	50° horizontal
	40° vertical
Real Time	
Data Outputs:	X and Y gaze coordinates
	Horizontal and vertical
	pupil diameter
	Two analog outputs
	One video output