

iView X™ MRI-SV

Eye Tracking Solution for fMRI Applications Compatible with Fiber Optic Goggle Displays



The Challenge

The ability to measure and analyse eye movements during visual stimulation is vitally important for the exciting new areas of research conducted using functional Magnetic Resonance Imaging (fMRI). This requires

- Solution for high-field magnets
- Fast and flexible integration with various stimulus setups
- Accurate and robust measurements of eye movements and fixations

The Solution

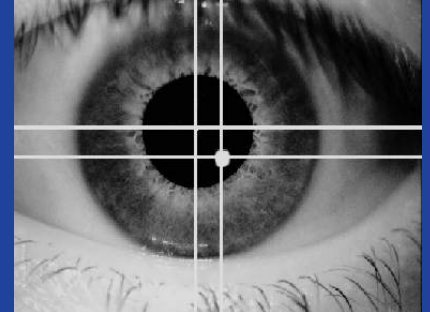
The iViewX™MRI-SV™ is an eye tracking system designed for use with fiber optic goggle displays from Avotec Inc.

- Contact-free monitoring, recording, and transmission of high quality eye movement data
- Seamless integration with Avotec's Silent Vision™ goggle displays guarantees ease of use
- No interference even with high-field magnets due to magnetically inert fiber optic goggles
- Easy to comprehend user interface provides a qualitative overview at any stage of the recording
- Low-profile design allows comfortable operation with most magnets and headcoils

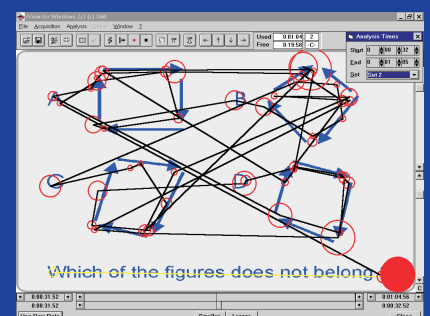
The Results

The iViewX™MRI-SV™ system collects all relevant eye movement data and allows for fast and accurate control and analysis.

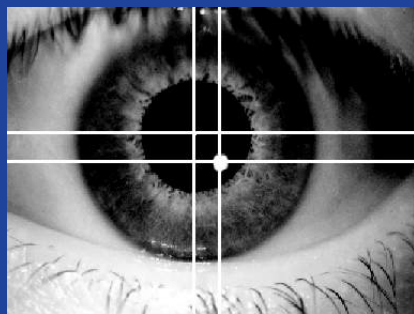
- Measures online horizontal and vertical gaze position and pupil size
- Provides online fixation control for synchronization with magnet and stimulus data
- Integrated data analysis (e.g. gaze path, object fixation sequence, area of interest analysis) can be printed in high quality or exported for documentation purposes
- All recorded data and results are available for further post-processing



- Easy to use
- Flexible
- Integrated with Goggles
- Inert



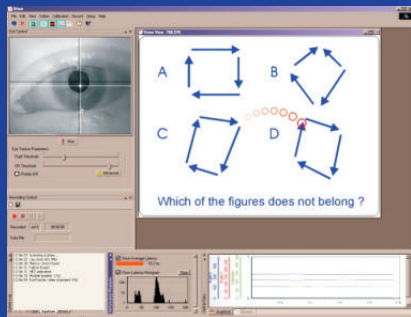
iViewX™ MRI-SV™ System Setup



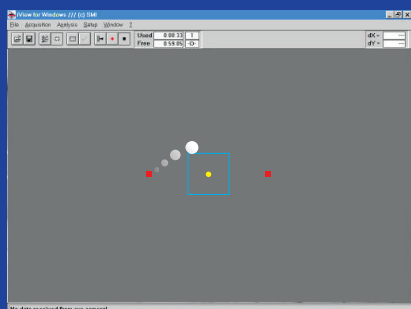
Eye image with pupil and corneal reflex centers identified.



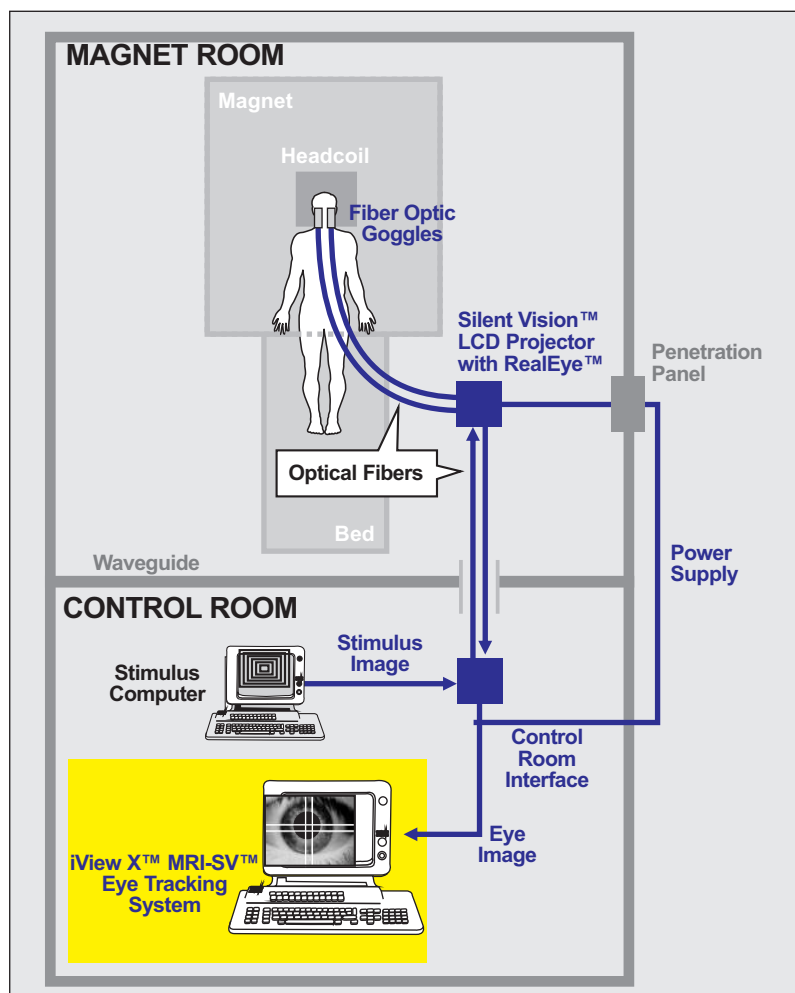
Headcoil with fiber optic goggles and integrated eye tracking optics (optional).



Integrated Windows 2000 user interface for setup and eye movement calibration.



Online gaze position display during trial and AOI definition for trigger output.



The iViewX™MRI-SV™ eye tracking system is used in combination with a stimulus computer and Avotec's Silent Vision™ stimulus display system consisting of fiber optic goggles, LCD projector, RealEye™ eye video interface, and control room interface.

Specification – iViewX™MRI-SV™

Technology

- Recording unit only

Performance

- Sampling Rate: 50/60 Hz
- Gaze Position Accuracy: typ. 3°
(2 minutes after calibration, subject dependent)
- Tracking Range: 15-20° horizontally,
(subject dependent) 10-15° vertically

Operating System

- Windows XP
- Dedicated workstation

Interface

- Power Supply (control room) 110-230 VAC

Certificates / Approvals / QM

- CE, EMC, Eye Safety

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