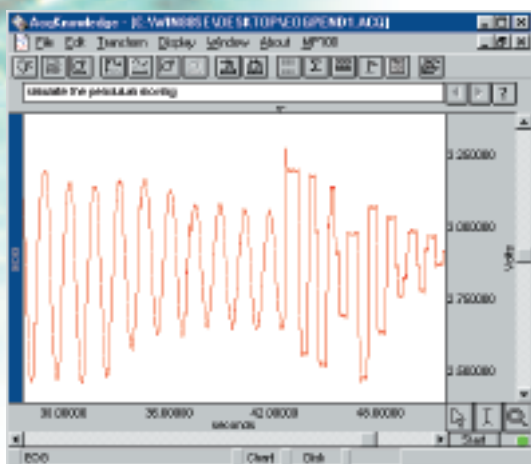


Record eye position and movement, or observe vestibular response or “jitter” with the electrooculogram amplifier (EOG100C) and an MP System. Software functions will calculate movement rate, direction, frequency, distance and velocity. For attention studies, use the X/Y plotting function to track eye travel and point of focus during or after data collection. Use *AcqKnowledge* to process raw EOG data to isolate signal behavior associated with nystagmus, saccades and microsaccades.

FEATURES

- NYSTAGMUS INVESTIGATION
- SACCADIC EYE MOVEMENTS
- EYE TRAVEL & POSITION
- VESTIBULAR FUNCTION
- VISUAL EVOKED RESPONSE
- OCULOMOTOR RESEARCH & VISUAL ATTENTION

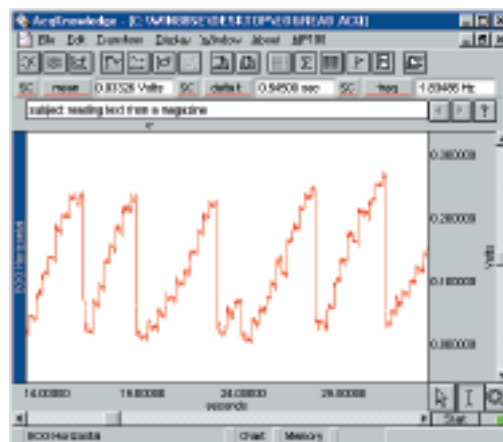


NYSTAGMUS INVESTIGATION Q15

Use *AcqKnowledge* to turn LEDs on and off when studying pendular or jerky nystagmus. The subject sits still and focuses on the slowly moving LED target lights. To isolate both slow and fast phase nystagmus components, change the switching speed of the lights during recording.

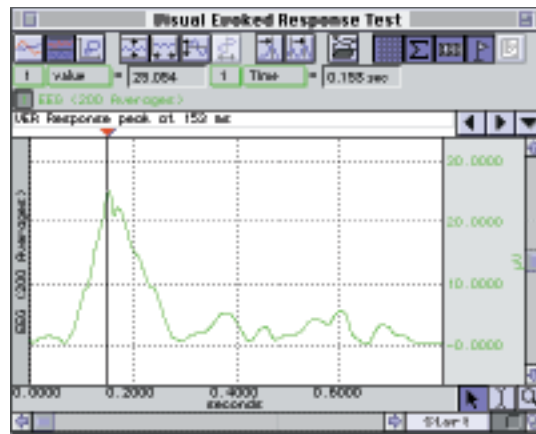
SACCADIC EYE MOVEMENTS Q16

Saccadic eye movement can be recorded from a seated subject reading text from a book while the subject's head remains relatively still and relaxed. As the subject tracks across the page, the eye will make larger voluntary movements, known as saccades, or fixate on a number of points in quick succession. The software lets users identify where the subject's eyes were located during the recording section; users can also isolate the areas where the subject struggled with a particular word or phrase.



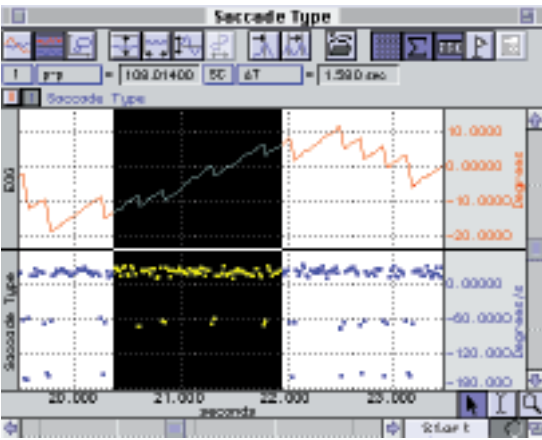
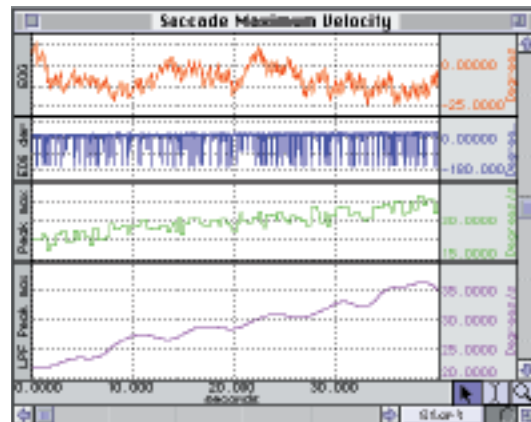
VISUAL EVOKED RESPONSE

To perform VER studies, use the TSD122 Stroboscope and the averaging mode of the MP System. The stroboscope will trigger the MP System or the averaging software can trigger an external stimulator. An Evoked Response or Electroencephalogram Amplifier (ERS100C or EEG100C) is used to record the evoked response while the software performs on-line averaging. The averaging software allows the user to set the number of averages and the length of the average, and to adjust the artifact rejection criteria. Display and overlap multiple responses for a quick comparison between subjects and trials.



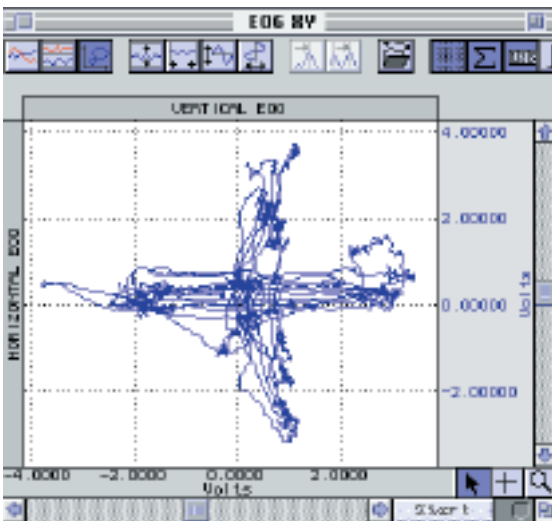
OCULOMOTOR RESEARCH & VISUAL ATTENTION

During normal viewing conditions, a subject makes 3-5 saccades per second, separated by periods (fixations) of 200-300 ms where the eyes do not make large or fast movements. To isolate saccade-to-saccade latencies for histogram timing analysis, record the derivative (velocity) of eye movement and use the Rate Detector to calculate the latencies. Alternatively, by using the Rate Detector to calculate the maximum cyclic value of the derivative, it's possible to determine the average velocity of saccadic movement over long time periods.



EYE TRAVEL & POSITION

The X/Y display mode will track a subject's eye travel and display the exact pattern of movement. This application requires two EOG amplifiers, one for horizontal eye movements and the other for vertical. The subject remains in a fixed position with the head still during recording. The software will display the data in both chart and X/Y display modes. There are a number of tests where this feature is useful, such as determining a subject's visual path when first exposed to a sign, advertisement, or new ergonomic layout.



VESTIBULAR FUNCTION

For caloric induced nystagmus, synchronize the vestibular stimulation with the nystagmus recording to obtain precise nystagmus latency. For rotationally induced nystagmus, use the TEL100C System to record the EOG to provide a significant degree of movement (up to 60 meters). For continuous rotation studies, couple the TEL100C transmission signal through a slip ring.

EOG 100C 57
Electrooculogram Amplifier

TEL 100C 66
Remote Monitoring Module Set

SS SERIES 67
Smart Sensor Electrodes & Transducers

EL SERIES 83
Electrodes

LEAD SERIES 83
Electrode Leads

MEC SERIES 87
Module Extension Cables

ERS 100C 57
Evoked Response Amplifier

EEG 100C 56
Electroencephalogram Amplifier

TSD 122 74
Stroboscope