



Pediatric Solutions

Objective Visual Function Testing

Electrodiagnostics

For all stages of childhood development, starting with infancy

Children who receive early diagnoses benefit from access to family counseling, accommodations, and therapies.

Electrophysiology can accurately characterize the phenotype of Inherited Retinal Diseases (IRDs).

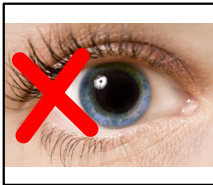
Evaluate children with:

- Suspected night blindness
- Congenital nystagmus
- Abnormal fundus exams
- Poor vision or visual delays
- ROP
- Cases of retinal hemorrhage

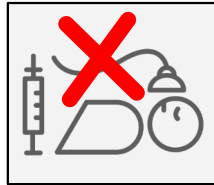
Abridged pediatric ERG/VEP protocol

A full retinal and optic nerve evaluation done in just 10 minutes!

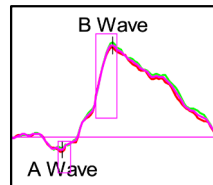
The Great Ormond Street Hospital (GOSH)⁵ in London produced an innovative, abridged ERG/VEP test that skips a formal dark adaptation, saving time while preserving diagnostic accuracy.



No dilation required



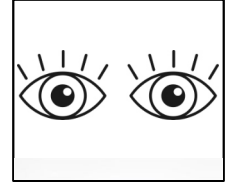
No anesthesia required



Includes reference data

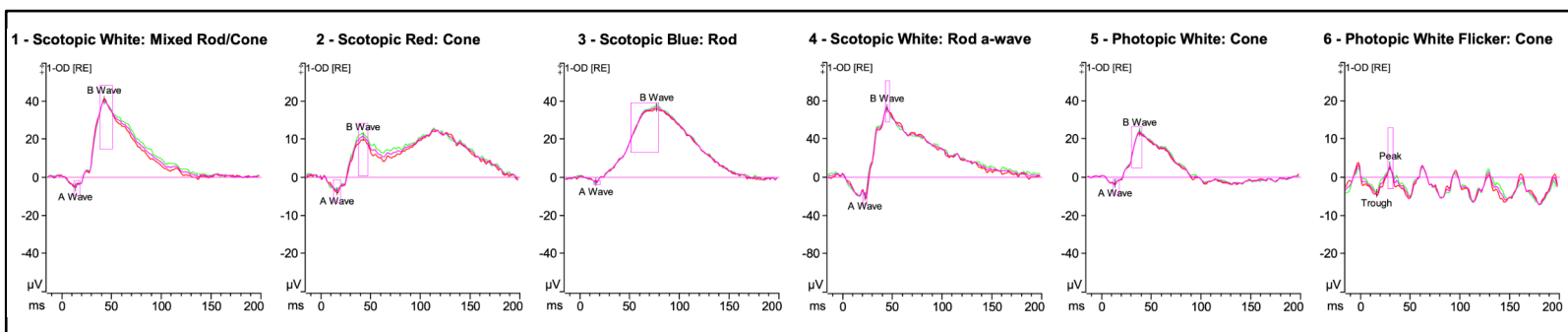


Skin Electrodes



Binocular Recording

Real results from the GOSH ERG protocol



Assess Visual Acuity Objectively

An automated method for assessing visual acuity using VEP techniques

Stepwise Sweep VEP

Designed for young, non-fixating children, this technique utilizes a VEP checkerboard stimulus to present progressively smaller check sizes.

This technique is adopted from the Royal Hospital for Children in Glasgow¹²³⁴.

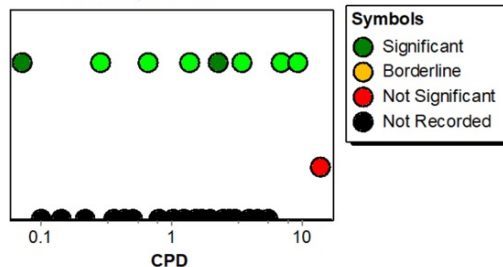
Evaluate children with:

- Difficulty fixating
- Cortical Visual Impairment (CVI)
- Unexplained Vision Loss
- Functional Vision Loss

Right Eye (OD)

VEP Result	Subject	Normal Ref
Best CPD	9.15	16.9
Recorded Steps	9	
Significant Steps	8	
Eye Correction Used	Yes	
Acuity Estimate	Subject	Normal Ref
Snellen 20ft	20/37	20/20
97.5% Confidence	20/73	

OD Response vs CPD



- Test takes 1-2 minutes per eye
- Age-matched normative reference data
- Easy-to-interpret report in Snellen Acuity
- Ranges from 20/20 to 20/2000 (6/6 to 6/600)

A complete pediatric electrodiagnostic system

ColorFlash and LCD Monitor Stimulators

ColorFlash Stimulator

A handheld stimulator for pediatric ERG and flash VEP

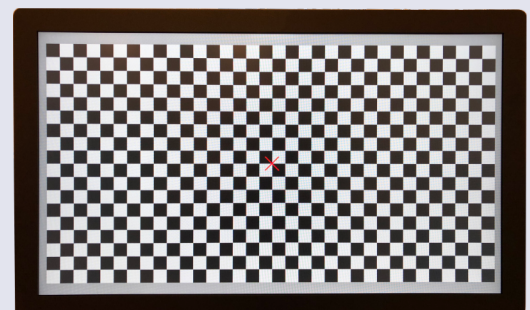


Features include:

- Testing from a distance
- Attention-getting sound effects
- Binocular stimulation

Diagnosys LCD Monitor

Pattern Stimulator with luminance artifact reduction



Sweep VEP, Pattern VEP, PERG, Multifocal ERG

The industry leader.

Decades of experience, thousands of installations.

- *Most experienced customer support team in the industry*
- *Hundreds of peer-reviewed papers published using our systems*
- *Extensive world-wide network of leading experts operating Diagnosys systems*

Selected References

1. Bradnam M, Mackay A, Hamilton R. The circular T-squared statistic and SNR measurement are complementary for fast objective detection of steady-state visual evoked potentials (VEPs). *IET Digital Library* (2002) 3-3.
2. Mackay A, Bradnam M, Hamilton R. Rapid detection of threshold VEPs. *Clinical Neurophysiology* (2003) 114:1009-1020.
3. Mackay A, Hamilton R, Bradnam M. Faster and more sensitive VEP recording in children. *Documenta Ophthalmologica* (2003) 107: 251-259.
4. Mackay A, Bradnam M, Hamilton R, Elliot A, Dutton G. Real-time acuity assessment using VEPs: development and validation of the step VEP technique. *Investigative Ophthalmology* (2008) 49: 438.
5. Marmoy OR, Moinuddin M, Thompson DA. An alternative electroretinography protocol for children: a study of diagnostic agreement and accuracy relative to ISCEV standard electroretinograms. *Acta Ophthalmologica* (2022) 100:322-330.



Ordering information

D382: ColorFlash

D370-5: Glasgow ssVEP on 27" monitor

D370-6: Glasgow ssVEP on 24" monitor

Available with both E3 Tabletop (D315) and Profile cart-based system (D310)

Please contact us if you would like more information on Diagnosys products.

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