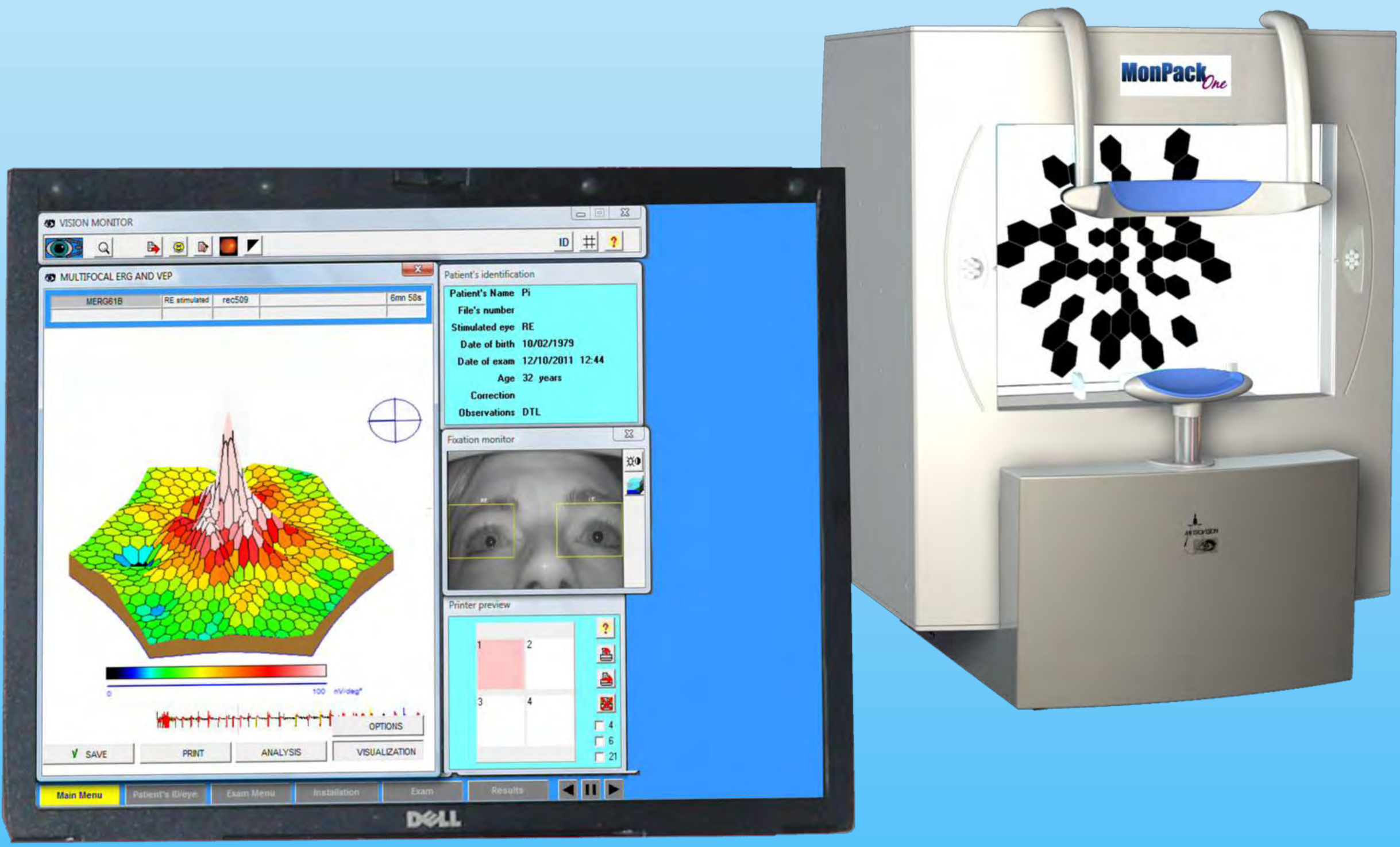
Vision Monitor

Visual Electrophysiology systems

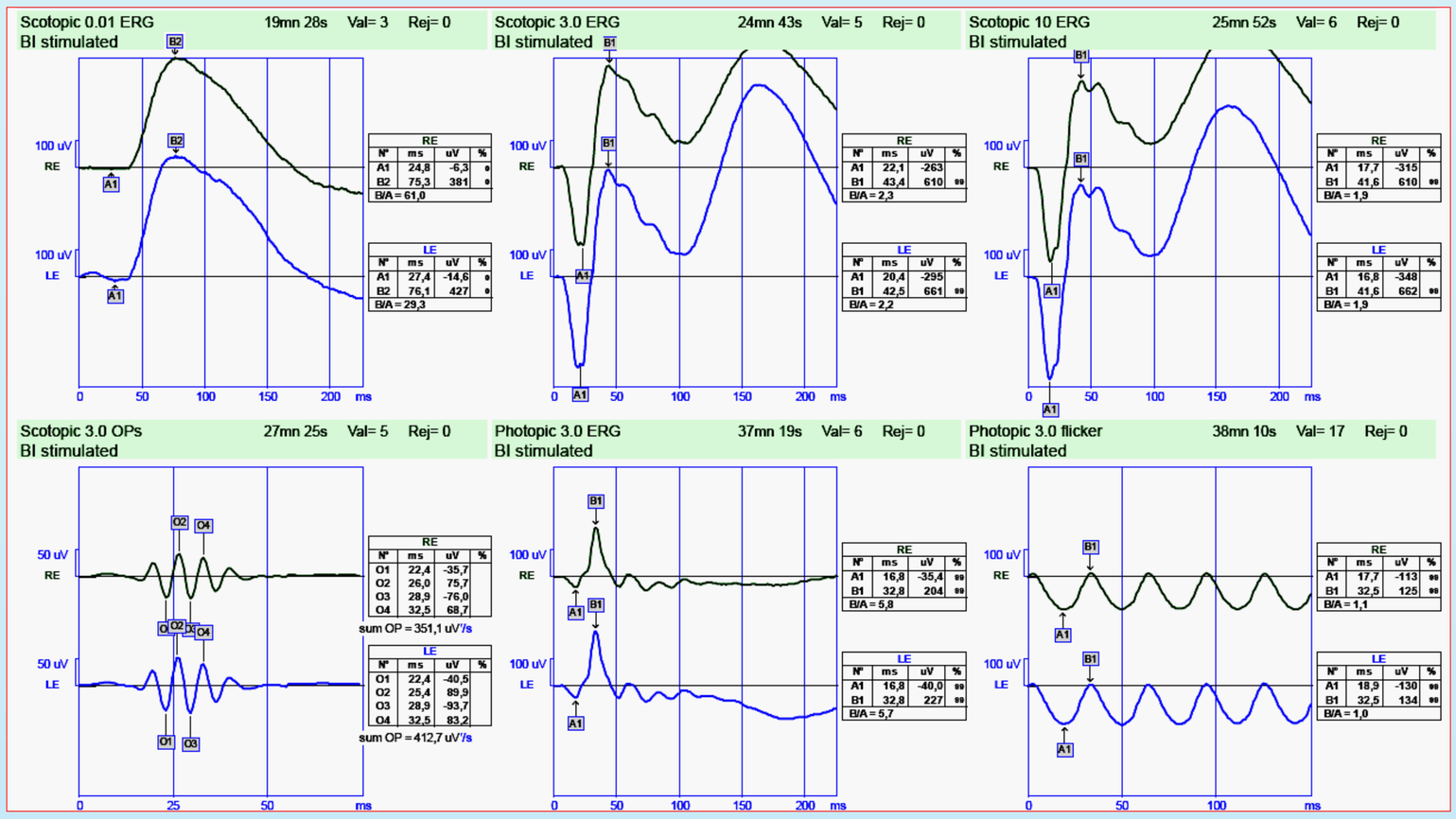
- **VEP, ERG and EOG**
- **multifocal ERG and VEP**
- **multifrequency VEP**
- **sweep VEP**
- **electronystagmography**



Manufactured by Metrovision
ISO 9001:2008 ISO 13485: 2003
certified quality system

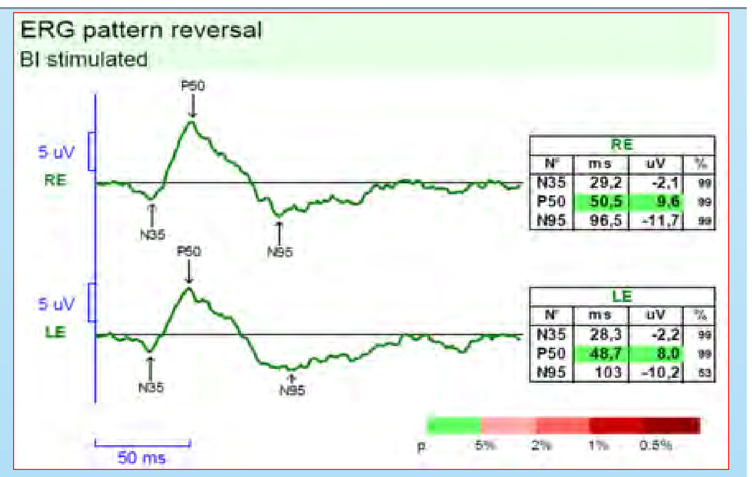
Flash ERG

Responses from the different layers of the retina and from the rod and cone systems



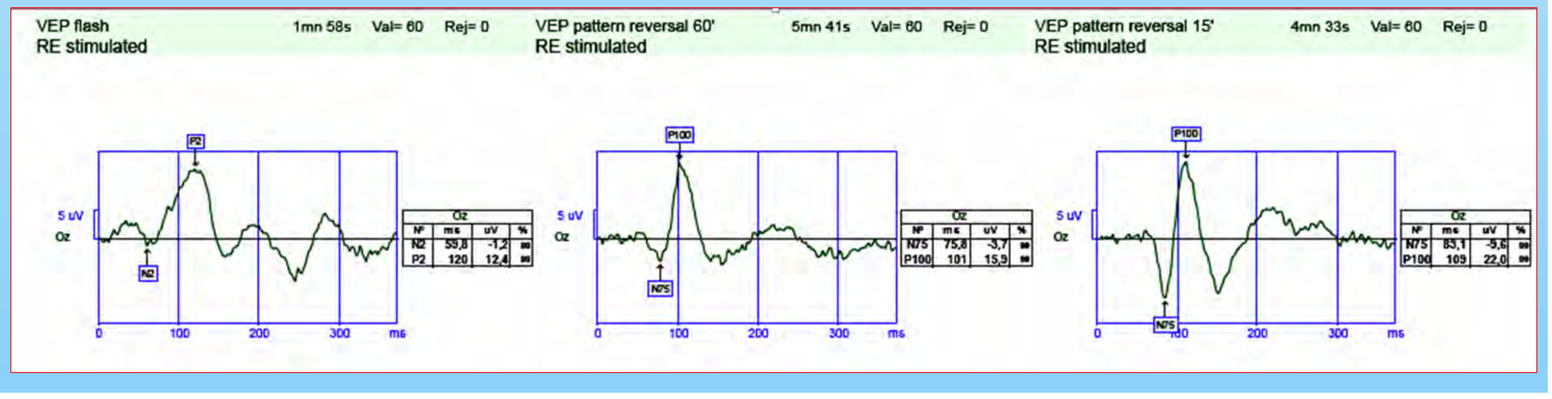
Pattern ERG

Responses from ganglion cells



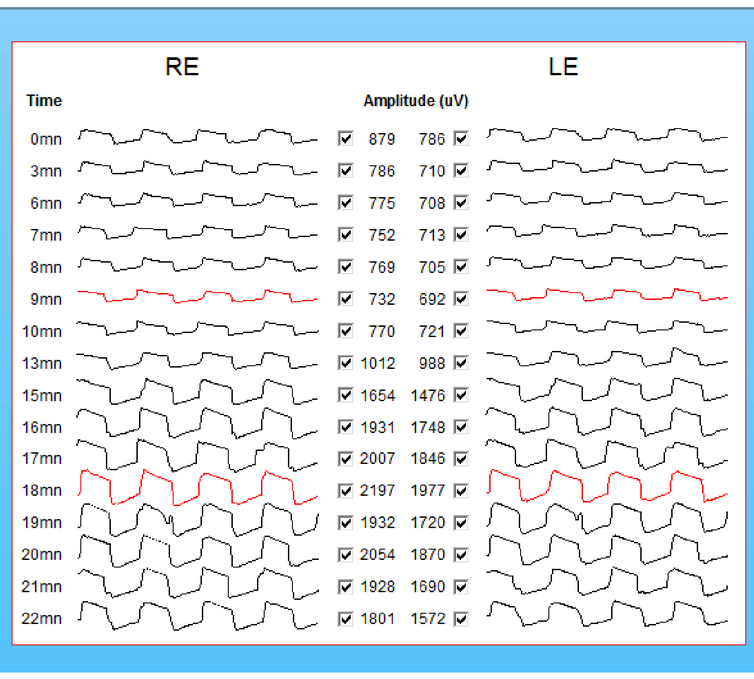
Flash and pattern VEP

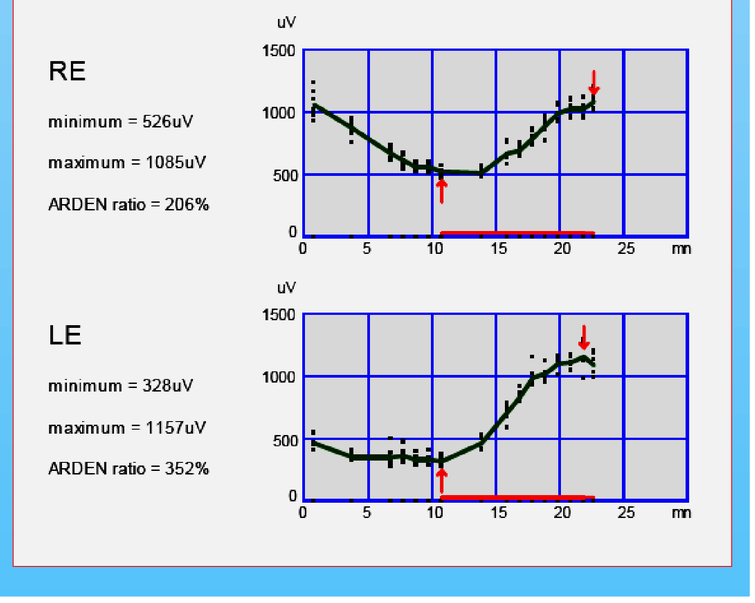
Responses from the visual cortex



Sensory EOG

Responses from the pigment epithelium

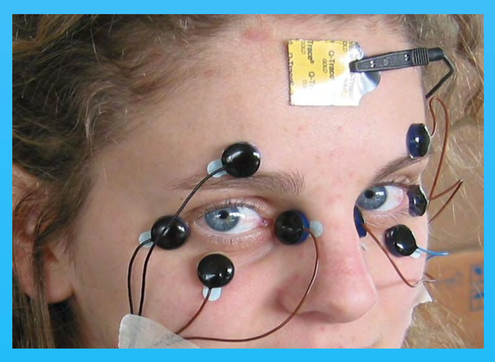


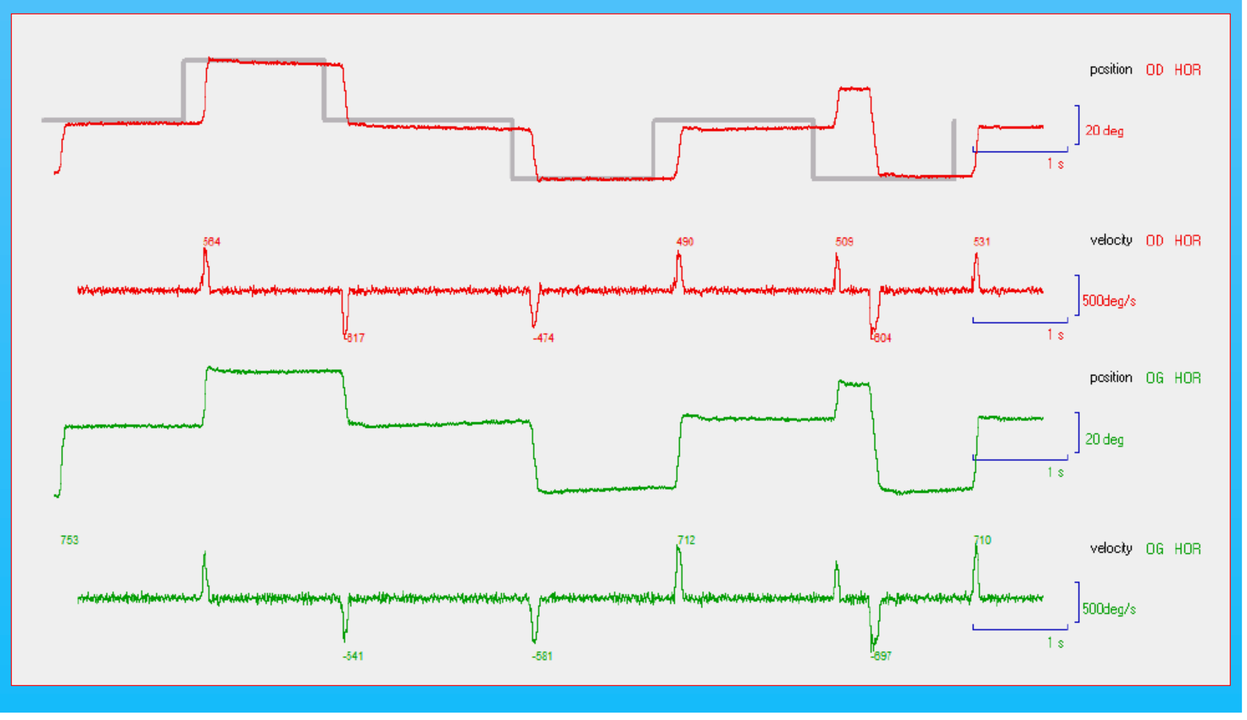


Electronystagmography

Objective evaluation of eye movements:

· fixations,
· saccades,
· pursuits,
· optokinetic nystagmus

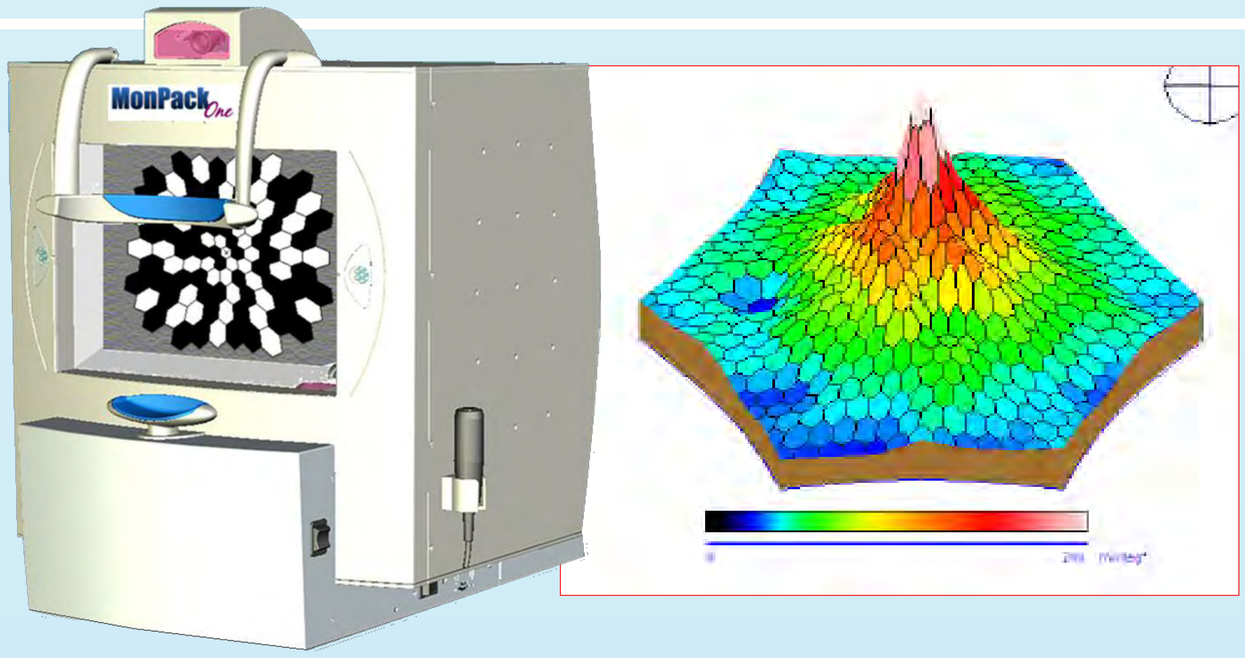


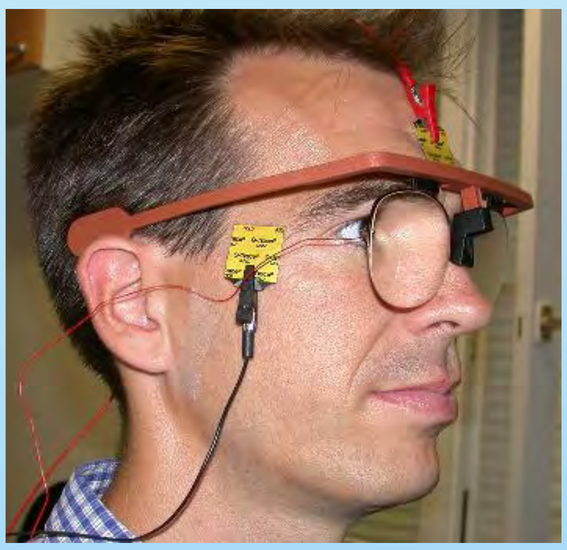


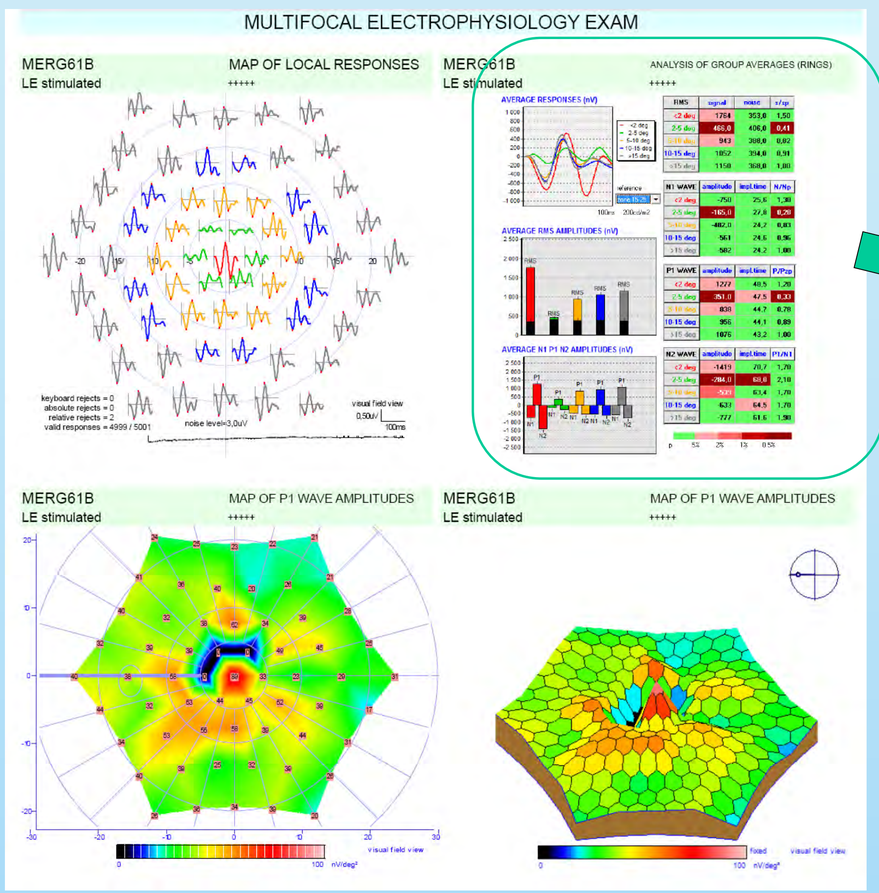
Multifocal ERG

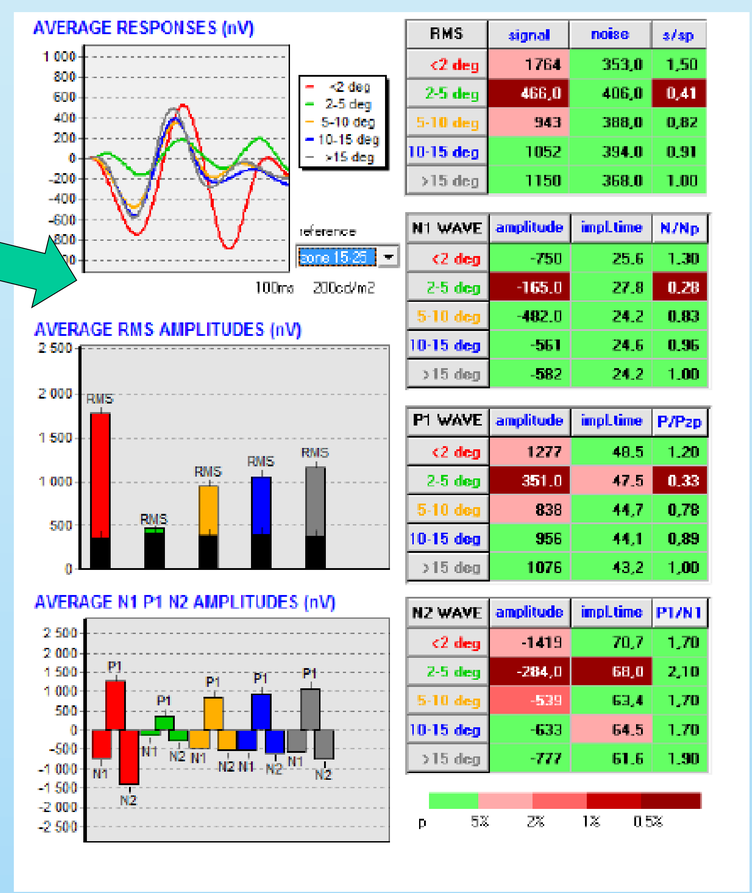
Multifocal ERG provides a detailed and objective cartography of the electrical activity of the retina. Metrovision's system presents optimal characteristics for clinical applications :

- a set of large field refractive lenses,
- stimulations with high luminance,
- a statistical analysis with an age corrected normative data base,
- a ring ratio analysis





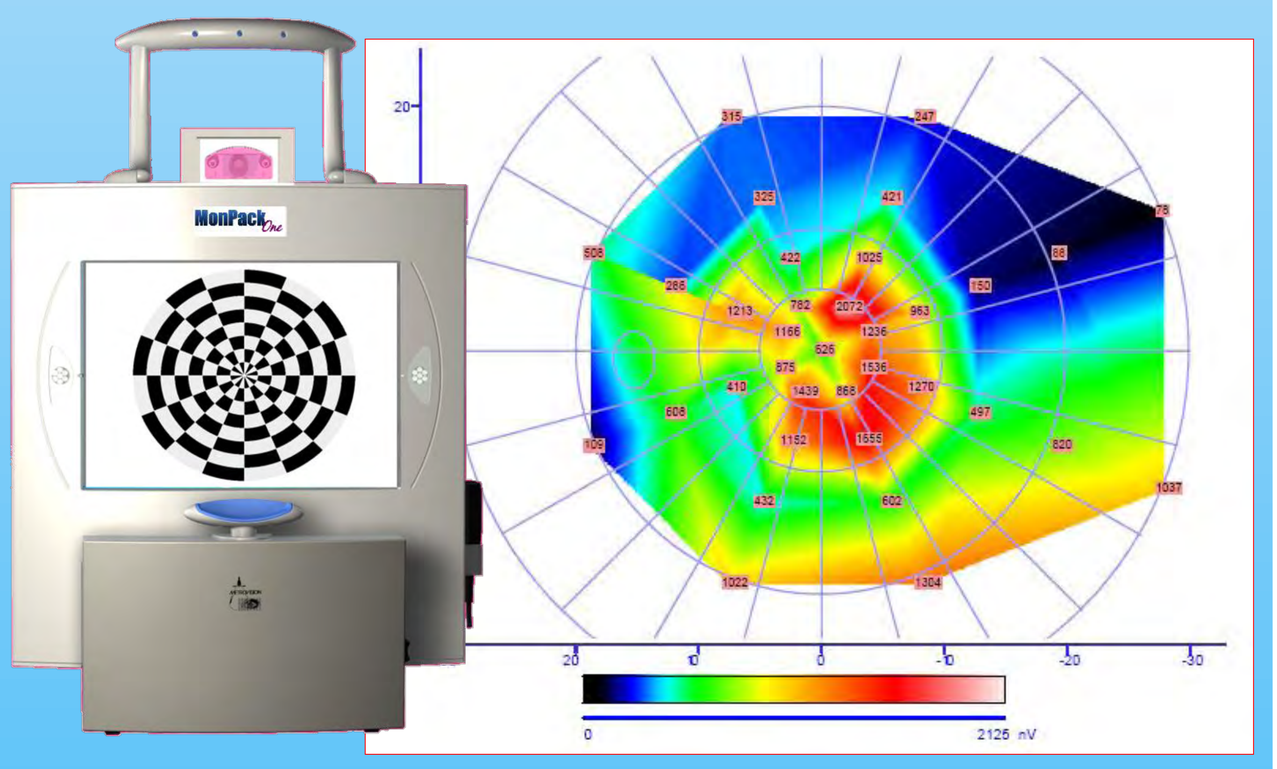




MfERG in hydroxychloroquine intoxication showing a reduction of amplitude between 2 and 5 degrees of eccentricity

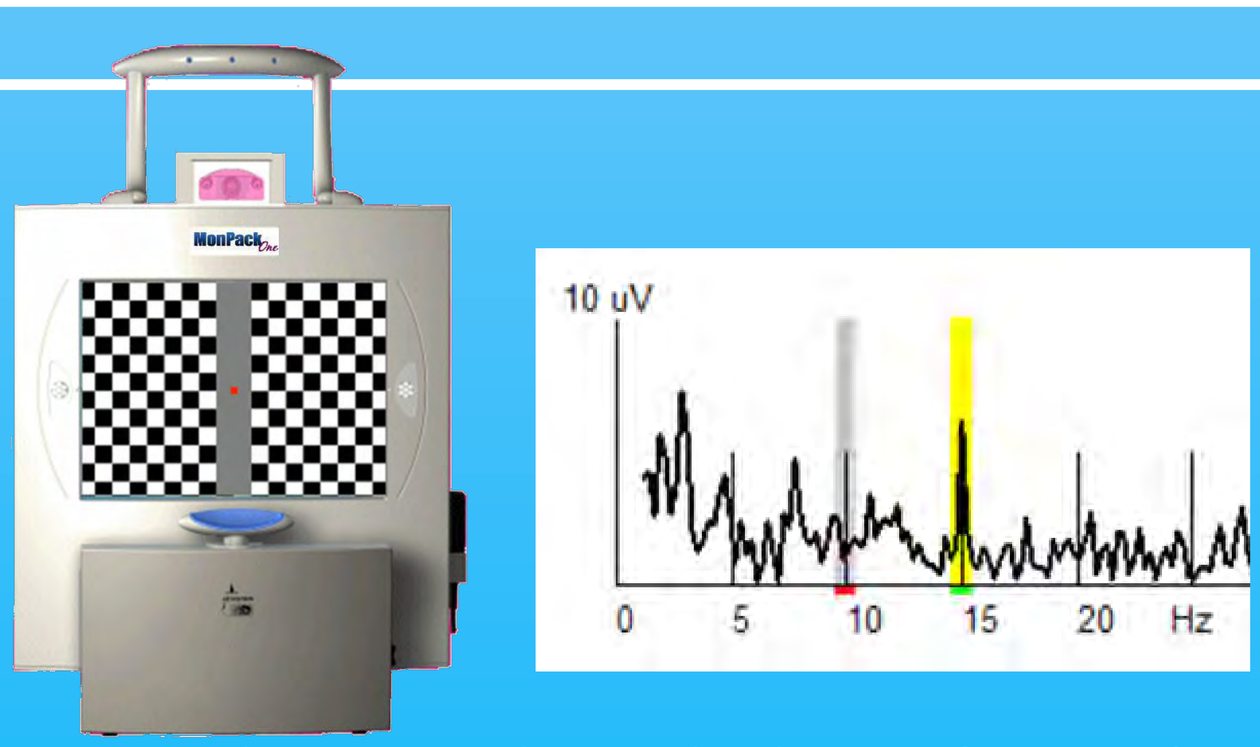
Multifocal VEP

Multifocal VEP provides a detailed and objective cartography of the activity of the visual cortex. The program allows the simultaneous recording of 4 channels and the automated fusion of results.



Multifrequency VEP

Multifrequency VEP allows the simultaneous recording of responses from 2 different zones of the visual field.



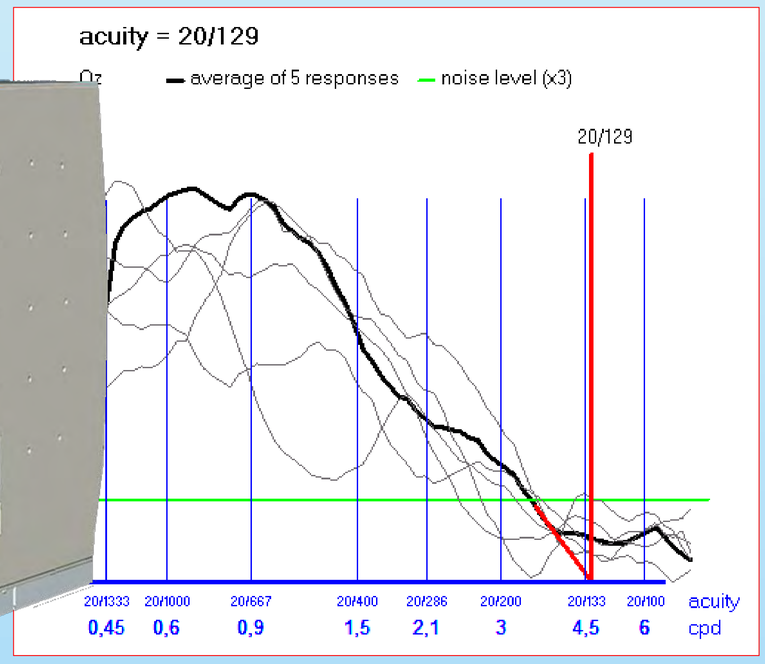
MVEP in hemianopsia showing the absence of response from the left hemifield.

MonBaby portable stimulator

This stimulator is specifically designed for performing ERG and VEP tests on young children.
It is made of a large array of light emitting diodes and provides controlled stimulus intensity and frequency (up to 30 Hz).
It is available with white, red and blue light sources.

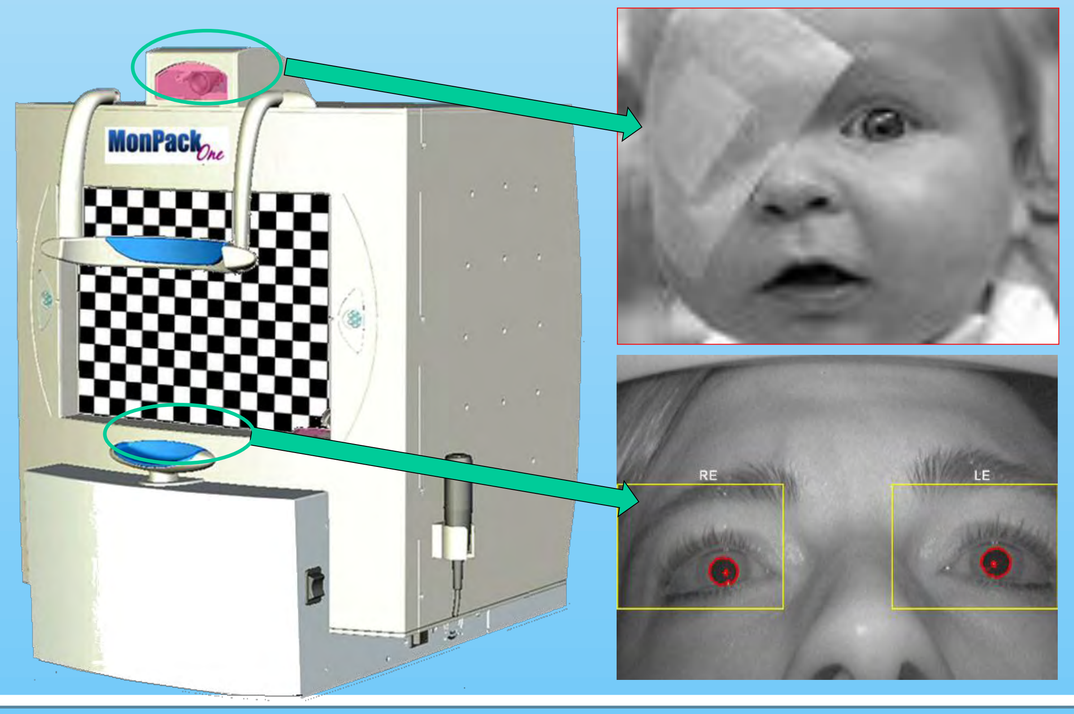
Sweep VEP

This program achieves fast measurements of visual acuity by using a steady-state pattern reversal stimulus swept over a range of spatial frequencies.
Visual acuity is estimated automatically from the smallest pattern size producing a detectable response.



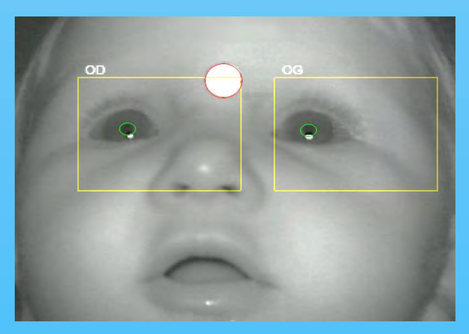
Fixation monitoring

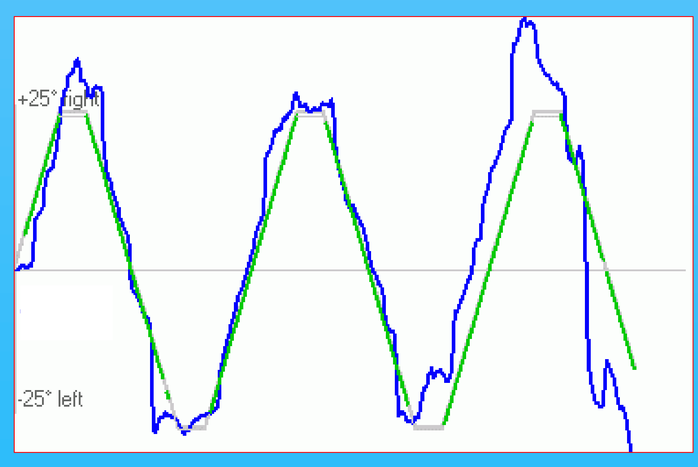
All instruments include a built-in near infrared camera for near tests. A second camera is proposed as an option for distance tests.
Another option is the automated image analysis which can reject eye blinks and eye movements artifacts and measure the pupil diameter.



Baby vision test

Objective preferential looking test. Eye and head movements are measured from the positions of the pupils and of a reflective dot placed on the forehead.
Visual acuity is estimated from the smallest grating size producing a visual tracking response.





MonPack stimulator

Universal stimulator for standard electrophysiology

- combines the functions of ganzfeld, pattern and multifocal stimulators
- monitor with LED backlight and automated compensation of the LCD light artifact (patent pending)
- complies with ISCEV standards

MonColor stimulator

Stimulator for advanced electrophysiology

- 5 wavelengths: violet, blue, green, red, deep red
- S-cone and L-cone responses
- photopic negative responses
- on and off responses

	MonPackONE	MonColor	MonBaby
Wavelengths	Blue, green, red and their combinations	Violet, blue, green, red, deep red and their combinations	- White - Blue and red (**)
Stimulation range	3 x 10^{-6} up to 3.0 cd.s.m^{-2} with steps of 0.5 dB	15x 10^{-6} up to 15 cd.s.m^{-2} or 200 cd.s.m^{-2} (**) with steps of 0.5 dB	10^{-3} up to 300 cd.s.m^{-2} with steps of 5 dB
Background luminance	up to 100 cd.m^{-2}	up to 2000 cd.m^{-2}	30 cd.m^{-2}
Stimulus duration	2 ms and up	2 ms and up	< 5 ms
Electrophysiology exams	Flash ERG and VEP Pattern ERG and VEP Multifocal ERG and VEP Multifrequency VEP Sensory EOG	Flash ERG and VEP S-cone and L-cone resp. Sensory EOG	Flash ERG and VEP
Psychophysical exams	Dark adaptation Contrast sensitivity Visual field	Dark adaptation	
Eye movement exams	Electronystagmography Pupillometry	Pupillometry	

Notes:

*** MonPackONE, MonColor and MonBaby stimulators can be combined in one unique system with unequaled performance**

**** option**

Bioelectric amplifiers

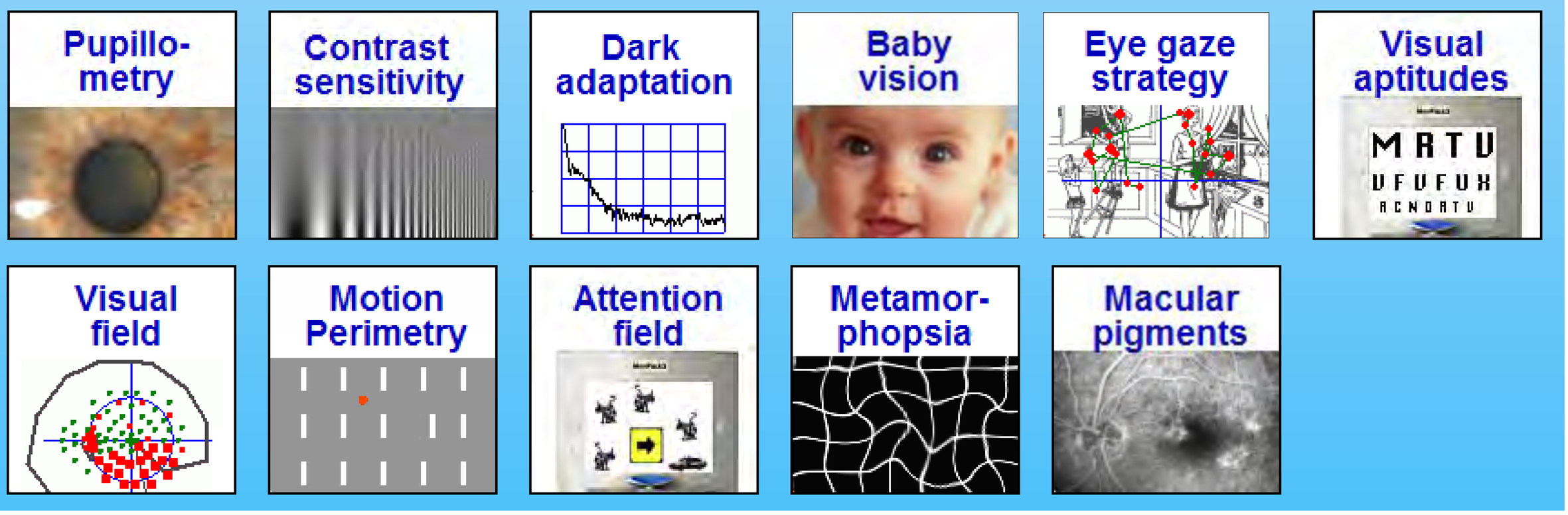
- 2 to 5 channels
- ultra high performance
  (input noise < 0.5 µV pp, CMRR > 115 dB,
  input impedance > 200 Mohms)
- optoelectronic isolation
- automated control of electrode impedance

Standard PC

- Windows XP, VISTA or 7 environment
- easy access to results through computer networks
- easy exportation of data
- video monitoring window
- unique database for all exams
- free internet assistance and trouble shooting

Other options

(refer to the specific brochures)



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