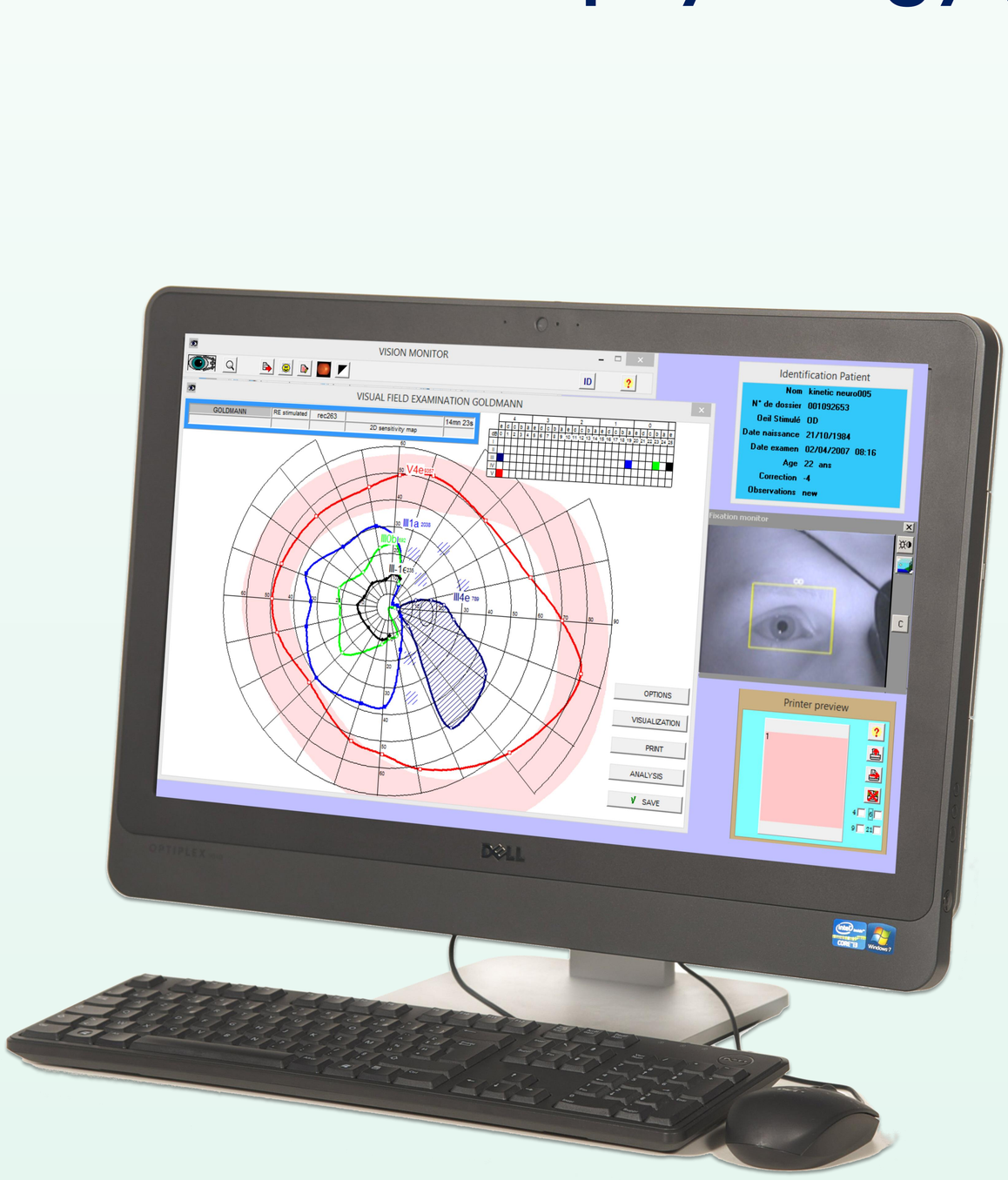
MonCV *One*

-Clinical Research-

- Standard automated perimetry
- Goldmann perimetry
- Dark and light adapted chromatic perimetry
- Dark and light adaptation
- Full field stimulus threshold (FST)
- Photoaversion threshold (PAT)
- Chromatic pupillometry
- Vision electrophysiology (fERG, EOG))



Manufactured by Metrovision
ISO 13485-2016
certified quality system

METROVISION

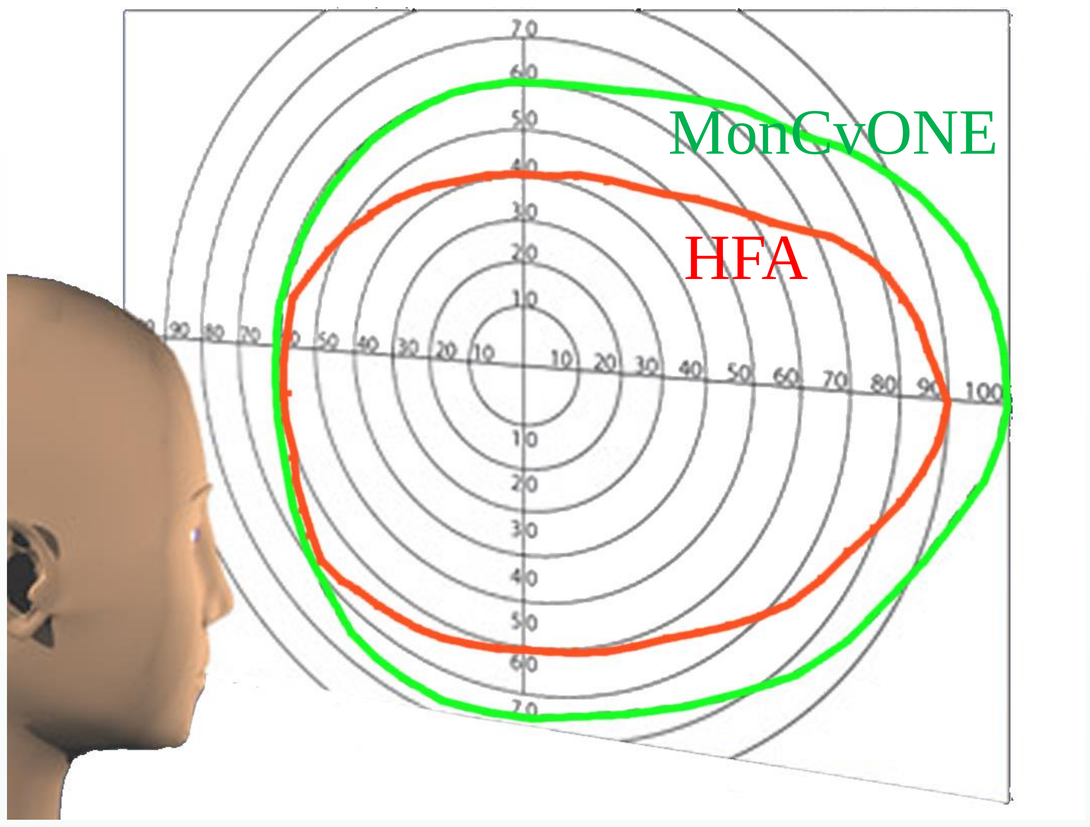
Ultra wide field

Full field projection perimeter

(degrees)	MonCvONE limits	Normal limits
Temporal	105	~105
Up	60	~60
Down	70	~70

Key point

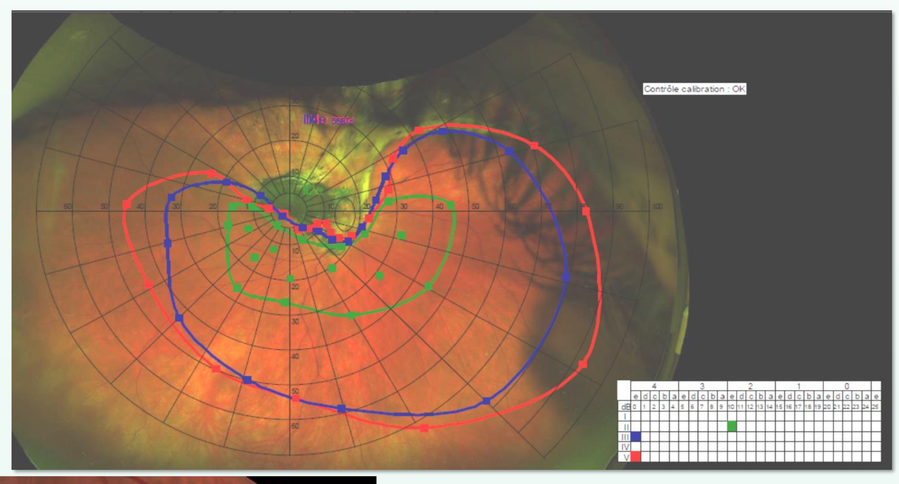
- *MonCvONE can test the visual field up to its true limits using automated or manual perimetry.*

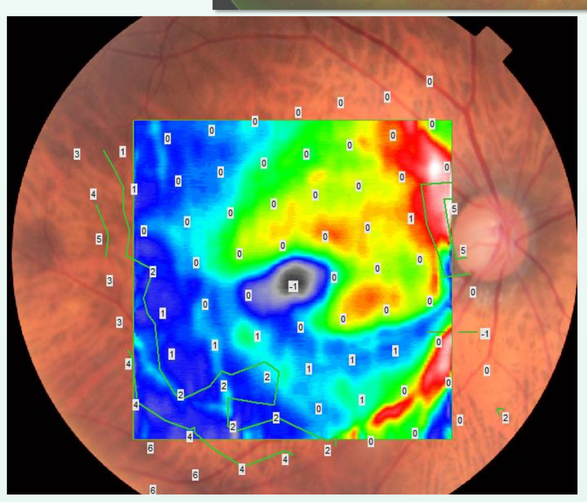


Structure – function comparison

Key points

- *Eye fundus images can be imported from standard imaging sources;*
- *Automated conversion from azimuthal (Goldmann) to stereographic (imaging) format;*
- *Manual (Goldmann) perimetry can be realized on top of the eye fundus image.*



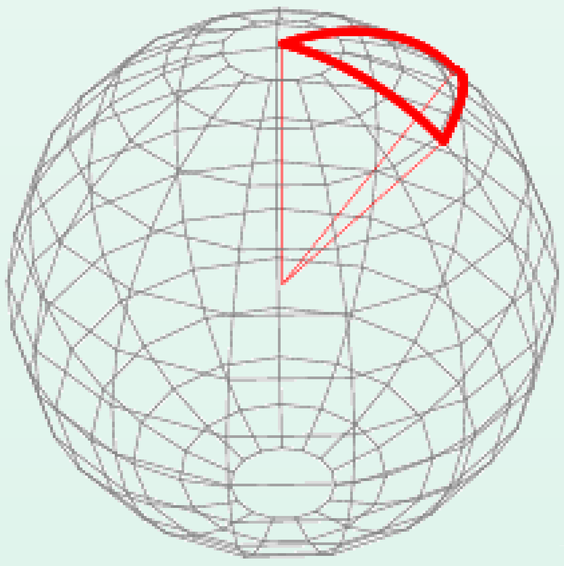


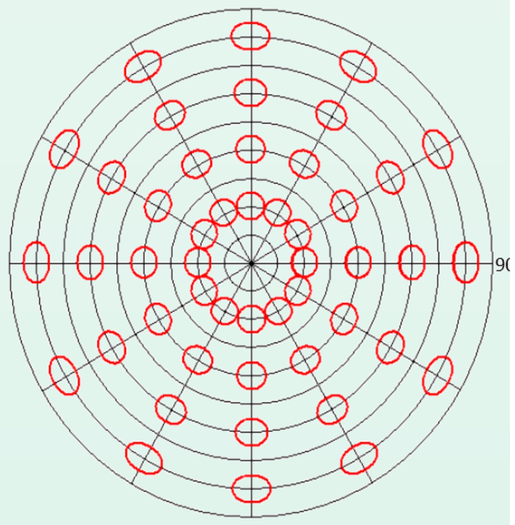
Quantification of isopters and scotoma

MonCvONE uses solid angles to quantify isopters and scotoma, so avoiding the quantification errors of the Goldmann planar projection.

Key point

- *Precise quantification of isopters and scotoma.*





Ultra wide photometric range

Key point

- *MonCvONE can perform exams under controlled photopic, mesopic and scotopic conditions.*

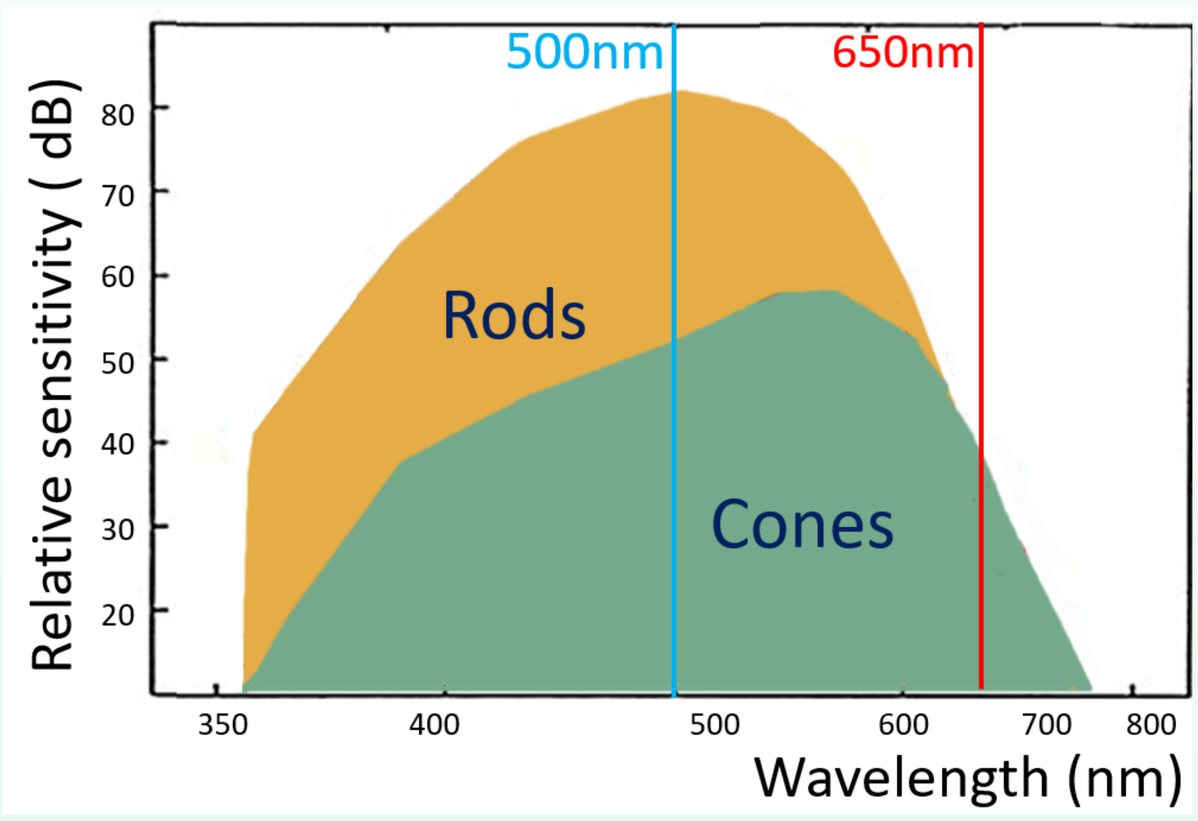
MonCvONE-CR testing range

Luminance (cd/m^2)	Level	Environment
10^{-6}		Absolute threshold
10^{-5}	SCOTOPIC	
10^{-4}		
0.001		
0.01		Full moon night
0.1	MESOPIC	
1		
10		Cloudy sky
100		
1000	PHOTOPIC	
10000		Bright sky

Dark and light adapted chromatic perimetry

Key points

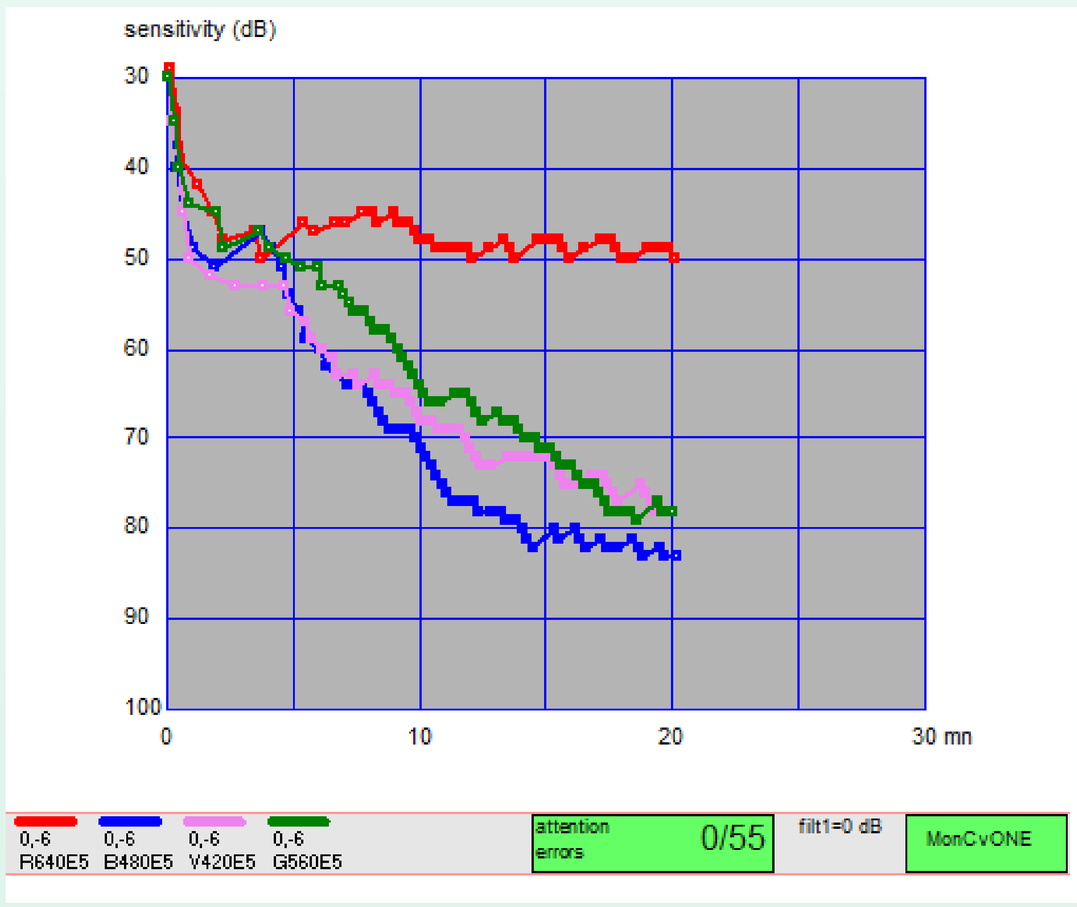
- *User defined dichroic filters (up to 5 wavelengths);*
- *64dB dynamic range (20–84dB with 0dB reference =318 photopic cd/m2);*
- *Goldmann size V stimulus.*



Dark and light adaptometry, FST and PAT tests

Key points

- *Programmable bleaching luminance and time;*
- *Programmable stimulus color and location (with Goldmann size V);*
- *Full field stimulus threshold (FST) scotopic and photopic;*
- *Photo aversion threshold (PAT).*

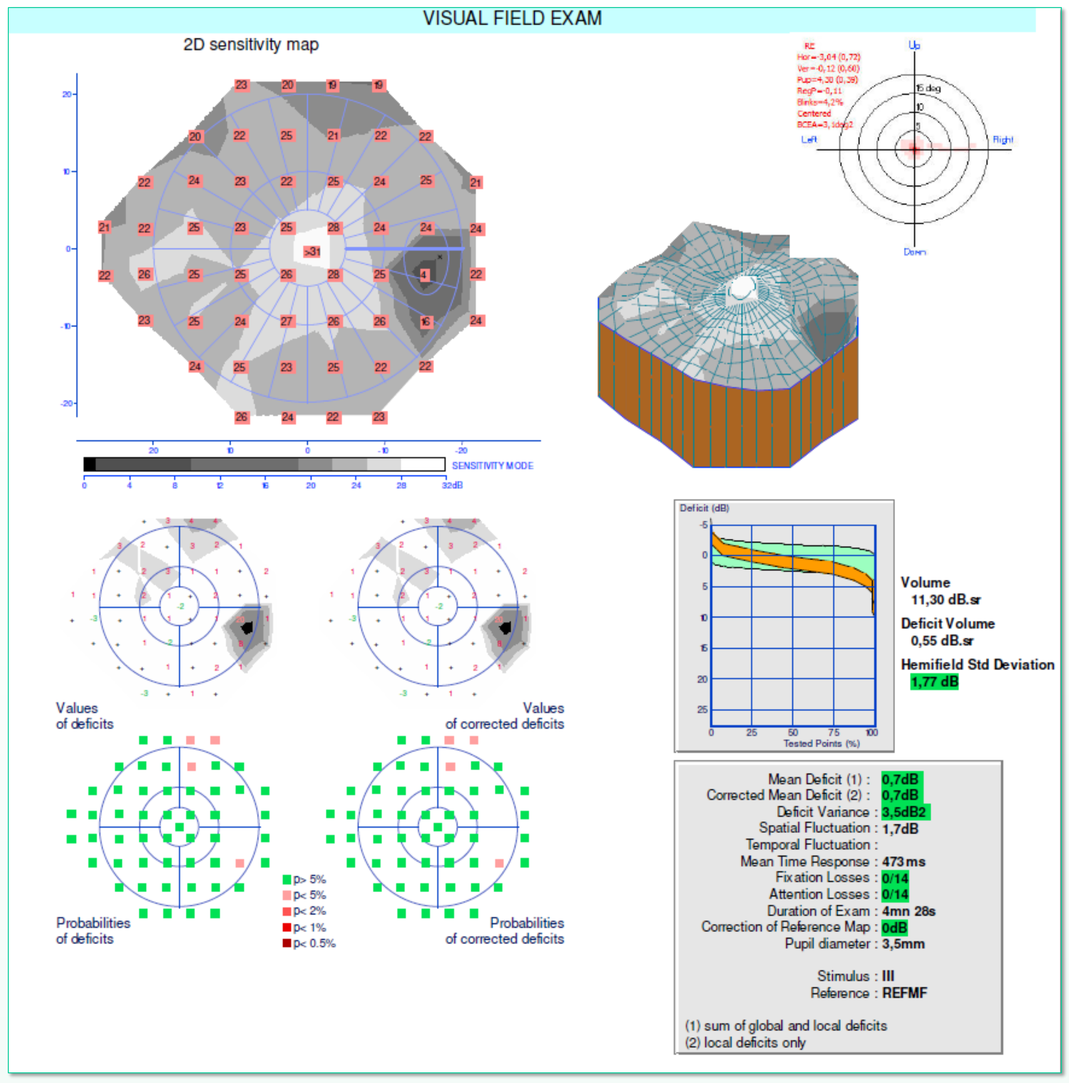


Standard automated static perimetry

The test library includes **STAT** and **FAST** procedures covering eccentricities up to 10, 24, 30 and 60 degrees.

Tests for Blue / yellow perimetry (SWAP) are also provided.

	Background (cd/m2)	Stimulus size	Eccentricity (degrees)
STAT/FAST 30	10	III	30
STAT/FAST24	10	III	24
STAT/FAST10	10	III	10
Fovea	10	III	fovea
FAST-60	10	III	60
SWAP	100	V	30



Key points:

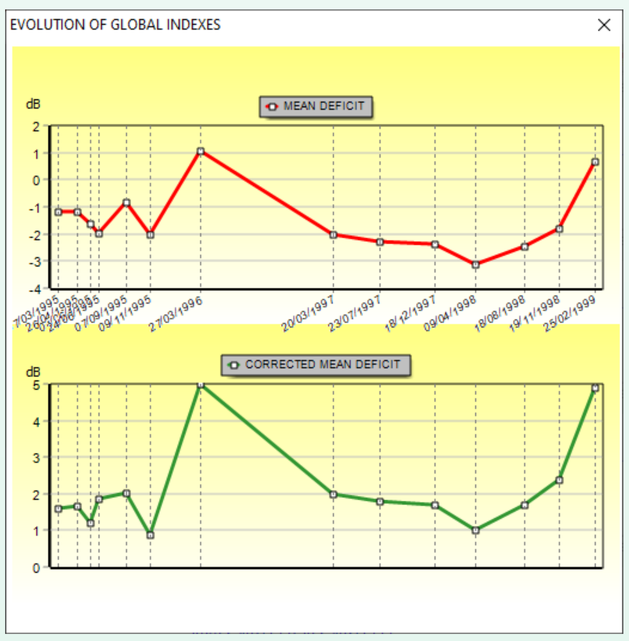
- *Standard automated perimetry tests and analysis,*
- *Automated analysis of fixation stability (BCEA), pupil size and blink rate.*

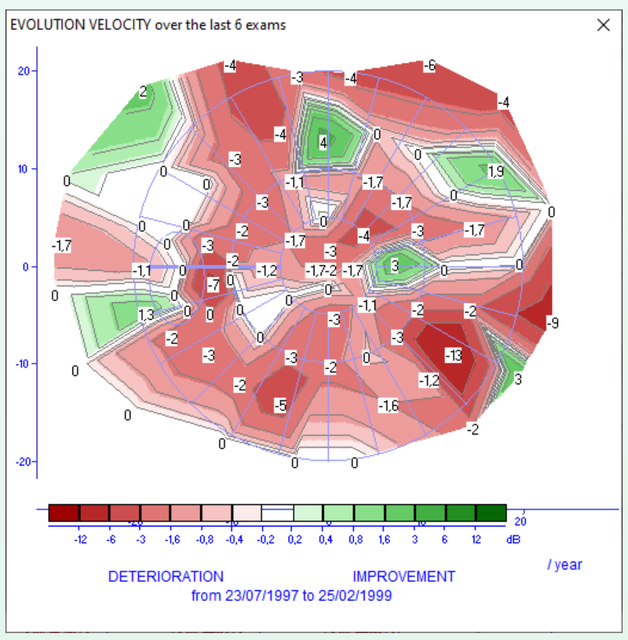
Visual field analysis

Visual field progression

Key points:

- *Evolution of global scores,*
- *Evolution of local thresholds.*

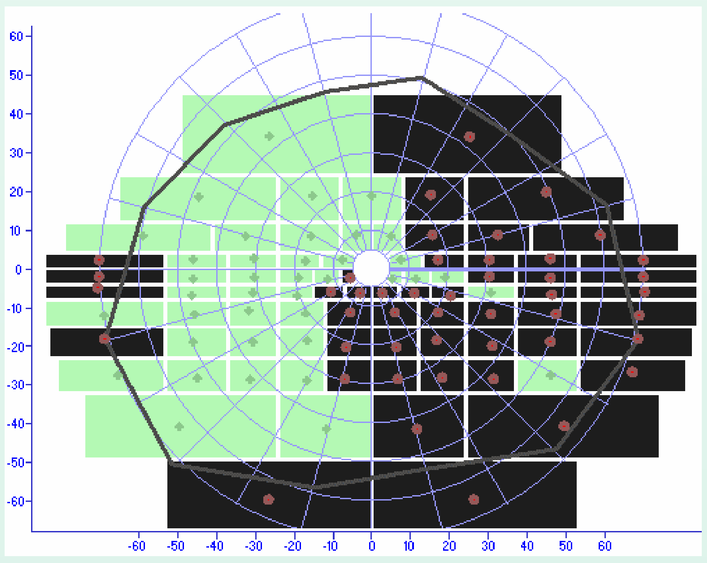




Binocular visual field analysis

Key points:

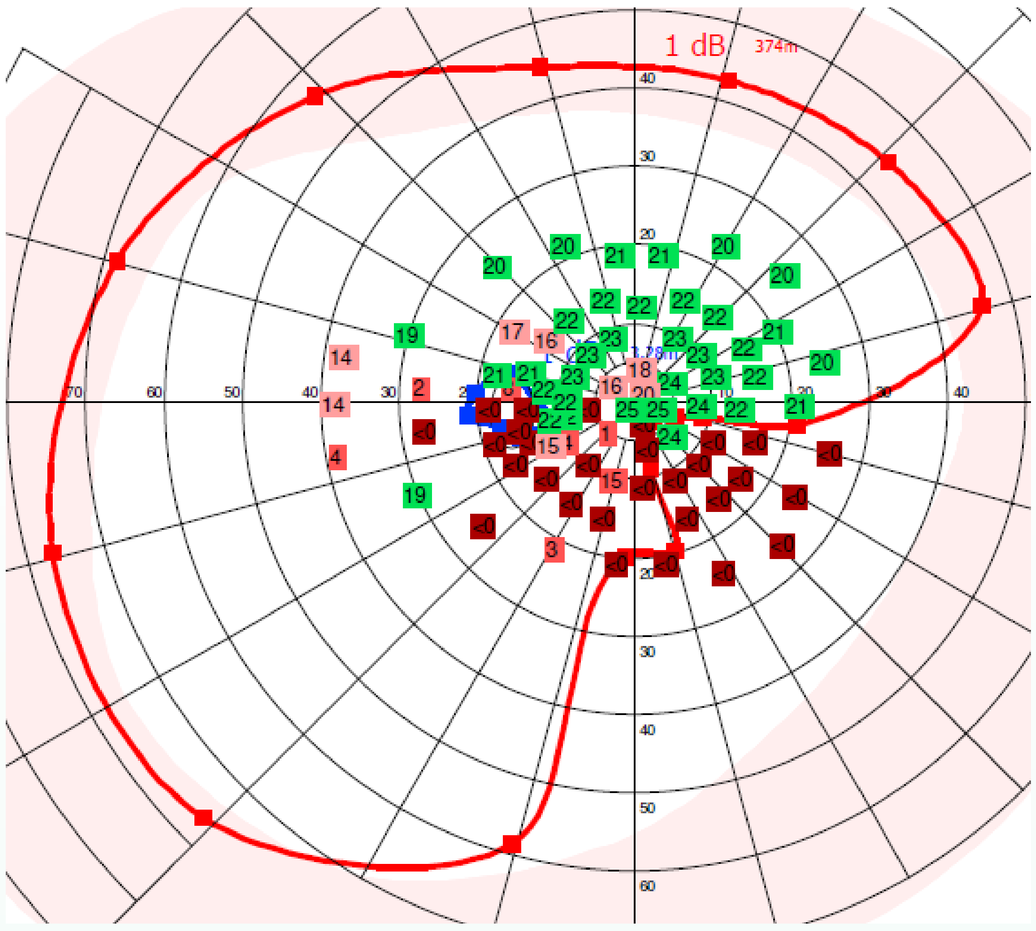
- *Exams are performed under true binocular viewing conditions,*
- *True binocular video monitoring,*
- *Esterman scoring for low vision,*
- *Driving aptitude for group1 and group 2 drivers.*



Mixed Perimetry: combination of Kinetic and Static Perimetry

Mixed perimetry combines the evaluation of the peripheral field with kinetic tests and the evaluation of the central field with static tests.

	Background (cd/m2)	Stimulus size	Eccentricity (degrees)
MIXED-30	10	III	Periphery +30
MIXED-24	10	III	Periphery +24
MIXED-12	10	III	Periphery + 12



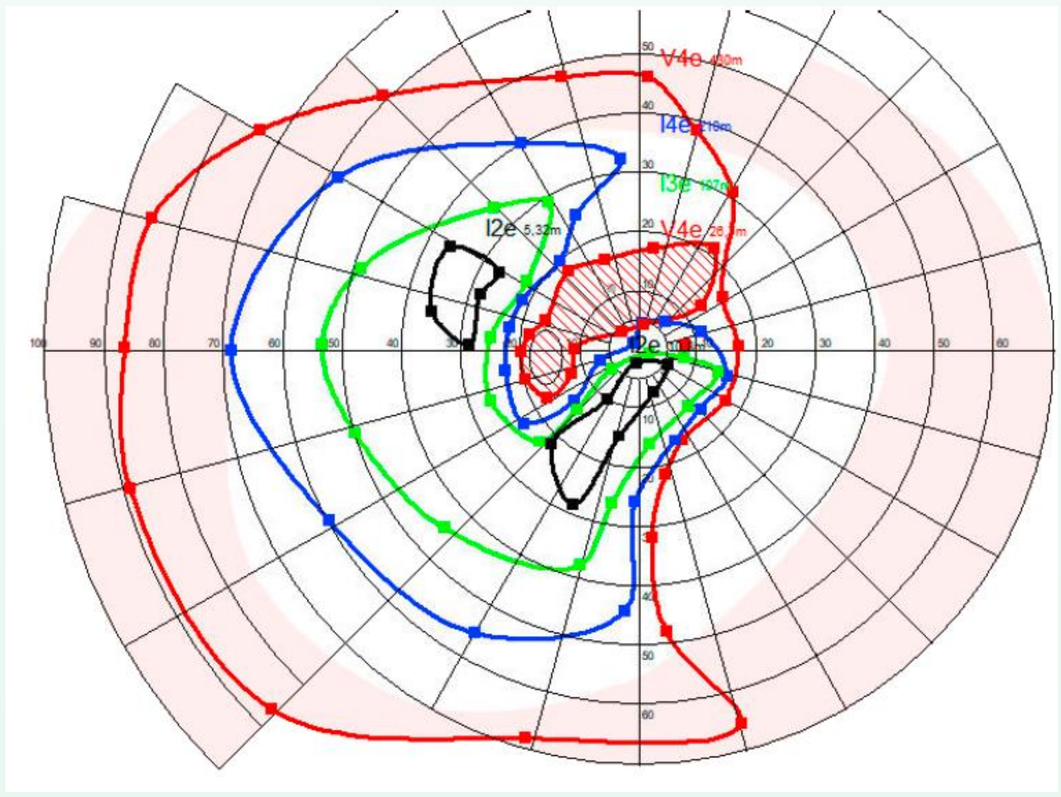
Key points:

- *a complete evaluation of the visual field,*
- *time saving in severely affected visual fields.*

Manual, Goldmann style Perimetry

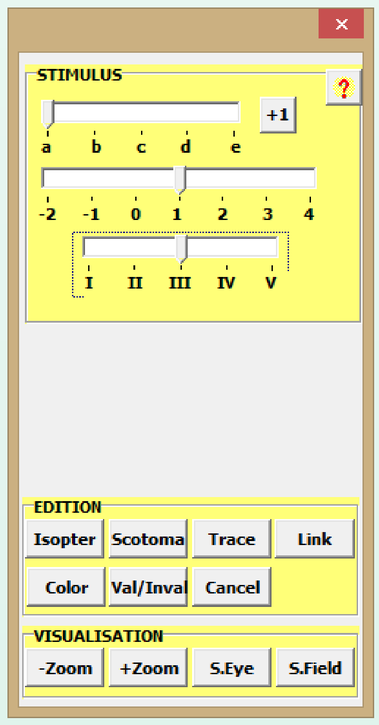
Manual perimetry is needed in a number of clinical situations:

- for patients who are not reliable with automated perimetry,
- for the control of abnormal results obtained with automated perimetry,
- for the evaluation of acute visual field loss.



Key points:

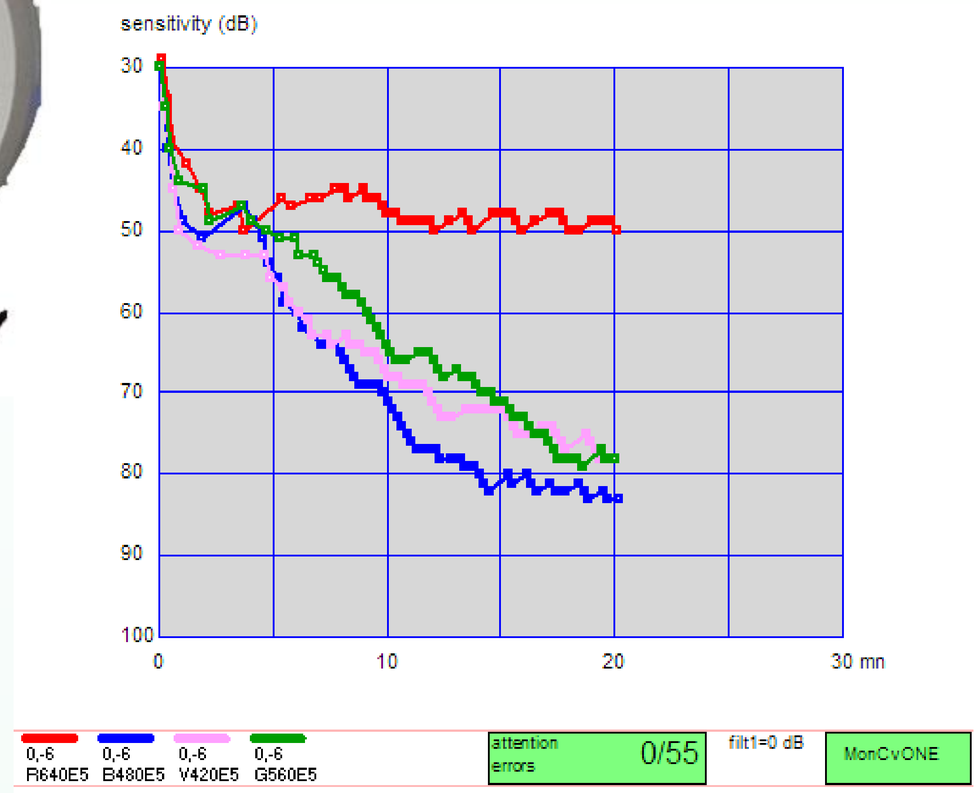
- *Interactive perimetry with direct mouse or stylus control,*
- *Automated quantification of isopters and scotoma surface area,*
- *Detailed evaluation of the macula obtained by zooming-in the central field,*
- *Automated analysis of fixation stability (BCEA), pupil size and blink rate.*



Dark and light adaptation exams

Key points:

- *Programmable bleaching time and luminance,*
- *Programmable stimulus color and location (with Goldmann size V),*
- *Automated measurement of alpha point and rod intercept time (RIT),*
- *Full field stimulus threshold (FST)*
  scotopic and photopic with white or chromatic stimuli,
- *Photoaversion test (PAT).*

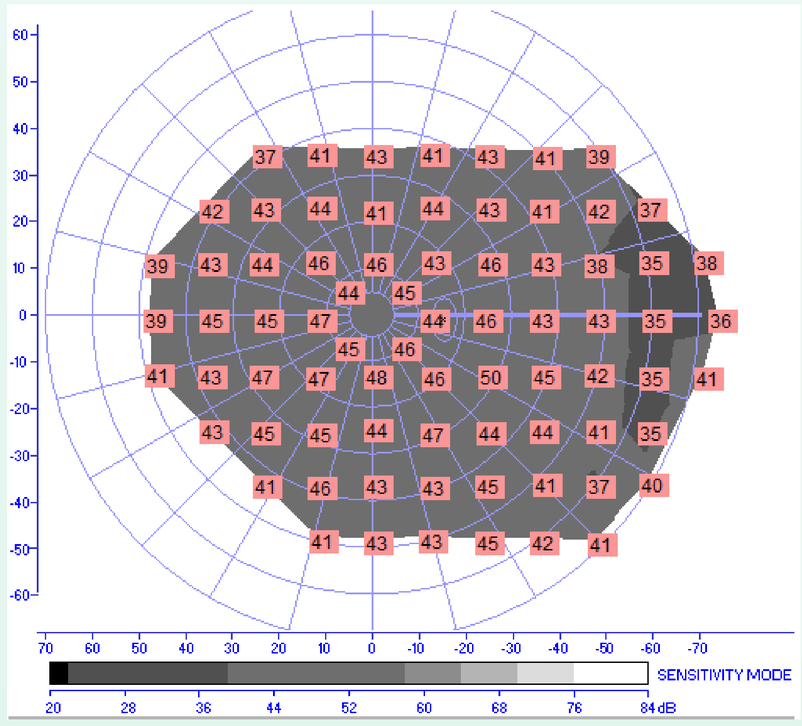


Dark and light adapted chromatic perimetry

MonCvONE can be operated under scotopic, mesopic and photopic luminance levels

Key points:

- *Ultrawide (70dB) dynamic range of luminance,*
- *Up to 5 user defined dichroic color filters,*
- *Programmable stimulus position over the entire visual field with a resolution better than 1 degree.*

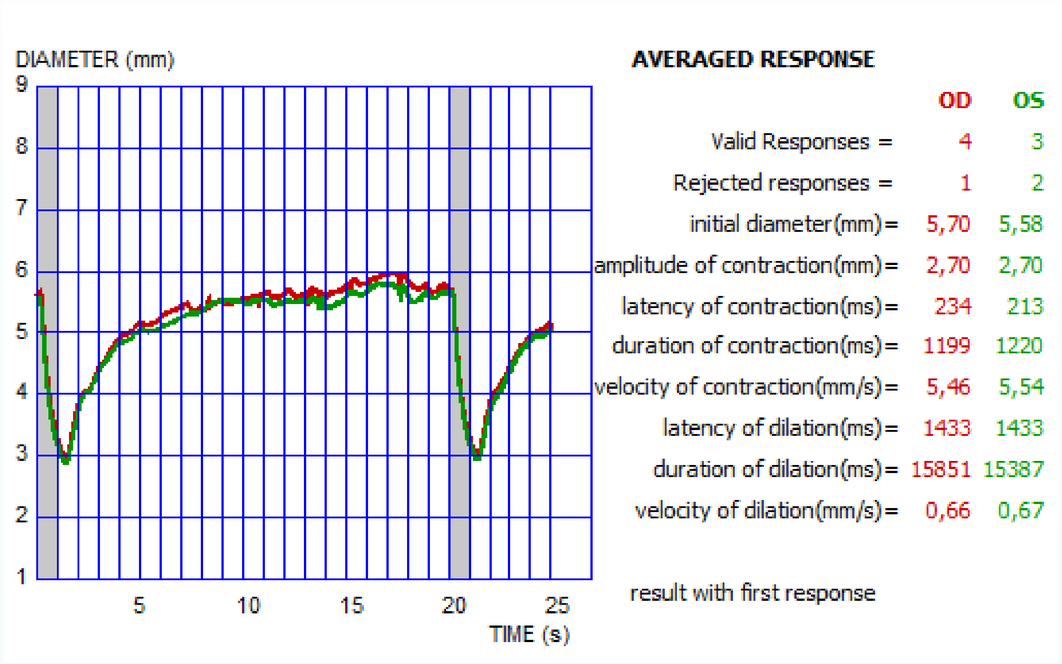


Chromatic pupillometry

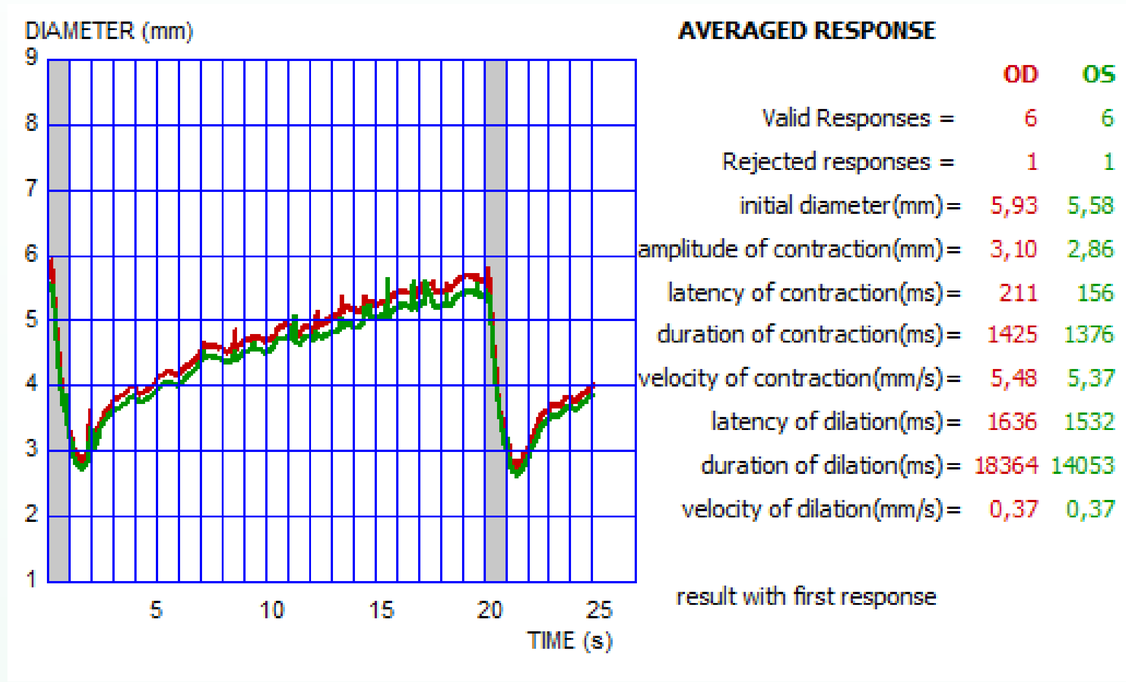
Key points

- *Programmable flash color, intensity and duration;*
- *Monocular or binocular recording.*

response to red flash



response to blue flash

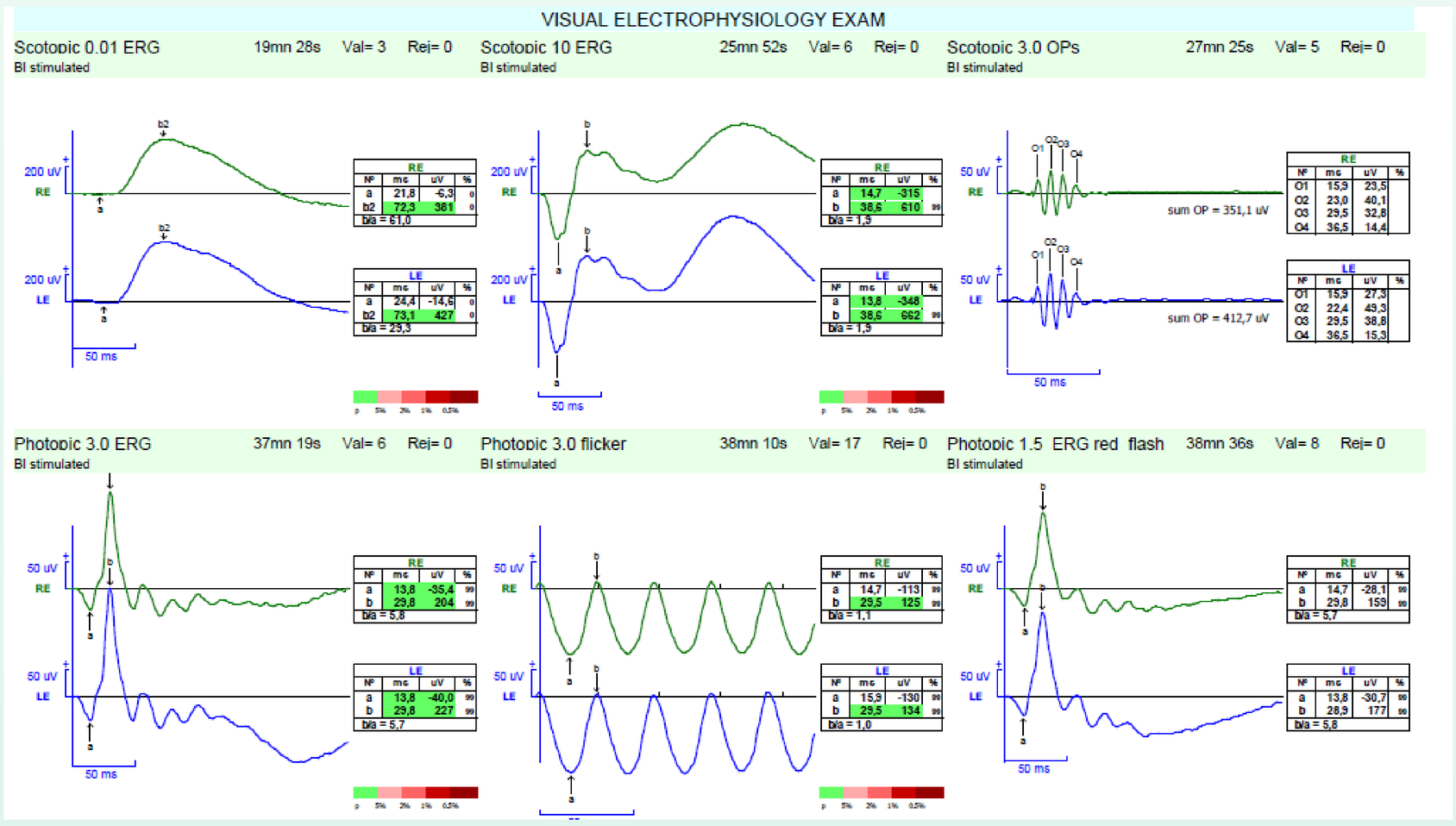


Vision electrophysiology

Key points

- *ISCEV protocol for flash ERG and VEP;*
- *ISCEV protocol for sensory EOG.*

(CR++ version)

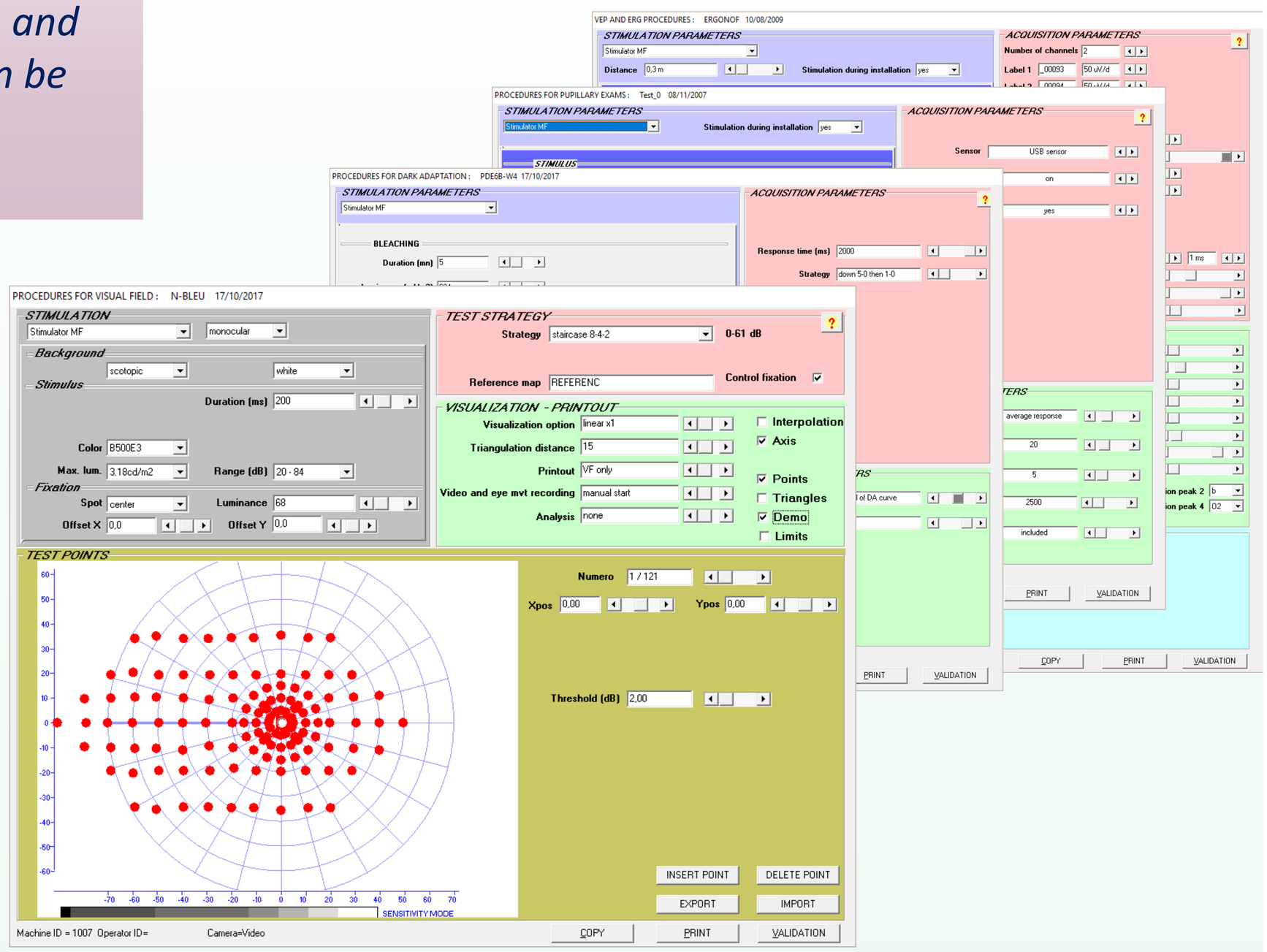


Tools for clinical investigation

Customizable examination protocols

Key point

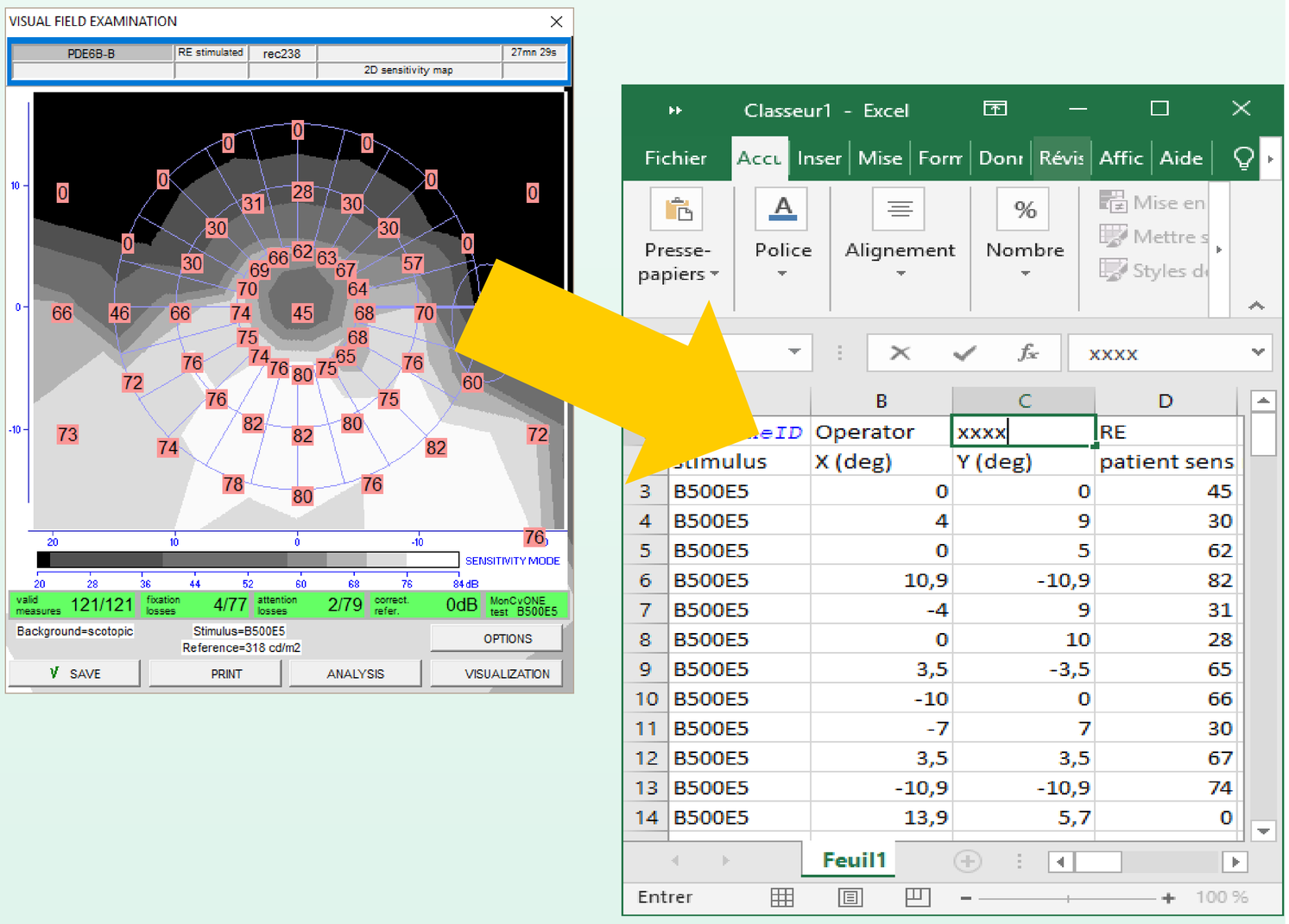
- *Stimulation, acquisition and analysis parameters can be edited to create new examination protocols.*



Easy export of data

Key point

- *Results can easily be exported to a spreadsheet (Excel) for statistical analysis.*



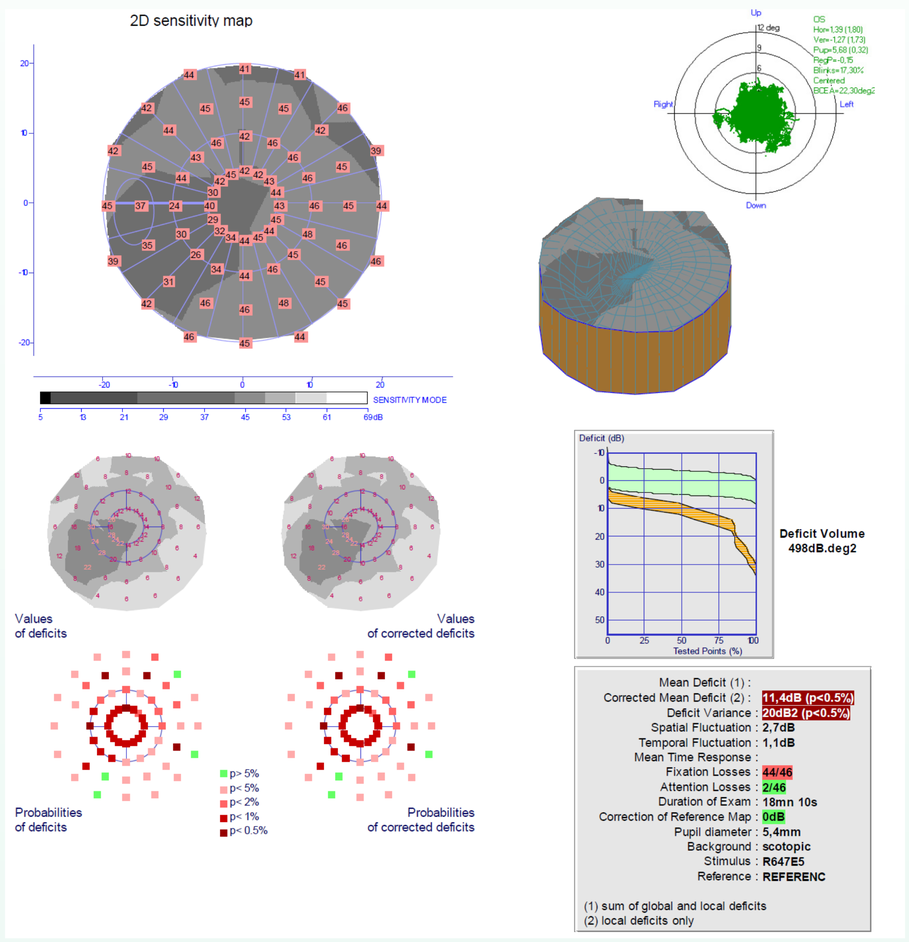
Video and eye movement recording

High resolution, binocular eye tracker

Key points

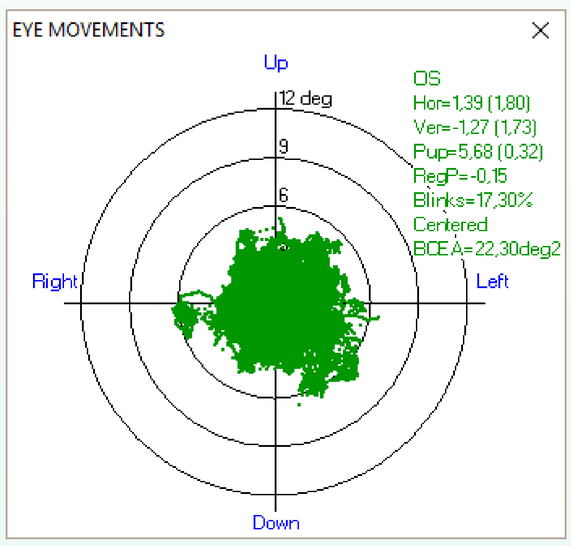
- *Near infra red operation (940 nm);*
- *Measurement of eye movements with the Hirschberg technique (corneal reflex – pupil distance);*
- *Measurement of the pupil diameter;*

Eye movement report



Key points

- *Available for all exams*
- *Evaluation of the stability of fixation with bivariate contour ellipse area (BCEA);*
- *Pupil size average and fluctuations;*
- *Blinks frequency.*



Examinations and options

Vision psychophysic exams

• Visual field exam (automated static & dark adapted chromatic perimetry)	PVM-CV
• Visual field PRO exam (Goldmann, Blue/Yellow perimetry)	PVM-CW
• Dark adaptometry exam (dark adaptometry, FST and PAT)	PVM-AO
• Macular pigments exam	PVM-PI

Eye movements recording

• Video and eye movement recording (during visual field and other exams)	PVM-CF

Vision electrophysiology exams (CR++ version)

• Flash and pattern ERG and VEP exam	PVM-EL
• Sensory EOG exam	PVM-ES

Options

• Electric table	HVM-TABLE
• Set of large field refractive lenses	HVM-OPTI
• High speed camera (200Hz)	HVM-camera-200

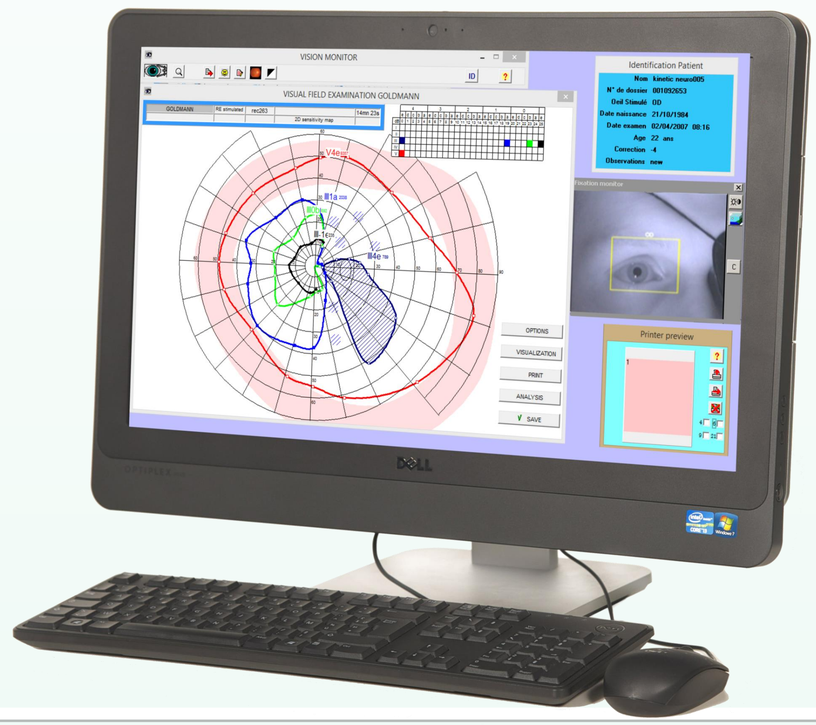
Specifications

- Hemispherical cupola with 30 cm radius;
- Full field projection perimeter, up to the true limits of the visual field;
- **Test sizes:** Goldmann I, II, III, IV, V, ganzfeld;
- **Dimensions:** footprint=62x35cm, height=74cm;
- **Weight:** 23 kg (without PC, printer and electric table);
- **Power supply:** 110-240V, 3.6-1.8A , 50-60Hz.

Computer networking

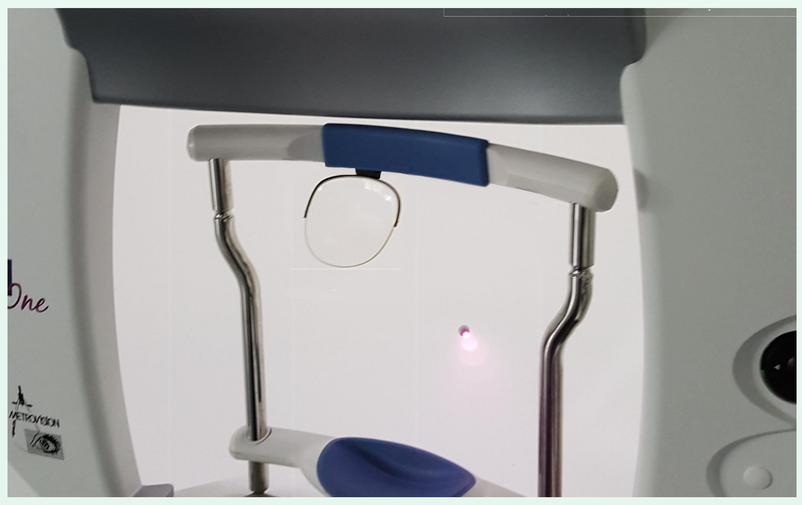
MonCV *One* is controlled from a standard PC or tablet operating under Windows.

It can be connected to a computer network allowing the access of results from a work station and their exportation under **PDF** or **DICOM** formats.



Eye occluder, correction of refractive errors

MonCV *One* is supplied with a set of large field lenses (55 mm in diameter) and a translucent occluder with an easy magnetic fixation to the head rest.



Key points

- *Large field lenses prevent peripheral field errors that result from the lens rim or lens misalignment;*
- *The translucent occluder prevents ganzfeld blankout.*

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