MonCV3
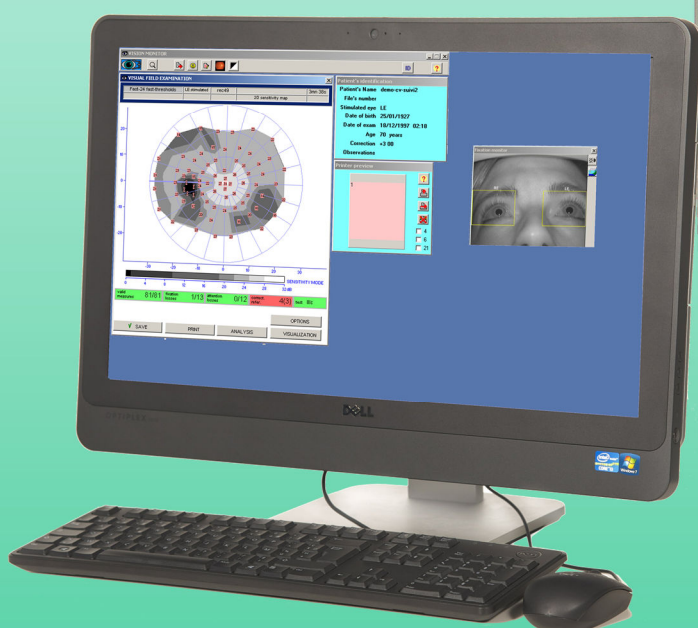# Multifunction Perimeter

Visual functions evaluation for all:

- **Anterior segment**
- **Retina**
- **Glaucoma**
- **Neuro-ophthalmology**
- **Pediatric-ophthalmology**
- **Visual aptitudes**

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MonCV3 combines in a unique and compact instrument a complete battery of tests for visual functions.

Thanks to its **modular** design, it easily adapts to the individual needs of vision care specialists. A specific configuration can be proposed for anterior segment, retina, glaucoma, neuro-ophthalmology, pediatric-ophthalmology and visual aptitudes and can , later-on, be upgraded with additional tests.
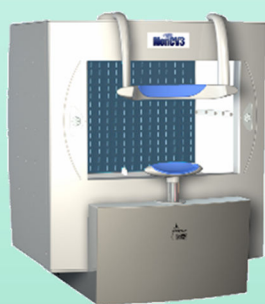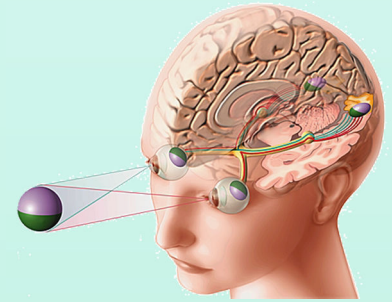
MonCV3 generates visual stimuli with precisely controlled luminance and contrast.

Tests of peripheral vision are performed at a distance of 30 cm and cover 60 degrees of visual field (± 30 degrees) with stimuli up to 80 degrees of eccentricity for horizontal limits.

Tests for central vision can be performed at various distances thanks to the removable head rest.

MonCV3 is equipped with a near infra red, high resolution image sensor. An advanced image analysis software provides real time measurements of pupil size and gaze orientation.
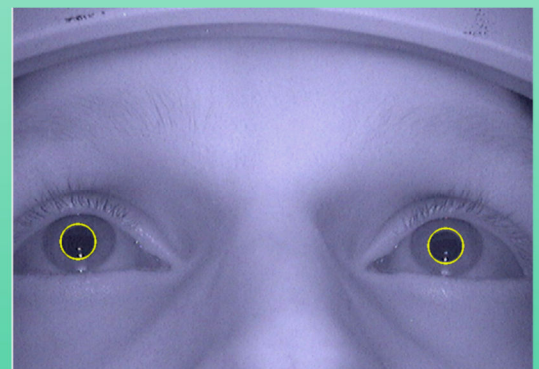
MonCV3 is controlled from a standard PC with Windows operating system.

Results are easily exported and accessed through a computer network. Operation is made simple by the use of the same interface and the same database for all exams.
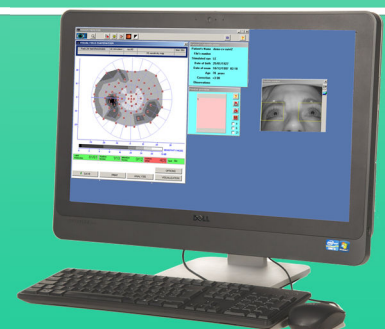
Visual fields

MonCV3 proposes two sets of tests for white over white contrast perimetry:

The **STAT tests** use conventional, regularly spaced grids of points.

The **FAST tests** (Fiber Adapted Static Testing Perimetry) rely on distributions of test points corresponding to the most frequent alterations of the retina and optic nerve fibers. They provide more clinically useful information with less examination time.
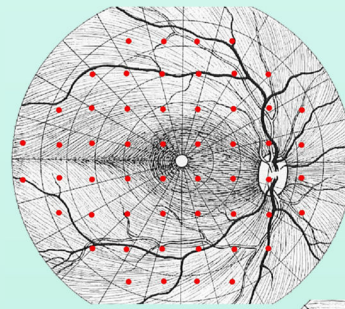
Grid of the
STAT-24 test
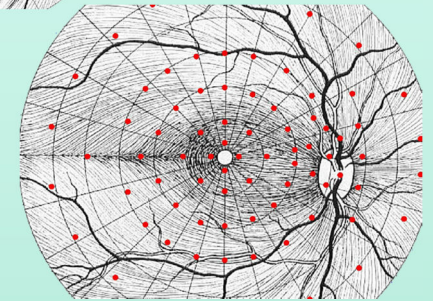
Grid of the
FAST-24 test

Test library

The test library includes STAT and FAST procedures covering eccentricities up to 10, 24, 30, 60 degrees and a specific test for the fovea.

Additional tests are available for testing low vision patients with size V stimuli and for testing drivers with additional stimuli up to 80 degrees along the horizontal meridian.

	Background (cd/m2)	Stimulus size	Eccentricity (degrees)
STAT-30 **FAST-30**	**10**	**III**	**30**
STAT-24 **FAST-24**	**10**	**III**	**24**
STAT-10 **FAST-12**	**10**	**III**	**10 - 12**
STAT-fovea **FAST-fovea**	**10**	**III**	**fovea**
FAST-60	**10**	**III**	**60**
Low vision	**10**	**V**	**30**
Drivers	**10**	**III**	**80 (horizontal)**

Analysis software

The map of sensitivity gives highly informative details about local deficits thanks to the optimized arrangement of test points and advanced graphic software.

A first statistical analysis compares the patient's results to an age matched normative data base.

A second analysis evaluates the local deficits after correction for the factors affecting globally the field such as opacities of ocular media.
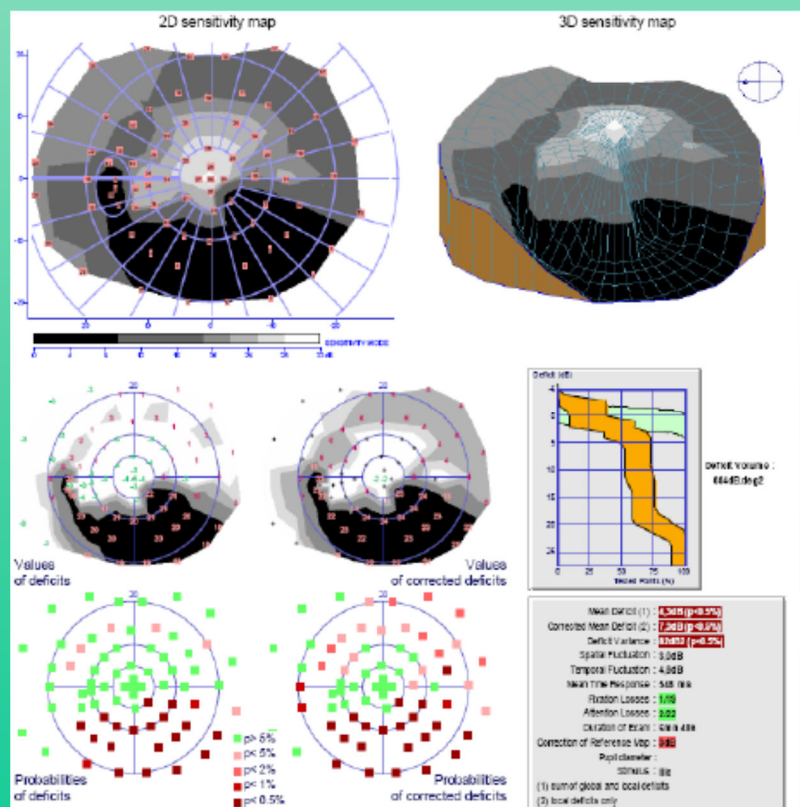
Motion perimetry

Motion perimetry is an advanced perimetry technique using as a stimulus the relative local displacement of a pattern of bars. It has been shown to present a greater sensitivity for the detection of glaucoma than conventional light contrast perimetry.
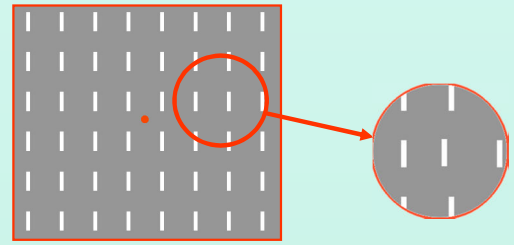
It is also much less sensitive to refractive errors and to the diffusion of light by the cornea or the lens. This program includes the same capabilities for statistical and follow-up analysis.

	Background (cd/m2)	Stimulus size (degrees)	Eccentricity (degrees)
MOTION-30	10	2	30
MOTION-24	10	2	24
MOTION-12	10	2	12

Follow-up software

The follow-up program provides an analysis of the progression of the visual field with a graph of the evolution of global indices.

A more detailed analysis is obtained with the evolution velocity map which shows the rate of sensitivity change for the different areas of the visual field. This map gives a clear indication of which areas of the field are improving (in green color) and which areas are deteriorating (in red).
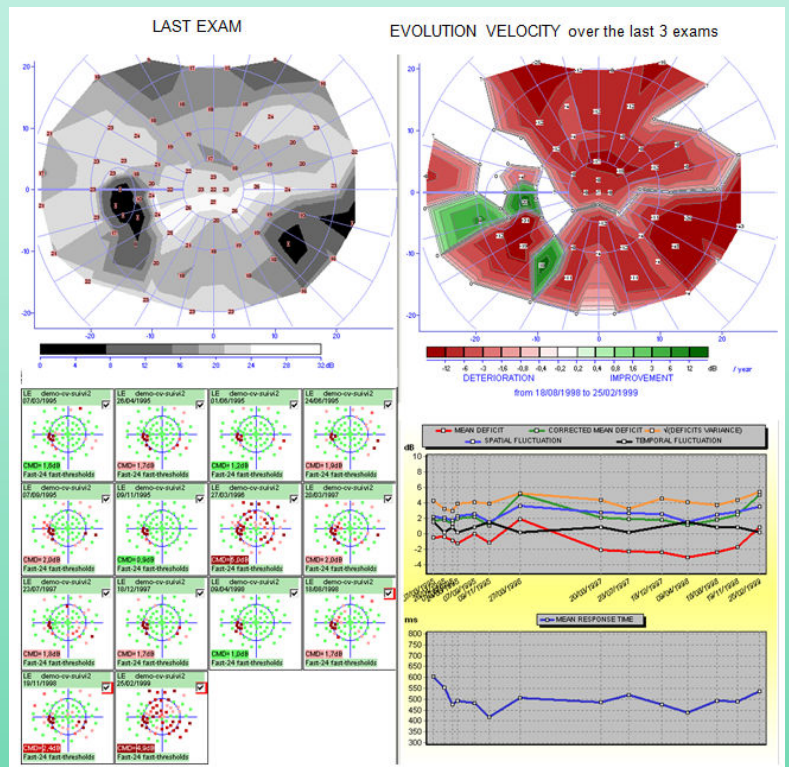
Fundus perimetry

The fundus program allows the comparison of the visual field with the eye fundus. The image of the eye fundus is imported as an image file either through the computer network or by USB key, CDROM, ...

The operator identifies by a simple click the position of the fovea and papilla and the program automatically performs the scaling and repositioning the eye fundus image.
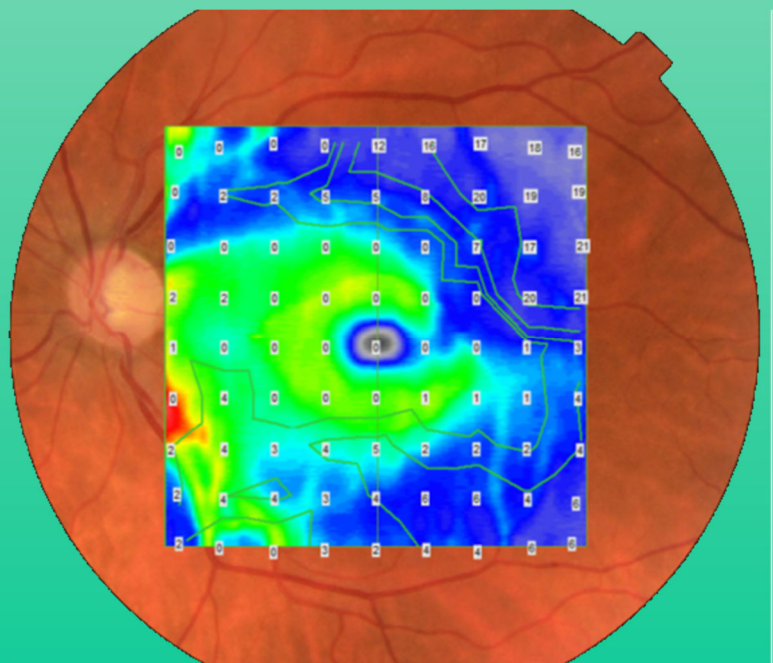
Visual acuity, disability glare

MonCV3 offers a wide selection of standardized tests for central vision, all with calibrated contrast and luminance and computer assisted scoring.

Tests of visual acuity
They include the standardized Landolt ring test as well as the ETDRS acuity tests.

Tests of visual acuity at low contrast
These tests are performed with LANDOLT and ETDRS charts with a low contrast of 10 percent.

## Tests of visual acuity at low luminance
These tests use LANDOLT and ETDRS carts with a low luminance of 1 cd/m2 and negative contrast.

Tests of disability glare
These tests simulate night driving conditions with a lateral high luminance source altering the visibility of low luminance optotypes.

Tests of color vision
This test is similar to a color lantern test with the presentation a color stimulus covering one degree of visual angle during 1/25 second or 1 second.
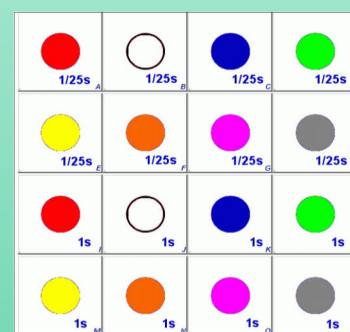

Contrast sensitivity

This program performs measurements of contrast sensitivity thresholds with sinusoidal gratings of different spatial frequencies. Measurements can be performed with static gratings or with temporally modulated gratings.

This test presents much more sensitivity than the standard visual acuity measurements in alterations of ocular media transparency and diseases of the retina and optic nerve.
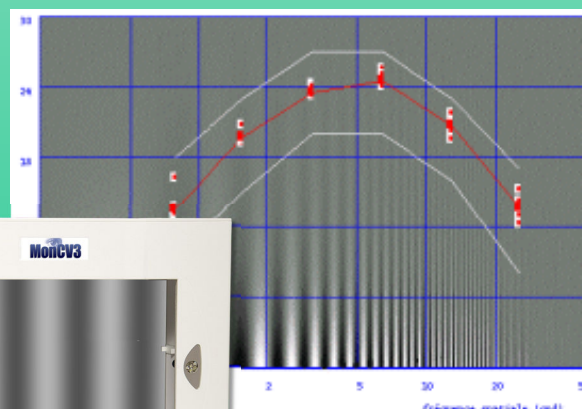
Other options

(refer to the specific brochures)
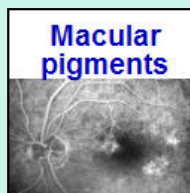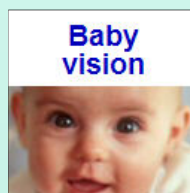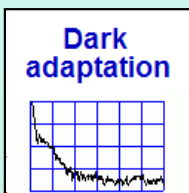
	Anterior segment	Retina	Glaucoma	Neuro-ophthalmol	Pediatric ophthalmol	Visual aptitudes
Visual field		✓	✓	✓		✓
Motion perimetry	✓	✓	✓			
Landolt acuity	✓					✓
ETDRS acuity	✓	✓				✓
Contrast sensitivity	✓			✓		✓
Glare test	✓					✓
Macular pigment		✓				
Metamor-phopsies		✓		✓		
Pupillo-metry	✓			✓	✓	
Attention visual field					✓	✓
Dark adaptation		✓				✓
Baby vision test					✓	
Eye gaze strategy				✓	✓	✓

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