General Information

Projection System	Internal LCD
Weight	26 kg / 57 lbs
Internal Fixation	Single or four crosses, circle – customizable
Field of View	45°
Background Luminance	1.27 cd/m2 (= 4 asb)
Stimulus Dimension	Goldmann I, II, III, IV, and V
Stimulus Duration	From 100 ms to 2000 ms
Threshold Strategies	4-2-1, 4-2, fast, raw, manual
Stimulus Pattern	User customizable
Joystick	3-axes motion control
PC	Pentium 4 at 3.4 GHz OS: Windows 2000 SP4 HD 160 GB – RAM 512 MB
Storage	HD / DVD
Display	19" SXGA LCD
Light Source	Quartz halogen lamp 12V/50W
Class	Type 1BF (according to IEC 601-1)
Power	100 to 120 and 200 to 230 VAC 50/60 Hz

Features

- *Automatic static/kinetic projection of stimuli customizable in color, duration and size (Goldmann standard)*
- *Fully customizable perimetry test — number and location of stimuli, threshold strategy, test mode (automatic, semi-automatic or manual), fixation target (type, size, and color)*
- *Real-time analysis of patient fixation during the exam — retinal movements are tracked, memorized, and compared with the fixation target position*
- *Fully automatic follow-up exam repeats the same test upon time, for an accurate monitoring of the progress of any pathologies or effect of a treatment — a dedicated differential map is available for both fixation and microperimetry exam to achieve a faster and accurate diagnosis*
- *Biofeedback function allows specialists to perform visual rehabilitation training in order to locate the actual PRL (Preferred Retinal Locus) and trains the patient to use a better region for fixation, identifiable with the same device called TRL (Trained Retinal Locus)*
- *Extra-accurate scotoma detection — dense and relative scotomatous areas are identified and delimited with the highest resolution*
- *Peri-papillary exam can be used to customize the analysis of glaucoma or suspect glaucomatous disease conserving the precise follow-up features*
- *Possibility to manually refine any microperimetry exam at the end of the pattern to immediately highlight functional aspects*
- *Enlarge precise correlation between morphological and functional way thanks to the use of retinal fundus analysis from different sources*

MP-1
Retinal Function Analyzer

Eye & Health Care
NIDEK CO., LTD.

FUNCTIONAL RETINOGRAPHY

MP-1
Retinal Function Analyzer

NIDEK

*The Art of Eye Care*

The functional approach to retinography . . .

Nidek's **MP-1** is a retinal function analyzer that, along with its accurate retinal tracker, correlates a precise fundus topography and light-sensitivity map on any selected area of the retina. The **MP-1** is designed to obtain multiple retinal analysis on patients with any visual acuity level.

## MP-1
Retinal Function Analyzer
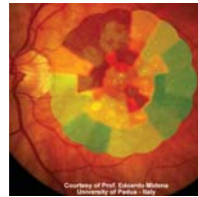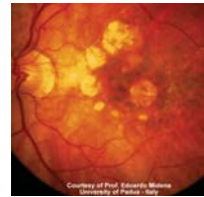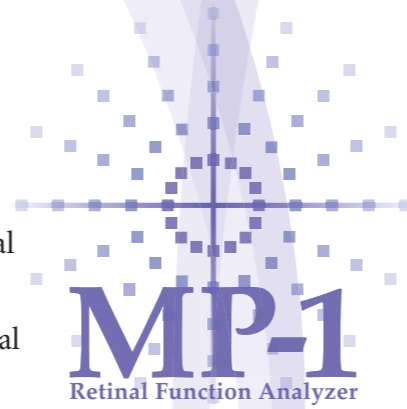
Fundus Related Perimetry

The MP-1 improves diagnostic accuracy by quantifying and qualifying functional response of selected retinal areas. The combination of subjective (sensitivity map) and objective (retinography) data is unified on a microperimetry map, allowing a straightforward analysis of the retinal function before and after any clinical or surgical treatment, helping the physician to improve the diagnosis accuracy.

Quality of Vision Quantified
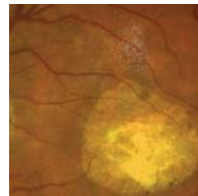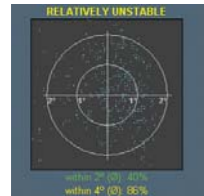
Fixation Analysis

Fixation characteristics are critical for retinal analysis. The MP-1 offers exact fixation quantification, location and stability, ensuring an accurate prediction of treatment results and assisting the physician's decision to proceed surgically or not.

To Treat or Not to Treat
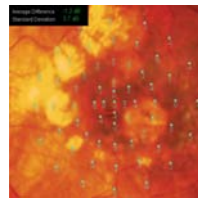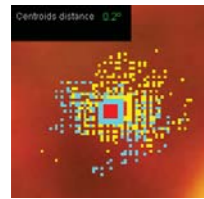
Precise Follow-Up Examination

Administering the exact same exam on exactly the same retina point over time allows qualification of quality of vision after any pharmacological or surgical treatment. Dedicated differential maps are available to fast highlight the retinal changes both for microperimetry and fixation exams.
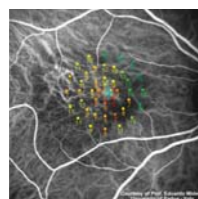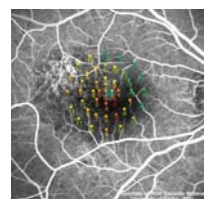
Monitor Patient Improvement
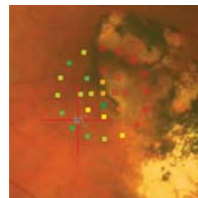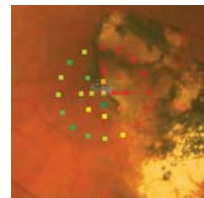
Low-Vision Rehabilitation

With the biofeedback exam, low-vision patients who have lost foveal fixation capabilities are trained to relocate their preferred retinal locus (PRL) into a different region, called trained retinal locus (TRL), previously decided by the physician, allowing fixation rehabilitation and recovering visual abilities (i.e. reading speed) thanks to the increase of fixation stability and visual outcomes.

Increase Reading Ability
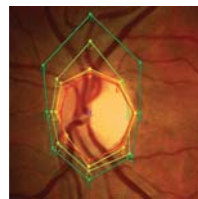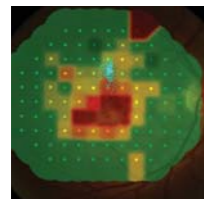
Scotoma Tracker

The high-precision kinetic exam of the MP-1 easily finds the shape of a scotomatous area due to rapid identification of the size and shape of even the smallest scotomas.

Customize MP Exams to Fit All Needs

Different Retinal Technologies

The MP-1 allows overlapping of the sensitivity map on imported images taken with retinal systems performing FAG, ICG, IR, OCT and others.

Merge Images from Any Source

Standardized Interpretation
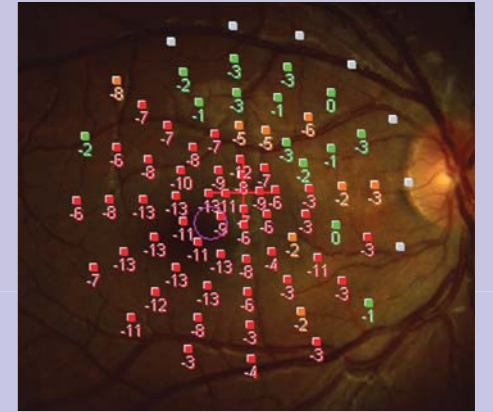
Normal Values & Local Defect Map

The local Defect Map allows plotting the differences in dB between measured thresholds and age-corrected normal values at each stimulated location, within 20° centered on the fovea.

- 🟩 Normal
- 🟧 Suspect
- 🟥 Relative scotoma
- ⬜ Normality data not available
- ☐ Absolute scotoma
- △ Not projected
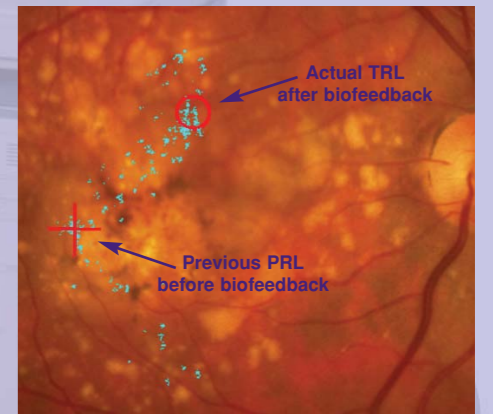
Improved Fixation

Visual rehabilitation through the biofeedback exam allows change of the previous fixation location (PRL – Preferred Retinal Locus) into an area with better sensitivity (TRL – Trained Retinal Locus).

The typical protocol is using MP-1 to:

- *Find actual fixation location*
- *Perform microperimetry analysis*
- *Locate highest sensitivity region*
- *Train new fixation location*