

# Visual Field Analyzers from Carl Zeiss

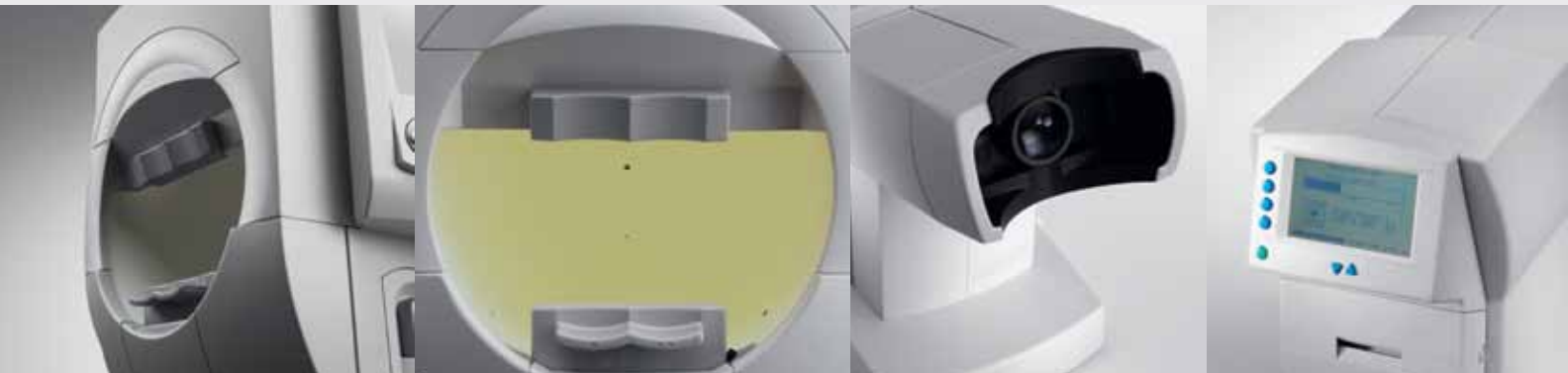


**Expanding your field of vision**



**Vision in focus**





### **Visual Field Analyzers**

Humphrey® Field Analyzer/HFA™ II-i Series

Humphrey Matrix®

Humphrey FDT®

### **Perimeter Software**

Guided Progression Analysis (GPA™)

HFA-NET Pro™

SITA-SWAP™

Offering the industry's broadest selection of perimetry products, Carl Zeiss Meditec continues to set the gold standard for quality, precision and innovation worldwide.

It is a standard that reflects our shared commitment to the enhancement and preservation of vision. A standard that expands the potential of perimetry with new technologies that offer unique insights to support you in glaucoma clinical detection, diagnosis and ongoing management.

Every perimetry product from Carl Zeiss Meditec is designed to provide optimized workflow, better patient comfort, and superb value not only today but also far into the future.

Take a moment to find out more about the perimetry solutions from Carl Zeiss Meditec for confident early diagnosis and comprehensive disease management.

And see where vision takes you.

# The gold standard in perimetry to aid in glaucoma diagnosis and management

## **Humphrey Field Analyzer HFA II-i Series**

Validated by more than 25 years of research, design and clinical experience, HFA is the accepted standard of care in glaucoma diagnosis and management. With over 60,000 installed units worldwide, the Humphrey Field Analyzer is the premier automated visual field perimeter.





## The complete portfolio of HFA II-i perimeters includes:

### Humphrey 750i Visual Field Analyzer

The ultimate in practice efficiency, advanced features and long-term value.

### Humphrey 745i Visual Field Analyzer

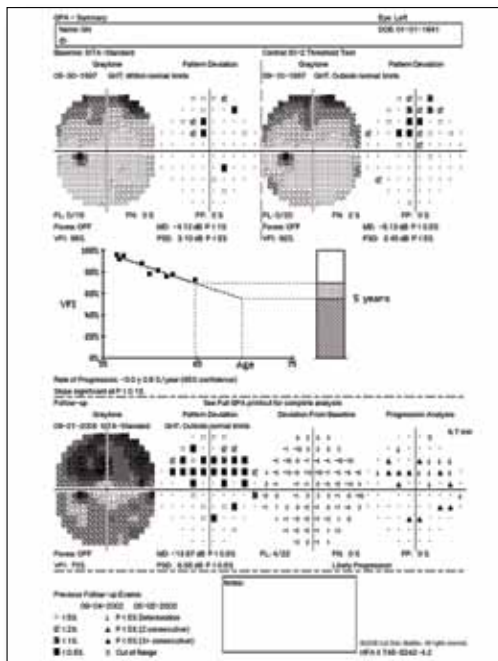
All the features of the 740i plus SITA-SWAP software for early detection.

### Humphrey 740i Visual Field Analyzer

The basic model in automated visual field testing for comprehensive care.

### Humphrey 720i Visual Field Analyzer

All purpose model for low volume practices.



## Advanced analysis

The HFA is the only perimeter with progression analysis validated in the Early Manifest Glaucoma Trial.<sup>1</sup>

- Enhanced Guided Progression Analysis (GPA) software identifies statistically significant progression automatically, and presents “at a glance” visual field progression analysis on a single page report.
- Visual Field Index™ (VFI™) is a simple and intuitive new global index to determine percentage of field loss on every visual field.<sup>2,3</sup>
- Pattern Deviation Plots identify localized field loss, minimizing ocular media effects such as cataracts.
- STATPAC, the language of perimetry, compares results to proprietary age-normative and glaucoma databases.

## Early glaucoma detection

- SITA-SWAP software reduces blue-yellow threshold test time to just 4–6 minutes, providing a clinically practical tool for early detection of glaucoma.<sup>4,5</sup>

## Enhanced exam reliability

- Patented system automatically tracks and aligns head and eye position.
- Kinetic, Custom and Social Security Disability testing provide a wide range of special purpose testing protocols.

## Practice and patient friendly

- HFA-NET Pro™ with *EasyConnect*™ RCT provides plug-n-play connectivity solutions to improve practice efficiency.
- DICOM Gateway option supports connectivity in DICOM environments such as the U.S. Veterans Administration Hospitals or ZEISS FORUM®. (Check for availability.)
- Touch-screen and menu-driven interface simplifies operation.
- Ergonomic design promotes maximum comfort, access and versatility.



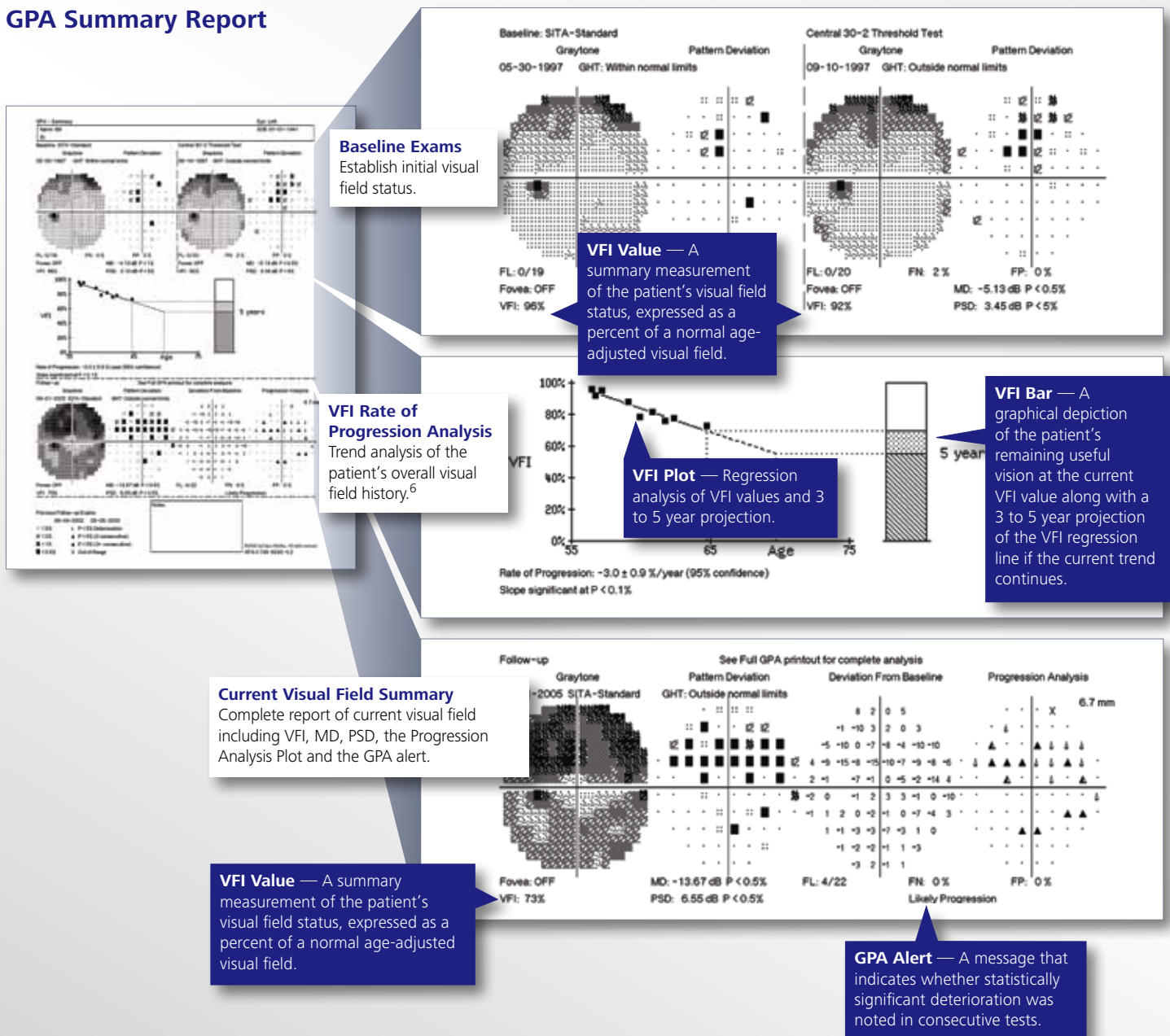
# HFA II-i new features

## GPA – advancing the science of progression analysis

HFA Guided Progression Analysis (GPA) software accurately differentiates statistically significant progression of visual field loss from random variability, providing an advanced, proven method to enhance the management of glaucoma.

The analysis is based upon detailed empirical knowledge of the variability found at various stages of glaucomatous visual field loss through information acquired in extensive multi-center clinical trials worldwide.

## GPA Summary Report





## Key new features available with the latest HFA II-i system software:

### Improved GPA design

- Presents “at a glance” visual field progression analysis on a single page report.
- Quantifies rate of progression with new global index VFI, optimized for progression analysis.
- Displays rate of vision loss relative to patient age for individualized patient care.
- Projects current rate of progression forward up to 5 years to help assess risk of future vision loss if current trend continues.
- Combines Full Threshold and SITA strategies.
- Automates removal of tests with poor reliability.
- Streamlines clinical interpretation and simplifies patient education.



### Improved workflow

- Provides VFI as a simple and intuitive new global index to determine the percentage of visual field loss.
- Replaces traditional printouts for most patients with the default single page GPA Summary Report.
- Makes GPA exam selection more intuitive during screen navigation.
- Allows non-IT specialists to set up networking with *EasyConnect* RCT.
- Improves database performance – with Archive/Retrieve up to 60X faster.
- Prints to virtually any network printer.
- Offers connectivity as a standard feature with HFA-NET Pro.
- Saves time and reduces charting errors through DICOM Gateway connectivity.

# Humphrey Frequency Doubling Technology proven to find early visual field loss

## Humphrey Matrix

For disease detection and basic management



## Humphrey FDT

For efficient disease detection



## Humphrey Matrix

Operating a visual field instrument doesn't get much easier than a Humphrey Matrix. It provides the ideal solution for busy practices seeking a single perimeter for case detection and fast threshold testing when streamlined assessment is an option. In addition to simplifying visual field testing, numerous studies show that frequency doubling perimetry can detect visual field loss missed by other methods.<sup>7, 8, 9, 10</sup> Its patented stimulus, space-saving user-friendly design and validated clinical performance all make the Humphrey Matrix an ideal solution for many practices.

- Proven diagnostic performance in detecting early visual field loss.<sup>11, 12</sup>
- Reliable FDT supra-threshold testing and quick threshold testing for high patient throughput.
- 15% faster threshold testing on average and up to 70% faster for more advanced cases.<sup>13</sup>
- Video eye monitoring simplifies patient alignment and fixation monitoring.
- Large patient-friendly stimuli eliminate the need for trial lens correction in most patients.
- Simple operation allows less experienced staff members to operate.
- Data output option allows connectivity to participating third party EMR software packages. (Ask for availability.)

## Humphrey FDT

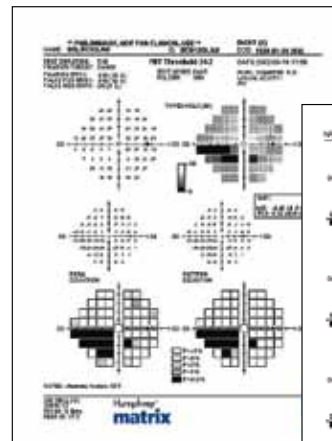
The Humphrey FDT is an ideal aid for detecting visual field loss associated with glaucoma and other diseases. Clinically verified in over 170 peer-reviewed journal articles, the Humphrey FDT is a rapid and affordable method of detecting early visual field loss. The Humphrey FDT perimeter brings the highest standard of perimetry into practices of every size and scope.

- Conducts supra-threshold testing in as little as 35 seconds; full threshold testing with statistical analysis in about 4 minutes.
- Easy-to-use 3-touch operation with no special training required.
- Minimizes the need for instrument or patient set-up.

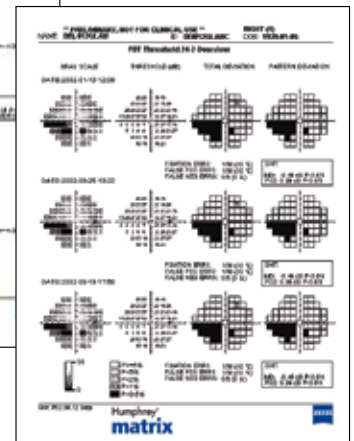
### Both the Matrix and FDT also provide:

- Large, age-related normative database.
- Compact design that fits anywhere in your practice.
- Easy and intuitive operation for users of any level of experience.
- No requirement for trial lenses or eye patches.\*
- Dependable performance in ambient light.

\*Trial lenses are required beyond  $\pm 3$  diopters for the Matrix and beyond  $\pm 7$  diopters for the FDT.



Single Field Analysis



Serial Field Overview





Technical Specifications	FDT	Matrix	HFA II- <i>i</i>			
			720i	740i	745i	750i
<b>Test specifications</b>						
Maximum temporal range (degrees)	30	30	89	89	89	89
Stimulus duration	300 ms	300 ms	200 ms	200 ms	200 ms	200 ms
Visual field testing distance	Infinity	Infinity	30 cm	30 cm	30 cm	30 cm
Background illumination	100 cd/m <sup>2</sup>	100 cd/m <sup>2</sup>	31.5 ASB	31.5 ASB	31.5 ASB	31.5 ASB
<b>Threshold test library</b>						
N-30	•	•				
C-20	•					
24-2, 30-2, 10-2, Macula		•	•	•	•	•
60-4, Nasal step			•	•	•	•
<b>Threshold test strategies</b>						
MOBS	•	•				
ZEST		•				
SITA Standard, SITA Fast, Full Threshold, FastPac			•	•	•	•
SITA-SWAP					•	•
<b>Screening test library</b>						
C40, C64, C76, C80, C-Armaly			•	•	•	•
C-20	•					
N-30	•	•				
24-2		•				
Peripheral test patterns			•	•	•	•
<b>Screening test modes</b>						
Age corrected	•	•	•	•	•	•
Threshold related, Single intensity			•	•	•	•
<b>Specialty test library</b>						
Social Security Disability, monocular, binocular			•	•	•	•
Superior 36, 64			•	•	•	•
Kinetic testing				Option	Option	•
Custom testing				•	•	•

User Features	FDT	Matrix	HFA II-i			
			720i	740i	745i	750i
<b>Fixation control</b>						
Heijl/Krakau blind spot monitor	•	•	•	•	•	•
Video eye monitor		•	•	•	•	•
Gaze tracking				•	•	•
Head tracking						•
Vertex monitoring						•
Remote video eye monitor capability			•	•	•	•
<b>Operator interface</b>	LCD	LCD display with keyboard	Touch-screen CRT with keyboard			
<b>Stimulus</b>						
Frequency doubling	•	•				
White-on-white			•	•	•	•
Red- or blue-on-white				•	•	•
Blue-on-yellow (SWAP)					•	•
<b>General testing features</b>						
Stimulus sizes	10°	2°, 5°, 10°	Goldmann III	Goldmann I-V	Goldmann I-V	Goldmann I-V
Foveal threshold testing				•	•	•
Automatic Pupil measurement						•
<b>User-defined test storage</b>			•	•	•	•
<b>Software features</b>						
Visual Field Index (VFI)			•	•	•	•
EasyConnect RCT			•	•	•	•
HFA-NET Pro			•	•	•	•
Glaucoma Hemifield Test (GHT)		•	•	•	•	•
DICOM Gateway			Option	Option	Option	Option
Guided Progression Analysis (GPA)				•	•	•
STATPAC 2—single field analysis			•	•	•	•
Serial field overview		•		•	•	•
Networking			•	•	•	•
<b>Printer</b>	Thermal printer	External color printer	Printrex thermal printer, table mounted or external B/W laser printer			
<b>Data storage, retrieval and analysis</b>						
PC-based	Viewfinder option					
Hard drive		40 GB		40 GB	40 GB	40 GB
3.5" floppy drive		•	•	•	•	•
CD-R/W drive		•				
Magneto-optical disk drive			Option	Option	Option	•
<b>Dimensions</b>	Height: 17" (43 cm) Width: 10" (25 cm) Depth: 19" (48 cm) Weight: 19 lbs (8.6 kg)	Height: 17" (43 cm) Width: 11" (28 cm) Depth: 24" (61 cm) Weight: 35 lbs (16 kg)	Height: 24" (60 cm) Width: 23" (58 cm) Depth: 20" (51 cm) Weight: 88 lbs (40 kg)			
<b>Electrical requirements</b>	100-120 V, 50/60 Hz 230 V, 50/60 Hz	100-240 V, 50/60 Hz	100-120 V, 50/60 Hz			
<b>Meets UL, CSA, CE standards</b>	•	•	•	•	•	•



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