

20 POINT CAMPIMETER SKU: 2920

Dedicated Glaucoma Screener

Each campimeter is supplied with black dial of varying size stimuli.

Also available is an additional dial with 3mm stimuli of varying contrast (i.e., 2.5%, 5%, 10%, 25% and 100%).

A pad of Recording Forms and Instruction Manual are included.





Woodstock, IL USA • Phone: 815-223-2022 • precision-vision.com



Damato Campimeter



aloud when you are ready to start.

Patient One. (Examiner presents stimulus.)

Patient Now...Two...Now. (Etc.)

Examiner (At the end of the examination...) Thank you. (Examiner inverts record sheet, writes comments about patient reliability, duration and other relevant details.) Very good. Your results show...

I am fortunate to have such an international team of friends and colleagues assist in the development of the campimeter.

ACKNOWLEDGMENTS

I am grateful for the invaluable support of the International Glaucoma Association, Merck, Prevent Blindness America, Ross Foundation for the Prevention of Blindness (Scotland), Royal National Institute of the Blind, and the University of Glasgow.

I am also grateful for the assistance of many colleagues, including Jaseem Ahmed, Emilio V. Alvarez, Cecilia H. Fenerty, Johanna Chyla, Jeffrey L. Jay, Elizabeth McClure, Fergus Neil, and Masato Wakakura.

I am grateful to Cecilia H. Fenerty for the clinical examples printed in this *User's Guide* and to Gill Rycroft for the illustrations.

I recognize the contributions of scientific articles on my various multifixation campimeters published by researchers from around the world.

I value the professionalism and friendship of Ed Kopidlansky of Precision Vision in producing the campimeters to their high standards and patiently putting up with all my modifications.

I must also mention my family, Frankanne, Erika and Stephen, who have tolerated so much over the years.

TO THE EXAMINER

Dear Examiner:

With so many excellent visual field tests around, you may be wondering why a new method is needed, especially a manual technique in an era of computerization. In 1983, it occurred to me that visual field examination is often omitted because patients cannot cooperate with computerized programs or because their practitioners do not have the time or the special skills demanded by manual methods. I therefore set about designing a test that would be both simple and inexpensive, and the result is **multifixation campimetry**.

With this method, a series of numbered fixation targets move the patient's eye in a controlle the visual field. The examiner does not need to move eye still for more than a few seconds at a time.

As with any visual field test, it is essential to reduce the number of points examined as much as possible, because examiners are usually such busy people and because patients quickly get tired. The 60-point campimeter allows examination of all, or part of, the central 30° field in a flexible manner and usually takes between 6 to 12 minutes. Patients tend to find the examination user-friendly, but the examination time is excessive when screening large numbers of patients, or when examining very young or very old patients. The 30-point campimeter and the dedicated 26-point glaucoma screener have therefore been developed for such situations. The glaucoma screener examines only parts of the field that are most likely to be abnormal in this disease. It seems a pity to restrict a visual field examination to glaucoma screening when there is an opportunity to detect other conditions as well, some of which are life-threatening. The glaucoma screener is therefore intended only as a "minimalist test," when the alternative would be to forgo visual field examination altogether.

The **DAMATO Multifixation Campimeter** is unusual in that it uses dark stimuli on a light background. This is because dark stimuli are more constant under variable lighting conditions than light stimuli. Dark stimuli therefore seem to be more appropriate for a portable test, which will inevitably be used in situations where standardization of ambient illumination is impossible.

Stimuli that vary in contrast instead of size are preferable because they enhance the detection of mild visual field defects and because they reduce artifact caused by refractive errors. Nevertheless, low-contrast stimuli are expensive to produce in a standardized manner, so inexpensive sets of black stimuli, which vary in diameter, have been made available for situations where resources are severely limited.

The original intention was to distribute the multifixation campimeter free of charge. But after several years, this exercise proved too costly. Furthermore, feedback from users around the world indicated a need



fixation targets move the patient's eye in a controlled manner so as to place a stimulus at known points in the visual field. The examiner does not need to move the stimulus and the patient does not need to keep the

for more durable and more sensitive campimeters. The most expensive part of the test is the examiner's time. If this is to be used most profitably, then it is best to have a high-quality campimeter with standard-ized stimuli.

With any test, there is inevitably a learning curve. An examiner using the mutifixation campimeter for the first time should interpret early results with due skepticism. Until the examiner becomes confident using the campimeter, personal results should be checked with those obtained using conventional methods. Non-specialists would do well to review their general knowledge of visual fields and universal, basic principles of visual field examination. They should also request expert feedback, if possible. Anyone delegating multifixation campimetry to assistants or volunteers needs to supervise the situation carefully. Attention to detail is all important, even with a simple test. Finally, although the multifixation campimeter enables selected patients to perform self-examination, such individuals should only be entrusted with this responsibility if there is no other alternative and then only after proving they are capable of achieving reliable results.

The DAMATO Multifixation Campimeter has evolved a great deal since it was first conceived in 1983. With the help of friends and colleagues, I am confident the campimeter will continue to evolve. There are already new versions on the drawing board, such as the one meter wall chart.

I hope you find the multifixation campimeter helpful. I would welcome any feedback and, with pleasure, will endeavor to respond to your questions, criticisms and suggestions.

Bertil Damato, MD, PhD, FRCOphth Consultant, Ophthalmic Surgeon St. Paul's Eye Unit Royal Liverpool University Hospital Prescot Street Liverpool L7 8XP, UK

the spot disappear...) You will notice the spot has disappeared. Keep looking at the window, please, and say 'Now' as soon as the spot appears. *(Examiner slowly and silently presents the black stimulus.)*

- Patient Now. (Examiner immediately dials the disc so that the 2.5% stimulus is ready for presentation.)
- **Examiner** Well done. Let's do the same with a faint spot. Please say 'Now' when the spot appears. *(Examiner slowly presents the 2.5% stimulus.)*
- Patient Now.
- **Examiner** Thank you. We'll now start the examination proper. Please keep looking at number one. Without looking away from that number say 'Now' when you see the spot out of the corner of your eye. (Watching the patient's eye closely, the examiner slowly dials the disc toward the side-arm, presenting first the 2.5% stimulus then progressively darker stimuli until the patient responds.)
- PatientNow. (With one hand, the examiner
immediately dials the disc so the
2.5% stimulus is ready for
presentation. With the other hand, the
examiner notes the missed stimuli on
the record sheet.)
- **Examiner**Please follow the line, then read the
next number aloud and keep looking
at that number. When you see a spot
in the window please say 'Now.'
(Examiner slowly presents the
stimulus.)**Patient**One...Now. (Examiner immediately

removes the stimulus.)

- **Examiner** Good. Now please do the same for the next number.
- Patient Two...Now.
- Examiner Next.
- Patient Four...Now.
- **Examiner** Good. Keep going, please.
- Patient Five...Now...Seven...Now...(Etc.)
- Patient Fourteen...(Examiner presents 2.5%, 5%, 10% and 25% stimuli without response.)
- **Examiner** Well done, you have found your normal blind spot, which is present in every eye.
- Patient Sixteen...Now. (Etc.)
- **Examiner** (At the end of the examination...) Well done. Now for the other eye. (Examiner turns the chart over and places the eye-cover in the patient's right hand.)
- **Examiner** Please hold the flap against your right eye with your right hand and the corner of the chart with your left hand.
- **Examiner** If you look at the window can you see the spot clearly?
- Patient Yes.
- **Examiner** Thank you. Now please look at number one and read the number

HYGIENE

fresh, facial tissue paper, or sterilize the cover with an appropriate solution which contains alcohol. Do not spill any alcohol on the chart, which should be cleaned regularly with soap and water.

A typical examination may proceed as follows:

SAMPLE EXAMINATION PROCEDURE

Examiner (Showing the campimeter to the *patient...)* This test is designed to detect and measure any defects in your field of vision.

Examiner (Writing the patient's details on the record sheet ...) First, I would like to complete this form. Can I have your name, please...and your date of birth. Thank you. (Examiner inverts record sheet.) Do you wear any reading glasses?

Yes, would you like me to wear Patient them?

Examiner Yes, please.

- **Examiner** Please hold the chart, just here with your right hand, and this flap with your left hand, and cover your left eye. You can rest your elbows on the desk to feel more comfortable.
- **Examiner** Please do not tilt your head sideways toward your shoulder. If I tilt the chart backward, like this, you can sit up straight without developing a stiff

neck. (Examiner pulls the top of the chart away from the patient to tilt the *chart upward.*)

- **Examiner** (Dialing the disc to place the 100%) stimulus at the center of the window...) Notice the window at the center of the chart, with the black spot in the middle. Can you see the spot clearly?
- No, the spot is blurred because I am Patient looking at it through the distance segment of my bifocals.
- **Examiner** In that case, please tilt your chin up a little while I adjust the position of the chart. (Examiner slides the lower edge of the chart toward the patient's side of the desk.)

I can see the spot clearly now, Patient through the near segment of my bifocals.

Examiner Good. Do not worry if the numbers are blurred, as long as the spot remains in focus. **Examiner** (Examiner dialing the disc to make

TABLE OF CONTENTS

Features.....

Methods..... Preparation for the Exam Examination of the Left Eye Patient Instruction The Examination Proper Examination of the Right Eye **Examination Strategies** Threshold Suprathreshold Abbreviated Screening Tests General Screening Test Glaucoma Screening Neurological Screening Macular Examination **Technical Variations Examination of Additional Points** Poor Fixation Unilateral Central Scotoma Documentation of the Results..... Interpretation of the Results Hygiene.....

Sample Examination Procedure.....

Acknowledgments.....

22

7	,

3

4

 21
 22
 22
 24

FEATURES

The multifixation campimeter uses numbered fixation targets to control the patient's gaze so as to place the test stimulus precisely at known points in the visual field.

The hand-held campimeter is a double-sided card, with a test grid for one eye on one side and another test grid for the fellow eye on the reverse side. The test grid has a series of fixation targets situated around a central window, in which selected stimuli are presented by the examiner dialing a disc inside the card (Figure 1).

An **eye-cover** is available for the fellow eye. The cover is white and semi-translucent so as to prevent a dark shadow over the covered eye from interfering with the vision in the fellow eye.

A rigid **side-arm** joining the eye-cover to the campimeter helps the patient to maintain the correct working distance of 13 inches (33.3 cm). The arm also ensures that the left or right eye is examined with the proper test grid for that eye.



Figure 1. The multifixation campimeter with (A) card, (B) side-arm, (C) eye-cover, (D) test grid, (E) stimulus window, (F) stimulus (G) finger-notches on disc and card, and (H) stimulus description.

DOCUMENTATION **OF THE RESULTS**

of the stimulus, the corresponding number on the record sheet is marked with the appropriate symbol.

Use a pencil or special ballpen that enables you to delete errors.

Before presenting a stimulus, make a mental note of what it is. Refer to the stimulus details printed below the notch to ensure you are correct. When you finish examining a point, do not take your finger away from the notch until you have identified the last stimulus presented.

For relative defects, the last stimulus presented will have been seen by the patient. Note that you need to draw the symbol for the strongest stimulus missed.

Document the result immediately after each poin has been examined. The chances of error increas if you wait until you have examined several point before recording the results.

A table on the record sheet shows the appropriate symbol for each stimulus, according to the type disc and examination strategy used (Figure 14).

When a threshold examination is performed, draw the symbol for the strongest stimulus missed. When a single level suprathreshold examination performed, draw the symbol N (for "Normal") over corresponding numbers. Be sure to identify the stimulus by completing the Method Section of the form. If that stimulus is missed, and if stronger stimuli are presented, draw the appropriate symbol as described above.

INTERPRETATION OF THE RESULTS

Disc	Stim	Symbol for Stimulus Missed	
	Contrast (%)	Size (mm)	
5-Contrast	2.5	3	
	5	3	+
	10	3	+
	25	3	*
	100	3	\otimes
	100	6	
1-Contrast	100	0.75	
	100	1.5	×
	100	3	\otimes
	100	6	

Figure 14. Symbol table.

21

nt se nts	At the end of the examination, invert the record sheet to assess the results.
e of	As with conventional perimetry, there may be arti- fact caused by the upper eyelid, or by spectacle rim. Other causes of spurious results include inad- equate illumination, pupillary constriction and inaccurate correction of refractive errors.
w is	For every new patient, wrap the eye-cover in

Examination of Additional Points

To examine points between numbered fixation targets, hold a pointer, such as a closed ballpen, over the chart and ask the patient to look at the tip of that pointer *(Figure 13)*.

Poor Fixation

If the patient keeps looking at the central window, then ask to trace a pointer over the relevant number on the chart as you introduce the stimulus.

Unilateral Central Scotoma

If the patient is unable to read the numbers with one eye because of a central scotoma, place a pinhole over the fellow eye and ask the patient to read the numbers with that eye.

If a number is associated with non-awareness

Figure 13. Examination of additional points. Visual fields of an 11-year-old girl with bilateral optic disc drusen, plotted with the 60-point campimeter. Using a pen as a pointer, additional points have been examined to show the enlarged blind spot.



The **fixation targets** are numbered to simplify communication with the patient and recording of the results. The numbering is non-consecutive so the examiner can ensure that the patient actually looks at the numbers without guessing (*Figure 2*).

The **lines linking the numbers** direct the eye movements from one fixation target to the next.

The **numbers spiral outward** so that stimulus intensity can conveniently be varied according to eccentricity. The spiral arrangement also makes it easier to shorten the examination, for example, when screening for a particular condition.

On the **60-point grid**, the numbered fixation targets are located so as to examine 60 points in the

Figure 2A



Figure 2. Test grids for (2A) the 30-point campimeter and (2B) the 60-point campimeter, each having numbered and un-numbered fixation targets. The meridians refer to stimulus location with respect to the fixation targets and are adjusted by 180° because the eye moves during the examination instead of the stimuli.

central 24° field. A notched circle at 30° allows examination of additional points in selected patients.

On the **30-point grid**, the numbered fixation targets are located so as to examine 30 points in the central 24° field. Notched circles at 30° and 4° allow additional points to be examined. The information presented in the *Damato Campimeter User's Guide* applies to both the 60-point and 30-point campimeters.

Examined points are situated on each side of the horizontal meridian for arcuate and altitudinal defects and on each side of the vertical meridian for hemianopic or quadrantanopic defects.

Figure 2B

Page 6 / Damato Campimeter User's Guide

Test stimuli are printed on the disc inside the card so that a selected stimulus can be made to appear briefly in the central window by dialing the disc *(Figure 3)*.

The **sensitivity of the test** is varied by selecting the appropriate stimulus. Two stimulus discs are available.

The **5-contrast disc** has 3 mm stimuli with contrast levels of 2.5%, 5%, 10%, 25% and 100%, and a 6 mm stimulus with a contrast of 100%. This *User's Guide* focuses on the 5-contrast disc.

The **1-contrast disc** has 100% contrast stimuli with diameters of 0.75 mm, 1.5 mm, 3.0 mm and 6.0 mm. The 3.0 mm and 6.0 mm stimuli subtend visual angles of 0.5° and 1.0° respectively.

The **stimulus window** is shaped so as to minimize shadowing on the disc. At the level of the stimulus, the window is 10 mm wide so the stimulus position has an error of less than 1° on either side of its central position.

Notches on the disc and card help the examiner to position and move the finger properly when dialing the disc so that the stimulus is presented efficiently.

Intermittent stimulus presentation standardizes stimulus intensity and prevents the patient from guessing. Blanks on the disc also help the examiner to detect false positive responses (i.e., guessing). The **disc is removable** so it can be cleaned or replaced.

The **record sheet** has a miniature version of the test grid for each eye for documentation of the numbers associated with disappearance of the stimulus. The test grids on the record sheet are printed in a light color so symbols drawn with blue or black ink will be clearly visible.

Figure 3. When the finger is moved from one side of the notch to the other, you are ready for presentation of the next stimulus. To present stronger stimuli, rotate the disc toward the side-arm.







The DAM	ATO Campi	mete	r		
	Patient				
Name:	JB				
DOB:	/ <u> </u>	18			
Sex:	F				
No:					γείτ ελε
	Eye				
	Right	L	eft		
Dist. Acuity	0.1				1 Alexandre
Near Acuity	N5				1 yrs
Correction	+1.75 x1650			14. J	
	+2.25000			1	
Pupil Diam.	3 mm			f.	11.1.
	Method				IICK.
Optical Correcti		2.	•		
Illumination:	48.3	-110 %	, max	ł	112
Strategy:	70 7	<u>r</u>			XX XX
Single-level	Stimulus:	%	mm		
Suprathreshold					\setminus \times
Threshold	4				\sim
Comment: .					
Dinking Dr	it. 60cm				
- 0					Left eye
Examiner:	CHF		_		
Date:	3/4/ 95				
	-71	_			
			Develope	i by Dr. Bertil Damato	
	O Campimet		St. Paul's	Eye Unit Impool University Hospital	

Figure 12B



MACULAR EXAMINATION

If you wish to examine 60 points in the central 12° field, fold the side-arm behind the chart and, using a tape measure, position the patient so the eye is 26 inches (66.6 cm) from the chart. If you are only interested in the central 6° , then hold the chart 52 inches (133 cm) from the eye (Figure

12). You may need to use a "middle-distance" optical correction to enable the patient to read the numbers. If the numbers can be seen but not identified, you can let the patient say "read" instead of reading the numbers aloud.

TECHNICAL VARIATIONS

Figure 12. Macular test. Right visual field of a 77-year-old woman with disciform macular degeneration plotted with the 60-point campimeter held at the normal working distance of (12A) 33.3 cm and (12B) at 60 cm. There is paracentral scotoma superiorly, extending very close to fixation. At a working distance of 60 cm, number "1" examines a point which is 2.2° from fixation (i.e., 4°x 33.3/60).

Figure 12A



METHODS

PREPARATION FOR THE EXAM

Seat the patient comfortably at a desk or in front of an adjustable music stand (Figure 4).

Confirm that the patient is wearing any required optical correction (i.e., reading glasses, bifocals or contact lenses).

Ensure that the screen is well lit (i.e., more than 80 cd.m^2) and the patient is not dazzled by any oncoming bright lights.

Position yourself in front of the patient so you can observe both eyes and make sure you are comfortable. If you use a music stand to support the campimeter, you will need a table for the record sheet. The table should be at the same height as the campimeter so you do not need to bend to record the results.

> Figure 4. Correct examination position. Sit in front of the patient so you can watch both eyes.

t		

Place the eye-cover in the patient's right hand and the card in the patient's left hand (unless the card is supported by a music stand).

remarks should be adequate.

EXAMINATION OF THE LEFT EYE

Avoid lengthy instructions which cause delay and

may be misunderstood; a few brief introductory



Write down the patient's particulars on the record sheet and invert the sheet. For recording results, use writing materials that would allow any errors to be deleted.

Ask the patient to cover the right eye by holding the cover, folded inward, against the closed eyelid or, if glasses are being worn, against the spectacle lens *(Figure 5).*

If the patient finds it difficult to hold the eye-cover properly over the eye, then an adhesive eye-pad should be used instead of the eye-cover. In this case, use the side-arm to help the patient maintain the correct distance from the card.

Avoid any shadows on the test grid.

Check that neither the patient's head nor the card is tilted sideways (*Figure 6*).

Adjust the position of the card so that it faces the patient squarely, with the stimulus 13 inches (33.3 cm) directly in front of the left eye.

Tilt the card backward or forward until the patient feels comfortable (*Figure 7*).

Place the strongest stimulus at the center of the window. If bifocal or varifocal spectacles are being worn, move the card closer to the patient or ask the patient to tilt the chin up or down so the stimulus is in focus through the near segment.

PATIENT INSTRUCTION

Dial the disc so the strongest stimulus disappears, then ask the patient to continue to look at the window and to say "Now" when the stimulus reappears.

Repeat the procedure with the weakest possible stimulus. Once the patient responds correctly every time you present a stimulus, you are ready to begin the examination.



Figure 5. Ensure that the fellow eye is covered.



Figure 6. Avoid tilting the head or the card.



Figure 11B-1

AUTOMATIC DI	AGNOST	IC TEST		
STIMULUS III, WHITE, BO BLIND SPOT CHECK SIZE III FIXATION TARGET CENTRAL STRATEGY QUANTIFY DEFECT CEN 30 DB		ID		
FIXATION LOSSES 0/33 FALSE POS ERRORS 0/9 FALSE NEG ERRORS 1/8		• •	LEF	Ť
FOVEA: 30 DB TEST TIME 14:03 21 HFA S/N 630-3127	n a s * ²² s * a 23		, °	
23 s 36°	3 23 2 24 225 25 25 25 25		°°°°°°°°	30°
24 m *	△ 25 m25 25 m2 25 m 24 m25 4 m m 2 4 25 m	826 0 0 88 000	, , , , , , , , , , , , , , , , , , ,	
24	8 25 8 8 9 24 9 8 8	25 4 ° 1 ° ° 24 • 18 °		
 ⇒ FOINTS SEEN: 67/149 NO. = DEFECT DEPTH (DB) 35 ■ ≈ POINTS MISSED 47/149 Δ = BLIND SPOT 		23 22 °		
CRRYTONE SYMBOLS SYM	251 794 2 100 316 1 16 11	2512 7943 2 1999 3182 10000 6 5 ⁻¹ 50	HUMPHREY II	

Figure 11A-2

Figure 11B-2



Examine only the outermost circle of numbers if a short test is required for the detection of hemianopia or quadrantanopia. Progress to full field examination if any abnormalities are found. If it is preferable to test the field at 30° , then ask the patient to look at each notch on the circle in turn as you present the stimulus *(Figure 11)*.

Figure 11. Neurological screening test. Visual fields of an 86-year-old woman with cerebrovascular disease, plotted with the 60-point multifixation campimeter using (11A-1) the abbreviated test (schematic illustration); (11A-2) the full test; and (11B-1, 11B-2) the Humphrey Visual Field Analyser. There is left homony-mous hemianopia with central sparing.





THE EXAMINATION PROPER

Explain that you will now proceed to look for abnormal defects in the field of vision.

Ask the patient to keep looking at number "1" and to say "Now" when the spot appears. Watching the patient's eye closely, dial the disc slowly until the weakest stimulus appears. Avoid giving any clues (e.g., noise, sudden movement of the hand, etc.) and ensure that the patient's response coincides precisely with the appearance of the stimulus. If the weak stimulus is missed, then present progressively stronger stimuli until one is seen.

To present a stronger stimulus, continue dialing the disc in the appropriate direction (i.e., toward the hinge of the side-arm) as far as possible. Then move your finger to the next notch on the disc so you are ready to present the next stimulus.

As soon as you have finished examining a point, dial the disc backward so you are ready to present an appropriate stimulus and then ask the patient to read the next number aloud. As soon as the patient does this, you can present the stimulus. Turn the chart over. Ask the patient to hold the eye-cover against the closed left eye with the left hand, and the right edge of the card with the right hand. Ensure the test grid is still free of shadows.

Repeat with each number in turn.

Figure 7. Tilt the card backward or forward until the patient is comfortable.

If there is any doubt about the validity of a response, because the patient has moved the eye or because you suspect the patient may have guessed, then immediately re-test that point before proceeding with the rest of the examination.

The delay before each stimulus presentation should be varied so the patient cannot guess when the stimulus appears. In addition, blanks should be presented from time to time to ensure the patient's responses are genuine.

When the patient is looking at numbers in the upper part of the test grid, cover the notch on the card with your other hand to prevent any text on the disc from distracting the patient.

EXAMINATION OF THE RIGHT EYE

Page 10 / Damato Campimeter User's Guide

EXAMINATION STRATEGIES

Threshold

This is the most intensive type of examination possible and is the preferred method. The objective of this examination is to determine for each point the intensity at which a stimulus becomes visible *(Figure 8)*. Start by presenting the weakest stimulus and then move to progressively stronger stimuli until one is seen. As the examination proceeds, you may be able to predict which stimuli are too weak to be seen and these can be omitted to save time.

Suprathreshold

Figure 8. Threshold examination. Visual fields of a 68-year-old man with glaucoma, plotted with (8A) the 60-point multifixation campimeter and (8B) the Humphrey Visual Field Analyzer. Each eye has superior and inferior arcuate visual field defects with a nasal step.

Figure 8A





Figure 10C-1



Figure 10B

Figure 10C-2



Glaucoma Screening

When using the 60-point chart to examine the areas that best discriminate between glaucoma and normal, test the points 34 to 48. This strategy tests the Bjerrum areas in (i) the superior field at 12°, avoiding eyelid artifact, and (ii) the nasal and inferior field at 16°.

The normal blind-spot area is tested at the beginning and the end of the examination to check patient cooperation. To increase sensitivity, look for a nasal step by examining points 57, 59, 75 and 76. (Figure 10). On the 30-point chart, the Bjerrum areas correspond to numbers 8-28. Neurological Screening

Figure 10. Glaucoma screening test. Right visual field of a 66-year-old man with primary open angle glaucoma plotted with (10A) the abbreviated glaucoma screening test; (10B) the full threshold examination using the 60-point campimeter; and (10C-1, 10C-2) the Dicon automated perimeter. There is a dense inferior arcuate defect with a nasal step detected with all three tests.

Figure 10A







Damato Campimeter User's Guide / Page 11

Figure 8B

This simplified method is designed to detect only dense visual field loss. It is suitable for screening purposes when the patient is uncooperative or when time is limited. Examine all points with the 3 mm black (i.e., 100%) stimulus or the 25% stimulus (Figure 9).

ABBREVIATED SCREENING TESTS

Abbreviated tests should be performed only when it is not possible to examine all 60 points. In any abbreviated test, select the stimulus according to

the sensitivity required. For example, if cooperation is limited or if visual acuity is reduced, you should use a strong stimulus, whereas if it is possible to achieve greater sensitivity, it would be preferable to use weaker stimuli.

General Screening Test

To perform a rapid general screening test with the 60-point chart, examine every second or third point so that points are evenly distributed throughout the field. If any points are found to be abnormal, then examine additional points as necessary.





Figure 9A

Figure 9B

Figure 9. Suprathreshold examination. Left visual field of a 75-year-old woman with glaucoma, as measured with (9A) the 60-point campimeter using the 3 mm black stimulus and (9B) the Dicon automated perimeter. There are superior and inferior arcuate defects detected with both methods.