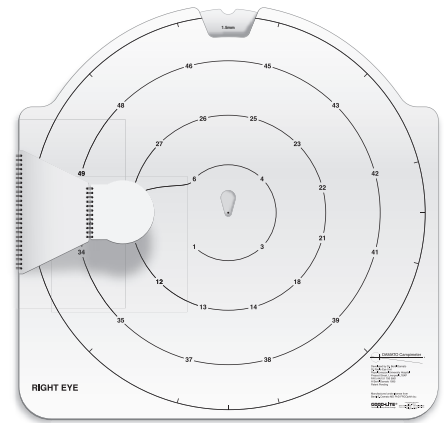


Damato Campimeter User's Guide: 293000



Introduction

There are still many patients who cannot have visual field examination, despite the development of a wide range of manual and computerized perimeters. I have therefore developed the multi-fixation campimeter, for situations where other methods are impractical.

The Multifixation Campimeter

This hand-held card has a test grid with numbered fixation targets located strategically around a central window, in which a stimulus is presented by the examiner by dialling a disc inside the card.

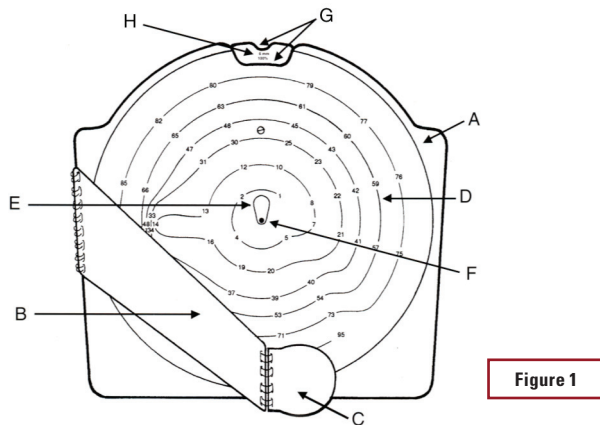
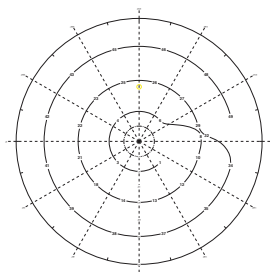


Figure 1

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, and (H) stimulus description.

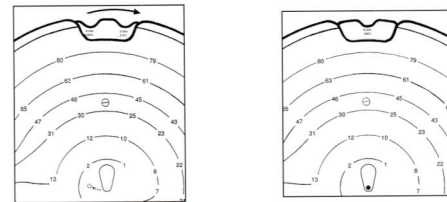
An **eye-cover** attached to the card by a rigid **side-arm** ensures that the correct grid is presented from the right distance (33.3 cm). The **fixation targets** are numbered non-consecutively to confirm that they are actually read by the patient.

The **test-grid** examines 30 points in the 24° field, with notched circles at 30° and 4° to test additional points. The numbers spiral outwards



to allow the stimulus to be adjusted according to eccentricity. The points are distributed on either side of the horizontal and vertical meridians for nasal steps and hemianopic defects respectively. The normal blind-spot is tested twice to validate the examination.

The **Stimulus** is presented briefly in the central window by dialling the disc.



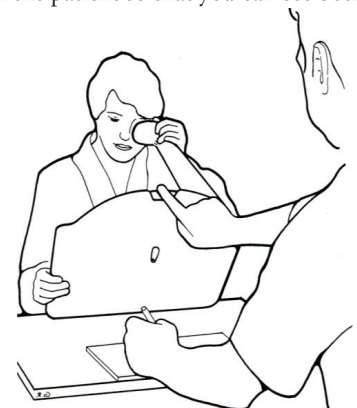
Blanks on the disc help the examiner to detect false positive responses.

The results are documented on a **record sheet**, which has a small version of the test grid. A tick indicates that a stimulus is missed once and a cross shows that it is missed twice.

Methods

Preparing for the Exam

- Seat the patient comfortably at a desk or before an adjustable music stand.
- Confirm that correct optical correction is worn. Ensure that the card is well lit and that the patient is not dazzled by any bright lights.
- Position yourself in front of the patient so that you can see both eyes.
- Invert the sheet.



Damato Campimeter User's Guide: Continued

Examining the Left Eye

Avoid lengthy instructions; a few introductory remarks should be adequate. Place the eye-cover in the patient's right hand and the card in the patient's left hand. Ask the patient to cover the right eye with the eye-cover folded inward. Avoid any shadows on the test grid.

Ensure both the patient's head and the card are straight. Tilt the card backwards or forwards until the patient feels comfortable.

Patient instruction

Ask the patient to look at the central window and to say "Now" when the stimulus appears.

The Examination Proper

Ask the patient to keep looking at number "1" and to say "Now" when the stimulus is seen. Watching the patient closely, dial the disc slowly until the weakest stimulus appears. Ensure that the patient's response coincides precisely with the appearance of the stimulus. If the stimulus is missed, then present the stronger stimulus by dialling the disc in the appropriate direction. If it is seen, dial the disc backwards to test the next point.

Ask the patient to follow the line and to read the next number aloud. As soon as the patient does this you can present the next stimulus. Repeat with each number in turn. Vary the delay before each stimulus presentation to avoid the patient guessing. In addition, present a blank stimulus from time to time. When the patient is looking at numbers in the upper part of the grid, cover the notch with your other hand to prevent the text on the disc from distracting the patient.

Examining the Right Eye

Turn the card over and repeat the procedure. Ensure that the test grid is free of shadows.

Variations

If the patient has poor fixation, looking repeatedly at the central window, ask him or her to trace a pointer over the relevant number as you introduce the stimulus.

If a central scotoma prevents the patient from reading the numbers, place a pinhole over the fellow eye instead of the eye cover.

Documenting The Results

Use a pencil or ballpen that enables you to delete errors. Refer to the table on the record sheet, which shows the symbol representing each stimulus. For each number, draw the symbol for the strongest stimulus that is missed.

Disc	Stimulus		Symbol for Stimulus
	Contrast (%)	Size (mm)	
1-Contrast	100	1.5	/
	100	3	X

Interpreting Results

At the end of the examination, invert the record sheet so that it is 'right way up' to interpret the results.

As with conventional perimetry, there may be artefact caused by the upper eyelid. Other spurious results can be caused by inadequate illumination, pupillary constriction, and incorrect correction of refractive errors.

As with any perimetry, we cannot be held liable for any adverse clinical outcomes arising from the use of this test and full responsibility lies with the practitioner administering the test.

Hygiene

For every new patient, wrap the eye-cover in new facial tissue or sterilize the eye-cover with an appropriate solution containing alcohol.

Developed by:

Dr Bertil Damato MD PhD FRCOphth
Royal Liverpool University Hospital
Prescot St, Liverpool L7 8XP, UK

Tel: + 44 (0) 151 706 3973
Fax: + 44 (0) 151 706 5436
E-mail: Bertil@Damato.co.uk