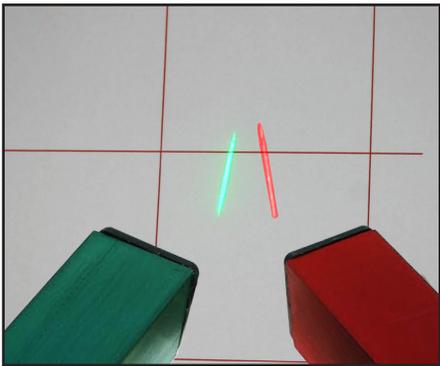


# Ocular Motility: Laser Lancaster and Hess Tests

Technical Bulletin

Both of these tests are used to evaluate the alignment of the eyes and their movements both individually and in tandem. They provide measure of horizontal and vertical alignment. The Lancaster can also provide insight into any cyclo-deviation. Also useful for spatial awareness assessment and mapping out a patient's field of single binocular vision (SBV). Both tests are conducted in low light at one meter. The patient's head needs to be immobilized in some manner such as a chin rest. They wear red/green Anaglyph glasses to ensure separation of each eye. The examiner then points one laser to a position on the screen ( or wall) and the patient tries to match that position pointing the other laser. Any difference or deviation indicates the deviation of alignment. Further, the Lancaster line generator also indicates any variation of angle (cyclo- deviation). By swapping the line generators between the patient and examiner, the other eye may be examined. Both the Hess and Lancaster Laser sets include Adult and Pediatric pairs of Red/Green glasses, instructions and 50 score sheets. Screens are printed in red ink which is invisible through the R/G glasses. The roll-up screens include mounting hardware and are approx 4x4x65 inches (10 x10 x150 cm). Thus they are rather costly to ship. The fold-up screens are made of heavy fabric reinforced vinyl. They unfold to approximately 60 inches square (150 x 150 cm) and can be mounted to a tack board or hung like a carpet for display. The clamp-on chin rest is recommended to avoid head movement during the test. See Chin Rest listing for dimensions.

The main difference between the Hess and Lancaster tests is that the Lancaster projects a line whereas the Hess pointers project a simple dot. Lancaster line generators permit determination of the orientation of the patient's vision. Orientation is important in understanding any cyclo- deviation resulting from the ocular muscle imbalance. The Hess Test may be more useful in understanding full visual field and any Aniseikonic affects. Further, the Hess Test may be more simple for children to understand thus yielding more reliable results in pediatric situations.



## Lancaster Line Generators

project a 4-6 inch line at 1 meter.



## Hess Lasers

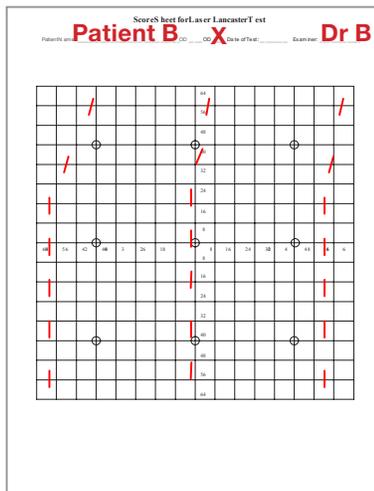
project Red and Green dots



Sets include Screen, Lasers, Glasses, Score Sheets, Instructions and Chin Rest. Note chin rest varies slightly from picture



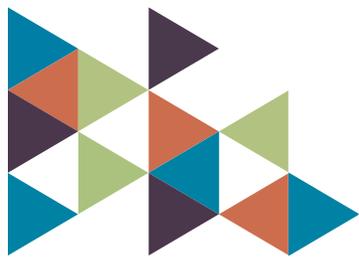
Lancaster Line Generators are square to permit tactile feedback of position



Lancaster example shows patient with inward ocular pull on up gaze.

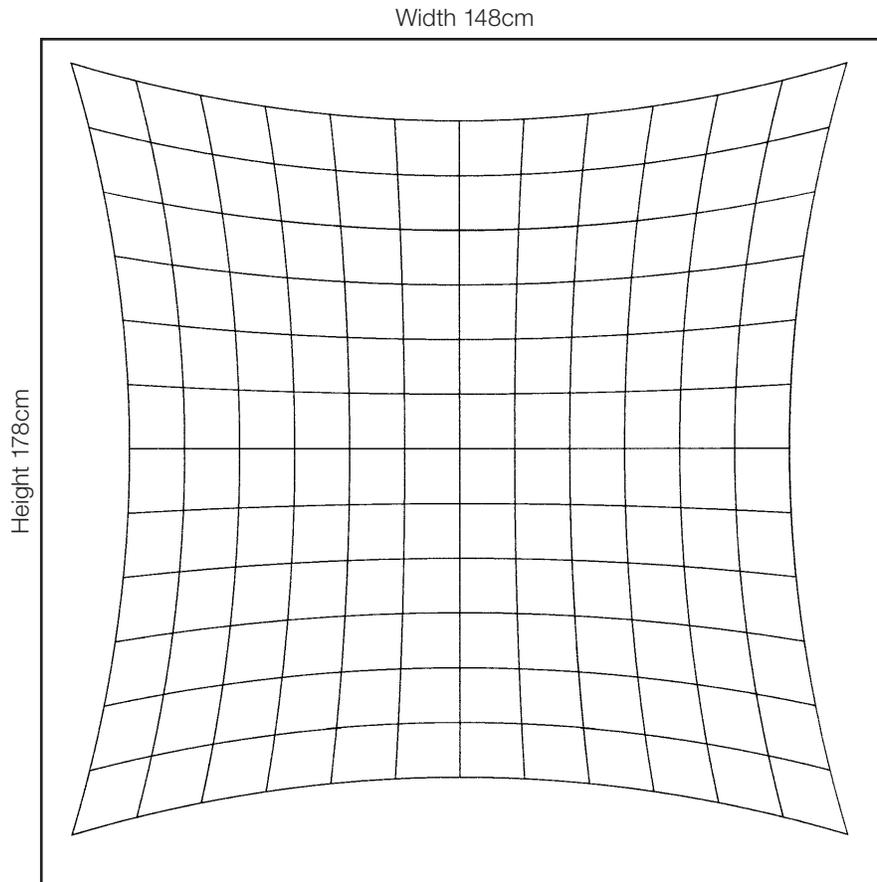
## Lancaster vs Hess Tests

Modality	Laser	Laser
	Lancaster	Hess
Classifying Strabismus	X	X
Heterophoria - Distance	X	X
Dynamic Aniseikonia	X	X
Cyclodeviation	X	
Training Ocular Motility	X	



# Ocular Motility: Laser Lancaster and Hess Tests

Technical Bulletin



**Hess Screen and Score Sheet**

	<b>Lancaster Lasers</b>	<b>Hess Lasers</b>
<b>Description</b>	<b>Part Number</b>	<b>Part Number</b>
Complete Kit including R/G Lasers, Roll-up Screen, Heavy Duty Chin Rest, Adult and Pediatric R/G Glasses, Instructions and Score Sheets	<b>501000</b>	<b>671001</b> (Does not include pediatric glasses)
Set of R/G Lasers with Adult and Pediatric R/G Glasses, Instructions and Score pads	<b>501100</b>	<b>481500</b> (Does not include pediatric glasses)
Roll-up screen	<b>506700</b>	<b>569200</b>
Folded Screen	<b>577500</b>	<b>577400</b>
Score Sheets - Set of 50	<b>501900</b>	<b>582010</b>
Heavy Duty Chin Rest	<b>705011</b> (With Clamp) <b>705100</b> (Without Clamp)	<b>705011</b> (With Clamp) <b>705100</b> (Without Clamp)