

TECHNICAL MANUAL

Thank you for purchasing the Vision Assessment Corporation Butterfly-S Stereo Acuity Test P/N 1010S.



PURPOSE

This test is designed to rapidly test for amblyopia, strabismus and other binocular acuity problems using stereopsis (*depth perception*) for test subjects ages preschool thru adult.

Depth Perception: (*n*) *The ability to perceive spatial relationships, especially distances between objects, and three dimensions.*

Geometric Shapes: *Triangle, Circle, Square & Plus*

- ▲ **Triangle**
- **Circle**
- **Square**
- ⊕ **Plus**

FAMILIARIZE YOURSELF WITH THE TEST

- Test consists of:
 1. 1 booklet – 2 vectographic pages (*3 Sections*)
 - Page 1 (*Section A*)

Gross Stereopsis



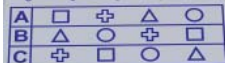
- Page 2 (*Section B*)

10 levels of disparity for critical testing



- Page 2 (*Section C*)

3 gross levels of disparity



2. 1 pair adult polarized viewers



(NOT TO BE USED AS SUNGLASSES)

3. 1 pair pediatric polarized viewers



(NOT TO BE USED AS SUNGLASSES)

4. Answer Key on back cover



TESTING CONDITIONS

- Well-lit, glare-free area
- If reflections or glare on the vectographic pages can be seen, try tilting the booklet or choose another testing location

ADMINISTERING THE TEST

- **Section A**
 1. Place the polarized viewers on the test subject
 2. **PLEASE NOTE: IF TEST SUBJECT WEARS PRESCRIPTION GLASSES, THE POLARIZED VIEWERS SHOULD BE WORN OVER GLASSES**
 3. Open test booklet and fold so that only Page 1 can be viewed by test subject
 4. Hold the booklet approximately 16 inches (40 cm) from the test subject
 5. A Butterfly is hidden in the dot pattern
 - ❖ When both eyes are functioning properly the butterfly should appear as a 3-dimensional image protruding from the page
 - ❖ If both eyes are not functioning properly the test subject will not see the image
 6. Ask the test subject to identify the image and trace it with his/her finger
 7. Exercise patience and encouragement while the test subject attempts to identify the image as many binocular test subjects rely heavily on monocular clues which do not exist in this test
 - ❖ If test subject is unable to see the image, ask the test subject to identify the "L" & "R" at the bottom of the page. If the test subject is unable to perform this task, he/she is untestable

Scoring

Butterfly	Seconds of arc
Wings (upper)	2,000
Antenna	1,100
Wings (lower)	1,000
Abdomen	600

- **Section B (For Adults)**

1. Turn booklet so that only Page 2 can be viewed by test subject
2. Ask test subject to look at the 10 boxes each containing 4 circles
3. Only one circle in each box will appear to be floating or forward from the others

4. Starting with box #1, ask the test subject to point to or identify (top, bottom, left or right) the circle that appears to be floating or different from the others
5. Repeat last step for boxes 2-10
6. When one is missed, retest the preceding box to ensure that the test subject can achieve this level and was not just guessing




Scoring

1. Record the level of stereopsis for the circle in the last box chosen correctly
2. Refer to Answer Key on back of test booklet


• **Section C (For Children)**

1. In each line – A, B & C, only one shape appears to be floating or forward from the others
2. Taking each line in order, have test subject look at the geometric shapes at bottom of page and point to or name the shape on each line A, B & C that appears to be floating or that is different from the others on that line. If one is missed, retest the preceding line to ensure that the test subject can achieve this level and was not just guessing

Scoring

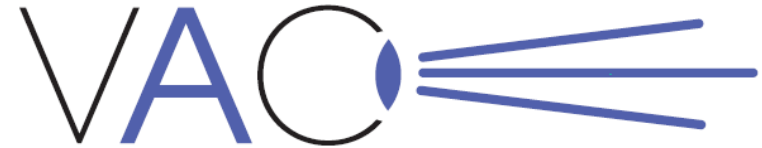
SCORE KEY	Seconds of arc 16 in., (40 cm)	Shepard Percentage	Verhoff Distance
A 	400	15%	0.1
B 	200	30%	0.2
C 	100	50%	0.3

CARE/HANDLING & STORAGE

- Clean vectographic pages with a soft, damp lint-free cloth
-  Store closed booklet in a cool, dry place away from direct sunlight
- Clean polarized viewers using lens cleaner and soft, lint free cloth

WARRANTY

- 1-year manufacturer warranty from date of purchase



Vision
Assessment
 Corporation

The ***Butterfly-S***
Stereo Acuity Test

P/N 1010S
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