Keystone Clinical Fusion Tests **for Stereoscopes**

Keystone Clinical Fusion Tests **for Telebinoculars**

Instruction Manual

5700

The Keystone Clinical Fusion Unit consists of four stereograms which measure the base-out and base-in <u>usable</u> fusional reserves at far and near points.
The numbers on the cards indicate the prism values of the respective disks in diopters.
The tests are designed and calibrated solely for use on the Keystone Stereoscope (test set 5117) and Telebinoculars (Test Set 5155).

Procedures

1. Set cardholder with front at FAR position on the shaft.
2. Place Card #1 – Far Point Convergence in front; then #2 – Far Point Divergence; followed by #3 – Near Point Convergence; and #4 – Near Point Divergence.

Some practitioners prefer to test divergence before convergence.

3. Direct attention to the large white disk at the top. Ask patient if he sees the horizontal and vertical lines as a "cross" on the disk. If he sees only a horizontal or only a vertical line, he is suppressing and, of course, a fusional test cannot be given.
4. Ask, (a) "Do you see a single zero in the white circle just below the large disk?" (b) "Do you see one or two number-one circles?" "One or two number-two circles?" Have patient fuse the circles in turn. His score is the largest number that he can fuse.
5. When both divergence and convergence tests have been given FAR position, move the holder in to 10 (NEAR position) on the shaft and give the Near Point tests.

Ranges of Responses

Test 1
Far Point Prism Convergence (indicated especially in Far Point exophoria)
Base-Out prism range for Keystone Telebinoculars: 0-24. This number in a target denotes its prism value.

Suggested levels of Response:

Excellent –	18 - 24	Borderline –	8 - 11
Satisfactory –	12 - 17	Unsatisfactory -	less than 8

Test 2
Far point Prism divergence (indicated especially in Far Point esophoria)
Base-in prism range for Keystone Telebinoculars: 0-12. The number in a target denotes its prism value.

Suggested levels of response:

Excellent -	10 - 12	Borderline -	5 - 6
Satisfactory -	7 - 9	Unsatisfactory -	less than 5

Test 3
Near Point Convergence (Indicated especially in Near Point exophoria)
Base-out prism range for Keystone Telebinoculars: 0-24. The number in a target denotes its prism value.

Suggested level of reponse:

Excellent -	20 - 24		Borderline -	8 - 11
Satisfactory -	12 - 19		Unsatisfactory -	less than 8

Test 4
Near Point Prism Convergence (indicated especially in Near point esophoria)
Base-in prism range for Keystone Telebinoculars: 0-24. The number in a target demotes its prism value.

Suggested level of reponse:

Excellent -	20 - 24		Borderline -	8 - 11
Satisfactory -	12 - 19		Unsatisfactory -	less than 8

Interpretation

The responses are essentially tests of recovery of fusion and may be said to indicate the <u>usable</u> or <u>reflex</u> fusional abilities. Conventional "break point" test may be higher, but the <u>usable</u> fusional reserves are probably better indicated by the recovery points.

The near Point tests are of special importance.

1. Low divergence findings are often found in esophoria at near. The application of minus lenses often affects adversely the divergence fusional amplitude at Near point. Orthoptic training with Keystone Base-In Prescription Services may be indicated.
2. The application of plus lenses in hyperopia, or bifocals, often induces low convergence findings at Near Point. Discomfort or inefficiency in Near point vision may result. These cases very often respond to orthoptics with Keystone Base-Out prescription services.

When testing an individual wearing bifocals, the stereoscope should be placed at a downward slant so that the patient looks through his bifocal segment in taking the Near Point tests. The far position tests are, of course, taken through the distance portion of the lenses.