

Tangent Screen Guide

Purpose of the test. Tangent Screens are used to develop a map of a patient's visual field. This map can then be used to diagnose various disease conditions of the eye including ocular hysteria, eye-lid droop. This guide is intended to describe the examination of the patient and not the diagnostic part of the testing process.

Other Test Names: Bjerrum Screen or Tangent Screen.

Description of the test. The tangent screen test includes a black felt screen with a pattern of radians and circles sewn in black with a white button in the center, a black wand, a supply of black pins, a selection of targets, an occluder, and a score sheet. A chin rest is also recommended (see below). Contact Good-Lite for more details on the choices for each of these accessories.

Score Sheets: An additional supply of score sheets are available from Good-Lite. The score sheets provide the following target patterns:

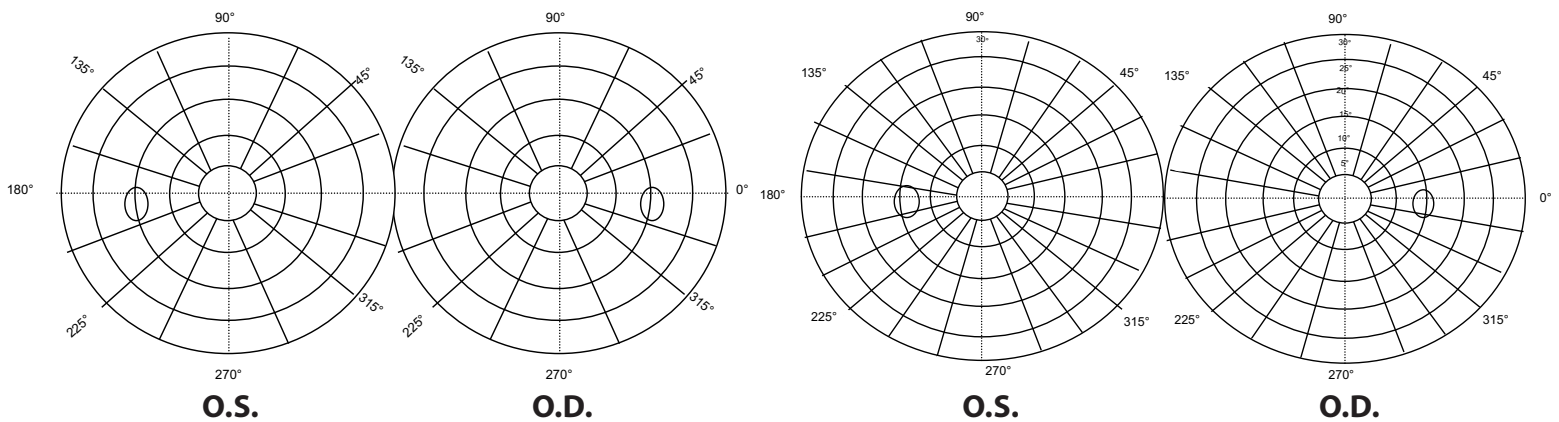


Illustration of targets for 22.5° Tangent Screen

Illustration of targets for 15° Tangent Screen

Optional Equipment: Use of a chin rest is recommended to insure that gaze on the white button is maintained and the patient does not use their eyes or neck to 'follow the target'. We also recommend use of Good-Lite's Reversible Occluding Glasses (P/N 452300).

Administration of the test. The patient is seated in a manner that positions the eyes one meter from the screen and such that they are at eye level with the center of the tangent screen target. The lights are dimmed and one eye is occluded.

The physician determines the size, color and sequence of the test objects to be used in each exam session. The assigned test object is selected and the pin is inserted into the fabric covering of the tip of the wand lengthwise, leaving only the head visible. A rotation of about 90 degrees of the examiner's wrist obscures the colored (or white) disk of the test object (so that only the black edge appears against the black screen). Alternating the rotation, the test can be made to disappear and reappear for confirmation of the patient's responses.

The patient is ordered to maintain their gaze on the white button in the center of the screen.

Starting with the top center radian, the examiner makes the object appear and moves it slowly towards the center. The object should be no more than 1-2 inches from the screen but it is recommended that the object and wand do not touch the screen to avoid damaging the felt screen. The patient is ordered to use voice indication to indicate when the object disappears (see Alternate Administration below). At the specific point where the object disappears, a black pin is inserted into the screen to mark that point. The examiner continues to move the object slowly towards the center and the patient is ordered to indicate when the object re-appears. At the specific point where the object re-appears, a black pin is inserted into the screen to mark that point. The process continues to the lower extremity of the radian with the patient indicating appearance (or disappearance) of the object on that radian.

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The process is repeated for each radian.

At the conclusion of the test with this test object, the pattern of visible visual field based on the black pins is transferred to the scorecard. The test distance, size and color of the object which was used is noted.

The test procedure is then repeated for each assigned test object size and color.

Alternate Administration: If the patient does not indicate that the object is visible at the top of the radian, reverse the steps to have the patient indicate when the object does appear.

Interpretation of results: Interpretation by a trained physician is recommended.

Care of the test: The black felt screen should be kept rolled-up or covered. If debris or dust collect, the screen should be brushed gently with a camel's hair brush. The wand and test objects should also be kept in a clean environment.

Reference: The following book is available from Good-Lite and provides some insight into the use and disease diagnosis from analysis of the visual field:

Visual Fields – Clinical Case Presentations Presents 158 cases of visual field disorders with analysis: 61 cases retinal and choroidal disorders, 27 optic nerve disorders, 32 glaucoma and 26 visual pathway proximal to the globe. Other unusual cases detail field disturbances due to media opacities and artifacts. Eight of the cases arise from multiple disease at the root. The cases are clearly and uniformly presented using the Subjective, Objective, Assessment Plan (SOAP) format and concentrate on common and uncommon visual defects encountered in practice. Liberal use of color retinal images and visual field diagrams. The authors are John C. Townsend OD, Gerald J. Selvin OD, John R. Griffin OD, MOpt, M.S.Ed and George W. Comer OD. 499 pages. Spiral bound. Part Number 602500 **Visual Fields – Clinical Case Presentations Book - available from Good-Lite**

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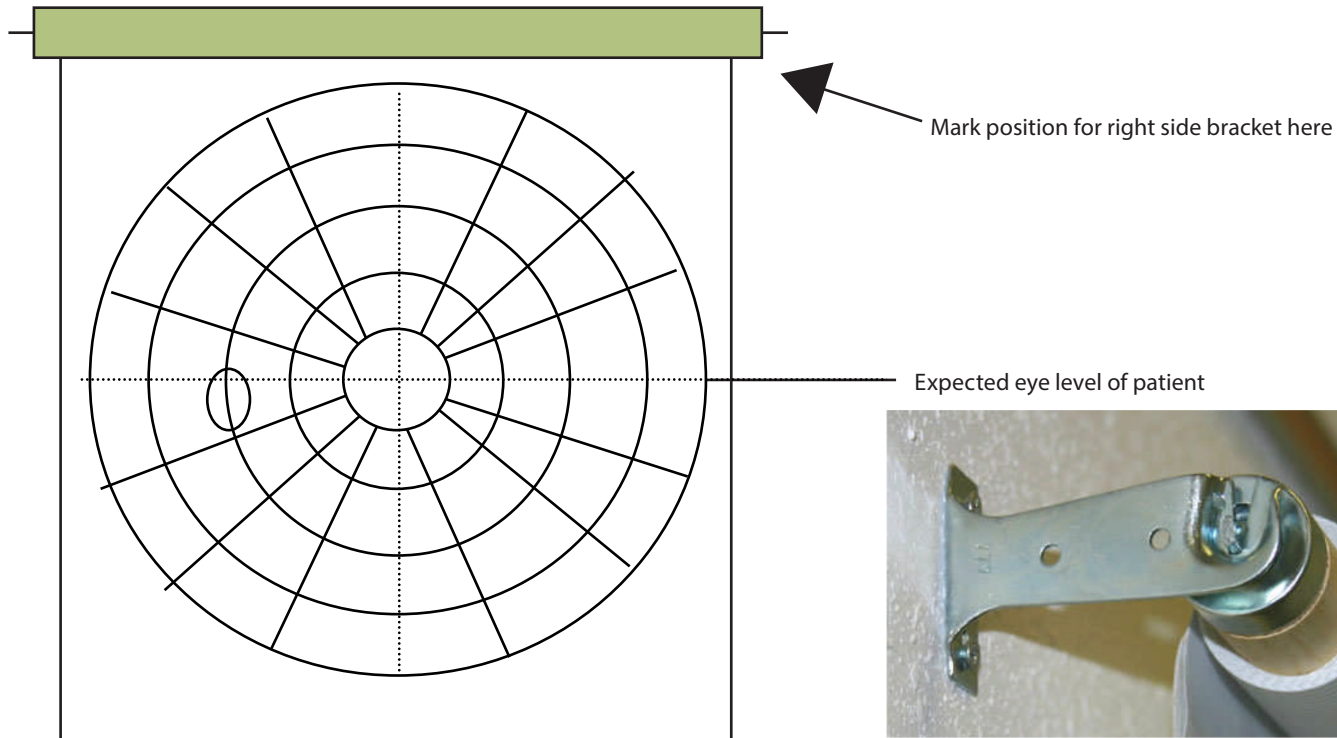
Mounting Guide:

Preparation:

The screen will require about 40 to 42 inches square when in use. The center line needs to be set-up so that it is at eye level based on the expected patients. This is usually accomplished by seating the patient in an adjustable height clinical chair, however, if the patients are in a wheel chair or other situation different calculations must be done. The test distance is one meter (39 inches).

Roll-up Style:

Unroll the screen and mark the location, based on the preparation cited, for the right side bracket (see diagram). Use screws to attach the right side bracket. (see note below).

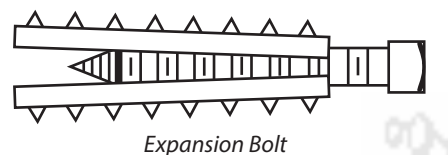


Then re-roll the screen, insert the screen in the right side bracket, check the roller for level, set up the left side bracket and mark the hole locations needed for proper alignment of the left side bracket. (see photo).

Note: Remember, there is some force exerted on the brackets when the screen is 'pulled down'. Be sure to use appropriate screws to mount the brackets. If the wall surface is wood, for example, wood or sheet metal screws are likely appropriate. If the wall surface is plaster or sheet rock then additional caution must be used. One reliable technique is to mount a 1x4x45 inch white pine board with screws through the sheet rock into the 2x4's (or other girders) behind the sheet rock. Then mount the screen brackets to the 1x4. Toggle bolts (see below) may provide sufficient security when used properly with sheet rock. Expansion bolts are not recommended.



Recommended



Expansion Bolt

Not Recommended