

# BIOPTIC TELESCOPES

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## GENERAL

The Bioptic Telescope (also Galilean, as are the Full Diameter Telescopes) provides patients with the benefits of a telescopic system while still maintaining mobility. Mounted high in the carrier lens, the telescope is “out of the way” while the patient is moving about or doing general work, but is always available for distance spotting. Patients simply need to drop their head slightly to bring the telescope into alignment with their eyes. This is important, because the patient does not use this telescope all of the time (as with the Full Diameter Telescope), but only when viewing a distant object magnified. With this principle in mind, one can see why Bioptic Telescopes have been prescribed for students who need to view the chalkboards in the classroom while still being able to see up close, for people who need to spot distant signs while moving or for any situation requiring a greater flexibility to meet constantly changing visual demands.

As with the Full Diameter Telescopes, different designs are available in the Bioptic line, depending on the needs of the patient. The standard Bioptic Telescopes (Model I) are available in powers of 1.7X, 2.2X, 3.0X and 4.0X. There is also a Model II Bioptic Telescope, available in only the 2.2X, power which is markedly smaller than the Model I 2.2X Bioptic Telescope. This is particularly suited for the patient who is more sensitive to the cosmetic appearance of the telescope. All of the standard Bioptic Telescopes are constructed of glass lenses mounted in a plastic housing. It should be noted that the Full Diameter 3.0X and 4.0X Telescopes and the Bioptic Model I 3.0X and 4.0X Telescopes, respectively, are physically the same telescope. The difference is in where the telescope is mounted in the carrier lens — centrally or superiorly.

The Wide Angle Bioptic Telescopes are available in powers of 1.4X, 1.7X, 2.2X and 3.0X. Because of the larger physical size of these units (compared with the standard Bioptic Telescopes) the visual field is larger.

It should also be noted that all of the Bioptic Telescopes have round objective lenses, with the exception of the Model I 2.2X and the Wide Angle telescopes 1.4X, 1.7X, 2.2X and 3.0X. These telescopes have rectangular objective lenses.

While the Bioptic Telescope is generally used for distance tasks, closer working distances can be achieved by applying a reading cap over the front end of the telescope. The reading cap will focus the telescope for any desired working distance (intermediate or near), based on the power (focal length) of the cap. As with the Full Diameter Telescopes, in some cases the Doctor will have to prescribe more than one reading cap to satisfy all the patient’s visual needs.

The patient’s distance prescription can be incorporated into either the telescope, the carrier lens, or both. For best results, it is recommended that this be done. It should also be noted that a bifocal carrier lens can be prescribed for the patient. The flat top style bifocal is the one that is customarily ordered. It is also possible to have both a Bioptic Telescope and a Bifocal Microscope or Reading Telescope in the same carrier lens. This is referred to as a [Trioptic System](#), and will be discussed in a separate section.

The telescopic units can be supplied with a black, brown or silver housing. For patients with a glare or light sensitivity problem, a tint can be incorporated into both the telescope and/or the carrier lens, as well as the reading cap. [Drilled Sunfilters](#) are also available.



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## FITTING

Bioptic Telescopes are generally mounted in the carrier lens such that the optical center of the ocular lens is 10 mm below the top of the carrier lens. They are laterally decentered to the patient's distance P.D., and have a standard drilling angle of inclination of 10° upward from the horizontal plane. Any position or angle, however, can be special ordered. Bioptics can be ordered in either a black, brown or silver housing — this must be specified on the order blank.

When using a bifocal carrier lens, care must be taken in the placement of the bifocal segment. If the patient wishes to see at a distance through the carrier lens, at least 8 to 10 mm should be available between the telescope and the top of the bifocal. Thus, a frame with adequate vertical dimension must be chosen for the patient. The Designs for Vision [Yeoman 6](#) frame is especially suited for this purpose.

When binocular telescopes are prescribed, the reading cap is used only monocularly, since the telescopes will not be aligned for the near working distance. The cap is generally placed over the eye with the better acuity, or, in the case of equal acuities, over the dominant eye. Base-in prism reading caps are available for binocularity at near.

Although any frame can be used when fitting the patient with a monocular Bioptic Telescope, it must be of sturdy construction, have spring hinges and adjustable nose pads so the telescope can be accurately aligned in front of the patient's eye. The [Yeoman 6](#) is the frame of choice to meet these needs. It has adjustable pads, an all-aluminum front, and spring temples for a snug fit against the head. For other frame options, please refer to our [Telescope Frame Selection Guide](#).

## POWERS AVAILABLE

Model I: 1.7X, 2.2X, 3.0X, 4.0X

Model II: 2.2X

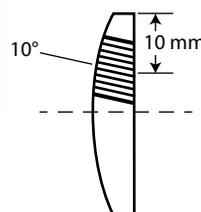
Wide Angle: 1.4X, 1.7X, 2.2X, 3.0X



Binocular 3.0X Bioptic Telescopes Model I,  
with black housings, mounted in the  
Yeoman 6 frame



Binocular 2.2X Bioptic Telescopes Model II  
with black housings, mounted in the  
Yeoman 6 frame



The Bioptic Telescope is mounted high in the carrier lens, angled up, and the optical center of the ocular lens is positioned 10 mm below the top of the carrier lens.



DESIGNS FOR VISION, INC.  
1-800-345-4009

# BIOPTIC TELESCOPES



1.7X  
Bioptic Telescope Model I



2.2X  
Bioptic Telescope Model I



2.2X  
Bioptic Telescope Model II



3.0X  
Bioptic Telescope Model I



4.0X  
Bioptic Telescope Model I



# BIOPTIC TELESCOPES



1.4X Wide Angle Bioptic Telescope



1.7X Wide Angle Bioptic Telescope



2.2X Wide Angle Bioptic Telescope



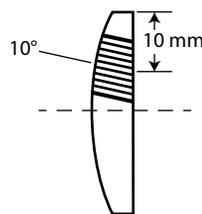
3.0 Wide Angle Bioptic Telescope



Reading Cap and 3.0X Bioptic Telescope



Reading Cap on 3.0X Bioptic Telescope



The Bioptic Telescope is mounted high in the carrier lens, angled up, and the optical center of the ocular lens is positioned 10 mm below the top of the carrier lens.

