

Topic Page: [Binoculars](#)

Definition: **binoculars** from *Collins English Dictionary*

pl n

1 an optical instrument for use with both eyes, consisting of two small telescopes joined together Also called: **field glasses**

Summary Article: **binocular**

From *The Columbia Encyclopedia*

small optical instrument consisting of two similar telescopes mounted on a single frame so that separate images enter each of the viewer's eyes. As with a single telescope, distant objects appear magnified, but the binocular has the additional advantage that it substantially increases the range of depth perception of the viewer because the magnified images are seen with both eyes. The frame of a binocular is usually hinged to permit adjustment of the distance between the telescopes. Focusing can be done by means of a wheel on the central axis between the telescopes; turning the wheel changes the distance from the objective lenses of the telescopes to the eyepieces. Separate focusing of each telescope from the eyepiece may be provided in some types of binocular. The term *binocular* now usually refers to the prism binocular, in which light entering each telescope through its objective lens is bent first one way and then the other by a pair of prisms before passing through one or more additional lenses in the eyepiece. The prisms aid in reducing the length of the instrument and in enhancing the viewer's depth perception by increasing the distance between the objective lenses. Other types of binocular include the opera glass and the field glass; both use Galilean telescopes, which do not employ prisms and which usually have less magnifying power than the telescopes in prism binoculars. A binocular is often specified by an expression such as "7×35" or "8×50"—the first number indicates how many times the binocular magnifies an object and the second number is the diameter of either objective lens in millimeters. The size of an objective lens is a measure of how much light it can gather for effective viewing.

See Kozak, J. T. , *Deep-Sky Objects for Binoculars* (1988).

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Binocular. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from <https://search.credoreference.com/content/topic/binocular>



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