

A review of the Vixen SG 2.1×42 binoculars

These binoculars come in stylish and well-padded cordura case. Upon unzipping the immediate impression was of a piece of really high quality engineering verging on art that is rare these days, particularly in this price range. This is reinforced by the fact that they are labelled not as made in China or even Japan, but 'Made in Saitama' (a town in Japan), showing real pride by the manufacturers. They were jointly developed by the Japanese companies Vixen and Miyauchi, two of the world's most highly regarded manufacturers of astronomical optics.

Being of Galilean optical design, which does not use prisms, they are much shorter and more compact than normal binoculars. Because they're so small they seem heavier than their 410g. The objectives and eyepiece lenses are protected by soft plastic covers. With the risk of labouring the point, these binoculars simply ooze craftsmanship and quality!

The view through them is quite unlike normal binoculars, with a real field of view of over 12° and amazingly an apparent field of view of over 25°! The 'walk in view' is so wide and panoramic that it seems more like looking through the eyes of an eagle than binoculars!

Having already seen cheap Chinese versions of this type of design, I was expecting a small reasonably well corrected central area and a large outer rim with severe distortion and other optical aberrations that would restrict the useable field of view. How wrong I was! This is where the collaboration between two of the leading Japanese optical companies really shows! Virtually all of the massive field of view was usable and the centre 75% was sharp, with only slight softening of the outer 25%. The outer field also showed moderate linear distortion and chromatic aberration, but no worse than many good quality regular binoculars - a genuine surprise! An inter-pupillary range of 55 to 74 mm should suit nearly everyone's eyes.

At night the virtues of this unique optical masterpiece really stood out. Orion, Cassiopeia and Cygnus could each easily fit within the field of view and even the Plough just about squeezed in. Under my light polluted suburban skies, the best I can see are stars around magnitude +5.25. With the little Vixens I could see pinpoint stars down to magnitude +7. It reminded me of the Australian desert skies, but without the expense of getting there! With a Galilean design there is no fixed exit pupil, so the closer you get your eyes to the eyepiece, the wider the field of view. This means that anyone who needs to wear glasses with binoculars may not have quite such a wide field of view.

My only real criticism of the Vixens is that the focus correction for long and short sightedness only amounts to around two dioptre, which was just about enough for me and probably most people's eyes, but might be a problem for some. For this reason, if you wear glasses stronger than this, try before you buy. Otherwise they're a wonderful piece of optical engineering that complements viewing with either the naked eye or regular binoculars, rather than replacing them. A great way to really get to know your way around the night sky and highly recommended!

Jonathan Regan
New Member Liaison Officer
Luton Astronomical Society
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