

## Binocular Sky Review: Opticron Imagic BGA VHD 10x50

### Manufacturer's Specification

Weight (g)	795
Field of View (°)	5.8
Eye Relief (mm)	22
IPD (mm)	58-74
Waterproof	Yes
Prism Type	Roof
UK Guarantee	30 years
Origin	China
Body Material	Aluminium Alloy
Armour Type	Rubber
Nitrogen Gas Filled	Yes
Prism Material	Proprietary 'PGK'
Prism Coatings	Oasis®, PC, FMC
Lens Coating	Fully multi-coated
Eyepiece Type	Twist-up



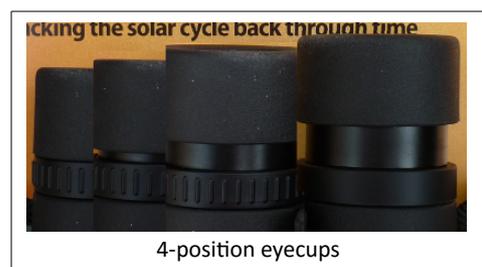
**Price: £499**

**Available from:** [Opticron UK stockists](#)

### Initial Impressions

The binocular is of roof prism construction and is covered in a textured rubber armour. It comes with well-fitting untethered plastic objective caps and a tethered (left hand side) plastic rainguard-type eyepiece cover which does not restrict the interpupillary distance setting when it is in place. Also in the box is a pair of tetherable rubber objective caps; I can't imagine why anyone would want to use the plastic ones in preference to these unless they have close-set eyes and the tethering rings are restricting the minimum IPD.

The eyepiece focusing is smooth throughout its range with no "stiction" if it has been left in the cold for a while. There is approx. three quarters of a turn of the focuser from close focus (3.5m) to infinity and another half turn beyond infinity. There is a knurled plastic dioptre adjustment ring on the right eyepiece assembly which is sufficiently tight so as not to be accidentally adjusted, but not so tight that it cannot easily be adjusted with gloved fingers. However, when the eyecup was down, I found it difficult to adjust the right eyepiece dioptre without rotating the eye-cup. The hinge is smooth and tight enough not to accidentally slip. The twist-up eye cups have two intermediate click-stop positions.



The coatings look very good and reflect only a small amount of light (green dominant). There is a baffle on the inside of the objective tubes, suggesting that control of stray light should be good. There are no cut-offs in the light path, suggesting that the prisms are adequately sized.

The lightly padded cordura case is sufficient keep the binocular clean, but will only protect it from the lightest of knocks. It has neither straps nor a belt/harness loop, but the flap is contoured to allow the binocular neck strap to be used as a shoulder strap. The case closes by pushing a metal stud on the case through a hole in a leather tab on the flap. I found this difficult to do with gloved fingers.



The neckstrap consists of a neoprene neck-piece and 1cm-wide nylon webbing. The webbing length adjusts with a 3-bar buckle. Separate pieces of webbing attach to the lugs on the binocular body. These attach to the strap webbing with side-release buckles. This permits the strap to be easily removed when the binocular is mounted but also has another function: inside the case are two nylon loops; the case can be tethered to the binocular strap with these. However, I found this arrangement to be fiddly to use.

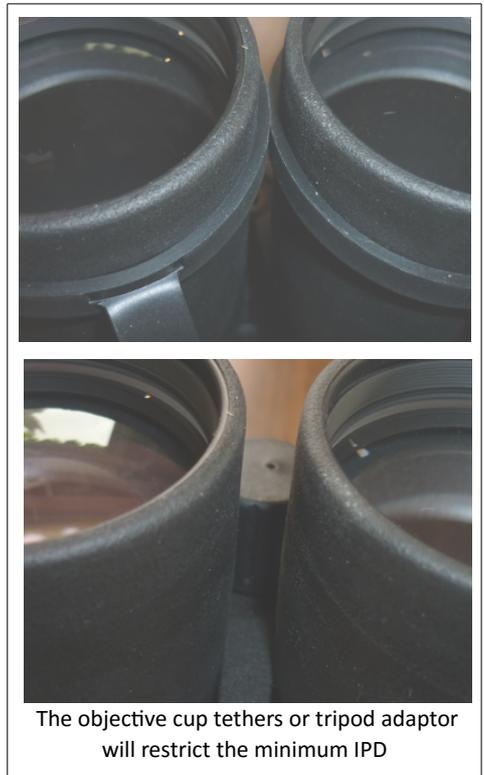


The other fiddly feature is the cover for the tripod-adaptor thread. It is a small, smooth screw-in button that is extremely difficult to remove and replace. Part of this is because there is very little space between 50mm roof-prism objective barrels, so it is difficult to get your fingers into a position where they can get a secure purchase on the cover. The other part is that it is so small, smooth and tight-fitting. If I owned this binocular, I would remove the cover once and leave it removed. The narrow space between the objective barrels also severely limits the type of tripod adaptor you can use; not only must the adaptor itself be sufficiently narrow to fit between the barrels (approx 6mm at minimum IPD), but the knob on the adaptor must have a diameter no greater than 18mm, and preferably a bit less.

**“The view is very sharp, flat and bright...”**

### Testing the Specifications

Unsurprisingly, the aperture is the full 50mm and is not internally stopped. Examination of reflections when a bright light is shone down the objective end confirms the fully multi-coated spec. I measured the minimum interpupillary distance at 57.5 mm, but with the objective cup tethers on the barrels, it is only 61.5 mm (59 mm if they are placed asymmetrically). My 9 mm wide tripod adaptor further restricted it to 64mm. The eye cups are 44.5 mm diameter, so there is 13 mm between them at their closest (17 mm with tethered eyecups); easily enough to accommodate most noses. The objective lenses are recessed 10.5mm into their barrels, offering good protection against accidental touching, and some protection against glare from external light, but insufficient for dew protection. With fully-corrected vision, the right eyepiece dioptre is set at zero, suggesting that it is properly adjusted. For those who do need spectacles, the eye lenses are recessed 3mm into their housings so, with the eye-cups folded down, there is 19mm of the specified 22mm eye relief available. I found this to be more than adequate to enable the entire field of view to be visible. The eye-lenses are recessed 15mm with the eye-cups fully extended, and 5mm and 10mm at their intermediate positions. I found the 5mm position best for use with spectacles and 10mm without.

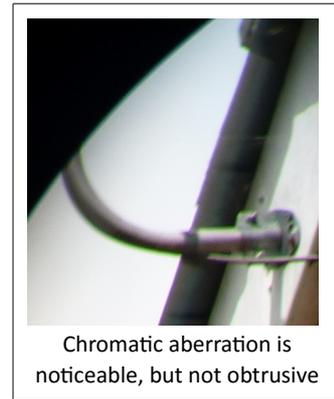


### Under the Stars

For testing, which involved a comparison with other binoculars, I both hand-held it and mounted it on an [Amazon Basics tripod with a trigger-grip \(aka joystick\) head](#). My observing site is in a reasonably dark suburban location.

Collimation was, as far as I could ascertain, perfect. The binocular “snaps” to a perfect focus. The field of view contained Eta and Gamma-2 Ursae Minoris (5.6°) with room to spare, which is consistent with the specified field of 5.8°. The view is very sharp and flat over the central 60% of the field. Field curvature affects the periphery. Albireo (34 arcsec separation, magnitudes +3.1 and +4.7)

was still cleanly split to about 60% out from the centre of the field and Delta Cephei (41 arcsec, magnitudes +4.1 and +6.1) to about 70%. There was noticeable vignetting in the outer 5% or so of the field of view. Control of false colour (chromatic aberration) is very good on axis, but lateral chromatic aberration becomes noticeable off axis. I did not notice it at all on Arcturus, although the colour of Mu Cephei seemed to change slightly towards the edge. Colour correction is quite sensitive to eye positioning: but the eyecups make it easy to keep your eyes on-axis if you are observing without spectacles; you need a bit more care with spectacles. Colour rendition is excellent. The varied colours of the stars in the southern part of Cepheus approached vibrant.



There is an unobtrusive amount of pincushion distortion, just sufficient to eliminate the nauseating “rolling ball” effect that can occur without it. The objective tube baffles do their job well, and control of stray light is very good. With the Moon just on the outside edge of the field of view, all I could perceive was a narrow ring of light around the periphery of the field.

## Conclusions

Binoculars are a very personal thing and what suits one person may not suit another; this binocular did not suit me. There is a lot to like about it: the central part of the image is very crisp indeed, perfect focus is easy to attain, colour rendition is very good and control of stray light is excellent. There is good contrast over most of the field of view and it is sufficiently lightweight to enable sustained use.

However, it has design niggles that, in my opinion, detract from its utility. Many of these relate directly to the restrictions imposed by the barrel-size of a 50 mm roof prism instrument: the tripod adaptor cover, the difficulty of using a tripod adaptor, the restriction on IPD imposed by a tripod adaptor and the objective cap tethers. Another is the proximity of the right eyepiece adjustment to the eye cup. Also, a binocular of this quality deserves a better case.

With a close focus of 3.5 m, it is probably intended to be a terrestrial binocular. It would probably best suit a naturalist who wants a low-light instrument that can also be used for astronomy.

Binocular Sky Ratings (/10)	
Sharpness of Image	10
Size of usable field	9.0
Colour Correction	8
Control of stray light	10
Eye relief	10
IPD	9
<b>Overall Optical Quality</b>	<b>9.0</b>
Focus mechanism	10
Right Eyepiece adjustment	8
Eye cups	10
Hinge	10
Armour	10
Weight and balance	10
<b>Overall Mechanical Quality</b>	<b>9.7</b>
Case	5
Neck-strap	10
Objective caps	10
Eyepiece caps	10
<b>Value for Money</b>	<b>8</b>
<b>Overall</b>	<b>8.9</b>

Stephen Tonkin  
2017 May 22

