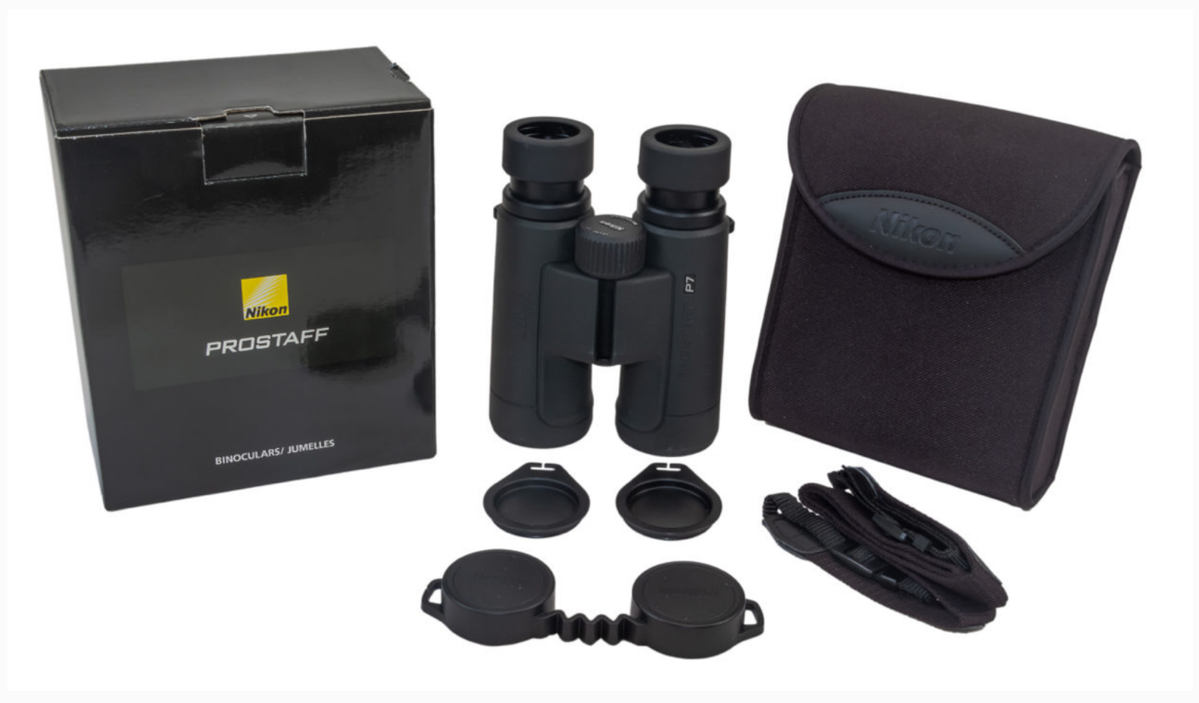
Nikon's New Affordable, Versatile ProStaff P7 10×42 Binocular Reviewed

By: Alan Dyer Published: Aug 17, 2022



The Nikon P7 comes with lens caps and a vinyl case with a belt loop but not a strap. The narrow strap is for the binocular. Credit: Alan Dyer

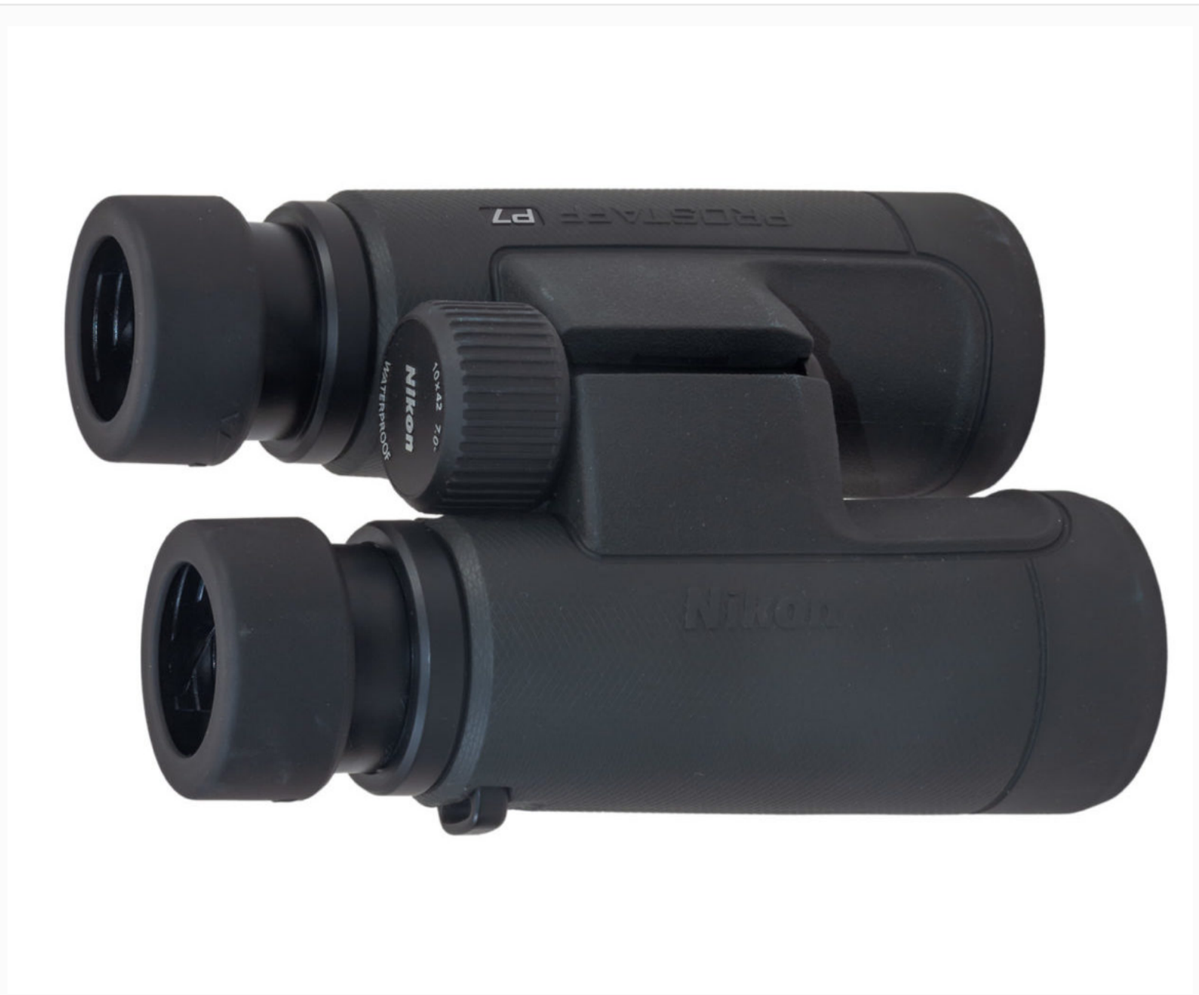
Nikon has upgraded their entry-level ProStaff line of binoculars, with a noticeable improvement in quality.

I'm always on the lookout for new binoculars of high quality at affordable prices suitable for astronomy. Earlier this year, Nikon introduced their new P7 series as a welcome upgrade to their ProStaff line of economy roof prism binoculars.

In 2020, I reviewed Nikon's $200 ProStaff 5 10×50 binocular for AGT as part of a group test of six roof prism 10x50s. Compared to the competition at that time, I found the older ProStaff 5 had lesser-grade optical coatings, exhibited some false color on night sky targets, and had twist-up eyecups that collapsed too easily. Nikon's new P7 rectifies all those issues.

However, the largest aperture in the P7 series is 42mm, not the 50mm preferred for astronomy. In the past, I've found in A-B tests that there was little a 10×50 binocular could show in the night sky that could not be seen with assurance in a 10×42, though a bit dimmer to be sure. Testing the P7 confirmed my findings.

Swapping between the 10×42 P7 and my favorite 10×50, the $525 Athlon G2 UHD (reviewed here at AGT), the faintest stars revealed by the 10×50 were also visible in the 10×42, though perhaps needing averted vision. Under dark skies, bright star clouds and dark dust lanes in the Milky Way did stand out with a little more contrast in the 10×50, but the views were still very impressive in the 10×42 P7. Deep sky favorites such as Barnard's E, the Dumbbell Nebula, the ET Cluster, the Double Cluster, and the Andromeda Galaxy all showed up well.



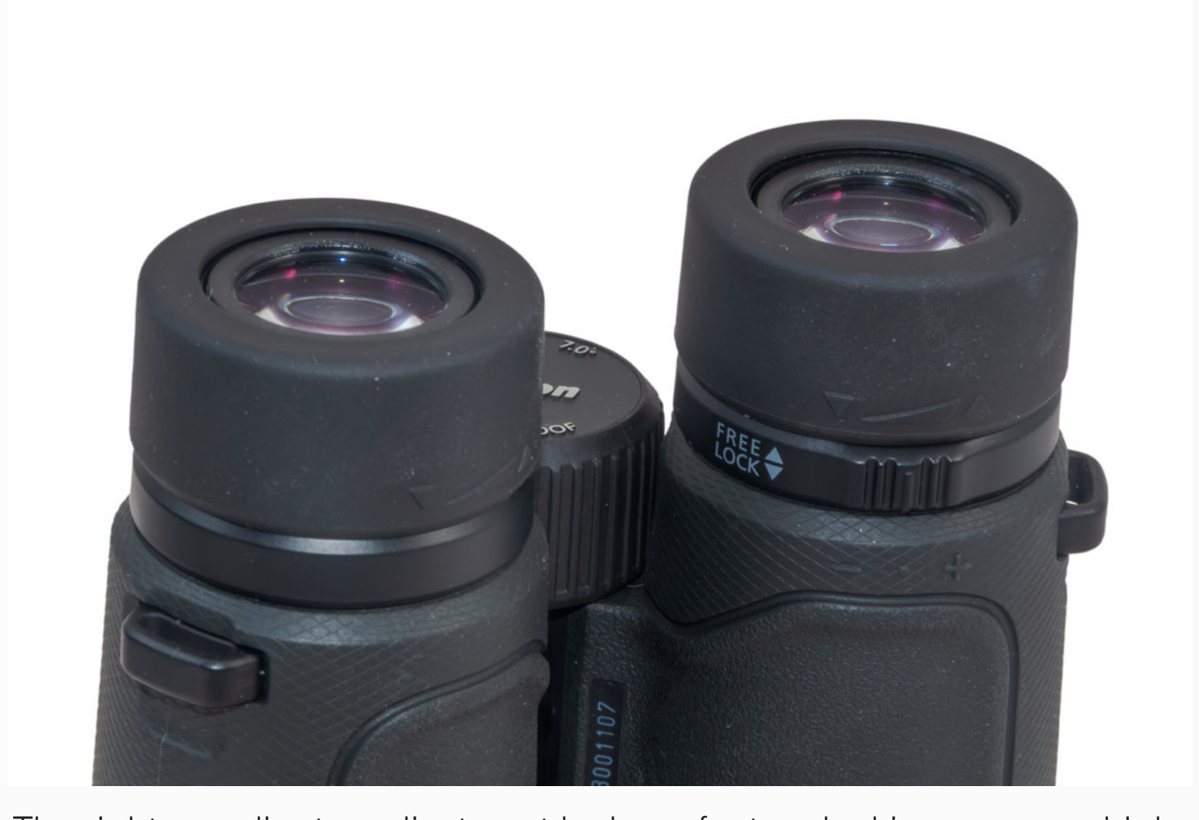
The large central focus wheel has a rubber, ribbed surface for a non-slip grip. Credit: Alan Dyer

Nikon P7 Handling

The advantage of a good 10×42 roof prism binocular like the Nikon P7 is that it is smaller and lighter than any 50mm model. At just 600 grams (21 oz), the P7 10×42 is a significant 270 grams lighter than the Athlon 10×50, and a huge 420 grams lighter than my favorite Porro prism 10×50, the Nikon Action EX.

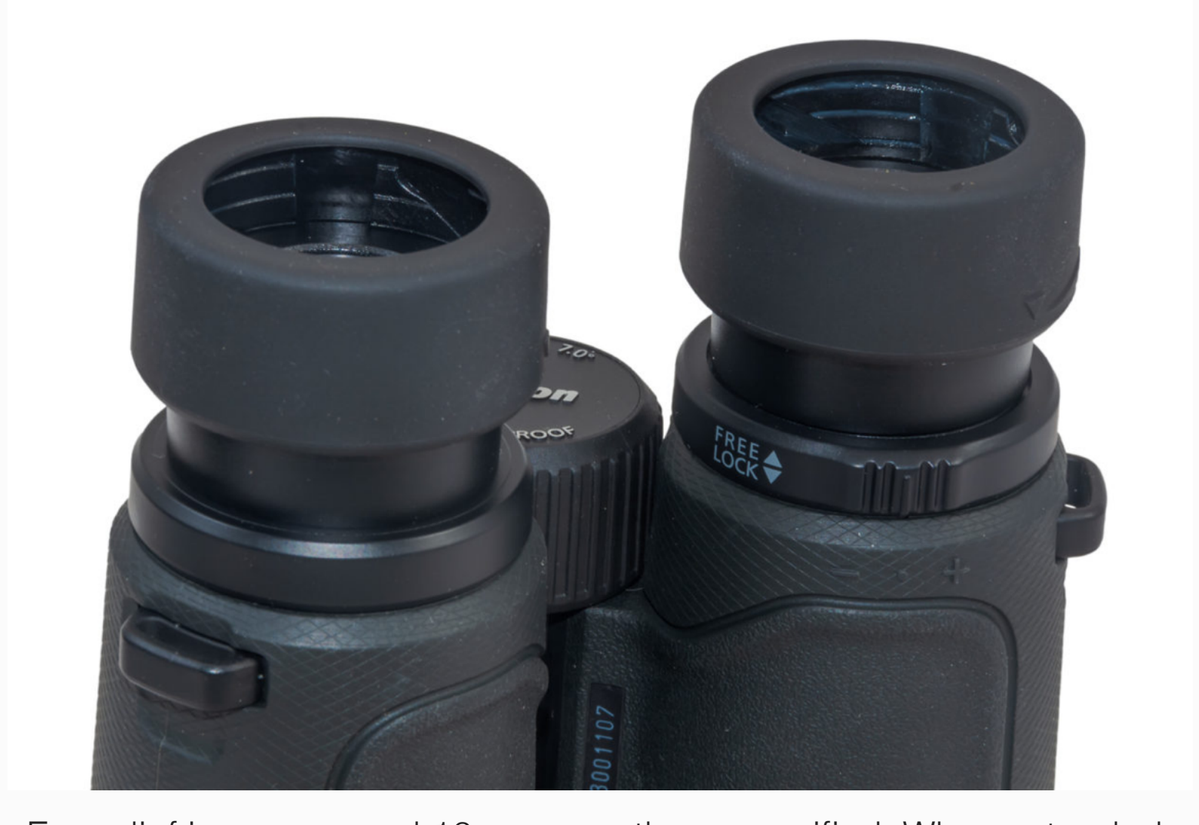
The P7 is also 100 grams lighter than the next 42mm model up in the Nikon line, the Monarch 7, which I reviewed here for AGT in a group test of four 10x42s. Even that 100-gram difference is noticeable. I appreciate the feather weight of the P7 every time I pick it up, making it a pleasure to hold and scan around the sky with a minimum of arm fatigue.

The P7's focus wheel turns smoothly and precisely, similar to the more premium Monarch. There's nothing cheap about the feel of the P7 or response of its focuser.



The right-eye diopter adjustment locks, a feature lacking on many high-end binoculars. Credit: Alan Dyer

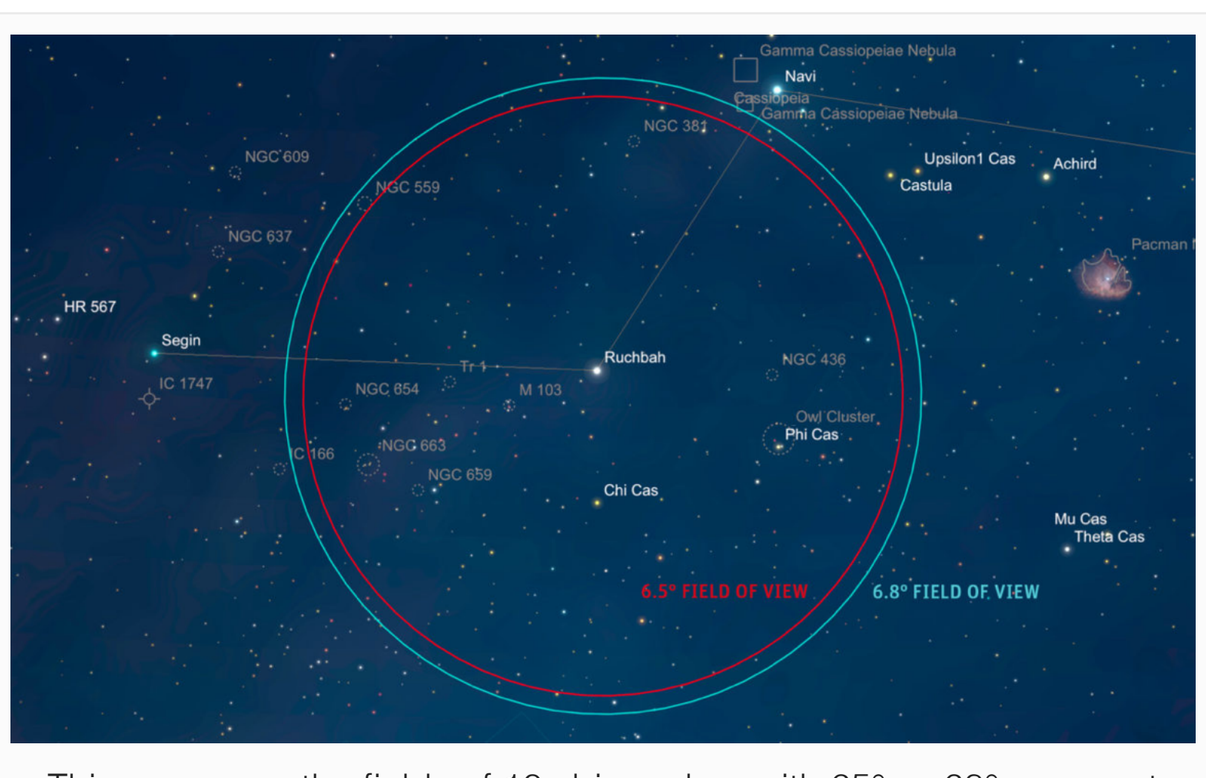
The P7 series features a diopter adjustment on the right eyepiece that can lock after it is adjusted to suit the user to prevent it from moving. When unlocked, it turns fairly easily, unlike some diopter adjustments that are so stiff turning them bumps the binocular, making it hard to hone in on the best focus for the right eye.



Eye relief is a measured 16mm, exactly as specified. When extended, the eyecups don't collapse easily when pressed down. Credit: Alan Dyer

The rubber eyecups twist up and down through three click-stop positions for use with or without eyeglasses. Each position was satisfyingly firm, with no mushiness on the stops.

While Nikon has improved the mechanics of their economy ProStaff line, one area they have not upgraded is the end caps. They are still cheap and flimsy plastic, not the durable rubber of most other binoculars.

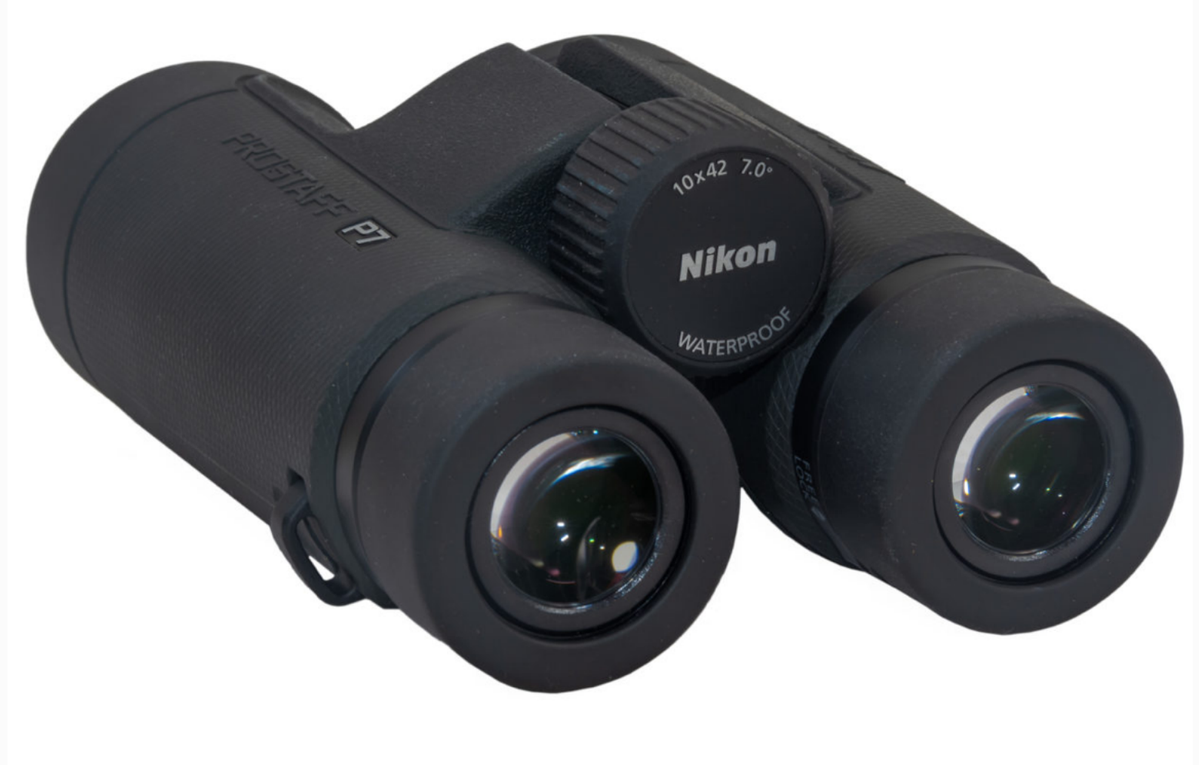


This compares the fields of 10x binoculars with 65° vs 68° apparent field eyepieces. The P7 provides the slightly wider 6.8° field indicated in blue. Credit: Alan Dyer

Nikon P7 Optics

What attracted me to the P7 was its advertised apparent field of view of 70° for the eyepieces. This is as wide as, or wider than, far more costly binoculars. I found in direct measurements on starfields that the actual field of view of the binoculars was close to 6.8°. Assuming 10 power, the eyepieces have a 68° apparent field, which is less than specified but still very impressive.

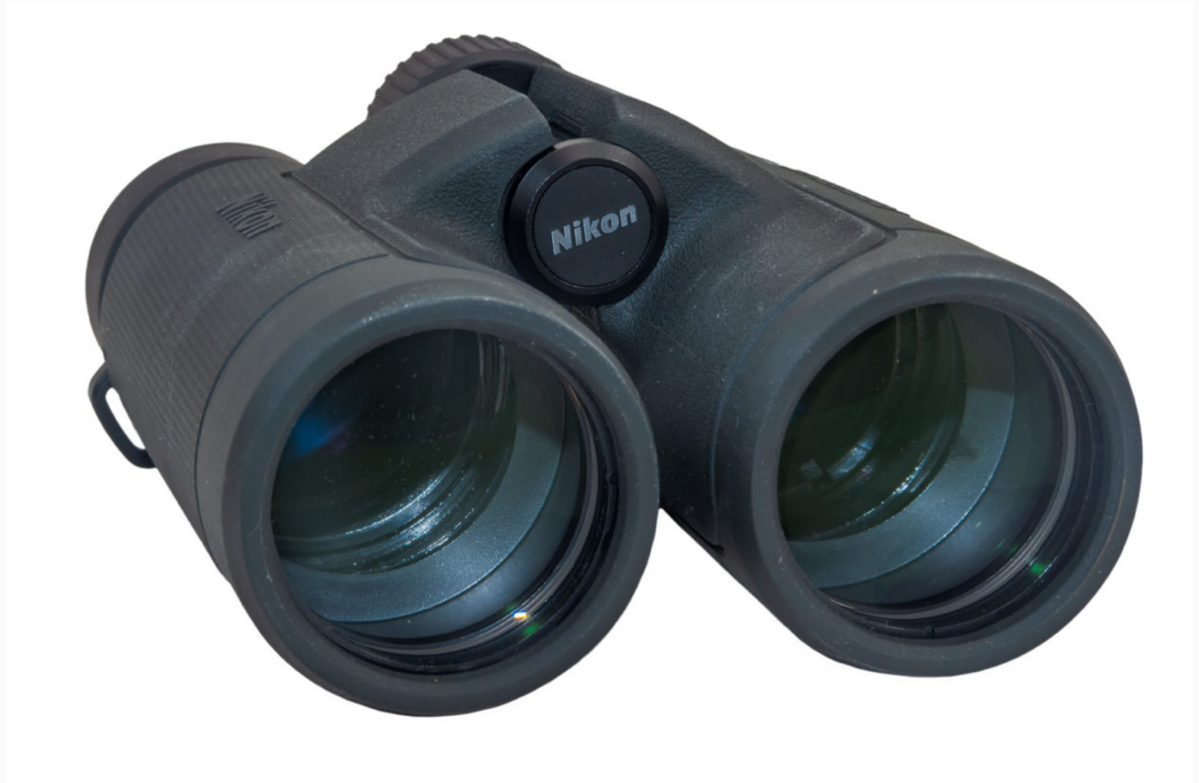
It proved ever so slightly wider than the 67° apparent field of the premium Nikon 10×42 Monarch 7, which had been my favorite 10×42 of the ones tested for AGT. The difference between the P7 and other 10x binoculars with more common 65°-field eyepieces is small but noticeable; the P7 presents a little wider view of starfields, yet with no edge-of-field darkening that plagues some binoculars.



The Nikon P7 proved very comfortable to handle and look through, making it a fine binocular for quick scans around the sky. Credit: Alan Dyer

Star images soften in the outer 35 percent of the field but are still reasonably tight at the edge. Nevertheless, when panning around stars do shift in and out of focus as they move across the field, with a small degree of barrel distortion warping the field. By comparison, in the 10×42 Monarch 7 stars soften in only the outer 20 percent, and are tighter still at the edge, with a bit flatter field. So that's one benefit to moving up the line in cost.

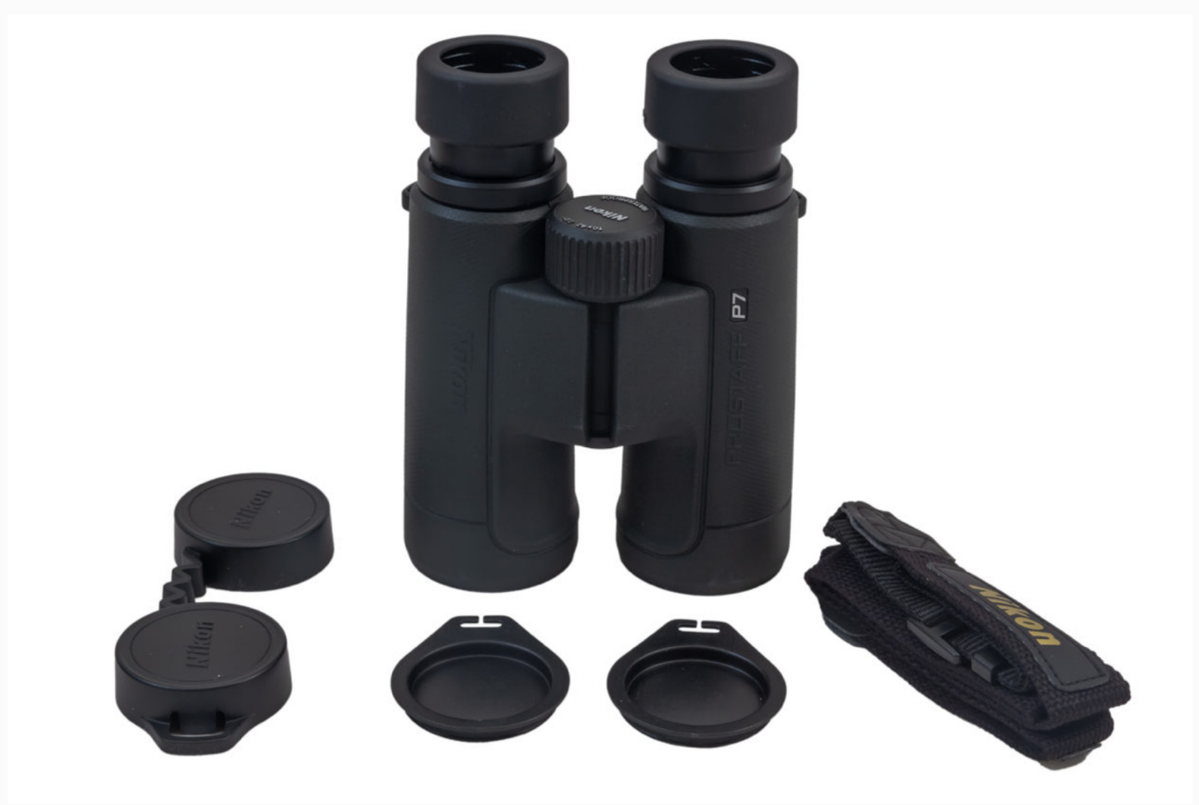
The other is that the Monarch 7 uses ED glass in the main lenses for lower chromatic aberration. In the P7, some false color was visible by day on bright specular reflections. However, by night I could see no sign of false color haloes around the crescent Moon, Jupiter or bright stars like Vega. Subtle star colors showed up very well.



The optics are fully multi-coated, presenting no annoying ghost images or internal reflections. Outer lens surfaces have water-repellent coatings. Credit: Alan Dyer

The P7 series does feature phase-corrected and dielectric coatings on the prisms, which eliminate the loss of brightness and contrast that low-grade roof prisms can impart to an image. I've found a good quality roof prism binocular like the P7 produces as bright and satisfying a view at night on the stars as a classic, but heavy, Porro-prism binocular often favored by astronomers.

The ProStaff P7 10×42 was also very sharp. Stars snapped into tight, pinpoint focus, with no mushy fuzzball appearance from spherical aberration or spikiness from astigmatism, as in lesser models. On-axis sharpness was as good as in the premium Monarch 7.



The P7's front lens caps are loose and losable rather than being tethered to the body as with most binoculars today. Credit: Alan Dyer

Recommendations

While a 10×42, with its 4.2mm exit pupil, might not seem the best choice for stargazing, I've long used high-quality 42mm binoculars for their ease of handling and light weight. The 10 power is great for resolving star clusters and small galaxies. And with the P7's wide-field eyepieces, you aren't sacrificing field of view.

If you are looking for a good quality binocular that can work well at night, yet small and light enough for daytime use – an all-purpose binocular – I can highly recommend Nikon's new ProStaff P7 10×42.

At $200, it is a bargain in a quality roof prism binocular. Just don't confuse it for Nikon's older ProStaff 7S model, which is still available as of this writing for the same $200 price but has lesser optics with a narrower field of view.

PLUS

Sharp optics with wide-field eyepieces

Lightweight

Smooth, precise focuser

MINUS

Some off-axis softness

Slight chromatic aberration in daytime views

Flimsy plastic lens caps

MSRP: $199.95

Website: www.nikonusa.com/en/index.page

About Alan Dyer

http://www.amazingsky.com

Alan Dyer is an astrophotographer and astronomy author based in Alberta, Canada. His website at www.amazingsky.com has galleries of his images, plus links to his product review blog posts, video tutorials, and ebooks on astrophotography.

RELATED POSTS

Sky-Watcher CQ-350 Pro Review: A (Semi-) Portable Titan

When it comes to astrophotography, sometimes less is more. But when it comes to having a capable mount to drive your gear, sometimes more...

Read More →

Price and Quality in a High-Power Zoom: SVBONY 3mm-8mm Zoom Review

Here's a low-cost zoom eyepiece that actually works well. I was surprised! I've never been a fan of zoom eyepieces. Most suffer from variable...

Read More →

A New Bandpass Combination for Imaging: Antlia ALP-T Dual Band SII / H-beta Filter Review

Multi-narrowband filters for one-shot color cameras are rapidly becoming more popular for their light-pollution-defeating benefits and the speed of using a one-shot color camera...

Read More →