

Vortex Optics

The recent proliferation of optics manufacturers and optical equipment reminds me of the sports card market in the late '80s and early '90s. At first, a few industry leaders commanded nearly all of the attention. Then, all of a sudden, everybody and their grandmother were producing baseball cards. Same thing with optics. Everybody, their grandmother, and even their grandmother's dog are now producing binoculars, it seems.

With so many companies out there, it has become tough to keep track of all the new offerings on the optics front. Every issue of every birding magazine includes advertisements of new products and for new companies. When a new company gets onto my radar, I try to consider what niche or niches New Company A is aspiring to fill. For example, is New Company A offering a decent full-size roof prism for less than \$250? Or a hands-down favorite in the \$750–\$1,000 range? Just to cite two examples of niches that I am not satisfied with...

Vortex is one such new company, and it was with an eye toward niche that I have approached this review of several offerings by Vortex.

I did not set out to review every single Vortex product. Instead, I chose a selection that would allow me to sample various shapes, sizes, and prices within Vortex's optics line. I also took into account suggestions from a Vortex representative and keyed in on niches that were either light in options from other manufacturers or that represented holes I wanted to fill in the optics case at the store that I own.

I began with a low-end offering, and moved up incrementally in price. I took each binocular into



The author sampled six products from the Vortex line. Top to bottom, left to right: Skyline scope, Razors, Vipers, Stokes Broadwings, Diamondbacks, and Spitfires. © Derek Lovitch.

the field, one at a time, and then spent some time with the entire group side by side. I also brought these optics out into the field to share with participants in bird walks that I lead.

Spitfire 8.5×32 (\$135–190)

When I first picked up the Spitfires, I was impressed by their compact size, their light weight, and their low cost (see the table, p. 74, for all product specs). The Spitfires are surprisingly bright for a small, low-end glass, and the edges are clearer than in most products at this price. The manufacturer's listed close focus of 5 feet (an even more impressive 4'2" for me personally) is excellent, especially for butterfly watchers.

Although I am happy to see rigid, twist-up eyecups on a low-end product, these ones are loose and wobbly. They feel as if they are about to fall off and, worse, they are too loose to stay locked in

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place—whether fully extended or, even more so, in an intermediate setting. The focus wheel is a bit too stiff, too. I first thought that this could be a great kid's binocular, but the interpupillary distance doesn't shorten up enough for the smallest of faces.

The Spitfires are very small (4.3" × 5") and lightweight (17.2 oz.), with a very good field of view (294 feet at 1,000 yards). Of course, with a small objective and a lower-end glass, they aren't overwhelmingly bright, but the fact that we now are seeing fully waterproof roof prisms—that we can actually see through—for less than \$200 is really a breakthrough. Personally, I think that if Vortex designed these as a 6× or 7× binocular, the resultant image would be brighter and more vivid, as less light would be “eaten” in the process of making the image bigger.

Unfortunately, my enjoyment of this binocular soon ended. For one thing, there is a noticeable yellowish tint to the image (pronounced in low light conditions), but in this price range that isn't terribly unexpected. Worse is the depth of field. It is truly awful. I had the same reaction as others who looked through this binocular: It gave us a headache. Poor depth of field and a stiff focus wheel (although it takes only about $\frac{3}{4}$ of a revolution from zero to infinity) make this binocular a challenge to use. At one point, I was looking at a pair of Mallards (drake Mallards are great subjects for studying optics) when the Mallards froze and looked skyward. Knowing what to expect, I pointed my binocular to the sky and focused on an adult Bald Eagle passing overhead. I almost got sick. Seriously, the view through this binocular gives me a feeling of motion sickness. I put the binocular back in the box and moved on to the next offering.

Diamondback 8×42 (\$190–250)

After my sour experience with the Spitfires, I immediately took note of the depth of field of the Diamondbacks—the entry-level, full-sized roof prism in the Vortex line. I was immediately relieved to see a marked improvement. Also—and unlike the Spitfires—the eyecups do not easily fall down. They lock into place fairly reliably when fully extended, but they do not lock into intermediate settings.

This binocular, as would be expected from its wider objective, is much brighter than the Spitfires. Although the edges are not crisp—something to be expected in lower-end products—the bulk of the field of view is quite sharp.

Their 420-foot field of view is excellent, as is the fantastic 4.5-foot close focus. In my field trials, however, I found the close focus for my eyes to be 5'3".

Although I find the Diamondbacks to be surprisingly bright, there is a distinct yellowish cast to the image, especially noticeable both in low light and in very bright light. The effect is less noticeable in moderate-light conditions, such as during the afternoon on a cloudy day, but the color comes across as decidedly “off” on a bright sunny day with fresh new snow. The entire image is dulled, a touch yellow, or even pinkish at times, and basically makes me feel as though I were looking through a pair of lightly tinted sunglasses. I also noticed this color issue to be significant when I looked at the trunk of a white birch in the early-morning light.

My biggest complaint about the Diamondbacks is their slow focusing mechanism. One and three-quarter revolutions of the focus wheel from zero to infinity takes too long, especially when frigid temperatures slow down the turning of the focus wheel even further. I also found that the right-eye diopter is a bit too loose and becomes offset too easily.



Compared to other products on the market, the Skyline scope and the Diamondback binocular are two of the most competitive offerings. © Derek Lovitch.

The Diamondbacks are slim, sleek, and well-balanced, with no bumps or other impediments to my hands. The result is overall light weight (25.2 oz.), making this a very comfortable binocular to use. A functional rain-guard and even useful objective covers (if you like that sort of thing) help round out the value of this binocular. The Diamondbacks provide a very nice package, and would make an excellent starter binocular or a great step-up from “Wal-Mart specials.”



Left to right: Razors, Vipers, Broadwings, Diamondbacks, and Spitfires, in order of decreasing cost. All products were compared to each other, as well as to other products in similar price ranges; see text for details. © Derek Lovitch.

Broadwing 8×42 (\$330–400)

The Broadwings represent the mid-range product in Vortex's "Stokes Line" of binoculars. They are clearly a step up from the Diamondbacks, and with each jump in price, we are certainly seeing a big jump in quality from Vortex. You tend to get what you pay for with optics. And with each successive product, I enjoyed my time with the Vortex instruments more and more.

The present step-up amounts to a significant leap in quality. The image provided by the Broadwings is much brighter, the edges are sharper, and the overall vividness is better. However, I still see a touch of a yellowish cast to the image, which is disappointing because, at this price range, other products on the market do not show this cast.

Excellent depth of field and a great close focus of 5 feet (4'10" feet for me in my test) are noteworthy in this model. However, the focus wheel requires two full revolutions to go from zero to infinity. Although the tradeoff is the superior close focus, I find that the time it takes to move from a butterfly at my feet to a falcon streaking overhead is just too long. Then again, I found the first quarter turn of the focus wheel to be for just the first few feet of focusing, whereas the last quarter revolution was mostly "beyond infinity." In other words, even when focusing on a stratospheric hawk overhead, the last quarter revolution lies be-

yond the range we need. The majority of your time will be spent using the focal range of about 1½ revolutions, which is tolerable. Folks who combine butterfly watching with birding and who need to switch rapidly between the two taxa may want to look elsewhere, though.

With the Broadwings we again see a relatively slim and sleek design, without any "overdesign" to get in the way of our hands. Although a little heavier at 26.6 oz., the Broadwings are very well-balanced in my hand. There is a significant glut these days of binoculars in this price range, and the Stokes Broadwings are a worthy entry into that selection.

Viper 8×42 (\$480–600)

Next we have the Vipers. Optically, this binocular is a significant improvement over the Broadwings, as we continue to march up the Vortex line.

Although the 20 millimeters of eye relief is more than sufficient for use with my eyeglasses, I find the eyecups too short for me when I am not wearing glasses. I am unable to jam the eyecups into my eye sockets, as I usually tend to do in order to help stabilize the binocular. Instead, I have to hold them slightly away from my face, which in the long run contributes to fatigue. Luckily, the binocular is lightweight (23 oz.) and very well-balanced—although, as is often the case, depressions for my thumbs are not where I need them.

The right-eye diopter locks securely in place, a welcome

addition in a price range below the highest of high-end binoculars. The ocular covers (rain-guards) fit too snugly, however, and are therefore a little tough to rapidly flip on and off.

The 347-foot field of view is good, but not great, and once again we have a binocular with a superb 5.1-foot close focus (which is exactly what my test resulted in for my eyes). Optically, this binocular produces excellent brightness for the money, and has very good sharp edges to the image. In some lighting conditions, I still pick up a trace of a yellowish tint, which at this price is a bit disappointing. Although the Vipers clearly outperform the other binoculars from Vortex up to this price range, I found this offering to be one of my least favorite thanks to the misplaced thumb depressions, the tight-fitting ocular guards, and the short eyecups. The field of view also leaves something to be desired. However, the brightness of the image and great close-focusing capabilities make this a binocular worth trying out if you are in the market for something in this price range.

Razor 8x42 (\$700–850)

The Razors are the cream of the crop from Vortex. The ads trump their “European styling,” which apparently means “looks like Swarovski ELs.” Some folks will like the double-barrel design, and others will not. In any event, it is nice to have some different designs to choose from.

Bells and whistles: First off, interchangeable flared eyecups are included. They are neither adjustable nor retractable, and since I have never been a fan of flared eyecups, I decided to forgo this option. Besides, they are of no use when wearing eyeglasses. I do like to be offered an option, though, and I admire Vortex for giving us a choice without forcing it upon us. The “regular” eyecups are both adjustable and retractable, and they even lock into intermediate settings with a fair amount of security. The click-stop, locking right-eye diopter is also welcome.

One and two-thirds revolutions of the focus wheel is more turning than I would prefer, but it is tolerable. The close focus of 8'2" is respectable, and for my eyes it came out to an even better 7'. The field of view of 410 feet at 1,000 yards is excellent. Eighteen millimeters of eye relief is more than enough, and I find this binocular to be comfortable with glasses. However, I am glad that the eyecups are adjustable, as I need to reduce their depth slightly for optimal viewing with my “extra set of eyes.”

Similar to the ELs in design, shape, size, and weight, the Razors present me with the same few “jiffy” (general impression of feel and image) issues that I have with the ELs—at least for the “feel” part of the equation. Especially when

holding my hands as far back as the thumb depressions encourage me to, I find the binocular to be too front-heavy in overall balance. Also, my preference is for a closed hinge between the two barrels, allowing my hand to rest comfortably atop the whole binocular, and not allowing my fingers to fall through the gap between the barrels. Some may prefer this design, and that's fine. The 29.4-oz. weight of the Razors is the heaviest of the Vortex binoculars that I am reviewing here, but even that is not an unreasonable weight.

Optically, the Razors are quite good compared to other binoculars in their price range. They produce a bright, crisp, and clean image. The color seems very “true,” and I have not noticed any yellowish cast as in the other offerings from Vortex. There are several good options out there in this price range—definitely including the Razors—but none that truly impress. The next step up provides a huge improvement in quality, while a step down doesn't seem to result in a significantly less-rewarding experience. I remain stuck in limbo about a wholehearted recommendation in this range.

Skyline 20–60x80 (\$310–390)

I also chose to take a look at one of Vortex's scopes, the Skyline, which comes with a 20–60x zoom eyepiece. With this scope eyepieces are not interchangeable, and there is not a fixed-power option, which is my personal preference. Since scopes have more components (more glass) than binoculars, it is tough to make an inexpensive scope that competes with the big boys. Furthermore, the high magnification of a scope can eat up copious amounts of light, with the result that many low- to mid-price scopes are either too dark or too fuzzy or simply too lousy to recommend. Until recently, I have had a critical hole in my store's offerings at this price range, but now I have an excellent offering there.

This scope, for the money, is surprisingly bright. Even in low-light conditions, it is not only useful, but quite good. It wasn't long ago that looking through a \$400 scope would give you a headache, but now we're seeing rapidly improving quality at rapidly decreasing prices.

Drawbacks: A distinct yellowish—or at times pinkish, especially in really bright lighting conditions—cast clouds the image. A narrow field of view further impairs the image, and in all but the brightest light (cloudless, mid-day sun, for example), zooming in over 40x renders the image virtually worthless. But again, look at what we're paying for with this scope, and remember that we are getting far better performance than what many products offer at this price.

A good, field-worthy nylon carrying case is included—a nice value-added item. A sunshield and an adjustable, rigid

The Specs. (Only manufacturer's specifications are included here.)						
	Spitfire	Diamondback	Broadwing	Viper	Razor	Skyline
Power × Objective	8.5×32	8×42	8×42	8×42	8×42	20–60×80
Field of View (feet at 1,000 yards)	394	420	350	347	410	113–55
Close Focus (feet)	5.0	4.5	5.0	5.1	8.2	26.0
Eye Relief (mm)	16	18	18	20	18	19–18
Weight (oz.)	17.2	25.2	26.6	23.0	29.4	56.4
Price Range (\$)	135–190	190–250	330–400	480–600	700–850	310–390

eyecup are two of the bells and whistles often reserved for higher-end products, adding to the overall attractiveness of this product.

Summary

As a store owner, I consider all of the preceding to be a perfect example of why I “cherry-pick” from a range of optics manufacturers, as opposed to carrying an entire line from anyone. Some of Vortex’s offerings are not very good at all, while others are simply great.

Each product that I reviewed offers a good-quality neck strap and a decent protective case, factors that sometimes come into play when determining the overall value of low-

er-price products. Most of the products also offer useful and fully functional ocular covers, and all but the Spitfires offer tethered objective covers as well. Every single Vortex product, even the least-expensive of the lot, includes an unconditional and unlimited warranty. While now expected from the top-of-the-line manufacturers, it is most welcome to see such assurances at lower price ranges, too.

Dollar for dollar, there are some very good values in the Vortex line—and I have not by any means covered the entire range of offerings from Vortex. There is no perfect binocular or scope for everyone at any price, and consumers should carefully consider their options. Most of the Vortex products reviewed here are worthy of such consideration.