

The Zeiss T*FLs

In the January/February 2006 issue of *Birding*, I debuted as “Tools of the Trade” department editor. I began this tenure with what proved to be a somewhat controversial assertion in regard to the Leica Ultravids that I had been test-driving for that issue. I wrote, “When we are comparing the best binoculars from the best brands, the optics are all going to be great. What becomes increasingly important then, is how they fit, how they feel. That’s what I call the gestalt of the binocular—how they feel in *your* hand and how they fit on *your* face.” Just as we talk about the gestalt, or “jizz”, of a bird, so I like to talk about the “jiffy” of a binocular. That is my corrupted acronym for “general impression of feel and image”, analogous to the “general size and shape” that gave us “jizz”.

Although not every reader approved of my stance (see *Birding*, September/October 2006, pp. 11–16), I stand by it, and I have received much

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feedback that supports the idea of “jiffy”. When you’re spending \$1,500+ for a new binocular, you’re going to be getting great glass (or, at least you better be). Do the optics differ among manufacturers? Absolutely. Do some excel in one category, but fall short in others? Absolutely. Does it make your impression of the fit and feel of the binocular any less important? No, it does not. If the world’s greatest glass is in a poor-

ly designed binocular, or one that doesn’t fit *your* hand and face, then this great glass is of little value to *you*. That, in a nutshell, is my approach to reviewing high-end optics.

With this approach in mind, I took a gander (but first at an American Goldfinch, not at a male goose) through the new Zeiss Victory T*FLs. Incidentally, T* denotes Zeiss’s patented multi-coating system, and FL stands for fluoride (not fluorite, by the way) glass—more on this later. My first impression: “Wow! These are bright!” Quite simply, the 7×42 Zeiss Victory T*FLs are the brightest glass I have ever looked through. On a number of occasions, I passed these around to other high-end optics users. Time after time, everyone’s comments were the same: “Wow! These are bright!”

Furthermore, the sharpness and crispness of the image is fantastic. Despite my best efforts, and despite soliciting comments from a number of birders, I have failed at being able to put my finger on what else—besides the brightness—is so great about the image. It is something intangible about the quality of the view, the crisp margins at the high-contrast edges (in other words, lack of chromatic aberration). I have really noticed the “purity” of whites and the vividness of bright colors, such as when I was studying a brilliant yellow crab spider on white phlox blossoms in fading evening light. There is a pleasing crispness to the overall image.



The 7×42 Zeiss Victory T*FL provides the brightest, sharpest, and most vivid image that the reviewer has ever seen in a binocular. Image courtesy of Zeiss Sports Optics.

Zeiss's promotional material states that, "Fluoride glass provides exceptional correction for false color fringes in the image, and our thin-lens, multiple-element, Advanced Optical System provides the highest resolution. ... Where other glasses blend the hues to a general impression of blue, the FLs show every subtle shade." A Zeiss representative explained the quality of the image to me as being a function of the fluoride ions that have been impregnated into the glass in order to decrease the amount of dispersion (scattering) of light within each element of glass. Therefore, the vividness of the T*FLs image is a product of a lack of unfocused light (that's the chromatic aberration, or "color fringing").

I am no expert in the physics of *how* a binocular works, but I do like to at least pretend that I know about how a binocular performs in the field. Although I have been unable to quantify or specifically describe why the image of the Zeiss Victory T*FL is so good, what I can say is that this binocular clearly outperforms everything else I have used in light-deprived situations, such as attempting to identify pre-dawn silhouettes at my local dawn-flight observation location. But even in optimal lighting conditions—mid-day sun under clear conditions—when the glass has all the light it needs, there is still something special about the image produced by this glass, something about the vividness, the definition, and the color. All high-end binoculars do have great glass, but Zeiss has clearly raised the bar.

I chose to take a close look at the 7× and 10× offerings. I am happy to see that Zeiss continues to offer a 7× option, as most manufacturers have gone to 8× or even 8.5× for their "low" power. However, I believe that power is overrated. The wider fields of view and the brighter images offered by a lower-power binocular are more important to me than a slightly "bigger" image, but that is a personal preference.

A simple demonstration will provide the example. Take a 7× or 8× binocular, and hold it in front of your face, at about arm's length. Do you see the little white circle in each ocular lens? That's the exit pupil. Repeat this with a 10× binocular. See how much smaller the exit pupil is?

All things (such as type and quality of glass and coatings) being equal, the wider the exit pupil, the brighter and wider your image will be. The exit pupil is calculated by simply dividing the millimeters of the objective lens (42 mm in the case of this Zeiss binocular) by the power:

$42 \div 7 = 6$ vs. $42 \div 10 = 4.2$. Therefore, a 7× binocular provides nearly 50% more exit pupil (and therefore more light) than a 10× binocular. This wider exit pupil is especially important for eyeglass wearers.

The 7× has a fantastic 450' field of view, whereas the 330' field of view for the 10× is respectable. (It is 405' for the 8×). This wide field of view further enhances the enjoyment of the view through this binocular, especially in the case of the 7×.

Although the depth of field (the amount of distance from the observer that is in focus at any given time) is superb on the 7×, much is left to be desired in the case of the 10×. Usually, I have found that 7× and 8× vs. 10× in one model line often function similarly in many aspects. That was certainly not the case here, and since I reviewed only 7× and 10× for this article, I am curious about the depth of field for the 8×. This critical, but often overlooked (likely because of the inability to quantify it) performance category transforms great glass into a poor binocular. Although the 10× is not exactly a poor offering, the inferior depth of field, especially at close range, leaves much to be desired. In fact, when attempting to hawk-watch with the 10× (many hawkwatchers prefer 10× due to the distances at which birds are being observed), I was so frustrated by my inability to find a distant speck against a pure blue sky that I soon went back to the car to fetch the 7×. Personally, I prefer the wider field of view for hawkwatching, period; and without a background of clouds to focus on, I was struggling to get on birds. The superior depth of field of the 7× eliminates this frustration—there is more sky in



A drawback to the Zeiss T*FL line is the wide body, which contributes to a front-heavy feel that makes the binocular uncomfortable for some users. *Image courtesy of Zeiss Sports Optics.*

focus at a given time, making it at least a little easier to pick out a Sharpie a mile away against a cloudless sky.

Both the 7× and the 10× have a convenient focus wheel that takes one-and-an-eighth revolutions to go from close focus to infinity. However, lackluster depth of field produces a choppy focus for the 10× binocular. As I followed a bird flying away from me, I seemed to be focusing in leaps and bounds, not easily and smoothly. In this case, I would have been much happier with a slightly longer revolution of the focus wheel in exchange for more precise and fluid focusing. However, the focus on the 7× is smooth and fluid.

Speaking of focusing, the close focus is exceptional, on all three sizes of this binocular. Birder/butterflies may have found the perfect binocular to replace their old Bausch & Lomb Elites. Zeiss lists the close focus for the 7×, 8×, and

10× as a most impressive 6.6 feet. In my own trials, however, I found the close focus capabilities to be even better. For me, I can focus down to just under 6 feet with both the 7s and the 10s. This definitely surpasses the close-focus capabilities of other high-end, full-sized binoculars. These instruments are also commendably lightweight as full-sized binoculars go. At only 26.1 oz. for the 7×, 26.5 oz. for the 8×, and 26.8 oz. for the 10×, the T*FLs are 1–2 ounces lighter than the rubber-coated Leica Ultravids and the full-size Swarovski ELs. However—and here’s where the importance of one’s “general impression of feel” comes into play—I find the Zeiss T*FLs, especially the slightly longer 10×, to be noticeably front-heavy. This impression came into play during long bouts of scanning the skies while hawkwatching, attempting to steady the binocular on the vibrating hull of a boat, and especially when I was trying to take photos through my binocular with a digital camera. My hands definitely felt as if they were tipping forward, enough so that the binocular would become heavier in my hand with prolonged use. Every ounce does count, but, in this case, the benefit of a couple fewer ounces was negated by the front-heavy balance in my hands. Furthermore, some folks will also find the wide body to be less desirable than some of new, sleeker, and slimmer designs from other manufacturers.

As I have mentioned before, I am not a fan of 10× binoculars, due to the tradeoff with field of view and brightness. In the case of the Zeiss T*FL, the brightness is much less of a trade-off than with other manufacturers. The reduced field of view, on par with other manufacturers in this price range, is, expectedly, less than with lower-priced products. However, the depth of field, as I mentioned above, is inferior—and distracting enough—that I was finding that I had to force myself to take the 10× into the field for purposes of this review. Furthermore, the edges of the image of the 10× are noticeably fuzzy. The 7s, on the other hand, are simply a joy to carry out into and use in the field.

From a bells-and-whistles perspective, I am very happy to see a *lack* of bells and whistles. The glass speaks for itself, and I am pleased to see that the Zeiss Victory T*FLs do not suffer from over-designing. Most importantly, there are *no* thumb bumps, ridges, depressions, or other doodads to get in the way of my hands.

Another thing that I am very happy to see is that Zeiss is making FL glass without the use of toxic lead and arsenic.

(In this vein, see my comments on Nikon’s Monarchs in the July/August 2006 *Birding*, pp. 74–77.) In fact, Zeiss made this change with the original Victory line seven years ago. I hope that other manufacturers will follow.

I am also glad to see that someone has finally decided to make a locking mechanism on eyecups that really locks—and stays—in place. The twist-up eyecups on the T*FLs lock into four different heights: all the way out, all the way down, and two intermediate settings. This is important to me because, when wearing eyeglasses, I need one of those intermediate settings. It’s a huge pet peeve of mine to constantly be readjusting the settings of the eyecups while in the field. (I should also mention that, according to a friend of mine, the eyecups have changed since the T*FLs debut. Apparently, they were first very hard, almost sharp, and uncomfortable to use. Zeiss has changed that, and the eyecups that were included in the binoculars that I reviewed were quite comfortable.) Speaking of pet peeves, the rain guard is to my liking for once—not too loose, not too tight.

Interestingly, I found myself having significant difficulty in writing this review. Not because I couldn’t find enough to talk about, but I simply kept getting distracted! While testing close focus on a patch of phlox, I thought, “Wow, that’s a bright image.” While testing field of view: “Wow, that’s a bright image.” While testing balance...well, you get the idea. The 7×42 is simply the brightest glass that I have ever looked through (and the 10× is not too shabby either, and is the brightest 10×42 I have ever seen). The quality of the image—with the brightness, the sharpness, and the vividness—has set a new standard. Superior close focus and the excellent field of view also combine to produce a truly extraordinary image.

No binocular is perfect for everyone, and despite my ravings about the image of this glass, I nonetheless recommend taking it for a test drive. Although lightweight, I have a serious issue with the balance of these binoculars. An inferior depth of field in the 10× certainly leaves something to be improved on in that category as well. Again, I

can only recommend taking a look for yourself. But I think that you will find that the image produced by the Zeiss Victory T*FLs has indeed raised the bar.

Acknowledgment

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Product Specs <i>based on manufacturer-supplied data</i>			
	7×42	8×42	10×42
Exit Pupil (millimeters)	6.0	5.3	4.2
Field of View (feet)	450	405	330
Eye Relief (millimeters)	16.0	16.0	16.0
Close Focus (feet)	6.6	6.6	6.6
Weight (ounces)	26.1	26.5	26.8