

# A New High-end Binocular: The Nikon EDG

This past June, I was part of a group of 20 retailers and authors that visited Guatemala for the unveiling of the new Nikon EDG line of binoculars. The binoculars provided to us at this product launch event were pre-production models that had been rushed out in time for the excursion. Some of the bells and whistles are still being tweaked, but the glass—the stuff inside that really counts—is the finished product. With this thought in mind, let us now turn to a review of the Nikon EDG.

The EDG is Nikon's first binocular designed by—and specifically for—birders, according to the company. A number of improvements have been made from the Premier LXL series. These improvements have resulted in a new high-end binocular that should appeal to birders.

At first glance, the most obvious external difference between the EDG and previous offerings from Nikon is the double-barreled construction. I have not always been a fan of this design, but I found these binoculars to be comfortable, thanks to a well-balanced feel. Even though, as usual, the thumb-depressions are not where I would like them to be, they are shallow, and therefore easy to ignore. They do not get in my way.

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The outer shell is comfortable, and it is not slick, even in very wet conditions, such as in extended rainforest downpours. Weighing in at 28.6 ounces for the 8× (28.9 ounces for the 10×), the EDG is slightly heavier than most of its high-end competitors, but the excellent balance makes up for much of that difference. The EDG feels durable. It has passed the “faceplant into a frozen snowbank



The double-barreled EDG is the first binocular that Nikon has designed specifically for birders, providing some major upgrades over the previous high-end offerings from the company. The EDG is positioned among the very best optics on the market. *Photo by © Derek Lovitch.*

test” in Snowbird, Utah, and survived at least one fall when I was hiking in the mountains of Maine.

Inside, the glass and coatings are totally new. Nikon's extra-low-dispersion glass (Extra-low + Dispersion + Glass = EDG; pronounced “edge”) “brings all of the different color wavelengths onto the same plane to reduce color fringing, and the di-electric coatings provide a 10% increase in light transmission over the Premier LXL,” according to Nikon. In other words, a lot of light is transmitted

through this binocular, and the resulting image is excellent. The edges are crisp, and the color is very “true.” This is definitely one of the brightest glasses on the market, and by far the best image Nikon has ever produced.

Also important is the significant improvement in the depth of field. Shallow depth of field has been a fault of the Premier series, in my opinion. Depth of field in the 8× EDG is very good, and it is good even at 10×. See the sidebar (this page) for additional perspective on depth of field.

Compared to the Premier LXL, the field of view has been improved by 40 feet to 408 feet at 1,000 yards (at 8×), which is excellent. In fact, the EDG offers one of the best fields of view—at each respective power—of any binocular in its class. The value of a superior field of view cannot be understated. In a nutshell, a wide field of view makes birds easier to find and easier to follow.

The EDG features an excellent minimum interpupillary distance, perfect for folks with close-set eyes. Although the ability to squeeze down to such a close interpupillary distance will not be important to many users, people who have had trouble with this feature on other binoculars will be gratified by Nikon’s solution.

### Eye-Relief and Focusing

I will preface the following comments by reiterating that I reviewed a pre-production model. When you take a look at the Nikon EDG at your favorite birding store, be aware of



Two aspects of the EDG are problematic. One is a hard rain-guard that seems “over-engineered.” The other is the sleeve over the focus wheel for adjusting the diopter; it disengages too easily. Both of these problems are being addressed by Nikon, however, as the EDG is tweaked before final production. Photo by © Derek Lovitch.

these issues, and scrutinize the EDG for a few potential problems.

The rigid, twist-up eyecups are comfortable enough, but there is a problem with them. Although the eye-relief is a more-than-adequate 19.3 millimeters for the 8×, the eyecups do not lock into place until they are at least halfway extended. Eye-relief of 19.3 millimeters for the 8× EDG (22.1 millimeters for the 7×) may be too much for some users; therefore, intermediate settings for the eyecups will

### Depth of Field

The distance within the image that is in focus at a given time is known as depth of field, and this is a critical component of the image of a binocular. I regularly comment on how important, and underrated, this variable is. That said, the how’s and why’s of optics performance—the physics of light and prisms—are not my forte. I really don’t care *why* they do what they do; I just want to know *how well* the binocular performs when birding. I don’t bird in a laboratory, and neither do you. However, a couple of recent conversations with optics experts have shed some light on the topic for me.

Depth of field turns out to be the same for *every 7×, every 8×, every 10×*, etc. It is fixed at each respective power. However, the *perceived* variability in depth of field that occurs when comparing two models is due to three factors.

Two of these three factors involve issues of “engineering.” The first of these is the speed of the focusing mechanism. A faster focus creates more depth of field, whereas slower focus creates a shallower depth of field. Second, an image imperfection known as spherical aberration of the exit pupil can impact a user’s perception of depth of field. An excellent, if complex, explanation of spherical aberration is provided at Paul van Walree’s website <[vanwalree.com/optics/spherical.html](http://vanwalree.com/optics/spherical.html)>.

Last but not least is the interpretation of depth by each individual’s eyes; everyone’s eyes focus differently. In fact, some experts believe that this is the single most important factor when comparing the depth of field between two different binoculars of the same power. Although this factor is personal and subjective, it is nonetheless real. Be sure to test depth of field on the EDG or any other binocular you are thinking of purchasing.



Nikon's extra-low-dispersion glass is especially welcome in such venues as the Guatemalan rainforest, as here, where leading North American optics authorities field-tested the EDG. *Patricinio Preserve, Guatemala; 5 June 2008. © Derek Lovitch.*

be necessary. For example, when I am wearing eyeglasses, I need to extend the eyecups a couple of millimeters for maximum success. Unfortunately, they cannot lock into this position, which soon becomes a real nuisance in the field, as I find I need to readjust the eyecups nearly every time that I bring my binocular to my face.

A more significant problem involves the diopter. The diopter sleeve, which slides over the center focus wheel, is too loose. It disengages regularly, even when the binocular is not being looked through, especially if you sling your binoculars off to your side. Then, when you bring your binocular up to your eyes and attempt to focus, the sleeve spins freely. Although the diopter itself does not move as easily, the disengaged sleeve does not permit you to focus.

At first, there's panic: "Oh, no! My brand new bins are out of alignment!" Then you realize it is only the diopter, but by now the bird has flown. When we were in the field during Nikon's launch event, it seemed that someone in the group, at just about every exciting, but brief, sighting, would swear as a bird moved away and out of view. Everyone knew what just happened. For me, it was a Collared Forest-Falcon that took flight just as I finally got my binocular on it, and I spun the focus wheel sleeve, never getting

the bird into sharp focus as it disappeared into the canopy. Again, Nikon says that this issue is being addressed.

On a positive note, the focus wheel—when engaged—is smooth and fluid, and it requires only about 1¼ revolutions between close focus and infinity, which is great. Also, with the excellent depth of field of this product, the need to focus is minimized. The EDG has a close focus of 9.8 feet, according to manufacturer's specifications, although I found the close focus to be better, coming in at 7.9 feet. These specs are about on par with most of the other offerings in this class.

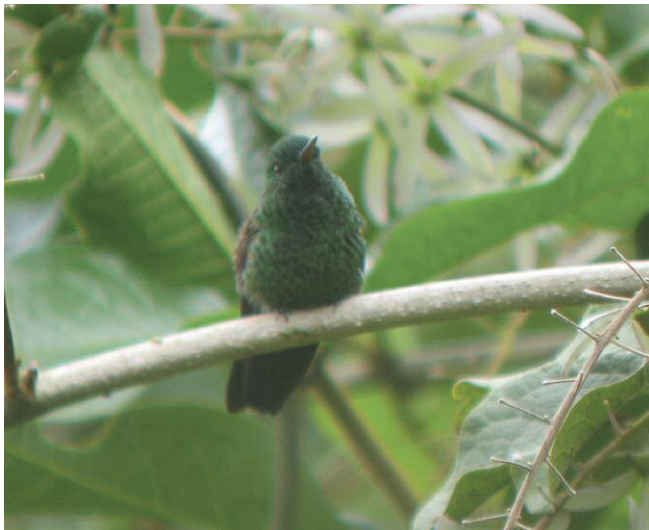
### Bells and Whistles

Once we have moved up to this highest level of glass and optical performance, many customers may make their final decision based on the proverbial bells and whistles.

Nikon has clearly taken these extras into consideration, and offers a number of new developments.

Personally, I do not have any use for objective lens covers. I tend to view these add-ons as floppy, dangling from the binocular, sometimes getting in the way of the view or creating problems with balance. I'll give Nikon credit for designing an objective lens cover that is a little more rigid, and thanks to a simple hinge, that firmly and stably folds underneath the binocular, remaining out of the way. Unfortunately, I lost one of mine in my first day in the field, so the security of the attachment may have to be reevaluated during the fine-tuning process.

On another front, I have to wonder what Nikon was thinking when designing the ocular covers (the rain-guard). The word "over-engineered" immediately comes to mind, as I find little added value in having a mechanism to lock the rain-guard to correspond with one's preferred interpupillary distance. Flexible rain-guards, as usually offered, do the same thing with less weight, and with a softer material. The biggest issue is a clanking against the body of the binocular, which is annoying. Also, this rain-guard is not as easy to flip on and off as I would like. In the case of rain-guards, I believe the status quo (soft, rubber-like rain-



This image was “digi-binned” using a Canon Powershot A95 camera and Nikon EDG 8×42 binocular. Nikon uses its trademark “Eco-Glass,” exceeding standards set forth in the Restriction of Hazardous Substances (RoHS) directive. It is gratifying to know that the objects of our devotion, like this **Blue-tailed Hummingbird** (*Amazilia cyanura*), may benefit from actions of enlightened corporations such as Nikon. *Los Andes Preserve, Guatemala; 6 June 2008. © Derek Lovitch.*

guards) is the preferred alternative.

Flared eyecups are also included, but for me they affect eye-relief too much to be of value. I do like the concept of flared eyecups to reduce glare, but I have yet to be satisfied with any company’s solution. Fortunately, these flared eyecups are easily removed—or not put on at all. I noticed that none of the folks at the Guatemala event were using them, and I think you’ll see why when you try out the EDG yourself.

The EDG features a nice, soft, wide neck strap, but I found the rubber coating on the undersides to be a bit uncomfortable in hot weather. However, I am a big fan of the adjustment mechanism. Binocular straps are usually a notorious pain to adjust, but this simple clip-lock mechanism allows for quick, easy, and painless length adjustment without even having to take your binocular off your neck.

Next is the matter of Nikon’s environmental policies. Although not exactly in the category of “bells and whistles,” Nikon’s policies, which I have mentioned before, deserve repeated praise. With the EDG, as well as with most of its other recent binoculars, Nikon is using its trademark “Eco-Glass,” and the company is now surpassing the standards set forth in the Restriction of Hazardous Substances (RoHS) directive (see *Birding*, July/August 2007, pp. 74–77). Corporations that are at the forefront of environmental progress should be commended.

Finally, there’s the warranty. This, too, isn’t exactly a bell or a whistle, but a binocular’s warranty is indeed an important consideration when making a substantial investment. Nikon now offers the best warranty of all high-end binoculars, with a lifetime warranty against defects, plus an impressive 25-year unconditional, no-fault policy. This really does sound great, but it has to be weighed against the reality of actual product service for defective equipment. Anyhow, if Nikon can back up this guarantee with timely service and repair, then its warranty will be a very significant value-added feature.

### Conclusion

All in all, Nikon has introduced an exceptional new product. If the final production models solve a few problems, then Nikon will really have added a worthy choice in the high-end market.

As always, with high-end binoculars, there is the subjective but important matter of what I term *jiffy*—“generalized impression of feel and image.” The Nikon EDG is really a great glass, and the bar has now been raised to the point at which I don’t think one particular high-end binocular blows anyone else out of the water. Therefore, your choice will come down to an admittedly subjective evaluation of how a binocular fits *your* face, how it feels in *your* hands, and how the image looks to *you*. I am often asked which binocular I recommend. That’s a tough question to answer, especially at the high end. They are all great, and although some products are better than others in certain categories or specifications, there are few products at the pinnacle of binocular technology these days that I would not wholeheartedly recommend. In the case of the Nikon EDG, I can only strongly recommend taking a long, hard look at this new high-end binocular, and giving it due consideration as you make your choice.

The Specs			
	7×42	8×42	10×42
Exit Pupil (millimeters)	6.0	5.3	4.2
Field of View (feet at 1,000 yards)	419	403	341
Close Focus (feet)	9.8	9.8	9.8
Eye-relief (millimeters)	22.1	19.3	18.0
Weight (ounces)	28.6	28.6	28.9