

## Nikon 70-200mm f/2.8G VR-II review

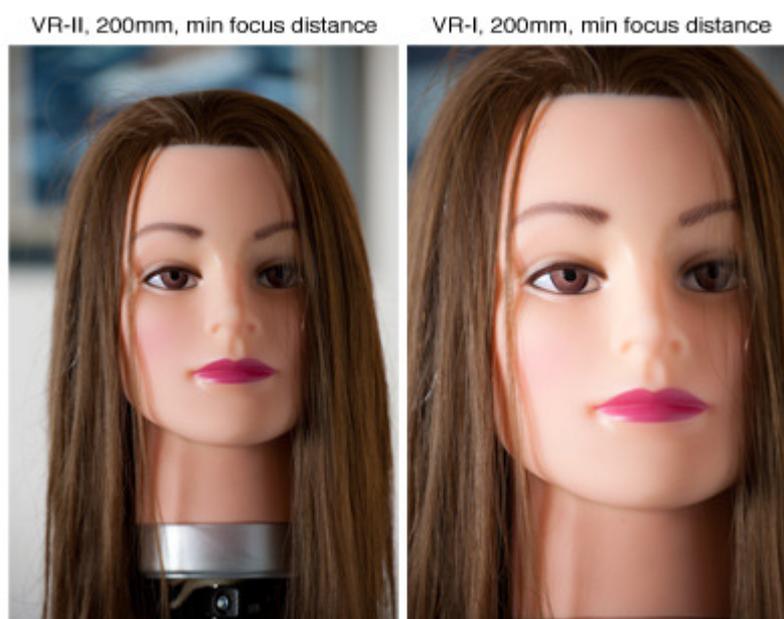
The original [Nikon 70-200mm f/2.8 VR lens \(Amazon\)](#) has been around for quite a while, and has been a workhorse lens for many of us. It has a number of characteristics, however, that aren't ideal for folks shooting full-frame FX cameras like the D3 or D3x; namely corner softness, light falloff or vignetting, an older VR system, and susceptibility to flare when shooting a backlit subject. So when the [new 70-200mm f/2.8 VR-II \(Amazon\)](#) lens was released, I ordered one, with the hope of replacing my original lens.

I'm going to write this review from my own perspective as a fashion and beauty photographer. I typically use this lens between 105 and 200mm, for anywhere from half-body shots to tight beauty shots. Things like corner softness and light falloff aren't as important for me as better VR, and wide-open performance at short distances. Landscape shooters will have a whole different set of requirements for a lens, and for the most part, I won't be addressing some of these things.

All testing was done with a Nikon D3x, using NEF files. Except as noted, all shots taken with a tripod, mirror lockup, and remote trigger. No output sharpening was used on any of the photos we're looking at here.

### **The elephant in the room**

As I mentioned, I shoot from close distances at the long end of the range with the original 70-200, looking for tight framing for beauty and head shots. One of the characteristics of the new lens is the "breathing" of the effective focal length as you zoom in. At minimum focus distance (about 4.5 feet), the effective field of view is approximately 135mm, rather than about 190mm of the older lens. To illustrate this, here is a comparison of the new and old lenses, both at an indicated 200mm, both at roughly their minimum focus distance:



(click for larger version)

This is a significant difference in framing. The reason for this has to do with the internal focus lens design; the old lens was also an IF design, but obviously dramatically different.

### **Sharpness at minimum focus distance**

Let's take a look at the overall lens performance at its highest magnification, such as one might use for a head shot. In this case, I've tried to match the field of view between the new and old lenses; the new lens was set at an indicated 200mm, and the old lens was set to 135mm. As you can see, I didn't get the field of view matched exactly, but it's close enough to evaluate the difference.

For reference, this is the overall frame we are looking at:



The focus point was on the model's right eye, showing the following detail:



(click for larger version)

Be careful when looking at the full size versions that your browser isn't scaling the images; click on them to zoom into 100% if you need to.

We can see that the new lens is critically sharp even at f/2.8 at indicated 200mm at closest focus distance; this is quite an impressive performance. The older lens (at 135mm) appears to be a touch soft at f/2.8, better at f/4, and critically sharp by f/5.6. It's worth noting that we are at extreme magnifications from a 24MP image here, with no output sharpening – for most applications, the old lens even at f/2.8 will deliver acceptable sharpness.

Just for fun, let's look at some images at maximum magnification with the old 70-200 at 200mm; reference image:



And the close-up detail:



(click for larger version)

Here we see the problem I was hoping the new lens would solve; at 200mm at MFD, the old lens is a bit soft at  $f/2.8$ , improved by  $f/4$ , and great by  $f/5.6$ . Note we are focused fairly near the center of the frame; it gets softer if you move the focus point further out. Unfortunately, the new lens cannot achieve this magnification, so this particular shot cannot be duplicated.

### Perspective

There is another impact of the reduced effective focal length, and that is the perspective changes between the lenses. For purposes of this write-up, I'll just focus on the background behind the subject.

The new lens at 200mm at MFD achieves the same framing as the old lens at roughly 135mm at about the same distance. But another option with the old lens is to keep the same framing of the subject, but back up a few feet and use 200mm instead. The impact of this, aside from some small perspective changes on the subject herself, is to change the appearance of the background...and to effect what is known as the bokeh, or the appearance of the out-of-focus areas of the image.

I demonstrate this here. The subject is the focus point, but quite underexposed in order to more readily draw attention to the background. The left column is the new lens at max magnification at 200mm, and the right column is the old lens, at 200mm, from further away to achieve roughly the same framing.



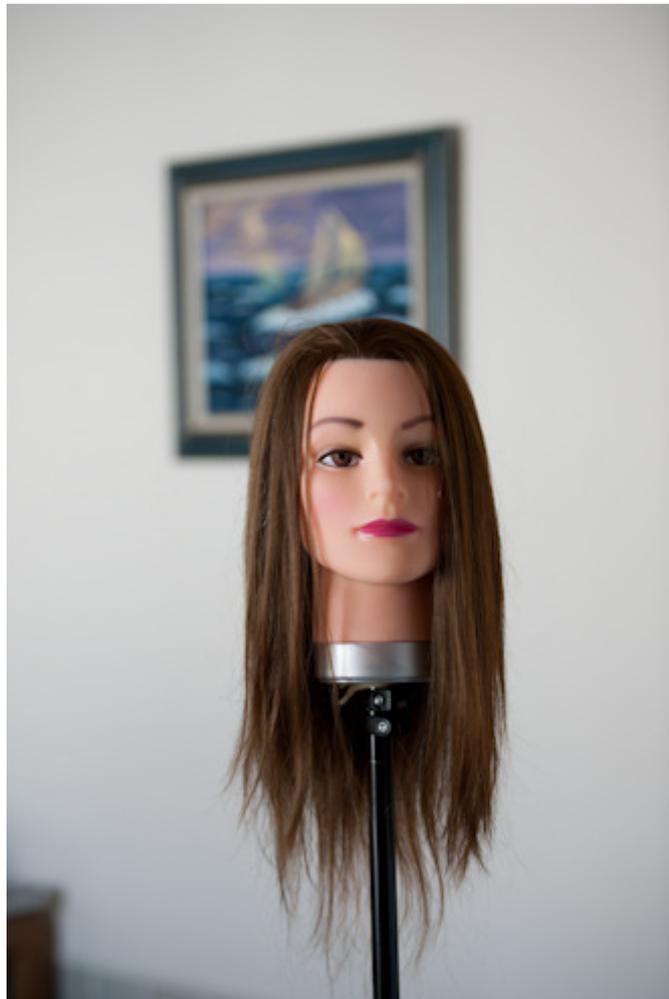
(click for larger version)

[note, these shots taken handheld]

If you look at the last row (at f/16), you can see what the background actually looks like, and the difference between the two perspectives; then peruse the f/2.8 and f/4 versions to see the difference in “bokeh”.

### Wider focal lengths

I don't usually shoot the 70-200 at the wide end for my work, but I thought I'd run through a quick test anyway to see how the two lenses compared to each other, and also to the fabulous [Nikon 24-70mm f/2.8 \(Amazon\)](#). Overall scene:



And the close-up detail:

f/2.8, 70mm

70-200 VR



70-200 VR II



24-70

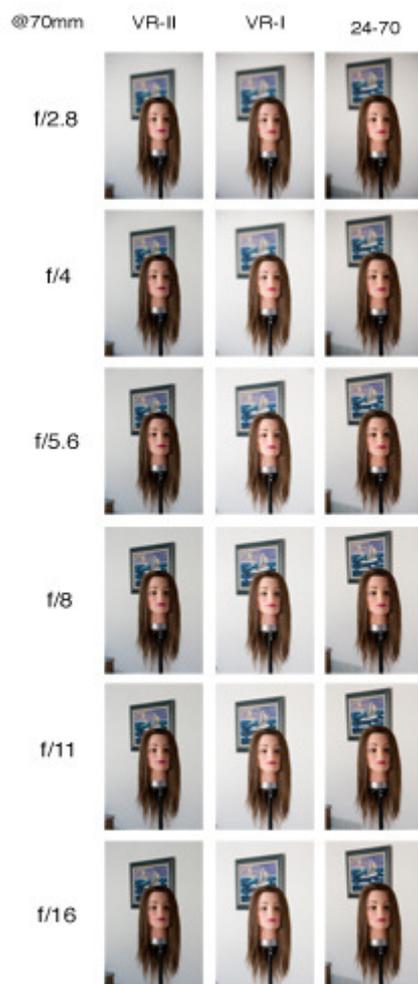


(click for larger version)

All of the lenses performed well here, although interestingly the old 70-200 seems a touch sharper than the new one.

### **Vignetting / Light falloff**

The old 70-200 had fairly significant light falloff into the corners when used on full-frame Nikon bodies. The newer lens reduces (although doesn't quite eliminate) this effect. Focus your attention on the top corners in these photos; the bottom corners are a bit harder to interpret due to the lighting and framing:



(click for larger version)

Interestingly, the new 70-200 seems to be even better than the 24-70 at 70mm in this regard, which is something I would not have expected.

### **Vibration reduction**

I don't have actual photos to post here; however, in practice I found the new VR system to be very effective; dramatically more so than the original VR lens. For example, I've got several shots at an indicated 200mm at 1/13 sec which are truly tack sharp, something I've rarely if ever achieved with the older lens. There are plenty of other articles on the net with examples of this.

### **Contrast**

The contrast of the new lens when shooting backlit subjects is dramatically better than the older lens. Example:



(click for larger version)

This is a bit of a worst-case example, with the background many stops brighter than the subject, but should at least give you an idea of how the new lens deals with backlighting as compared with the original lens.

### Conclusions

Nikon's new 70-200mm lens has a lot going for it. Incredibly sharp optics, dramatically better VR, much reduced light falloff, and excellent contrast even in severe lighting conditions. It's unquestionably the best zoom lens in this range I've ever used. Everything about the new lens appears to be significantly better than the old lens...but...

The field of view at close focus distances, for my work, is a problem. The original 70-200 is my go-to lens for beauty and head shots, and the new lens can't reproduce the same framing that I can get (and regularly use) with the original. In these cases, I can't step any closer to the subject (because I'm already near the minimum focus distance), so the only option would be to crop into the files. There are plenty of pixels to do this with the D3x, for headshots and the like when 8×10 or 11×14 is likely to be the largest print required; however, for commercial and other work, I don't want to be forced to crop into the files.

There's always a tradeoff...

[EDIT Dec 12 2009: I re-shot the 200mm MFD images on the original lens, which are now better than before at f/2.8 through f/5.6; not sure what happened originally, but I think I must have had a bit of vibration when I was shooting. In any case, the text and associated images are now updated.]

If you found this review useful, use our link to purchase this new lens, or any other gear you need, at Amazon! [Nikon 70-200mm f/2.8G ED VR II AF-S NIKKOR Lens](#)

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