

LENSTESTS



Sigma

Fine performance at an amazingly low price!

Hands on: Attractively finished in matte black, Sigma's 24-70mm f/3.5-5.6 HF is an ounce or two lighter than the current breed of variable-aperture 24-70 and 24-80mm zooms, and about average in length. Zoom and focusing rings are amply-sized, grippably ribbed, and rubber-clad. Large, legible white-on-black markings include feet/meter focusing scales, 24-, 28-, 35-, 50-, and 70mm zoom settings, infrared focusing index, and depth-of-field scale that, due to the focusing ring's very short turning radius, offers little practical help in estimating depth of field. Both zoom and focusing actions are smooth and well-damped. As the lens' HF (Helical Focusing) designation indicates, the outer lens barrel doesn't turn during focusing. (HF is Sigma's designation for internal focusing.) Our Canon-mount test zoom also had the usual manual/autofocus switch located on the barrel beside the mount.

In the lab: SQF data indicate excellent imaging performance at 24- and 50mm; very good at 70mm. At 24mm, we found considerable barrel distortion (2.5 percent). At 50mm (0.4 percent) and 70mm (.35 percent), minimal pincushion distortion (0.4 and .35 percent respectively).

Exposure accuracy at the film plane was extremely accurate at 24mm, with underexposure by 1/3 stop at maximum aperture due to light falloff, less than 1/10-stop overexposure from f/5.6-11, and less than 1/10 underexposure at f/16 and f/22. At 70mm, exposure was very accurate, with 1/10-stop underexposure at maximum aperture due to light falloff, 1/3-stop overexposure

from f/8-16, and 1/5-stop underexposure from f/22-38.

At the close-focusing distance of 13 3/4 inches at 24mm (1:10.4), center sharpness was excellent from f/3.5-16, very good at f/22. Corner sharpness was poor from f/3.5-5.6, acceptable at f/8, good at f/11, very good at f/16, and good at f/22. Optimum performance was at f/16.

At 50mm, and the closest focusing distance of 13 1/2 inches (1:5), center sharpness was excellent from f/4.5-16, very good at f/22, and acceptable at f/32. Corner sharpness was poor from f/4.5-11, acceptable at f/16, very good at f/22, and acceptable at f/32. Optimum performance was at f/22.

At the 70mm minimum focusing distance of 14 inches (1:3.8), center sharpness was excellent from f/5.6-11, good at f/16, excellent at f/22 and acceptable at f/38. Corner sharpness was poor from f/5.6-16, and acceptable from f/22-38. Again, optimum performance was recorded at f/22.

In the field: Test slides were very sharp and contrasty from center to corner at every aperture and focal length. Light falloff was gone by f/5.6 at 24mm, and virtually non-existent at 50mm and 70mm. Flare, too, was barely detectable at all apertures and focal lengths.

Conclusion: An extremely good optical performance for a \$100 (street price) zoom leaves us wondering why this lens is so inexpensive. It is a third of the street price of that of any other zoom (that we could find) that also offers 24mm. It's even got a focusing ring with feet and meter markings!

Sigma 24-70mm f/3.5-5.6 HF



SPECIFICATIONS

24-70mm (25.02-68.11mm tested), f/3.5-5.6 (f/3.55-5.84 tested), 9 elements in 7 groups. Focusing turns 40 degrees counterclockwise. Zoom ring turns 80 degrees counterclockwise. Focal lengths marked at 24-, 28-, 35-, 50-, and 70mm. **Diagonal View Angle:** 75-34 degrees. **Weight:** 10 9/16 oz. **Filter size:** 62mm. Mounts: Canon AF, Minolta AF, Nikon AF, Pentax AF, and Sigma AF. **Lenshood:** Included. **List price:** \$190. **Street price:** Approx. \$100.

SUBJECTIVE QUALITY FACTOR

Mag	A+	A	B+	B	C+	C	D	F
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@24mm

MAG	5	6	8	12	17	22
Size	4x6	5x7	8x10	11x14	16x20	20x24
3.5	96.8	96.5	95.4	92.9	88.0	82.3
5.6	96.5	96.2	95.0	92.2	86.7	80.0
8.0	96.4	96.0	94.8	91.9	86.1	79.2
11.0	96.4	96.0	94.8	91.9	86.2	79.3
16.0	96.2	95.8	94.5	91.4	85.3	77.9
22.0	95.5	95.1	93.6	90.0	82.7	73.8

@50mm

MAG	5	6	8	12	17	22
Size	4x6	5x7	8x10	11x14	16x20	20x24
4.5	97.2	96.9	96.0	93.8	90.1	85.8
8.0	96.9	96.6	95.5	93.1	88.6	83.3
11.0	96.8	96.5	95.4	92.9	88.2	82.7
16.0	96.9	96.5	95.4	93.0	88.5	83.4
22.0	96.3	95.9	94.6	91.7	86.1	79.3
32.0	95.3	94.9	93.3	89.5	81.1	70.6

@70mm

MAG	5	6	8	12	17	22
Size	4x6	5x7	8x10	11x14	16x20	20x24
5.6	95.9	95.3	93.2	87.3	78.8	72.2
8.0	96.1	95.6	93.6	88.2	80.2	73.6
11.0	96.4	95.9	94.1	89.4	82.4	76.5
16.0	96.5	96.1	94.4	90.0	83.5	77.6
22.0	96.2	95.7	93.8	88.8	80.9	73.7
38.0	94.1	93.3	90.1	80.9	65.7	52.7