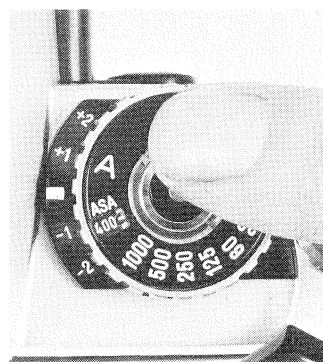


# modern tests

the 50mm f/1.7. Like other Rokkor-Xs, this standard lens—which has been little changed in optical design these past few years—is finished in satin black with unusually large numerals (all white save for the footage scale which is green). There's a raised red lens mounting dot so you can attach a lens without looking at it, and a very nice diamond-pattern, rubberized-grip focusing ring.



**Need auto-exposure compensation? Just match the A on shutter speed dial to the correction needed. Here it's set to +1 EV.**

amount of red flare. As a result, we encountered a focus shift of about .06mm when stopping down from f/1.7 to f/4, but this is well within acceptable tolerances. At f/5.6 the image was nearly perfect. Off-axis, we saw a weak skew-ray flare which disappeared at f/2.8. A small coma flare persisted until f/5.6. There was no astigmatism or lateral color evident. We judged the overall image quality to be very good to excellent. *In field test slides:* our field test color transparencies displayed the slight softness we expected, due to the zonal spherical aberration. However, at f/2.8 and smaller openings, the film images were very crisp and sharp. Off-axis, we saw the very weak one-sided flare identified with the slight coma, but no other image faults were observed.

In our close-up exposures, taken with the object at about a half meter, we found no increase in flare, and only a slight curvature of the focus. We detected this as an increase in off-axis sharpness when we defocused the lens slightly. Overall, the on-film images were very good.

## 17mm f/4 ROKKOR-X ULTRA-WIDE FOR MINOLTA

**Mounts:** Minolta bayonet  
**Filter size:** 72mm screw-in  
**Apertures:** f/4 to f/16  
**Min. focus dist.:** 10 in. (25cm)  
**Features:** Multicoating, floating-element design for sharper edges at close distances  
**Serial no.:** 2016158  
**Size:** 3 in. diam., 2.42 in. long (76 x 61.5mm)  
**Weight:** 11.5 oz. (326g)  
**Price:** \$420; may be available at a discount price  
**Practical Comments:** This 17mm lens covers nearly 115° corner to corner with very little distortion. One millimeter shorter, and you're into the full-frame fisheye lens in the Minolta line. A lens of this type is typically used for architectural work or scenic panoramas, but technology has im-

proved a lot so that it can also perform with quality at close distances. Before Minolta redesigned its 17mm lens it did not have the floating-element system, so we were looking for improved corner image quality in close-ups. We found it—off-axis image quality was good even at the closest focusing distance of about 10 in. (magnification about 1:14).

Wide-angle lenses usually have greater problems with light falloff which causes vignetting at the corners. This was evident with this lens also, but stopping down to f/5.6 (one stop) and smaller apertures minimizes this problem.

In a short focal length lens, the elements move a very small distance, hence, Minolta wisely chose to design this ultra-wide angle with a very short (less than 80°) focus-ring turning radius. This way, sharp focus is more easily apparent in the viewfinder. The 72mm filter size makes buying quality filters very expensive—you may find that cheaper, replaceable gelatin filters are more practical.

### Performance

Our standard	Tested
<b>Focal length:</b> ±5% (16.5-17.85mm)	17.30mm
<b>Max. Aperture:</b> ±5% (f 3.8-f 4.2)	4.15
<b>Distortion:</b> ±2.5%	.8% (Pincushion)
<b>Light Fall-off:</b> at f 5.6 ± 1 stop from theoretical limit: (-2.8 stops), actual, -1.9 stops	

**On the Optical Bench:** We found a small amount of overcorrected spherical aberration which created a focus shift of about .2mm at maximum aperture. In our tests we found almost no other aberrations. The central image is just about perfect when

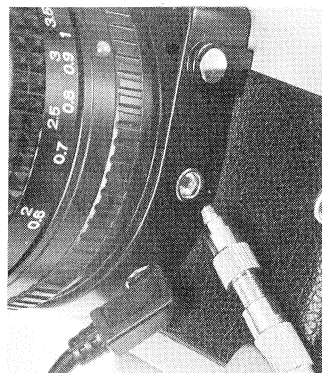
tions, such as coma and lateral color, were almost unnoticeable. At f/8 the image was clean and sharp. We also examined the optical image with the test target



**Test lens was MC Rokkor. MD version will be the same optically, so test results apply.**

at 12 in. to check image quality with the floating-element system in use. There was a decrease in the overcorrected spherical aberration on axis, and the off-axis image quality was actually improved over the infinity image. The distortion increased to slightly over one percent (pincushion-type) in the close-up test, but this is still well below tolerance limits. *In field test slides:* Our color transparencies showed only a slight softness when the lens was used wide open at f/4. Stopped down, the film image left little to be improved on, either centrally or near the edges. In close-ups, we found the expected improvement in image quality when we compared pictures taken with this lens and those taken with its predecessor without floating elements. When we included the middle area of the film image we found that the floating-element design indeed represented an improvement. Ghosts were observed when we took backlighted pictures as red, or pink diaphragm reflections, but they are relatively weak and not annoying. No general haze or flare was observed elsewhere in the picture. About the only problem we had was a focus shift between f/4 and f/8. Our pictures showed a remaining softness at f/8, which was improved by a slight refocusing of the lens before exposure. This can be traced back to the moderate, over-corrected spherical aberration and it means that the camera user should refocus at f/8 in a stopped down position. This focus shift was detected only in the most critical images, and was not noticeable in ordinary picture taking.

The absence of distortion makes the super-wide pictures produced with this lens outstanding. Its superior performance for close-ups makes it a highly desirable addition to the Minolta lens line.



**Three XG-7 controls, top to bottom: lens release button, cable release socket (which also accepts electronic remote control cables) and PC cord terminal.**

### Resolving Power

at 1:50 magnification			
f/no.	Center Lines/mm	Corner Lines/mm	
1.7	Excellent	71	Excellent
2.8	Excellent	80	Excellent
4	Excellent	89	Good
5.6	Excellent	89	V/Good
8	Excellent	89	V/Good
11	Excellent	71	Excellent
16	V/Good	63	V/Good

### Image Contrast

at 30 lines/mm			
f/no.	Center %	Corner %	
1.7	Low	38	Low
2.8	Low	46	Low
4	Low	54	Low
5.6	Low	60	Medium
8	Low	60	Medium
11	Low	54	Medium
16	V/Low	48	Low

While the lens with its 1⅞-in. length and 2½-in. overall diameter (it takes 55mm accessories) cannot be considered compact, the front lens element is well recessed within the barrel, making a lens hood really unnecessary. There are click half f/stops as well as full f/stop indentations. The lens operated with the characteristic Minolta precision and smoothness which is to say, very well indeed.

**On the Optical Bench:** We found a moderate amount of zonal spherical aberration and a small

### Resolving Power

at 1:50 magnification				
f/no.	Center Lines/mm	Corner Lines/mm		
4	Exc.	64	Exc.	0
5.6	Exc.	64	Exc.	40
8	Exc.	64	Exc.	44
11	V Good	64	Exc.	44
16	V Good	56	Exc.	44

### Image Contrast

at 30 lines/mm				
f/no.	Center %	Corner %		
4	Low	40	Low	21
5.6	Low	57	Low	28
8	Low	61	V/Low	34
11	Med.	57	V/Low	38
16	Low	44	Low	38

the lens is stopped down one stop to f/5.6. The star image pattern appeared well centered. Off axis, at about 50°, we saw a bit of skew-ray flare which disappeared at f/5.6. Other aberrations