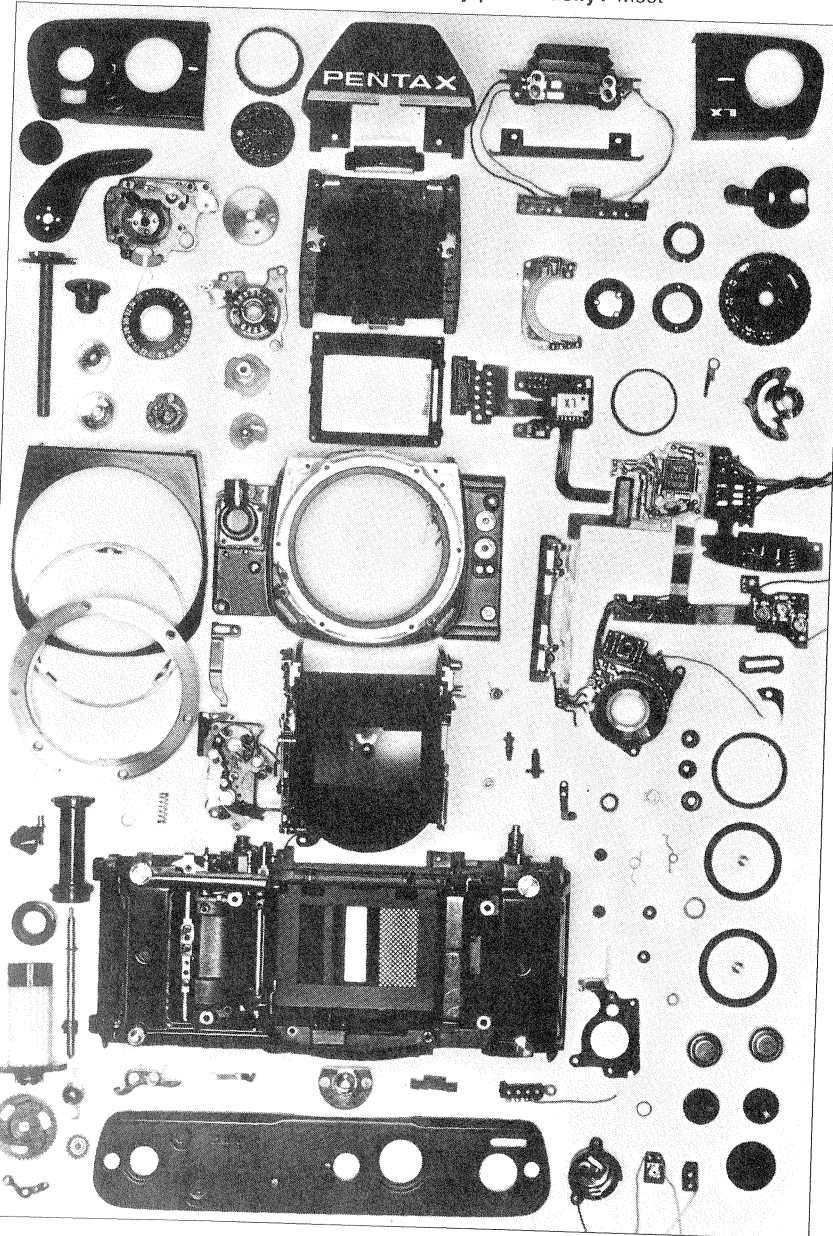


# Lab Report

(continued)

## Stripdown Report

	Interior	Exterior	
Material choice:	Good	Good	Repair access: Fair
Assembly, finish:	Good	Good	Seal against dirt: Good
Do frequently made adjustments require major stripdown? No			
Modular construction? Semi			
Replace key parts easily? Most			



Using semimodular construction, LX is complex, expensively made. Shutter curtains are shown trapped to form slit used for 1/300 sec. Polka-dot pattern on opening curtain serves to reflect light to photocell.

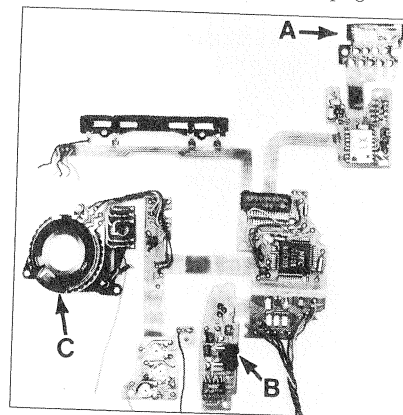
Even before you remove the first screw from the LX, a close look at the exterior tells you this is not just another SLR. Pentax has never lavished as much attention and effort on any preceding model.

In the final assembly stages of building the LX, a black, liquid silicon rubber is applied to every joint between the various cover panels and the main casting. This liquid gasket, or caulking, oozes out of each joint, is wiped off, additional amounts are added to any outside seams and joints as needed, and the camera is set aside to give the caulking time to dry.

The result is best appreciated when viewed with a magnifier. Looking closely at each seam and joint you'll see an unbroken flow of material from one surface to the next. Even the rim of each screw is caulked to the panel it secures. The black silicon rubber cures so that its surface gloss and hue are nearly identical to that of the adjacent black-anodized aluminum panels.

Regions that do not lend themselves to such a treatment are gasketed in other ways. Plastic foam with fine, closed, nonconnecting cells, as well as semirigid plastic moldings of various shapes form the gaskets used at points where the external

/continued on page 126



Flexible circuit board features LED array "A", silicon photocell "B", film-speed/exposure-bias-setting control "C". Also visible are four integrated circuits and three of the four potentiometers used to adjust various camera functions.

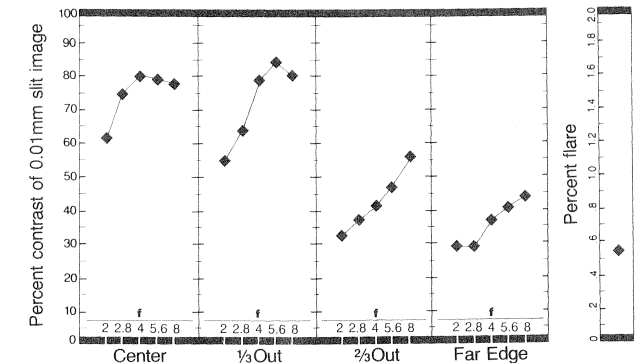
## Lens Performance

(See Lens Test Glossary, page 127)

SMC Pentax-M 28-mm f/2 Ser. No. 7432870

Dimensions: O.D. 63.0 mm (2.48 in.) L: 41.5 mm (1.63 in.) Weight: 217 g (7.59 oz.) Filter size: 49-mm  
Close working limit: 200 mm (7.87 in.) Close limit field size: 175x265 mm (6.89x10.43 in.)  
Focal length: Marked: 28-mm Measured: 28.54-mm f-number: Marked: f/2 Measured: f/2.13 T-number: T-2.27

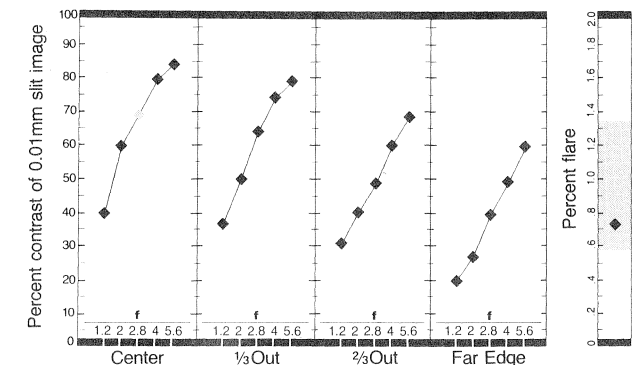
Aberration	1/3 out	2/3 out	Far edge	Notes
Coma	4	4.5	6.3	Critical f-stops
Astigmatism	2	6.3	2	
Lat. chrom.	None	V. slight	Moderate	
Long. chrom.	blue-green-red = 0.04 mm			Focus shift
Spherical	f/2-f/5.6 = +0.05 mm			
Distortion	Very slight barrel			
Vignetting	None beyond f/4			
Centering	Near-perfect			



SMC Pentax 50-mm f/1.2 Ser. No. 1461388

Dimensions: O.D. 65.0 mm (2.56 in.) L: 48.5 mm (1.91 in.) Weight: 391 g (13.68 oz.) Filter size: 52-mm  
Close working limit: 342 mm (13.46 in.) Close limit field size: 160x246 mm (6.29x9.68 in.)  
Focal length: Marked: 50-mm Measured: 52-mm f-number: Marked: f/1.2 Measured: f/1.25 T-number: T-1.32

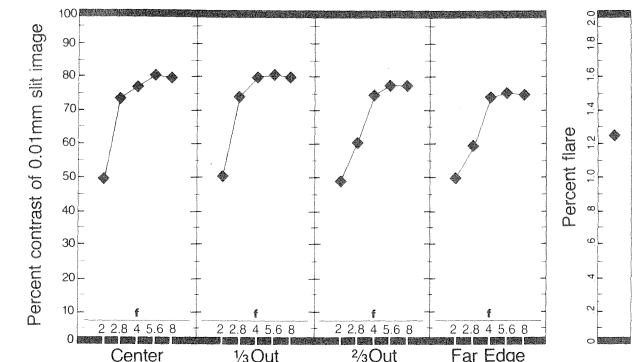
Aberration	1/3 out	2/3 out	Far edge	Notes
Coma	1.2	2.8	5.6	Critical
Astigmatism	1.2	5.6	1.2	f-stops
Lat. chrom.	None	V. slight	V. slight	
Long. chrom.	blue-green-red = 0.16 mm			Focus shift
Spherical	f/1.2-f/4 = 0.00 mm			
Distortion	Above average barrel			
Vignetting	None beyond f/2.2			
Centering	Perfect			



SMC Pentax-M 85-mm f/2 Ser. No. 6978651

Dimensions: O.D. 62.4 mm (2.45 in.) L: 46.5 mm (1.83 in.) Weight: 252 g (8.82 oz.) Filter size: 49-mm  
Close working limit: 730 mm (28.74 in.) Close limit field size: 184x276 mm (7.24x10.86 in.)  
Focal length: Marked: 85-mm Measured: 84.98-mm f-number: Marked: f/2 Measured: f/2.15 T-number: T-2.22

Aberration	1/3 out	2/3 out	Far edge	Notes
Coma	2	2.8	3.5	Critical f-stops
Astigmatism	2	5.6	2	
Lat. chrom.	None	V. slight	V. slight	
Long. chrom.	blue-green-red = 0.06 mm			Focus shift
Spherical	f/2-f/5.6 = -0.02 mm			
Distortion	None			
Vignetting	None beyond f/2.8			
Centering	Near-perfect			



**Mechanical:** Strong and simple seem to be the rule at Pentax. These three lenses adhere to this, with their autodiaphragm systems and general construction. The focusing helioids of the 28- and 85-mm are all-aluminum, the 50-mm is aluminum-brass-aluminum. All three have twin parallel-focusing guide arms. The two shorter lenses use bronze for guide arms, the long lens chrome-plated brass. There's good blackening and baffling against flare except for two element edges at the rear of the 85-mm, which were likely responsible for the (still respectably low) flare level.

The two shorter lenses use bronze for guide arms, the long lens chrome-plated brass. There's good blackening and baffling against flare except for two element edges at the rear of the 85-mm, which were likely responsible for the (still respectably low) flare level.