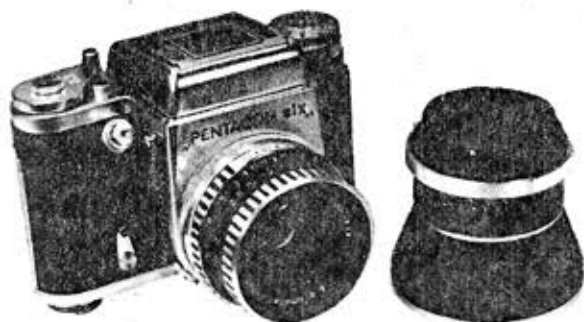


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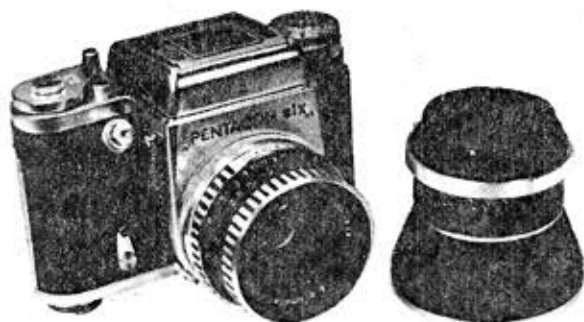
# TEST REPORT



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BY NEVILLE MAUDE



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The range of lenses for the roll-film Pentacon Six (and previous Praktisix) is one of the reasons for choosing this particular type of camera. The camera review showed the performance of the normal lens (*A.P.*, 24.1.68) and in this issue we examine the rather amazing 50mm Flektogon, and the useful 180mm Sonnar, a dual-purpose lens which can be used for 35mm also.

### The 180mm Olympic Sonnar

The Olympic Sonnar was introduced for the Berlin Olympic Games, which were held in 1936, the particular need being for a wide-aperture long-focus lens of light weight. The makers, Carl Zeiss of Jena, have constantly improved it over the years in the same way as other famous lenses, such as the Tessar, so that the present performance is far better than the original, though no dramatic leap forward occurred in any particular year. It should, perhaps, be pointed out at this juncture that the Olympic lens is not the same as the Olympia, though the latter has no connection with Earls Court.

The mount of the Olympic Sonnar is completely new. Basically the design is a five-element lens for 6 x 6cm negatives, especially the Praktisix. An automatic extension is fitted which maintains the

F.A.D. mechanism whilst giving a screw-threaded mount for the Praktica/Pentax lens thread. This means that the same lens can be used on the Praktisix or on 35mm cameras with Praktica or Pentax-type threads. This facility could be useful, for example, if the photographer wanted good roll-film black-and-white negatives for big prints and also 35mm colour transparencies for projection. The Sonnar is also available with the Exakta bayonet mount (still with automatic diaphragm). On test the lens gave an excellent performance, as the pictures show. Even at its full aperture of f/2.8 sharpness proved

good, while at f/4 to f/5.6 peak performance was reached. Indeed, there was a tendency for the grain structure of the Panatomic X film to break up on the 20 inch test prints before the apparent sharpness limit was reached. A test was also run with the Sonnar on the Praktica-mat, using Pan F film. Since only the centre of the lens was being used, it was no surprise to find first-class negatives throughout, again with the peak being reached at between f/4 and f/5.6.

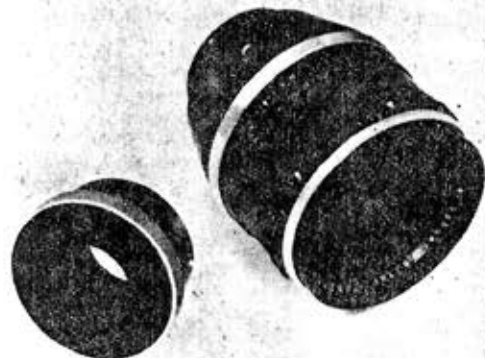
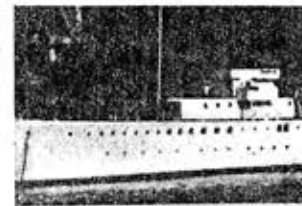
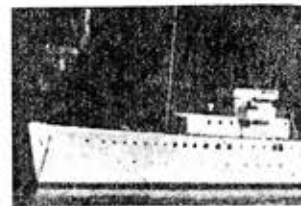
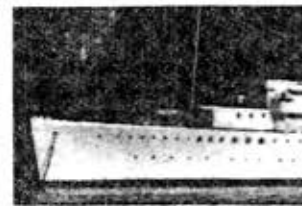
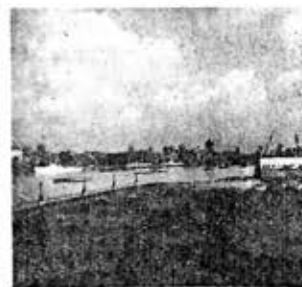
The 180mm Sonnar has a fully automatic iris, stops down to f/22, focuses to 7ft 3in., and has an 86mm filter thread. It weighs about 2lb, which is light for its specification, and in practice it proved quite easy to hold in the hands though there is a tripod screw on a rotating collar. The price is £100 5s 8d.

### The 50mm Flektogon

This is the widest of the Pentacon Six lenses, covering an angle of 75°. Roughly speaking this could be held to correspond with a 28mm lens for 35mm film. Made by Zeiss, the lens has 7 elements, focuses to 18 inches, and has a fully automatic iris stopping down to f/22. Filter thread size is 58mm. It is the performance which really matters, and this proved

### LENS PERFORMANCE

The first pictures show the entire field of view as recorded on the negative, with the ship central only for the 180mm lens, central and edge for the Flektogon. The other pictures are same-size reproductions of parts of 20 inch prints made from negatives exposed at various apertures as indicated. Panatomic X film was used.



The Olympia Sonnar has a dual-purpose fitting. It can be placed on a Pentacon Six or screwed in a 35mm camera with a Praktica/Pentax-type mount. The adapter is here shown removed.



surprisingly good. Indeed, even at the widest opening of  $f/4$  the 20 inch prints showed excellent edge-to-edge sharpness. This may be partly due to the sensible idea of making the lens an  $f/4$  instead of  $f/2.8$  as might be expected from some firms. At  $f/5.6$  the image became crisp, with little further change. A rather unexpected result was that, at full aperture, the edge was just a trifle sharper than the centre! Several repeat tests were made to verify this and it does

not appear to be due to film curl. A noteworthy feature of the lens is the excellent control of distortion; inevitably the edge ship is appreciably longer than the centre, but a photographed square stays substantially square rather than becoming too much of a pincushion or barrel.

The Zeiss Flektogon 50mm  $f/4$  costs £101 4s 6d and, like the 180mm Olympic Sonnar, is distributed by C. Z. Scientific Instruments Ltd.



## THE GALAXY FISH-EYE ATTACHMENT

Here the Galaxy attachment is shown fitted to a Prinzflex with 50mm lens. This was used to take the photos in this review.

Fish-eye lenses are great fun to use, and their unusual perspective can be employed to good purpose once the photographer has gone beyond the stage of "shock" closeups and the like. However, price must be considered and the cheapest we have yet seen is about £50 while at £300 odd the admirable 7.5mm Nikon is rather expensive. One answer is to use an attachment, and the Prinz Galaxy is priced at £32 19s 6d. Much has been said in recent articles about fish-eyes so here we need only describe this specific lens.

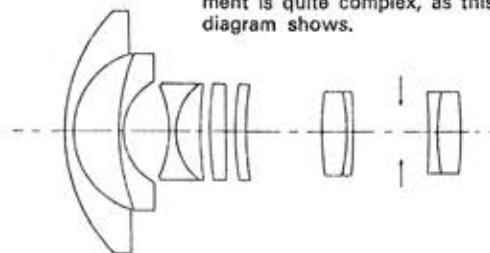
The Galaxy uses adaptors to fit on the

front of the camera lens, and provides a ratio of enlargement of 0.15X, with a maximum aperture of  $f/3.5$  to  $f/90$  according to the focal length of lens. As is usual, it is clearly marked as giving a field of  $180^\circ$ , which is just not so. Image size varies with the focal length of the prime lens, and the image diameter can be calculated by multiplying the focal length of the prime lens by 0.42, so with a 50mm lens the image circle is about 20.9mm in diameter. It is possible to use the Galaxy attachment on roll-film cameras also, but obviously one gets only a small circle in the centre of the



An enlargement from one of the contact frames illustrated. At  $f/11$  the picture is sharp in the centre on a glossy 10 x 8 inch print, but falls off a little, on very close inspection, at the edge.

The construction of the Prinz Galaxy 0.15 x fish-eye attachment is quite complex, as this diagram shows.



This shows the image size produced by this fish-eye auxiliary lens with a 50mm prime lens.

negative. There seems to be little point in using the attachment with wide-angle lenses, since this reduces image scale without increasing the angle of view. However, the device can be put on long focus lenses when a large-scale image is needed. Calculations are simple, but also pointless since it is much easier to look through the reflex and see the results!

### Fish-Eye Cine

One can also fit the Galaxy on cine cameras, save perhaps some zoom mode and the results are certainly unusual. Indeed, a travelling shot down a narrow corridor is quite traumatic. This point out a great advantage of the attachment over the lens, the conversion device can be fitted to a whole range of prime lenses for various effects.

### Exposure Measuring

The effective aperture of the Galaxy and prime lens combination is shown on the attachment, which has a scale showing apertures according to focal length. T.T.L. metering, which is so often an ideal answer, is not perfect in this case since often the alignment needles do not in the field of view seen through the finder. However, one can use a separate meter, or employ the camera, without the attachment, as a meter and subsequently adjust the settings. It should be noted that the prime lens must be wide open and aperture adjusted on the attachment—failure attends the opposite course.

### Focusing

Many fish-eye lenses do not focus, but attachments do since the prime lens movement is more than sufficient. Indeed with a 50mm lens focused almost full out, objects touching the glass of the front element have proved to be sufficiently in focus. Possibly further extension would make the lens assembly focus inside its own front element, but this thought is sufficient to induce most physical nightmares.

### Results in Practice

There is no real point in producing "sharp" pictures for this sort of attachment. However, for the record the sharpest results were achieved with the iris set three stops or so down from maximum, say  $f/11$  with a 50mm lens. In general the pictures proved perfectly satisfactory for normal purposes and in particular neighbours were highly amused when colour transparencies were projected. The Galaxy is easily carried, being 3.5 x 2.4 inches long and weighing 9g. The rather vulnerable front element is protected by a plastic lenscap which should be best kept in place during storage and should be removed with reasonable care since pipe-wrench treatment if a three crosses can break the stop screw inside.

### Verdict

To date this is the least expensive way of taking fish-eye pictures. The Galaxy attachment is versatile and, I repeat, can be great fun to use. The suppliers are Dixons.