

PRAKTIKA

PHOTOGRAPHY

1977 No 5



THE JOURNAL OF THE PENTACON CLUB



In praise of the Pentacon-Six

BY

A. M. CARLSSON

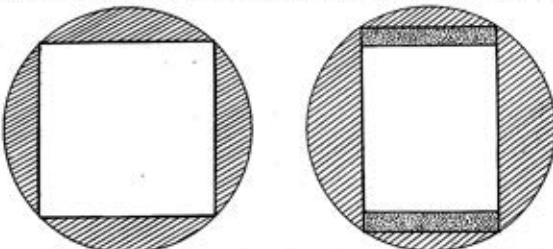
MOST READERS are aware that membership of the Pentacon Club is open to owners of *all* types of cameras made by Pentacon at Dresden; and, from time to time, these pages contain photographs taken with that favourite instrument of many professionals – the Pentacon-Six.

Recently, two of my photographic friends have switched to this 6 × 6cm camera. The first of them had previously used 35mm equipment for colour slides, but found that many magazine editors in this country simply would not look at the 35mm transparency – although the position was quite different abroad. So, one day, I casually remarked that he should use a larger format, and even jokingly suggested a 5 × 4in. camera! But he must have taken my remarks to heart, because the next thing I knew was that he had acquired a Pentacon-Six complete with several additional lenses.

The circumstances surrounding the other friend were just the opposite. For many years he had undertaken exacting professional photography – working for much of the time with a half-plate camera – and, consequently, he was conversant with the highest of standards. But suddenly he got the message, too, and changed to the 6 × 6cm format (obtaining, likewise, a Pentacon-Six) although, in his case, he supplemented the standard 8cm Biometar lens of the camera with his existing Cooke Avians (via a bellows attachment) for telephoto work.

I have mentioned these facts in some detail because there is undoubtedly a moral attached to them. It is rather significant that in both instances, two discerning photographers arrived at the same final choice of format and equipment . . . albeit from two widely different approaches. For this reason, I thought that a little investigation into the merits of the larger 6 × 6cm format might be worthwhile.

First of all, the camera itself. Unfortunately, this is no longer available new in this country. Actually, it is difficult to discover whether or not the camera is still in production – although 'Our Man from Dresden' assures me that it is still on the market in East Germany.



Above: These diagrams show how the square format makes the fullest use of the lens image when compared with the elongated 35mm shape. When the latter is cropped to the more usual 4:5 picture-shape ratio (dotted area) an even greater amount of lens potential is lost.

The lenses are still made; and, of course, the camera appears occasionally on the second-hand market over here.

The standard objective is the 80mm f/2.8 Biometar, with a 120mm f/2.8 Biometar and the 180mm f/2.8 Sonnar available as 'moderate' telephotos, while the 300mm and 500mm lenses – as normally used on the Praktica – are adaptable via the interchangeable mount. For wide-angle work, there is the f/4 Flektogon of 50mm focal length.

For the benefit of those folk who are not conversant with larger format photographic technicalities, the following table shows the relative angle of view of the Pentacon-Six lenses with the 35mm format equivalents:

Pentacon-Six Lens	Angle of View	Equivalent focal length
50mm Flektogon	75°	28mm.
80mm Biometar	54°	45mm.
120mm Biometar	41°	67mm.
180mm Sonnar	25°	100mm.
300mm Pentacon	16°	170mm.
500mm Pentacon	10°	280mm.

From these figures it will be apparent that, broadly speaking, the Pentacon-Six lenses cover a wider angle of view than do the Praktica equivalents, but this is due mainly to the fact that they are used in conjunction with a *square* format. Here it can be stressed that, with this shape, the covering power of the lens is used to its fullest extent and without the wastage associated with the elongated 35mm format which invariably has to be cropped again at the printing stage – thus creating even more loss of lens potential.

The superiority of the square format makes itself felt all along the line. Firstly, there is the fact that one has *three* options as to picture shape – horizontal, upright and square – and, at the *taking* stage, this means that the camera needs to be used in one position only. Consequently, the design ergonomics can be more satisfactory than with any camera which has to be turned sideways for the taking of vertical pictures.

The next, and most important, factor is one of quality in the final photograph – be it a transparency or a colour or monochrome print on paper.

As was suggested earlier, editors (and block-makers) usually prefer the larger format of the 6 × 6cm camera, and there is little doubt that, all other conditions being equal, the bigger transparency *does* result in superior reproduction quality. But it is in the photographer's own darkroom where the advantages are really felt. With the 6 × 6cm negative, one is suddenly freed from the shackles associated with 35mm film. For instance, the relative amount of magnification necessary to reach any given print size is so much less. E.g. a *full* 8 × 10in. print can be produced at a mere 4½ diameters, whereas 8½ diameters is needed with a 35mm negative. This offers a



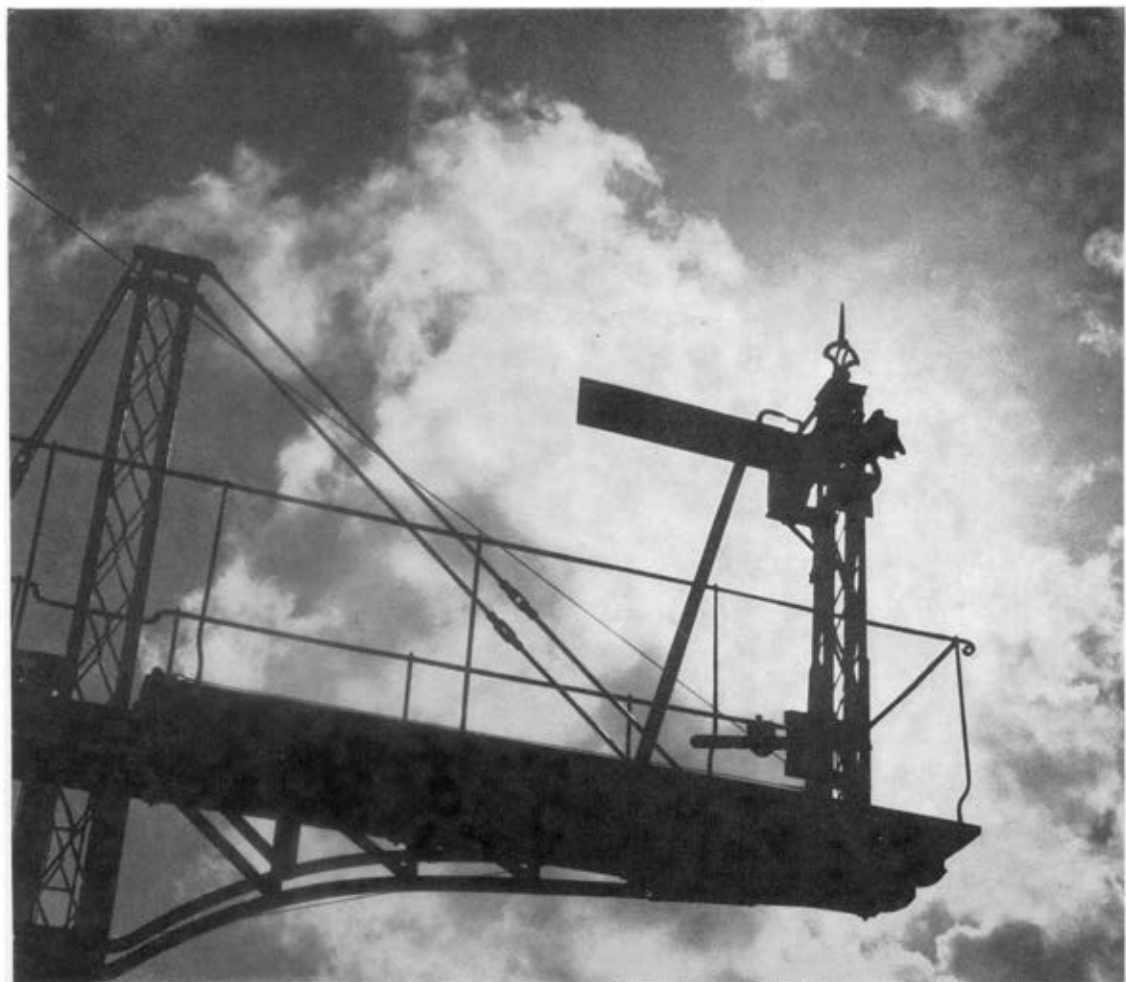
Above: *The comparative wide-angle effect of the 8cm Biometer lens is highly suitable for narrow street scenes. The square format allows the shape of the final picture to be decided upon at the printing stage.*

valuable bonus; a faster film emulsion can be adopted as a standard without losing out on print quality. Enlarging, too, is easier. Focusing is quicker and more certain owing to the increased brightness of the projected image. Part of this brilliance is due to the smaller degree of magnification but the *clear* celluloid base of roll-film (which, unlike 35mm stock, does not need a grey 'anti-halation' dye in it) is also a contributory factor.

Then again, selective enlarging (even with a 400ASA film) becomes practical and it is perfectly feasible to use no more than a *quarter* of a 6×6 cm negative to produce a print equal in quality to the best obtainable from a 35mm one. This is not a far-fetched statement

as simple mathematics will show. To make, for example, an 8×10 in print from a 35mm negative means enlarging from (at the most) a $24\text{mm} \times 30\text{mm}$ portion of it, and such an area represents less than a *quarter* of a 6×6 cm negative. So, to make an 8×10 in enlargement from this small section of the latter, the same *linear* magnification is required and, provided that the Pentacon-Six negative possesses a good standard of sharpness and fineness of grain, then the final prints are bound to be of similar quality. The sectional blow ups reproduced here bear out this fact.

Naturally this freedom in the darkroom has to be paid for in other ways . . . by heavier and bulkier camera equipment. However it can be mitigated to a large extent by simplification. For instance, having a square format, the Pentacon-Six does not require a heavy pentaprism viewfinder. In fact, the simple 'look down' type of plain screen is far superior in many respects;



Above: 'Danger!' A dramatic Pentacon-Six shot, with the 8cm Biometar lens used at $f/11$ – without a filter – on Boots 125 ASA film. Taken with camera at waist level.

Right and below: With the 6 x 6cm format it is possible to simulate the effect of a telephoto lens – without sacrificing quality – by using only a small part of the negative. This 13-diameter blow-up shows how effective such a technique can be.

portraiture of small children, flower photography *in situ* and any subjects needing a low viewpoint are classical examples. Then again (as has already been demonstrated) selective cropping means less necessity for interchangeable lenses.

Personally, during a spell of working in the 6 x 6cm format, I found that the standard 80mm lens was adequate for practically all my requirements. The complete negative area – when merely trimmed to give a picture shape ratio of 4:5 – represents a semi wide-angle shot (equivalent to one taken with a 42mm lens on 35mm film), while selective enlarging to the extent already described gives an effect similar to that of an 80mm lens on a 35mm camera. This range is virtually identical to that of a 'mini-zoom' on a Praktica *but* – for most of the time – resulting in a higher standard of print quality.

Having discovered all this the hard way, my only regret is not having done so earlier when it was possible to buy a *new* Pentacon-Six from stock! I'll just have to wait until I can get to Dresden . . .



