

Classic CAMERA



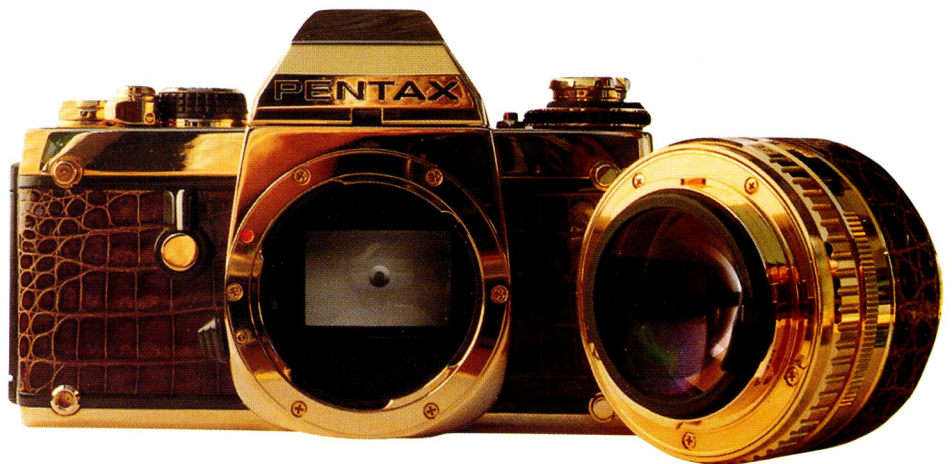
COMMEMORATIVE PENTAX LX GOLD

In August 1981, just a little over a year after it released on the market its modular professional Pentax LX reflex with mechanical and electronic functioning, Asahi Optical decided to celebrate in style its 10 million reflex cameras manufactured and distributed throughout the world by creating and marketing a limited number (perhaps as few as 300 hundred) of commemorative Pentax LX Gold cameras. They were identical to the mass-produced version both technically and in terms of performance and differed only in the gold finish of all exposed gold parts of the camera and the lizard skin lining of all parts normally covered in rubber or imitation leather.

The high-quality gold finish on the LX Gold was also used on all its controls including the winding lever, rewind crank, self-timer lever and all visible or partially-visible metal parts on the camera body, from top- to bottom-plate. The lens mount collar was also gold finished, as were the screws used to attach the body and the protruding bayonet wings. The gold finish was also used on the interchangeable viewfinder and all metal parts of the coupled lens, including the rear mount bayonet mount.

As a final touch, the lens focusing ring was lined with the same lizard skin used on the rest of the camera body and all parts normally painted black were painted brown, including the interior of the film compartment and the interior of the back cover. All the camera's plastic parts—such as the synch socket guards, memo pocket on the back and lens cap—were also made in the same brown tint.

The Pentax LX Gold did not utilize the normal serial number series of other Pentax cameras and had their own special numbering found on the bottom plate. However, the gold-finish seven-element SMC 50mm f/1.2 Pentax lens used the same number series found on standard production lenses.



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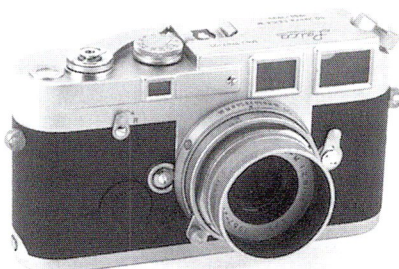
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History of the Topcon Reflex



Jena's "Turn of the screw"

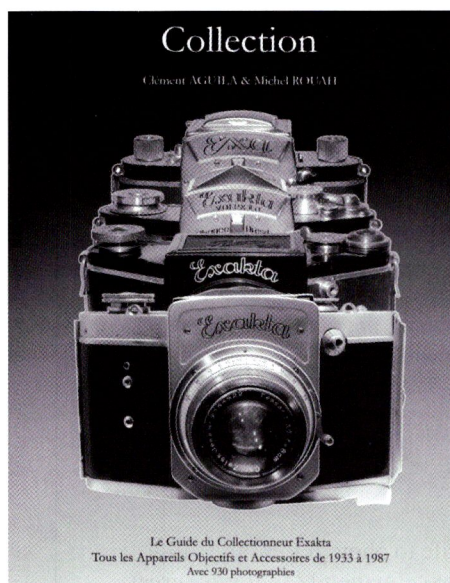


*Leica M6 Christie's auction
price £ 3.760*



*The KE 28B: a 6x6 aerial camera with Leitz
optics*

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EXAKTA COLLECTION

Clément Aguila and Michel Rouah
DDP Image Editions, 2003

Clément Aguila and Michel Rouah do not require any introduction to those in the world of camera collecting given the fact that they are the famous authors of the book, *Exakta Cameras, 1933-1978* published by Hove Foto Books in 1987. Time advances inexorably for us all, but the passing years have not dimmed the passion for collecting and research of these two French authors who, quite the contrary, have continued their tireless research into the cameras, lenses, accessories, publications and advertising materials of a brand of camera that officially made its exit in the early Seventies. Thanks to their painstaking research and the collaboration of other renowned Exakta collectors, Clément and Michel have now produced a new book that is much more complete, scrupulously documented and illustrated and brought

up-to-date with recent cameras that (with varying degree of legitimacy) have availed themselves of the Exakta name. This large, A4-format book is over 500 pages long and is richly illustrated with over 90 photographs. If one compares it with the 2001/2002 McKeown guide that dedicates just a dozen pages or so to Exakta, one begins to appreciate the vastness and depth of the work created by these two collector-researchers. The book proclaims itself "The Exakta Collector's Guide—all the cameras, lenses and accessories from 1933 to 1987" and does not try to categorize itself either as a work on the history of the Ihagee camera industry in Dresden that created the Exakta brand, nor a book on camera history in general. Like its English-language predecessor, this new edition (for the moment only in French with a limited run of 250 copies), is an analytical guide to the world of Exakta divided into various chapters that include the Exakta Vest Pocket, 35mm Exakta, 6x6 Exakta and 35mm Exa, right up to the Exakta Real and the "non-Dresden" Exaktas. Each camera model and its variants are examined in a very specific, almost obsessive, manner, in order to highlight even the slightest differences in engravings, manufacturing and functioning. Every lens with Exakta mount created by any company, whether European, Japanese or American, is described and (if possible) illustrated—and there are over one thousand lenses. Each original Exakta accessory, as well as those adapted to the Exakta system, are all described and examined and there are over 130 of them, including the system

of interchangeable finders. But the sheer size of the work is nothing compared with the completeness of the information offered, the quality of the images and clarity of the text. To receive one or more copies of the book at a price of 44 Euro plus shipping costs, contact the publisher: DDP Image, 2 rue du Tribu, 81240 Saint Amans Soult, France. This book is a must in the library of every Exakta collector or enthusiast, as well as serious collectors and historians of cameras in general.

NIKON CAMERA COLLECTORS HANDBOOK

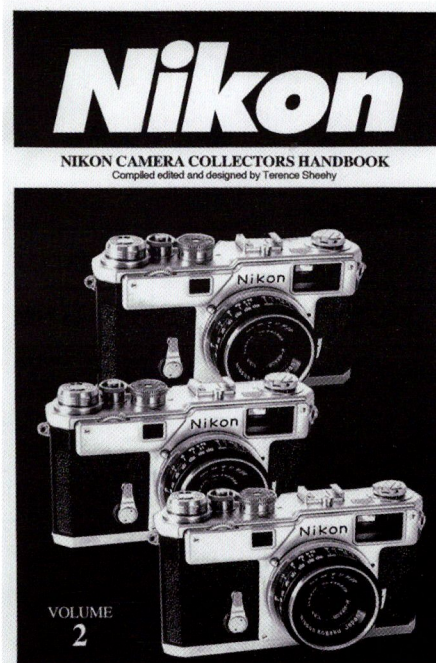
Volume 1 and Volume 2

Terence Sheehy

Classic Camera Collector Publications
39 Beechwood Avenue

Orpington, Kent BR6 7EZ, UK

Among all the camera brands to which Terence has dedicated his handy and practical guides, Nikon has always



retained a somewhat special role, perhaps because it was the first non-European brand to reach the same levels of fame and reputation as those of Leica, Zeiss or Rollei, for example, but also because Nikon is a brand that is well-known even outside photographic and collecting circles. The world of Nikon cameras and lenses is so vast, complex, differentiated and fragmented that two volumes were required to at least attempt to provide a profile of it. The same clean and elegant layout and sharp printing of text and images Terence has gotten us used to over the years here offers us the opportunity of getting the most out of these two slim volumes of just a hundred pages each dedicated to Nikon. The work was made possible through the assistance of Derek White, Gray Levett, Robert Rotoloni, Tony

Hurst and Gerald Davies, all names well-known to those involved in camera collecting and the Nikon brand in particular. Following an original and not-too-ordinary selection, the first volume covers reflex cameras from the Nikon F to the Nikon F3, with some sidelining into motors and finders, a number of lenses and certain aspects of Nikon literature and advertising. Historical and economic aspects are also covered, but to a lesser extent, as if the primary goal was to place the Nikon camera in center stage. The second volume returns to the brand's origins, starting from the Nikon rangefinder, then making a leap directly to the first-generation electronic Nikons and AI lenses, offering classic images, advertising of the day and articles and tests that have become landmarks. Thus,

bringing together lens layouts, instructions for use, axonometric projections, lists of lenses, catalog pages and advertising, Terence has built a printed monument of noteworthy importance to these classic and ultra-classic Nikon cameras. The more modern Nikon cameras—with autofocus and their outfits with built-in motors and smart lenses, sensors and sophisticated features—are not even taken into consideration. But not out of malice or snobbishness. Out of choice. The choice of someone who has dedicated most of his life to photography and those cameras that have made photography great.

Each of the two volumes is available from the author/publisher at a price of 15 pounds in the UK, 18 pounds in Europe, 19 pounds in the US and Canada and 20 pounds for the Pacific rim.

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HISTORY OF THE TOPCON REFLEX



Comparison of the Topcon R2 and Beseler Topcon C with lens outfit

Pre-TTL Topcon Reflex Cameras

The famous 1964 Topcon RE Super camera was the first 35mm reflex equipped with a TTL exposure meter to be sold on the international market, anticipating the Spotmatic by a number of months. Behind this exploit was a small Japanese camera company, Tokyo Kogaku, that had been making 35mm reflex cameras since 1957. Marco Antonetto, author of the Topcon Story, offers us an authoritative and detailed look at the history and events, as well as the 35 mm reflex cameras themselves, that formed the background leading up to this ground-breaking phenomenon.

The camera market in the 1960s

At the end of World War II, the situation in the camera market was certainly not flourishing. Many of the best-known companies were in the countries that had lost the war and their rebuilding was necessarily a long-term process. This made way for new entrants on both the winning and losing side. They were, for the most part, small companies or even just artisan workshops whose streamlined production capacity made it possible to create prototypes in a short period of time and begin production on them virtually immediately. And, although many concentrated on imitating those cameras that had been most

successful before the war, many others developed radically new equipment with technical innovations that were sometimes impractical and impossible to realize, but others that were truly ingenious.

This period saw the amazing proliferation of cameras in the strangest shapes and sizes, a trend that would continue up to the 1960s. Many of these have disappeared without a trace, but some continue even today to be a basis for imitation.

But what was the market situation in the early Fifties? Reconstruction had begun and although still limited, a renewed sense of well-being rekindled a latent

interest in photography. Amateur photographers had at their disposal a wide range of equipment in all formats that was fairly simple and economic to use, while for professionals, depending on their requirements, the choice ranged from large format "press" cameras (such as the classic Speed Graphic, virtually the symbol of American photoreporters of the day) to the 6x6cm twin lens modeled on the Rolleiflex. This was the heyday of the twin lens, the trusty tool of thousands of reporters. In Fellini's renowned film, *La Dolce Vita* (1959), almost all the equally renowned "paparazzi" sport a Rolleiflex around their necks.

However, some professionals required a more dynamic and versatile camera that allowed them to mount other than the normal lens. And for them there was the Leica or one of its many copies. On the virtues of the Leica still in production today nothing need be said. But what is important to stress is that, in particular thanks to the Leica, the small 24x36mm format won for itself its own niche within professional photography.

Small and light-weight, a 24x36mm camera was ideal for war correspondents where the time did not exist to precisely compose a photo on the ground glass. Also important was the number of shots on a single roll, 36 frames as opposed to the 12 of the 6x6cm, extremely important in tight spots.

But some photography specialists required something more. The Leica could mount telephoto lenses with a maximum focal length of 135mm, but some applications (particularly nature and scientific photography) required much longer focal lengths. Other photographers required the ability to take very close up shots, even through a microscope, without too much difficulty. Responses to these needs had been provided in 1935 by the Ihagee company of Dresden with its Kine Exakta, the first 35mm reflex regularly sold in Western markets. In actuality, this was a miniaturized version of the Exakta VP which, because it used 127 film, was bulkier and heavier.

It is said that the Exakta VP, already with its characteristic trapezoid shape, was created to satisfy repeated requests from German scientists (above all biologists) for a universal camera that could be used for both general and specialized shooting, especially microscope and long telephotography. The features of the Kine Exakta were very advanced and

for twenty years remained practically unchanged, for example setting times that ranged from 12 full seconds to 1/1000s and film advance using a handy winding lever which, with a single movement, also cocked the shutter. Lens changing was also fast thanks to the bayonet mount. But its ticket to success was the ability to mount lenses of any focal length, thus ensuring precise framing and perfect focus.

For normal shooting, Leica and Contax solved the focusing problem using a rangefinder, but this provided sufficient precision only at focal lengths of less than 135mm. Originally, the widened Contax rangefinder also permitted focusing of lenses of 180mm, but it was later seen that with the very fast 180mm f/2.8 Sonnar, focusing was not precise enough. As a result, the Sonnar was produced with a shortened barrel so that it could be used with a reflex system. On the other hand, the more modest 180mm f/6.3 Tele Tessar with its greater depth of field, continued to be used with coupled rangefinder. But there was an exception. With lenses longer than 135mm, the Leica also required a reflex system.

Very precise framing, together with very efficient focusing, was provided by the Rolleiflex with its reflex mirror and crisp image on the ground glass. But again, even just getting a bit closer to the subject would create parallax error (as also occurred with rangefinder 35mm cameras). The Rolleiflex later inserted a mobile mask on the viewfinder to compensate for this error, but this solution only worked well with minimum shooting distances of just about a meter or so. In fact, for even closer up shooting additional lenses were produced to mount on both the taking and viewing lens. The latter lens was equipped with a prism that eliminated parallax error, but the image it displayed had a different perspective than the final image.

The ideal solution was that offered by single lens reflex cameras such as the Kine Exakta which soon became popular, but only for certain applications—those in which the reflex view through the taking lens was truly indispensable. Its followers were few, but it should also be remembered that during the same period another 35mm reflex, the Sport, was released in the Soviet Union. This is not the place to examine the relative virtues of these two cameras, but the fact remains that not only was the Sport never officially marketed in the West, but it also never

vaunted the range of accessories that was so crucial in guaranteeing the long term success of the Exakta over the years.

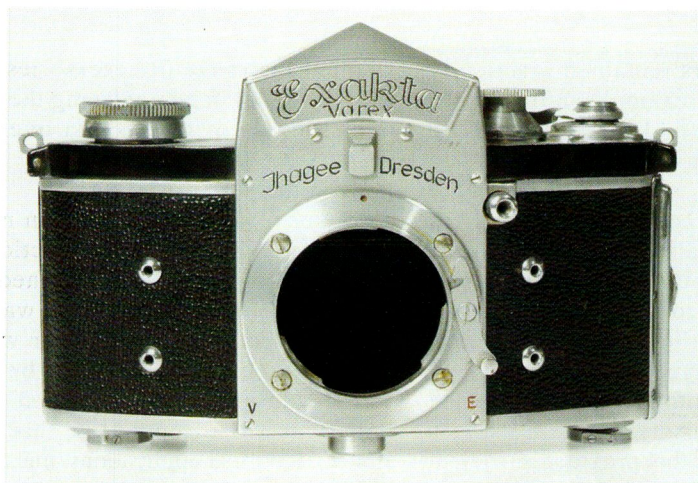
Back to the post-war years.

As we have seen, companies in many countries undertook the production of cameras, but the reflex remained the Cinderella of the 35mms. There was the Exakta, of course, production on which was restarted in 1948. But, to be fair, why should companies have given much importance to a camera like this? For almost all normal applications, the small, lightweight and reliable Leica was much more convenient. Plus, if there was need from time to time to use a powerful telephoto lens or take a few macro or microphotography shots, one could always purchase a Visoflex. The same was also true for the Contax, an updated version of which was offered by the new Zeiss Ikon that had been reconstituted in West Germany.

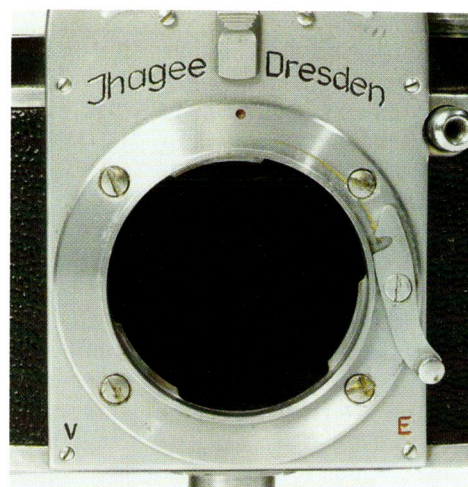
On the other hand, it must be recognized that a reflex such as the Exakta did not offer many advantages over the Leica with Visoflex or Contax with Flectoscop. It was just faster to use, and this meant it was preferred for action shooting, but in a studio or lab with non-moving subjects, the two systems were essentially equivalent. Nonetheless, something had been put into motion.

Immediately after the war, while manufacture of the Exakta was started up again, the Rectaflex was born in Italy while in East Germany, from what had been Zeiss Ikon, the Contax S (the "S" standing for *spiegel*, the reflex mirror) was born, and in Hungary the Gamma Duflex, marking what could be considered the first modern reflex cameras. The Rectaflex was more refined and was impeccably made. The Contax S was less assuming and constructed with lower quality materials, while the Duflex was technically the most modern with automatic diaphragm pre-setting and instant mirror return. And all three represented concrete progress over the old Exakta.

In particular, the new reflexes almost immediately adopted the pentaprism that made it possible to shoot at eye-level and, above all, to have left/right orientation as it appeared in reality. Little by little, other manufacturers began to show interest in the reflex and by the early 1950s, there had appeared the Swiss Alpa, whose design dated from the war years, the German Edixa Reflex and, in Japan, the Miranda and Asahiflex.



Exakta camera without lens



Exakta bayonet mount, unchanged from 1936 to 1972, was used by Tokyo Kogaku on its first reflex cameras starting in 1957



Topcon R camera without lens



Detail of the Topcon R bayonet mount, identical to the one used on the Exakta, later modified by Topcon to include internal transmission of the diaphragm movement

35mm reflex cameras: some technical considerations

As has been said, the limited interest of manufacturers in the 35mm reflex was primarily due to technical and market considerations. Reflex cameras were more complicated to produce and therefore had to cost more than other types of cameras, a constraint that necessarily limited its potential market share. Another consideration was that the diaphragm had to be closed manually before releasing the shutter, with consequent loss of time. The reflex mirror returned to its viewing position only after the shutter had been cocked, meaning that immediately after shutter release, the viewfinder remained dark. Finally, the presence of the mirror itself made it impossible to use more powerful wide angle lenses.

To solve the problem of diaphragm closing, the first solution experimented

with was the so called pre-set system. The photographer would decide to utilize a certain aperture opening and set this on a device that limited the turning of the diaphragm ring. He would then frame the shot and focus with the diaphragm fully open and then, just before taking the shot and without taking his eye away from the viewfinder, would rotate the diaphragm ring until it stopped at the pre-set value. This system of manual pre-setting worked fairly well, but it was not that convenient and, as a result, a number of manufacturers of the day added a traditional viewfinder eyepiece to their reflexes (for example, the Alpa and Praktina) to be used only with the normal lens when time was at a premium. The next evolutionary phase, the definitive and currently utilized one, was completely automatic pre-setting that arrived towards the mid-Fifties. The aperture opening was reset, but the

blades only closed when the shutter was released, meaning that viewing was always with the maximum aperture.

Just before this, Asahi had presented a reflex with immediate mirror return that guaranteed uninterrupted viewing, but the ability to use wide angle lenses would take some time. Theoretically, the problem no longer existed with the invention of the retrofocus lens that functioned on the principle of a telescope seen from the wrong end. But the difficulty of designing good quality retrofocus lenses at reasonable prices meant that in order to mount very short lenses on reflex cameras, at least until the 1960s, traditional wide angles were used that required the reflex mirror to be raised and the use of a supplementary viewfinder.

But even if the panorama of what could be defined as "complete" reflexes, those with focal plane shutter and therefore

full lens interchangeability, evolved very slowly, there were other reflex cameras that made a fairly significant name for themselves in the 1950s. These were the reflexes with a between the lens shutter. Just as complex from a structural standpoint, they did not use focal plane shutters which at the time, because of the slow travel speed of the curtain and the materials used, were less efficient than the between the lens type. In addition, synchronization was easier with between the lens shutters, whether using speedlights (at the time used by a limited number of professionals), or the more common bulb flash.

Reflex cameras of this type were more complicated to use because they required a complex sequence of operations. To aim with ease, the diaphragm, like the shutter, had to be completely open and there was a little door that protected the film from the light in the camera body. Then, when the shutter release was pressed, the shutter closed, the diaphragm closed to the pre-set value, the mirror flipped up, the film door opened and finally the shutter opened to the pre-set setting. At the end of a shot, all these steps would repeat in reverse order to prepare for the next picture.

Another limitation of the between the lens shutter was the fact that the lenses were not 100% interchangeable. Normally, the shutter is placed between the lens elements, making it possible to replace just the front lens unit. Naturally, this system could not vary widely from the original focal length of a normal lens (40-50mm). Certain manufacturers completely discarded even partial lens interchangeability, opting exclusively for add-ons, for example Zeiss Ikon with its famous Contaflex. Later, however, it was Topcon that offered total interchangeability by placing the between the lens shutter behind the lens. But this type of central shutter could not be too big without causing a deterioration in performance, and therefore its presence caused a narrowing which limited the range of focal lengths that could be mounted.

Reflexes with between the lens shutters enjoyed significant success throughout the 1960s, but then, gradually, began to lose popularity. First of all because, obviously, they were much less versatile than real reflexes whose average quality (especially mechanical) had reached levels that were much higher than just a few years earlier. Secondly, and above all, because the workings of the mirror-

shutter-diaphragm-door unit, irrespective of whether they were German or Japanese, had proven to be delicate, at best.

Today, it is easy to find this type of camera at a good price, but it is much more difficult to find one in perfect working order. This is true not only for the less-known brands such as the Kowa E and Savoyflex, respectively Japanese and French made, but also for Zeiss Ikon's superb Contaflex. The chapter of reflex cameras with between the lens shutters opened in the early Fifties and drew to a close some twenty years later, the same period in which the era of authentic reflex cameras was just beginning.

Evolution of the species in Europe and Japan

The overall trend in cameras during the 1950s saw the strong presence of 6x6cm twin lens reflexes and the increasing popularity of the small 24x36mm format. The main exponents of this latter format were the Leica and Contax, but, at least numerically speaking, there was a large number of other types of cameras with fixed lenses either coupled or not to a rangefinder. In addition, use of 127 film, the type used on the old Exakta VP, was still widespread and allowed for mid-size formats ranging from 3x4cm to 6x4cm.

As we have seen, there was some interest in small format reflexes, but not much. Evidently, manufacturers were not yet thinking about a mass market and believed that expert photographers would always end up preferring larger formats. Remember, this was a period in which high speed film reached, at most, ISO 400 with a graininess that was highly visible in 18x24cm enlargements. But, starting from a 6x9cm negative, a format widely used during those years even by amateur photographers thanks to the popularity of economically priced folding cameras, this graininess was virtually invisible.

This did not mean, of course, that manufacturers were not looking to the future. It merely meant that they adapted to the needs of the market (whether real or imagined). In just a few years, however, everyone realized that the 35mm reflex could represent the camera that would revolutionize the market. Not so much because it offered much better results, but because it could be decked out with myriad accessories and photography fans would not just buy the camera, but also a variety of lenses,

finders and other accessories.

The general versatility of reflexes placed them at the heart of complete systems. While many years earlier Exakta's market was that of the elite, but numerically limited, ranks of scientists, the reflex cameras from the late Sixties made it possible for anyone to photograph and print a flower or insect using very long telephoto lenses. This created a new generation of photographers who paid close attention to their camera outfits that they kept constantly up-to-date with all the new developments offered by manufacturers and the flourishing of the reflex at the end of the 1950s was truly amazing. In the span of just a few years, or even months, there appeared the reflex cameras by Nikon, Canon, Zeiss Ikon, Minolta, Petri, Yashica ... and, of course, Topcon.

All these reflexes had in common a focal plane and therefore total lens interchangeability, but there were significant differences among other individual features. Those that seemed most advanced both in terms of what they offered and, especially, for the care and precision with which they were built, were the Contarex by Zeiss (but with a substantial price tag that relegated it to a select market) as well as the Canonflex and Nikon F, a reflex destined to become famous.

This could be considered emblematically the period in which the Japanese photographic industry "overtook" its German counterpart. But this overtaking was not technologically based (still firmly German, even if this was to be short lived), nor was it a reflection of purely commercial considerations. The fact is that during these years, and the 35mm reflexes are proof of this, the Japanese stopped copying the Germans (while still exploiting to the maximum the good points of their cameras) and began offering radically new, more modern and versatile ones that in no way sacrificed quality. And the "manifesto" of this new trend could be considered the Nikon F.

The technical improvements during the 1950s were not so much concerned with the search for new performance levels (as would be the case in the decade which followed and even more so in the 1980s), but in the gradual improvement of what already existed. Two significant examples of this were the attention paid to lens composition and exposure meters.

The first camera to be equipped with a



Topcon R camera (1957) with 58mm f/1.8 Auto Topcor lens with automatic closing and manual re-opening of the diaphragm



Topcon R camera (1957)

photoelectric exposure meter was the twin lens Contaflex that had been released first in the Thirties, but in the Fifties many cameras were still equipped with extinction meters whose unsophisticated functioning could not guarantee exact readings so critical for the color film starting to appear on the market. In fact, one of the major improvements was that of building a selenium cell exposure meter into the camera, a trend that would continue throughout the decade. The next phase was marked by the coupling of the exposure meter to the aperture or exposure time for automatic exposure. This would arrive in 1960 with the Savoyflex Automatique by the French camera manufacturer, Royer. The trend towards equipping cameras with their own system of exposure measurement was increasingly felt to be important, and with reflex cameras in which changing the lens could cause incorrect readings, the problem took on special importance, so much so that in 1960 Asahi Pentax unveiled its Spot-Matic, a prototype of through the lens exposure reading. But this "first" remained still-born as the Spot-Matic was never put into production.

In terms of lenses, maximum speed continued to be incremented which required the improvement of their complex optical system. Following the

end of the war, anti-reflection treatments which up until then had been a military secret, entered the public domain and were adopted across the board. This greatly simplified research because it eliminated the constraint of having to limit the number of air/glass surfaces in a lens. F/2 lenses became increasingly common and were offered ever more often alongside their f/2.8 or f/3.5 predecessors. The spread of 35mm cameras with interchangeable lenses, whether reflex or not, pushed designers into more detailed study of all focal lengths. Even less expensive cameras tended to adopt 4-element fixed lenses following the layout of the Carl Zeiss Tessar, rather than simpler and less efficient ones such as meniscus lenses. To summarize, improvements were being made on a rapid, but non-revolutionary basis. However, these revolutionary changes were just around the corner.

The early Topcon reflex cameras

In 1957, Tokyo Kogaku Kikai entered the reflex market with its Topcon R, a camera that among its contemporaries represented the high end of the market. In the United States, after first having begun sales on its own account, in 1959 it entrusted marketing to the Charles Beseler Company which enthusiastically undertook the launching of this new

reflex on the US market, calling it the Beseler Topcon B.

Even after forty years, the Topcon R remains quite pleasing in appearance with a clean, simple line and pronounced edges of the camera body, typical of the day. Its general features mirrored those of its main competitors with interchangeable viewfinder, curtain focal plane shutter and 100% lens interchangeability. A more detailed look, however, reveals a number of fairly significant details. While with the Nikon F and Canonflex it is not difficult to find analogies with the previous cameras that had served as models for them (the Contax and Leica respectively), the Topcon R seems to be completely original and untied to pre existing lines. The R was also created with a sort of "original sin" that, later on, would have dramatic consequences. In that era, many manufacturers, especially the Japanese, used lens mounts already extant on other popular cameras. For example, the Asahi Pentax chose the Contax 42x1mm screw mount, while Nikon and Canon chose the same mounts as the Contax and Leica for their rangefinder cameras. The purpose behind this policy was to offer the user a wider range of lenses and accessories while, at the same time, offering themselves as credible rivals to more highly esteemed models. A policy that was both sales and image based.



Topcon R camera (1957) with 58mm f/1.8 Auto Topcor lens—front



Topcon R camera with 58mm f/1.8 Auto Topcor lens, Autokinon with automatic diaphragm closing and re-opening

From this standpoint, however, Topcon accomplished something that at the time could have appeared a winning move, but which, with the passing of time, represented a disadvantage in the face of Nikon and Canon who designed radically new bayonet mounts for their reflex cameras. Topcon chose a different route, to adopt the Exakta bayonet. A completely logical choice if one considers that, at the time, Exakta was a universally known reflex with a vast range of lenses and accessories, including those for special applications. With this strategy, the Topcon R was released on the market with its own series of lenses equipped with what was called semi-automatic pre-setting, but Exakta lenses, available the world over, could also be utilized and this guaranteed a complete system that was much more extensive than what its direct competition could offer. In 1960/61, two other Japanese reflex cameras used the same Exakta mount, the Tokiwa with its Firstflex model and Mamiya with its Prisma and Reflexa models which mounted a Canon OM lens. But the Exakta bayonet was already more than twenty years old and had a couple of technical limitations that were not at all irrelevant. First of all, its available diameter was reduced, less than the length of the diagonal of the 24x26mm format. Practically speaking,

this meant that utilizing lenses with long focal lengths or with extreme macrophotography, the barrel itself would obstruct the light from the lens and darken the corners of the frame. Plus, the small size of the mount made it a bit too fragile for supporting very heavy lenses. In short, the Exakta bayonet was proven to be inadequate for just those specialist applications that the reflex seemed to have made available for all.

Of course, the situation was not quite so dramatic, at least at the beginning, especially because, yes, the reflex could utilize any focal length, but in the late 1950s, very few considered utilizing a telephoto lens longer than 135mm. As for macrophotography, no laboratory would have considered even obvious vignetting a problem. Problems would surface a number of years later when the Nikon and Canon bayonets, unchanged for decades, would prove their superiority.

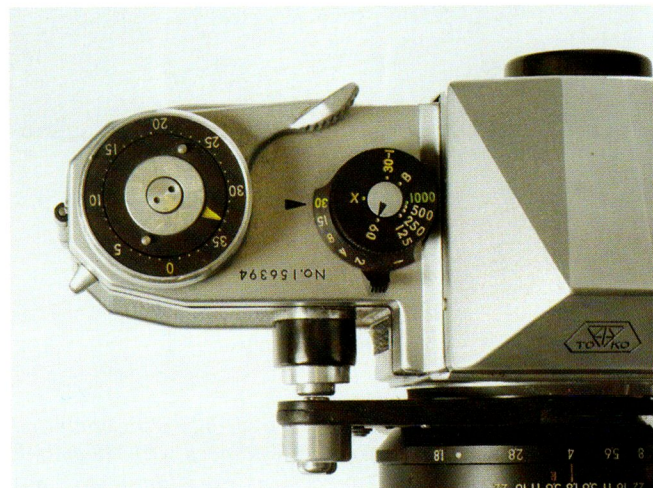
The structure of the Topcon R also reflected another typical problem of that era, automatic diaphragm pre-setting. The need to keep the diaphragm open right up to the moment of the shutter release to make it easy for the photographer to aim, had given birth with the Exakta to a special system with the advantage of maintaining complete compatibility with previous camera

bodies. In the late series, a bracket was added to the lenses near the shutter release button (which, on the Exakta, was on the left). At the end of this bracket another button fit over the shutter release button. As it was pressed, it first triggered a spring mechanism that had been previously cocked manually that instantly closed the diaphragm to the pre-set opening. To aim once again, the film first had to be advanced (because the mirror was not instant-return), then the pre-set spring mechanism had to be cocked to return the diaphragm to its maximum aperture. The Topcon adopted an identical system, but its shutter release button was on the right of the camera body as on most other cameras. For this reason, early lenses for the Topcon R, the Auto-Topcor, could not support this automatic function on the Exakta and vice versa. In addition, right from the beginning, Topcon offered a series of lenses with focal lengths ranging from 35mm to 300mm (not all automatic, however), a range that was vast enough to satisfy all normal requirements. For scientific applications in which automatic pre-setting was only of relative importance, the full range of Exakta lenses was available.

On closer examination, the Topcon R shows itself to have been well constructed and very sturdy. It has a



Beseler Topcon B camera, version of the Topcon R marketed in the United States (front)



Beseler Topcon B camera (detail)

traditional shutter with rubberized curtains that run horizontally. The setting time for electronic flash (X) is 1/40, indication of the low curtain speed. It has a full range of shutter speeds (from 1 second to 1/1000 and B setting), but it has a double setting dial with separate controls for long and short speed settings. Plus, the click stops are not equally spaced and certain times are hard to set (for example, 1/500) because its neighbors are closely spaced. The frame counter does not automatically reset and has to be placed on zero each time the film is changed. Holding the Topcon R and looking at it from above, on the left is the pull out rewind lever and, aligned with it, a scale for making a note of the film speed being used. That for black and white film can be set from ASA 50 to 800 and for color from ASA 10 to 32. There is also an "Emp" (Empty) position when no film is in the camera. Next to the winding lever is a dial used to set the flash synch, X or F, and the corresponding socket is located on the upper left side of the camera. Near the pentaprism is a button used to release and replace the viewfinders. When pressed, the viewfinder can be removed by pushing it towards the back. In addition to the pentaprism finder which came standard with the camera, the Topcon R also had a waist level finder with magnifying lens. The traditionally shaped pentaprism bears the

manufacturer's logo on the front and this, according to the instruction booklet, is to avoid mounting other non compatible pentaprism finders.

To the right of the pentaprism is the double speed setting dial. The internal dial is used for setting fast speeds from 1/30 to 1/1000 plus the B setting and X synch, while the external one has slow speeds from 1 second to 1/30. These dials are not that convenient to use, first of all because as the manufacturer recommends, fast speeds should be set with the shutter cocked and slow speeds with it uncocked. This means, for example, after having taken a photo at 1/125, to set to 1/15 you must: (a) turn the slow speed dial to 15; (b) cock the shutter; (c) set the fast speed dial to 30. Luckily the manufacturer declares that although it is not preferable, the dials may be set under any conditions. The meaning behind this enigmatic comment is that the Topcon R shutter, despite its efficiency, is still an old style one and the fast speed dial turns during shutter release.

On the extreme left is the winding lever whose design is much more modern in concept. Its task is to advance the film, re-cock the shutter and advance the frame counter. It can be activated with a single, 180° wide movement or through several smaller movements until it stops. In line with the winding lever is the frame counter which, as mentioned

previously, must be zero reset each time the film is changed.

On the base plate is the tripod screw mount and the button which when pressed and turned, disengages the film advance mechanism to rewind the film. The interior of the camera is completely traditional in concept with a large pressure plate to guarantee that the frame remain flat. Although criticized by the Japanese magazine *Asahi Camera* for being too heavy and bulky, the Topcon R (designed by Zenyôji) enjoyed a certain success, in particular in the United States and largely due to the high quality of its lenses. This gave a significant boost to the Topcon brand name and, for the first time, placed it among industry leaders. Nikon and Canon had begun to be known in the professional field for their 35mm rangefinder, while the most Topcon could boast was a few copies of the twin lens Rolleiflex. The R made its name and although it did not enjoy the legendary status of industry leaders, it did begin to be considered part of the ranks of more esteemed manufacturers. It marked a good start for Topcon which prepared to vie for the still-vacant position of new leader of 35mm reflexes. But it had its work cut out for it. The Topcon R was anything but perfect, for example it lacked a self timer and its so-called automatic pre-setting (in reality only semi-automatic) was not all that



Topcon R2 camera (1960) with 58mm f/1.8 Auto Topcor automatic lens and internal diaphragm transmission (front)



Topcon R2 camera (1960) with 58mm f/1.8 Auto Topcor automatic lens and internal diaphragm transmission (top plate)

convenient. As a result, the Auto Topcor lenses were soon updated, maintaining the same name but no longer requiring that the spring mechanism be cocked after each shot to re-open the diaphragm. Practically speaking, when the button was pressed, the diaphragm closed to the pre-set value and re-opened on its release.

The earlier lenses were defined as semi-automatic and the most recent ones, the Autokinon, were identified as being automatic and continued to be offered alongside those with manual pre-setting, called the R Topcor. The Topcon R equipped with the automatic Auto-Topcor was called the Autokinon, but this name only appeared in the product catalog and did not appear on the camera which remained unchanged. After three years, both the normal and Autokinon version of the Topcon R had to give way to a new model. However, the approximately 10,000 produced with chrome and probably also black finish, testify to the modest commercial success of this camera, fully justifying the appearance of a new model, the Topcon R2 in 1960.

Topcon R2

In July 1960 Topcon took a major step forward with the presentation of the new R2 (known as the Beseler Topcon C in the United States). It was basically the same as its predecessor, the Topcon R,

but corrected a number of the latter's more blatant faults. A self timer lever was placed on the front, under the shutter release button. The lack of this function had not only been a drawback for amateurs who wanted to appear in their own photos, but also for professionals who, in emergency situations, had to shoot with long times after having set up the camera on a support. Some Topcon R2 cameras, probably the last to be produced, were marked Automatic on the pentaprism (like the R3) and differed from the normal R2 and Beseler C in that the self timer had a different design, like the one that would be used on the R3. But the major change was in the type of automatic pre-setting. Lenses for the R2, called the F Auto Topcor, no longer had a bracket that set over the shutter release button on the machine body. The diaphragm was always open and a lever in the lens changing catch closed when the shutter was released. Naturally, this required a special transmission on the back of each lens. The new lenses could be used on the Topcon R only by manually closing the diaphragm, while the old lenses on the R2 full maintained their "semi-automatic" functioning since the release button was still in the same place on the camera body.

The automatic pre-setting control on the F Auto Topcor lenses was still a radial motion lever, located on the side. The

diaphragm remained closed to the pre-set value, but when the lever was moved (the task of a corresponding control on the camera body) the blades opened completely. When the lens was connected to the body using accessories without pre-set transmission (such as non-automatic tubes or bellows), to close the diaphragm all that was required was to turn the dial. When normally mounted on the camera body, the pre-set control keeps the diaphragm open and, when it retracts, closes it to the pre-set value only at the instant the shutter is released. This type of pre-setting mechanism marked Topcon's move away from the old system of external pre-setting and would not undergo any further modification. The F Auto Topcor lenses also had another control, a diaphragm simulator located on the upper part of the base plate. This was connected directly to the aperture dial and, as a result, moved. It must have been used to connect to an exposure meter to be coupled to the machine body that would keep track of the actual aperture setting. In fact, the simulator stuck out from the back of the lens, beyond the overhang of the metal crown that surrounded the mount, thus making it more or less accessible from the outside. But this control, similar to the bracket on Nikon lenses, was never utilized by F Auto lenses.

In the race to improve reflex camera



Beseler Topcon C camera, version of the Topcon R2 marketed in the United States (front)



Beseler Topcon C camera, version of the Topcon R2 marketed in the United States (top plate)



Beseler Topcon C camera, version of the Topcon R2 marketed in the United States (detail of front)



Beseler Topcon C camera, version of the Topcon R2 marketed in the United States (detail of controls)



Comparison of the Topcon R2 and Beseler Topcon C

135mm f/3.5 F Auto Topcor lens



135mm f/3.5 F Auto Topcor lens

35mm f/32.8 F Auto Topcor lens



58 mm f/1.8 F Auto Topcor



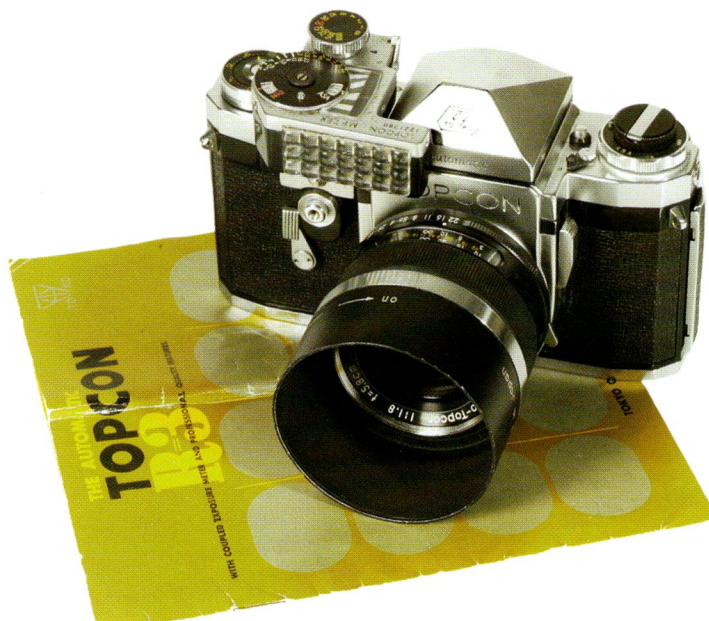
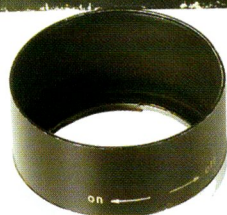
Comparison of 58mm f/1.8 Topcor Auto and 58mm f/1.8 Topcor Auto Autokinon

The three F Auto Topcor lenses, 58mm, 35mm and 135mm





Topcon R3 camera (1960) in original box



Topcon R3 camera (1960) designed for use with the clip-on Topcon exposure meter (exposure meter mounted)



Topcon R3 camera (1960) designed for use with the clip-on Topcon exposure meter (exposure meter not mounted)

functioning, the presence of a built-in or coupled exposure meter to allow the photographer to avoid using supplementary accessories became of ever-increasing importance. In response, Topcon, like other manufacturers, designed an exposure meter to be attached to the camera and, to further simplify its use, coupled it to the speed dial. But the R and R2 still utilized a

double dial (one for slow and the other for fast speeds, the latter of which also turned during the shutter release). The answer? Design a new reflex camera incorporating all the changes.

Topcon R3 Automatic

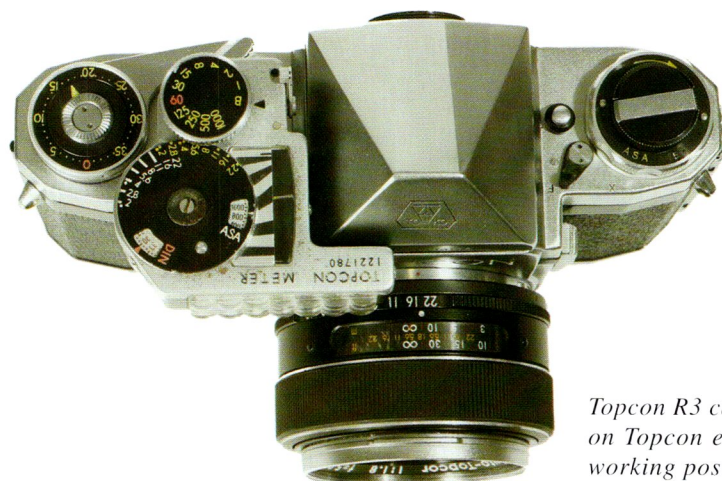
The result was the release in November 1961 of the Topcon R3 Automatic that was based on the tried-and-true body of

previous models but, and this was of major importance, it had just one speed dial with all the settings evenly spaced. This dial was much more modern and did not move during shutter release, proof of the very significant evolution in the focal plane shutter mechanism. In fact, the X synch setting changed from 1/40 to 1/60. On the front, above the self timer (identical to the one found on the



Topcon R3 camera (1960) designed for use with the clip-on Topcon exposure meter (exposure meter mounted in working position, front)

Topcon R3 camera (1960) designed for use with the clip-on Topcon exposure meter (detail)



Topcon R3 camera (1960) designed for use with the clip-on Topcon exposure meter (exposure meter mounted in working position, top plate)

latest version of the R2 Automatic), an accessory clip was placed in an upright position. This detail made it incompatible for use with most of the existing accessories, but its actual purpose was quite different, that of housing a selenium exposure meter coupled to the speed dial. It was called the Topcon Meter and, on the front, had a very large surface with selenium cells to guarantee high sensitivity levels. On the upper part was the speed dial connected to another dial with aperture settings. It was very easy to use. When the camera was aimed, the galvanometer

needle would indicate on the second dial the aperture to set on the lens on the basis of the set speed. The simulator on the F Auto Topcon lenses, which could have greatly shortened measurement times, was no longer used. As we shall see, Topcon was working on an improved exposure meter which would not require the aperture to be read and set on the lens dial. This exposure meter could easily have been housed in a pentaprism so that the photographer could have them match up by turning both the speed and aperture dials without having to take his eye off the frame.

However, other, much more advanced possibilities would later prevent the manufacturer from adopting this solution. Nonetheless, the exposure meter system adopted for the R3 was, for its day, quite up-to-date and actually did accelerate the shooting process. But, despite the fact that a depth of field control was added (a slide located next to the mount that was used to close the diaphragm to the pre-set value), the Topcon R3 Automatic was still an old style reflex based on a three-year-old body. To meet the demands of an increasingly competitive market,



Topcon RS—top plate

The virtually impossible to find Topcon RS (1962) that presaged the design and many technical solutions of the Topcon RE Super



Topcon RS (1962)—detail

something new was needed, something that would not only stand up to its competitors, but also form the basis for future improvements.

Topcon RS

The Topcon RS is a forgotten camera whose traces, up until now, had been virtually lost. But the RS's existence was rediscovered through painstaking examination of the Service Parts List of the RE Super (46A) in which it was seen that most of the components for this reflex started with another code number, 32A. Although it is normal practice for cameras to utilize some parts from previous models (normally secondary parts such as springs, levers or washers), in the case of the RE Super, even more important parts were coded 32A, while the number 46 was reserved for just a few parts, especially those pertaining to the exposure meter. It seemed obvious that the RE Super had been based on another, previous reflex that was very similar from a mechanical standpoint, but without exposure meter and which used the number 32 as its ID code. The RS was extremely important because it marked a decisive break with the past and forced its manufacturer to take a decisive leap in quality which, in just a few months, would take it to the

increasingly-contended top of the 35mm reflex sector.

The RS was highly innovative with much higher quality detailing compared to the previous reflex series. One of the RS accessories was an exposure meter, similar in concept to that on the R3, but with a CdS instead of a selenium cell. This new exposure meter was clearly based on advanced studies of light sensitive materials. Released with the RS were also the RE Auto Topcor lenses, another apparent contradiction. In appearance, the new lenses seemed much different than the old F Auto ones, but the optical component was the same and the mechanics also seem to have been the same, leading one to believe that it was just a simple restyling. On closer examination, however, there is a fundamental difference: the transmission of the aperture value of the old F Auto lenses which, at first glance, could easily function as a diaphragm simulator for TTL exposure at full aperture of the RE Super, functioned just the opposite way from the RE Auto lens simulator. In practice, if to close the diaphragm with the RE Auto Topcor lenses the corresponding dial had to be turned towards the left, with the F Auto it had to be turned to the right. This apparently minor change had a very important

effect, however. On the RS without exposure meter, the lenses from either series could be utilized, but on the RE Super, the exposure meter could not be used with F Auto lenses whose simulator would provide erroneous information to the exposure meter.

The RS was very different in appearance from the other reflexes with its own, immediately recognizable shape. No longer with a polygon form, it was completely squared off with slightly rounded corners. Its critics said it looked like a brick, and they may have been right, but with this design, the Topcon acquired a look all its own. The overall appearance, also thanks to the new, more austere line of the pentaprism, is almost military, winning the Topcon the reputation of being the most German of the Japanese reflex cameras. This was not only due to its appearance, but also its very high quality level in general reflected in the attention paid to detailing.

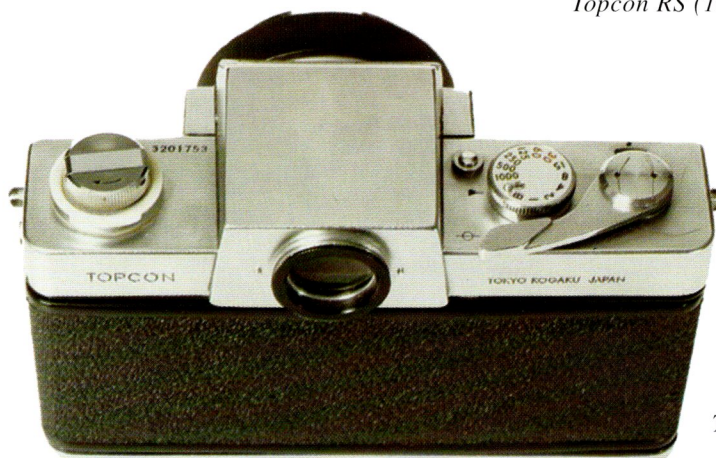
When holding the camera, as if ready to take a picture, the controls all fall naturally right into the hand, to use a term much more recent than the RS itself, its structure is highly ergonomic. This peculiarity is further emphasized by the fact that the body is neither compact (the trend towards small size



The Topcon RS presaged the design and many technical solutions of the Topcon RE Super—detail



Topcon RS (1962)—detail



Topcon RS (top plate and back)

reflexes would only be seen a decade or so later) nor lightweight. This makes it easy to hold without having to pay particular attention, and its substantial weight made it possible to take handheld shots at long exposure times without much risk of motion, also because the movement of the first curtain and the flipping of the reflex mirror are controlled by a very precise mechanism that does not cause excessive vibration. On the upper left is a film rewind crank around which is a bracket mount used to attach accessories, especially bulb flash, and this would remain unchanged on subsequent models.

The structure of the pentaprism has been redesigned and is interchangeable, its release button on the right. The mount is slightly different from previous models and therefore is no longer compatible. But this sacrifice is amply compensated for by the fact that the focusing screens are now interchangeable and, according to the manufacturer, what they display is 97% of the field actually taken, thus greatly improving the versatility of the camera over previous models. Plus, changing the screens is fast and easy, unlike those of its competitors. The actual area the finder covers is reduced, around 93%,

but it is still greater than that of the R3 and previous models which were around 90%. To the right of the pentaprism are the frame counters and winding lever with the same features seen on previous models including a total movement of 180 degrees and the option of advancing the film with smaller, partial movements. On the front are the self timer and, in its traditional position, the shutter release button. The position of this button was justified in the R2 and R3 Automatic by the need to maintain automatic (or semi-automatic) pre-setting with the old Auto Topcor lenses with external pre-set. It would be logical, therefore, to think that these lenses could also be mounted on the RS without any problem. But, in practice, there is a problem because when an Auto Topcor is mounted on the RS, the lens control is, in fact, perfectly aligned with the camera's shutter release button, but thanks to the narrower body, is a few millimeters away, making it impossible to shoot. There is an easy solution to the problem, an extension to screw onto the RS shutter release button, but there is no evidence in Topcon technical documentation of that period that such an accessory ever existed.

Once again the Exakta lens mount was

used with the control inside the automatic pre-set, earlier added by Topcon in the R2. Next to the mount is a control to check depth of field that closes the diaphragm to the working value. On the bottom of the camera is a scale for keeping track of the speed of the film in the camera (ASA 12 to 800), the control to open the back, tripod screw mount, film rewind button and, an important new addition, a motor drive connection. This last detail is highly significant because winders did not exist in the early 1960s (they were invented by Topcon itself some ten years later), and motors were used by professional photographers who required both rapid sequential shooting and elevated number of frames per roll. For this reason, all motors were designed to accept special backs that held 250 frames. This choice demonstrates that Topcon also, and even primarily, went after the professional market, fearlessly taking on the big, well-known names in this sector. From a mechanical standpoint, the RS was of top notch quality and its lens kit, even if more limited in size than other manufacturers, was second to none.

Text and photos by Marco Antonetto
(End of Part II)

TOPCON 35mm REFLEX SPEC SHEETS

Topcon R

BESELER B TOPCON In the United States

Topcon Code	15 A	Serial number key	15 XXXX
Serial Number	150001	to 160050	last known number
Production Years	1957 to 1959		
No. produced	Approx. 10,000		
Format	24x36mm	using 35 mm film	
Lens (type)	Auto Topcor		
Standard Lens	58mm f/1.8 Auto Topcor	- 35mm f/2.8 Auto Topcor	
Lens Mount	Bayonet with Exakta mount		
Shutter	Curtain, on focal plane		
Settings	1 sec. to 1/1000s	and B setting	
Synch	F X - 1/40s		
Exposure Meter	No		
Battery	No		
Dimensions	157mm x 105mm x 109mm	with standard 58mm lens	
Weight	1040 grams	with standard 58mm lens	
Price / USA	\$269.50 in 1957	/ \$295.00 in 1959	

Topcon R II

(R2) BESELER C TOPCON In the United States

Topcon Code	30 A	Serial number key	30 XXXX
Serial Number	300001	to 303484	last known number
Production Years	1960		
No. produced	Approx. 3,500-4,000		
Format	24x36mm	using 35 mm film	
Lens (type)	F Auto Topcor		
Standard Lens	58mm f/1.8 F Auto Topcor	- 35mm f/2.8 F Auto Topcor	
Lens Mount	Bayonet with Exakta mount	and diaphragm connection	
Shutter	Curtain, on focal plane		
Settings	1 sec. to 1/1000s	and B setting, Self-timer	
Synch	F X - 1/50s		
Exposure Meter	No		
Battery	No		
Dimensions	157mm x 105mm x 105mm	with standard 58mm lens	
Weight	1065 grams	with standard 58mm lens	
Price / USA	\$295.00		

Topcon R3

BESELER D TOPCON In the United States

Topcon Code	31B	Serial number key	31 XXXX
Serial Number	310001	to 311904	last known number
Production Years	1960		
No. produced	Approx. 4,000-5,000		
Format	24x36mm using 35 mm film		
Lens (type)	F Auto-Topcor		
Standard Lens	58mm f/1.8 F Auto Topcor (62 B series)		
Lens Mount	Bayonet with Exakta mount and diaphragm connection		
Shutter	Curtain, on focal plane		
Settings	1 sec. to 1/1000s and B setting, Self-timer		
Synch	F X - 1/50s		
Exposure Meter	Designed for external clip-on selenium Topcon Meter		
Battery	No		
Dimensions	109mm x 105mm x 105mm with standard 58mm lens		
Weight	1065 grams with standard 58mm lens		

Topcon RS

Topcon Code	32A	Serial number key	32 XXXX
Serial Number	320001	to 322125	last known number
Production Years	1962		
No. produced	Not known		
Format	24x36mm using 35 mm film		
Lens (type)	RE Auto Topcor		
Standard Lens	58mm f/1.8 RE Auto Topcor		
Lens Mount	Bayonet with Exakta mount and diaphragm connection		
Shutter	Curtain, on focal plane		
Settings	1 sec. to 1/1000s and B setting		
Synch	F X - 1/60s		
Exposure Meter	Designed for external clip-on CdS meter		
Battery	No		
Dimensions	157mm x 99mm x 95mm with standard lens		
Weight	990 grams		

THE KE 28B: A 6x6 AERIAL CAMERA WITH LEITZ OPTICS



The KE-28B seen in 3/4 view from the left

Cameras created especially for military applications always form an interesting and somewhat mysterious chapter in camera history. Partly because production of them is limited and not highly publicized, partly because they are at least partially subject to military secret and partly for other lesser known and noble reasons, military cameras have always enjoyed a certain anonymity and have always been shrouded in a certain sense of mystery.

The fact that standing military orders of a number of nations require cameras to be destroyed in the event of capture or

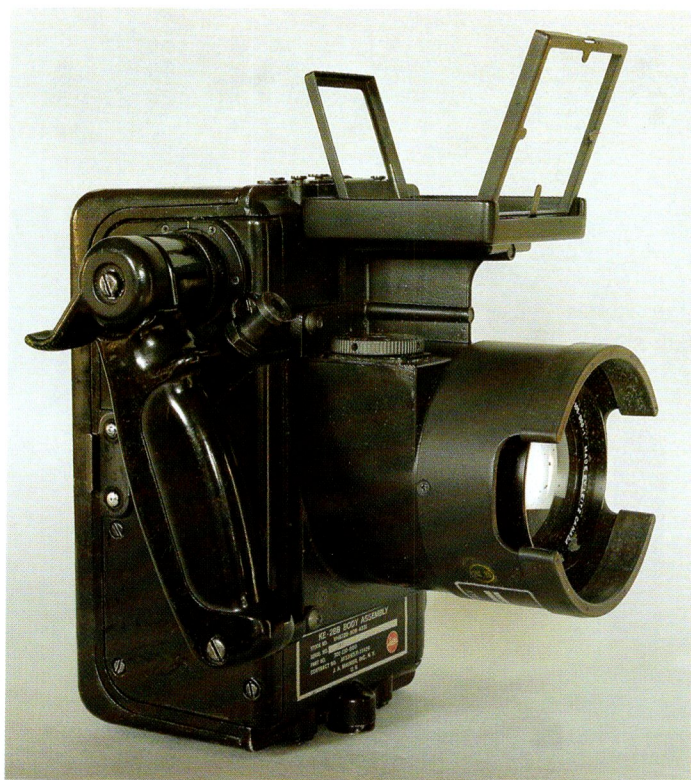
desertion, or even just when the equipment is taken out of active service, underscores the fascination collectors feel for these cameras, survivors of military campaigns and battles, or reconnaissance or patrol missions.

When the allure of military insignia is joined by that of an already famous name in the professional and amateur photography field, the collecting fever reaches uncontrollable heights.

Because every army from World War I on had its own photography division for strategic or propaganda purposes that was equipped with special or modified

equipment, sometimes including custom made pieces with their own contractual specifications, the amount of military or military-application equipment is enormous and covers the army, navy and air force (perhaps the most privileged of all the military branches) and ranges from the Luftwaffe's famous Leica and Robot cameras to medium and large format aerial cameras with often secret and unpronounceable names.

Germany, the United States and Japan seem to lead in the production of this type of equipment, but France, England and Italy (not to mention the peace-loving



Right side



Left side

Sweden if Victor Hasselblad's biography is to be believed) have also played a part.

A reconnaissance 6x6cm

Alongside the 35mm cameras used during World War II and throughout the period of the Cold War that followed, medium format cameras were also utilized, especially for aerial reconnaissance, equipped with lenses and viewfinders specific to this application. Today, when the entire surface of our planet is kept under constant surveillance by a network of spy satellites capable of distinguishing objects no larger than a square meter, the idea of military reconnaissance planes equipped with heavy, bulky photographic equipment run manually by a non-photographically-expert pilot or co-pilot more capable with a control stick than an aperture ring, could bring a smile to the lips. However, the production and use of these cameras marked a wide-ranging historical period from the 1950s to the 1980s. Part of this history belongs to the 6x6cm camera known as the KE-28B of the US Air Force.

The initials KE are well-known to camera collectors since they indicate a camera (K) used for single shots (E) and were used for a number of different pieces of equipment. The Leica KE-7A, constructed using a Leica M4 body, is famous with collectors but the KE-12 (with a Speed Graphic body), KE-7 (using the Kodak

35mm Signet) and KE-48C (Nikon F body) are perhaps somewhat less known. More familiar is the KE-4 Combat Camera by Graflex based on an original project developed by Hubert Nerwin and styled like the rangefinder 35mm with interchangeable lenses, but larger in size and designed to use double-perforated 70mm film for 6x7cm format.

The camera known as the KE-28B was preceded by the KE-28A model that was virtually identical and of which a thousand were produced at the start of the 1960s by Aerial Industries of Chicago. The KE-28A was created on the basis of precise military requisites with a fixed focus lens with f/32 minimum aperture and extension of the depth of field at maximum closing from 20 feet to infinity, a focal plane shutter with maximum speed of 1/1000sec and X and M synch, 6-in. lens with double the focal length compared to standard 6x6cm format lenses, direct viewfinder and two generous side grips for use with gloves. The camera was manufactured on the basis of Air Force contract AF 33 number (600) 41860 and was equipped with a 6-in. lens with maximum speed of f/2.8, subcontracted out to the Pacific Optical Company in Los Angeles. The camera body was vertical to follow the direction of the film path and the film advance and shutter wind-on and release controls were located near the grip on the right side. On the back of the camera a system of sliding

guides was used to find the correct exposure on the basis of film speed and weather conditions. Spartan, sturdy and heavy, the KE-28A camera was made of aluminum alloy, almost completely by hand, with black satin finish. The cameras ordered were delivered as ordered and offered good results under demanding working conditions. Lens performance, however, was judged unsatisfactory and for a second batch of the same type of camera a new supplier was looked for.

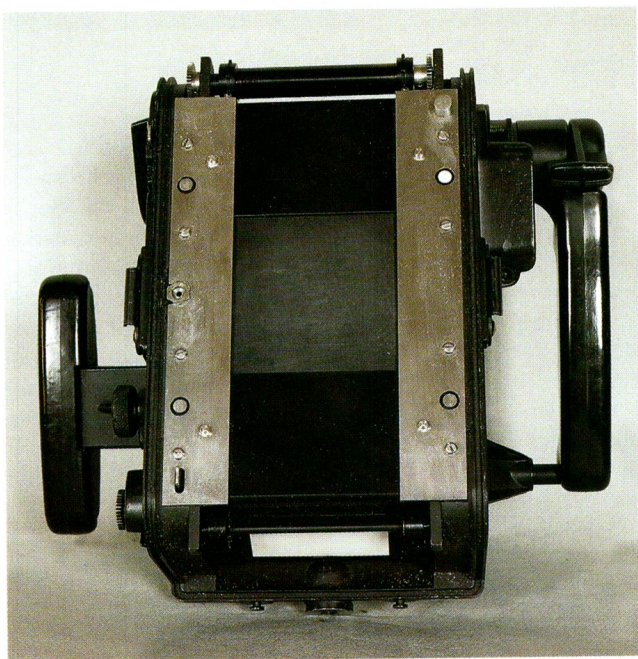
KE-28B

In July 1965 the new contract was signed — AF 33 (657) 13426 — with the Maurer Company in New York which went to the Canadian subsidiary of Leitz for the lenses. This new camera, strongly based on the KE-28A, was dubbed the KE-28B. A thousand of these new cameras were built and they bear a remarkable resemblance to the earlier model, but in addition to the lens, there are a number of details that differentiate them. The general layout was the same with the camera's vertical orientation and film advance, focal plane shutter, direct viewfinder, two side grips and position of the main controls, wind-on and release near the right grip.

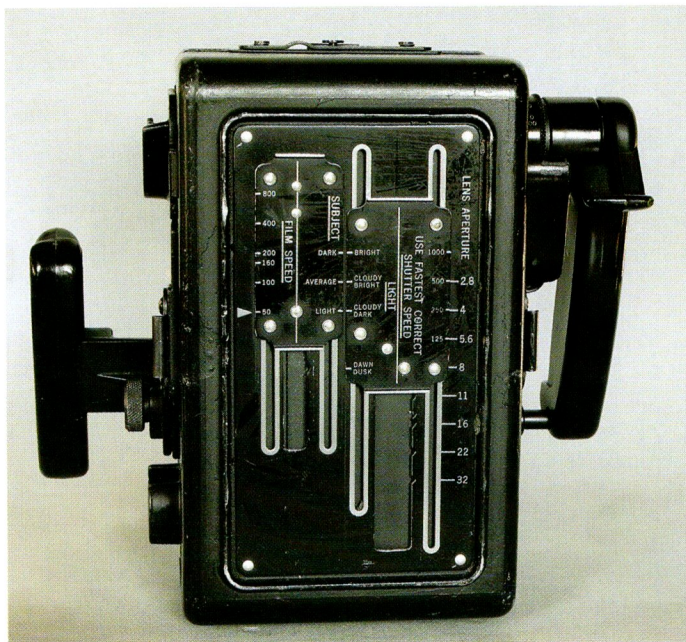
The design of the grips and controls was slightly different with the left grip attached only at the middle instead of at the two ends and the viewfinder folded away



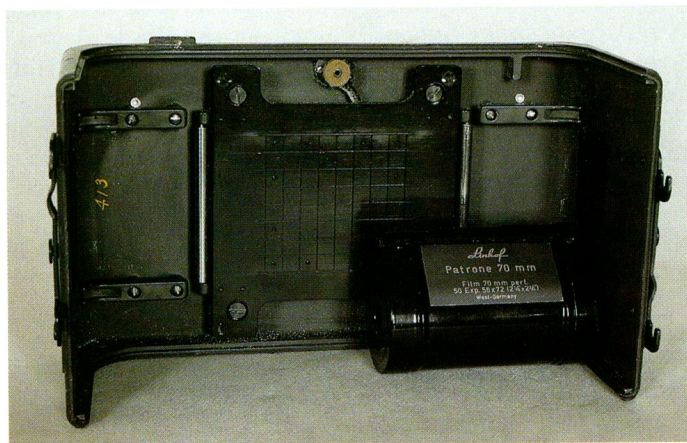
Camera seen from below with the unmistakable inscription "BOTTOM". Among the various markings on the ID plate is the unmistakable red Leitz logo, perhaps added later



Back open with 6x6cm format window and metal curtain



Back with guides for rapid exposure calculation



Detail with back removed and film pressure plate and Linhof cartridge for 70mm film

instead of being stationary. The shutter blinds were completely different and made of very thin stainless steel, with just four shutter speeds, 1/125, 1/250, 1/500 and 1/1000sec. The flash synch sockets and two clips for attaching the flash included on the previous model were not included. But, for a camera to be used for aerial shooting from a distance, the synch function was totally useless. The rapid calculating guides still appeared on the back, even if they provided only a rough measure of the correct exposure. But on the new model, these guides were

positioned differently than on the KE-28A. The film speed guide was moved from right to left, while that for the aperture was moved to the left instead of the right, and both guides were turned upside down, with more closed aperture settings and lower film speeds on the bottom instead of the top. Some of the markings on the edge of the guides were also different. The aperture scale still ranged from f/2.8 to f/32, but the new film speed scale went from ASA 50 to 800, compared with the previous scale of ASA 25 to 400. The aperture scale

had just four settings (125 - 250 - 500 - 1000) compared with the older one which was more extensive and included also 30 and 60, speeds that evidently ran the risk of blurred shots in movement.

As on the old version, there were three lighting conditions for the subject, full light (LIGHT), medium (AVERAGE) and shade (DARK) and there were four set weather conditions, full sun (BRIGHT), light cloud (CLOUDY BRIGHT), heavy cloud (CLOUDY DARK) and extreme conditions (DAWN - DUSK).

In the new model KE-28B a written



Base plate with "BOTTOM" marking and plate with lens specifications



The sturdy "trunk" of the KE-28B



Detail of controls, winding lever controlled by the thumb, shutter release button, aperture ring

warning brusquely reminded the photographer to use the highest shutter speed possible. With ASA 50 film, full sun and subject in the shade, the aerial photographer was ordered to use 1/500 f/2.8 instead of 1/125 f/5.6, the setting preferred by photographers on the ground. The KE-28B could be loaded in full light conditions using 70mm film in Hasselblad or Linhof safety cartridges. The KE-28A required loading only in a dark room. Another innovation on the KE-28A was a special system to extract air from the back to guarantee that the film remained perfectly flat.

But it was the lens that marked the major difference between the KE-28A and KE-28B models. The KE-28B was equipped with a Leitz Elcan manufactured in Midland, Canada. The lens with 6-in. focal

length (corresponding to 152mm) seems to have been the first Elcan lens to have been used by the US armed forces, but from available news reports, it was certainly not the last and was followed by many other lenses supplied on the Leica M in the KE-7A version, such as the f/2 Elcan with 55mm and 66mm focal lengths and the extraordinary 90mm f/1.0 Elcan produced for the navy.

The 152mm f/2.8 Elcan for the KE-28B camera was marked 1983-A6 and its 7-element optical scheme was identified with the initials C59, later replaced by a scheme of the same type labeled C138. The front element was 60mm in diameter and the weight of the lens alone was close to 800 grams, with the overall weight of the camera totaling over three-and-a-half kilos. The camera came equipped with a

sturdy carrying case.

On the collecting market, these cameras, sought after by a specialized niche of collectors, have estimated values that are bizarre depending on highly variable factors. The presence of a Leitz Elcan lens boosts the value. At a recent German auction, a Maurer KE-28B with Elcan lens, with estimated value of between 400 and 600 Euro, sold for over 800 Euro.

**Danilo Cecchi
Angelo Derqui**

Special thanks to Romolo Ansaldo who made available both the camera and information that allowed us to put together the history of this camera.

JENA'S "TURN OF THE SCREW"

The universal screw mount lenses of Carl Zeiss Jena



Comparison of four 50mm f/2.8 Tessar lenses; note the changes in size and finish from the early Fifties to the early Nineties

The name Jena (pronounced Yena) brings to mind a number of things. For some it might conjure up images of a voracious, evil African canine that hunts in packs and is anything but popular, but nevertheless succeeds in getting a laugh out of life. Others might remember a Napoleonic victory to which the French dedicated a bridge over the Seine and a square in Paris. For others, it is simply the large, industrial capital of the German state of Thuringia. To photographers, or those who have photographed to a greater or lesser extent during the course of their lives, Jena can only mean the famous brand of camera lenses. For all those in this category, Jena is automatically associated with the name of Carl Zeiss, one of the most famous and esteemed lens manufacturers.

From its origins to the split

The Carl Zeiss Jena company was founded in 1847 as specialists in the production of microscopes and it was only thanks to the initiative of one of its directors, Prof. Ernst Abbe, that following the death of the company's founder a section dedicated to the construction of camera lenses was created.

The first lenses bearing the Carl Zeiss Jena name were apochromatic, such as the 4-element Protar lens (1890), the double Protar (1895), the 6-element Planar (1896)

and the 4-element Unar (1899).

The Tessar finally saw the light of day in 1902, comprised of 4 elements in three groups and offering highly satisfactory results. The Tessar lens was manufactured in a wide range of focal lengths to equip cameras of various formats, from large and medium format to 35mm and smaller formats.

At its birth, the maximum speed of the Tessar was f/6.3 which was increased in 1917 to f/4.5 and later to f/3.5. During the mid-1930s the speed of the Tessar was upped to f/2.8 in a number of focal lengths, including 40mm for the 24x24mm Tenax II, 50mm for the 35mm Super Nettel, 60mm for the Baby Rolleiflex and 80mm used to equip Zeiss Ikon 6x6cm format cameras such as the Super Ikonta and the Ikoflex III.

The Tessar was so popular that Carl Zeiss Jena was not able to fill market demand for it and granted manufacturing rights to a number of foreign companies, including Krauss (France), Koristka (Italy), Bausch & Lomb (USA) and Ross (England).

Following the lapse of the Tessar patent in 1927, a number of companies in Germany and other countries successfully employed its 4-element, 3-group layout.

During the period between the wars, Carl Zeiss Jena offered its lenses to all the top manufacturers of cameras in Germany and

other companies abroad.

In addition to the Tessar, Carl Zeiss Jena also built more economical lenses such as the 3-element Novar and Triotar, as well as specialty lenses such as the 800mm focal length Magnar telephoto lens (1906) and very fast lenses such as the f/2 Biotar (1927).

With the birth of the 35mm camera system, in 1932 Contax began producing Sonnar lenses with a high speed of f/2 for 50mm and 85mm focal lengths and up to f/1.5 for the 50mm. The year 1936 saw the start of production of the 35mm Biogon wide angle lenses with an exceptional speed of f/2.8. Up until 1942, Carl Zeiss Jena built and sold over two and a half million lenses with serial numbers ranging up to 2,800,000. With the defeat of Germany and the division of the country into four allied zones, the city of Jena fell under Soviet control. But before the Russian occupation troops could reach Jena, Americans entered the city and over one hundred Carl Zeiss Jena managers and technicians were transferred to the American zone. This group of managers and technicians the vast majority of those working in Jena would later set up the Zeiss Opton company in Oberkochen.

Following the legal recognition granted by a number of Western courts regarding the alleged transfer of the company's headquarters from Jena to Oberkochen, the

firm once again took on the name Carl Zeiss. Following the war, the employees remaining in Jena restarted production interrupted by the war years.

The post-war period

In the immediate post-war period, production of camera lenses was resumed, under Soviet control, at the Carl Zeiss Jena factories on the basis of pre-war designs. Numbering began with 3,000,000 and between 1945 and 1949 approx. 200,000 lenses were made. Like virtually the rest of the photographic industry in the DDR, the company was nationalized under the name VEB Carl Zeiss Jena and re-organized with the purpose of equipping the cameras built in Dresden works with the best lenses Jena had to offer.

While during the pre-war era Carl Zeiss Jena lenses had been sold to both German and foreign companies, in the post-war years Jena lens were used almost exclusively for East German cameras. The most noteworthy exception was the supply of Contax mount lenses to Zeiss Ikon in Stuttgart, West Germany, while lens production of Carl Zeiss in the west was slow to get off the ground under the provisional name of Zeiss Opton. Specifically, for the Contax, Zeiss Ikon-Stuttgart was supplied with the 50mm f/2 and 85mm f/2 Sonnar, 35mm f/2.8 Biogon, 75mm f/1.5 Biotar and 180mm f/2.8 and 300mm f/4 Sonnar for reflex system, as well as long 500mm telephotos and special lenses such as the 25mm focal length Topogon.

Unlike pre-war output which used chromium plated brass for the lens mount, post-war pieces used lighter materials such as aluminum alloys with either natural or black external finish.

In West Germany, Carl Zeiss Oberkochen began producing new lenses marked either Zeiss Opton or Carl Zeiss, and soon were able to completely satisfy the entire demand of Zeiss Ikon in Stuttgart. The lenses built in Oberkochen were used primarily to equip the new cameras manufactured by Zeiss Ikon, the Contax and 35mm Contaflex and 6x6cm Ikonflex, and only exceptionally for different brand cameras.

For the medium format, lenses were only supplied to a few select customers such as Rollei and Hasselblad, while the production of lenses for 35mm cameras was virtually limited to the Contax, Contaflex and Contarex cameras built by Zeiss Ikon. This policy became even more pronounced with the birth of the Contarex 35mm reflex system for which Carl Zeiss began exclusive production of its interchangeable lenses. The business strategy of Carl Zeiss Jena was different and seemed more open, even if the majority of the lenses manufactured in Jena were used on Dresden-built cameras,



50mm f/3.5 Tessar with diaphragm pre-set and aluminum finish (side view)

in particular the reflexes built for the 35mm and 6x6cm formats. Carl Zeiss Jena lenses were used to equip the bayonet mount Exakta as well as the new Contax S and Praktica, both with 42x1mm screw mount, that were put into production at the end of 1949.

Starting in 1952, Carl Zeiss Jena lenses were manufactured with a new bayonet mount for the 35mm Praktina reflex and, starting in 1956, an unusual bayonet mount that was very similar but with wider diameter was made for the 6x6cm Praktisix and Pentacon Six reflex cameras.

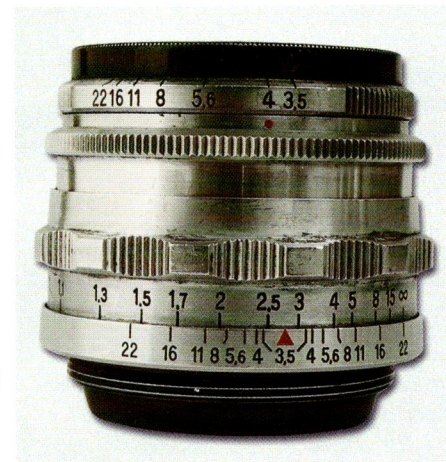
The Contax S and Praktica 42x1mm screw mount was also used on the Edixa Reflex made in West Germany starting in 1954 and was employed on the Japanese Asahi Pentax reflex starting in 1957.

Later, the same screw mount would be used on a number of other German and Japanese 35mm reflexes such as the Regula, Icarex, Yashica, Ricoh, Mamiya, Fujica, Chinon, Olympus and, starting in 1966, on the Soviet 35mm Zenit. The 42x1mm screw mount became a universal mount and was utilized on many reflex cameras up until the mid-1970s and even after this date until the Eighties on the Praktica and through the end of the Nineties on reflex cameras from the former Soviet Union.

The other mounts used on the interchangeable lenses produced by Carl Zeiss Jena had a shorter-lived history. The Contax bayonet was abandoned at the end of the Fifties when the relationship between Carl Zeiss Jena and Zeiss Ikon-Stuttgart had been over for some time. The Praktina bayonet was also abandoned in the early Sixties and the Exakta bayonet at the beginning of the Seventies.

Tracing the history and evolution of Carl Zeiss Jena lenses with universal 42x1mm

50mm f/3.5 Tessar no. 3374242 with diaphragm pre-set and aluminum finish (front view); note inscription "Tessar 1:3.5 f=50mm" typical of early lenses and later modified



screw mount in essence means reviewing lens and photographic history in general over the last half century.

Fifty years of screw mount lenses

The evolution of the output of Carl Zeiss Jena lenses can also be evaluated in terms of the number produced, based on known serial numbers.

During the early post-war years, from 1945 to 1952, production ranged from 50,000 to 75,000 lenses per year, rising to 150,000 per year built up until 1955. Between 1945 and 1955, over a million lenses were manufactured in total with serial numbers between 3,000,000 and 4,000,000.

Carl Zeiss Jena lenses manufactured between 1945 and 1952 have the focal length in centimeters engraved on the barrel. For example, the Tessars have the complete inscription "Tessar 1:2.8 f=5cm". After 1952, this was modified to "Tessar 1:2.8f=50mm" and, later on, to the even more abbreviated "Tessar 2.8/50".

In the years that followed, production picked up considerably, arriving at levels of over 300,000 lenses per year. In 1958, the serial number 5,000,000 was reached, in 1961 6,000,000, in 1964 7,000,000 and in 1967 the number 8,000,000.

1970 marked the attainment of serial number 9,000,000 and from here production levels began to slacken, with the number 10,000,000 reached in 1975 and serial number 10,800,000 not achieved until the end of the Eighties. Following the fall of the Berlin Wall and the reunification of Germany, Carl Zeiss Jena was divided up, a part returning under the control of the Carl Zeiss Foundation, a part remaining active under the name Jenoptik and a part acquired by the Docter group, specialists in the construction of large format lenses.

50mm f/2.8 Tessar with diaphragm pre-set and aluminum finish (side view)



50mm f/2.8 Tessar no. 3882328 with diaphragm pre-set and aluminum finish (front view); note inscription "Tessar 2.8/50"

50mm f/2.8 Tessar no. 3377726 with diaphragm pre-set and aluminum finish (front view); note inscription "Tessar 1:2.8 f=50mm" typical of early lenses and later modified



50mm f/2.8 Tessar diaphragm pre-set with aluminum finish mounted on an Asahi Pentax SL (front view)



50mm f/2.8 Tessar no. 4786595 with SB semi-automatic spring diaphragm and aluminum finish (front view)



50mm f/2.8 Tessar no. 4786595 with SB semi-automatic spring diaphragm and aluminum finish (side view)

Following these events, production of Carl Zeiss camera lenses was definitively halted.

The immortal Tessar

The post war period saw the resumption of the production of Tessar lenses, still considered the best of the standard lenses for general applications. Production of lenses for medium and large formats included 135mm to 360mm focal lengths with maximum speed of f/4.5 and 50mm to 105mm focal lengths at f/3.5. Tessar lenses were also manufactured with a speed of f/2.8 for the 50mm for 35mm format and 80mm for the 6x6cm format.

50mm Tessar lenses were particularly attractive for their performance, light weight

and price and were used on many 35mm cameras. Manufacture of the 50mm Tessar began in 1946 at a speed of f/3.5 and, starting in 1947 at f/2.8.

In addition to being produced with a screw mount and Exakta and Praktina bayonet mounts, the 50mm f/2.8 Tessar was also made for fixed or interchangeable mount on 35mm cameras with normal finder eyepiece such as the Altix, Welti, Beltica, Super Dollina and Belmira, as well as the Werra and more modern Pentina with reflex viewfinder.

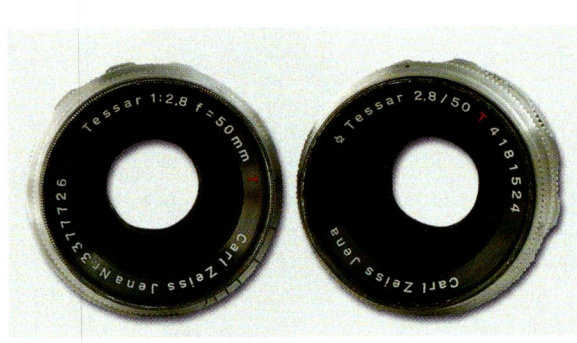
Following the period of cooperation between Carl Zeiss Jena and Zeiss Ikon-Stuttgart for the supply of telephoto lenses for Contax, the Zeiss Foundation initiated

a number of international lawsuits to regain possession of the Carl Zeiss brand name and all brands associated with it. For reasons connected to this battle over the use of patents registered before the war, a number of Tessar lenses built in Jena from 1954 on are simply marked with the letter T. After the decisions of some courts, the use of the name Carl Zeiss was even forbidden in some markets. However, no one could prohibit the use of "Jena" and for this reason the brand name was sometimes shortened to CZ Jena, or even just Jena, until it became "aus Jena" and, finally, "Jenoptik".

The 50mm f/3.5 and 50mm f/2.8 Tessar lenses with screw mount were manufactured in the early years following



Comparison of 50mm f/3.5 Tessar and 50mm f/2.8 Tessar (side view)



Comparison of two Tessar 50mm f/2.8 lenses (front view); note different inscriptions



50mm f/2.8 Tessar semi-automatic with aluminum finish mounted on an Asahi Pentax SL (front view)



50mm f/2.8 Tessar semi-automatic with aluminum finish mounted on an Asahi Pentax SL (from above)

the war with external finish in natural aluminum and only manual closing of the diaphragm. This type of diaphragm was indicated in catalogs of the day with the code N (Normal) or NB (NormalBlende). Because the closing of the diaphragm on cameras with reflex viewfinder caused the finder to darken, a system was devised that made it possible to close the diaphragm to the desired value right before the shutter was released. A ring located near the front of the lens and near the ring used to close the diaphragm made it possible to select which aperture setting to be used. When the diaphragm ring was turned counter clockwise, it would stop at the pre-set value without going past it. Carl Zeiss Jena lenses equipped with the diaphragm pre-set ring were indicated in the catalog with the letters BV (BlendenVorwahl). The 50mm f/2.8 Tessar was built in a version with the diaphragm pre-set ring starting in the early Fifties. The oldest pieces stopped down to f/22 but do not have the click stop on intermediate stops, while those built after 1952 only stop down to f/16 but have the click stop on intermediate values between 2.8 - 4 - 5.6 - 8.

Tessar screw mount lenses were also made in a slightly wide angle version with a focal

length of 40mm and NB manual diaphragm. The 40mm Tessar had a covering power for 35mm format of 57 degrees on the diagonal, compared with 45 degrees for the 50mm focal, and with maximum speed of f/4.5.

The diameter of the 40mm Tessar filters was 40.5mm, like those on the 50mm Tessar with f/3.5 or f/2.8, and again like the latter, was later upped to 49mm. The 40mm focal length is the shorter one compatible with the Tessar scheme with the shooting range of the 35mm reflex and camera mirror movement.

During the pre-war period, wide angle lenses were created for the Contax with Tessar scheme and 28mm focal length, with the rear lens so close to the focal plane that it prevented its use on reflex cameras.

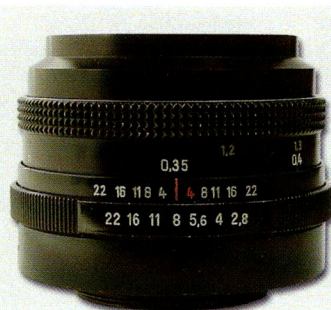
At the end of 1953, the Praktina FX 35mm reflex was equipped with an automatic diaphragm closing system connected to the shutter release button. The lenses equipped with Praktina bayonet mount, including the 50mm f/2.8 Tessar, had a pre-setting ring on the front with internal connection to the rear mount for automatic spring closing of the diaphragm and with an exterior lever on the barrel to manually re-open the diaphragm.

At the end of 1956, the 35mm Contax F and Praktica FX2 with screw mount were also equipped with a mechanism similar to that of the Praktina. As the 50mm f/3.5 Tessar were taken out of production, the 50mm f/2.8 Tessar with screw mount was modified for spring closure, utilized an external mount that was much larger than the identical 50mm f/2.8 Tessar with manual pre-setting, used 49mm filters and was identified in the catalog with the initials SB (SpringBlende).

The 50mm f/2.8 Tessar with spring diaphragm utilized the front ring for diaphragm pre-setting. Following the shutter release, rotating this ring clockwise would re-open the diaphragm to its maximum aperture and wind on the spring. In other SB type lenses, the diaphragm was re-opened by using a special lever. The 50mm f/2.8 Tessar with spring diaphragm had no mechanism for manual diaphragm closing and did not have a way of evaluating the depth of field in the viewfinder.

In mid-1958 the Praktina IIa 35mm reflex was equipped with a mechanism for automatic diaphragm closing at the time the shutter was released, and automatic re-opening of the diaphragm to its maximum

50mm f/2.8 Tessar no. 10811238 with completely automatic ADB diaphragm in black finish with latest generation AM dial (front view) - note inscription "aus Jena DDR"



Tessar 50mm f/2.8 with completely automatic ADB diaphragm in black finish



Comparison of two 50mm f/2.8 Tessar lenses with completely automatic ADB diaphragm in black finish and black finish/zebra stripes (side view)



Comparison of two 50mm f/2.8 Tessar lenses with completely automatic ADB diaphragm in black finish and black finish/zebra stripes (front view)



40mm f/4.5 Tessar with manual diaphragm and aluminum finish (side view)



40mm f/4.5 Tessar no. 3834919 with manual diaphragm and aluminum finish (front view)



40mm f/4.5 Tessar manual with aluminum finish mounted on an Asahi Pentax SL (front view)

aperture when the shutter was wound on. Those lenses equipped with automatic diaphragm closing and re-opening were identified with the initials ASB (Automatische SpringBlende) and could be identified by the black band on the front of the aluminum colored lens barrel and for having the aperture ring more towards the back of the barrel, behind the focusing ring.

Lenses with Exakta bayonet mount and screw mount were also modified to be equipped with automatic diaphragm closing/re-opening, were identified in catalogs with either the initials ASB or ADB (Automatische DruckBlende) and were manufactured with the aperture ring positioned towards the rear and focusing ring towards the front.

The first series of ASB and ADB lenses have the focusing ring in black finish, but

the black finish was soon extended to the entire lens mount, except for the aperture ring. A lever protruding from the external lens mount was used to manually close the diaphragm and to visually check the depth of field. The minimum aperture setting of the automatic 50mm f/2.8 Tessar was restored to f/22 once again. The same system for automatic diaphragm closing/re-opening used on the Contax F and Praktica was also utilized almost immediately on Edixa Mat Reflex cameras as well as the Japanese made Asahi Pentax S and later became a standard feature of all screw mount reflex cameras.

The year 1956 saw the start of production of the 6x6cm Praktisix reflex which was equipped with Carl Zeiss Jena lenses with the ASB automatic diaphragm mechanism similar to that used on the Praktina IIa. The first standard lens for the Praktisix was an

80mm f/2.8 Tessar with four elements, aluminum finish and black focusing ring. Production of the Praktina was halted at the start of the Sixties and two years later production also ceased of the Contax F. The Carl Zeiss Jena lenses with screw mount remained in the Praktina outfit and the 50mm f/2.8 Tessar remained in production and were sold as the lowest priced standard lens for the Praktica system made by Carl Zeiss Jena.

In the mid-Sixties, the "look" of the housing of Carl Zeiss Jena lenses was modified to include a black finish with white or red numbers for the distance scale and the aperture and focusing rings were finished with the classic "zebra stripes" consisting of a series of raised bands with silver finish against a black background. The performance characteristics of the 50mm f/2.8 Tessar with black zebra finish were

also modified and the minimum focusing distance went from 50cm to 35cm. These aesthetic changes in the new mount were accompanied by a number of optical changes as well, such as the use of a new anti-reflection coating and rendering color performance uniform on all Carl Zeiss Jena lenses.

In the early Seventies, production of the 35mm Exakta reflex was stopped, as were the Carl Zeiss Jena lenses with bayonet mount for this camera. For the new L series Praktica cameras, alongside the production of Carl Zeiss Jena lenses with screw mount, was that of the screw mount lenses manufactured by Meyer with the Pentacon and Pentacon Electric brand.

These latter lenses were equipped with electrical sockets for connection with the diaphragm simulator also utilized on the L series Praktica cameras such as the Praktica LLC, VLC, PLC and the Praktica EE with electronic shutter. This innovative system of electrical sockets provided a brilliant solution to the problem of light readings with the diaphragm fully open in screw mount cameras and opened the way for a new type of information exchange between the lens and camera body that would later be developed in the Eighties and Nineties with the creation of cameras programmed for fully automatic speed/diaphragm selection. Carl Zeiss Jena would make use of these electrical sockets in a new series of screw mount lenses.

Production of the series B Praktica cameras began in 1982, with bayonet mount for interchangeable lenses connected to the diaphragm simulator. The bayonet mount lenses created for the Praktica B were simply marked Prakticar or Pentacon Prakticar, irrespectively of whether supplied by Meyer (re-named Pentacon) or Carl Zeiss Jena. Production of Carl Zeiss Jena lenses with B bayonet mount continued through the early Nineties with black finish identical to Pentacon Meyer lenses and it was often difficult to tell the two apart. In fact, for these lenses, use of the Carl Zeiss names such as Tessar and Sonnar were not used, just the name Prakticar followed by the phrase "aus Jena", or sometimes the inscription "CZJ".

The 50mm f/2.8 Tessar was also included in the Praktica B catalog with the name Prakticar. Production of Prakticar lenses was halted following the reunification of Germany at the end of the Eighties and following the purchase of Pentacon by the Schneider company.

Despite these major changes, production of screw mount Carl Zeiss Jena lenses continued through the Eighties, together with that of the bayonet mount Prakticar lenses. The screw mount lenses kept their original names despite a number of

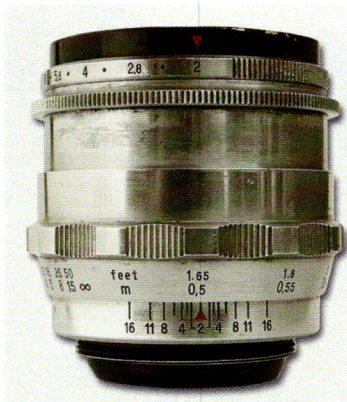
technical and aesthetic changes. In the second half of the 1970s, the black finish with striped rings was replaced by a more modern and appealing all-black finish with the aperture ring covered with a subtle ribbed texture and the focusing ring with a fine pattern of squares. In place of the manual diaphragm closing lever was a dial with A and M positions used to select automatic or manual closing. In this guise, Carl Zeiss Jena lenses remained in production, although at a reduced rate, up through the early Nineties, even out-living for a while the last of the screw mount



58mm f/2 Biotar with manual diaphragm and black finish (side view)



58mm f/2 Biotar no. 3341968 with manual diaphragm and black finish (side view) - note inscription "Biotar 1:2 f = 5.8cm" with focal length still given in centimeters



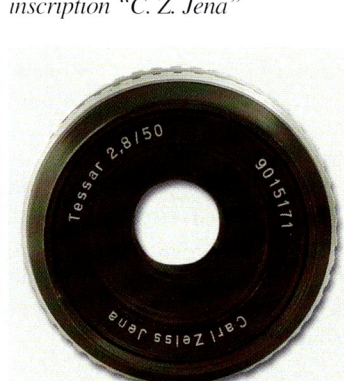
58mm f/2 Biotar with diaphragm pre-set ring and aluminum finish (side view)



58mm f/2 Biotar no. 4827284 with diaphragm pre-set ring and aluminum finish (front view) - note inscription "C. Z. Jena"



50mm f/2.8 Tessar with completely automatic ADB diaphragm and black finish/zebra stripes (side view)

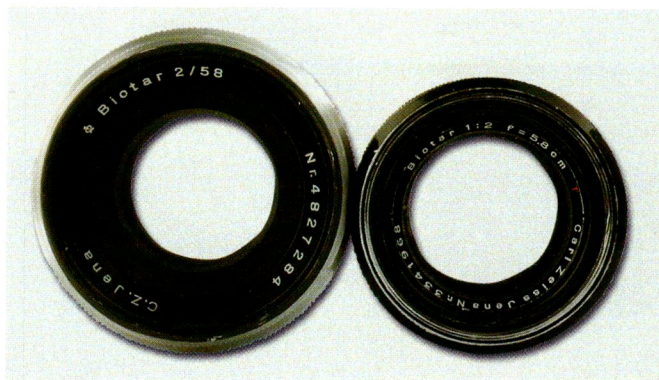


50mm f/2.8 Tessar no. 9015171 with completely automatic ADB diaphragm and black finish/zebra stripes (front view)

Praktica cameras that were taken out of production at the end of 1989.

Following 1975, serial numbers over 10,000,000 were recorded, arriving at 10,800,000 in the early Nineties, even though sometimes a lower serial number of just four, five or six numbers was engraved on the lens barrel, as if after having reached 10,000,000 lenses, the numeration had reset to zero.

The 50mm f/2.8 Tessar was produced with screw mount even in this updated version, but maintaining the minimum setting of f/22 and 35cm minimum focusing distance.



Comparison of two 58mm f/2 Biotar lenses; the black model with manual diaphragm and aluminum model with diaphragm pre-set (front view)



Comparison of two 58mm f/2 Biotar lenses; the black model with manual diaphragm and aluminum model with diaphragm pre-set (side view)



58mm f/2 Biotar with black finish mounted on an Asahi Pentax SL (front view)

This brought the number of technical and aesthetic variants of the 50mm f/2.8 Tessar with universal screw mount to six, without taking into consideration the variations affecting just inscriptions or markings.

A special version of the screw mount 50mm f/2.8 Tessar was produced during the second half of the 1970s for use with macro bellows. This version without focusing helical and manual diaphragm closing to f/22 featured the lower mount and all black finish. The bayonet mount version under the Praktica name was a 55mm f/2.8 automatic macro lens with Tessar type scheme of four elements in three groups that stopped down to f/22, used 49mm filters and focused without accessories starting from 25cm. Once again, it seems accepted that this lens was produced by Carl Zeiss Jena.

Standard fast lenses—Sonnar, Biotar and Pancolar

If the 50mm f/2.8 Tessar remains the most common and well known of the standard Carl Zeiss Jena lenses, the standard fast lens produced by Carl Zeiss Jena for the Dresden screw reflexes was completely different. From the very beginning, the Contax S were equipped with a fast lens derived from the Contax rangefinder 50mm f/2 six-element Sonnar. To be mounted on reflex cameras, the Sonnar's optical scheme

was modified and its focal length changed to 58mm for a covering power of 40 degrees on the diagonal, while maintaining its maximum speed of f/2 unchanged. In place of the Sonnar name, this new lens was called the Biotar and was sometimes identified only with the initial B.

The first 58mm f/2 Biotar lenses with screw mount for the Contax S were constructed with a simple mount with fully manual diaphragm closing and black finish. But soon, the 58mm f/2 Biotar was also being produced with aluminum finish and equipped with a front ring for diaphragm pre-setting with the minimum closing changed to f/16 instead of f/22 as in the previous, black finish version. In compensation, the minimum focusing distance was reduced from 90cm to 50cm. In the screw mount version, the 58mm f/2 Biotar was equipped with a spring diaphragm closing and was identified in catalogs with the initials SB for SpringBlende.

The 58mm f/2 Biotar was also manufactured in an Exakta bayonet mount version, both BV and SB with external button for diaphragm closing, as well as the SB version of the Praktina bayonet mount with automatic diaphragm closing/re-opening. With the complete automatization of diaphragm closure at the moment of shutter release and for re-

opening after release, the 58mm f/2 Biotar was replaced with a new lens of the same speed, recomputed and again using six elements, but with the standard focal length of 50mm.

The automatic 50mm f/2 ASB lenses with Praktina mount were given the name Flexon, while those with Exakta bayonet mount and screw mount were called Pancolar. Flexon and Pancolar automatic ASB lenses had aluminum finish with black focusing ring at the front of the barrel. The 50mm f/2 Pancolar with screw mount stopped down to f/22 and focused starting from 45cm. During the mid Sixties, the 50mm screw mount Pancolar was modified to feature the new black body with zebra striped rings, and in this version the maximum speed was upped to f/1.8, while the minimum focusing distance was reduced to 45cm.

At the height of its production activity, Carl Zeiss Jena offered a new standard lens that was released at the same time as the 1968 Pentacon Super, but it remained in production for just a short period, perhaps just to 1972. Less than 5,000 of these were produced, all with black finish and zebra striped rings. This new lens was called the Pancolar, had six elements, a focal length of 55mm and maximum aperture of f/1.4. The 55mm f/1.4 Pancolar had a covering power of 42.5 degrees on the diagonal,

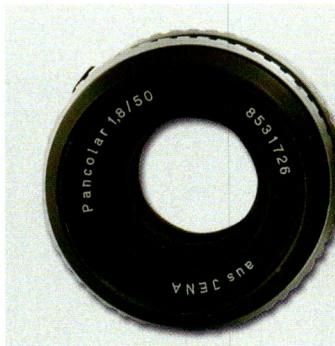
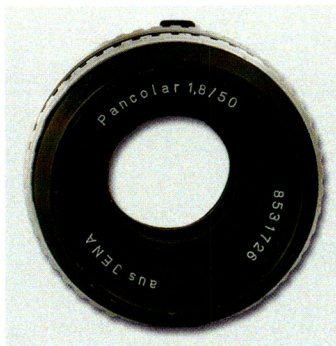


50mm f/1.8 Pancolar semi-automatic with black finish/zebra stripes mounted on an Asahi Pentax SL (front view)



50mm f/1.8 Pancolar with completely automatic ADB diaphragm and black finish/zebra stripes (side view)

50mm f/1.8
Pancolar no.
8531726 with
completely auto-
matic ADB
diaphragm and
black finish/zebra
stripes (front
view) - note
inscription "aus
Jena"



Comparison of
50mm f/1.8
Pancolar and
50mm f/1.8
Tessar with com-
pletely automat-
ic ADB
diaphragm and
black
finish/zebra
stripes (side
view)

TESSAR LENSES

	Focal	Aperture	Focusing	Diaphragm setting	Barrel	Filter diam.
Tessar	40mm	f/4.5 - 16	0.40 - infinity	Manual NB	aluminum	40.5mm
Tessar	40mm	f/4.5 - 16	0.40 - infinity	Manual NB	aluminum	49mm
Tessar	50mm	f/3.5 - 22	0.50 - infinity	Pre-set BV	aluminum	40.5mm
Tessar	50mm	f/2.8 - 22	0.50 - infinity	Pre-set BV	aluminum	40.5mm
Tessar	50mm	f/2.8 - 16	0.50 - infinity	Pre-set BV	aluminum	40.5mm
Tessar	50mm	f/2.8 - 16	0.50 - infinity	Semi-automatic SB	aluminum	49mm
Tessar	50mm	f/2.8 - 22	0.50 - infinity	Automatic ASB	aluminum	49mm
Tessar	50mm	f/2.8 - 22	0.50 - infinity	Automatic ASB	black/aluminum	49mm
Tessar	50mm	f/2.8 - 22	0.35 - infinity	Automatic ASB	black/zebra	49mm
Tessar	50mm	f/2.8 - 22	0.35 - infinity	Automatic AM MC	black	49mm

BIOTAR AND PANCOLAR LENSES

	Focal	Aperture	Focusing	Diaphragm setting	Barrel	Filter diam.
Biotar	58mm	f/2 - 22	0.90 - infinity	Manual NB	black	40.5mm
Biotar	58mm	f/2 - 16	0.50 - infinity	Pre-set BV	aluminum	49mm
Pancolar	50mm	f/2 - 22	0.50 - infinity	Automatic ASB	aluminum	49mm
Pancolar	50mm	f/1.8 - 22	0.35 - infinity	Automatic ASB	black/zebra	49mm
Pancolar	50mm	f/1.8 - 22	0.35 - infinity	Automatic AM	black	49mm
Pancolar	55mm	f/1.4 - 22	0.40 - infinity	Automatic ASB	black/zebra	66mm

stopped down to f/22, focused starting at 40cm and used 58mm diameter filters.

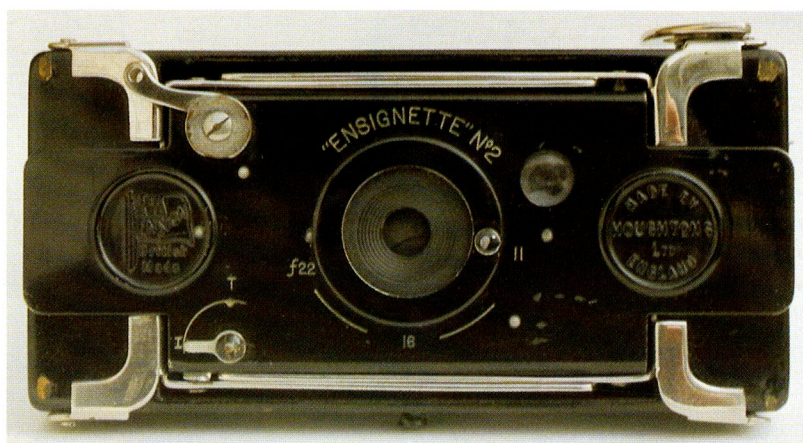
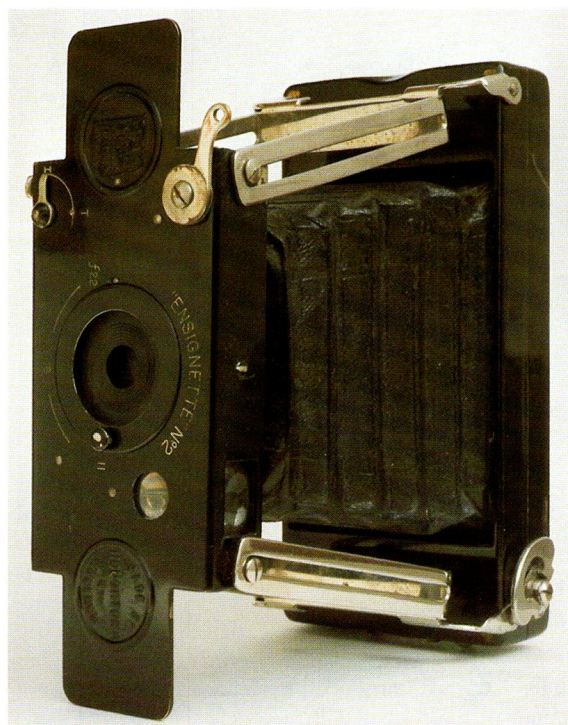
At the beginning of the 1970s, with the release of the Praktica LLC with electrical diaphragm simulator, a new series of lenses equipped with a series of electrical sockets for connection to the simulator was released. These lenses were called Pentacon Electric and were developed from Meyer lenses, but those produced by Jena were also brought up-to-date with electrical sockets. The same 50mm f/1.8 standard Pancolar lens was produced in a Pancolar Electric version with screw mount and equipped with electrical sockets, but in all other ways identical to the non-electrical socket version.

In the mid-Seventies, the 50mm f/1.8 Pancolar with screw mount was modified, as were the majority of "aus Jena" lenses, and was equipped with the new, all black finish in both normal and electrical version. It would remain in production through the end of the Nineties. Alongside the Pancolar lenses with screw mount, the 50mm f/1.8 "Prakticar aus Jena" was also built with bayonet mount for the series B Praktica. For the same cameras, an unusual Prakticar aus Jena lens with 50mm focal length and maximum speed of f/1.4, six elements, focusing from 35cm, f/16 minimum aperture and 52mm filter diameter was also produced.

Danilo Cecchi
Norberto Tubi
(End of Part I)

ENSIGNETTE

Turn-of-the-century English pocket camera



Ensignette no. 2: front with camera closed

Ensignette no. 2: camera open for vertical shooting

The English photographic industry during the Victorian era was famous for being the most reliable and renowned of the period. Distinguished by its large formats and meticulous craftsmanship using choice woods and high-quality lenses, the English dominated the market for over half a century against competition from the French across the Channel and the Americans across the Atlantic.

Only the Germans were able to unseat the English from their position of predominance, but not until the end of the first world war. English camera makers enjoyed another brief moment of glory in the 1950s before the arrival of Japanese products that would undercut the competitiveness of the majority of Europe's photographic companies.

Between the large format English cameras dating from the turn of the century and

interesting and original designs from the post-World War II period, was an era of economical, mass produced cameras. To a certain extent, this photographic output waged battle against the overpowering economic strength of multinational companies such as Kodak, and this was not a bad thing given the fact that today it has become a collectors' source that may be somewhat less active, but no less important.

One of the cameras that is quite emblematic of the state of the English photographic industry in the period between the wars is the Ensignette built by Houghton or Houghton-Ensign in dozens of different variants.

The Ensign trademark

The complex story of the Houghton company began in 1834 with the founding

of a trading company by George Houghton and Antoine Claudet. The company, specializing in glass products, was named Claudet & Houghton and was headquartered in the High Holborn area of London.

The company expanded out into other business sectors, including photographic products, took on son George as a partner and, following the death of photographer Claudet, the company became George Houghton & Son and later, in 1904, Houghton Limited.

In 1903 it began production of Ensign brand roll film and as its logo adopted a pub sign with a large letter N in the middle, an amusing Edwardian pun on "N sign". Around 1905, in its new Walthamstow factory, they began producing cameras and this activity would expand with Houghton become the most important English



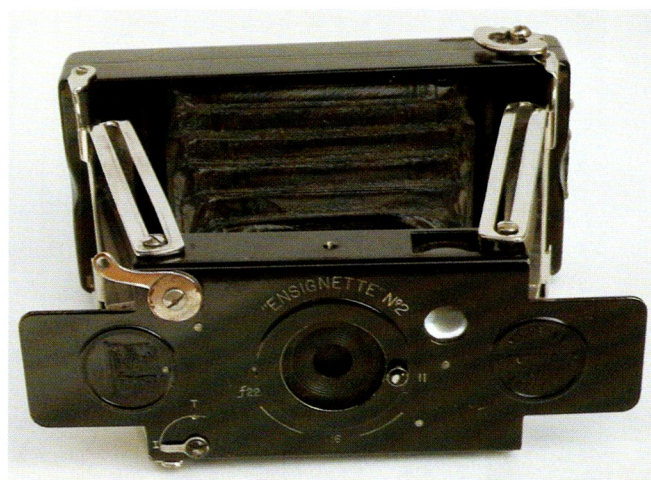
Ensignette no. 2: base plate with camera closed



Ensignette no. 2: back with red frame counter window



Ensignette no. 2: top with camera closed with film advance key



Ensignette no. 2: camera open

Ensignette no. 2: camera open

manufacturer of cameras with a thousand employees.

In 1911 its trademark was replaced by the flag of the English navy with "Ensign" written in the middle.

In 1915, Houghtons Ltd. and W. Butcher and Sons Ltd. merged to form The Houghton-Butcher Manufacturing Company, but the two companies continued to sell their cameras under separate names, despite the fact that they were built alongside each other in the same factories

in Walthamstow.

In 1930 the name of the company was changed to Ensign Limited while production continued under the Houghton-Butcher trademark.

During World War II, the company played a major role in the war effort, but suffered the destruction of Ensign House, the company headquarters in High Holborn, during the Blitz.

The Ensign company was liquidated in 1945, becoming first Barnet Ensign, then

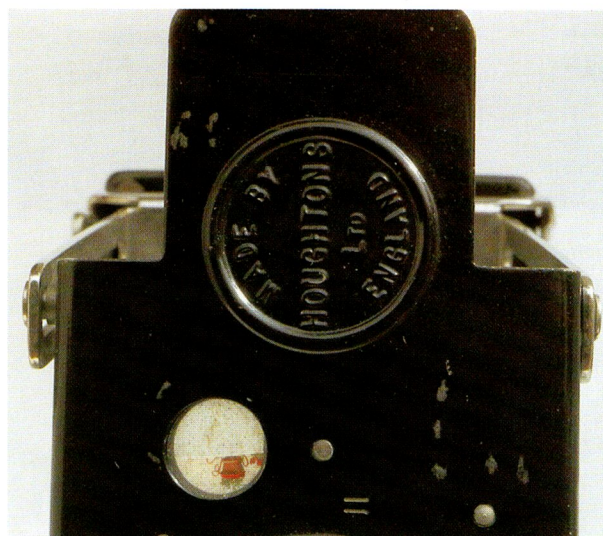
Barnet Ensign Ross and finally, in 1951, Ross Ensign. The company definitively closed its doors in 1961.

Diversified production

The cameras built by the firm of Houghton-Ensign over the course of its long and troubled history covered an enormous range of formats and types, from the large format Victo folding camera to the 6x9cm rectangular box camera, small 3.5x4.5cm folding Midget camera, classic 6x9cm



Ensignette no. 2: detail of front Ensign logo in relief, snapshot and T setting control and shutter release lever



Ensignette no. 2: detail of front with inscription "Made by Houghtons" in relief and round window of reflex viewfinder



Ensignette no. 2: detail of front with viewfinder and lens opening



Ensignette no. 2: detail of front with aperture control on values 11, 16 and 22

folding camera, original 4x6cm Cupid camera, large plate or roll film reflex cameras and those marvels of engineering, the Ticka camera disguised as a pocket watch and the rangefinder Multex from the 1930s.

In the post war period Ensign produced the 6x6cm Commando rangefinder camera and Autorange bellows camera, a faithful copy of the Super Ikonta.

Among Ensign's wide range of cameras, the Ensignette stands out for its elegance and originality. It was a folding pocket camera with pull-out front produced during the 'Teens and Twenties in four formats and in over 50 different models.

The Ensignette

The Ensignette pocket camera was first

presented at the end of 1909 following a long period of research and development. It was based on a design by Swedish engineer Magnus Neill and patented in 1907.

Contemporaneously with the Ensignette camera, a new type of roll film called E1 was also introduced that could take six 2-1/4 x 1-1/2 in. (approx. 54x36mm) negatives.

The Ensignette was constructed entirely of metal and black painted brass and was the first English made camera destined for mass distribution to use this type of technology. It had a very elongated shape, was just over 9x4.5cm and less than 2cm thick when closed. The contoured front with two side wings that protruded from the short edges was bellows-mounted and

could be pulled out and locked in place using four rigid struts. The focusing screen was built into the extractable front.

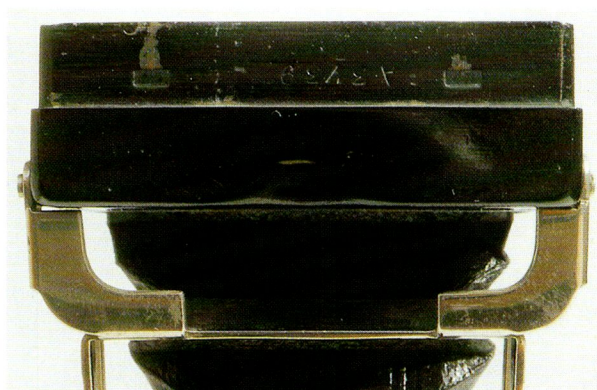
The Ensignette no. 1 was equipped with a f/11 fixed focus meniscus lens and drop shutter for taking shots and posing. The most deluxe model, known as the Ensignette no. 1x came equipped with an f/5.6 Ensign lens but at twice the price of the base model. There would follow the Ensignette no. 1b with f/5.6 Cooke lens and Ensignette no. 1g with f/6.8 Goerz Syntor lens, marketed at even higher prices. Its major commercial success was the Ensignette no. 1, of which it is estimated that 10,000 were made, stimulated production on even more sophisticated models with the option of focusing that began to be marketed in 1911.



Ensignette no. 2: back open with roll film seats



Ensignette no. 2: detail of patent number "Patent 28464 - 1907" engraved inside camera body



Ensignette no. 2: detail of serial number "A 3739" engraved inside camera body

The year 1912 saw the release of the Ensignette no. 2 with an even larger format, 3x2 in. (approx. 76 x 48mm) that took six negatives on a new type of roll film known as E2. The Ensignette no. 2 measured close to 13x6cm and was 2.5cm thick when closed. Its structure was identical to that of the Ensignette no. 1 with its square, elongated body, back that could be opened and removed for film loading, bellows pull out front, optical equipment and mechanics reduced to bare essentials.

The patent number shown on the interior of the Ensignette no. 2 was the same as that engraved on the front of the Ensignette no. 1, Patent 284-64 - 1907. A number of variants of the large format Ensignette were also created utilizing different lenses, including the f/6.8 Tessar.

The Ensignette was marketed throughout the world, including the US (where it was distributed through a sales network with offices in New York, Chicago, Los Angeles and San Francisco), India (home office in Calcutta) and even Japan through the firm of Asanuma. In 1913, Kodak began production of roll film for the Ensignette no. 1 and Ensignette no. 2, using the code numbers 128 and 129 respectively.

In the early Twenties, a new 2-1/4x3-1/4 in. (approx. 54x78mm) Ensignette camera was released built of aluminum alloy that soon replaced the brass used on other models in production. The new camera offered a wider range of shutter speeds and was called the Ensignette Junior.

During the same period, the Vest Pocket Ensign was also presented, very similar to the Ensignette and designed to be used with the 127 roll film Kodak produced for its successful 40x65mm Vest Pocket. The Ensignette cameras were removed from Ensign catalogs at the end of the Twenties. A number of special versions of Ensignette cameras were also produced with polished nickel finish instead of the traditional black paint finish, and even with silver or gold finish. One of the leading experts of the Ensign brand, Adrian Richmond, has estimated that there are over 57 versions of the Ensignette, taking into consideration variations in structure, equipment, logo and finish.

For those collectors who do not limit themselves to just one example per type of camera and prefer to go in search of the entire range of variants, the minute Ensignette represents highly fertile territory.

The Ensignette and the collecting market

The value of Ensignette cameras on the collecting market is fairly low for commonly available models with black finish and does not exceed 75 - 100 Euro. Exceptions are those with special finishes where decidedly higher amounts are paid, even ten or twenty times more. Examples from recent auctions include an Ensignette no. 1 with polished metal finish and red leather bellows that sold for £600 (900 Euro) and an Ensignette no. 2 with similar finish and bellows in black leather that went for over £700 (1000 Euro).

For those rare pieces with silver finish, prices range around 1500 Euro, and for those with even rarer gold finish, estimated values are around 2000 Euro.

Danilo Cecchi

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Channing and Dunn, *British Camera Makers*, Parkland Designs, 1995
McKeown, *Guide to Antique and Classic Cameras*, 2001/2002
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www.ensign.demon.co.uk

AN ALL-GOLD PENTAX LX



Pentax LX Gold seen from front, complete with pentaprism finder and standard 50mm f/1.2 SMC Pentax lens

The allure of gold finish instead of traditional chrome, silver or black finishes has always struck the fancy of camera manufacturers and even won over many photographers, at least starting in the Twenties and Thirties and with varying success. Following a certain drop off in popularity during the Fifties and Sixties, gold finish returned on cameras from the early Seventies on, and those companies that resisted this pomp and ceremony are few and far between.

Alongside those gold finish commemorative cameras produced in limited editions with special numbering and markings by famous camera makers to tickle the fancies of demanding and refined collectors, there appeared the forgeries, imitations that were

sometimes blatant but other times careful copies of the most famous gold cameras created using as their base mass produced cameras without any special features. But in addition to these forgeries created for mass appeal were also one-of-a-kind pieces either realized or commissioned on a custom basis by private collectors wanting to make a showy addition to their collection, or by some photographer desirous of promoting his image as an exhibitionist.

It would take too long and perhaps be useless to list all genuine gold-finish cameras, from the original Leica Luxus or the Rectaflex Gold up to those numbered and marked cameras that have titillated many collectors in recent decades, including the Leica M4-2 Gold (1979), Leica M6

Gold Brunei or Thai, Leica R3 Gold (1979), Leica R4 Gold (1984), Minox AX Gold, Hasselblad 500 CM Gold and 503 CX Gold, and so on.

A commemorative Pentax Gold

Among those companies that could not resist the call, or perhaps the pleasure, of gold finishing their most prestigious cameras, is Pentax. In August 1981, just a year following the presentation of their professional, electronic Pentax LX, and desiring to appropriately commemorate the ten million reflex cameras built and sold throughout the world, Asahi Optical produced just three hundred of its Pentax LX Gold.

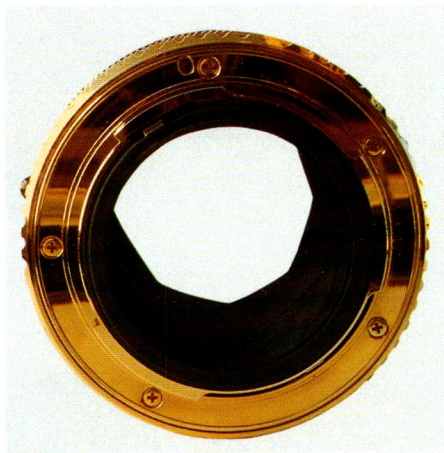
This camera in no way differed from the



Pentax LX with lens removed from seat



Pentax LX Gold body with finder and without lens



Rear view of 50mm f/1.2 SMC Pentax Gold lens



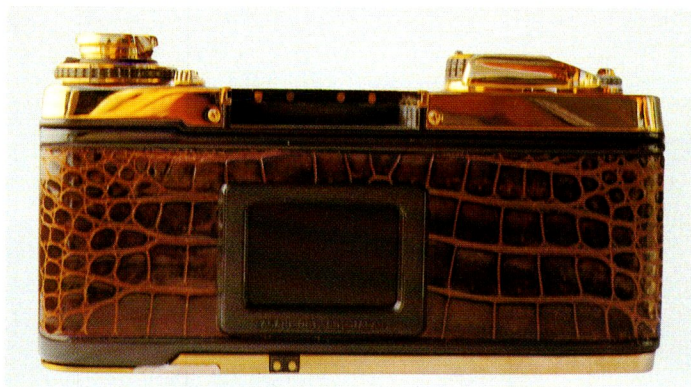
Profile of 50mm f/1.2 SMC Pentax Gold lens

mass produced model except for the all-gold finish of all visible metal parts and for the lizard skin lining used on those parts normally finished in rubber or black leatherette. There was nothing surprising about the fact that in 1981 Asahi Optical chose its LX camera for such a unique treatment. At the time, the Pentax LX was unquestionably Asahi Optical's top of the line model, a professional reflex with interchangeable finders, motor drive option and equipped with a shutter that was electronically controlled but also partially mechanical. The initials LX chosen for the model were also a way of celebrating the sixty years the company had been in business. The care that went into the gold finish of

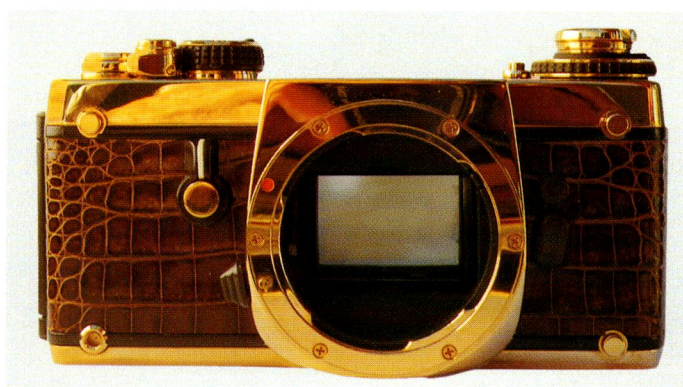
the LX Gold was almost obsessively extended to its controls, the winding lever, shutter release button, rewind crank, self timer lever and all other metal parts on the camera body, from the top plate to the base plate, from those fully visible to those normally hidden such as the lens mount collar, the screws that fastened it to the camera and even the tabs sticking out from the bayonet. The gold finish was also applied to all the metal parts on the interchangeable finder and all metal parts of the standard lens, in this case a six element 50mm f/1.2 SMC Pentax, including the rear bayonet mount. Complementing the gold finish, the lens focusing ring was covered in the same lizard skin used on the camera body and all those

parts normally painted black were painted brown, including the interior of the film compartment and the inside of the back. All the plastic parts of the camera, such as the synch socket guards, memo pocket on the back and lens cap, were produced in a matching brown.

The Pentax LX Gold did not utilize the same serial numbers as the other cameras and had their own special numeration engraved on the base plate. The Pentax LX that has been so kindly lent us for the photos in this article is marked with the number 342 preceded by a somewhat mysterious pair of letters (XM) with a horizontal line over the M to emphasize it. The use of a number over 300 could indicate that more than 300 were made.



Pentax LX Gold body without finder, rear view



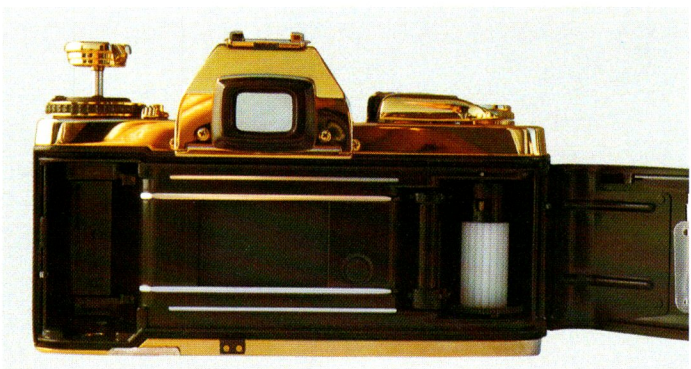
Pentax LX Gold body without finder, front view



Pentax LX Gold body without finder, seen from top plate



Pentax LX Gold body with finder removed



Back open on LX Gold



Pentax LX Gold seen from base plate, with plastic guard and engraved serial number

On the other hand, the serial number of the standard 50mm f/1.2 SMC Pentax Gold lens is completely in line with normal lens output.

Siblings of the LX Gold

Despite its unique status, the Pentax LX Gold heritage did continue within Pentax. In 1994, fourteen years following the birth of the Pentax LX and in commemoration of the seventy-fifth anniversary of Asahi

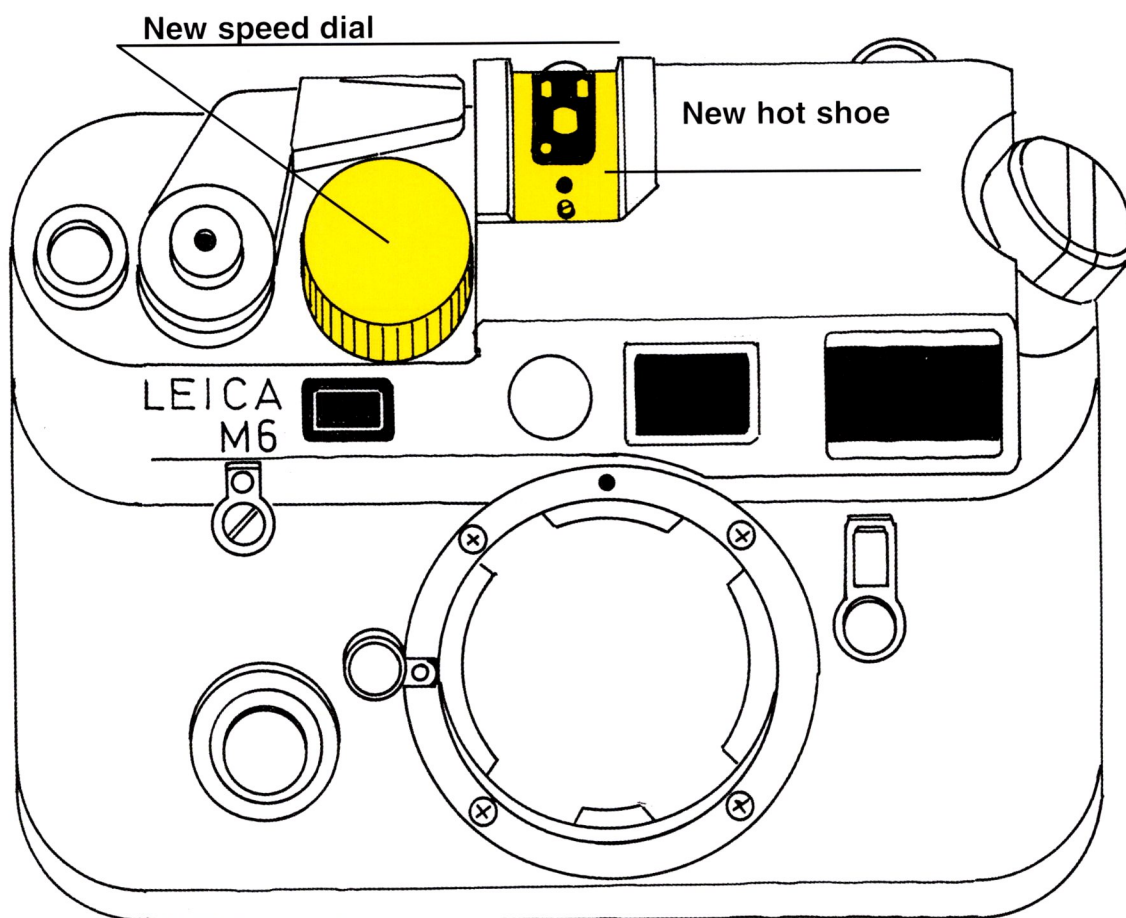
Optical, another limited series of LX cameras was produced. This time, they were not gold plated but rather equipped with natural-finish titanium covers. A thousand of these were made and sold only in Japan under the name Pentax LX Titan.

Two years later, 300 Pentax LX Limited cameras were produced, again with black titanium covers and once again for the Japanese market alone.

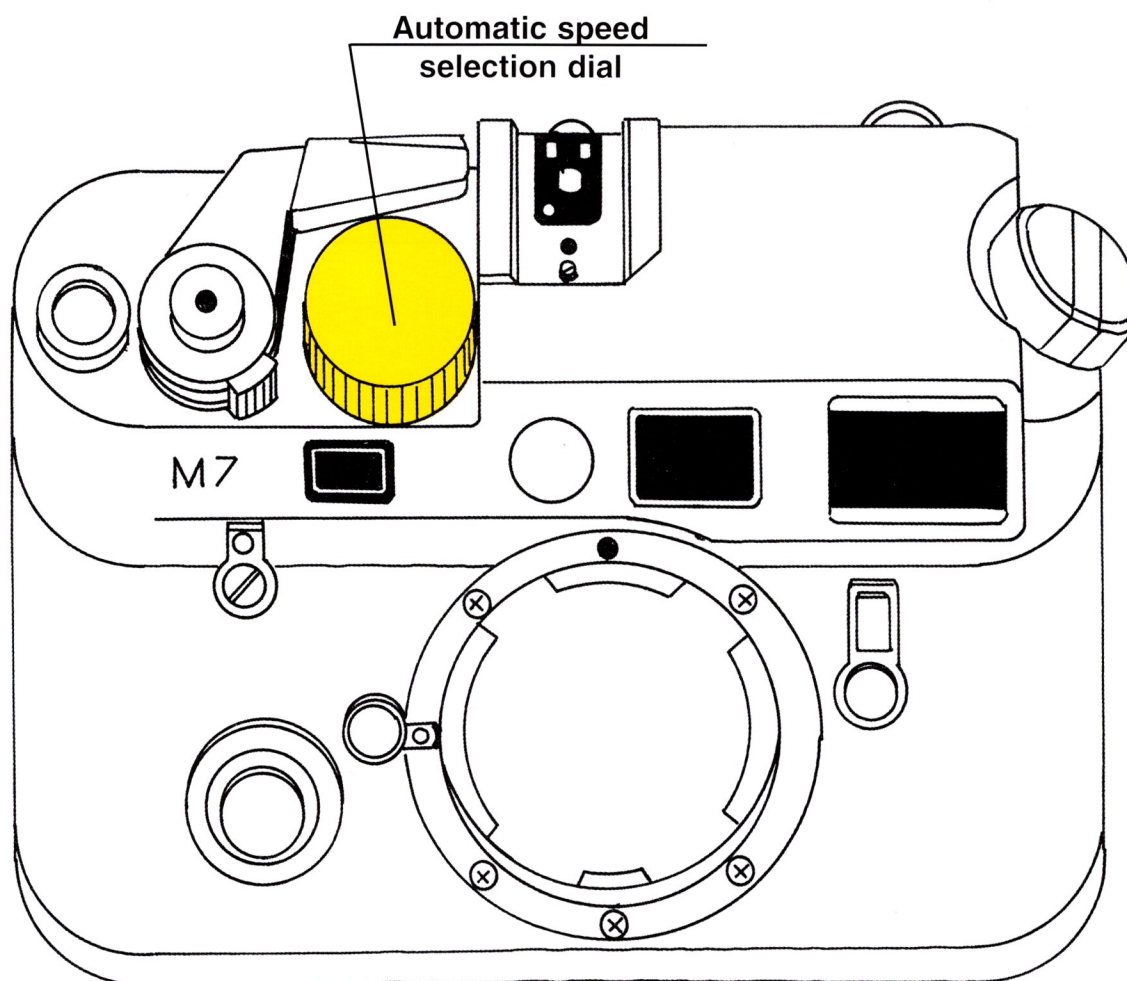
To celebrate the arrival of the year 2000,

and just a few months following the end of production on the Pentax LX, one thousand Pentax LX 2000 cameras were made with chrome finish and equipped with a chrome finish 50mm f/1.2 SMC Pentax lens. The Pentax LX 2000 was also only sold in Japan and marked the end of the cycle of commemorative Pentax LX cameras.

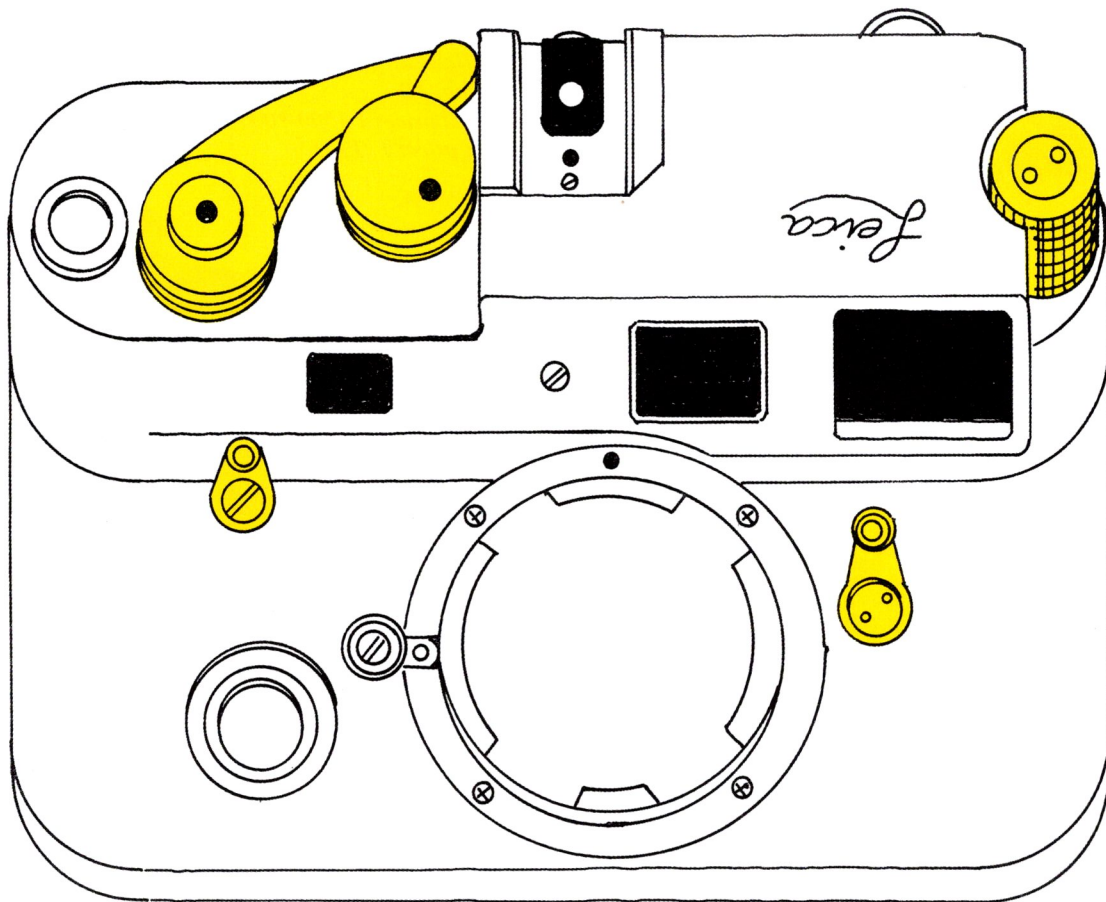
Danilo Cecchi and Tito Antonielli

**LEICA M6 TTL (1998)**

Photokina 1998 saw the unveiling of the new Leica M6 TTL equipped with a new hot shoe, auxiliary photocell for TTL flash calculation and a new, larger speed dial positioned further forward for easier maneuverability. The Leica M6 TTL is built in two different versions: with 0.72 finder and six frames for focal lengths from 28 to 135mm and 0.85 finder and five frames for 35 to 135mm focal lengths. Both versions are supplied with either black or chrome finish on metal parts. In 2000, a third version with 0.58 finder and five frames for 28mm and 90mm focal lengths, also with black or silver finish, was released.

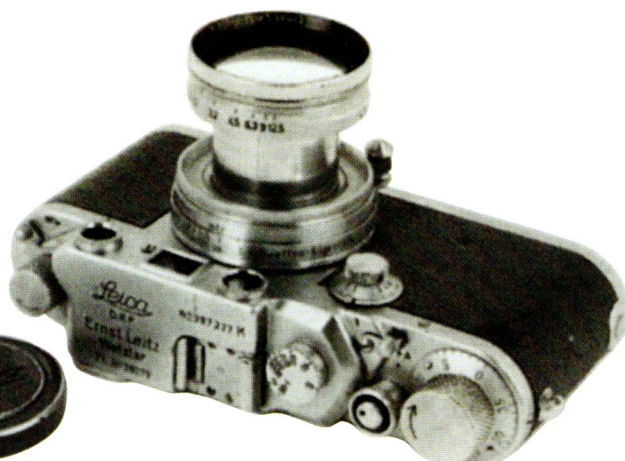
**LEICA M7 (2002)**

The new Leica M7 was released in Spring 2002. Its appearance is identical to that of the Leica M6 TTL, but it features electronic shutter control and the option of automatic exposure aperture priority. Automatic speed selection ranges from 32 seconds to 1/1000sec, while manual setting ranges from 4 seconds to 1/1000sec and the 1/60 and 1/125 speeds function mechanically even without batteries. On the outside of the shutter release button ring a circuit breaker switch has been added that also acts as a safety catch for the shutter release button itself. The Leica M7 is built with 0.72 finder in both black and silver finish and with 0.58 or 0.85 finder, but in black finish only.

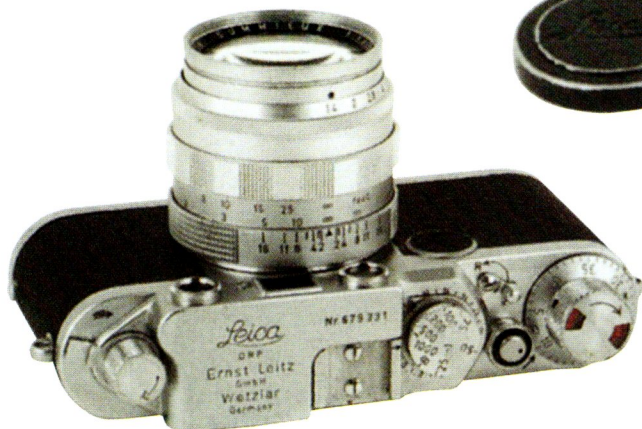
**LEICA MP (2003)**

A new Leica was released in 2003, equipped with a mechanical shutter and built-in exposure meter similar to that on the Leica M6, but with its controls following the design on the Leica M3. This camera, called the Leica MP, uses a winding lever and rewind knob similar to those on the Leica M3, but without self timer and designed for optional use of a film winder motor. The Leica MP with 0.72 finder is manufactured in either black or silver finish, while the Leica MP with 0.58 or 0.85 finders is made exclusively in silver finish.

Christie's Auctions



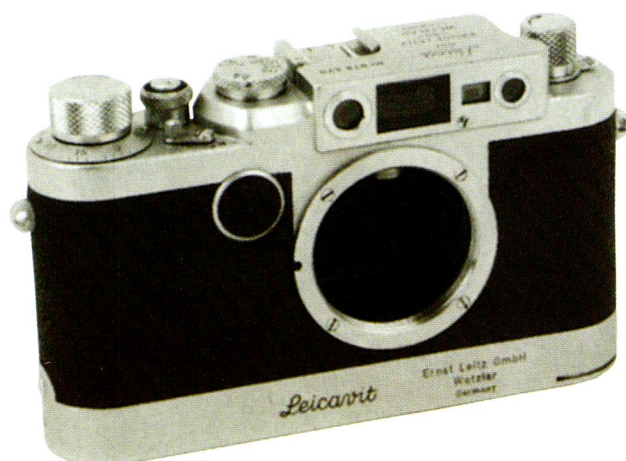
Leica IIIc Luftwaffen Eigentum
Condition: 4B
Estimated price: £ 1500-2000
Auction price: £ 1762



Leica IIc with a Summilux f/1.4 lens
Condition: 3B
Estimated price: £ 300-500
Auction price: £ 1645



Leica Standard Luxus copy
Condition: 4B
Estimated price: £ 200-300
Auction price: £ 446



Leica IIIg with a Leicavit rapid winder
Condition: 3B
Estimated price: £ 700-1000
Auction price: £ 1410

The photographic collecting market operates on a number of levels, both in terms of equipment type and quality as well as from an economic standpoint, something expert collectors are well aware of. The base level is an across-the-board collecting approach that takes in cameras from virtually every country and time period, progressing to collecting at a mid level which utilizes more selective methods and a critical approach that is more informed and quality oriented. At the top is collecting at a high and very high level with a rigorous selection of brand names and models and an almost maniacal attention to the completeness and rarity of each individual piece. Rarity often becomes the only parameter of evaluation and can even relegate to the background inferior

condition of a piece, such as aesthetic flaws and slight operational defects. These higher levels are also more difficult to analyze because often they involve one-of-a-kind, or virtually one-of-a-kind, pieces which do not have an objective estimated value and represent true exceptions within the range of photographic output. Photographic collecting fits squarely into this general profile and, as in all types of collecting, each category and level has its own, specific price range.

Within photographic collecting we find very common cameras and lenses manufactured by famous brand names, but also others of less known and famous makers. These are items that, even in A1 condition and thanks to large number of pieces manufactured and the lesser attention

paid to producing them, will never reach significant price levels and remain at the lower end of the collecting scale at prices less than 250 or 350 Euro. Then there are prestige cameras and lenses that hold more interest because of their brand name, total number produced or technical features, and they have higher estimated values that generally range between 500 and 2500 Euro. This covers the bulk of collectible items and included among these are the most famous brand names, the most popular models and those in best condition, but they remain fairly common items, even if not overly common. The major part of the collecting market lives off the items in this middle range, cameras that have made history and marked the success of a given manufacturer and the photographic sector



Summarex 85mm f/1.5 chrome lens

Condition: 3

Estimated price: £ 400-600

Auction price: £ 940



Summicron 90mm f/2 chrome lens

Auction price: £ 940



Hologon 15mm f/8 M-fit

Condition: 2

Estimated price: £ 4000-6000

Auction price: £ 4465



Apo Summicron 90mm f/2 asph lens

Condition: 2

Estimated price: £ 500-800

Auction price: £ 998



Summicron 35mm f/2 titanium lens

Condition: 2B

Estimated price: £ 500-800

Auction price: £ 763

in general.

Above this level are those cameras and lenses of high, and tremendously high quality, the big names of the international photographic industry of the past and present, those pieces manufactured in limited and very limited number, true exceptions that did not enjoy popular success or have a direct impact on the development of the photographic industry. This is the upper echelon of collecting, a level accessible to just a few wealthy experts with names that appear again and again and price levels starting at 5000 Euro and up, without any apparent price ceiling.

Leica, across-the-board collecting

There are some names, such as Leica, that appear in all three of the categories described above. For a common type of screw Leica, without lens or equipped with a modest standard f/3.5 Elmar, recent auctions have seen prices of £200 or £250. These are cameras of no interest to expert collectors, but may be interesting to neophyte collectors taking their first steps in the world of photography, or collectors who already have cameras with different brand names and want a Leica as a point of comparison. For less common screw Leicas, prices rise quickly to £400 or £600, jumping to £1000 or £1500 for more special items or those equipped with special lenses or accessories, finders, motors or focusing units. While the universe of screw Leicas represents a synthesis of the complex world of collecting, that of the Leica bayonet mount offers another aspect.

The Leica bayonets start from a higher level, from a minimum of £450 or £500 for more common models ranging up to around £1000 for other, still mass produced models.

Among those screw Leicas noteworthy for their characteristics and prices reached were a chrome Leica IIIf equipped with a screw f/1.4 Summilux that started at £500 to go for over £1600 (2300 Euro). A total of 550 screw f/1.4 Summilux lenses were manufactured from 1960 to 1963 and it remains the fastest Leitz lens for the screw mount Leica. In the same level was a chrome/grey vulcanite Leica IIIfck with Luftwaffe markings which sold for over £1750 (2500 Euro). Remember that Leica military models from World War II hold special interest for collectors. A chrome Leica IIIf without lens but with Leicavit went for over £1400 (2000 Euro) and a standard gold plate Leica equipped like a Leica Luxus did not reach £450 (640 Euro). Among the screw lenses in the same price level were a chrome 85mm f/1.5 Summarex and a chrome 90mm f/2 Summicron, each sold for £940 (1335 Euro). Just over 4,000 of the first lens presented during the war were manufactured, while less than 500 of the second lens released in the latter half of the 1950s were built.

The M series Leicas began at £470 (670 Euro) for black Leica M4P bodies and rose to over £1000 (1400 Euro) for a chrome Leica M5 and close to £1900 (2700 Euro) for a black Leica M4. Among the later generation Leica M cameras were the mass produced Leica M6 which went for

between £820 and £880 (1170 to 1250 Euro), but there were also a number of custom built Leica M6 cameras that sold for a range of prices. A titanium Leica M6 TTL with leather lining went for £1400 (2000 Euro), a Leica M6 Oresundsbron went for the same price as did a Leica M6 TTL 2000. A Leica M6 Ein Stuck with 35mm f/1.4 Summilux reached £1880 (2700 Euro), a Leica M6 Historica with 50mm f/2 Summicron sold for £2115 (3000 Euro), a Leica M6 LHSA with three Summicron lenses (35mm, 50mm, 90mm) reached £2820 (4000 Euro) and a Leica M6J with coupled 50mm f/2.8 Elmar hit £3760 (nearly 5370 Euro), putting it right on the edge between the medium and upper level of the collecting market.

Among the Leica bayonet mounts were not only more commonplace and less valuable lenses, but also some noteworthy pieces such as a titanium finish 90mm f/2 Apo Summicron that sold for close to £1000 (1400 Euro) and a 50mm f/1 Noctilux sold for the same price. Slightly lower, but still compatible prices were paid for other Leica classic and modern lenses. A titanium finish Summicron 35mm f/2 went for over £760 (nearly 1100 Euro), a titanium finish 35mm f/1.4 Summilux closed at £700 (nearly 1000 Euro), a titanium 50mm f/1.4 Summilux reached £822 (over 1150 Euro) and a titanium 50mm f/2 Summicron for £528 (750 Euro).

Those pieces without the allure of the modern titanium finish sometimes went for even more. A chrome 35mm f/2 Summicron Aspheric sold for over £700



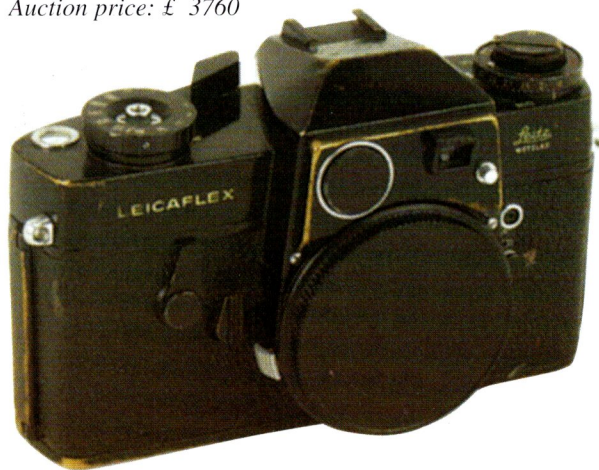
Leica M6 Historica
Condition: 2B
Estimated price: £1500-2000
Auction price: £2115



Leica M6 J
Condition: 2B
Estimated price: £ 3000-5000
Auction price: £ 3760



Leica M7 0.72, black
Condition: 2B
Estimated price: £ 1000-1500
Auction price: £ 1292



Leicaflex black
Condition: 5B
Estimated price: £ 500-800
Auction price: £ 493



Leicaflex SL black, with a Schneider PA Curtagon lens
Condition: 3B
Estimated price: £ 400-600
Auction price: £ 376

(1000 Euro), a second black 35mm f/2 Summicron Aspheric and a black 28mm f/2 Summicron Aspheric surpassed both at £880 (1250 Euro), the same price reached by a black 50mm f/1.4 Summilux and a black 75mm f/1.4 Summilux. A classic chrome Tele 90mm f/2.8 Elmarit of which just a few hundred were ever made went for over £820 (1150 Euro), the same price as the new Tri Elmar, but a Tri Elmar with "Leica Historica 1975-2000" marking sold for over £1400 (nearly 2000 Euro). Prices in the highest range belong to the 15mm

f/8 Hologon created for the Leica M by Carl Zeiss in less than 500 pieces, sold with its finder and graduated filter for £4500 (6400 Euro). Despite their name and fairly lively interest in them at the beginning, the Leicaflex and Leica R 35mm reflexes were not able to warm the cockles of collectors' hearts. Apart from some pieces produced in limited number, the estimated value of the Leica R on the collecting market is generally medium-low. A black Leicaflex with external photocell went for close to £500

(715 Euro) while the chrome Leicaflex SL oscillated between £150 and £200 (215 and 285 Euro) and a black Leicaflex SL2 went for over £280 (400 Euro). A black Leicaflex SL with rare 35mm f/4 PA Curtagon shift lens sold for over £375 (535 Euro). Among the Leica R cameras were a black R4 Everest sold for £350 (500 Euro), a black RE body that sold for over £250 (360 Euro), black R4 bodies that sold for between £165 and £175 (235 and 250 Euro) and chrome or black R5 bodies that went for under £330 (470 Euro). A Leica R4 with 100mm f/4



*Ernemann Klapp Tropical camera,
6.5x9cm*

Condition: 4

Estimated price: £ 250-350

Auction price: £ 493



Ermanox 4.5x6cm

Condition: 3/4C

Estimated price: £ 600-800

Auction price: £ 705



Plaubel aerial camera AK 1/03

Condition: 4B

Estimated price: £ 600-800

Macro Elmar lens on the bellows went for over £280 (400 Euro) while an unattractive Leica R6 stopped short of £330 (470 Euro), a nicer Leica R6 surpassed £490 (700 Euro) and a black, decidedly lovely Leica R6.2 brought over £760 (1085 Euro). A black Leica R7 in good condition sold for over £560 (800 Euro) and an almost new Leica R8 for more than £880 (1260 Euro). But in almost all cases these are cameras destined to be used rather than collected. Leica R lenses are also evaluated more for their use value rather than based on collecting criteria. A 180mm f/2.8 Apo Elmarit went for over £700 (1000 Euro), the same price brought by a 19mm f/2.8 Elmarit. Among the special lenses a 100mm f/2.8 Apo Macro Elmarit went for over £820 (1170 Euro) and a 16mm f/2.8 Fish Eye Elmarit for over £490 (700 Euro). An 80-200mm f/4 Vario Elmar reached £470 (670 Euro) and a 35-70mm f/2.8 Vario Elmarit of which it seems only five hundred were made, started at a maximum estimated value of £1800 to arrive at £ 2590 (nearly 3700 Euro) belying the legend of the scarce collecting interest in Leica R lenses.

Wood and brass

Wooden cameras from among the classic ones built in the 1800 and 1900s are also represented in all three collecting categories, from the lowest level to the very peak. For under £100 (140 Euro) were cameras from English and French studios with 13x18cm and 18x24cm format, for between £100 and £200 (140 and 280 Euro)

were the 5x4 inch Cambo View Camera with 240mm f/5.6 Symmar lens, half plate cameras by Thornton and Pickard, 5x4 inch Sandersons, 12x12 inch cameras by George Hare and quarter plate Tench cameras, just to name a few. At the higher level, for example, there was the 6.5x9cm Ernemann camera equipped with 12cm f/3.5 Ernon lens selling for just under £500 (715 Euro).

Stasis at the center

The crux of collecting is the middle level that oscillates but remains constant over the long term. It is made up of the same old names, models and objects that never go out of style completely, but by the same token are never excessively over priced. A Nikon S2 with not an overly-lovely f/1.4 lens was sold for less than £425 (600 Euro), the range finder Nikkor 105mm f/2.5 for Nikon was sold for between £225 and £375 (320 and 535 Euro) and the Nikkor 35mm f/2.5 for less than £200 (285 Euro). An Alpa Reflex 5b with 50mm f/1.8 Kern Switar lens was sold for just under £330 (470 Euro), the same price paid for a black Nikon F with motor. The black Nikon F2 cameras with MD2 motor and battery pack ranged from £350 to just over £410 p (500 to 585 Euro) and a black Nikon F3 with MD4 motor and battery pack skimmed £450 (640 Euro). A Canon F1 with Servo finder, motor and f/1.2 lens arrived at £587 (840 Euro). Square, black first type rangefinder Contax with Tessar or Sonnar lenses ranged between £150 and £165 (215 and 235 Euro), the Contax II and Contax

III also within the same range, while the post-war Contax IIA and IIIA went for a few pounds higher. A Contarex Cyclope with f/1.4 Planar sold for just over £350 (500 Euro) and a Contarex Super with f/2 Planar and 35mm f/4 Distagon reached £528 (750 Euro). Among the representatives of smaller formats was a Minox Riga that went for just over £410 (580 Euro), a second Minox Riga that hit £500 (700 Euro) and a third Minox Riga with instruction booklet that sold for £528 (750 Euro). A black Minox B reached £235 (335 Euro) and a modern Minox LX with box just hit £500 (700 Euro). A Minox LX edition 2000 went for £564 (800 Euro). A small Rollei 35 Classic with platinum finish and 40mm f/2.8 Sonnar went for over £700 (1000 Euro). Among the classic medium formats, a Ermanox 4.5x6cm with 100mm f/2 Ernostar went for just over £700 (1000 Euro) and a rangefinder Bertram 6x9cm with four lenses sold for £376 (537 Euro). A post-war Exakta 66 with 80mm f/2.8 Tessar went for over £580 (840 Euro) and a Rolleiflex 2.8F stopped at just over £410 (580 Euro). Among the more unusual cameras, an American KE-12 aerial camera manufactured by Graflex and complete with two lenses brought £530 (750 Euro) and a Plaubel aerial camera of which sixty were made for the Swedish air force and equipped with a 100mm f/3.5 Anticomar lens went for as high as £1175 (1680 Euro). A Hasselblad 500C outfit with three lenses (50mm, 80mm and 150mm) went for £1057 (1430 Euro). Hasselblad is one of



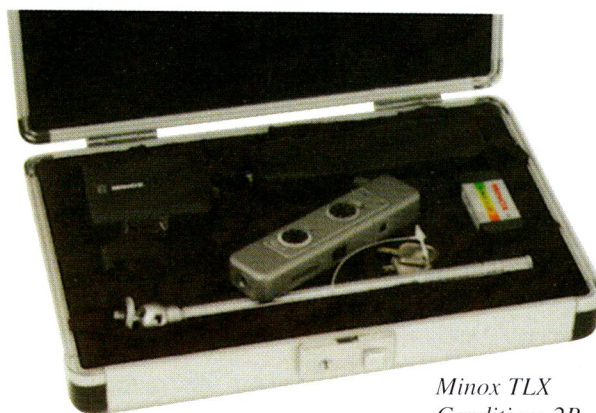
Contax I with a Sonnar 50mm f/1.5 lens
Condition: 4C
Auction price: £ 164



Contax III with a Sonnar 50mm f/1.5 lens
Condition: 4C
Auction price: £ 152



Minox LX edition 2000
Condition: 2B
Estimated price: £ 400-600
Auction price: £ 564



Minox TLX
Condition: 2B
Estimated price: £ 400-600
Auction price: £ 493



Rollei 35 Classic
Platinum
Condition: 2B
Estimated price: £ 400-600
Auction price: £ 705



Hasselblad 500 CX Gold
Condition: 2B
Estimated price: £ 1000-1500
Auction price: £ 1527



Hasselblad 500 EL Moon
Estimated price: £ 500-800
Auction price: £ 470



Rolleiflex 2.8 F
Condition: 4D
Estimated price: £ 200-300
Auction price: £ 411

those cameras that is more used than collected, but a collectors Hasselblad 500 ELM "Moon" with 80mm and 250mm lenses stopped at £570 (815 Euro) and a highly collectible gold plate Hasselblad 500CX with blue lining and coupled, gold finish lens went for as high as £1527 (2180 Euro).

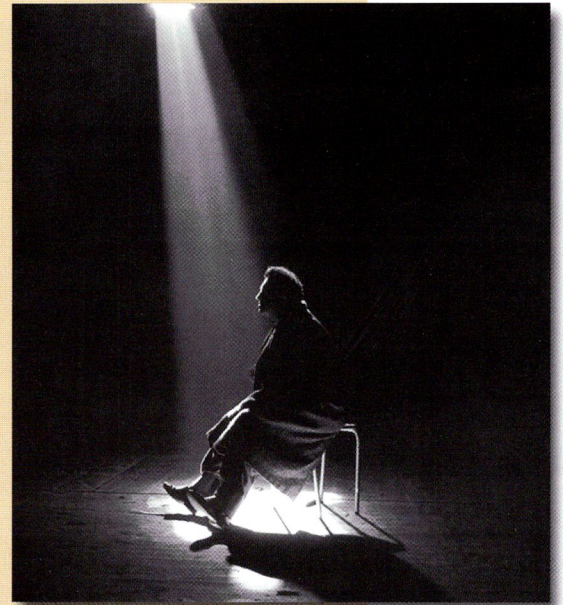
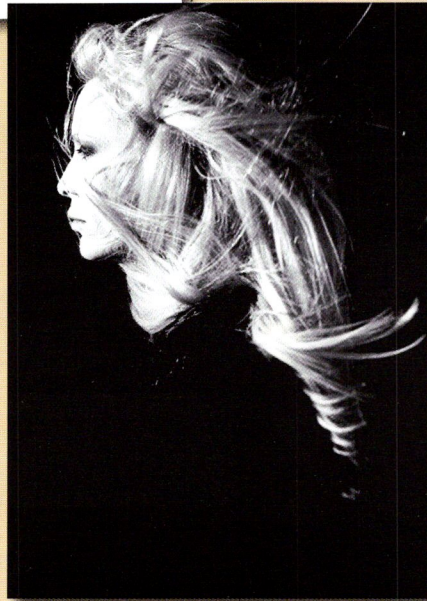
zoom



**Raul Bova, Patty Pravo,
Rosita Celentano,
Uto Ughi, Fiorello,
Nancy Brilli,
Sofia Loren:
portraits by
Claudio Porcarelli**

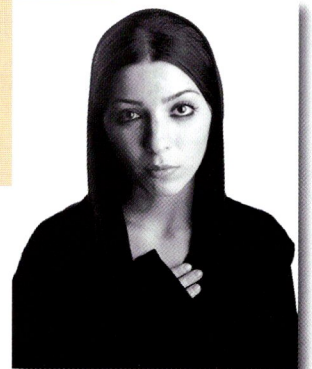
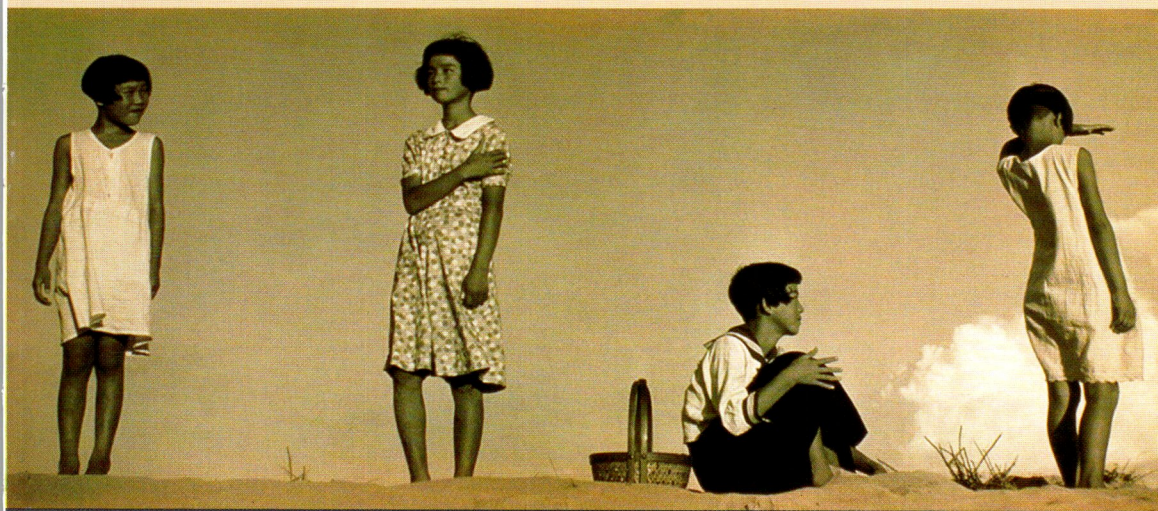


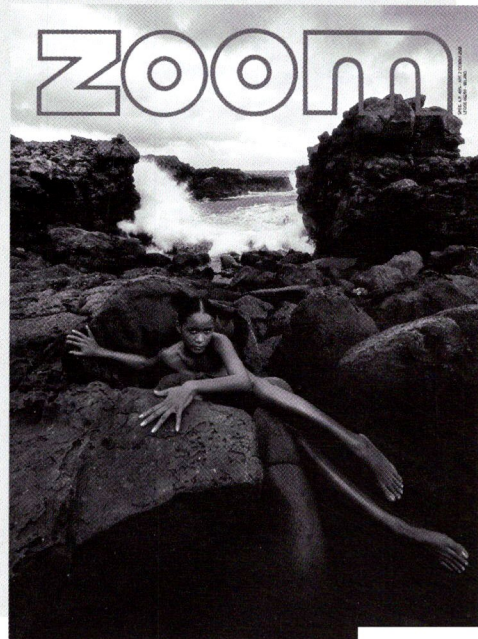
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