Classic CAMERA

TOPCON R

After having manufactured cameras before, during and after the war, in 1957 the Tokyo Kogaku company finally released its first 35mm reflex known as the Topcon R. Equipped with an interchangeable pentaprism viewfinder and Exakta bayonet interchangeable lenses, the Topcon R predated the most famous Japanese reflex cameras, the Canonflex and Nikon F, and marked the beginning of a long, illustrious line of cameras that would culminate in the Topcon RE Super, the first TTL reflex to be mass produced and marketed.

TOPCON 35

Having built lenses for other Japanese camera companies, as well as a range of military aerial cameras, in the mid Fifties Tokyo Kogaku began manufacturing its range finder models for 35mm film under the name Topcon 35; it would later focus its attention on 35mm reflexes.

PRIMOFLEX

Like the majority of other Japanese camera companies, in the Fifties Tokyo Kogaku produced a twin lens reflex camera called the Primoflex that drew its inspiration from the Rolleiflex. The Primoflex Jr. with 4x4cm format, clearly modeled on the Rolleiflex Baby, was marketed under different trade names.

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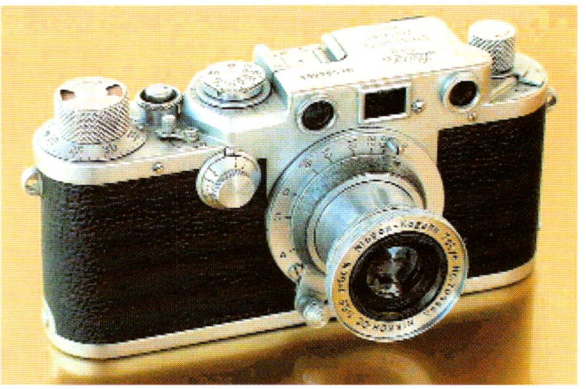
The history of the Topcon reflex.



Nikon lenses for Leica Cameras

Christie's auctions: Leica M6 William Klein, made by Leica Camera to benefit Reporters sans Frontieres, went for £ 9,400

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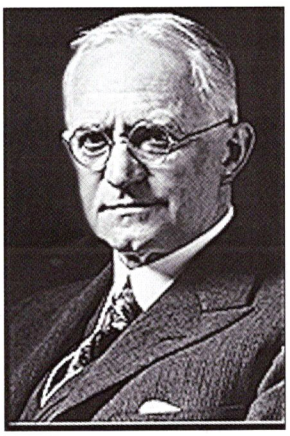
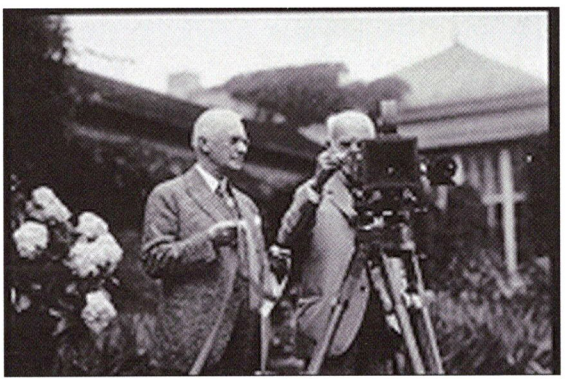
NIKON LENSES FOR LEICA CAMERAS (AND LEICA COPIES)



George Eastman, founder and president of the Eastman Kodak Co.



George Eastman and Thomas Edison working together to develop cinematography.

The famous photo of George Eastman (bundled up against the cold and sailing the same route as the Titanic) taken with another first model Kodak on a Transatlantic voyage.

George Eastman should and must be considered one of the fathers of photography. Although he was preceded (at least chronologically) by other noteworthy predecessors and inventors, the rapid technological (and therefore also artistic) development between the end of the 19th and beginning of the 20th century is unquestionably due to his creative genius. We owe this man, a true, intelligent lover of photography, a whole series of concrete developments ranging from light sensitive media to equipment.

George Eastman, in a photo as a young man, but already sporting a "presidential" pose!

Have you ever noticed that virtually all the major camera manufaturers and particularly those of 35mm cameras have names 5 letters long? Kodak, Leitz (Leica), Zeiss, Canon, Nikon, Asahi (Pentax) ... etc. One might even hazard that the inspiration behind this "alliterative" cadence was George Eastman (1854 -1932) and that in inventing the successful name "Kodak" for the company he founded in 1892, he to some extent opened the way for those who came after him, destined to be his often ruthless competitors!

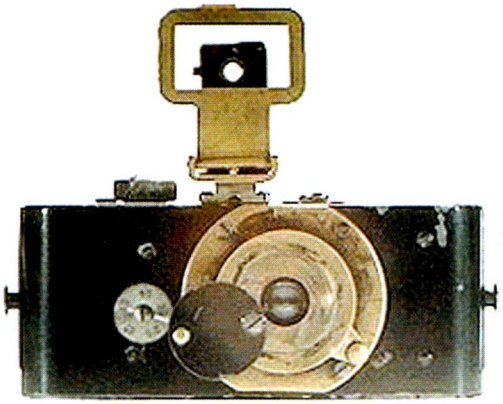
Eastman gave this explanation for his choice of name: "I knew that a company name must be short, not susceptible to spelling errors that would render it unrecognizable and, in conformity with trade mark names, must not have any specific meaning."

As we all know, competition can take many forms that are sometimes very complicated and (at least at the beginning) even clandestine. Other times, as we shall see, the assault is astoundingly direct and straightforward. Our subject here is lenses and, as an introduction, I must give a brief chronological overview (whose summary nature I hope will be appreciated) of the technical/production related developments that permitted interaction between products of different manufacturers, the subject of this brief article.

One of the real Leica "zeroes" of which just 31 were produced in 1923 to run the field tests required and to gather the impressions of those who were entrusted to test them.

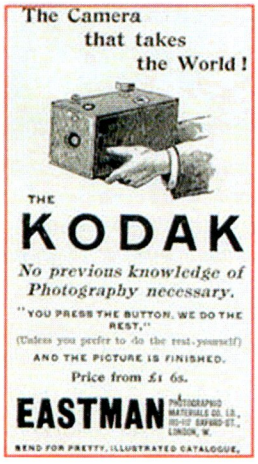
A color photo of the Tourist Multiple Camera, kindly supplied by the Kodak Museum. I have never had the opportunity to inspect one personally, but it seems a sturdy, well made camera.

A lovely image (from a box or poster?) for the Brownie camera, ca. 1900. The Brownie camera was a tremendous success.



The very first Leica, just two prototypes made for the first tests, one used by Barnack and the other by Leitz. A third "prototype", quite different from the other two, has recently surfaced.

Oskar Barnack (right) photographed, I believe, at Wetzlar with a Leica, next to Ernst Leitz I.



The legendary advertising poster that promised: "you press the button, we do the rest" and "no photographic experience required".

"Leica, the small photographic wonder" is the slogan on this wonderful poster sponsored by a Swiss company. The camera shown is a Leica I with fixed lens.

Another Brownie poster. Prices started at one dollar! And, on the bottom of the box, there is mention of a "Brownie club".

One of many beautiful Leitz posters. The three ladies are smiling at the new, small-size Leitz, proof of their approval.

1913-An Austrian born resident of New York, Paul Dietz, registers a patent for the first 35mm camera to actually be produced and sold to the public. The patent was granted the following year, 1914, on March 31st, but the outbreak of the war greatly penalized the spread of what could have become a tremendously successful camera. There was as yet no Leica as a competitor to be feared! The Tourist Multiple Camera could hold approx. 15 meters of movie film making it possible to take 750 photos in "true", 18x24mm movie format.

1913-Oskar Barnack, having moved from Zeiss to Leitz in 1911, invented and developed the Leica prototype, a "compact" camera designed to be used with 35mm movie film.

1917-Nippon Kogaku, K.K. was founded on June 25th through the merger of three Japanese lens companies. With two hundred native employees plus eight German engineers, the company specialized in the production of optical equipment for scientific applications, the armed forces and industry. From the early 1930s (ca. 1932), Nippon Kogaku began to produce Nikkor camera lenses predominantly for the medium format plate cameras of a number of manufacturers.

1925-The Leica A, with 50mm fixed lens, was presented and offered to the public at the Leipzig fair where it was an

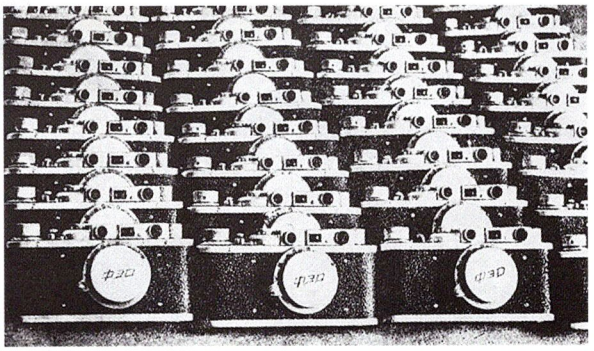
One of the first examples of Leitz advertising that heralds the new Leica IC with interchangeable lens. Note the modern/high tech association with the lovely seaplane.

Leica I model C with its three lenses and multi focal viewfinder. The unveiling of a 35mm camera with interchangeable lens further boosted the success and versatility of the "small format", as it was called.

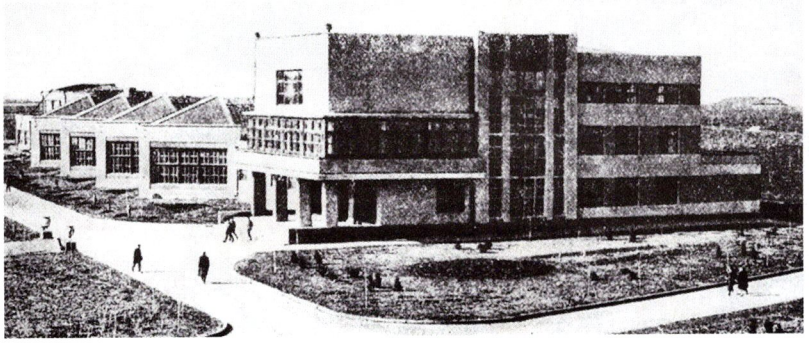
Famous Russian photographer Alexander Rodchenko confidently holding a Leica I. It was thanks to him that the new German made 35mm was so highly esteemed (although available on a limited basis only) in Soviet Russia.

Felix Edmundovich Dzerjinski, hero of the Russian revolution from which the commune that would produce the FED took its name.

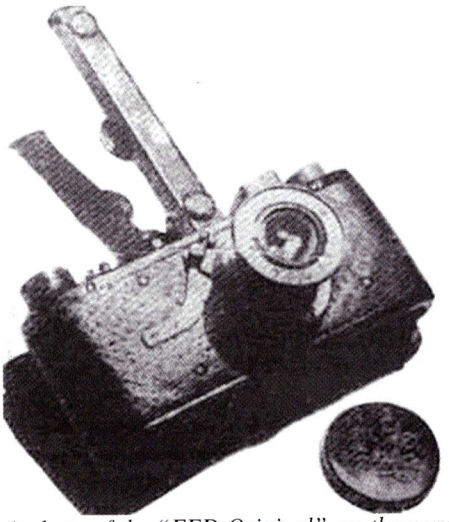
Symbol of the FED commune with hammer and sickle and red star, with military adornments.



A group photo taken in the factory to commemorate the goal of 80,000 FEDs produced. The J "Russian Leicas" number almost eight million, approx. ten times more than the German camera they took their inspiration from.



An old photograph of the buildings destined for FED production (the commune as a whole was much larger).

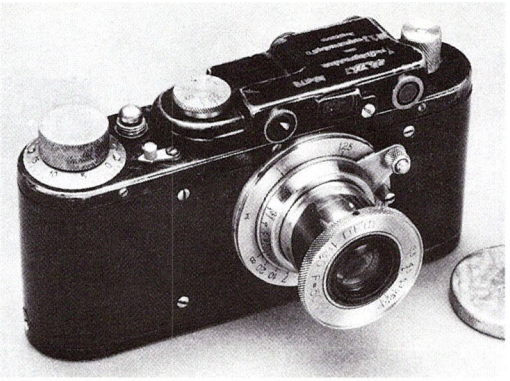


A photo of the "FED Original", as the very first FED is known in collecting circles; an almost exact copy of the Leica IA, including a copy of the Fodis rangefinder.

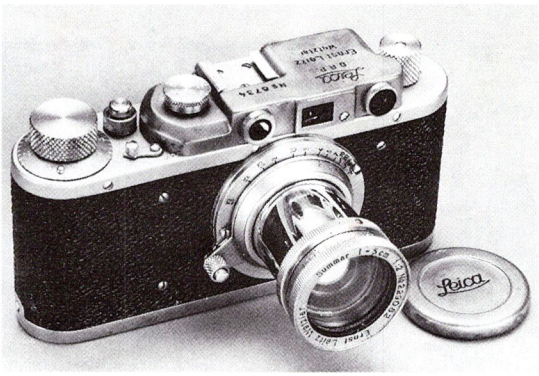
extraordinary success, generating hundreds of orders. In the first year, approximately 1000 would be built and sold, with rapid growth rates in production in the years to follow. A highly precise, separate rangefinder inserted into the accessory shoe was used for focusing and would later be adopted by almost all manufacturers.

1930-Leitz introduced a new Leica, the model C, with an interchangeable lens and the option of three different lenses for 35, 50 and 135mm focal lengths. Its versatility of use and freedom of composition were astounding, two features professional and amateur photographers alike unexpectedly found themselves the beneficiaries of. The lenses were simply screwed onto the camera body, thus marking the birth of the "Leica 39/1 gauge screw mount" that would eventually be patented around the world.

1932-With "democratic" decision making, the Soviet Union suspended (i.e., "outlawed") the importing of photographic equipment from abroad (the Leica was highly esteemed in Russia thanks to the enthusiasm of *Alexander Rodchenko*, the most famous Russian photographer of the day) and in the same year began production of a Leica *copy*, the first in the world, both in terms of year and quantity, but the last in terms of quality. Thanks to special financing, factories were built in the commune founded to commemorate *Felix Edmundovich Dzerzhinsky* (the founder of the Soviet secret police, later to become the KGB) in Krakow in the Ukraine. The camera was baptized the



A rare FED, no. 279, with the black finish of the first Leica II cameras. It was the advent of the coupled rangefinder and interchangeable lens system that forced the FED to update to the features of the Leica II.



But just cloning the Leica was clearly not enough. There are even some (albeit rare) "exact" copies, right down to the engravings, like this classic counterfeit. This should not be confused with the thousands of fakes produced in recent years, decked out with all sorts of pseudo Nazi embellishments.

The 1932 Contax I, here equipped with the fastest lens of its day, the famous 50mm f/1.5 Sonnar that was also produced with screw mount, but only in the post-war years.

A Zeiss engineer at work on the subsequent Contax III (1936) equipped with built-in exposure meter, an all-new feature introduced by Zeiss on its Contaflex, the intriguing but delicate twin lens 35mm that had preceded it.

The first offices of Seiki Kogaku Kenkyujo.

A example of a non Leica camera equipped with the 50mm f/3.5 Leitz Elmar lens with interlens shutter. The Nagel Pupille was produced from 1931 to 1935 during the same period as the Leica Compur equipped with the same type of lens. Note that the separate rangefinder was also supplied by Leitz.

FED, drawn from Dzerzhinsky's initials. From the very early and almost experimental copies of the fixed lens Leica I, Soviet output soon turned to reproduction of the Leica II, copying without hesitation both the rangefinder and the 39/1 gauge screw lens mount, like those of Leitz.

1933-Zeiss Ikon of Dresden unveiled its Leica rival, an extraordinary and luxurious rangefinder camera that was truly astounding and innovative with rich black paint and nickel-finish exposed parts. Its wide-base rangefinder, interchangeable lenses with bayonet mount and vertical blade shutter gave it a truly modern air, while its 100% removable back for film loading made it convenient and "safe". The rangefinder and lens mount were very different from those of the Leica, if for no other reason than because of the patents Leitz had registered in many countries.

November 1933-In Japan a new company was founded whose stated purpose was to produce a camera that could stand up to the tremendous success of the screw Leica whose annual production had taken off the year before, in 1932, with *tens of thousands* of cameras produced and sold. The new company opened for business under the name "Seiki Kogaku Kenkyujo" (reportedly in an office with just three rooms), but on August 15, 1947 the name was changed to the now famous "Canon Camera Company, Ltd.", today a giant in many sectors, not just the photographic field. Apart from the unobtainable and legendary "Kwanon" prototypes (named after a Buddhist god), the first Canon Hansa cameras were equipped with a strange foldaway viewfinder and special bayonet lens mount given the fact that Leitz had held a patent on its own in Japan since 1934. It should be noted that the lenses (50mm Nikkor), helical mount and viewfinder and rangefinder parts were produced and supplied by Nippon Kogaku which at that time did *not* produce its own camera. Immediately after the war, Canon would extricate itself from this reliance on Nikkor lenses and would begin its own extensive quality lens production that continues to be innovative up to the present day.

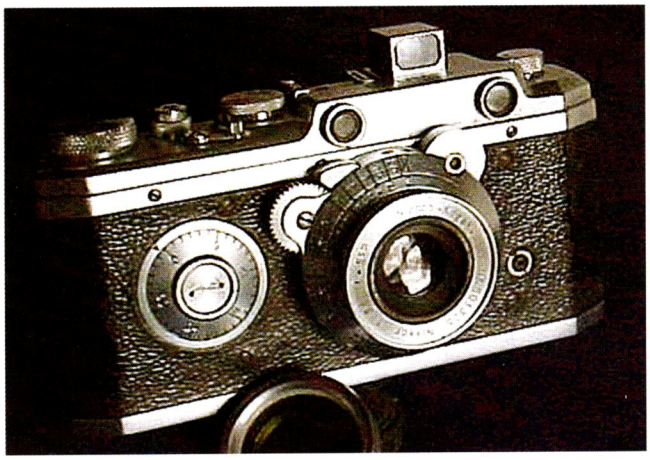
I could continue this summary of dates and facts, most of which have been culled from the most popular books on this subject that you have certainly read and continue to read, but I think the above is adequate to give an idea of the concerted nature of the initiatives taken by the handful of companies protagonists in the history of 35mm photography.

It would be interesting to study in, depth

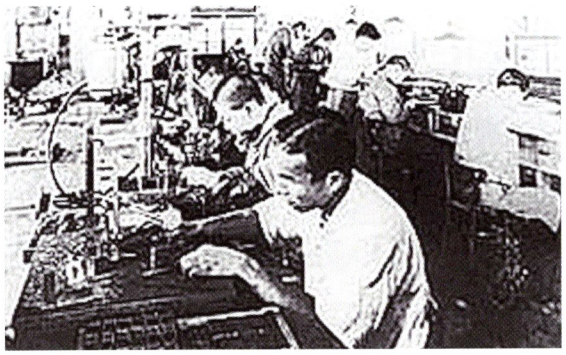
The logo of the "Kwanon Camera" depicting a Buddhist deity.

Advertisement for the Kwanon. Of the approx. ten cameras produced, a total supplied by one of the company's founders, not one exists. A single Kwanon, different from the one shown here, was repurchased by Canon Co. in the 1950s from the private individual who owned it.

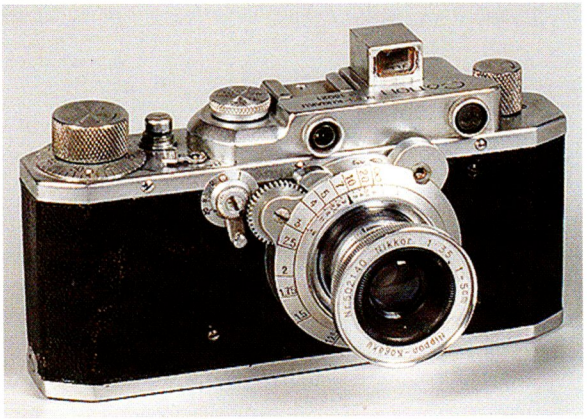
In this illustration of the Hansa Canon, similar to the Leica, a "Patent Enlarger" suspiciously similar to its contemporary Focomat Leitz is also offered.



Canon no. 2333 with the characteristic shape created by the frame counter on its front, and the special appearance of the lens/focusing unit produced by Nippon Kogaku. Leitz had also registered its patents in Japan, and therefore the 39/1 gauge could not be used.



A 1938 photo taken during Canon assembly.



A Canon S, model introduced during the last months of 1938, with the complicated mount and lens supplied by Nippon Kogaku. The frame counter is no longer located on the front where the photographer could turn it accidentally, but rather aligned with the winding knob as on Leica cameras.

the (many) similarities between the cameras produced by each manufacturer and the (few) differences between them in terms of technology and aesthetic design, but the topic of this brief report is that of the various 39/1 gauge screw mount lenses, with particular emphasis on the Nikkors that utilized this mount for Leica cameras, and the numerous Leica copies that sprung up like mushrooms in the post-war period. It should always be remembered that, in photographing, the only function of the camera *body* is to provide a "camera obscura", i.e., make it possible for a lens to successfully channel the light rays used to form an image onto light sensitive material, while preventing any problems or interference with this process. In naming this object, the English very creatively shortened it to "camera", a choice I find myself envying on virtually a daily basis.

Actual photo-graphy, or better, writing with light, has as its primary tool the *lens* which, in some countries, is a highly esteemed component, while in others (including our own) it is all but ignored. I say this with reason. Many collectors love cameras (and sometimes even use them!), but few pay much attention to the respective and *indispensable* lenses they buy or test in the field to obtain some special effect or other.

And yet, the true success of a camera is ALSO indissolubly linked to the quality of its lens, or better, its LENSES, as is the case when talking about camera "systems", like that of the Leica and its friends.

The directors of Leitz knew this well and I don't think I err tremendously if I hazard the uncharitable view that they were quite jealous of their lenses, despite the fact that they supplied several thousand to other German manufacturers, predominantly (but not exclusively) the 50/3.5 Elmar with interlens shutter. But never to their real competitors or other camera systems.

In the early "roaring" Thirties, the situation stood as follows. Leitz dominated in terms of both sales and fame, also thanks to its flawless marketing operations, especially in the most important markets. In Russia, production of the copies of the Leica II continued apace at a rate very similar to that of the "real" Leica. Zeiss Ikon had just begun to try to catch up with the successful and extraordinary Leica, offering just one model, the Contax I that was less tested, less reliable and more expensive. Seiki Kogaku (Canon) was just beginning its initial, low volume production of Leica copies, adopting a strange pull out viewfinder and bayonet lens mount (produced, as already mentioned, by

The rare "Seiki" logo on the Canon X-Ray no. 2397 built in the late 1930s.

One of the first Italian Leica copies, the Gamma (Rome, 1947-8). Early models had a bayonet mount that was soon replaced by the more versatile 39/1 Leica gauge.

The successive version of the Gamma, the model with the "normalized" Leica 39/1 gauge lens mount. In fact, it is equipped here with a blued 50mm f/2 Summitar produced during the same period.

Despite the different position of the rangefinder lever which on the Gamma is placed on the lower part of the lens ring, it is 100% compatible with the Leica, including rangefinder.

The English Reid IIIA is one of the best Leica copies ever produced, equipped with excellent Taylor Hobson lenses (photo credit: Mike Banks).

Nippon Kogaku) because of the Leitz patents that had also been registered in Japan in 1934. In fact, when the Canon J was presented in 1939, although it made use of a restored screw mount (a mount that had been used on some Kwanon prototypes), it was only similar, not identical, to the Leica mount.

The hurricane of the second world war also took its toll on those 35mm cameras that existed, reducing the numbers that were produced and halting the release of new models. But in the years following reconstruction, all companies in this sector began once again to work industriously to conquer (or in the case of Leitz, re-conquer) their own market share. The new models that had been put aside were released and while others were designed. New initiatives were launched in a number of countries to produce Leica "clones" that were essentially carbon copies given that between late 1945 and early 1946, the victorious powers legally "confiscated" German industrial patents and made them available free of charge!

As a result, Leica copies began to bloom in a number of countries, more numerous in Italy and Japan, and all (or nearly all) equipped with the 39/1 gauge screw mount identical to the Leitz mount. Among the very few exceptions was the all-Italian Roman bayonet mount Gamma released in 1947, but which soon also converted to the Leica mount in 1950.

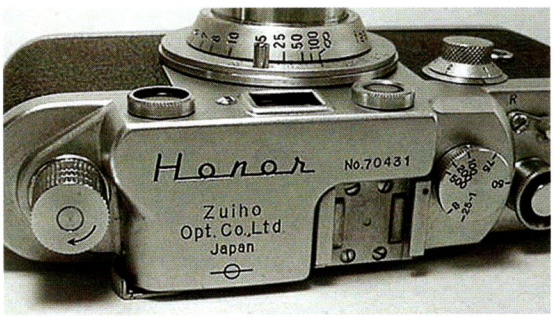
But of all these manufacturers, many of them new to the sector, only a very few were actually capable of producing even one "simple" lens model, even the most basic 50mm lens. For others, generally small-to-medium workshops involved exclusively in the building of camera

The Italian made Kristall camera series (in various models, 1954 -1955) often offered innovations on a technical scale. Models 2a, 2s and 3s were built in stainless steel and the Kristall 53, seen here, had a system of diaphragm adjustable viewfinders ranging from 28 to 105mm (1953, before the Leica M3). The 50mm f/3.5 Kristall lens is fully Leica compatible.

The Italian Wega, shown here with box and instructions, also included a lens mount and rangefinder setting fully compatible with the Leica gauge. 50mm f/3.5 Trixar Anastigmat lens and Elmar copy.

This example of the Leica Nicca (5 letters), marked Tower (5 letters) on the request of the US importer, is almost identical to the Leica IIIA. The majority of Nicca and Tower cameras appear on the collecting market today still equipped with the fast 50mm f/1.4 Nikkor or 50mm f/2 Nikkor, like the one in the photo. Note the Nikkor lens with Tower cap!

This Leotax Special, a rare model of the famous Japanese Leotax series, is equipped with a 50mm f/3.5 Letana Anastigmat lens, yet another copy of the Leitz 50 Elmar.



The Honor S1 (type II), of which we see the top cover here, is a copy of a Japanese Leica. Today it is sought after as a relatively rare collecting piece.

bodies, the only possible choice open to them was to purchase finished lenses, or at least pre-assembled groups of lenses with diaphragm onto which just the focussing helical could be mounted if required.

On the other hand, given the lively production of camera bodies with 39/1 gauge screw mount, many lens producers rushed to offer lenses suited to these cameras, sometimes on the basis of direct contact with the camera manufacture, but not always. In his excellent book, *Leica Copies*, H.P. Rainer identifies 33 manufacturers who made copies of Leica *bodies* and 64 manufacturers of the screw mount lenses these cameras required. But it is interesting to note that only about a dozen of these factories (out of a total of approx. 97) that produced Leica copies and lenses were able to produce both and offer a finished product. (Russia and China were each counted as a *single* producer, therefore *two* of the production entities making up the twelve full-capacity manufacturers).

Nippon Kogaku (from hereon referred to as Nikon), having lost the military contracts that represented virtually all of its lens production, for the first time between late 1945 and early 1946 designed its own camera, a rangefinder naturally, that would be released in 1948. The new Nikon I would seem a strange hybrid that brought together features of the Leica and Zeiss Contax which it resembled more from an aesthetic standpoint. (Remember that in this period the German patents could

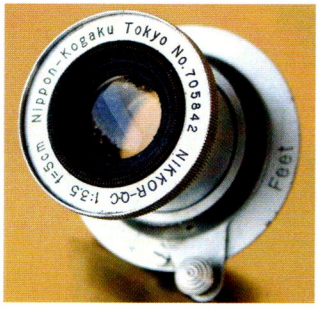
A (poor) photo of the rare 25mm f/4 Nikkor screw mount, in its day an extraordinary wide angle. Unveiled in November 1953, it surpassed in terms of both speed and angle of field even the most extreme Leica wide angle available, the "old" 28mm f/6.3 Hektor remained unchanged (although in this period blued) since 1935.

But in 1952 Nippon Kogaku had presented its 28mm wide angle. Naturally, being a 28mm /3.5 it was faster than its Leitz competition and is seen here with its dedicated viewfinder.

In 1948, on the other hand, simultaneously with the presentation of its first camera, the Nikon I, the standard wide angle was a "simple" 35mm f/3.5 Nikkor whose performance and appearance were similar to that of the recent Leitz 35mm f/3.5 Summaron which, since 1946, had flanked the old pre-war 35mm Elmar. Shown here is a screw mount version, lens no. 427802.

In 1952 Nikon introduced a new, faster wide angle, the 35mm f/2.5 Nikkor that pre-dated Leitz's 1958 35mm f/2.8 Summaron by a full 6 years. It is an excellent lens and its screw mount version must have been quite successful because today it is considered a fairly common lens.

A rare example of a 50mm f/3.5 Nikkor in Leica screw mount version. In these early lenses, the serial number allows us to determine the date of manufacture precisely: 705842 indicates piece no. 842, produced in May 1947. This version of the 50mm f/3.5 Nikkor, another obvious copy of the Leitz Elmar, had already been produced for years for the rangefinder Canons. But in 1947, with the acquisition of a small lens firm, Canon ceased using Nikkor lenses and began producing its own Canon Serenar.



September 1956. Rumors abound at Nikon that Leitz is about to present a new, superb 35mm f/2 wide angle, its famous Summicron (not actually released until 1958). But no one is interested in copying any longer or keeping up with this major German company. In fact, they offered their own amazing 35mm f/1.8 Nikkor which (naturally) is shown here in its Leica 39/1 screw mount version. It should also be remembered that the same lens could be used on the Leica M series utilizing a simple adapter ring.

be openly ignored.) At first, the series of lenses available for the Nikon I with Zeiss Contax bayonet mount were only 5. These were a wide angle 35mm f/3.5, two "normal" 50mm f/3.5 and f/2, two telephotos, an all-new 85mm f/2 and a 135mm f/4. All these lenses, with the exception perhaps of the 85/2, had already been in production for quite some time with the 39/1 Leica-compatible screw mount. What's more, it could be said that, starting in June 1950, it was those with Leica mount that were the most popular with "critics" and the public alike thanks to a fortuitous meeting. Two famous *Life* magazine photographers, David Douglas Duncan (whom I met in Rome) and Horace Bristol, while passing through Tokyo on their way to Korea to report on the war there, saw some excellent photos taken by a young Japanese photographer and were struck by their excellent technical quality. Hearing that the lens used for the shots was manufactured just a few miles away, they asked and were granted permission to visit the factory. There, greeted with foresighted openness by company management, they were given the privilege of choosing a series of lenses, unquestionably with Leica screw mount for DDD who would use them intensively in the years to follow.

In one of his famous books on the Korean War entitled *This is War* published in 1951, *all* the photographs were taken with Nikkor lenses mounted on a screw Leica!

With this perhaps "involuntary" (a professional "freebie"? ... who knows) but successful bit of publicity, the sales of

Here is the same 50 Nikkor no. 705842 mounted on a Leica IIIF with which it is fully compatible. Note the poor quality of the chrome around the focusing ring, most certainly due to low nickel content.

The 50mm f/2 Nikkor in its retractable, Leica screw mount version, is definitely another lens you will not see often. Its Nikon S (Contax-type) bayonet version is also rare.

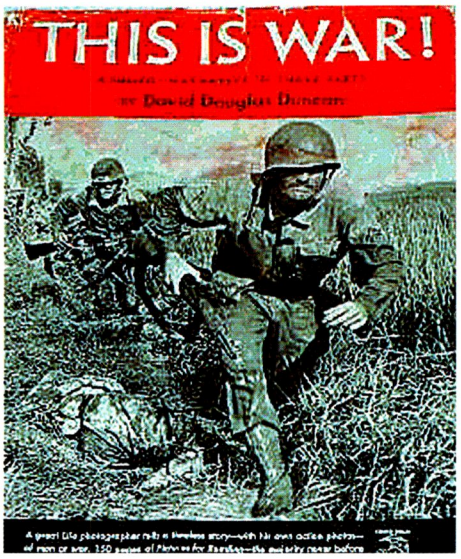
Introduced in October 1956, the 50mm f/3.5 Micro-Nikkor represented a point of reference due to its incredible focusing power. The entire success of the Micro-Nikkor series, later to follow in a reflex version, can be found in its perfect lens design, also rare in the rangefinder version. Approximately 1,500 were produced, of which only a small percentage were equipped with 39/1 screw mount, such as no. 524351 shown here.

These three photos show another rare 50mm f/3.5 Nikkor, no. 214448, here in its rigid, close focus version, not to be confused with the Micro-Nikkor published in other photos; I believe only about 500 were produced. In order to compete with Leitz and other manufacturers of screw mount lenses, Nikkon put more emphasis on faster and more prestigious lenses that it was always able to offer at competitive prices. Nice to see it mounted on a nice Leica IIIG, isn't it?

The 50/1.5 Nikkor is also extremely rare, both in its screw and bayonet mount versions. Shown here are two photos of lens no. 907600, complete with its unusual chrome cap and splendid aluminum hard case that would later be made of luxurious Bakelite for the later, fairly common (but excellent) 50mm f/1.4 Nikkor.

Nikon's "pièce de résistance", its serious competition to Leica (and other) lenses during the 1950s-60s. The 50mm f/1.4 Nikkor was and is a top notch lens, competitively priced, versatile and extremely pleasant to hold and use! The famous Life magazine photographer, American David Douglas Duncan, was enthusiastic about it and his only complaint was ... it weighed so much! But of course he had to carry his entire kit with him on the battlefield and I can't blame him if he was less willing than we are to enjoy the full tactile delight such a fine, well-constructed object can give those of us in everyday life. Note the original lens cap with Nicca marking.

Duncan in the role of combat photographer in Korea.



And this is the cover of his most famous book, This is War, all of the photos in which (it is said) were taken with Nikkor lenses on a screw mount Leica.

A lovely Leitz 50mm f/1.5 Summilux would have nothing on this splendid Nikkor, but unfortunately the price tags of the two lenses are not even minimally comparable. With the cost of the Summilux alone, you could buy six to eight Nikkors in the same condition!

Examining this photo carefully, we can deduce that Nippon Kogaku's goal was to "distract" Leica owners from their own brand of lenses. Clearly stamped on the bottom of the box is the marking "for Leica". And, even back then, prices continued to rise. The first price marked is $78.00, replaced by a successive label with a price tag of $81.95, a 5% increase.

A 50mm f/1.4 Nikkor on a Leica M3. A perfect match and even the design is pleasing. Shrewdly, Nikon never produced a camera that could be used with Leica lenses!

Nikkor lenses with 39/1 screw mount took off sharply and Nikon rightly decided to continue to produce all its new lenses in both the Nikon/Contax mount as well as the versatile Leica screw mount with the knowledge that the owners of a wide range of cameras would at least have the opportunity of purchasing them.

Many of the 20 lenses to be mounted directly on the camera and even some for the reflex system were made with and for Leica gauge, with the exception of the more recently designed lenses, such as the 35mm wide angle with stereo mount, the super wide angle, at the time 21 mm, and just a few others such as the latest version 50mm f/1.4, the so called "Olympic". It is all too obvious that by producing its fine lenses with screw gauge that were often advantageous and always competitive, Nikon hoped to "upset" and oppose Leitz's supremacy in the sale of screw lenses. In fact, the rangefinder Nikon with Contax type bayonet mount had nibbled away at the market, but had not achieved those levels of sales that seriously threatened the German company. In short, competition on all fronts that Leica was valorously able to keep in check with its fantastic M3 released in 1954.

Two ... lucky ... photographs that show the rarest, almost legendary screw Nikkor, the virtually unknown version (in screw mount) of the famous, extraordinary 50mm f/1.1 Nikkor for the Nikon rangefinder, introduced in 1956. Just think, Leitz would wait another ten years before offering an equivalent lens, the superb 50mm f/1.2 Noctilux aspheric (1966).

The medium 85mm f/2 Nikkor tele, released in 1948 as part of the Nikon rangefinder system, was a fairly immediate success among Leica (and Leica copy) users whose only original alternative was the heavy and certainly more expensive 85mm f/1.5 Summarex. There was also the old, but still excellent 90mm f/4 Elmar, but the advantage of two faster stops and definitely appealing price guaranteed a nice reception for this Nikon tele "outsider". Eight long years (of Nikkor sales) would pass before Leitz would provide its answer, its magnificent 90mm f/2 Summicron!

Two photographs (taken off of the Net) of the extremely rare 85mm f/1.5 Nikkor released on the market in 1951. A few hundred of these were made with Leica-compatible screw mount and, since they were made of aluminum alloy instead of brass were certainly lighter than the Leica Summarex. Do you have one?

The famous 105mm f/2.5 Nikkor, still a pillar of the Nikon F system, is a descendent of the lovely lens shown here. Fast, with the "right" focal length for portraits and exceptional performance, it is one of the most highly esteemed and famous lenses in the world.

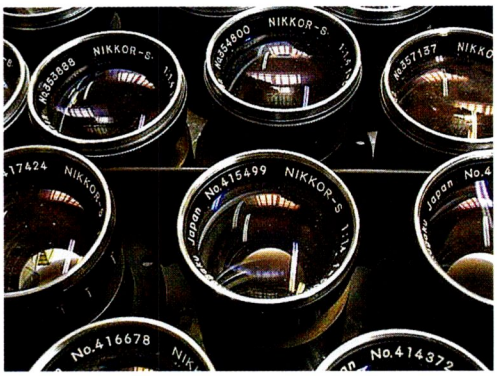
Seen here the 39mm Leica screw gauge and the rangefinder cam. The lens hood and caps are also indispensable for collectors, not just photographers!

Nikon equipment is definitely sturdy and I don't recall having seen any spotting or other defects.

The screw mount 105mm f/2.5 Nikkor mounted on a Leica, it seems custom designed for the camera.

The longer (direct) focal length for all rangefinder systems was traditionally 135mm. Nikon created four versions of its 135mm Nikkor, with a speed of f/4 in its first 1947 version, and f/3.4 in the ones that followed. This is one of the reasons why the 135mm Nikkor is the most commonly available Nikon telephoto, including in its 39/1 gauge version. Thanks to its clean, elegant line, it seems a product of the best of modern day design.

Although illegible in this photo, these are all 50mm f/1.5 Nikkors being assembled, new and almost ready to be sent around the world to take photographs ... and challenge the competition.



The name in this photo is illegible. They look like soldiers on their way to the front, don't they?

A "poor" screw mount 35mm f/3.5 Nikkor restored like new after fifty years and so proud to be mounted on a lively Leica M4. A very pleasant surprise for true lover of "photographed" photography to discover with a mixture of astonishment and respect the qualities of old lenses that rarely disappoint those with the time to try them out.

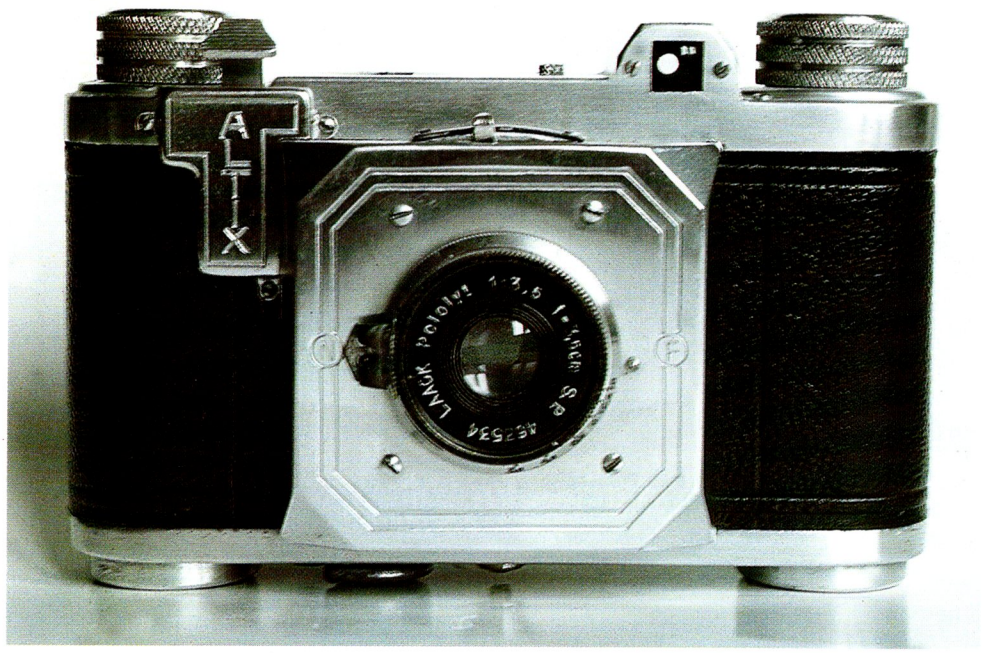
With serial no. 317956, mounted on the Leica M4 in this photo is one of the first 50mm f/1.4 Nikkor screw mounts ever made, probably in early 1951. In the Nikon S system, the 50mm f/1.4 was introduced in December 1950, proof of Nippon Kogaku's determination not to neglect the "for Leica" lens market from the very beginning of its renewed, aggressive resumption of post-war production.

It is common knowledge that the never-forgotten 39/1 gauge screw mount of Leica-compatible lenses is enjoying a comeback that is unquestionably more than just a passing trend with the surprising Voigtlander series (produced by Tokina) and a number of lenses made by other Japanese outsiders. Even Leica, taking up on a bit of "Italian" advice, has recently produced a limited series of some of its lenses, offering a screw version of its 35/2 Summicron aspheric and the two 50mm Summicron and Summilux. Maybe even Nikon which seems to have discovered the classic allure and following up the initiative of the re-issuing of its fabulous Nikon S3 rangefinder (unfortunately very expensive in Italy) will decide to re-release some of its 39/1 screw mount lenses. Despite the spread of digital technology, these lenses would undoubtedly enjoy success because of (I repeat) their extreme versatility and the ability to use them on all Leicas and Leica copies, whether screw or bayonet mount. I covet my beloved series of old Nikkors and can't wait to have the time and relative tranquility needed to "wring" every last bit of their potential out of them! The wonderful thing about photography is that even the wait, the aura created around the photos we intend taking in the future, can give rise to their own pleasurable sense of creative dreaming.

Luigi Crescenzi

THE EXCEPTIONAL ALTIX

Berthold Altmann's 35mm



Altix I, 1939, 24x24mm format with 35mm f/3.5 Laack Pololyt - front

History is filled with the names of famous kings and emperors, but only rarely are the names of their subjects or citizens remembered. We remember the names of generals, but not their foot soldiers. We remember the names of heroes, knights, explorers and navigators, but seldom those of sailors. The list of the neglected and forgotten could tediously stretch on forever, and part of it would include the virtually forgotten stories of less important cameras and their manufacturers that played no role in influencing events or setting a trend, but whose names are often intertwined in a torturous and symbolic manner with the greats of photographic history. And yet the often short lived histories of these cameras are no less interesting, less complex or less fascinating than their more famous counterparts. One of the names that risks being forgotten by history is that of Berthold Altmann and the cameras which took their names from his own, the Altix.

In the late Twenties, Berthold Altmann worked with Emil Hofert in running a small camera company in Dresden, the Eho Kamera Fabrik specialized in the manufacture of box cameras in formats ranging from 6x9cm to 6x4.5cm and 3x4cm. With the death of Hofert in 1935, the reins of the company passed into the hands of Altmann and the production of low priced, box cameras continued with some branching out into the twin lens Altiflex and 6x6cm Altissa box camera, characterized by its unique shape and equipped with a large standard or reflex viewfinder.

In 1939, Altmann began manufacture of a modest 24x24mm format camera using 35mm film that was baptized the Altix. The name of the firm was changed in 1940 to the Amca Camera Werk and in 1941 to Altissa Camera Werk. The effects of the war years on Dresden also left an indelible mark on the Altissa factories, but in 1946 Berthold Altmann put the company back on its feet starting with thirty-odd employees that would grow to number 150 in just five short years.

The company was nationalized in 1952 and its name changed to VEB Optik Altissa Kamera Werk. Altmann left East Germany and in 1953 the company that now employed close to 300 people was renamed VEB Altissa Camera Werk. This saw the most fruitful period of the company that would end up being taken over by VEB Kamera und Kinowerke Dresden in 1958 and later, like all other Dresden camera companies, would be merged into VEB Pentacon.

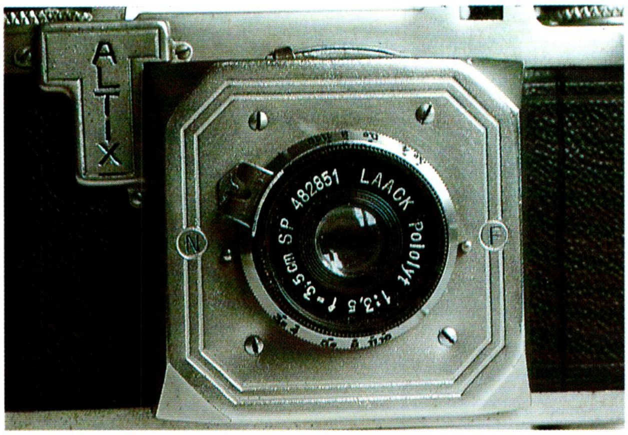
The vicissitudes of the company strongly influenced its production which in the post war period was heavily oriented towards the manufacture of 35mm cameras. Notwithstanding, by the mid 1950s, the company's output was decidedly significant, both in terms of volume and quality.

Pre-war Altix cameras

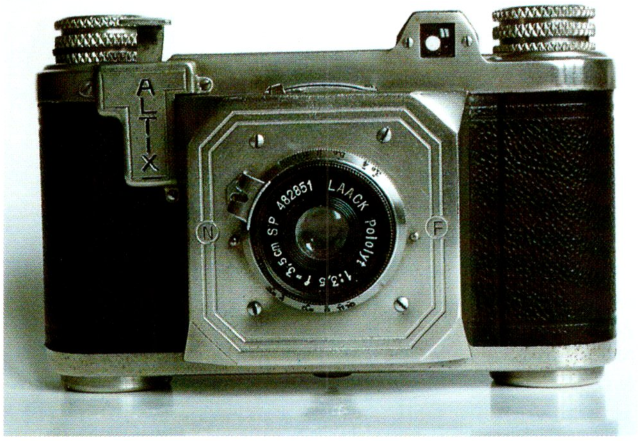
Production was begun on the first 35mm Altix cameras in 1939. Despite current trends, the square 24x24mm format was chosen for the Altix. This was not a unique choice, the same square format had already been used extensively in the

Altiflex twin-lens 6x6cm

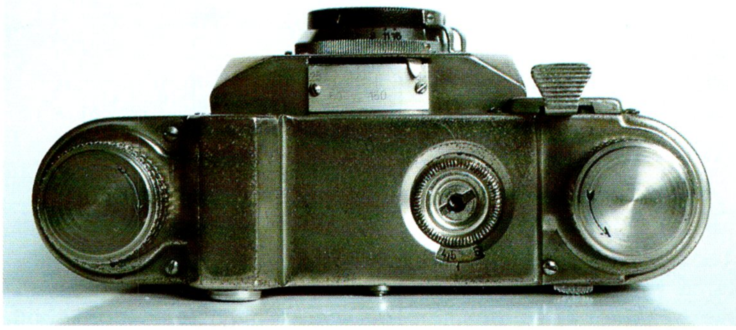
Altix I, 1939, 24x24mm format with 35mm f/3.5 Laack Pololyt - top plate



7 Altix I, 1939, 24x24mm format with 35mm f/3.5 Laack Pololyt - lens detail



Altix I, 1939, 24x24mm format with 35mm f/3.5 Laack Pololyt - variant - front



Altix I, 1939, 24x24mm format with 35mm f/3.5 Laack Pololyt - variant - top plate

early '30s on Berning's Robot spring cameras and later in 1938 on the Zeiss Ikon Tenax.

In comparison with other cameras with the same format, the Altix was extremely modest in concept and did not include any special features or unique design. Its normal finder eyepiece was small without rangefinder and was positioned on the flat top plate, built in to the contour of the upper casing. The controls for film advance and rewinding were comprised of two large knobs located on the ends of the top plate and the shutter release button was also on the top plate, but significantly off center, towards the front near the plate on which the name Altix was vertically engraved.

The Altix was equipped with a modest 35mm f/3.5 Laack Pololyt lens mounted on a 4 speed shutter (25 - 50 - 100 - 150 plus B setting).

The Altix body had rounded corners, similar to the Leica, and the protruding front plate of the lens mount was the only element worthy of note because of its unusual square shape with beveled edges that formed an octagon shape.

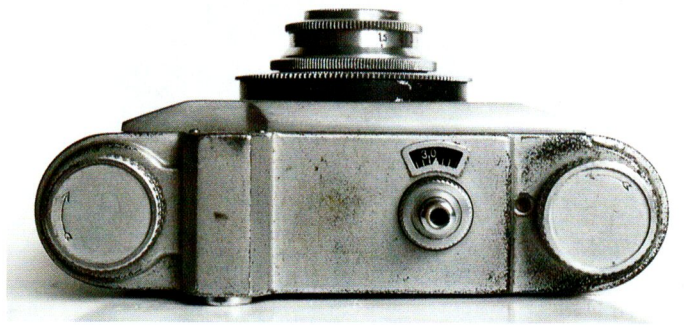
Post-war Altix cameras

In 1948, the pre-war Altix was replaced by a new model which for continuity's sake was called the Altix II. Its appearance was slightly different than that of the previous model, with a markedly protruding front incorporated into the body with wide, smoothed sides, and lens housing embellished with a chrome ring and the name ALTIX engraved in block letters.

The shutter release button on the Altix II was on the top plate, aligned with the frame counter. The viewfinder was still built into the top plate casing, the controls again two large knurled knobs and the shutter speeds offered still ranged from 1/25s to 1/150s plus B setting.

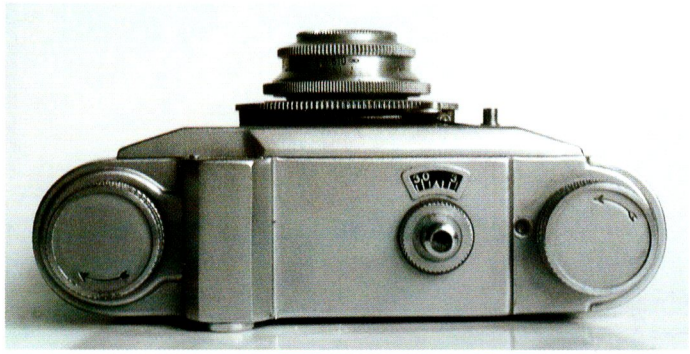
The lens, normally a 35mm f/3.5 ROW Tegonar 35mm or Laack Tegonar, was interchangeable with 22.5mm screw mount. Some Altix II cameras came equipped with a 50mm f/2.9 Ludwig Meritar, and others still had a Cludor shutter with speeds ranging from 1 second to 1/200s plus B setting, most likely

Altix II, 1949, 24x24mm format with 35mm f/3.5 ROW Tegonar interchangeable screw mount lens - front with name in block letters



Altix II, 1949, 24x24mm format with 35mm f/3.5 ROW Tegonar interchangeable screw mount lens - top plate

Altix II, 1949, 24x24mm format with 35mm f/3.5 ROW Tegonar interchangeable screw mount lens - front with name in block letters



Altix II, 1949, 24x24mm format with 35mm f/3.5 ROW Tegonar interchangeable screw mount lens - top plate

transitional models to the Altix III.
The first Altix II cameras were manufactured without synch socket, but during the years of its production, a synch socket was added to the front.
In 1949, production of the Altix II began to intermix with that of the Altix III which was almost identical in appearance but had slightly different features. Standard equipment included a Cludor shutter and 35mm f/3.5 Novonar lens, but some cameras used 37.5mm f/3.5 Tessar lenses that seem to have been part of a consignment intended for the post-war Tenax.

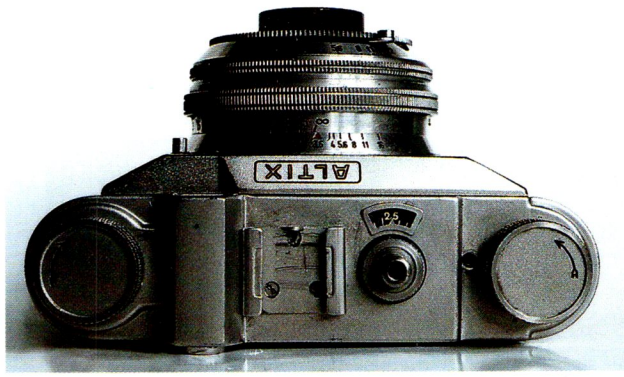
From square to Leica format

The Altix IIIA entered production in 1952. Despite its cosmetic and structural similarities, the new model offered significant new options over the Altix III. The Altix IIIA no longer utilized the square, 24x24mm format, but rather the standard 24x36mm format and the lens was interchangeable with a new, larger-diameter 29.5mm screw mount. However, despite these new features, the Altix IIIA was only manufactured with a modest, 3-speed shutter (25 - 50 - 200 plus B setting).
Despite the new screw mount, the Altix III was equipped with a modest 50mm f/2.9 Ludwig Meritar.
The year 1952 also saw the unveiling of the Altix IV that replaced all previous models and offered the 24x36mm format, but without the interchangeable lens option. Very similar in appearance to the older models, the Altix IIIA and, above all, the Altix IV are identifiable through the Altix name engraved on the top plate instead of on the front and for the shutter unit mounting and heavier, bulkier lens.
The Altix IV was manufactured over a longer period of time and was equipped with either Cludor shutters with speeds up to 1/200s, or Vebur shutters with speeds up to 1/250s.
The lenses used to equip the Altix IV were the Carl Zeiss 50mm f/3.5 Jena Tessar or Meyer 50mm f/2.9 Trioplan, as well as the Carl Zeiss 50mm f/2.8 Tessar.
The Altix IV was exported to the US under the name Classic 35 and equipped with a 1/250s Vebur shutter and 50mm f/2.9 Trioplan lens. It appears that following the curtailment of German production, a certain number of Altix IV cameras equipped with Vebur shutters and Trioplan lenses were assembled in Yugoslavia by the ZRKA company of Sarajevo.

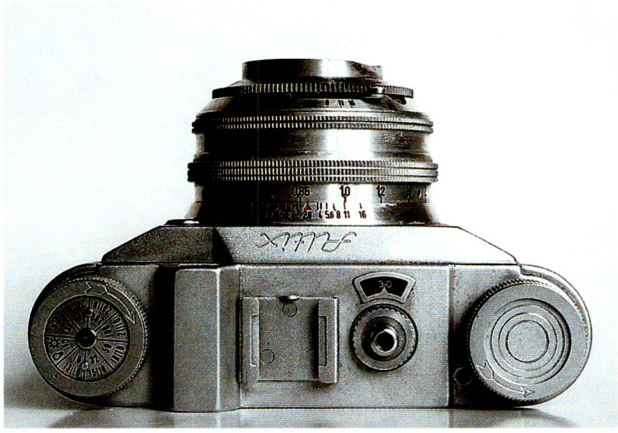
Altix V with interchangeable lens

In 1954, the most sophisticated member of the Altix 35mm family was put into production. This camera, the Altix V, offered a 24x36mm format and still resembled the Altix IV, but utilized an interchangeable lens.
The Altix V had a large, 3-sector, breech lock bayonet mount with approx. 40mm diameter. Although smaller, this mount

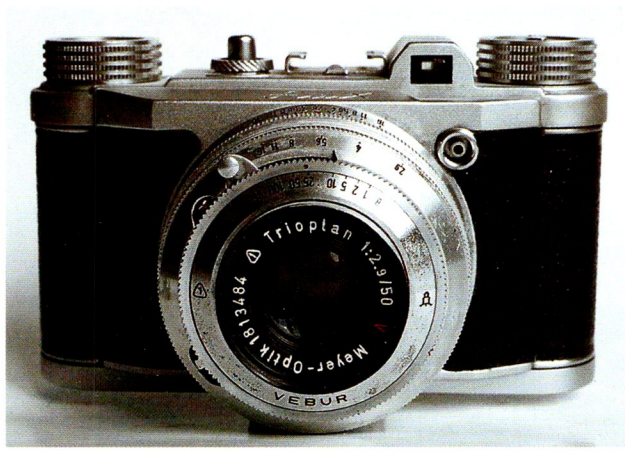
Altix IV, 1952, 24x36mm format with 1/200 Cludor shutter and 50mm f/3.5 Tessar fixed lens - front



Altix IV, 1952, 24x36mm format with 1/200 Cludor shutter and 50mm f/3.5 Tessar fixed lens - top plate with name in block letters

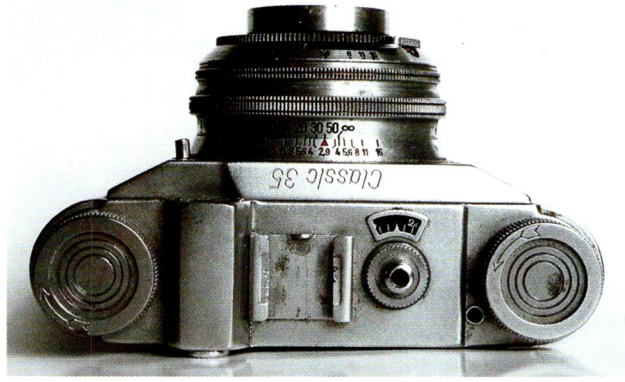


Altix IV, 1952, 24x36mm format with 1/250 Vebur shutter and 50mm f/2.9 Trioplan fixed lens - top plate with name in italics



Altix IV, 1952, 24x36mm format with 1/250 Vebur shutter and 50mm f/2.9 Trioplan fixed lens - front

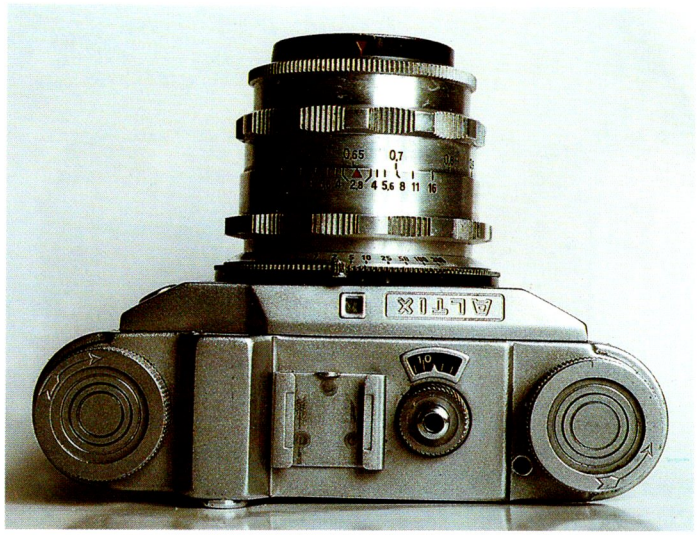
Classic 35 identical to the Altix IV, 1952, 24x36mm format with 1/250 Vebur shutter and 50mm f/2.9 Trioplan fixed lens - front



Classic 35 identical to the Altix IV, 1952, 24x36mm format with 1/250 Vebur shutter and 50mm f/2.9 Trioplan fixed lens - top plate with name in italics

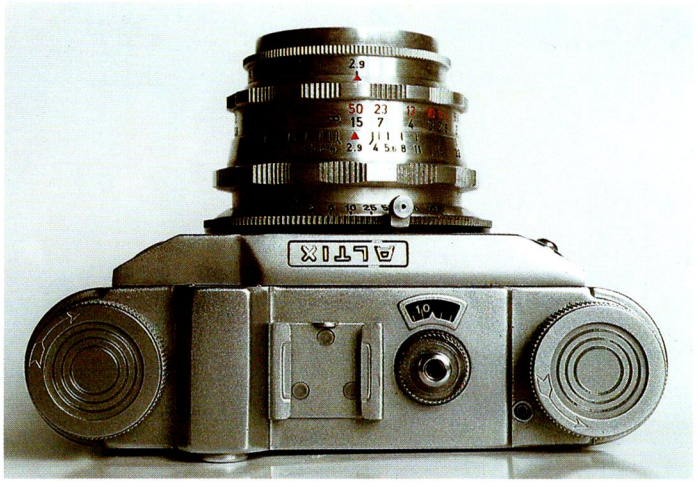
Classic 35/Altix IV with back open and serial number

Altix V, 1956, 24x36mm format with 50mm f/2.8 Tessar interchangeable lens - front



Altix V, 1956, 24x36mm format with 50mm f/2.8 Tessar interchangeable lens - top plate with name in block letters

Altix V, 1954, 24x36mm format with 50mm f/2.9 Trioplan interchangeable lens and 1/250s Tempor shutter with red self-timer button on front - front



Altix V, 1954, 24x36mm format with 50mm f/2.9 Trioplan interchangeable lens and 1/250s Tempor shutter with red self-timer button on front - top plate with name in block letters

was very similar in concept to that used until 1952 on the Praktina and later the Pentacon Six, as well as on the Werra of the same period.

The lens could be removed following just a quarter, counter-clockwise turn of the rotating ring attached to the camera body. This revealed the shutter blades positioned behind the lens and approximately 3 centimeters from the film plane.

The shutter used on the Altix V was a Tempor with speeds from one second to 1/250s, plus B setting, but export models were equipped with a Prontor SVS which instead of 1/250s, offered a speed of 1/300s. The Altix V also included a self-timer.

The standard lenses on the Altix V were the 50mm f/2.8 Tessar or 50mm f/2.9 Trioplan, and only rarely the 50mm f/2.9 Meritar. As an alternative, the Meyer medium telephoto 90mm f/3.5 Telefogar and wide angle 35mm f/4.5 Primagon were offered, in addition to the less common 30mm f/3.5 Lydith wide angle. For 90mm and 35mm lenses, their respective viewfinders were offered as accessories. As in previous models, the base plate could be removed completely for film changing and the upper part of the back was hinged for partial opening. There was also a built-in pressure plate.

As on earlier models, the shutter had to be wound on before being released using the lever on the front, and to prevent double exposures the shutter release button was deactivated if the normal winding of the film did not release the safety lock. And, as with the Altix IV (which continued to be manufactured even after the arrival of the Altix V) the Altix name was engraved on the top plate, at first in block letters and later in italics.

The Altix V was produced up to 1958 with some variations and with a complete series of different colored linings including blue, brown, yellow, green and bright and dark red. The highly unique and characteristic shape of the body remained unchanged.

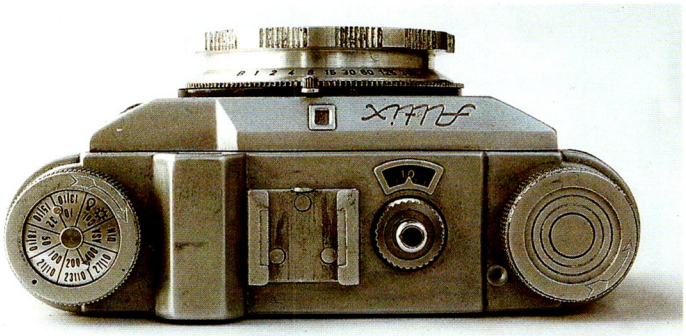
With its various formats, lenses and colors, the 35mm Altix represents one of the most unusual families of cameras produced in the DDR and stood out from others of the same era. The Altix family could be compared to a certain degree to others with original design and performance characteristics, such as the Werra and Vitessa, although the Altix never equaled these in terms of operating speed or rangefinder precision.

The last of the Altix

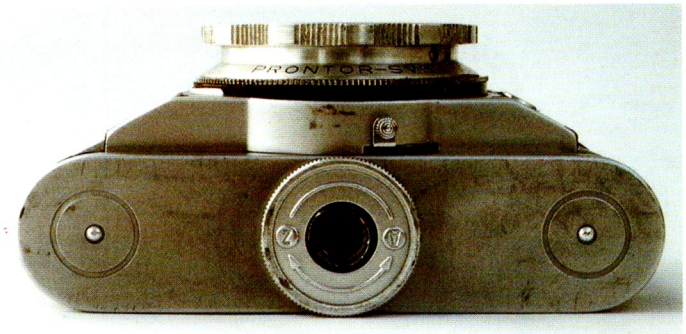
In 1958, 35mm Altix production was

Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter with linear shutter speed scale and 50mm f/2.9 Trioplan interchangeable lens - front

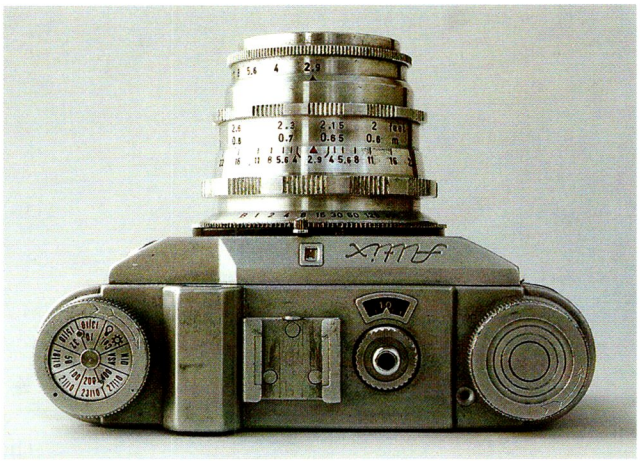
Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter - front only



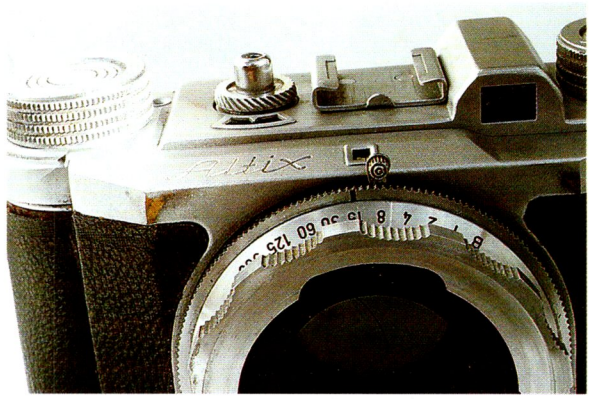
Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter - top plate only



Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter - base plate only



Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter with linear shutter speed scale and 50mm f/2.9 Trioplan interchangeable lens - top plate with name in italics and film speed memo disk



Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter - detail of front only

replaced by the new Altix N model (N standing for "neu", i.e., "new"). Once again, the lens was interchangeable with the same bayonet mount as on the Altix V and the 1/250s Tempor shutter was still used, but the camera body was changed so as to be virtually unrecognizable.

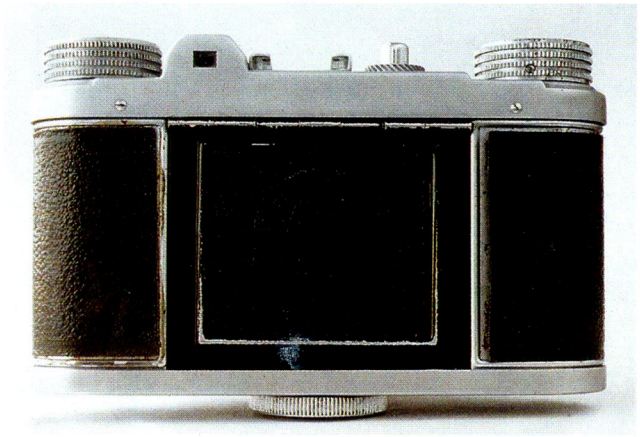
The upper casing became much higher with a completely flat top plate and included a normal viewfinder that was significantly larger than on previous models.

The Altix N was also equipped with a rapid winding lever and film speed memo disk. The front lost its characteristic profile, taking on a trapezoidal shape a bit like the Kodak Retinette of the same period. But it gave the camera an aseptic, impersonal look that was even too reminiscent of its western counterparts.

An initial version of the Altix N was produced with a short winding lever and name engraved on the top plate, only to be changed in a later version with longer winding lever, name on the front in its characteristic lower case, cursive lettering and even larger viewfinder.

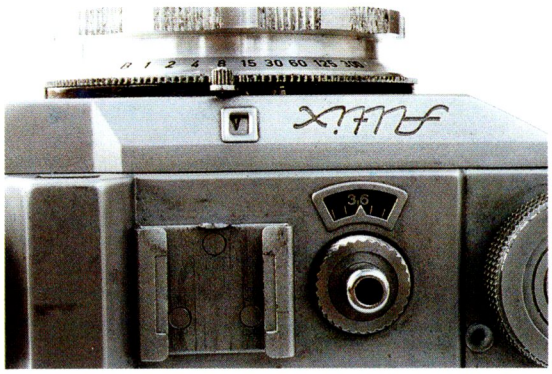
Alongside the Altix N was a second model dubbed the Altix NB (B standing for "belichtungsmesser"). Its appearance was the same as the Altix N and

Altix V - back open



Altix V - back closed

Altix V - camera and base plate removed



Altix V, 1956 (export model), 24x36mm format with 1/300s Prontor SVS shutter - top plate detail, frame counter and M X and self-timer V synch selector window

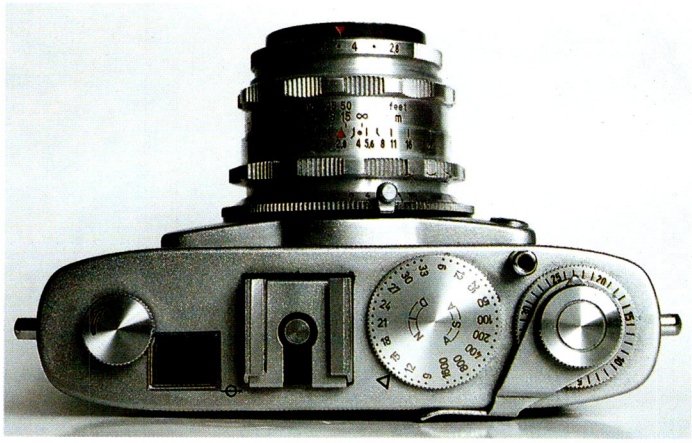
Meyer Optik Gorlitz lens - 50mm f/2.9 Trioplan with Altix bayonet mount - front

Meyer Optik Gorlitz lens - 50mm f/2.9 Trioplan with Altix bayonet mount - side

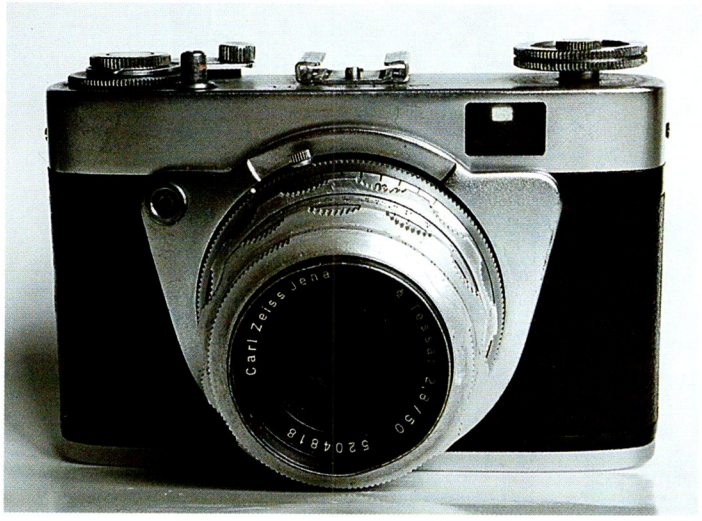
THE 35mm ALTIX CAMERAS

Model	Format	Period	Shutter	Lens	Lens mount	Notes
ALTIX I	24x24mm	1939-1941	25-50-100-150	Pololyt 35/3.5	Fixed lens	
ALTIX II	24x24mm	1948-1952	25-50-100-150	Tegonar 35/3.5	22.5mm screw	
ALTIX III	24x24mm	1949-1952	Cludor 1/200	Novar 35/3.5	22.5mm screw	
ALTIX IIIA	24x36mm	1952	25-50-100	Meritar 50/2.9	29.5mm screw	
ALTIX IV	24x36mm	1952-1958	Cludor 1/200 Vebur 1/250	Tessar 50/3.5 Tessar 50/2.8 Trioplan 50/2.9	Fixed lens	Classic 35
ALTIX V	24x36mm	1954-1958	Tempor 1/250 Prontor 1/300	Tessar 50/2.8 Trioplan 50/2.9	Bayonet	
ALTIX N	24x36mm	1958-1960	Tempor 1/250	Tessar 50/2.8 Trioplan 50/2.9	Bayonet	Lever
ALTIX NB	24x36mm	1958-1960	Tempor 1/250	Tessar 50/2.8 Trioplan 50/2.9	Bayonet	Lever Exposure meter

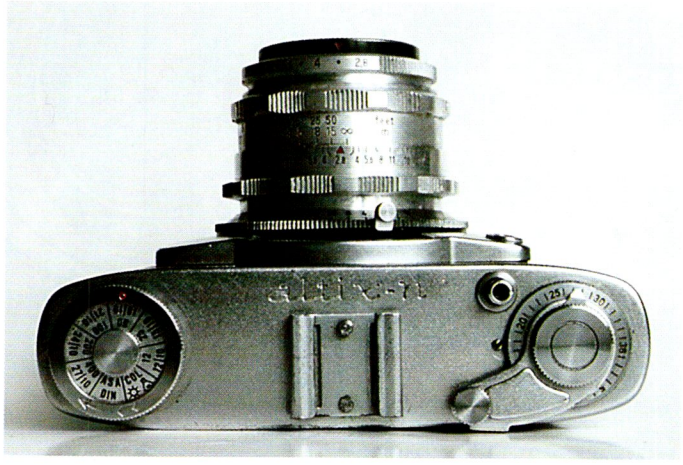
Altix N, 1958, 24x36mm format with 1/250s Tempor shutter and 50mm f/2.8 Tessar interchangeable lens - front with name in italics



Altix N, 1958, 24x36mm format with 1/250s Tempor shutter and 50mm f/2.8 Tessar interchangeable lens - top plate with long winding lever and film speed memo disk



Altix N, 1958, 24x36mm format with 1/250s Tempor shutter and 50mm f/2.8 Tessar interchangeable lens - front



Altix N, 1958, 24x36mm format with 1/250s Tempor shutter and 50mm f/2.8 Tessar interchangeable lens - top plate with name in italics and short winding lever

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www.altissa-camera.de
www.altissa-museum.de

used the same shutter, but it was equipped with an uncoupled photoelectric exposure meter that was mounted on the top plate in a very visible, highly protruding position. The Altix NB name was engraved on the exposure meter itself. In a later version, the exposure meter of the Altix NB was incorporated into the upper casing.

The Altix N and NB were the last cameras to be manufactured by Altissa Kamerawerk. After being merged into VEB Pentacon, the factory was converted to other, less crucial types of production.

The 35mm Altix cameras manufactured between 1939 and 1960, but especially those produced between 1952 and 1958, remain a very special example of originality and diversification in the midst of a sector otherwise dominated by a strictly conformist outlook. Post war Altix cameras have a collecting value of between 70 and 150 Euros depending on the model, variant, lens and finish color. As is generally the case in classic camera collecting, it is not the individual camera that arouses interest, but the number of technical and design variations produced.

Danilo Cecchi
Massimo Bertacchi

HISTORY OF THE TOPCON REFLEX

History of Tokyo Kogaku

The famous Topcon RE Super (1964) was the first 35mm reflex equipped with a TTL exposure meter to be sold on international markets, preceding the Spotmatic by just a few months. Behind this exploit was a small Japanese camera company named Tokyo Kogaku. Here, Marco Antonetto, author of *Topcon Story*, skillfully and painstakingly traces the history, events and products that marked the life of this company.

Tokyo Kogaku's origins

September 1, 1932 marked the founding of a new Japanese optical company that would take its name from its home city, Tokyo. Born under the sign of Virgo, the company was called Tokyo Kogaku KK., but it would become famous around the world as Topcon (at first also known as Tokyo Optical Co. and later Topcon Optical Co.). Those who believe that human destiny is influenced by the stars could find proof of this in Topcon's fate. It is said that those born under the sign of Virgo do not lack for fantasy and creativity and have an almost maniacal obsession with detail, but that they lack organizational skills.

In fact, in approximately forty-five years of activity, not a long period for those in the photography field, Topcon demonstrated that it had creativity to burn and was second-to-none in terms of construction quality. But, at the same time, it did not shine in terms of sales strategy. Despite the fact that in certain periods of its existence it could boast superlative cameras that were the dream of amateur photographers, esteemed by professionals and the envy of its competitors, Topcon was not able to rise to be a sector leader. Tokyo Kogaku was a shop that produced optical instruments and precision mechanisms for the Japanese armed forces in a period of tremendous political tension during which the military command was pushing for a major arms buildup. It was comprised of a small binocular factory,

the Katsuma Seisaku Sho, and the Seikosha, the optical section of the Hattori Tokei-ten research lab. With 85 employees, its principal shareholder was Kintario Hattori, owner of the old Seiko watch factory. The following year, led by Hattori's brother-in-law Shinohara, Tokyo Kogaku bought up another factory, the Seiko Company Ltd. specialized in the production of surveillance equipment. Even just a cursory look reveals fairly clearly the context in which Tokyo Kogaku operated. It was one of the companies in a group headed by a powerful family that moved freely within the power structure and had no problems obtaining orders for its companies thanks to its influence in high-ranking political and military circles. Tokyo Kogaku produced its first lens for civilian use in 1933, a copy of the classic Cooke triplet. Called the State Anastigmat, it had a focal length of 10.5cm and speed of f/4.5 and was mounted by the First Camera Korks (part of Kuribayashi Seisakusho, in future Petri) on its First Hand Camera, a bellows camera for 6x9cm plates. The next year saw the release of the Toko Anastigmat, similar to the State, but available in a range of focal lengths. In 1937, with the expiration of the Zeiss Tessar patent, the Simlar entered production whose first focal length was 21cm f/4.5. But the race for arms build-up meant that Topcon's major customer was the armed forces. In 1935, its president, Shinohara, bought up Ohara Optical Glass, a member company of the Hattori group that produced optical glass and also supplied (among others) Nippon Kogaku that one day would be a Topcon rival. Ohara would later supply optical glass not only to Tokyo Kogaku, making it a competitor of Nikon, but also, later, Asahi Optical and Seiki Kogaku (later to become Canon).

However, as has been said, military contracts were still Tokyo Kogaku's bread and butter. Within the armed forces of the Celestial Empire, increasingly intent on building its might, there was a power vacuum and one of the results was that the Imperial Navy had its supplier of optical equipment, Nippon Kogaku, while the Army had none and had to rely on the Navy. Tokyo Kogaku succeeded in filling this void and the military contracts took on increasing importance. Its factories turned out thousands of artillery sights, sighting devices and other equipment for wartime use.

The first cameras

Partly as a result of its increased productive capacity, in 1936 Tokyo Kogaku decided to build a camera for civilian use to be sold on the domestic market. Once its main features had been decided, a name had to be chosen and after the first round, those that remained included Minion, Renox and Lord and following a special contest, it was Lord that was chosen. The Lord, designed by Y. Ishiguro and M. Numata was a rangefinder camera with fixed lens that took 16 4.5x6cm frames on 120 film. The concept behind the camera was quite original and its aesthetic design was also surprisingly modern. A good part of the credit for its realization should go to M. Atago, a ballistics expert and enthusiastic collector of photographic equipment, which meant he was also a connoisseur of the best German cameras of the day.

In fact, the Lord was quite advanced for its time because the rangefinder and view finder were coupled and it had automatic film advance (only the first frame was positioned in the window). Its lens was the new 75mm f/3.5 Simlar mounted on a double telescopic tube to avoid the use of a bellows. The Simlar was a copy of the 4-element Tessar and later would also be supplied to other camera manufacturers. The attempt to come to terms with the German "sacred cows" is clear: the retractable lens Lord was as slim as a bellows Ikonta, but close-up resembled the Plasmat Roland with a number of similarities to some Korelles. The Japanese engineers felt themselves to be in competition with their German colleagues and in some cases, at least on paper, surpassed them. In reality, however, their products were noticeably inferior because the control equipment at their disposal was not of the same level as that of Zeiss Ikon. The Japanese ordered a certain number of these pieces of equipment in Germany and Switzerland, but World War II was on the verge of erupting and very few of these reached their final destination.

As a result, although very well designed, the Lord had a number of problems. For example, the rangefinder was made of low quality materials that could not guarantee the precision required, while the complicated connection between the shutter release button and interlens shutter (an S-type Seiko-sha with speeds up to 1/200 and B and T settings) was comprised of a series of small folding rods that passed inside the telescopic tube, the functioning of which proved quite delicate. From the scanty and contradictory information available, it appears that approximately fifty Lord cameras were produced between 1937 and 1938, but not all cameras built were the same because of the modifications made during this period to correct problems as they arose. The retail price of the Lord was 180 yen, less than the corresponding German cameras, but significantly higher than similar Japanese models.

Production was interrupted almost immediately, however, because of the war with China that absorbed all industrial capacity and, in this context, the Army's Scientific Institute commissioned Topcon to create a subminiature camera for espionage purposes that could be used without being seen. The result was the Kaitenkei that was about as large as a matchbox and utilized 10 frame strips on 8mm movie film. It came equipped with a 13.9mm f/2.8 lens and its guillotine shutter had a fixed aperture of 1/50. But, despite its excellent quality, the Kaitenkei was not accepted by the Army because similar cameras were available in Europe for less. This choice also explains why during the same period a small company in Riga began to manufacture what would become the star of subminiature cameras, the Minox.

However, at the end of 1938 Tokyo Kogaku released a new civilian camera, the Minion. It was a folding camera that utilized 127 film with 10 4x5cm frames per roll. This was not a standard format, an aspect that would cause some problems. The Minion was unquestionably well made (it even met military contract quality specifications), but it was not intended to be as deluxe as the Lord. It had no rangefinder and utilized a 3-element Toko lens that was excellent but less prestigious than the Simlar. Its focusing system was also quite unusual in that only the front lens element, not the entire barrel, moved. This system worked very well and the minimum focusing distance was 80cm. The shutter was a Seiko-sha Licht with B, T settings and times from 25 to 1/100. It cost just 70 yen. The first Minion model had an all-black finish and its film advance was not that efficient. Once the film was loaded (to tell the truth, not that easy an operation because the upper casing had to be removed and the film inserted from above already attached to the take-up spool), it was advanced until the number 1 appeared in the rear window. But the wrapper of the 127 film did not have the proper numbering because the 4x5cm format used by the Minion was not one of its standard formats. So, following the initial positioning of the film, it was advanced manually using the frame counter on the upper part of the camera. However, given tolerance margins and a certain operational difficulty, film advance could prove imprecise with irregular

spacing between frames or even overlapping from one frame to another. The viewfinder was comprised of two frames that had to be raised manually, but was soon replaced by a spring system (released by pressing a button on the side of the viewfinder) that positioned them automatically. This latter solution, found on most Minions, was adopted almost immediately after production start-up. The Minion described above is known today as the Minion I to differentiate it from subsequent models.

In late 1939 a new, modified model of the Minion I was released on the market. Compared with the previous model, the new Minion offered a very basic change, totally automatic film advance. Once the first frame was positioned, the advance dial was turned until it stopped and, following each shot, the dial was released through the moving of a slide on the rear of the upper part of the case. Following the tenth shot, the letter L appeared in the frame counter window and the dial turned freely so that the film could be wound onto the take-up reel. The modified Minion I cost 83 yen and in order to satisfy current-day trends, in addition to the black finish version there was also a chrome version, but which cost an additional 10 yen. Other lesser modifications included reinforcement of the arms for the lens aperture and enlargement of the size of the number in the frame counter. The modified Minion I is often confused with the later Minion II which incorporated many of the same modifications.

The same year Tokyo Kogaku produced the Machine gun Target Camera (mod. 17) that could take bursts of 16 4.5x6cm frames on 120 film. Clearly this camera was a direct result of its war-time production. In fact, in 1939, Japan was in full war mobilization and its entire industrial sector was called upon to participate in the war effort. Despite this, 1940 saw the release of the Minion II, its principal modification being in the viewfinder. A normal finder was created by inserting a lens in the rear frame, providing a much clearer, restful view. Another change involved the diameter of the focusing helical that was increased to improve focusing precision and, as a result, the 20m marking was added between 10m and infinity. The lining was changed to artificial instead of real leather and the lenses were also assembled using a different technique to reduce the focusing distance. Despite its popularity, production of this camera was halted in order to concentrate exclusively on war production, but a few Minion II cameras were produced in 1945 from remaining stocks. Throughout the war, Tokyo Kogaku dedicated itself exclusively to military contracts and totally abandoned its civilian production. The only exception was the supply of 75mm f/4.5 Rott Anastigmat lenses to First Camera for its BB Semi First and Semi Rotte. An aspect of this trend was the appearance in 1941 of another machine gun camera, the Zero Fighter checking Camera whose basic features were quite similar to those of the previous model.

The immediate post-war period and restart of production

During World War II, Japan underwent devastating bombing, culminating with the dropping of the atomic bomb on Hiroshima and Nagasaki. But, notwithstanding this tragedy, it must be said that the war also brought with it at least one positive aspect seen in the post -war period, the boost given to research in almost all technical areas. Tokyo Kogaku was no exception. Since 1937, the company had seen its military orders quintuple and to meet this demand it had even created a special school to train optical technicians. The frenzied production of all types of military equipment, including aerial photography equipment, binoculars and lenses, also led to research to improve lens speed. One example was the creation in 1940 of a 5cm f/1.5 Simlar that drew its inspiration from the Carl Zeiss Biotar and Sonnar. Three years later, starting from the same design, a 5cm f/0.70 was even created that was so intriguing that following the war the winning side sent it back to the US where it was used by the air force. To compensate for the reduction in supplies of optical glass from Ohara Optical Glass caused by the damage sustained by Allied bombing, Tokyo Kogaku founded a new company, Okatani Kogaku, in order to maintain supplies for its own production. At the peak of production demand, Tokyo Kogaku had approx. 7000 employees with 2300 pieces of production equipment.

At the end of the war, in Japan the Allied occupation forces allowed Tokyo Kogaku to reorganize. With only 200 employees, the restart of production was very difficult and, in addition, in 1947 the Hattori Tokei-ten financial group was dismantled. Tokyo Kogaku became a public corporation with the name Tokyo Optical Kogaku, from which the Topcon brand name was derived. Production began again officially in 1946 with the Minion III. It was unquestionably a classier model than its predecessors, now sporting a 6cm f/3.5 Simlar and Seikosha Rapid shutter with B and T settings and times from 1 sec to 1/500s. Other, less crucial modifications such as the disappearance of the exposure chart on the back and high position of the aperture lever, contributed to making the Minion III the most advanced and highly developed model of this camera series. Between 1947 and 1948 Topcon began development of reflex cameras with focal plane shutters and both a 35mm and 120 roll film models were designed. During the period 1948-49 a prototype of a single lens reflex with focal plane shutter and instant mirror return was also built, features which given the period were very interesting and innovative. Some of this camera's mechanisms were patented and it would have at least partial influence on future production.

In 1948, production began on a new Minion series, this time for 35mm film that was growing in popularity. The first model, the Minion 35 A, adopted the so-called Japanese format of 24x32mm which despite its rationality, did not reap the success it should have. The Minion 35 A was actually a scale model of the 4x5cm Minion. It had a normal viewfinder without range finder with the same type of Seikosha Rapid interlens shutter. It was equipped with a 40mm f/3.5 Toko lens that used three excellent quality elements and came with chrome finish. The shutter release button was located next to the shutter, a slight inconvenience that was to be rectified the very same year with the Minion 35 B which had the same characteristics, but with the shutter release button in its traditional position above, near the film winder dial. The following year, in 1949, after having seen that the 24x32mm format refused to take root, the Minion 35 C was released that was identical to the B but utilized the classic Leica 24x36mm format.

The Minion 35 series cameras would not seem to conform to the best in the Tokyo Kogaku tradition. They are respectable cameras with good performance characteristics, but they have no individual personality, that indefinable "something" in terms of technical design or construction quality that one would expect from such an illustrious manufacturer. On the other hand, it should be remembered that in a Japan so devastated by bombings and economically on its knees and lacking adequate materials or supplies, it would be unfair to expect highly creative innovations. The major goal was to get production going again as well as the possibility of looking to the future while living in the present. And at Topcon, as in

Twin-lens 4x4cm Primo Jr., left side. The twin-lens Primo Jr. was presented in 1958 in imitation of the Rolleiflex Baby and Yashica 44.

Twin-lens 4x4cm Primo Jr., front with focusing hood open.

Twin-lens 4x4cm Primo Jr., right side with tensioning lever.

other companies, their efforts were herculean. Therefore, it should come as no surprise if the Minion 35 offered nothing special. It was developed to be produced quickly and, if possible, sold with equal rapidity. Proof of this is the fact that it used 35mm film that was becoming increasingly popular during that period, also because it was cheaper than 120 film. Another indication of the efforts to meet market demand was the release of three models in the space of just two years. In short, Topcon was in the throws of reorganization following the enormous damage suffered during the war. But already in the early 1950s it would exhibit its best qualities, innovation and constructional perfection, those that would allow it to attain a leading position in the 1960s.

Topcon output and equipment in the 1950s: Twin lens cameras

Even before the war, in the photographic field two categories of cameras had established their supremacy in terms of speed and ease of use: 35mm rangefinder and 6x6cm twin lens reflex cameras, the leading exponents of which were the Leica and Rolleiflex. The advantages of these cameras and their rise to popularity will be examined in more detail in the next part of this series. Here we limit ourselves to noting that in the early 1950s Topcon also followed this general trend, while at the same time adding its own creative touch. In 1951 the twin lens reflexes were very popular and Topcon jumped on the bandwagon, offering its Primoflex. In Japan it was distributed by Osawa, but on the domestic market it was also sold by another group, the Hattori-Tokei-ten under the trade name of Laurelflex. For foreign markets, the name used was Topcoflex. What follows is a description and comparison of the features of the various models.

The Primoflex I (Laureflex/Topcoflex) was a twin lens reflex that clearly drew its inspiration from the Rolleiflex, as did all other twin lens cameras of the period. It stood to reason that if the Rolleiflex was as near perfect as possible of its kind, the only reasonable thing to do was copy it, and copy it well, if possible, given that the margin for improvement was slim. The characteristics of the Primaflex I were, therefore, those of a normal twin-lens without any special automatic features. The taking and viewing lenses were 3 element 75mm f/3.5 Toko lenses, the shutter an MKS with speeds from 1 second to 1/200 and B setting and the minimum focusing distance 0.90m. The film advance was manual (the numbering checked through the red window at the rear) and the shutter release was located directly on the shutter and was cocked after each photo. The flash sockets were on the side (Kodak style). Its mechanics were simple and streamlined, making it a sturdy, reliable camera. Optical quality was guaranteed by the tried-and-true-3 element Toko. The Primoflex I A (Topcoflex I A) also dates from 1951 and differed from the previous version only in the replacement of the MKS shutter by a Rectus with the same characteristics and by the larger focusing knob.

The Primoflex I B (1952) had one major improvement that was important and involved film advance. The initial frame was positioned using the rear window, the frame counter adjusted and then the film advanced automatically. The Primoflex I BB dates from 1952 and differed from the IB only in the addition of a direct view sport finder and a exposure chart on the back. The Primoflex II (Laurelflex II) also dates from 1952 and had a more sophisticated lens, the 4-element 75mm f/3.5 Simlar, modeled after the Tessar. The viewing lens was still a Toko, but with the speed upped to f/3.2 for a clearer view. Shutter performance was also improved, which was either a Konirapid or Seikosha Rapid with speeds from 1 second to 1/500 and B setting. A single control made it possible to advance the film and also cock the shutter and a Fresnel lens was added to the viewfinder. The Primoflex II was a definite step forward compared with previous models because the lens was superior, because it included faster speeds but, above all, because the photographer

Twin-lens 4x4cm Sawyers, front with focusing hood closed. Sawyers was the other brand name used to market the Primo Jr.

Twin-lens 4x4cm Sawyers, right side with tensioning lever.

could advance the film and cock the lens in a single movement, a feature important in twins lens cameras to win the approval of photojournalists always in search of the fastest shooting time possible. Also of note the effort to increase the brightness of the view on the ground glass and the result was due not only to the Fresnel lens, but also the greater aperture of the viewing lens. In other words, something was moving: Topcon was regaining its standing and demand for its products was on the rise.

The Primoflex III A (Topcoflex III A), dated 1953, was a less refined but more modern model in which the two 75mm f/3.5 Toko lenses, both viewing and taking, once again made their appearance and the shutter used was still the Rectus with speeds limited to 1/200s. But the most important modifications concerned the main body of the camera that was pressure die cast and the new position of the shutter release button, at long last positioned on the camera body. In addition, a German-style flash socket was utilized. It was also possible to take deliberate double exposures. There was a pre-series run of approx. 50 Topcoflex III A cameras with rack-and-pinion focusing between the two lenses.

The Primoflex IV A (1954) was an improvement over the III A. Film advance was completely automatic and the aperture setting could be read above the lens. Also added were an accessory shoe, a memo dial for the type of film loaded and both lenses had a bayonet for filters.

The Primoflex V A dates from 1955 and, although some purists may turn up their noses at this, it represented virtually the end of this long lead-up. Many of the V A's features were similar to those of the Rolleiflex of the same period, plus it included a feature that was absolutely new among twin lens cameras. Focusing precision was one of the features that made the twin lens successful, but unlike single lens reflexes, the depth of field could not be displayed by closing the diaphragm. On the contrary, given that the trend was to mount a viewing lens that was faster than the taking lens, the discrepancy between the actual depth of field and that shown in the finder was even greater. To address this, Topcon engineers also inserted a diaphragm in the viewing lens. This diaphragm was mechanically coupled to that of the taking lens, but under normal conditions was always at maximum aperture. To check the depth of field, a special control was used and the diaphragm closed to the same value as that set on the taking lens. The image on the ground glass became dark, but the depth of field seen was the actual one. Or nearly, because the fuzziness on the ground glass did not correspond perfectly to the real situation. Nonetheless, this system was certainly more convenient and faster than the traditional one of determining depth of field from the distance setting dial. And, for a photojournalist, speed was everything. The taking lens was a 4-element 75mm/3.5 Topcor and the viewing lens again the faster 75mm f/3.2 Toko. The shutter was a Seikosha Rapid with speeds ranging from 1 second to 1/500s and B setting. The decision to use a new lens also demonstrates Topcon's desire to offer the public a truly high-quality product with professional level performance.

The Primoflex (Topcoflex) Automat was released in 1956 and had high, professional-level features. For the viewing lens, the 75mm f/3.2 Toko was replaced by a 75mm f/3.5 Toko and the shutter was also replaced with a Seikosha MX with the same speeds as the previous model. The synch socket was located on the front in mirror image to the shutter release button. But, despite its banality, the most important change, the one that would make the difference in terms of the camera's popularity was the replacement of the film advance lever with a crank that greatly increased speed of use. The Primoflex Automat L (1957) offered almost all the features of the Automat, but had an EV exposure scale. It was to be the last of the Topcon twin lens cameras, a type of camera which, one step at a time, had attained a very high level of quality. But, following their original blaze of popularity, twin lens cameras in general

Twin-lens 4x4cm Sawyers, front with focusing hood open.

Comparison of twin-lens 4x4cm Primo Jr and Sawyers.

soon saw a downturn in their fortunes with the small format single lens reflex hot on their heels. Topcon perceived this trend in time and the Primoflex gradually stepped aside to make room for those cameras more in line with current demand.

Moreover, in 1958, following the trend for increased miniaturization, another twin lens was born, the Primo Jr., that took 4x4cm frames on 127 film. As a type of twin lens it was not new, one that Rolleiflex had already presented in the 1930s and then re-issued in 1957, with the Yashica imitation following almost immediately. The Primo Jr., which used a 60mm f/2.8 Topcor for taking and a 60mm f/2.8 Toko for viewing, was produced in two different series, the first with Seikosha MXL shutter (serial no. beginning with 26 XXXX) and the second (from 1959) with the Seikosha SLV (serial no. beginning 36 XXXX). The first series was also sold under the Sawyer's Mark IV trademark. Both series were later also supplied with coupled selenium exposure meter. Compact and efficient, the Primo Jr. had everything required to become popular, but the public did not show much interest in this camera which soon disappeared along with the same type of camera produced by other manufacturers. The fact was, in the late 1950s, the difference between the 24x36mm and the 6x6cm was very obvious, also because in that period, film grain was anything but fine. The 4x4cm frame from which a rectangular enlargement was almost always made, did not offer all that much more than the Leica format. Plus, while the professional market continued to use the 6x6cm, amateur photographers preferred not to spend too much for a 4x4cm twin lens when, for a much lower price they could buy a 24x36mm from which they could obtain virtually the same results. But that was not all. The core of the 127 rolls was very small and the film was wound tightly. Over time, the curve in the film was such that even a good size pressure plate could not always guarantee perfectly flat film causing uneven sharpness.

Normal view finder 35mm cameras

In fact, it was no coincidence that starting in 1953 Topcon began to produce the Topcon 35, a fixed lens, 24x36mm camera that could be considered the descendent of the Minion. The first model, called the Topcon 35A Original, had a 40mm f/3.5 Toko lens and Copal blade shutter with speeds ranging from 1 second to 1/300s and B setting. The model which followed, the Topcon 35A, utilized a 42mm f/3.5 Topcor that could be replaced by a 80mm telephoto sold with its own supplementary view finder.

The Topcon 35B appeared in 1955, equipped with an improved shutter, the Seikosha Rapid with speeds up to 1/500s. Once again, the lens was interchangeable and there was also a rangefinder that was very useful for precise telephoto lens focusing. The Topcon 35S (1956) gave up the interchangeable lens but lens speed was improved with the 44mm f/2.8 Topcor. The shutter was also changed to a Seikosha MX with times up to 1/500s. The Topcon 35L (1957) was the most prestigious model of the series because it used the very fast 44mm f/2 Topcor. This model included parallax correction and a Seikosha MXL shutter (an LVS light value settings shutter) with speeds up to 1/500. It came standard with a TOPCON METER selenium exposure meter that could be coupled to the camera. Arriving together with the 35L was the Topcon 35JL that was similar to the L but with a slower lens, the 4mm f/2.8 Topcor used previously on the Topcon 35S. The Topcon 35 also had a number of accessories available, including two finder shades, an intensifier for the Topcon Meter and a series of filters for color and black and white.

Although well built with noteworthy optical features (especially later models), apart from the possibility of mounting a telephoto lens on the A and B models, the Topcon 35 series was not particularly original. They may not have offered any exceptional features but, together with the

Topcon 35S with range finder, Seikosha MX leaf shutter and 44mm f/2 Topcor lens, front. Built in 1956, the Topcon 35S gave up the interchangeable lens option in favor of a faster lens.

Topcon 35S with range finder, Seikosha MX leaf shutter and 44mm f/2 Topcor lens, front detail.

Topcon 35S with range finder, Seikosha MX leaf shutter and 44mm f/2 Topcor lens, back open.

twin lens cameras, they provided a valuable training ground for Topcon and Seikosha engineers who continued to develop their skills in preparation for a decisive step–the 35mm single lens reflex –that would outdate all previous output in one fell swoop.

The 1960s and 1970s

The production of focal plane shutter reflex cameras (SLRs) began with model R in 1957. Topcon Optical Co. decided to market this new camera also outside of Japan in expectation that the SLR would be very popular, especially in countries with high growth. At first it set up its own sales offices in the major industrialized nations then, over the next few years, it entrusted the marketing of its cameras to companies with well-established reputations in the photography sector. For example, for the United States its importer became Charles Beseler Co. of East Orange, NJ. Beseler began in 1959 with the sale of the Model R that he had renamed the Model B (B, we think, for Beseler), while the PR II, with interlens shutter and therefore for another market sector, had a different sales outlet. This American company, still famous worldwide for its enlargers and probably Topcon Optical's largest customer, for its own market always had its name marked next to that of Tokyo Kogaku and, in addition, when possible used names that were different from the original ones. But this was quite common on the American market. Canon supplied some of its cameras with the Bell & Howell name and Asahi Kogaku with the Tower brand (for Sears Roebuck). Even industry leaders Asahi Pentax and Minolta, like Topcon, used different model codes for the United States than in other countries. Exact codification of the international name and United States (or other country) name is given in the technical spec sheets for each camera.

In the early 1960s, Toshiba was anxious to enter the camera sector and began collaborating with Tokyo Kogaku, or, more precisely, Tokyo Kogaku became part of the Toshiba Group. This marked the start of top-notch cooperation between their engineering staffs that led to a period of rapid, continuous corporate evolution. Toshiba engineers began working on a number of fronts that were organizationally as well as technically related, such as how to build training courses for those on the assembly lines and how to improve productivity. For example, the Uni-meetings were meetings between all production managers, including post sales managers, and were given this name because they were initiated during the

Topcon 35L with range finder, Seikosha MX leaf shutter and 44mm f/2 Topcor lens, front. The Topcon 35L (1957) had a selenium cell exposure meter that could be clipped on to the top plate and used the EV scale for rapid time-aperture selection.

Topcon 35L with range finder, Seikosha MX leaf shutter and 44mm f/2 Topcor lens, front detail.

Topcon 35L with range finder, Seikosha MX leaf shutter and 44mm f/2 Topcor lens, top plate.

development of the Uni project. From that time on, every piece of equipment in the development phase would give rise to a series of these Uni-meetings.

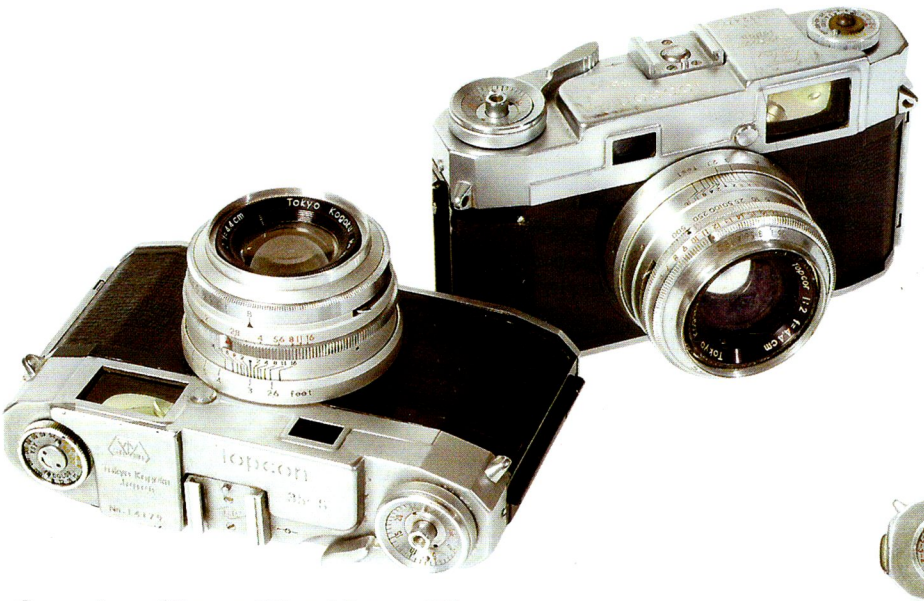
During these years, Topcon's reputation for the quality of its products was excellent and its corporate strategy included three major objectives: 1) quality first and foremost; 2) meeting of delivery schedules; 3) keeping costs competitive. In 1958, Topcon received a special award at the Brussels fair and, in the same year, the Japanese Ministry of Industry and Transport granted Tokyo Kogaku an award for its production capacity. In the early 1960s, Topcon was a world leader when the RE Super with its TTL exposure meter (designed together with Toshiba engineers) was introduced. For a certain period it was also a leader in the production of interlens shutter reflex cameras (LSR).

Reflex cameras with interlens shutter

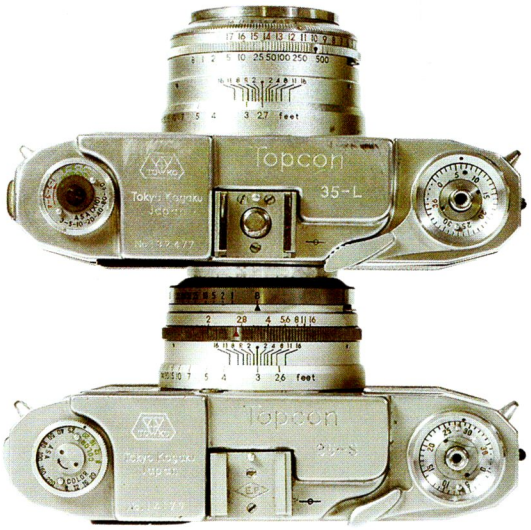
When the interlens shutter reflex demand was beginning to increase somewhat around the world, Japan was also ready to begin producing this type of camera. Topcon was basically the first Japanese company to enter this market in 1959 with its PR model. During the nearly 15 years in which this camera was manufactured, Topcon was competing with many other European and almost all Japanese companies. Tokyo Kogaku remained with the LS reflex until the bitter end for a number of reasons. First, the fact that the popularity they had won from these low-cost, well-built cameras was a boost to sales of precision lenses and more sophisticated cameras (from the RE Super to the Topcon Horesemann). Second, the increase in the sales of compact reflex cameras brought stability to the company. Third, it benefited from the mechanical and technological research that went into them, so much so that, although they had begun production of LS reflex cameras as an alternative to the more costly FP Reflex, over time, Topcon even considered using them to replace FP Reflex market, but this never occurred. The compact reflexes ended up costing so much that they had to be abandoned. Tokyo Kogaku produced 300,000 of the 600,000 interlens shutter reflex cameras manufactured in Japan.

As early as the late 1950s, the continued demand for cameras forced the company to completely rethink its product line and marketing strategy. Responsibility for production was divided into various sectors: design, components, assembly, etc. Assembly line production was also organized, made necessary by market demand, and attempts were made to produce in-house as many of the major components as possible, such as the camera body and mirror box, that were then assembled at the end of the line.

A new factory was opened in 1963, the Tokyo-Kogaku-Seiki in the region of Shin-Su (northern Japan), already home to other precision instrument and camera factories. This new location made it easier to obtain supplies and find personnel. However, a number of problems arose due to the continuous readaptation of the assembly line each time a new model entered production, and in this period, this sometimes meant two models in a single year (e.g., 1963) with a resulting negative impact on costs. The sharp rise in sales brought with it an increase in camera repairs and this necessitated the creation of a Post Sales Department. The ability to solve technical problems in the shortest



Comparison of Topcon 35L and Topcon 35S.



Comparison of Topcon 35L and Topcon 35S top plates.

Comparison of Topcon 35L and Topcon 35S fronts.

possible amount of time became one of the cornerstones of the Tokyo Kogaku corporate strategy.

One of the recurring complaints centered around the shutter on the Uni which, especially in the beginning, often jammed because of the oil used to lubricate its moving parts. In the end, Seiko succeeded in constructing a shutter without the use of lubricating oil. Another recurring problem was breakage in the transmission between the shutter and camera body. This increase in problems inflated costs and, for example, the Unirex which first cost 33,500 Yen, in just four years increased to 39,800 and then 43,800 Yen, an increase of over 30% in four years. This continuous rise in price hurt Unirex production which had been designed for a low cost market sector and, in the end, it was so expensive to produce that the costs could not be met and its sales prices was close to that of some of the mid-level FP Reflex cameras, such as the Asahi Pentax Spotmatic 500, the Fujica ST 701 and the Minolta SR-T100. In addition, Seiko stopped production of the SLV shutter and, as a result, Topcon decided to stop producing the Unirex.

The last of the Topcon reflex

The early 1970s saw the dawn of the boom in electronic cameras and the major Japanese companies, virtually competitor-free abroad in the middle range of the market, began a major advertising push and started building plant with the technology required to manufacture these new cameras. Topcon, still essentially a company with an artisan approach, found its SLR production at a standstill because of the continuous rise in costs, plus its top-of-the-line, the Super DM, had become out-of-date. At this point, they realized that it would be very difficult to compete with the major companies, and they began to look for production partners to capitalize on the brand name which was the only real asset they had since the TTL exposure meter had gained prominence in recent years. Its cameras that utilized electronic technology, starting with the RE 200, were probably produced by third party companies, such as Cimko. In the early 1980s, it definitively abandoned the photographic field.

Article and photos by Marco Antonetto

(End of Part I)

TOKYO KOGAKU CAMERAS

Pre-war

Year	Model	Format	Type	Shutter	Lens
1937	Lord (film 120)	6x4.5cm	rangefinder	Seikosha 1/250	Toko 75mm f/3.5
1938	Minion I (film 127)	4x5cm	bellows	Seikosha 1/100	Toko 60mm f/3.5
1939	Minion II (film 127)	4x5cm	bellows	Seikosha1/100	Toko 60mm f/3.5
1946	Minion III (film 127)	4x5cm	bellows	Seikosha Rapid 1/500	Simlar 60mm f/3.5

35mm

Year	Model	Format	Type	Shutter	Lens
1948	Minion 35A	24x32mm	35mm	Seikosha Rapid 1/500	Toko 40mm f/3.5
1948	Minion 35B	24x32mm	35mm	Seikosha Rapid 1/500	Toko 40mm f/3.5
1949	Minion 35C	24x36mm	35mm	Seikosha Rapid 1/500	Toko 40mm f/3.5
1953	Topcon 35A	24x36mm	35mm	Copal 1/300	Toko 40mm f/3.5
1953	Topcon 35A	24x36mm	35mm	Copal 1/300	Topcor 42mm f/3.5 or Topcor 80mm f/5.6
1955	Topcon 35B	24x36mm	rangefinder	Seikosha Rapid 1/500	Topcor 42mm f/3.5 or Topcor 80mm f/5.6
1956	Topcon 35S	24x36mm	rangefinder	Seikosha MX 1/500	Topcor 44mm f/2
1957	Topcon 35L	24x36mm	rangefinder	Seikosha MXL 1/500	Topcor 44mm f/2
1957	Topcon 35JL	24x36mm	rangefinder	Seikosha MXL 1/500	Topcor 44mm f/2.8

Twin-lens

1951	Primoflex I	6x6cm	twin-lens	NKS 1/200	Toko 75mm f/3.5
1951	Primoflex IA	6x6cm	twin-lens	Rectus 1/200	Toko 75mm f/3.5
1951	Topcoflex	6x6cm	twin-lens	Rectus 1/200	Toko 75mm f/3.5
1951	Laurelflex	6x6cm	twin-lens	Konan Rapid 1/500	Toko 75mm f/3.5
1952	Primoflex IB	6x6cm	twin-lens	Rectus 1/200	Toko 75mm f/3.5
1952	Primoflex IBB	6x6cm	twin-lens	Rectus 1/200	Toko 75mm f/3.5
1952	Primoflex II	6x6cm	twin-lens	Konirapid S 1/500	Simlar 75mm f/3.5
1953	Primoflex III	6x6cm	twin-lens	Rectus 1/200	Toko 75mm f/3.5
1954	Primoflex IVA	6x6cm	twin-lens	Rectus 1/200	Toko 75mm f/3.5
1955	Primoflex VA	6x6cm	twin-lens	Seikosha 1/500	Topcor 75mm f/3.5
1956	Primoflex Automat	6x6cm	twin-lens	Seikosha MX 1/500	Topcor 75mm f/3.5
1957	Primoflex Automat L	6x6cm	twin-lens	Seikosha MXL 1/500	Topcor 75mm f/3.5
1957	Topcoflex Automat	6x6cm	twin-lens	Seikosha MXL 1/500	Topcor 75mm f/3.5
1958	Primo JR	4x4cm	twin-lens	Seikosha MXL 1/500	Topcor 60mm f/2.8
1958	Sawyer's	4x4cm	twin-lens	Seikosha MXL 1/500	Topcor 60mm f/2.8
1959	Primo JR II	4x4cm	twin-lens	Seikosha SLV 1/500	Topcor 60mm f/2.8

Curtain shutter 35mm reflex

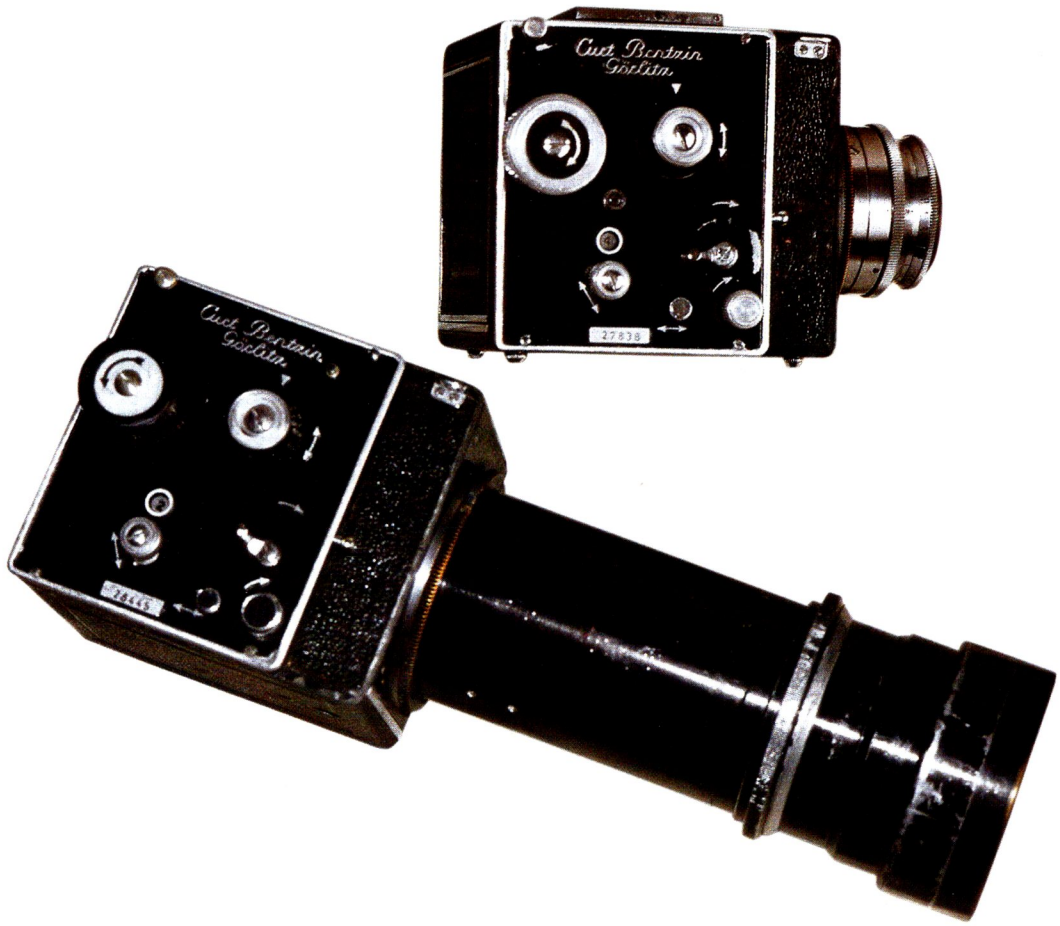
1957	Topcon R	24x36mm	reflex	Curtain 1/1000	Auto Topcor 58mm f/1.8
1960	Topcon R2	24x36mm	reflex	Curtain 1/1000	F Auto Topcor 58mm f/1.8
1961	Topcon R3	24x36mm	reflex	Curtain 1/1000	F Auto Topcor 58mm f/1.8
1962	Topcon RS	24x36mm	reflex	Curtain 1/1000	RE Auto Topcor 58mm f/1.4
1963	Topcon RE Super	24x36mm	Reflex TTL	Curtain 1/1000	RE Auto Topcor 58mm f/1.4
1965	Topcon RE2	24x36mm	Reflex TTL	Curtain 1/1000	RE Auto Topcor 58mm f/1.8
1971	Topcon Super D	24x36mm	Reflex TTL	Curtain 1/1000	RE Auto Topcor 58mm f/1.4
1973	Topcon Super DM	24x36mm	Reflex TTL	Curtain 1/1000	RE Auto Topcor 58mm f/1.4
1973	Topcon IC Auto	24x36mm	Reflex TTL	Curtain 1/500	Hi Topcor 50mm f/2
1974	Topcon IC Auto new	24x36mm	Reflex TTL	Curtain 1/500	HiTopcor 55mm f/1.8
1977	Topcon RE 200	24x36mm	Reflex TTL	Curtain 1/1000	RE Topcor 55mm f/1.7
1978	Topcon RE 300	24x36mm	Reflex TTL	Curtain 1/1000	RE Topcor 55mm f/1.7
1979	Topcon RM 300	24x36mm	Reflex TTL	Curtain 1/1000	AM Topcor 55mm f/1.7

Leaf shutter 35mm reflex

1958	Topcon PR	24x36mm	Reflex	Citizen MV 1/500	Topcor 50mm f/2.8
1959	Topcon PR2	24x36mm	Reflex	Citizen MV 1/500	Topcor 50mm f/2.8
1958	Topcon Wink Mirror	24x36mm	Reflex	Seikosha SLV 1/500	Topcor 48mm f/2
1962	Topcon Wink Mirror E	24x36mm	Reflex	Seikosha SLV 1/500	UV Topcor 48mm f/2
1963	Topcon Wink Mirror S	24x36mm	Reflex	Seikosha SLV 1/500	UV Topcor 53mm f/2
1965	Topcon Uni	24x36mm	Reflex TTL	Seikosha SLV 1/500	UV Topcor 53mm f/2
1969	Topcon Unirex	24x36mm	Reflex TTL	Seikosha SLV 1/500	UV Topcor 50mm f/2
1970	Topcon Unirex EE	24x36mm	Reflex TTL	Seikosha SLV 1/500	UV Topcor 53mm f/2

PRIMARFLEX:

AN INNOVATIVE 6X6 REFLEX FROM THE THIRTIES

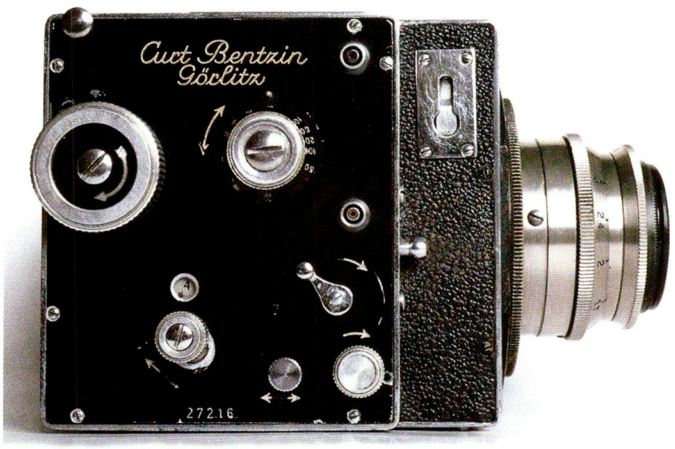


The Curt Bentzin company, headquartered in Goerlitz, was founded at the end of the 1800s and began producing cameras in the early years of the new century. These included a number of interesting plate cameras ranging from 6.5x9cm to 9x12cm format and equipped with focal plane shutters and optical or reflex finders. Well known among these are the Folding Focal Plane with shutter speeds up to 1/1000 second and the Primar Reflex produced in a range of formats. These were followed in the 'Teens by the Primar Klapp Reflex and in the Twenties by the 6x13cm Primar Stereo Reflex.

In the early Thirties, the Bentzin company began marketing an intriguing 4x6.5cm format twin lens that utilized 127 roll film. This camera, called the Primarette, did not have a reflex finder and displayed the frame and focusing image on the ground glass located on the back of the camera which utilized a Pronto leaf shutter.

The growing market interest in roll film and the birth of the first portable cameras with reflex finder pushed the Curt Bentzin company in the early Thirties to take on this new challenge. Already on the market were the single lens reflex Exakta Vest Pocket made by Ihagee of Dresden that had been launched in 1933 and utilized 127 film with 4x6.5 format. A couple of years later the single lens reflex Noviflex by Eichapfel and the Reflex Korelle by Kochman were also released. Both these cameras were produced in Dresden, both used 6x6cm format on 120 film and both had a focal plane shutter. Like the Exakta, the Noviflex and Korelle used

Pre-war Primarflex no. 27216, first model without name on front, equipped with standard 100mm f/2.8 Trioplan lens



Side view of Primarflex showing main controls

Primarflex with lens

Primarflex front with standard lens

film that advanced horizontally and, again like the Exakta, both seemed to follow the general lines of over-grown 35mm cameras equipped with a removable lens.

Curt Bentzin, on the other hand, designed a single lens reflex camera that was completely original both in terms of concept and construction. The reflex created by Curt Bentzin in 1936, a 6x6cm with 120 film and called the Primarflex, had a number of surprising innovations that won it the gold medal at the Paris International Exhibition in 1937.

An unusual 6x6

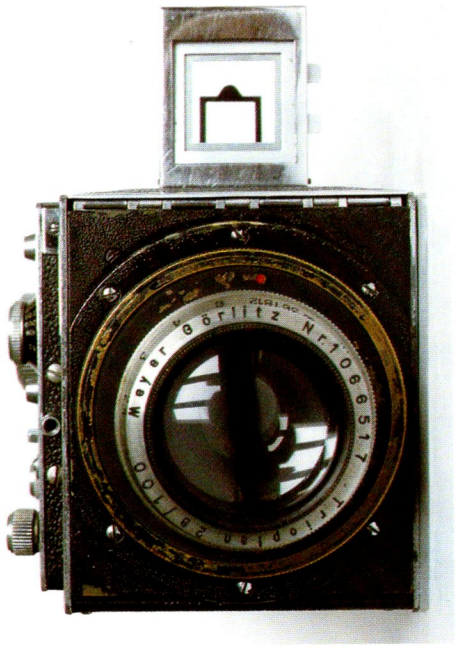
The Primarflex was extremely compact with an almost cubic box shape with just over 10 cm per side and all its controls were on the right side of the camera. The self-capping focal plane shutter had speeds up to 1/1000 second with vertical film advance. Its top cover opened to reveal a reflex view finder that became a folding hood as well as an adjustable frame sport finder.

The lens was interchangeable with wide diameter screw mount (70mm vs. the just-under 40mm of the Exakta and 40.5mm of the Korelle, later upped to 55mm on the Korelle III). Like some other box cameras, the film was loaded after having released the film spool from the back of the camera and after having opened the bottom hinged back. This offered a number of advantages, including the possibility of using preloaded spools as well as the replacement of the film spool with 6x6cm plate holder chassis without causing major problems, or 6x4.5cm chassis that could be loaded for either horizontal or vertical shooting.

Twelve years later Victor Hasselblad would use a loading system very similar to that of the Primarflex on his own cameras, but improving it significantly through the insertion of the film spool in a light-proof interchangeable magazine.

The controls of the Primarflex were located on the right side and grouped on a square plate that protruded slightly from the camera. The main controls included a large knob used to wind on the shutter, lower the mirror and advance the film and frame counter, plus a dial with shutter speeds ranging from 1 second to 1/1000 sec with the possibility of speed selection with the shutter either cocked or uncocked.

Again on the right side of the camera



Primarflex front with direct view finder open and three adjustable frames

Primarflex front with frame finder open

on the same plate were the secondary controls such as the self timer lever with start button, the frame counter reset button and a special button used to lower the mirror with the shutter uncocked. The threaded shutter release button was slightly hidden to the right of the front on the tier between the camera body and the protruding control plate. On the base plate were two different diameter tripod bush mounts.

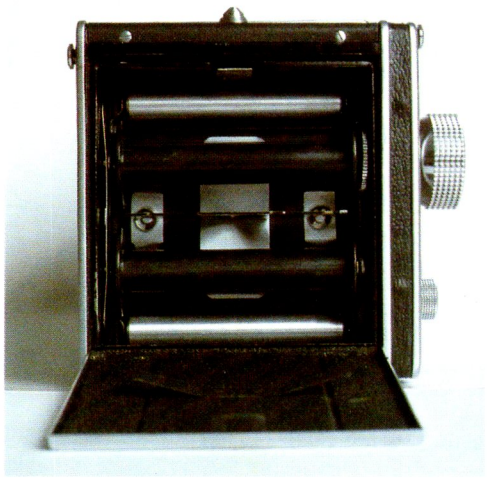
The Primarflex was produced during the second half of the 1930s in a number of different versions with slight changes in lettering style, in the controls and finish, giving rise to a series of variations little known to even expert collectors.

The Primarflex lettering, not present on early models, was engraved on the front over the changing catch, first using cursive lettering with initial capital and then lower case letters, then in block lettering and, in post war models, on a horizontal plate located on the upper part of the front.

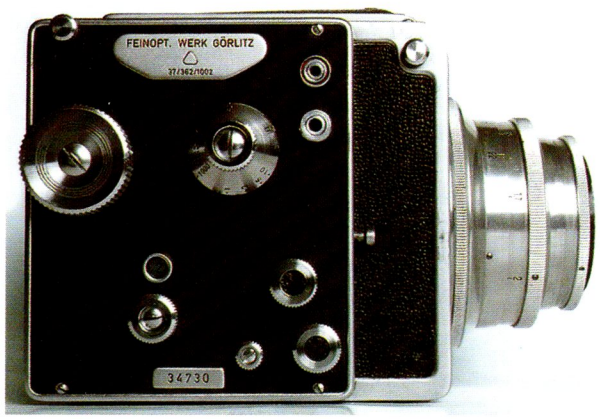
The large screw lens mount was also later modified and contoured like a three section threaded bayonet to make it possible to use both old lenses as well

Primarflex front with finder hood open

Post-war Primar Reflex front equipped with standard 105mm f/3.5 Tessar lens

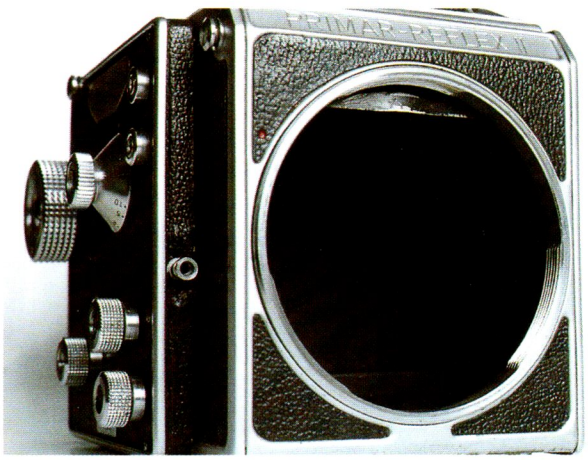


Open back of Primarflex with removable cassette



Primar Reflex no. 34730, side view with main controls with redesigned shape, but with position and function unchanged

Primar Reflex front without lens



Detail of Primar Reflex 3 section contoured bayonet screw mount

as quick mount new lenses with just a sixth of a turn.

Exceptional lens kit

The Curt Bentzin company excelled in the manufacture of prestige cameras, but it always used specialized outside companies for its optical equipment.

The Primarflex was offered with standard lenses with a fairly high focal length in relation to the format, such as the 105mm f/3.5 Zeiss Tessar or 100mm f/2.8 Meyer Trioplan, as well as the 105mm f/2.7 Meyer Makro Plasmat.

The limited choice of wide angle lenses was typical of that era, especially for single lens reflex cameras, and the only one available was the 80mm f/3.5 Meyer Trioplan with a focal length considered standard for modern 6x6cm cameras.

This shortcoming was compensated for by a wide selection of long focal length lenses such as the Tessar with 135mm f/3.5, 165mm f/2.8, 210mm f/3.5 and 320mm f/6.8 focal lengths, as well as the 135mm f/3.5 and 180mm f/3.5 Meyer Primotar or the 250mm, 300mm and 400mm Meyer Tele Megors, all with a speed of f/5.5. Also available at the time for the Primarflex was the 120mm Rodenstock Imagon portrait lens.

In addition to these German lenses, the best foreign lenses of the day could also be used on the Primarflex.

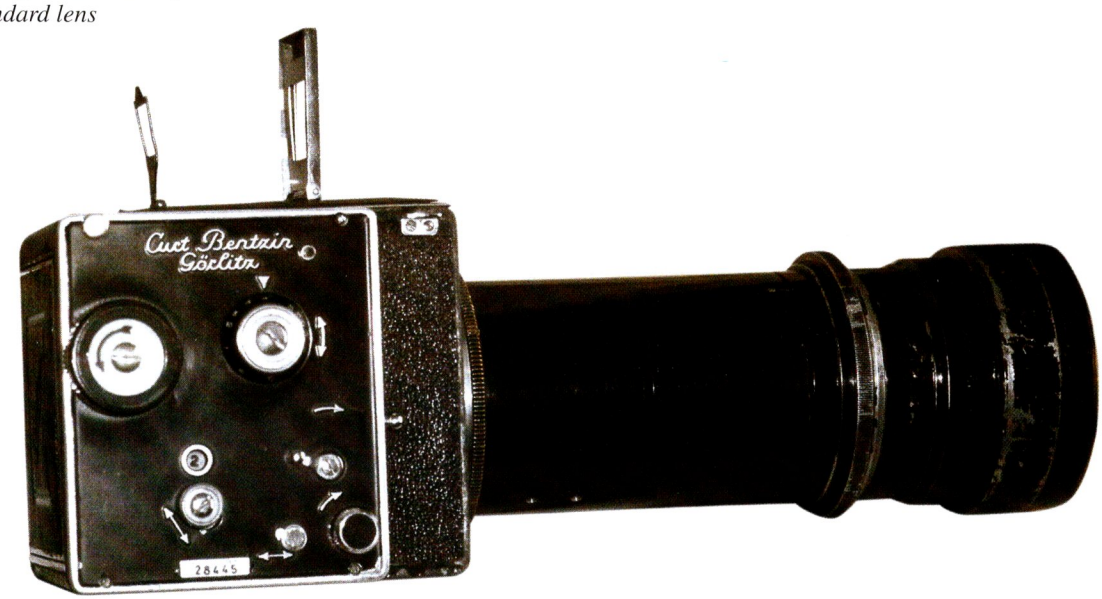
Created with the Primarflex screw mount were the French-made 85mm f/4.5 and 90mm, 135mm and 180mm focal lengths, all with f/3.5 maximum aperture, Flor Berthiot lenses, as well as the 95mm f/2.9 Boyer Topaz and 105mm f/4.5 Boyer Opale. Among English lenses with Primarflex mount were those made by Dallmeyer. Thanks to its large screw mount and threaded connecting plate, the Primarflex could use virtually any type of lens, even those not created specifically with Primarflex mount, making its lens kits virtually unlimited.

Post-war crisis

In the post-war period, the Primarflex was resurrected as part of the DDR's new state-owned sector.

The Curt Bentzin company was transformed into a VEB (a people's company) and renamed Primar Kamera Werke, later to be merged (along with most DDR photographic companies) into the VEB Pentacon.

Pre-war Primarflex, second-type with lettering on front and Trioplan standard lens



Pre-war Primarflex, second type with Dallmeyer telephoto lens

In preparation for being reissued on the market, the Primarflex was reworked, but only from an aesthetic standpoint with some additional chrome here and there.

It was inappropriately renamed the Primarflex II or Primar Reflex, while its companion Korelle Reflex, also reissued following the war, was known at the time as the Meister Korelle.

On the US market during the early 1950s, the Primarflex was also given the name Astraflex II by a very creative but not overly honest importer. After 1956, instead of the 6x6cm reflex Primarflex and Korelle models, DDR state planning showed a preference for the new model Praktisix derived from the Korelle and later rebaptized the Pentacon Six.

While in Sweden Viktor Hasselblad was launching on international markets his 6x6cm single lens reflex whose overall concept was strongly influenced by the Primarflex, this type of camera was mercilessly shelved in its country of origin.

Primarflex and the collecting market

The number of Primarflex cameras manufactured was not exceedingly high, but despite this they are not of that much interest to collectors who fail to comprehend their historical and innovative value. In addition, those cameras available often have film advance or shutter problems.

According to the most accredited price guides, a pre-war Primarflex in good condition has an estimated value of between $250 and $350, while post-war models go for between $200 and $300. For pieces with major defects, estimated values are barely half this.

Danilo Cecchi
Hugo Tomyska

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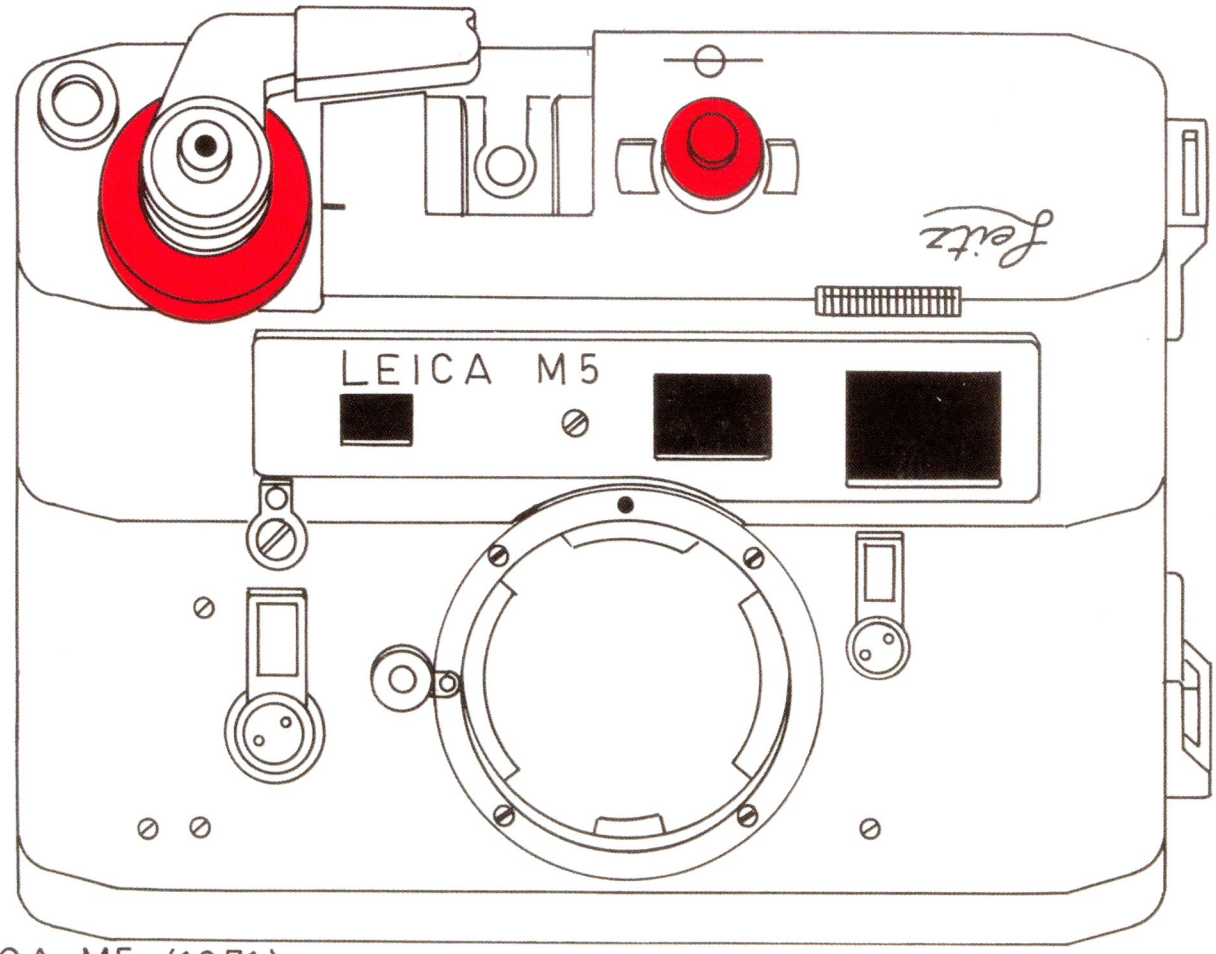
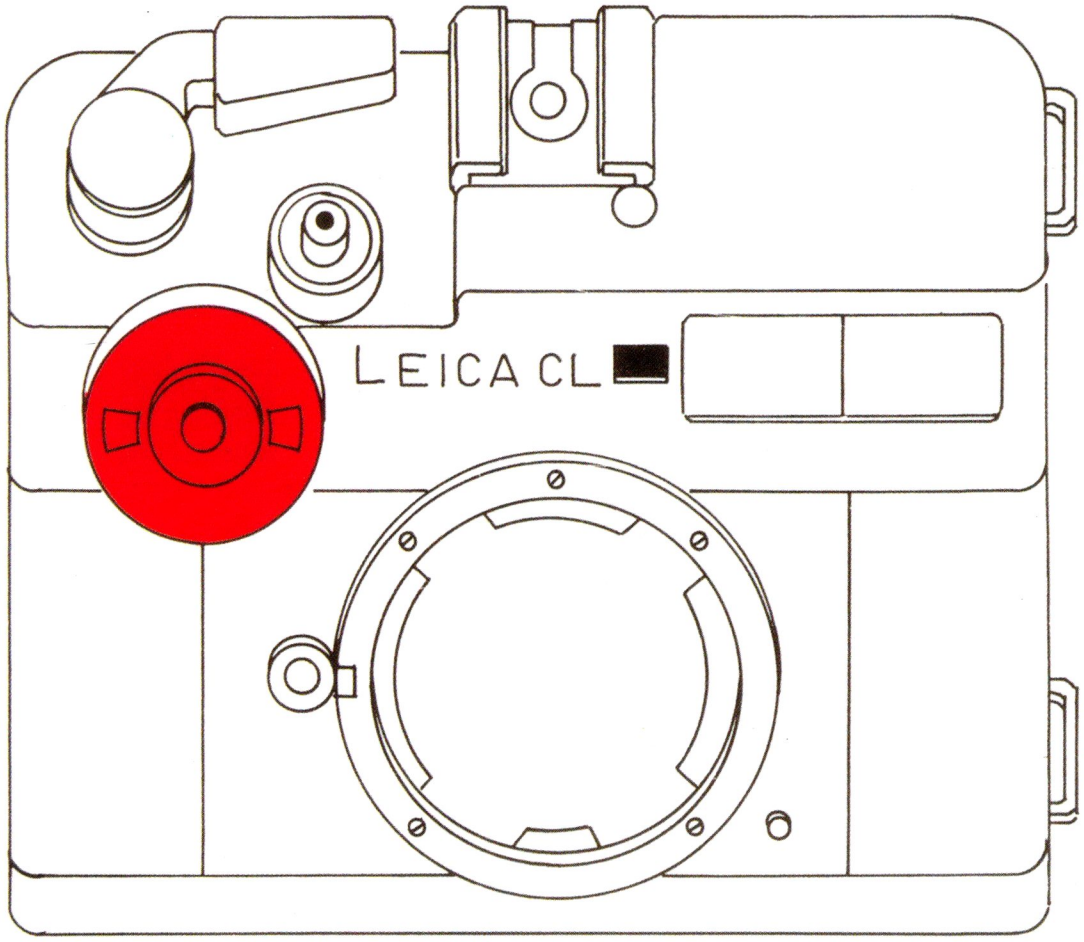


LEICA M5 (1971)

LEICA M5 (1971-1975)

In 1971, production of the Leica M4 was halted to create room for the Leica M5, the first Leica camera equipped with built-in, through-the-lens exposure meter. The Leica M5 body is different, slightly taller than other Leica M series cameras, and it is also styled differently with squarer corners. The speed dial is positioned in line with the shutter release button and rapid winding lever as on the Leicaflex, and the multi focal viewfinder covers the fields framed by 35, 50, 90 and 135mm lenses. The Leica M5 has a hot shoe and film speed dial located on the top plate. Up to the year 1975, over 23,000 of these cameras were produced with black finish and over 10,000 with chrome finish. The presence of the CdS cell on a moving arm limits the use of 21mm lenses as well as 28mm lenses unless specifically modified.

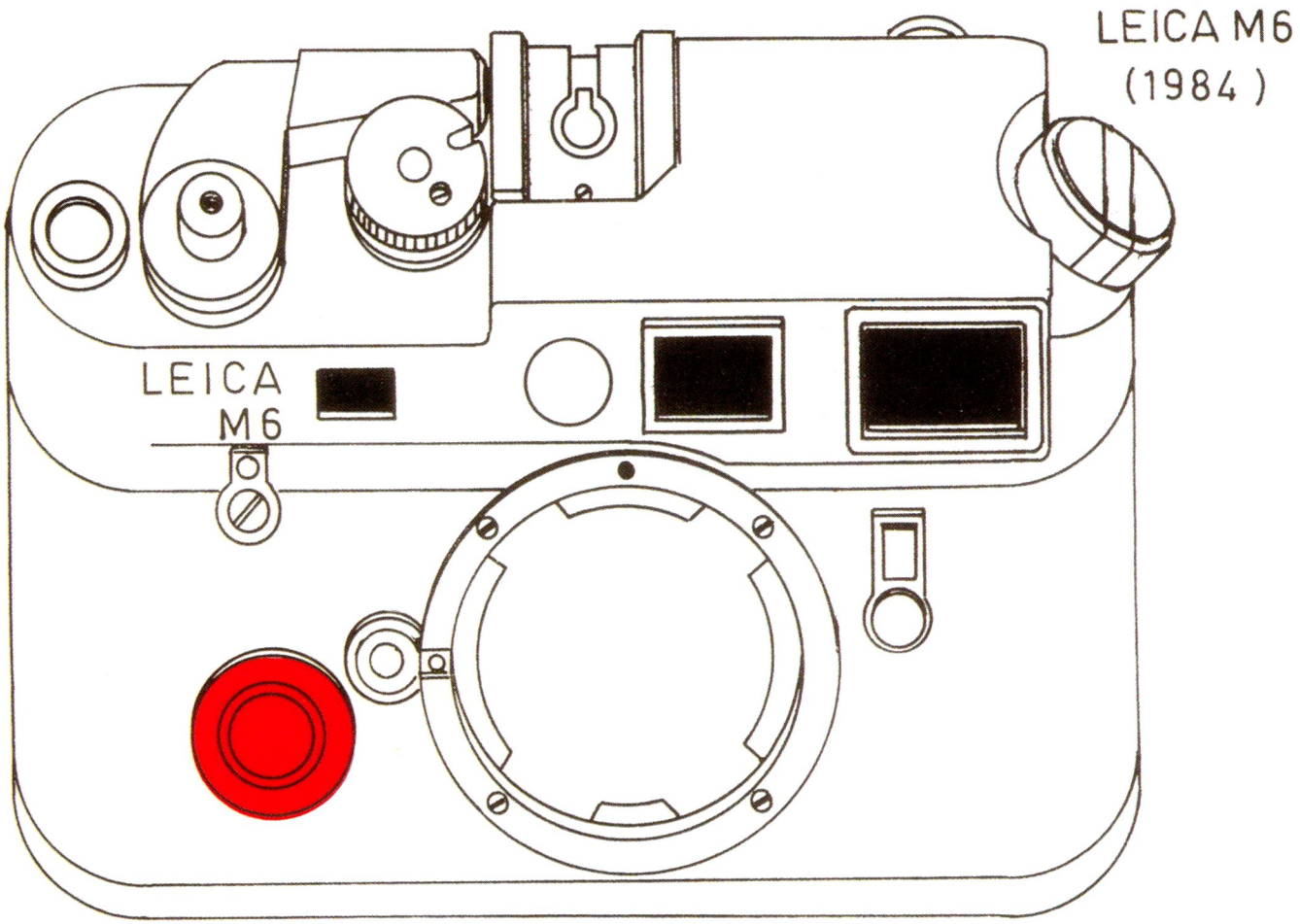
Leica CL Year (1973-1976)



LEICA CL (1973-1976)

From 1973 to 1976, in collaboration with the Japanese firm Minolta, Leitz manufactured 65,000 new range finder cameras named the Leica CL, but also sold under the Minolta Leitz CL name. The Leica CL is compact with vertical metal focal plane, Copal-Leitz electronic shutter and TTL exposure meter with CdS cell. The Leica CL utilizes an automatic multi-focal viewfinder for 40, 50 and 90mm lenses. The shutter speed dial ranges from 1/2 to 1/1000 plus B setting and is located on the camera front. Two special, compact lenses were produced for the Leica CL with 40mm and 90mm focal lengths that correspond to the viewfinder frames.

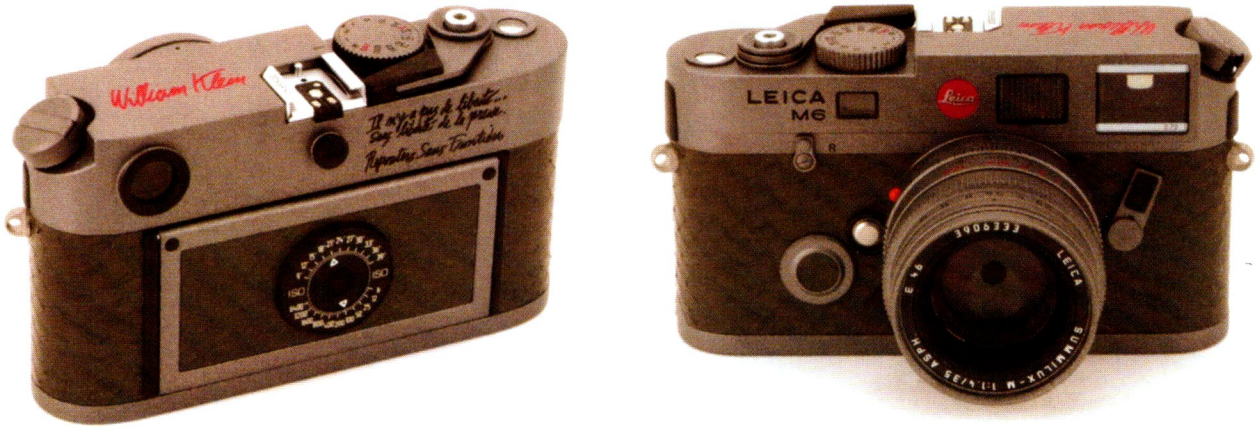
The bayonet mount makes it possible to utilize all Leitz M lenses on the Leica CL, with the exception of the super wide angles that hinder proper functioning of the TTL photocell mounted on a moving arm, just as on the Leica M5. Despite its spurious origins, the Leica CL was fully integrated into the Leica family and, in 1975, 3,500 Leica CL cameras were produced to commemorate Leica's 50th anniversary.



LEICA M6 (1984-1998)

In 1984 the Leitz company (destined to become Leica GmbH in 1988), began production on the Leica M6, a camera that merged the aesthetic appeal of the Leica M4 with the technical features of the Leica TTL. Still manufactured in both black and chrome finish, the Leica M6 utilizes a sophisticated TTL exposure meter with selective reading of light reflected off the shutter curtain through a silicon photocell located inside the camera. Exposure readings are displayed in the viewfinder by LEDs. The Leica M6 does not include a self timer mechanism, replaced on the front by a battery compartment, and has the same multi-focal viewfinder used on the Leica M4-P for the following focal pairs: 28/90mm, 35/135mm and 50/75mm. As with the Leica M4-P a motor can be mounted on the Leica M6. A single X synch contact on the back can also function simultaneously with the hot shoe located on the accessory clip.

Christie's Auctions



Leica M6 William Klein, made by Leica Camera to benefit Reporters sans Frontieres
Condition: 1A
Estimated price: £ 10,000-15,000
Auction price: £ 9,400

Following the war in Iraq, the fluctuations in the international foreign exchange market have become increasingly intense with a strengthening of the Euro against the dollar and pound sterling and, from all indications, it would seem that the camera collecting market is affected by similar shifts. For continental Europeans it might prove more economical to buy in London or the US, while British and American collectors could have some doubts about investing large amounts in cameras offered by the auction houses or dealers on the Old Continent. For the moment, collectors from the Far East seem either noticeably absent or perhaps just not that interested.

What is certain is that the value of quality cameras has not experienced any visible decline with sales remaining within predictable limits, even if slightly oriented towards the lower range. In recent auctions, not all the nice pieces were sold and although the estimated values were largely adhered to, they often settled at the lower end of the range. Price surprises were few and far between.

Classic cameras

Regarding real collectors' cameras that would do any museum proud, there was a Ermanox for 4.5x6cm plates with 100mm f/2 Ernostar lens that went for £940. This camera made photographic history and is present and cited in virtually every camera history book. A just slightly more modern Ermanox Exakta Night but for roll film and with f/2 Biotar lens reached £330. No less interesting was a pre-war Exakta 66 and post-war Exakta 66, two cameras that are completely different, their only common feature being their brand name and selling price, nearly £650 for each.

Another historic camera, an original Kodak from 1888, was sold for almost £1200. This is a camera which all photographic history books feel the need to mention, whether positively or negatively. Another worthy mention was a bellows Damen Kamera disguised as a ladies handbag and made around the year 1900 by the Certo company of Dresden; it sold for over £2900. This camera also appears in many camera history books, although it did not have any tremendous impact on photographic history because of its excessive sophistication and rarely limited use.

A nice outfit for wet plate composed of a 7x7cm wooden camera, a number of plates and vials of chemicals, all elegantly housed in its own wooden case, a real collectors' item, went for almost £4500.

A single lens reflex Minex from the 1920s with 2.1/2 x 3 in. format made of teak with brass detailing and equipped with a 136mm f/3.5 Ross lens and 12 in. telephoto, complete with backs, plate holders, adapters for film rolls or packs and instruction booklet, started from a base price of £1500-£2000 but surprised everyone by going for over £15,000.

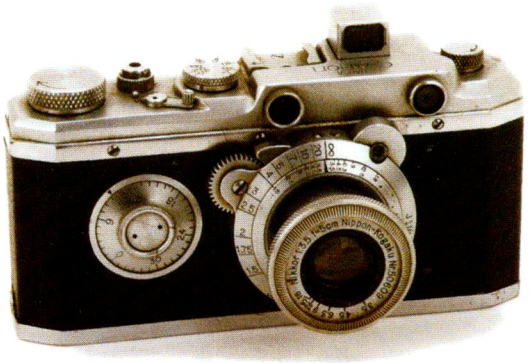
Medium format cameras

When speaking of medium format, one always runs the risk of confusing collecting with the used camera market. A moon version Hasselblad 500 EL for collectors remained unsold, while a Hasselblad 500 EL commemorating the first twenty years of the space program sold for over £1000.

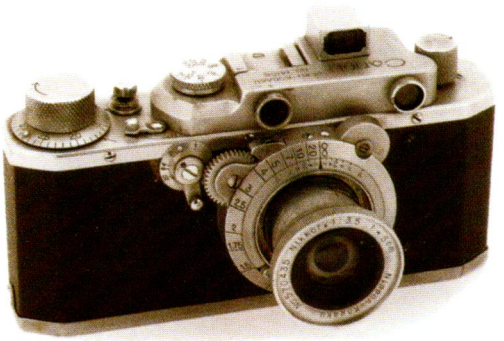
A commemorative 4x5cm Linhof Technika with gold finish and 150mm f/5.6 Symmar lens found a buyer for close to £1900.

Twin lens cameras

When speaking about twin lens collectors' items, only rarely are cameras



Hansa Canon
Estimated price: £ 5,000-8,000
Auction price: £ 4700



Canon S1
Condition: 4B
Estimated price: £ 3,500-4,500
Auction price: not sold

Canon 800mm f/8 lens
Condition: 3
Estimated price: £ 1,500-2,000
Auction price: £ 2,232

Nikon SP
Condition: 4B
Estimated price: £ 1,000-1,500
Auction price: £ 1,116

Nikon F with a Nikon 250 back and motor
Condition: 3B
Estimated price: £ 600-900
Auction price: £ 528

Kodak Ektra outfit
Condition: 2B
Estimated price £ 4,000-6,000
Auction price: £ 3,525

other than Rollei considered, and when they are the cameras involved are one of the fairly successful imitations of this brand. A prototype 6x6cm twin lines by the English firm of Ross, equipped with a 80mm f/2.8 taking lens strongly inspired by the Rolleiflex, was sold for nearly £600.

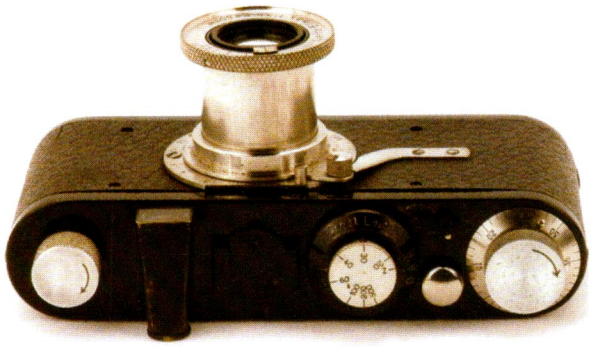
From the two extremes of Rollei production history were a Rolleidoscop stereo camera with two Tessar lenses that just reached £1300 and a very modern Rolleiflex Jersey with f/2.8 Planar that went for close to £1200.

A classic Rolleiflex Tele with 135mm f/4 lens approached the £1900 mark. Among the small Rolleis, a Rollei 35 Platin with 40mm f/2.8 Sonnar lens reached £600 and a more modest Rollei 35S equipped with the same lens sold for close to £550.

Subminiature cameras

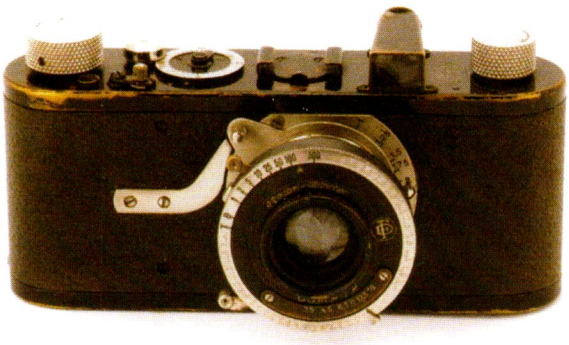
The small but well-known Matchbox Camera built by Kodak in a run of about one thousand cameras during the second world war to be used by military and espionage personnel went for over £2200 and an Italian camera ring built by Giampaolo Ferro sold for twice that amount, over £4400, while the highly sophisticated Swiss Compass complete with tripod and booklet went for over £2900.

A Tessina with red external covering was sold for £450 and a Steinbeck ABC Watch Camera went for £940. A

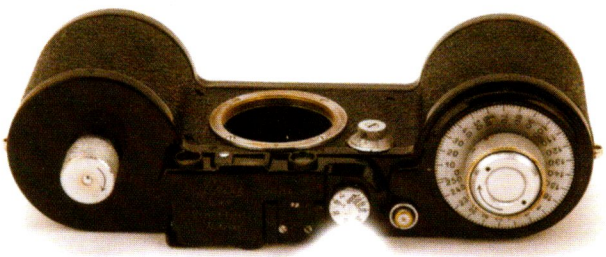


Leica Elmax
Condition: 4B
Estimated price: £ 5,000-8,000
Auction price: £ 6,462

Leica Compur
Condition: 4B
Estimated price: £ 2,500-3000
Auction price: £ 2,585



Leica Compur
Condition: 4B
Estimated price: £ 2,600-3,000
Auction price: £ 3,055



Leica 250 Reporter
Condition: 4B
Estimated price: £ 2,800-3,500
Auction price: £ 2,937

Leica 250 Reporter
Condition: 4B
Estimated price: £ 3,000-4,000
Auction price: £ 3,525

sophisticated Pentax 110 outfit with camera body, flash and five lenses went for just over £160, while a modest Petie with its Vanity Set packaging sold for over £350.

Zeiss Ikon

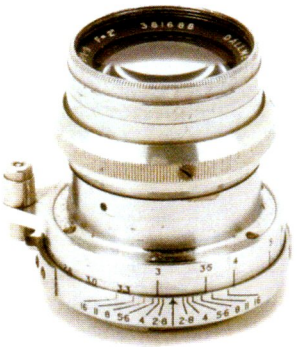
The late generation mastodontic Contarex cameras by Zeiss Ikon continue to be popular today, with prices for the Super version reaching over £500 for a camera body and even higher than £1500 for an outfit comprised of a camera body and three lenses (25, 50 and 135mm). In the Super Electronic version, a body with standard f/2 lens sold for over £200. An old Contarex Cyclope with four lenses, including a 21mm Biogon, sold for over £1000, but the Carl Zeiss lenses for Contarex sold individually brought even more interesting prices.

A 21mm f/4.5 Biogon lens for Contarex with its finder brought £600 and an 18mm f/4 Distagon with reflex view for Contarex hit £940. A 180mm f/2.8 Sonnar telephoto for Contarex reached £1650 sterling while a more powerful but slower 250mm f/4 Sonnar for Contarex stopped at under £900. A 400mm Tele Tessar for Contarex went for over £2500. The Vario Sonnar zoom lenses for Contarex, the first to have been made by Carl Zeiss, went for over £1500 for the 40-120mm focal length and just reached £2000 for the 85-250mm model.

Among the Contax rangefinder lenses, a 21mm Biogon without finder sold for almost £450, a rare 42.5mm f/2 Biotar for close to £1300 and an equally rare 35mm f/3.5 Herar went for over £800. A 300mm f/4 Sonnar telephoto with Flektoskop sold for almost £1000 and a 180mm f/3.5 Tessar Tele for less than £300.

A Hologon Ultrawide camera with 15mm

Nokton 50mm f/1.5 lens
Condition: 3
Auction price: £ 1,292



Super Six 2 inch, f/1.9 lens
Condition: 3
Auction price: £ 564

Angenieux type R11 retrofocus 28mm f/3.5 lens
Condition: 3
Auction price: £ 940

Angenieux type S1 50mm f/1.8 lens
Condition: 4
Auction price: £ 998

fixed focus lens went for over £1400 while a second Hologon Ultrawide in the same condition, complete with grip sold for more than £1500 and a third Hologon Ultrawide in better condition for over £1750. For a truly lovely Hologon, the price went even higher, up to £3300.

Among Zeiss Ikon's old time stars, a Contax I with f/1.5 Sonnar lens in decent condition sold for more than £400, while others in worse condition just barely reached the £200 mark, often stopping around £150. The pre-war Contaflex twin lens with f/2 or f/1.5 Sonnar lens almost consistently went for over £800. A pre-war Contax II outfit with f/3.5 Tessar lens and a 180mm f/2.8 Olympia Sonnar with Flektoskop sold for over £1400. A post-war Contax IIa with Stereotar lens and coupled finder sold for more than £750. Strangely enough, even the so called Contax "No names" built in the Ukraine during the 1960s and equipped with original f/2 Sonnar lenses continue to attract buyers. One of these was sold for £235 and a second "no name" but embellished with very elaborate markings went for as high as £500.

Nikon rangefinder cameras

A nice outfit consisting of a non synchronized rangefinder Nikon M body with four Nikkor lenses (35, 50, 85 and 135mm) as well as a universal finder went for more than £8200, a non synchronized Nikon M body equipped with a rare f/1.5 Nikkor lens reached £4600 and a synchronized Nikon M with a more common f/1.4 lens stopped at just under £3300. Other Nikon M cameras in worse condition went for between £1000 and £1500, but one fairly nice specimen did reach a price of £2500. A Nikon S with f/1.4 lens and original documents sold for over £1600, compared with the £200 or £300 for less nice Nikon S cameras or £300 and £450 for the Nikon S2. On the other hand, an outfit comprised of a Nikon S2 body with three lenses and two finders sold for £1900. A nice chrome finish Nikon SP with standard f/1.4 lens went for over £7600, compared with £1000 or £2000 paid for chrome Nikon SP cameras that were not as fine. A splendid black finish Nikon SP with f/1.4 lens and assorted accessories, hit £23500 and a rare Nikon S4 with standard f/1.4 lens sold for over £1750.

Among Nikon rangefinder lenses, a 25mm wide angle with finder went for over £1600 while a similar lens with black finish but without its finder just reached £1000. A mini finder for the 35mm lens designed for the Nikon S2 reached £650 and a focusing unit designed for long telephotos sold for over £3000. An 85mm f/1.5 Nikkor telephoto reached £940.

Prices for Nikon reflex were between £150 and £250 for the Nikon F and Nikon F2, but the Nikon F2 with cover and base plate in titanium rose to £1000 and as high as £1300 if complete with original documents. A Nikon F3 with titanium case and f/1.2 Nikkor Noct lens sold for over £1750 and a modern Nikon FA with gold finish for over £800. A Nikon F body with black finish, motor and 250 frame magazine back went for more than £500.

Alpa cameras

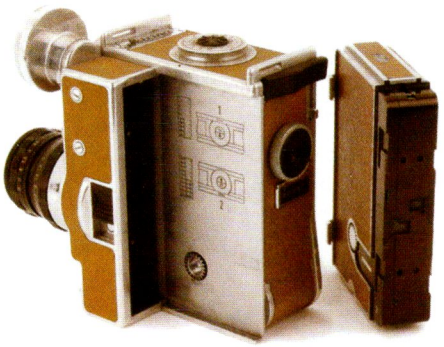
The Swiss Alpa camera was produced in a range of models and variants, almost all hand crafted and in limited number, meaning that they are predominantly of interest to collectors. An Alpa reflex with f/2.8 Alfinon stopped short of £400, but an Alpa Prisma Reflex with two lenses sold for over £600. An Alpa 7 with Macro Switar went for over £250 but an identifical model with f/1.9 Xenon lens reached £564. Black or chrome finish Alpa 9d cameras sold for just over £350, reaching a maximum of £400, but a black Alpa 11el came close to £650 and even a black Alpa si 2000 sold for £470. A chrome Alpa 10d with f/1.9 Switar Macro went for more than £750.

For lenses with Alpa mount created by a number of different European lens companies, a classic f/1.8 Switar Macro Kern sold for just over £250, a 150mm Kilar for the same amount, a 135mm f/2.5 Angenieux again for the same amount and a 90mm f/2.5 Angenieux for just over £300.

Leica copies

When discussing Leica copies, a clear distinction must be made between the poor imitations that are often over valued and those original models that drew their inspiration from the screw Leica, but were created with new and intelligent innovations. An Italian Gamma III with rangefinder and equipped with an f/2 English lens reached £450, a Kardon Americana with f/2 Kodak lens £650 and a second Kardon with the same lens but including the marking of the US Army Signal Corps went for over £1500. The all American Kodak Ektra, that company's unsuccessful attempt to battle the Leica on US soil, is often offered with its kit of prestigious and exclusive lenses.

Leica III outfit
Estimated price: £ 1,000-1,500
Auction price: £ 1,057



16mm Leicina camera
Estimated price: £ 6,000-8,000
Auction price: £ 6,815

Leitz single-exposure housing
Condition: 2
Estimated price: £ 1,200-1,800
Auction price: £ 2,820

Mooly-C Leica motor
Condition: 3B
Estimated price: £ 1,500-2,000
Auction price: £ 1,880

Elcan 50mm f/2 lens
Condition: 2
Estimated price: £ 800-1,200
Auction price: £ 1,527

Elmarit 28mm f/2.8 lens with an optical finder
Condition: 4
Estimated price: £ 400-600
Auction price: £ 998

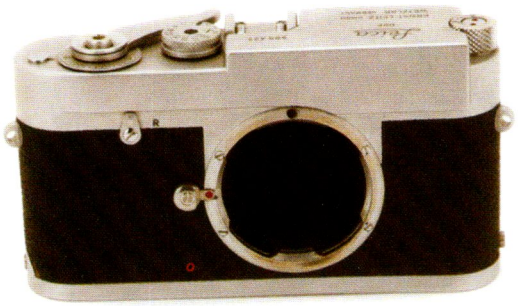
One outfit with camera and three lenses sold for over £1000, a second similar outfit for more than £1400 and a third outfit with camera and six lenses for over £2100. A Kodak Ektra oufit with camera body, four lenses, finder and accessories, all virtually new and still in its elegant case, brought over £3500.

Alongside the Russian and Chinese Leica copies, neither of which are very highly esteemed, and the Japanese Leicas with slightly higher estimated values, the English Reids are much more highly regarded. A Reid III in good condition with f/2 Taylor Hobson lens sold for £940 and a second camera of the same type reached £1175.

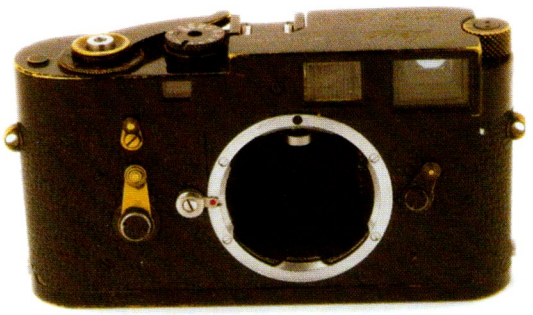
Among Canon rangefinders produced over a period of more than three decades in a very high number of models and variants, a late 1930s Hansa Canon, in essence the first of the Canon models to be mass produced, stood out going for £4700. Among rangefinder Canons from the late '60s, there was the Canon 7 which marked the end of an era. Of this model, a chrome finish example with f/1.8 lens reached £200, and another with an f/2 Summicron came close to bringing £300. A Canon 7 with black finish and f/1.2 lens went for £1900. An outfit comprised of a Canon 7 body and four Leitz screw lenses reached £470, an outfit with Canon 7 body and six Nikkor screw lenses went for £940 and a black-finish Canon 7 and f/1.2 lens brought £1900. An 800mm Canon telephoto lens with focusing unit for use on rangefinder cameras and complete with its original wooden case sold for over £2200.

Leica screw mount cameras

The Leica Ia, manufactured between 1925 and 1932, can be distinguished from other Leica cameras immediately by the long, characteristic spring on the front. This spring was used as an infinity lock and, even today, the Leica Ia is still considered to be one of the most interesting cameras from a collecting standpoint, despite (or possibly because of) its nearly 80 year history. However, there are significant differences between fixed lens Leicas which are also reflected in the prices they bring. A case in point are rare Leicas, such as those equipped with Anastigmat lenses of which approx.



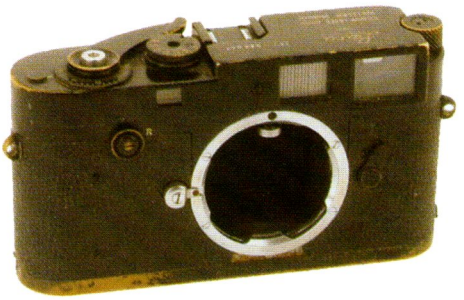
Leica M1 Sonderausfuhrung
Condition: 3
Estimated price: £ 1,500-2,000
Auction price: £ 1,410



Leica M2 black paint
Condition: 4B
Estimated price: £ 2,000-3,000
Auction price: £ 2,115

Leica M2 nera
Condizioni: 4B
Base d'asta
£ 2,000-3,000
Prezzo d'asta:
£ 2,115

Leica M2 black paint
Condition: 2B
Estimated price: £ 2,500-3,500
Auction price: £ 3,525



Leica M2 black paint
Condition: 5B
Estimated price: £ 1,800-2,200
Auction price: £ 1,880

300 were made, and those with Elmax lenses of which approx. 800 were made. A Leica Anastigmat with estimated value of between £12,000 and £18,000 remained unsold, while a Leica Elmax estimated at between £5000 and £8000 went for around £6500. Also well known are the fixed lens Leicas equipped with Hektor lenses of which just over 1300 were made, those with gold finish known as the "Leica Luxus" of which 600 were produced and, finally, those equipped with Compur shutters of which just over 1500 were manufactured. Of the two Leica Compurs of the second type with speed ring on the edge, both apparently in the same condition, one went for just over £2500 and the second for just over £3000.

Aside from these famous and perhaps even over valued Leicas, even among the more common ones equipped with focal plane shutters with seven speed settings and 4 element Elmar lenses, there are models which are rarer and more sought after than others. The condition of the piece is clearly important, even if after eighty years no one expects to find specimens in top notch condition. What matters is the serial number on the top plate. Those cameras with 4-digit serial numbers built between 1926 and 1928 go for over £1000, while physically nicer pieces but with 5-digit serial numbers go for around £500. Those bodies that have been modified, repainted or converted into other models generally go for even less, under £400.

Leicas with interchangeable lens and screw mount were manufactured for a period of thirty years and numerous models, both pre and post-war, are available on the market. As is well known, their market value shifts noticeably depending on how rare they are, their condition and lens equipment. The Leica Ic without rangefinder has an estimated value of around £250, the Leica II with rangefinder is slightly lower, around £200 and the pre-war Leica III, Leica IIIa and Leica IIIb estimated values are even lower still, between £150 and £200. Naturally, prices rise if the camera has a special lens or if multiple lenses are included, rising to £350, £400 or even £500 for small outfits comprised of a camera body and three lenses. An outfit consisting of a Leica III with four lenses, finders and accessories in a leather case went for over £1000. A pre-war screw Leica with SCNOO rapid winder on the base plate and without lens went for £450, while another pre-war screw Leica with 200mm Telyt lens and Visoflex stopped short of £300.

The value of the Leica 250 of which less than one thousand were made, is always very high and in one case over £2900 was paid for a body alone, without lens, while in another a camera body plus f/3.5 Elmar lens went for over £3500.

Leica IIIc cameras manufactured during and just after the war have a higher estimated price than pre-war models, between £250 and £300 depending on the lens and condition. A Leica IIIc with f/1.8 Angenieux lens rose to bring £1000. Among Leica IIIc cameras, there are a number of special models, such as those with grey paint finish that are much sought-after. One of these, without special markings, brought £900 and a second one £1300. The synchronized Leica IIIf in decent condition can bring

Leica M4-P Everest
Condition: 2B
Estimated price: £ 1,200-1,800
Auction price: £ 1,292

Leica M5 Anniversary chrome
Condition: 2B
Estimated price: £ 1,000-1,500
Auction price: £ 1,880

between £350 and £400 and small outfits comprised of a camera body and four lenses as much as £500 or £700. The last screw Leicas, the Leica IIIg, remain the most expensive of this camera family. A single camera with standard f/2 lens can bring over £800, while equipped with three or four lenses, their value can reach levels of between £1000 and £1500.

A special screw Leica with standard 24x36mm format but utilized to photograph fluorescent x-ray screens and equipped with a very fast f/1.5 Xenon lens, brought £1000. Among screw mount Leitz lenses, a prototype 50mm f/2 Summitar went for £4700, a 35mm f/2 Summicron for over £1100 and a 21mm Super Angulon with its original finder was sold for £763. A 180mm f/2.8 Tele Elmarit with bayonet mount for Visoflex focusing unit of which just a few were ever made and which never appeared in the Leitz catalog, was sold for over £2100. A 90mm portrait Thambar with soft filter went for over £1400. Among screw lenses manufactured by other lens companies, an f/1.5 Voigtlander Nokton was sold for £1175, a second Nokton for almost £1300, a 50mm f/1.5 Sonnar and a 35mm f/2.8 Biogon for £330 each, and three Meyer lenses, a 50mm f/1.5 Plasmat Kino, a 75mm f/1.9 Primoplan and a 150mm f/5.5 Telemegor sold as a block for £4700. Again among high quality non Leitz screw mount lenses were a very lovely 50mm f/1.5 Xenon that went for £500 and two f/1.9 Dallmeyer Super Six lenses for £564 each. There were also a number of French Angenieux lenses, including a 50mm f/1.8 that reached £1000, two 90mm f/1.8 sold for amounts close to £1000 each and three 35mm f/3.5 Retrofocus, the first of which sold for £646, the second for £822 and the third for £881. A 28mm Retrofocus went for £940, a 90mm f/2.5 for £493 and a 28mm f/3.5 Retrofocus sold together with a 28mm f/3.3 Berthiot Angulor for close to £1000. Among the most popular original Leitz accessories was a black finish motor with 'Mooly' spring drive that sold for £1880.

Leica M lenses

Among the less common lenses produced with Leica M bayonet mount were an f/1.4 Summilux sold for just over £3000, a f/1.2 Noctilux for over £3500 and a 90mm f/1 military Elcan for £23500. A 50mm f/2 retractable mount, black finish Summicron sold for over £750, a prototype 35mm f/2.8 Summaron for over £700 and a 50mm f/1 Noctilux for £940. The 21mm Super Angulons brought prices of between £750 and £850. Among non Leitz M bayonet mounts was an intriguing 35mm f/2 Xenogon sold for over £750, compared with the corresponding 35mm f/2 Summicron sold for just under £650 and a 105mm f/2.5 Nikkor that went for £223.

A number of prototypes were sold under the Leitz name. A 16mm film camera with interchangeable mount and three lenses went for over £6800, a black finish Leica without serial number and with a 90mm f/2.8 Elmarit prototype reached £3300 and an unusual accessory for individual photos with square plate for over £2800.

Leica M cameras

The Leica M has never really gone out of production, and after fifty years of existence are still produced today according to the same design used half a century ago, partly for reasons of

fashion, partly as a challenge and partly out of reserve. The new model Leica MP, a traditional, mechanical camera that is perhaps more interesting than the Leica M7, is the clearest proof that at Leica, the more things change, the more they remain the same. After the screw Leicas, the Leica M family is the most classic example of a collector camera, even though they are still fully useable for taking straight-forward, quality photographs. The most traditional of the Leica M classics, the inimitable Leica M3, has a base value of not less than £400 for the body alone, this amount doubling if equipped with a standard lens and Leicameter, and tripling if it also includes a small outfit of at least three lenses. Values for the Leica M2 are not much different. A Leica M2 with five lenses and Visoflex went for £1900. The exception to this are naturally black finish cameras of which a limited number were made. A Leica M3 body with black finish went for over £2100, a second body whose condition was no better but included the instruction booklet sold for over £2900 and a third black finish Leica M2 including Summicron lens, aperture setting ring and filter went for over £3500. An unusual chrome Leica M2R of which 2000 were made, in good condition and complete with instruction booklet sold for £1000 and a second Leica M2R body in excellent condition for over £1600. A Leica M1 that was part of a special lot and without finder, like the Leica MD, sold for over £1400. A Leica M4 with Summicron and Leicameter brought over £800, a second chrome Leica M4 with Summicron in good condition £1000 and a chrome Leica M4 with Summicron over £700. A Canadian Leica M4 body with black finish sold for £1900 and a commemorative black Leica M4 with booklet and warranty over £2200. A rare Leica M4M with black finish and electric motor built in New York went for over £4400. A black finish Leica M4 MOT, without motor but with 3 lenses and Leicameter sold for over £3500. A black military Leica M4 marked KE 7A with f/2 Elcan lens brought over £5640. A lovely chrome Leica M4-P body in good condition went for over £1100. A black Leica M4-2 with electric motor sold for over £700. A gold finish Leica M4P Anniversary with matching f/1.4 Summilux lens went for as high as £2350 and a chrome Leica M5 Anniversary body reached £1900. A black Leica M5 body in good condition brought £900 and a black Leica M5 with 35mm f/1.4 Summilux went for £940. Among commemorative Leicas, very popular with some collectors and virtually ignored by others, a black M4P Everest 82 sold for £1300 and a black M6 LHSA for over £1400.

And finally, there was the case of a one-of-a-kind Leica M6 with metallic anthracite finish, equipped with a matching Summilux and signed by William Klein. This camera was crafted and offered by Leica as its contribution to finance the "Reporters sans frontiéres" organization and it brought £9400, perhaps a disappointment to those who expected higher bids, even on the level of the £25,000 paid five years ago for a similar model signed by Henri Cartier Bresson.

Frankly Speaking...

DAN WYNN,
celebrated fashion
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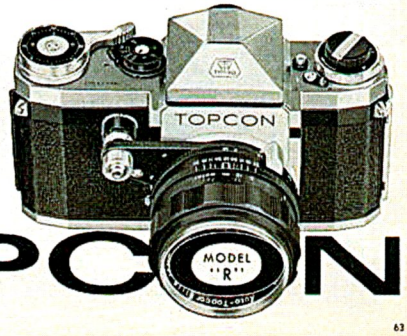

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