ZEISS HISTORICA

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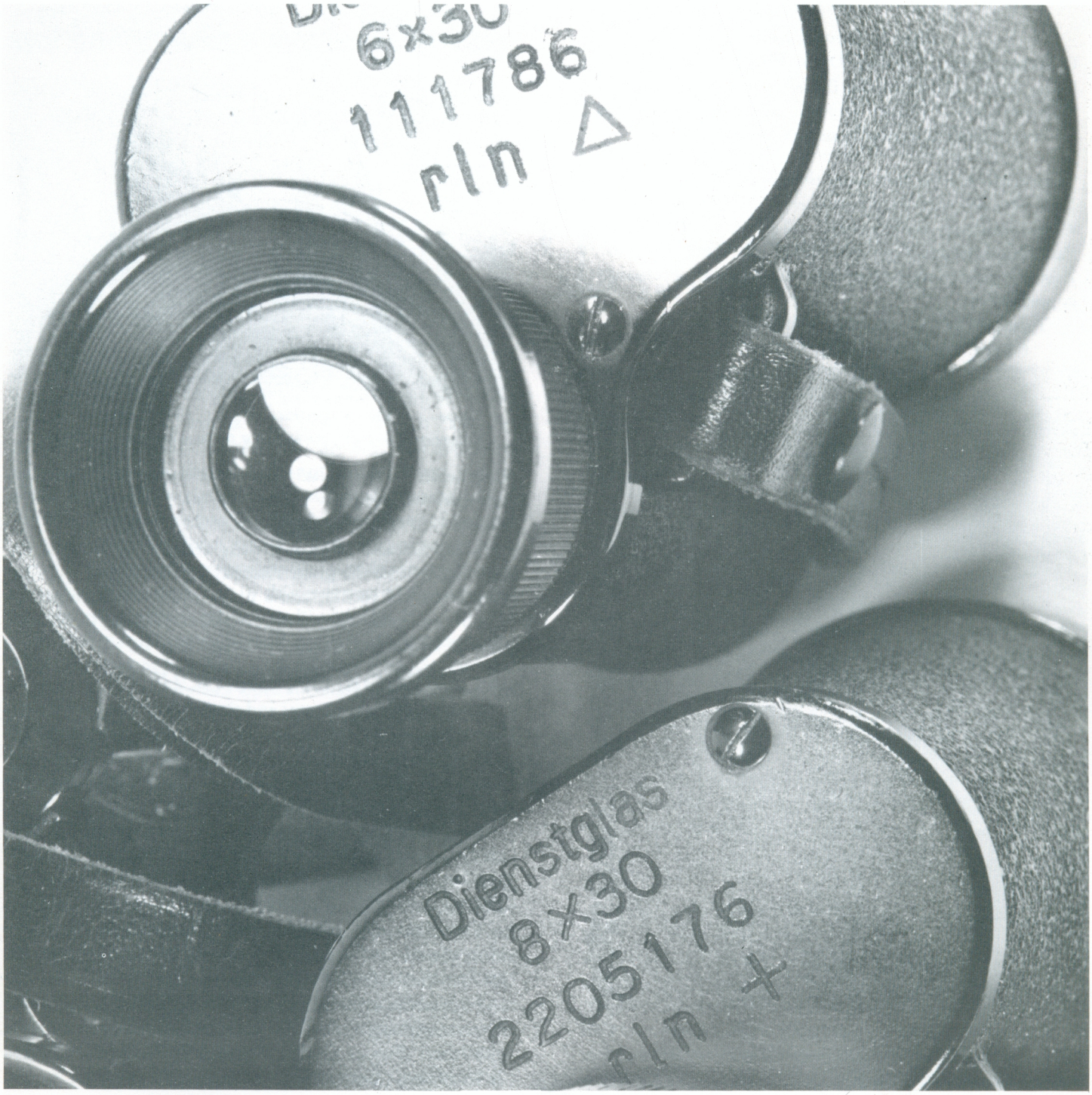

The Zeiss Historica Society of America is an educational, non-profit society dedicated to the study and exchange of information on the history of the Carl Zeiss optical company and affiliates, its people and products from 1846 to the present.

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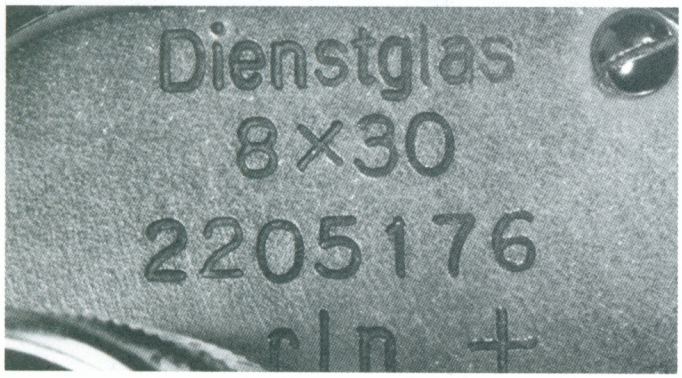


ON THE COVERS

FRONT COVER: Two Zeiss military binoculars, each carrying a different symbol for cold-weather lubrication. More on cold-weather symbols appears elsewhere in this issue.

BACK COVER: 1910 view of the Zeiss factories in Jena.

ILLUSTRATION SOURCES

Front cover, Paul G. Shenkle • Inside front cover, courtesy Carl Zeiss Oberkochen. • Cold Weather Symbols: Nick Grossman, Paul G. Shenkle, Fred Schwartzman, the editors. • Contax/Contarex Lenses, Charles Barringer, Jr. • Abbe with bicycle, courtesy Wolfgang Pfeiffer of Carl Zeiss. • Ross/Zeiss lens, Lawrence Morton • Lichtstrahlen: Beirette camera, Ray Fearn.

FALL MEETING IN OBERKOCHEN

This year, as in 1989, the Society will hold a two-day meeting in Oberkochen, Germany — the home of Carl Zeiss. Dates of the meeting are Saturday and Sunday, September 12 and 13, 1992.

Those who remember the hospitality of Zeiss in 1989 will surely look forward to this repeat in 1992. Several interesting presentations are planned. Among them will be talks by former Zeiss executives Wolf Wehran and Siegfried Kessler, and the showing of a film from the 1930s on the design and manufacture of the Contax. Members will also be able to view the treasures in the Zeiss Optical Museum.

For accommodations, the editors suggest the Hotel am Rathaus, a modern and comfortable hotel in the center of

Some of the attendees at the 1989 meeting in Oberkochen. Put yourself in a picture like this in 1992!

Oberkochen, with its own excellent restaurant. For reservations, contact the Hotel at 7082 Oberkochen, Germany. Phone: (0 73 64) 395-396.

Added attractions in Germany around the time of the meeting will be the giant Photokina trade fair in Cologne (September 16 to 22), and a major auction of rare photographic equipment at member James and Regina Cornwall's auction house in Cologne on September 19.

BOOK ON BINOCULARS

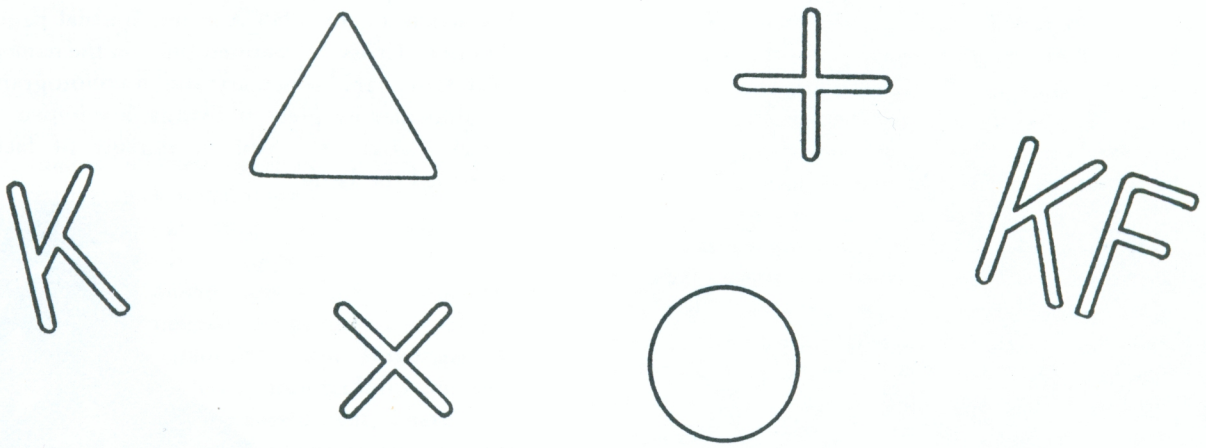
While books on cameras and photographic equipment are common, books on binoculars are rare. Member Fred Schwartzman has drawn the editors' attention to a book which appears indispensable to those interested in binoculars. It was published in 1989.

"Feldstecher — Fernglaeser in Wandel der Zeit" ("Field-glasses — Binoculars through the Years") is a large (8" x 12") book containing over 150 photographs within its 144 pages. The author is Hans T. Seeger.

The book is almost wholly focused on European binoculars — primarily German — with some information on French and English equipment.

Price of the volume is approximately $30 (plus postage) at current exchange rates. For more information, contact the publisher: Bresser Optik, Postfach 1146, D-4280 Borken 1/Westfalen, Germany.

COLD WEATHER SYMBOLS:



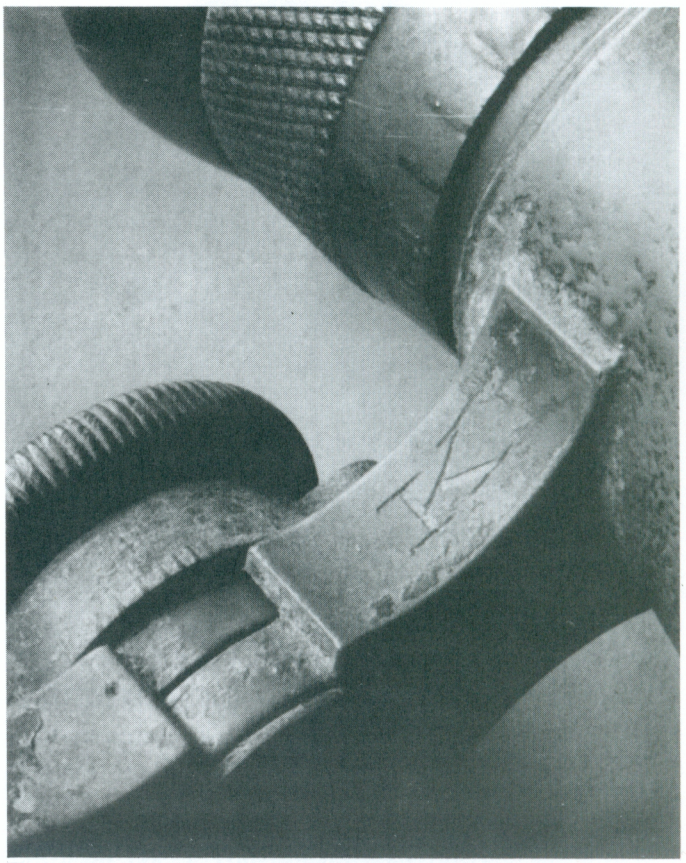
MORE EVIDENCE

Marion Husid, New York City

Members and collectors seek explanations for those small geometrical shapes — circles, equilateral triangles, Greek and St. Andrews Crosses ("+" aka "plus sign" and "x" respectively) — and the letters "K" or "KF" that appear on eyepiece housings, shutter housings, rangefinders, and on other things. Some signs are red, some white, others blue. Some are not colored at all. They're easy to spot because usually you'll find them situated near the manufacturer's logo or close to the company's military code letters. In most cases, equipment marked in this way served the military, especially preceding and during World War II.

In the Zeiss Historica Journal, articles on manufacturers' codes began in Spring 1982 with member Nick Grossman's, "The Question of German Optical Codes," on page five. But few articles can be found in subsequent Journals that attempt to decipher the meaning of those funny geometrical forms, the reasons for their different colors, and why some equipment carry them and others do not.

Member Robert Pins's article on page three of the Journal for Spring 1984, "Contax Military Camera: Myth or Reality?", was the first to explain a "K". His photograph of a WWII military Contax camera's shutter mechanism housing "plainly factory-stamped with the letter 'K'." accompanied the article. Pins wrote that the "K" meant Kaltefest not Kugellager (ball bearing) "since no ball bearings are present." He also noted that his cameras stamped with "K" shared similar design modifications, "... reinforced shutter release mechanisms and ruggedized film transport and shutter-tension gearing."



Goerz "08" 5-power Galilean military binocular of WWI carries engraved "K" mark.

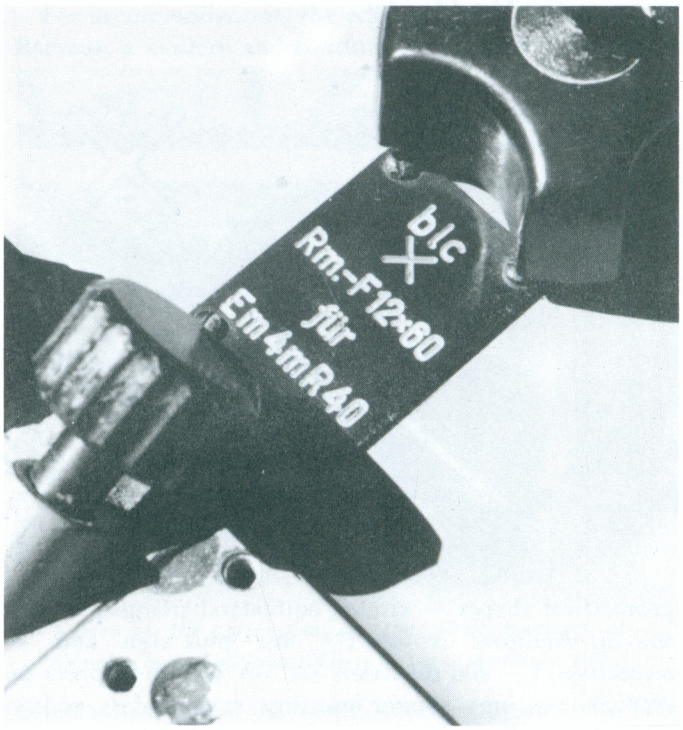
On page 13 of this same issue, Nick Grossman's photograph of a World War II military rangefinder, type Em 34 is marked with a Greek Gross "+". Stamped with the trademark "OPW Warschau", the rangefinder is an instrument "indistinguishable from the same model made by Zeiss."

Autumn 1985 included another article from Grossman, "Products from Zeiss, Vienna," page three. He wrote that his 15x60 binoculars for use on a tripod, and datable to November 20, 1925, were made "for the Austrian army, but the curious marking includes the 'plus sign' that many collectors attribute to the World War II period."

Five years later, on page seven, Autumn 1990 Journal, a 6x30 military monocular from Carl Zeiss Jena pleaded for identification. Member Dieter List of Nuremberg answered the distress signal. "The triangle indicates that the equipment was lubricated with a special cold-weather grease (Kaeltefett in German)." Member Larry Gubas also learned from this Spring 1991 Journal, page two, why the "cross (+) following 'blc' is painted light blue." His article, "More on Zeiss Binoculars," appears on pages 11-13.

15x60 binocular with the Zeiss/Wien (Zeiss/Vienna) trademark is marked with a white "+", dates from around 1925.

In January 1992, Nick Grossman questioned "Kaeltefett" as the explanation of all symbols found on equipment. He sent several photographs of some special markings that needed clarification: a circle on a 15x60 Doppelfernrohr Nr.862,xxx dating from circa 1918; a Greek Cross "+" on a 15x60 instrument, bearing the Zeiss-Wien trademark (from his article in the 1985 Autumn Journal page three); a St. Andrews Cross "x" painted blue on the nameplate of 12x60 WW II military binoculars; and in a photograph of two pairs of binocular eyepiece housings, a stamped triangle and a Greek Cross "+". Still in pursuit of facts, Grossman reopened the issue.



Blue "X" appears on the nameplate of 12x60 military binocular produced in substantial quantities for World War II.

Again, Dieter List promptly responded to an appeal for help. His explanation for "Kaeltefett" came by way of a xeroxed article by Gerd Lensing of the Museum fuer Historische Wehrtechnik, E.V. in Nuremberg. (To find out more about this museum, see below.)

Lensing's article may provide a breakthrough for all members and collectors as well as an impetus to bring more information to this marketplace of ideas. Here are some excerpts.

MARKINGS ON OPTICAL INSTRUMENTS OF THE FORMER "WEHRMACHT"

Weather conditions, in particular extremely cold climates, reduced the proper functioning of military equipment: vehicles, rangefinders, measuring instruments, etc. On the eastern front, where very low temperatures prevailed, precision instruments invariably suffered and became dysfunctional. Low temperatures reduced their mobility by freezing and locking their threads. Often optical instruments were severely damaged because they were forcibly mishandled.

Consequently, experiments to discover the perfect cold-resistant grease took time. Each one had to be tried and tested. Each new material created to make a product work in freezing temperatures was given a special mark, fixed near the sign of its manufacturer. This was done either at the factory or after repair or overhauling.

When a new grease with a new mark was introduced, new instructions followed. We know of several optical instruments that bear two different markings. Theoretically, more than two markings on an instrument may exist because these optics presumably had been regreased more than once. To remove an existing mark was unnecessary because new instructions came with the regreasing. (Ed. Note: To determine the sequence of events is left to posterity.)

Usually, when the equipment was shipped from the manufacturer's to wherever needed, the product carried the relevant stamp of its cold-resistant protection. If that grease didn't work and had to be replaced by another lubricant, the new marking was engraved on the instrument. Therefore, when two marks appear, one is certain to be stamped and the other engraved. Stamping or engraving of the figure provides the clue to regreasing.

Following is a chronologically arranged explanation of those different marks assembled from documents and instructions in the Museum's archives as well as from private sources.

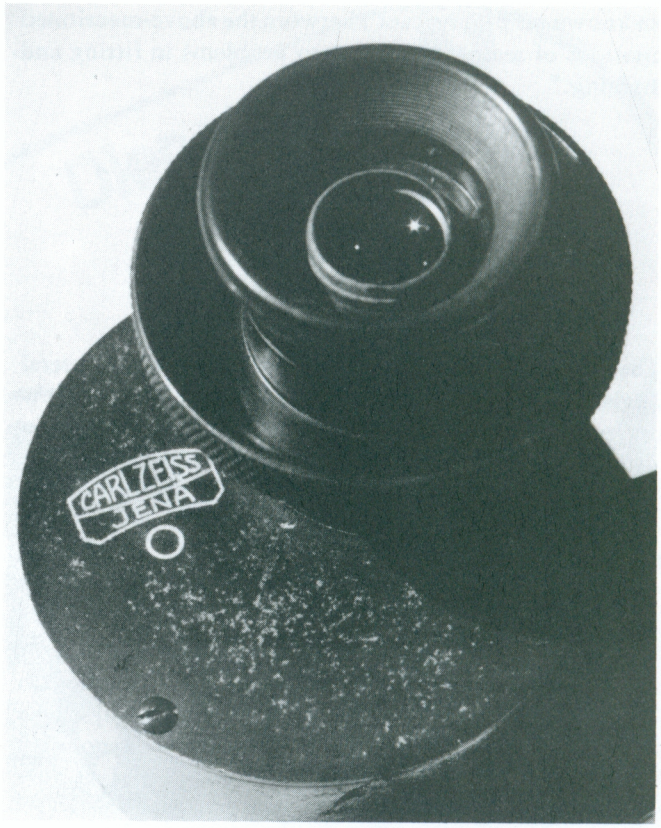
"SURVEY OF MARKINGS FOR DIFFERENT LUBRICANTS AGAINST LOW TEMPERATURES."

KF

The first mark "KF" (Kaeltefett) shows the treatment of optical equipment with special lubricants (Spezialfetten). Official instructions accompanied the equipment:

"Equipment that bears the letters 'KF' next to the manufacturer's code is treated with a cold-resistant lubricant named 'Invarol.' It guarantees faultless operation of the mechanism — its mechanical drive — at minus 20 degrees Celsius." [-4F]

The next marking, an outlined blue circle, was necessary due to the introduction of a new lubricant with better



15x60 Zeiss binocular (#862,XXX) dating from around 1918 carries a white circle.

resistance to lower temperatures. It came with new instructions:

"Equipment with an outlined blue circle is treated with vacuum grease 1416 or a grease with the same cold-resistant characteristics. These instruments can operate freely to minus 40 degrees Celsius." [-40F]

Nevertheless, in practice, some instruments failed to operate freely so new instructions were issued:

"Equipment with an outlined blue circle is treated with vacuum grease 1416 or a grease with similar characteristics. Most of these instruments with few exceptions can perfectly function at minus 40 degrees Celsius." [-40F]

Since the earlier lubricants proved inadequate, a new one was introduced with new instructions:

"Equipment with a light blue cross next to the manufacturer's code can be used perfectly down to minus 40 degrees Celsius. (In the future, all of the army's observation and measuring instruments are greased with instrument lubricant 1442.)" [Instrumentenfett 1442]

Another clarification appeared later:

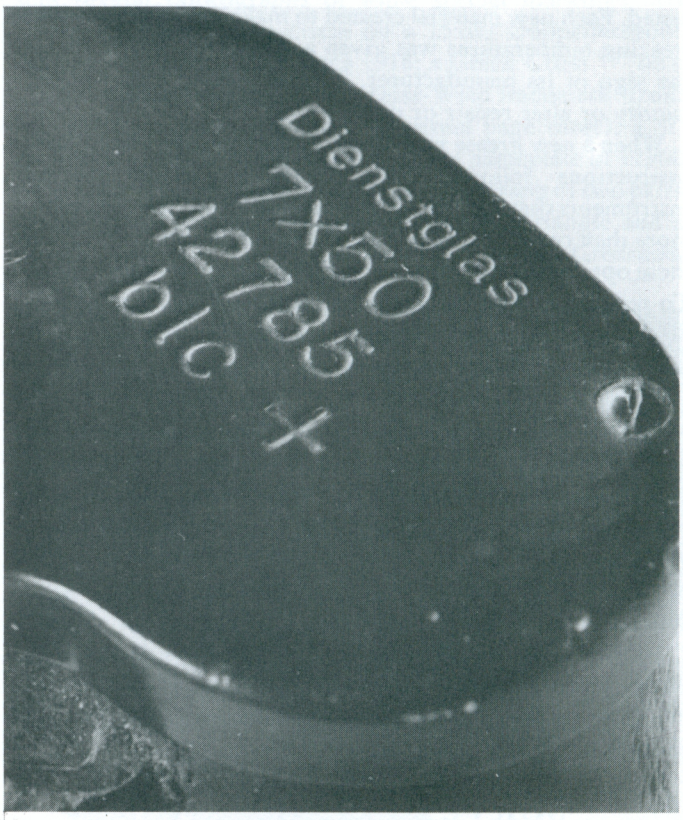
"Equipment bearing a light blue cross may not be fully

functional despite the use of Zeiss's Instrumentenfett 1442 (also known as 'E-Lubricant') between the above-mentioned limitations of temperatures due to problems in fitting and tightening."

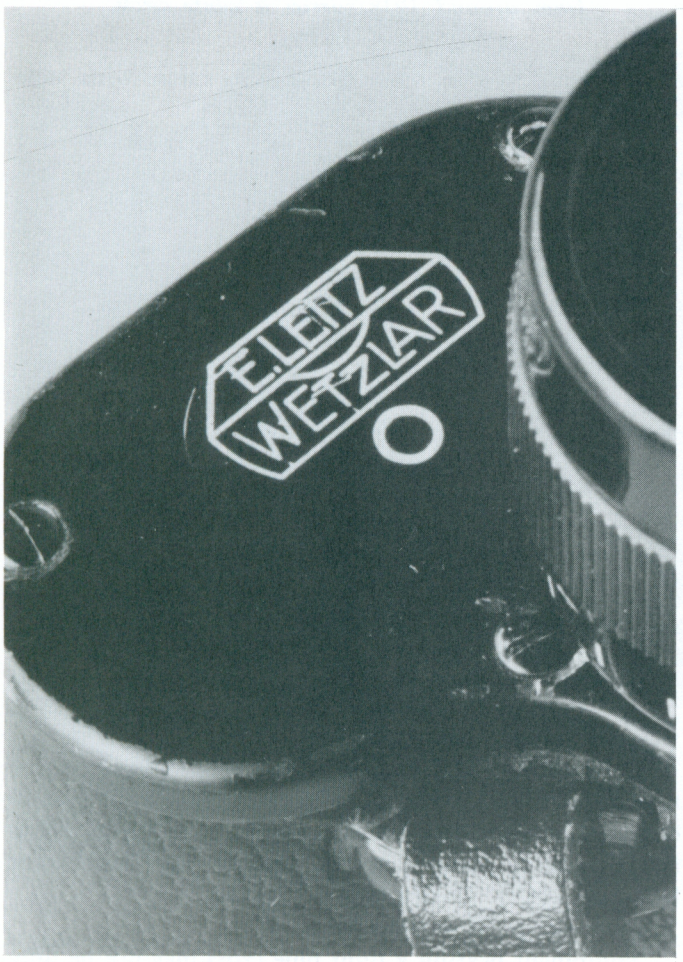
The last marking came in the form of an equilateral triangle. Whether all problems were resolved with this new sign remains unknown. Again, new instructions were issued:

"Equipment that bears a light blue colored equilateral triangle next to the manufacturer's code letters (in the same size) will operate without limitations or restrictions between minus 40 degrees and plus 50 degrees Celsius." [-40F to +122F]

To answer the question, "Why the colored markings?" Mr. Lensing adds that presumably color was applied to attract the user's attention. These documents, he says, give no hint to special meanings. Indeed, in many cases, no color appears at all. He also states that no exact dates of new lubricants can be determined.



7x50 individual focus Zeiss Jena binocular with stamped "+" mark.



6x30 binocular with Leitz trademark is marked with a circle.

6x30 Voigtlaender binocular carries the triangle mark.

More symbols of cold-resistant markings come from another publication of the Museum Fuer Historische Wehrtechnik E.V., Ausgabe 29, April 1991, page seven:

*****

Doppelfernrohr 10x80
Busch Rathenow: Kaeltefettmarkierungen "KF" and "+".
cxn (Busch, Rathenow) with Kaeltefettmarkierungen "o" and "x", also "x" and "Triangle".
beh (Leitz, Wetzlar) mit Kfm. "o" (blue) and "x".

*****

Traeger (Supports)
clk (Breithaupt & Sohn, Kassel) mit Kfm. "o" blue, also "x".

*****

Messkreis (Protractor)
krq (Busch, Rathenow) mit Kfm. "o" (blue).
cxn (Busch, Rathenow) mit Kfm. "o" and "+".

*****

Gestell 38 (Mount 38)
cll (August Baumgart, Rathenow) mit Kfm. "Triangle".
dqc (Metallwarenfabrik Ising, Bergneustadt) mit Kfm. "Triangle".

*****

(Ed. Note: At least one pair of Busch 10x80 military binoculars with a red "x" exists. E. Leitz, Wetzlar 6x30 binoculars with a white outlined circle under the logo on its left eyepiece housing, and Voigtlaender khaki-colored 6x30 binoculars with ddx. and an equilateral triangle without color stamped on its right eyepiece housing belong to member Fred Schwartzman.)

Please look in your own collections and send us your comments. Also, Nick Grossman is interested in tropic-proofing. For more information contact Nick. You'll find his name and address on your membership list.

*****

A very special thank you to Dieter List for making available his information. Also thanks to Mr. Werner Suenkel, Certified Engineer, President and Senior Advisor, of the Museum Fuer Historische Wehrtechnik E.V., for his English translation of Gerd Lensing's "Kennzeichnung von optischem Geraet der Wehrmacht," Oktober 1987, Ausgabe 15, pp. 29-31.

The Museum's address: Museum Fuer Historische Wehrtechnik E.V., Heinrich-Diehl-Strasse, 8505 Roethenbach/Pegn., Germany. Annual dues are about $37. [DM60] and include four quarterly issues. Published in German, the Museum's publications may contain valuable information to Zeiss Historica members interested in German military equipment.

6x30 Zeiss Jena binocular (top) carries a triangle mark; 8x30 instrument carries "+" mark.

CONTAREX AND CONTAX RTS: COMPARING THE LENSES

Dr. Joachim Kaemmerer, Oberkochen, Germany

To compare differences and similarities between the Contarex and Contax RTS (Real Time System) lens ranges in light of present day standards may prove interesting. In their time, Contarex lenses were masterpieces of optical construction and manufacture. But how well do the Contarex lenses meet today's expectations?

Clearly, when listed side by side, the Contax RTS lenses available today far outnumber those made for the Contarex in the late sixties. And the Contax lenses, having an appreciably larger range, tend towards shorter focal lengths for wider angles of view, with faster lens speeds for almost all focal lengths.

Although the focal lengths that result from logical steps in field of view gradation have remained essentially the same, market demands have led to some in-between focal lengths (28mm and 100mm, for example, that are particularly desirable in the Contax's US market). Now, consumers can often find several maximum apertures in the same focal length, as well as a slightly larger number of special-purpose lenses.

Let's examine the way the lens mounting of each camera affects the lens designer. Did the camera itself impose greater constraints on the Contarex lens designer or on the Contax lens designer? Did the latter have to surmount greater difficulties?

Despite the different forms of the bayonets, the mount-to-film distance is the same in both cameras. The diaphragm controls, on the other hand, are quite different since the Contarex does not have a preset diaphragm. The preselected aperture is set on the camera itself. The diaphragm control lever slips into the spring, which is cocked at an angle, and keeps the diaphragm open. When the shutter is released, the diaphragm control lever closes the diaphragm to the value preset on the camera. Not so on the Contax. Here, the aperture is preset on the lens and fed into the potentiometer of the camera's exposure meter. The closing path of the diaphragm, and the movement of the diaphragm control lever, is limited on the lens.

Despite these differences, the space required for controlling the diaphragm is more or less the same in both

Comparing the bayonet mounts: Contax RTS (left) and Contarex.

18mm f4 Distagon for Contax (left) and 18mm f4 Distagon for Contarex.

camera systems, as is the space allowed for the maximum permissible diameter of the rear lens element. So both Contarex and Contax lens designers are confronted with the same conditions and design requirements.

Wide-angle Lenses

The 18mm Distagon f4 that came on the market in 1968 was a great success even at that time. To attain a distortion-corrected field of view of 100 degrees in a retrofocus lens was quite an achievement.

In their construction, the Contax and Contarex lenses appear to be absolutely identical. But the Contax lens has an improved fine correction that affects its imaging performance. This lens also demonstrates a change in correction philosophy which has taken place. At the time of the Contarex, one was content to optimize the lens for reproducing distant objects. Today, one also can better control images in the close range - thanks to modern computers and programming.

The 18mm Distagon f4 for the Contax is not focused by an overall lens adjustment, but merely by repositioning the front element. In this way, too great a refraction of the tangential image lap is avoided, and close range image quality in the field of view is noticeably improved. Comparisons at an object distance of 0.3 show this clearly.

The optical construction of the 25mm lens, as well as that of the 500mm and 1000mm mirror lenses, is taken over from the Contarex. Those designs were still up to date.

The Standard Lenses

The high-speed standard lens for the Contarex with its slightly longer focal length (55mm) had a maximum aperture of f1.4. (High-speed standard lenses for both cameras are seven-element Planar types.) But due to the splitting of the component in front of the diaphragm into two elements: a meniscoid collecting and a diverging lens, the construction is slightly different in the Contax Planar. Such construction presents an effective means for correcting spherical aberration and image curvature.

Additionally for the Contax lens, higher-refractive glasses in the collecting lenses control these aberrations. For example, spherical aberration reduction in the Contax lens is especially visible in the increased contrast at the photo's center.

The 50mm Planar f1.7 for the Contax is not quite so superior to the 50mm Planar f2 for the Contarex. But one has to take into consideration that the Contax lens is half a stop faster. Its increase in quality was achieved by the same correction means as in the Contax f1.4 lens. The rear member of the f1.7 is split, so that it contains one more element than the f2 for the Contarex.

Long-focus Lenses

The construction of the 85mm Sonnar f2 shows its kinship with the same lens for the prewar Contax. This Sonnar type has the advantage of being of a very short construction. But this lens is unsuitable for mirror-reflex cameras which need more room between the rear element and film plane for mirror movement.

For SLR cameras, therefore, this lens type is mainly built in the 85mm-135mm range. The strongly cemented construction of the 85mm Sonnar f2, as we know it from the old Contax Sonnars, was necessary before the introduction of lens coating. Air coming into contact with glass surfaces caused reflection loss and flare, and had to be kept to a minimum.

At that time, the optical designer Bertele managed the feat by creating a lens with only six glass-air surfaces. It could open to f1.5 and produced very good image quality. The 85mm Sonnar f2 produced excellent images as well.

Why the old Sonnar type was retained for the Contarex, I don't know. By splitting the cemented components and taking advantage of the additional correction parameters gained, one could, perhaps, have slightly reduced the number of elements.

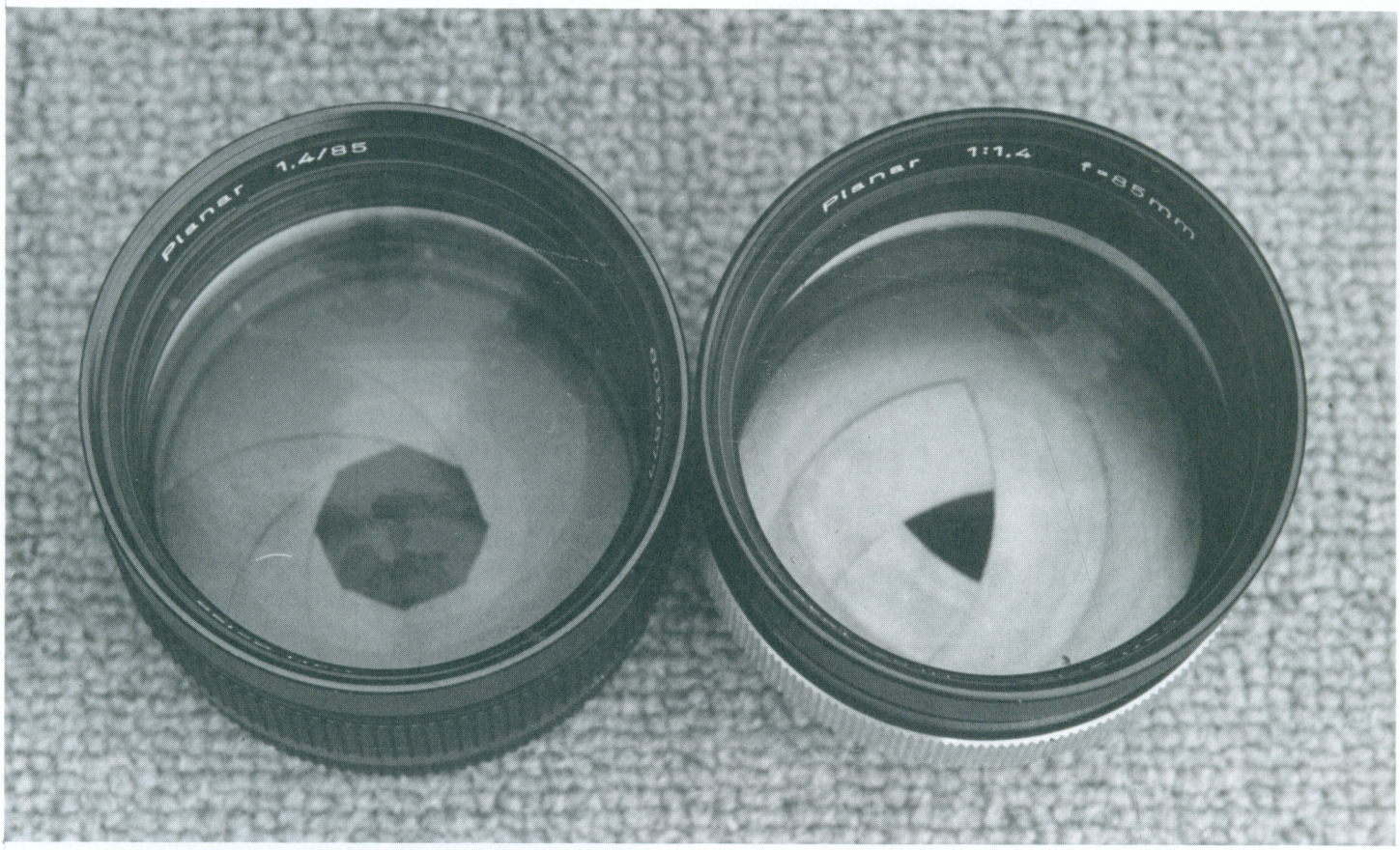
An 85mm lens with the same maximum aperture does not exist for the Contax RTS. If we compare, however, this lens with the six-element 85mm Planar f1.4, which is faster by one f-stop, we see that the newer lens possesses just as good image quality despite its increased aperture.

The 135mm Sonnar f2.8 for Contarex finds its match in the Contax system with a five-element Sonnar having the same focal length and aperture. Because of the two-element, cemented rear component in the newer lens, its astigmatism was reduced and its performance further increased.

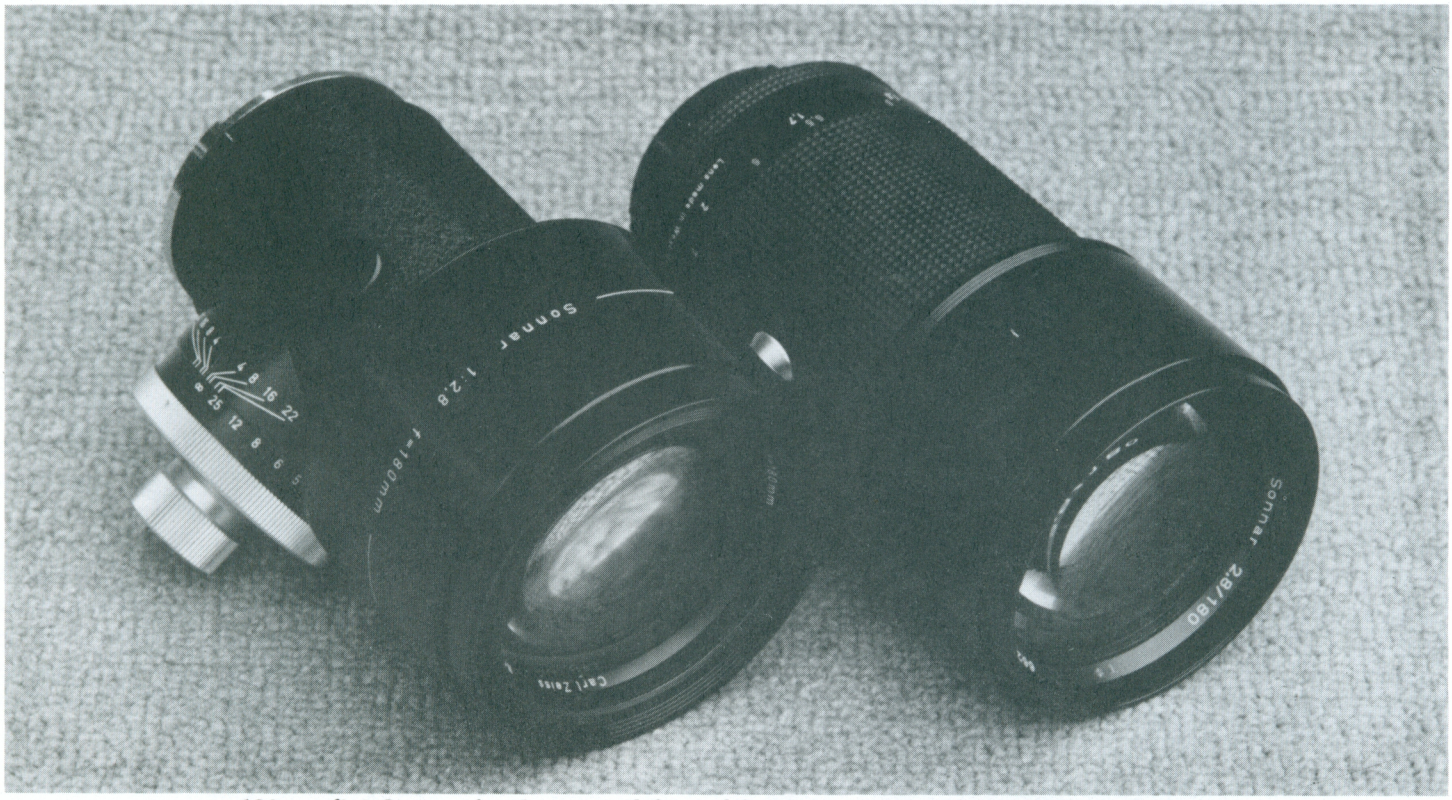
Contarex lenses with longer focal lengths, 180mm or 250mm, surpassed the Contax lenses. Even with the means and possibilities available at the time, these Contarex lenses ably corrected their relatively small image fields. Chromatic

The high-speed standard lenses: 50mm f1.4 Planar for Contax (left) and 55mm f1.4 Planar for Contarex.

85mm f2.8 Sonnar for Contax (left) and 85mm f2 Sonnar for Contarex.



Rare 85mm f1.4 Planar for Contarex (right) and 85mm f1.4 Planar for Contax. Note the unusual triangular diaphragm in the Contarex lens.



180mm f2.8 Sonnar for Contarex (left) and for Contax RTS. Lenses are similar in size and weight, but Contarex lens has rapid-focus knob instead of conventional helical focus.

40-80mm f3.5 Vario-Sonnar for Contax (left) and 40-120mm f2.8 Vario-Sonnar for Contarex. While the Contarex lens has considerably greater range and speed, the Contax lens is far more convenient to carry and hand-hold.

aberrations limit the image quality of longer focal lengths, which even today only expensive special glasses can remedy (see the 300mm Tele-Apotessar f2.8 from the Contax system). The 180mm Sonnar f2.8 for the Contax, though, gains image quality in the close range because of its internal focusing.

Zoom Lenses

Spectacular progress is apparent in the zoom lenses. Today, the 85mm-250mm Vario-Sonnar f4 for the Contarex need not fear comparison with regards to its image quality. Having a fixed rear element and two moving lens clusters in the zoom part, its construction principle compares favorably to that of the Contax 80mm-200mm Vario-Sonnar f4.

Here it becomes clear how much multi-element systems can profit by computers with high-speed processing and large memory capacity, by program development with controlled correction, and, of course, by the general increase in experience. So despite its reduction in size, the image quality of the Contax lens is superior to that of the Contarex.

One precursor of the Contarex pancratic lenses did not go into serial production. It carried the provisional name "Mutanar", a 52mm-102mm f2.8. In contrast with the Contarex zoom lenses that later came to market, the Mutanar features optical image position compensation that is easily realized mechanically.

For focal length variation, two groups are shifted conjointly along the same paths. But the image position corresponds exactly for only three focal length settings (if the pancratic part consists of three lens clusters, as is the case here).

85-250mm f4 Vario-Sonnar for Contarex (left) and 80-200 f4 Vario-Sonnar for Contax. By giving up 50mm reach on the long end of the range of the Contax lens, weight drops from 3800 to 680 grams! Length reduction is from 27 to 16cm.

Between these settings are deviations that impair sharpness, if no refocusing takes place. But in mechanical compensation, when the two moving groups execute movements relative to each other, and fabrication has been exact, the image position stays completely unchanged.

Progress Continues

Progress is apparent in many areas. What has been said about zoom lenses applies as well for multi-element, extreme wide-angle lenses. Without modern technology, its computing and correction methods, they would be almost unimaginable. That maximum aperture could be increased without loss of quality, in some instances with the aid of new aspheric correctives (the 35mm Distagon f1.4 for example) is extraordinary.

Progress in the close range, enhancing image quality, with the help of floating elements or internal focusing, i.e. by means of a relative movement of lens clusters operating inside the optical system during focusing is a major advance. This is particularly effective in the highly asymmetrically constructed extreme wide-angle lenses, or in very fast systems.

The possibility of improved chromatic correction in the telephoto range by means of FC-glasses, which, unfortunately, increase material prices, deserves a mention. And not to be forgotten is the markedly improved anti-reflection qualities resulting from multilayer coating. This is particularly effective with multi-element lenses, where it contributes to distinct scatter-reduction and enhances macro-contrast.

All in all, despite the demonstrated improvements of the last twenty years, one can only admire the performance of the Contarex lenses. Even by today's standards they offer acceptable imaging performance. Indeed, some of them can, in my opinion, still compete with top lenses on the market today.

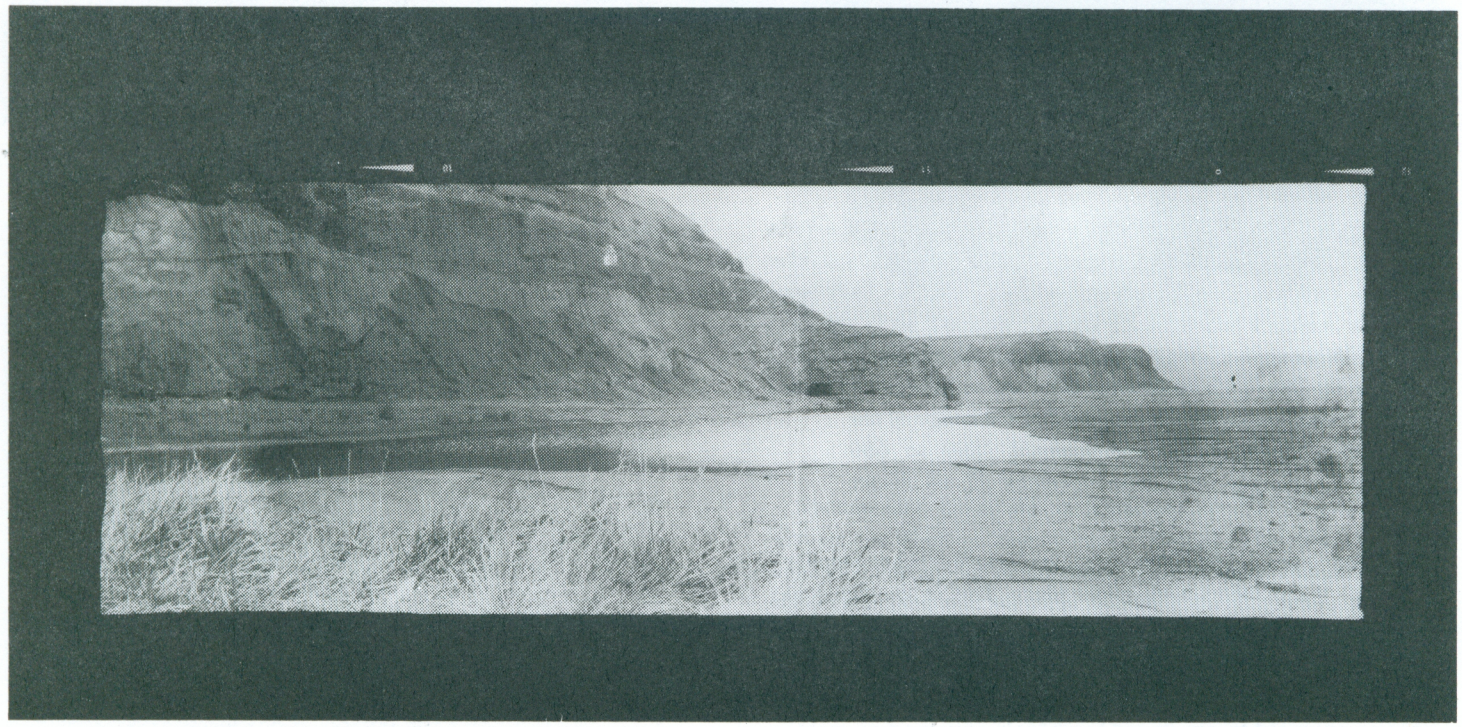
Editors Note: This is a slightly abridged and edited version of a talk given by Dr. Kaemmerer of Zeiss Oberkochen at a Zeiss Historica meeting held in Hamburg, Germany in the summer of 1988. The original translation was by Hans-Juergen Kuc.

CONTAREX	CONTAX
	Distagon 3,5/15
	F-Distagon 2,8/16
Distagon 4/18	Distagon 4/18
Distagon 2,8/25	Distagon 2,8/25
	Distagon 2/28
	Distagon 2,8/28
	PC-Distagon 2,8/35
	Distagon 1,4/35
Distagon 2/35	Distagon 2,8/35
Distagon 4/35	
Tessar 2,8/50	Tessar 2,8/45
Planar 1,4/55	Planar 1,4/50
	Planar 1,7/50
Planar 2/50	Makro-Planar 2,8/60
S-Planar 4/50	Planar 1,2/85
	Planar 1,4/85
Sonnar 2/85	Sonnar 2,8/85
	Planar 2/100
	Sonnar 3,5/100
	Makro-Planar 2,8/100
Tessar 3,5/115 (Balgen)	Makro-Planar 4/100
	Planar 2/135
Sonnar 2,8/135	Sonnar 2,8/135
Sonnar 4/135	
Sonnar 2,8/180	Sonnar 2,8/180
Sonnar 4/250	Tele-Tessar 4/200
	Tele-Apotessar 2,8/300
	Tele-Tessar 4/300
Tele-Tessar 5,6/400	
Mirotar 4,5/500	Mirotar 4,5/500
Mirotar 5,6/1000	Mirotar 5,6/1000
Vario-Sonnar 2,8/40-120	Vario-Sonnar 3,4/35-70
Vario-Sonnar 4/85-250	Vario-Sonnar 4/80-200

The lens lineup: Contarex and Contax RTS.

A HYBRID ZEISS/ROSS LENS

Lawrence Morton, Foxton, New Zealand



A panoramic photograph (shown actual size) made with the Zeiss/Ross lens. Approximate angle of view here is 72°.

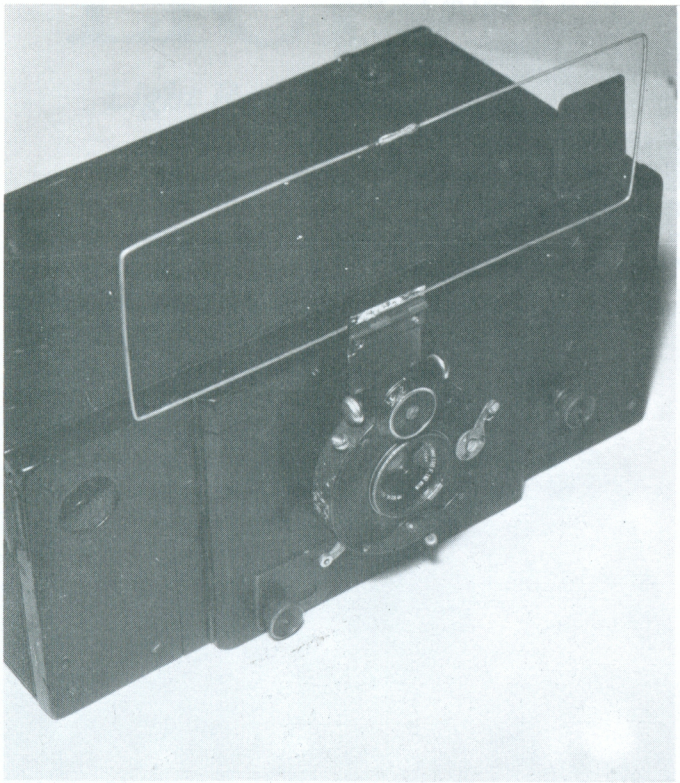
Through the years, some Zeiss lenses have been made, quite legitimately, by manufacturers other than Zeiss.

Many years ago, I bought a curious old camera at a second-hand camera shop. It looked very much like a typical 120 box camera, but was almost twice the normal length, and took only four photographs on a roll of 120 film. What particularly intrigued me about the camera was the inscription around its 112mm f16 lens. It read "Zeiss Anastigmat, Ross London."

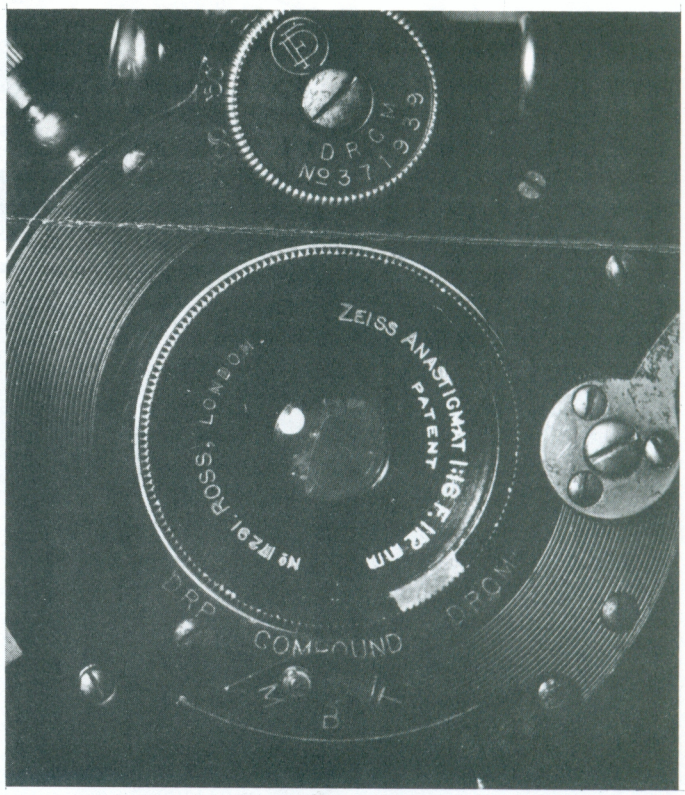
At that time, I was technical representative of the New Zealand agents for Carl Zeiss (Oberkochen) and Zeiss Ikon. I wrote to Zeiss Ikon, enclosing photographs, and asked if the lens was a genuine Zeiss lens, or some sort of pirated version.

Zeiss Ikon passed my letter along to Oberkochen, who replied that the lens was indeed quite genuine. Between about 1900 and 1910, the demand for Zeiss lenses was so great that the factory could not make them quickly enough. They therefore licensed the designs of certain lenses to other reputable manufacturers. Ross of London was one of the manufacturers so licensed. Like all these hybrid products, the Zeiss lenses made by Ross carried both makers' names.

Unfortunately, the camera and lens are no longer mine. They were lost in the mail on their way to a museum in Dunedin, New Zealand, and never recovered. But the photos and letter shown here remain as an interesting record of an interesting product.



The camera as purchased, with lens in place.



The Zeiss/Ross lens in its Compound shutter.

ZEISS

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CARL ZEISS

Date: [illegible]

Mailing Address: CARL ZEISS – 7082 Oberkochen (Germany) – Postfach 35/36

Messrs. Sonotone (N.Z.) Ltd.
attn.: Mr. L.W. Morton
Crown Buildings,
87 Cuba Street,
Wellington C.1. - New Zealand

Your Ref	Yours of	Our Ref.	Ext.	Oberkochen,
	Sept. 10, 1968	PhoLab/Bge Frd.Abt./Swe		Oct. 29, 1968

Dear Sirs,

Roll film camera with Zeiss Anastigmat f/16-112 mm, ROSS LONDON

Your above-mentioned letter to Zeiss Ikon-Voigtländer Vertriebsgesellschaft, Stuttgart, was handed over to us for direct attention. Since we lost all design and computation data of our former lenses we are unfortunately not in a position to answer in every detail your enquiry for the history of the above-mentioned camera. We are giving below the information we could gether from relevant literature and catalogues we found by mere accident.

1. Taking lens of the camera

When the "Glastechnisches Laboratorium Schott u. Genossen" founded in Jena in 1886 markedly improved the glass melting technique, P. Rudolph of the firm Carl Zeiss in Jena was able to compute new "anastigmatic" photographic lenses. By combining an "Altachromat" with a "Neuachromat" P. Rudolph succeeded in designing a lens with correction of spherical and astigmatic aberration and curvature of the image field. Owing to the excellent performance of this "Anastigmat-Doublet" the demand for Zeiss lenses increased to such an extent that the production capacity of the Jena factory turned out to be insufficient. During the first decade of this century production licences were, therefore, granted to well-known optical workshops in Germany and abroad. We are enclosing a photostatic copy of page 2 of the Zeiss catalogue of the year 1910, listing some licencees. In addition to these firms we would like to mention Messrs. Karl Fritsch, formerly Prokesch in Vienna, E. Suter in Basel, and Voigtländer u. Sohn in Braunschweig who were also temporarily licencees. Lenses manufactured in these workshops bore two firm names. However, we are unable to clearly identify the "Zeiss-Anastigmat f/16-112 mm" built into your camera. We assume that the lens was manufactured in the early years of our century, and that its design is similar to that of the Protar f/18 which had been available with f=11 cm under the designation series V, 2. At the time P. Rudolph's Zeiss-Protar lenses were well-known wide-angle systems which covered angular fields up to 100° when stopped down.

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To: Sonotone, Wellington

CARL ZEISS

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Date: Oct. 29, 1968

The compound shutter of the lens was manufactured by Messrs. Friedrich Deckel of Munich (today: Compur-Werk). We take it from illustrations we have available that in 1910 the shutter was not manufactured in the form as shown on your photograph. We could gather this type in a catalogue of the year 1914 published by Nettel-Kamerawerk.

2. Camera body

We cannot make any statements as to the origin of the camera itself. We know that in 1914 Kodak offered roll film for three 60x180 mm frames for a "Panoram No. 1" camera. However, since there are no trade marks on your instrument we assume that it was built by a photographer.

The same presentation that is shown on your negative can be obtained of every extreme wide-angle photograph, when the image format is cut in such a way that the picture ratio is 1:3. Only recently professionals have built themselves cameras with a negative format similar to that of your camera. We would like to mention in this respect the well-known American wide-angle expert Simon Nathan (sometimes he calls himself "Simon Wide") who has carried out this kind of work and reported on it in "Modern Photography".

We hope that our above statements answer at least some of your questions.

Yours sincerely,
CARL ZEISS
Abt. f. Photographie
i.A.

- Dr. Köber -

1968 letter from Oberkochen provides much historical information on hybrid lenses like the Zeiss/Ross.

ZEISS-WERKZEITUNG

Neue Folge, 3. Jahrg., Heft 3 DEZEMBER 1928

1898 photo by O. Trinkler shows (left to right) Rudolph, Abbe, and Schott.

ABBE: A RARE GLIMPSE

In the 1890s, as the high-wheeler bicycle changed to its present low-wheeled form, many difficulties were experienced with the chain drive. Attempts were made to replace this troublesome device with a gear drive. In 1898, the first "chain-free" bicycle appeared in Jena — a product of Fahrzeugfabrik Eisenach (Eisenach Bicycle Factory). It was produced under the tradename "Wartburgrad" (Wartburg bicycle).

In this photo, we see one of the happy owners of this novelty, Dr. Paul Rudolph, who was then the head of our Photographic Section. Next to him we see Professor Ernst Abbe, and Dr. Otto Schott. Professor Abbe was most interested in technical developments and novelties. We see him just as he points to the new gear-drive arrangement with his walking stick.

Professor Abbe was shy about being photographed. We all know that few pictures of him exist, and so this photograph is one of only a few.

Apparently, Abbe was so deep in thought about the chainless bicycle that he didn't notice our colleague Trinkler with his camera on an expedition to test one of the new products of our Photographic Section. Trinkler captured the trio on a plate.

The picture gives us a view of what was then the Goethestrasse, now the Ernst-Abbe-Strasse. The building in the foreground at that time contained the chemical laboratory of Dr. Riedel on the ground floor. On the floor above was the photo studio. In the house in the background, the ground floor contained the construction office, while the floors above housed our saddlery. On the right can be seen the gate to the front garden of Abbe's house.

(This article is a translation, slightly abridged, of an article which appeared in the Zeiss house organ "Zeiss-Werkzeitung", December, 1928.)

LICHTSTRAHLEN

Light Rays: Notes of Interest to Those Interested in Zeiss and Its History

ABOUT OUR ARCHIVIST

If you've missed the contributions and correspondence from our longtime archivist over the past months, there is a reason why: Larry Gubas has been sick. Now on the mend, Larry has been through two major operations in the past months. We wish him a quick and complete recovery.

LAST OF THE LINE?

What could be the last Carl Zeiss (Jena) designed camera for the forseeable future is now being sold in the UK at a knock-down price. The manufacturing date of this camera is, as far as I can ascertain, 1989/90. It is not a top-of-the-range Praktica, Pentacon, or Practisix SLR, but a very humble 35mm compact snapshot camera. It bears the Carl Zeiss Jena logo embossed on the baseplate. The instruction sheet is labelled 'VEB Kamerafabrik Freital DDR' but I have no doubt that it is Zeiss-designed, although manufactured by another member of the Kombinat.

The camera is a BEIRETTE VSN 2, with a coated Meritar 45mm f2.8 lens in a Priomat shutter (1/30, 1/60, 1/125 second, plus Bulb). The names go back a long way in German camera history. There was a German-made 35mm Beirette in the late 1930s and I remember a 50mm f2.9 Meritar (a Hugo Meyer design?) fitted to a Practica 35mm camera in 1960. The VSN2 body is plastic. Tripod bush and hot shoe flash connections are standard. A simple exposure guide coincides with lens apertures and film speed/shutter speed values. The camera comes complete with instruction book (in German with an English insert), ever-ready case and shoulder and wrist straps. It's on sale new at a London dealer for the equivalent of $35 US.

Ray Fearn, Kent, England

MAJOR NEW CONTAX BOOK FROM HANS-JUERGEN KUC

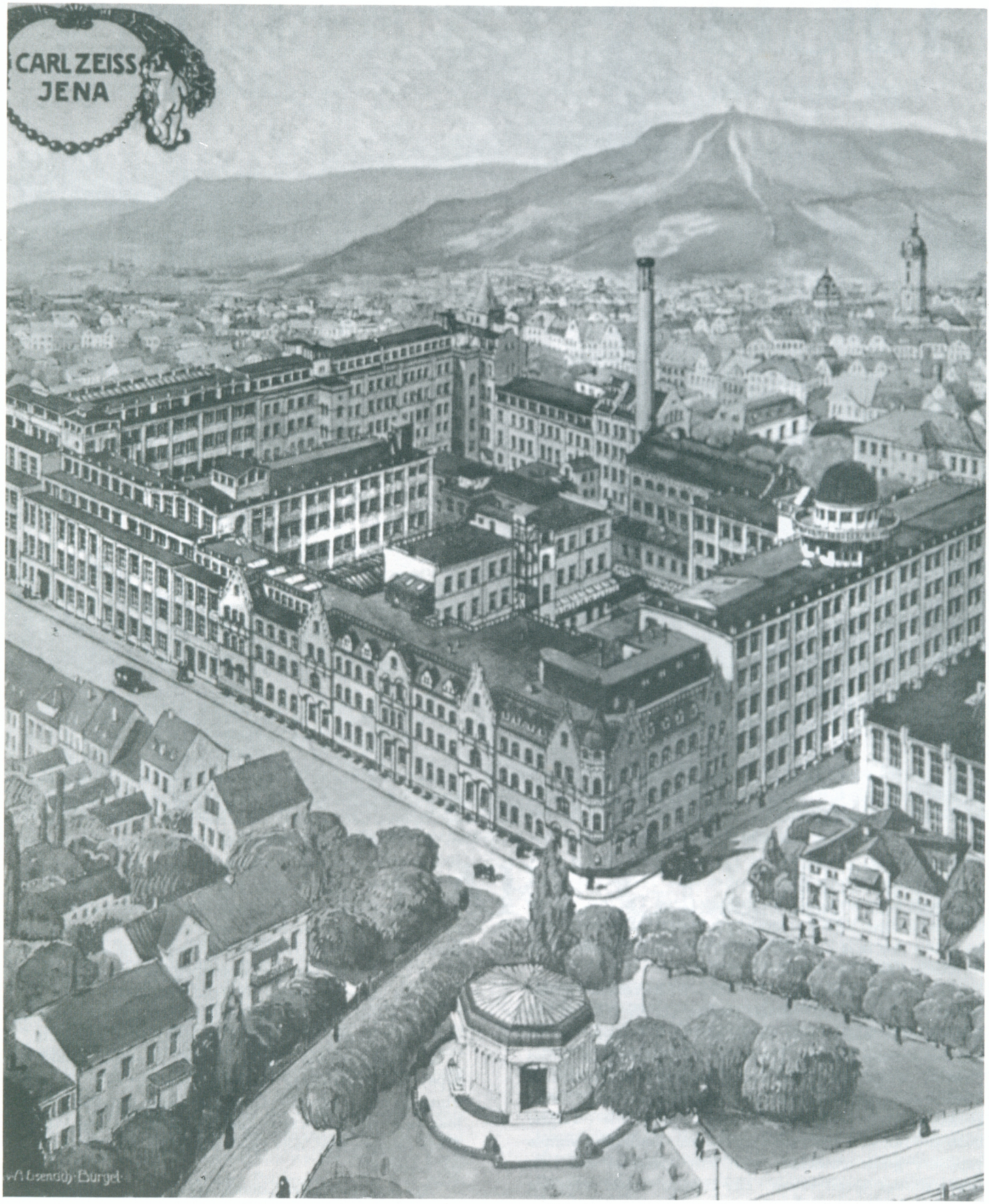
A beautiful new hardcover book on Contax history by member Juergen Kuc has just arrived on these shores. "Auf den Spuren der Contax" ("On the Trails of the Contax") is an 8-1/2" x 10-1/2" volume of 272 pages containing over 400 photographs and illustrations.

The book covers Contax history from 1932 to 1945, and includes a chapter on the Super Nettel, the Nettax, and the twin-lens Contaflex. Many rare models, accessories and variants are described and shown. Each of the seven versions of the Contax I is precisely described, illustrated, dated and given its place in a range of serial numbers.

This major and authoritative work should be in every collector's library — both for reference and enjoyment.

Kuc continues his Contax research. Members could help repay his painstaking labor by sending him the serial numbers of any pre-1945 Contax cameras, together with the lens numbers, model type, and any special features. Address Hans-Juergen Kuc, Alte Landstrasse 156, D-2000 Hamburg 63, Germany.

"Auf den Spuren der Contax" is available from the author at the address above, or from the publisher, Fachbuchverlag Rita Wittig, Chemnitzer Strasse 10, D-5142 Hueckelhoven, Germany. And from A Photographers Place, 133 Mercer Street, New York, 10013. Telephone 212-966-2356.



The Zeiss factories in Jena in 1910. Abbe memorial — the small domed structure in the foreground — can be visited today. From a color print by A. Eisenach.

ERRATA

page 4 upper left, third line should read Greek Cross.

page 13 caption, second line should read 80-200mm f4.