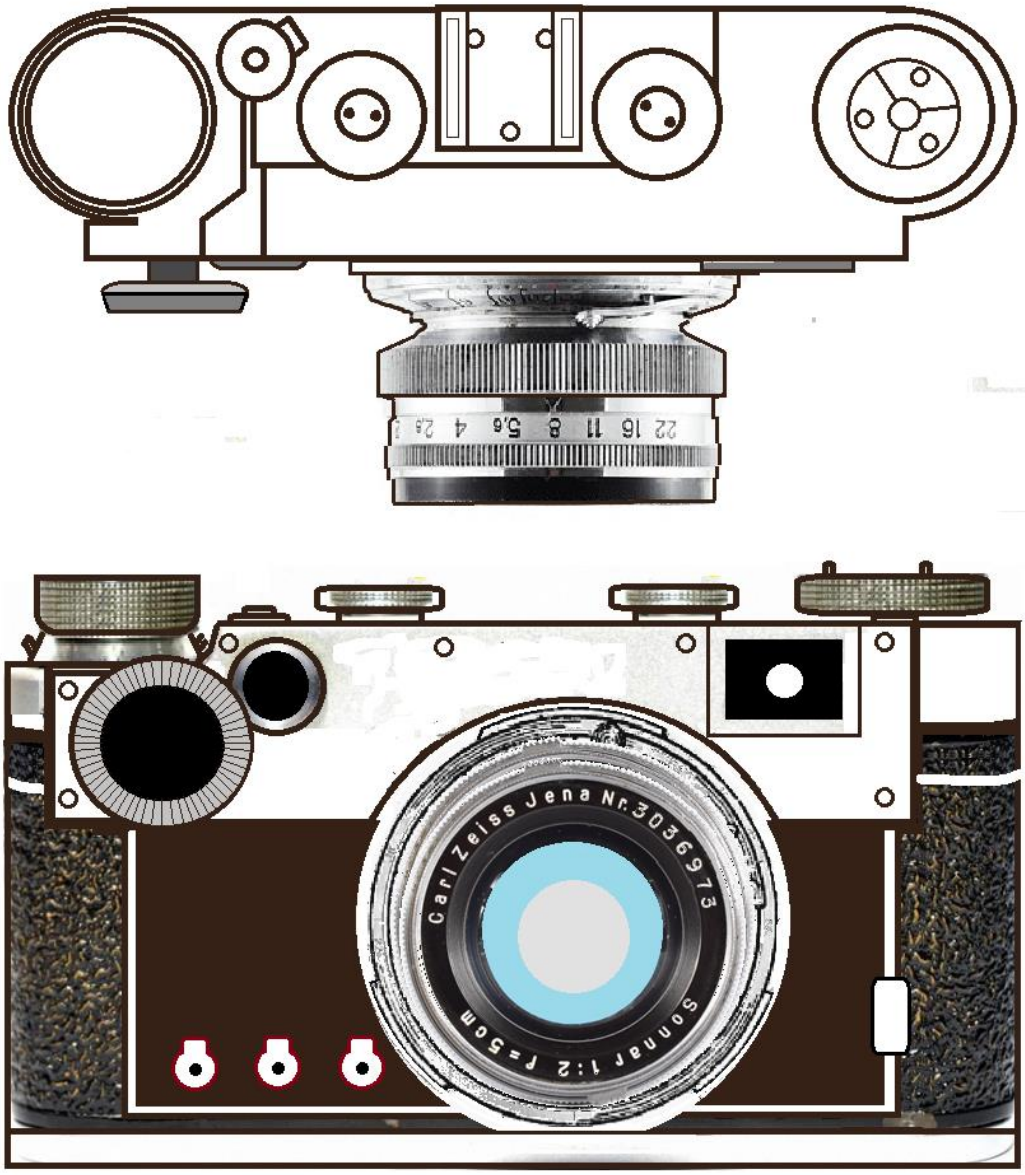
VTSVS 2 ?

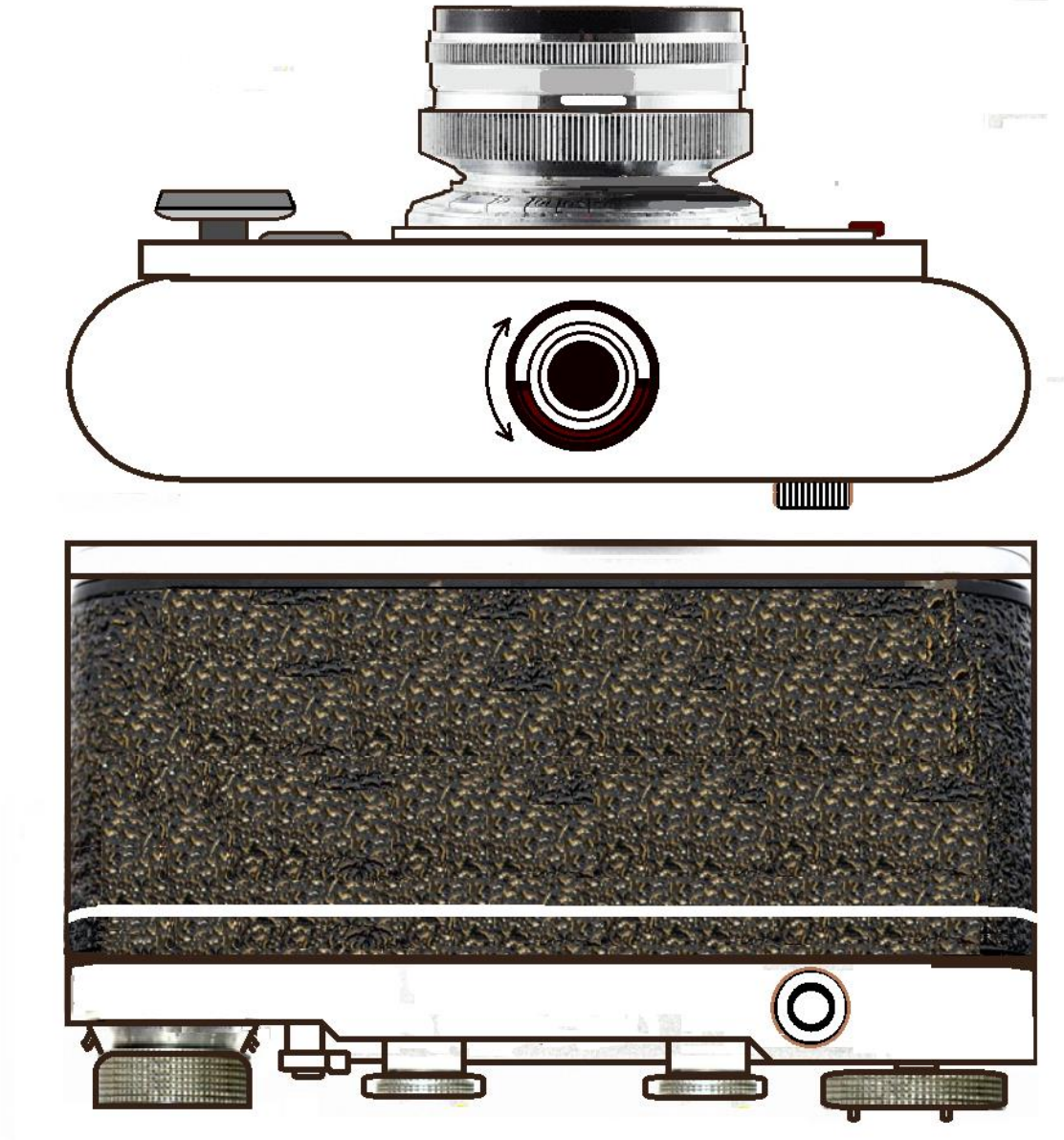
Or Experimental 106 ?

Luiz Paracampo



Schematics of the Unknown and Unnamed camera- 1.

-A Detailed research study from its possible origins-



Schematics of the Unknown and Unnamed camera -2.

Bottom & rear view

FOREWORDS:

At the years 1949 – 1950 there were produced another intriguing camera the VTSVS, which still causes discussions all around the world where it was really constructed.

In the present article we will try to clear up some fake premises showing evidences that came to light nowadays.

It is known that after the WWII, together the war payment of goods, it was included instruction courses and personnel preparing for mass production at Soviet industries, as well as developing of new products. This German/Russian cooperation phase went from 1946 to 1952 when all German people returned home and made their own way in optics. In this special case, according to:

http://theodoliteclub.com/?page_id=2259

By order of the GKO no. GKO-288ss from 07.26.1941. and order on the military technical cooperation of the spacecraft № 012 from 07.28.1941. a mechanical workshop of phototechnical equipment (VTS optical-mechanical workshop) was established at the Saratov VKF.

By Directive of the Main Directorate of Formation and Staffing of the Red Army No.org / 6/539227 of August 17, 1941, it was announced the formation of the VTS Optomechanical Workshop. From the directive: "... The deputy head of the GShKA ordered by 08/25/1941. to form state-of-the-art VTS optical-mechanical workshop in Saratov No. 30/122 ".

The creation of an optical-mechanical workshop (OMM) was due to the fact that at the beginning of the war the German OMM in Russia was captured by the German fascist troops. The head of VTU GSH, the naval engineer MK Kudryavtsev, issued with the petition No. 582097 of August 14, 1941. in UHFW; "... By order of the State Treasury bureau ... at the GSH Kavoizlozheno the creation in Saratov of a mechanical workshop for the manufacture of photo-reproduction equipment for military cartographic factories. The Moscow Bolshevik experimental mechanical workshop was handed over to the General Staff, which was relocated to Saratov with all the equipment and personnel.

I ask you to liquidate OMM VTS (Lviv), and form the OMM VTS in Saratov for the same state with the subordination of VTU ". The basis for the formation of the workshop was a 26 people personnel and the equipment of the experimental workshop of the Moscow Bolshevik printing house. Additionally, in November of the same year, by order of the VTU GSH, the workshop received personnel and equipment from the Central warehouse

of the military topographic supply of the VTS KA No. 299 evacuated from Moscow to Saratov.

The optical-mechanical workshop is located in the building of the Belfablist factory (Universitetskaya St., house 55). From the 4th quarter of 1941.

OMM began to perform tasks VTU GSH for the production and repair of topographic tools and cartographic equipment. Since 1942 The workshop began the development of the first built map making portable complexes mounted on ZIL-5 vehicles for front-line topographic parts. In December, the first marching motorized cartographic complex PC was transferred to the Don Front (Stalingrad).

Order on MTC KA No. 02 dated 01/26/1942 the workshop was subordinated to the military technical cooperation department of the headquarters of the Volga Military District. According to the directive of the Deputy Chief of the General Staff KA No. 115792c of 09/19/1943, OMM October 15, departed from Moscow. Arriving on November 2, 1943, OMM with personnel and equipment was located on the production area along Olkhovskaya Street, 24, the former building of the Aerogeopribor plant rented by VTU for OMM and Central warehouse and topographic supply No. 299.

In accordance with the directive of the General Directorate of the Spacecraft Org / 6 / 3110666c dated July 4, 1944 (announced in the order of the Moscow Military District troops No. 16141 of July 15, 1944) OMM transferred from July 25 to the new staff No. 030/400 with renaming the "Experimental Mechanical Plant VTS ". According to the approved staff, the plant's organizational structure envisaged seven workshops (mechanical, optic-geodesic, experimental and map printing equipment, finishing, carpentry, tool and repair), two laboratories (measuring and printing), seven departments (design, technological, planning, production, technical control, energy-mechanical, supply and accounting), three offices (administrative, personnel, secret office work).

At this point it was introduced 11 officer positions.
During the years of the Great Patriotic War (1941–1945), the company manufactured: seven motorized cartographic complexes; more than 700 different instruments, machines and equipment. Over 1700 various

topographic and geodetic instruments like: aerial cameras, printing machines and other equipment were repaired. By the end of 1945. The production area of the plant increased and reached 2400 sq. m., the technological equipment included more than 100 units of various metal-cutting and other machines. The number of employees reached 245 people.

By order of the Chief of the VTS SC from 09/30/1946, The plant moved to the state of peacetime with the renaming of the "106th Experimental Mechanical Plant of the VTS".

In 1947 The plant switched from budget financing to economic calculation. By the end of 1950. production area amounted to 4380 square meters, and the number of employees raised to 336 people.

In 1960 The plant received the new name "106th Experimental Optical-Mechanical Plant" (106th EOMZ). -In accordance with the Decree of the Central Committee of the CPSU and the Council of Ministers of the USSR in 1965, The construction of a complex of industrial and administrative buildings and structures of the 106th EOMZ along Schelkovskoe Highway began. -In March 1972 the plant relocated to new production areas and began their development. The area of the plant was 23 thousand square meters, the number of basic technical equipment reached 600 units. The number of industrial - production personnel of the plant was 1123 people.

Order of the Minister of Defense of the USSR No. 372 of 03/15/1976 The name of the plant is the 106th Experimental Order of the Badge of Honor Optical - Mechanical Plant.

By the end of the '80s, -The plant was a powerful structure for the production of topographic and geodetic equipment for the needs of the Armed Forces. Some topogeodesic and cartographic techniques were supplied for inclusion in various complexes: "T1-A" theodolites to the Arsenal plant (Kiev) in the set of equipment for launching rockets; "GAL-M" gravimeters for performing gravimetric measurements on submarines, etc.

Also produced at the 106th EOMZ, the equipment was supplied to enterprises of the GUGK under the USSR Council of Ministers, the USSR Ministry of Internal Affairs, the USSR Ministry of Geology and a number of other organizations. Some mobile means were delivered to the countries -

participants of the Warsaw Pact. -In 1972 At the International Leipzig Fair (GDR), the “GAK-3” gravimeter was awarded a large gold medal.

In the 90s, like most defense enterprises, the 106th EOMZ faced serious economic difficulties. Output has declined. Orders from the Ministry of Defense were shortened. -The plant was forced to establish the release of consumer goods and lease production areas. Since 1999 position has stabilized somewhat. In 2010 the plant was withdrawn from the composition of the TS of the Armed Forces of the Russian Federation and transformed into an open joint-stock company.

The camera "VTS VS" (the name "TS Air Force" is more common) was produced in 1949 and in 1950. The total production of about 1000 pieces.

http://bar90cameras.ru/vts-vs-tsvvs-1950-g-568

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Most collectors believe that the 1949/1950 “TVSVS” (or “TSVVS”) camera was made NPO "Almaz". However, until 1971, such a name did not exist, from 1947 (the time of formation) and until 1971, this defense enterprise was called the Design Bureau with different numbers.

According to the common knowledge and researches, the only enterprise in the system of the Military Topographic Service of the country that had by 1949 sufficient experience in manufacturing precision mechanical parts and optics, as well as the corresponding design, technological and production base, was Experimental Optical Mechanical Plant No. 106. 1941. -However, as in the case of statements about the production of a camera at NPO Almaz, there is no direct evidence, apart from speculations.

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“No name VTSVS” – This camera was specially made to use exceeding Sonnar production- and no other Contax lenses different from 50mm. Camera built under bi-national cooperation phase. This one, without marks or name, supposes to be one of the exceeding 1000 units requested by the Military Topographic Service who directed production to the market for money funds and factory development.

Camera rangefinder with 24x36 frame format. Focal shutter, shutter speed with shutter speeds "B", 1/20, 1/30, 1/40, 1/60, 1/100, 1/200 and 1/500. The case is made of brass, finished in genuine leather. Lens "Carl Zeiss Jena Sonnar" (2/50) not coated, mounting - bayonet "Contax". The viewfinder and rangefinder are separated. The color of the rangefinder field is yellow. The cover and frame of the base housing are numbered with a number in visible locations without disassembly.

The abbreviation on the cover with the "star" hands of some units is better known as "Air Force Topographic Service" (SVS Air Force).

However, it is more accurate to decipher it, such as the "Military Topographic Service of the Armed Forces" (VTS Armed Forces).

REASONS TO BUILT THE CAMERA

You can allow at least two reasons for producing a limited number of "VTS VS" cameras:

- in 1948, it completed 30 years since the formation of the Red Army Military Topographical Service. In the years 1949-50, a commemorative camera series was produced;

- The cameras were made by special order for unknown purposes, but obviously not for use in topographic photography.

The assumption of a number of collectors that the camera was produced for delivery to senior military commanders can hardly be considered correct since the number of monograms in these devices does not exceed the number of any other model. If cameras were to be produced for delivery to these or other services to several military commanders, most wardrobes, as was currently used at that time, these would have brass plates (silver, etc.) with different monograms.

In addition, for the release of gift options, it was hardly necessary to organize another new production, as well as a temporary one. In 1949, it was possible to use "Kiev" (upper class apparatus) with additional high quality finish, or "Zorki", or "FED" (from the same class).

In general, as with all products manufactured by the military-industrial complex, the fate and history of VTSVS cameras are further speculation in the complete absence of documentary evidence.

OTHER CONCLUSIONS:

As one can see, during those days there were several things to organize. During 1947 the factory went to a new economic schedule, and Soviet Union was full of Zeiss components from war reparations, including Contax Sonnar lenses, which would give an extra status to the new product. Those

lenses, covering leather and several screws were undue to be used in Soviet made equipment and should be put on products for the internal market. Making use of the skillfulness of the "Experimental Mechanical Plant VTS" together German people from factories, the internal staff of the factory ordered a pilot production of 1000 cameras in order to test the market. -Probably the production exceeded this value, which can be proved today by the unmarked cameras and some with screw mounts with original marks which are witnesses of this procedure. The excess of Sonnar lenses in Russia that equipped all those cameras have its numbers beginning in 3,000,000 (more specifically 30,80X,XXX) indicates Jena production from 1945/1949, perhaps for a future "Contax Jena" production or a hopeful future "Contax Dresden" production, which was further frustated (see Zeiss Historica).

These Jena lenses equipped practically all VTSVS and also "no name Kiev" first batch from 1963, also were standard lenses in the "Contax II Sttutgart" first series.

During those laborious and "black hole" days, both for Zeiss history and Russian development, Soviet Ministery of Internal Affairs was obviously trying to put into feasibility the WWII suspended five years plan of 1942, when at particular Stalin's order, it was planned be produced the best quality items world around, and cameras would be no exception, now with the imposed and important German cooperation.

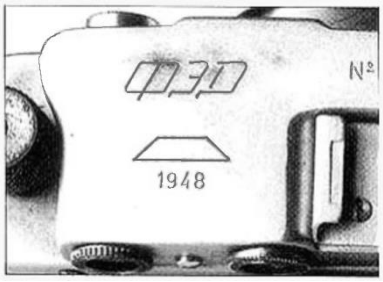
Those products were made and tested in order to test reliability acceptability and production possibilities in the various levels.

Of course VTSVS was included in this ideology which was later followed by Chinese in the 1970 years in the Dong Feng program where cameras and automobiles were shown to the West. At that time, although, ecloded the cold War at the beginning of 1947, which turned to be unfeasible the original Soviet plan.

Now, it will be important to remember that a new formula was born. The excellent behavior of FED cameras during the War years should be

associated with the Zeiss optical technologies in order to produce outstanding Soviet cameras.

The previous statement can easily be proven through the high demand of those cameras which required production at KMZ with its FED 1948 and Arsenal with its FED Arsenal, using the same Industar 22 derived from the Tessar quantification.



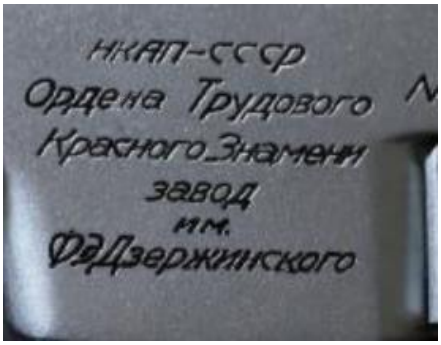
Above FED 1948. further FED-Zorki and finally Zorki.

FED-Zorki

Zorki

And FED Arsenal also from 1948.

The original FED production, after the war (1946) could not reach the market needs.



The Sign of the Order of the Red Labor. Homage to the workers during WWII

NKAP-(CCCP), Medal

In 1941 the Main Directorate of Formation and Staffing of the Red Army ordered also the transference of the F. E. Dzerzhinsky Kombinat NKVD/SSSR (the FED Kharkov factory) as part of the Air Ministry, due the beginning of the Second World War, and at the same time the factory was transferred to Berdsk.

In 1954 a second trial for a new camera was made –so let us call "106":

Boris Jamchtchik

Milos Mladek

-Why 1954?-

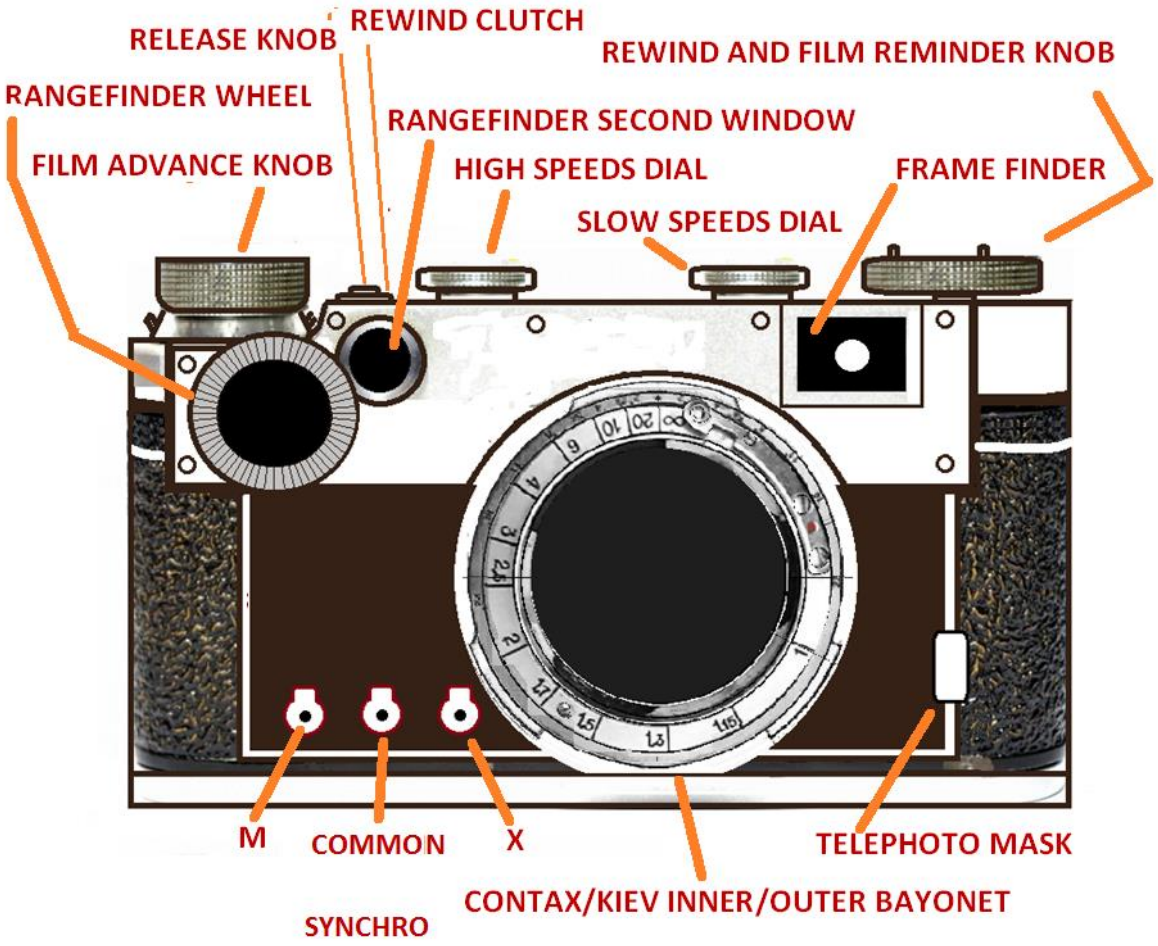
Most cameras have Zeiss Sonnar lenses beginning by 35,XXX,XXX or KMZ Jupiter 8 №54XXXXX,, which confirms the years 1953~1954.

Carl Zeiss Jena Post-War Production Serial number sequence

3,000,000-3,200,000	1945-1949
3,200,000-3,470,000	1949-1952
3,470,000-4,000,000	1952-1955 *
4,000,000-5,000,000	1955-1958
5,000,000-6,000,000	1958-1961
6,000,000-6,000,000	1961-1964
7,000,000-8,000,000	1964-1967
8,000,000-9,000,000	1967-1970
9,000,000-10,000,000	1970-1975

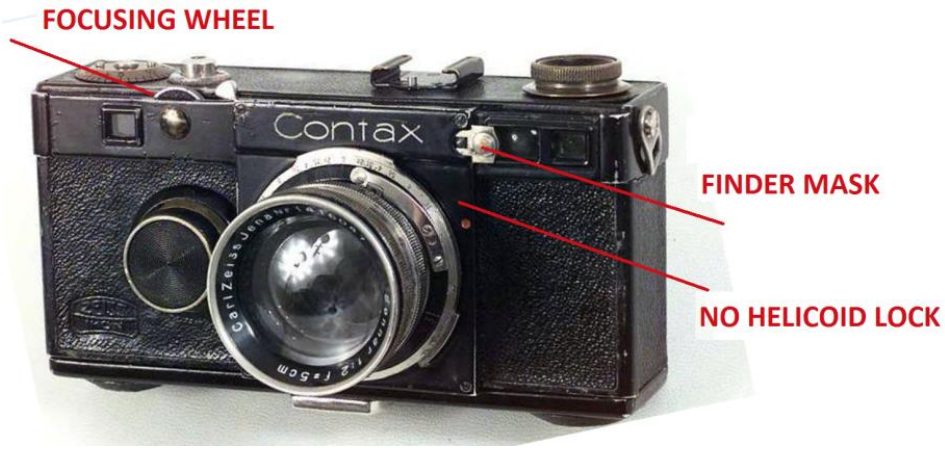
85/135mm mask

This new camera has the following specifications:

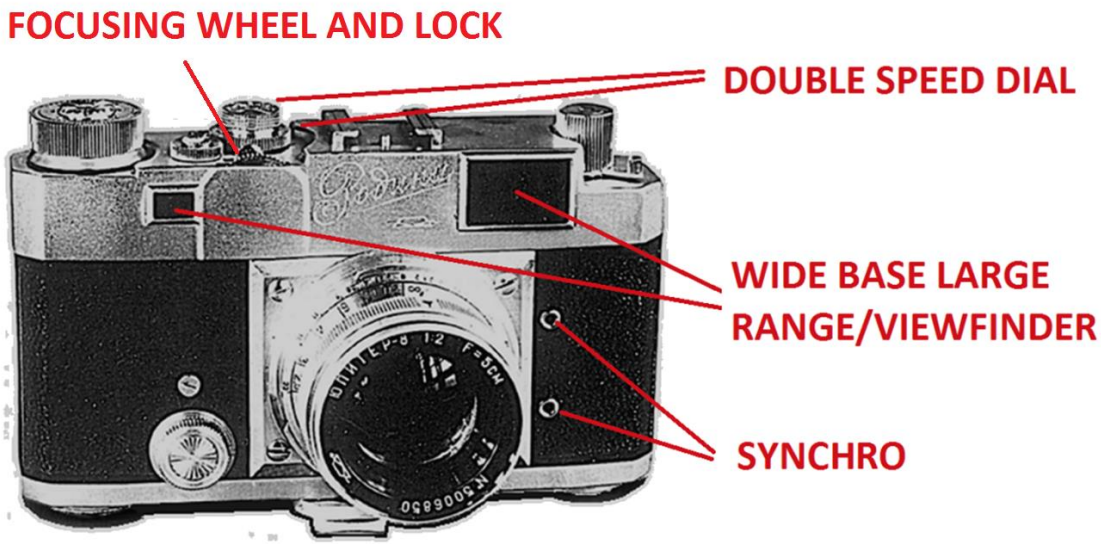


-Identical bayonet mount to Contax and Kiev able to accept all range of interchangeable lenses.

-External focusing wheel but no lock and finder mask for telephoto lenses, à la Contax I first series style.

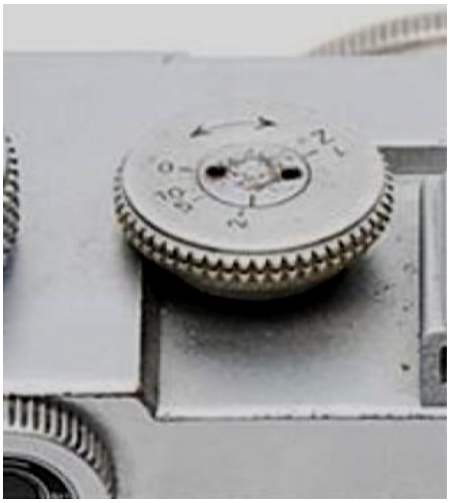


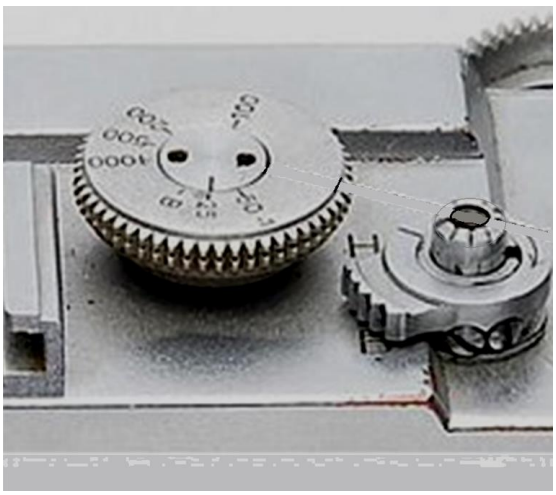
-Single window large base range/viewfinder and double dial speed control inspired on KMZ Rodina of 1952



The new camera received cooperation from both FED and Kiev staff. Both from Ukrania for a new camera built in Moscow.

-Received FED 2 body style (1954) and rewind lock; and original leather display à la Kiev style.





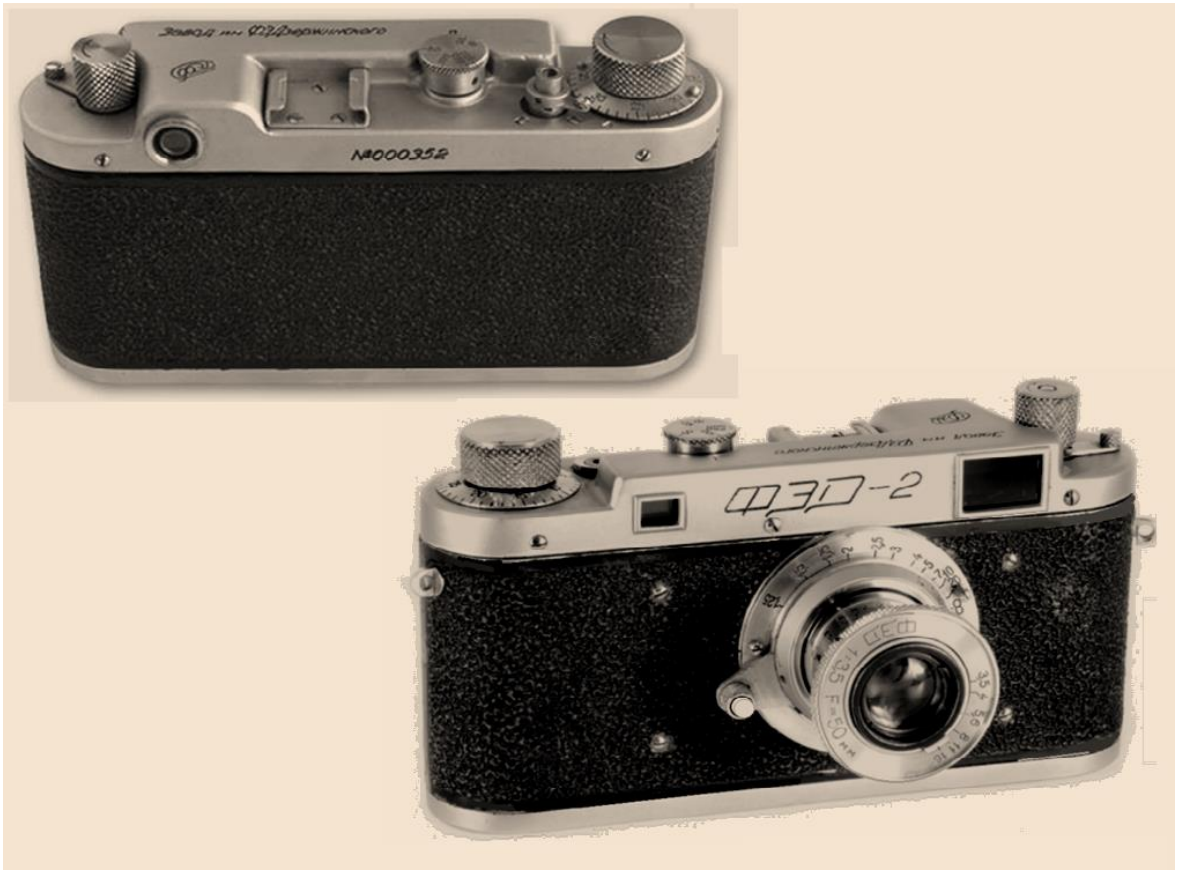
-Two separated speed dials

High speeds : 1000 500 200 100 50 25 B

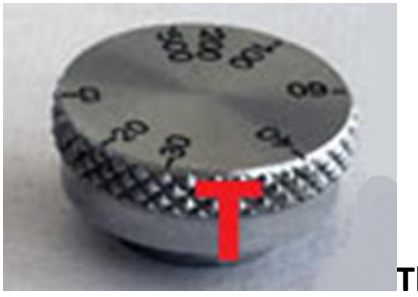
Slow speeds : 0 10 5 2 1 Z must be cocked separately! At Exakta style.

<u>Observe the "0" also present in TSVVS of 1949/1940 instead of "B"</u>

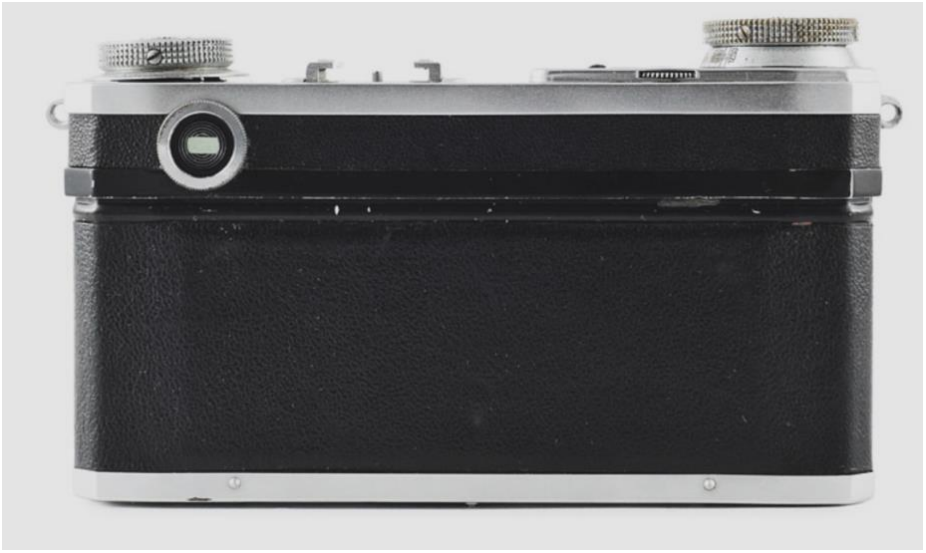
Also Z and 1 The Z delays 1 second at the style of "Tempor" shutter.



FED 2 first series



The “0” instead of “B” on VTSVS 1st series.

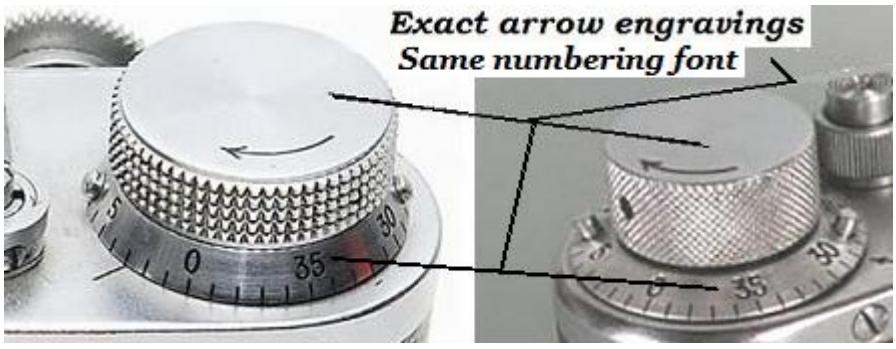


Kiev back style

-In the picture of the “106” one clearly sees the ocular style of TVSVS

And the clutch lever style of 1954 FED 2

-And the arrow at advance knob as well as same counter number font.



The height of the rims of the dial limb of the frame counter is increased – giving a better nail holding for the convenience of installing “0”;

-Viewing the bottom lock one can clearly see the engraving style and font also found in the 1949/1950 VTSVS .

Same engravings in opening lock and key and machine lettering font.

Coincidence or reuse of old pattern?

-The open camera reveals more: We need not to be a Sherlock to deduce under the bottom skirts the release spring of Zorki of 1953

Zorki 1D and 1E (1953) release spring arrangement. To increase the elasticity of the trigger spring, it is squeezed stiffener

In the following photos the pressure plate:

Back cover rivet and pressure plate from VTSVS

-The riveted pressure plate and same material found on previous VTSVS

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-And the curious Werra back locking and tripod bush (1954) seen in the two previous pictures. Also the same film spool spring catcher found on "106". <u>Remember the Werra was initially developed at Arsenal Factory in Ukraine</u>.

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As all we know, this "106" camera was not series produced. Being so, variations exist. As there happened with VTSVS.

Yuri Davidenko of dvdtechcameras shows us a removable back VTSVS with screw mount lens which has the same finishing rails found In "106" of Milos Mladek.

-<u>Those arguments prove that both cameras were clearly produced in the same factory where same operating machines and skilled personnel were doing standardized products.</u>

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-The two following pictures also remind us tooling of empty spools that followed similar procedures in its makings.

Equivalent rear cover rails

-Also similarities in overall satin chrome finishing and rails on the cover.

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CONCLUSIONS:

Each factory has its own production methods and technology. Being so, KMZ for instance denotes in their products similarities in their manufacture and camera styles.

It is a kind of personality imposed by their technicians, manufacturers, styles and the available machine tools at the time. By this reason one factory cannot completely copy other's product unless they have the same machinery access.

As we had seen, in the first era (1946-1952) there was an era of intense developing of new products in order to fulfill the internal needs of Soviet Union. The second one (1954- onwards) the international affirmation on it. Then was born the project "106".

Every based description found on theodoliteclub.com at the beginning of this article leads us to firmly suppose and accept the "106th Experimental Mechanical Plant of the VTS" as the producer of the camera "106", or at least, produced at the same VTSVS plant.

The factory does not produce lenses, so uses lenses from other manufacturers. It seems that the internal helicoids came from Kiev but it is clear that Kiev would not produce such a camera of a lower grade in order to emulate with their original Kiev.

Also it would not be the case of FED who was developing its new model to enter the market.

But in Soviet Union technologies and experiences are shared among manufacturers, by this reason technologies and operative ways employed by other factories are also employed in this discussed model. – It is important to note that the birth of FED 2 coincides with the generation of the "106", and at the time, this last was under the Military Topographic Service jurisdiction while the first was under the Military Aeronautical Ministry, both part of Aeronautical Internal Command.

All ideas merged in this model were used in USSR at the years 1953 ~ 1954, and this proves that the camera now discussed was not made in none of the traditional factories, but in a new one interested in share its potentialities. And why not the "106th Experimental

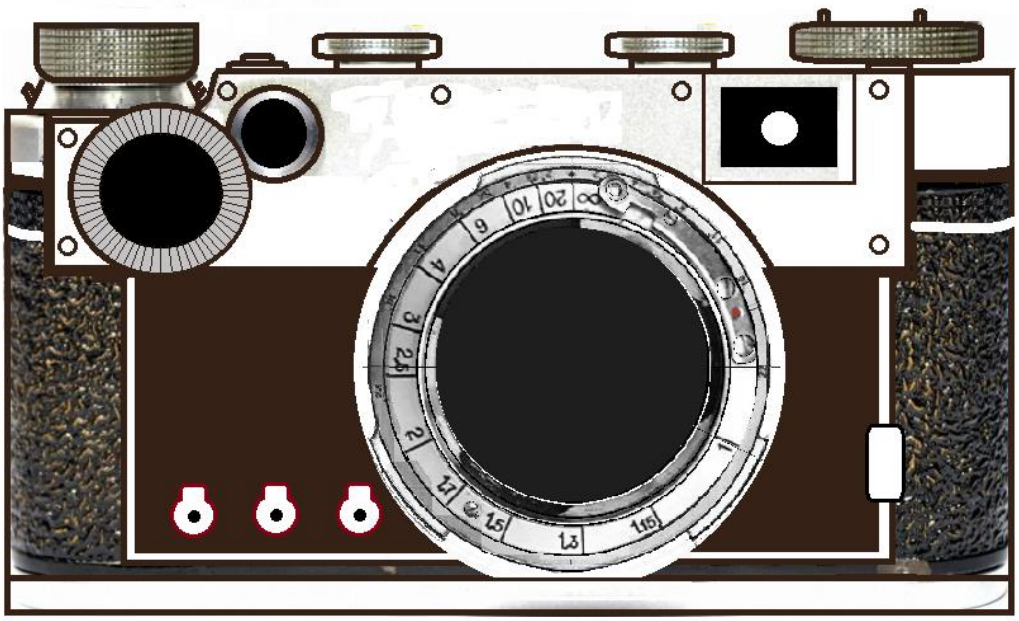
Mechanical Plant of the VTS" ? – Mainly they have had a previous experience in building the TVSVS.

At this stage, a new venture seemed to be feasible once at the same time USSR propaganda was preparing goods to be shown at 1958 Brussels' Fair and attract "Valuta" (strong currengy) to their cash.

The commercial feasibility, investments, money return, market niches, production prices and selling costs also should be analyzed.

The absence of a name in the camera denotes a non authorized production or a simple test production for future analyses and so, a prototype batch with very few units produced. Or more, it was a risk a camera with engravings out of the factory area. So much similarities call us for a camera built at the same factory. Why not be a Real "TVSVS-2"?

Perhaps the fact of another camera at a category in the middle of the FED and Kiev would have no future, once just in 1954 it was announced the production of Zorki 4 that fulfils this gap, having in addition all speeds in a single dial, standard syncho contacts, selftimer, view finder diopter adjustment, lower production costs and had a background of the large experience of KMZ in building cameras. Unhappily this new camera was a stillborn design.



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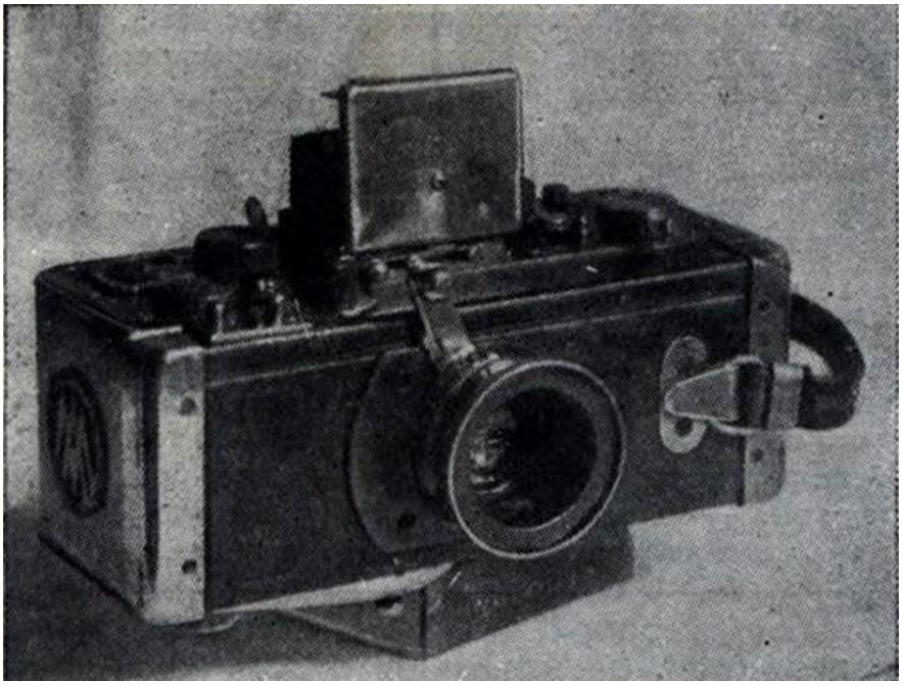
The absence of name was a common practice in Soviet Union. And this denote prototypes. We can see such procedures in



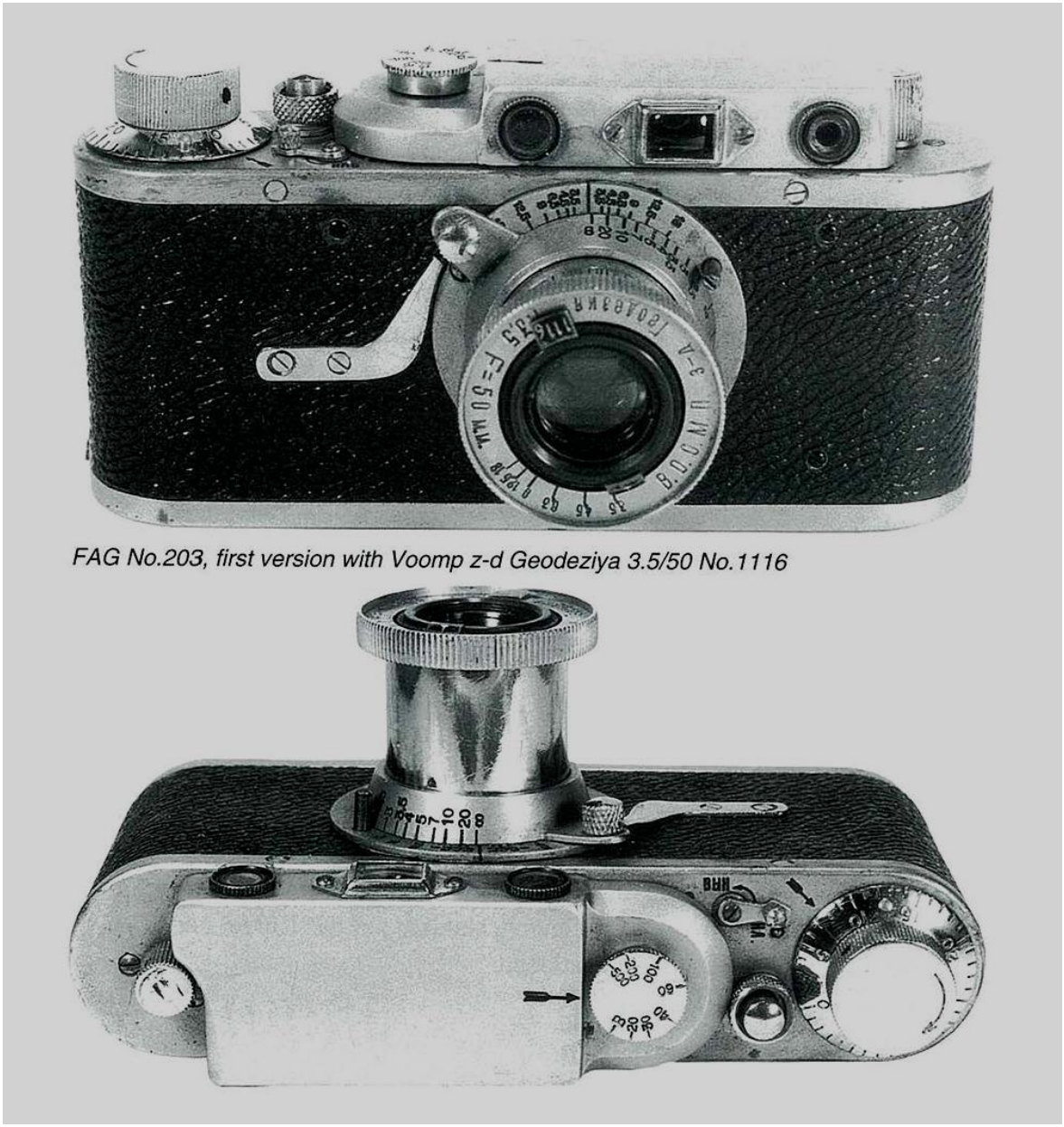
Filmanka 1931

Sport/Gelvetta

Pioner nº 2

Pioner №3 (1936/1937)

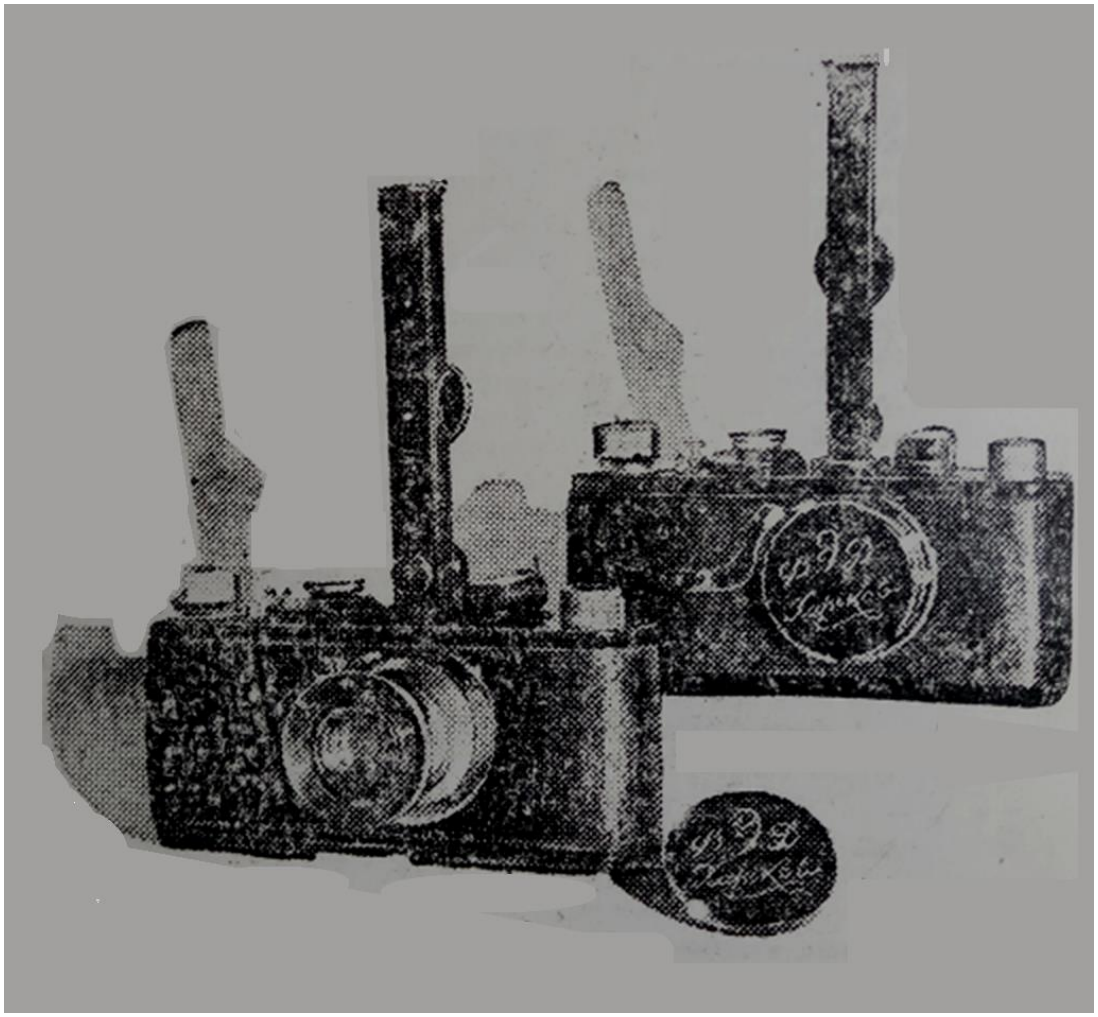
Pioner Geodesiya



FAG No.203, first version with Voomp z-d Geodeziya 3.5/50 No.1116

Voomp Geodesiya

FED Pioner



FED Kharkov (Fedka) (Sovietskoe Foto both pictures)

Soviet “ROBOT” of 1949

GOI (Leningrad) 1947/1948

CONJECTURES.

This camera has already been written quite a lot. For about 30 years, and perhaps even more, collectors of rare photographic equipment are trying to unravel the mystery of the origin of this camera (somewhere at the dawn of Perestroika, from the West, information about such rarities began to reach us), and in fact nothing attracts like you can ponder, it is not prohibited. Interest in this case is directed towards a camera - a hybrid of "Leica" and "Contax", usually attributed to the Soviet one, although, apart from the content of the inscriptions on the rangefinder plate and covers, there is probably no more Soviet in it. Disputes, apparently, subside only when there will be official documents regarding the origin of this chamber. For more than two decades, the Soviet industry - mainly two enterprises - FED (from 1934) and KMZ (from 1948) produced a camera — a copy of the second German model "Leica" (1932). After the war, Leica was copied by many countries, both Western and Eastern. All of these were more or less well-known, large or not so, the manufacturers of photographic equipment. There were even German copies, for example, "Neuca" (Franz Neubert, Feinmechanische Werkstatte, Jena, 1946/47). (one)

TVSVS "First Model"

Leica rangefinder system (i.e., 51.6mm),

Contax was standardized around a standard lens of 52.3mm.

98 % and 101%

TVSVS “Second Model”

All these copies are mainly attributed, the ambiguities relate mainly to the circulation and the years of release of the camera. However, there is one interesting copy, released in small editions, about which little is known. Its conditional name is "VTSVS" (Military Topographical Service of the Armed Forces).

THE RISE AND DEMISE OF THE "MODEL 2"

As already mentioned, today there is no certainty or any document about the place of manufacture of this chamber, and its purpose is also debatable (the army symbol implies some special use). If we consider the camera as a tool, then the "VTSS" is the least universal tool, since apart from the lens with F = 50mm, nothing can be put on it (the outer bayonet has been removed), no "tabular" devices were issued to it (nor developing such device for this camera, apparently were intended to done). This is not a "clean" copy of "Leica", as the lens is applied via a bayonet instead of a thread.

Since there is no official information about the release of this camera, versions appear: for aerial photography [1], the version of the "award" camera for top commanders of the USSR Armed Forces, the version of the device for surveying (in that it was a device after all) the staff are convinced that the staff and teachers of the department of phototopography and photogrammetry of the SPbVVTU named after A.I. In the '50s, in this school the "VTS" cameras (as they were called here) were used as teaching aids in teaching photography cadets. "In the fields", when conducting ground surveying for mapping, it was necessary to document external objects, for this it was enough to have a film camera. As a bonus, this camera was used on the occasion [2]

The second model on analysis is an outstanding development of the first model which was capable of use only one lens type, and only having high speeds shutter. This new model counts on flash and strobe synch, large base rangefinder, removable back, full compatibility with Kiev/Contax lenses, frame for two telephoto lens fields in the view finder, and slow speeds control, increasing the range of use, denoting an orientation towards the consumer public market area. Although having a better overall specification, it received the stigma of the previous model, high manufacture costs, limited availiability of normal lenses (Sonnar lenses), and had present range of applications superseded by Zorki 4.

References:

1 - “Leica Copies by HPR” CCP UK 1994.
2 - J-L Princelle “Russian and Soviet Cameras” Hove Foto Books, 1995.
3 - P.H.Pont and J-L Princelle “300 Leica Copies” France, Fotosaga, 1990.
4 - Suglob V.P. “1200 f \ a from the USSR: classifier catalog”. Minsk: Medial, 2009.
5 - “Photocurrier” № 8-9, 2004.
6 - “USSR. Office of the Air Force Command. Nomenclature reference for the property of the aerial photo service. Military Publishing, 1949.
7 - “OMP” No. 5 1933.

https://photolubitel.com/index.php?route=module/kbm/article&kbm_article_id=15

https://photolubitel.com/index.php?route=module/kbm/article&kbm_article_id=14

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