

And came the war

Leningrad (Sankt Petersburg) is largely known world over by the Siege of Leningrad or Leningrad Blockade which was a long military operation during WWII undertaken by the German in the Eastern Front theatre. The attack has begun at August 20th 1941 when the Germans arrived at Leningrad. Finland attacked at east front, cutting all city supplies, but Leningrad did not fade.

The siege started on September 8th 1941, when the last road to the city was severed. Although the Soviets managed to open a narrow land corridor to the city on January 18th 1943, the siege was finally lifted 27 January 27th 1944, during a total of 872 days being the longest and most destructive siege in history.

Historically documented is the fact that Germany's main objective was making the people to die of hungry and starvation, once there were no plans of relocation the urban population, and soon occupy the city after a giant calamity of a planned destruction of the city, thinking that the rest of the country would receive an unconditional rendition after this horrendous fact.

This intention could be proved through the yet printed invitations to the victory that would be celebrated at Hotel Astoria when the city would change its name for *Adofsburg*.

The blockade was cutting off all communications and prevented the defenders from receiving food or supplies. Food would be the main weapon against the citizens, cutting them the city would reach starvation after only a few weeks. The objective was never occupy the city but maintain it under bombardment and siege in order to accelerate the starvation.

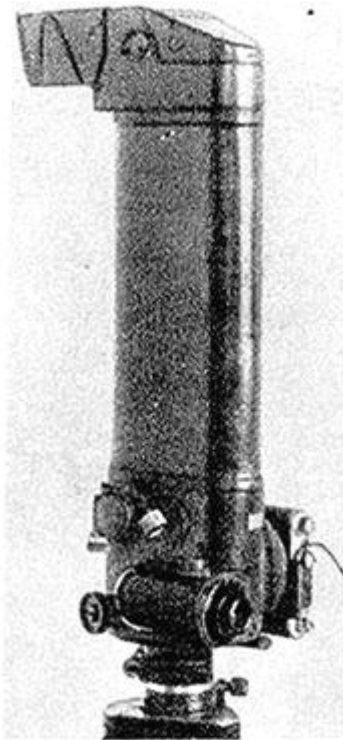
Heroically Leningrad resisted although each day increased the number of deaths. At LOMO all employers and directors began to live in the factory in order to concentrate efforts. Several production items of their own were passed to the new formed Krasnogorsk in Moscow and to Siberian factories opened at clear sky!

During these dark days the GOMZ conglomerate produced up to their possibilities an interesting kit destined for observation of the Finnish coast. It was the DF telescope 1500mm focal length f25 with 1°15' field observation and further a PDF with the same optical block in periscope mount to be used in trench.

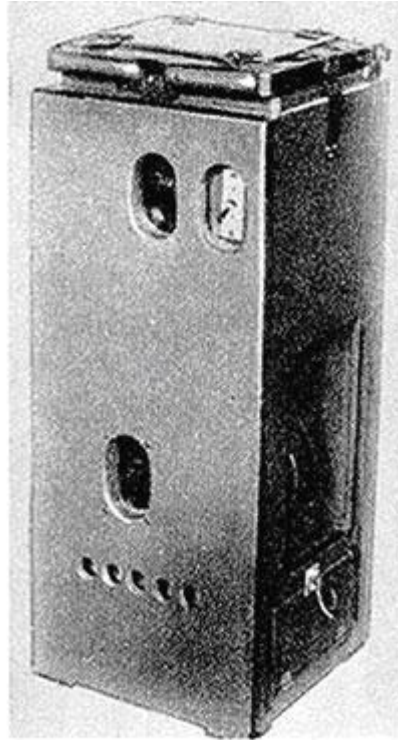


DF Photo-Telescope

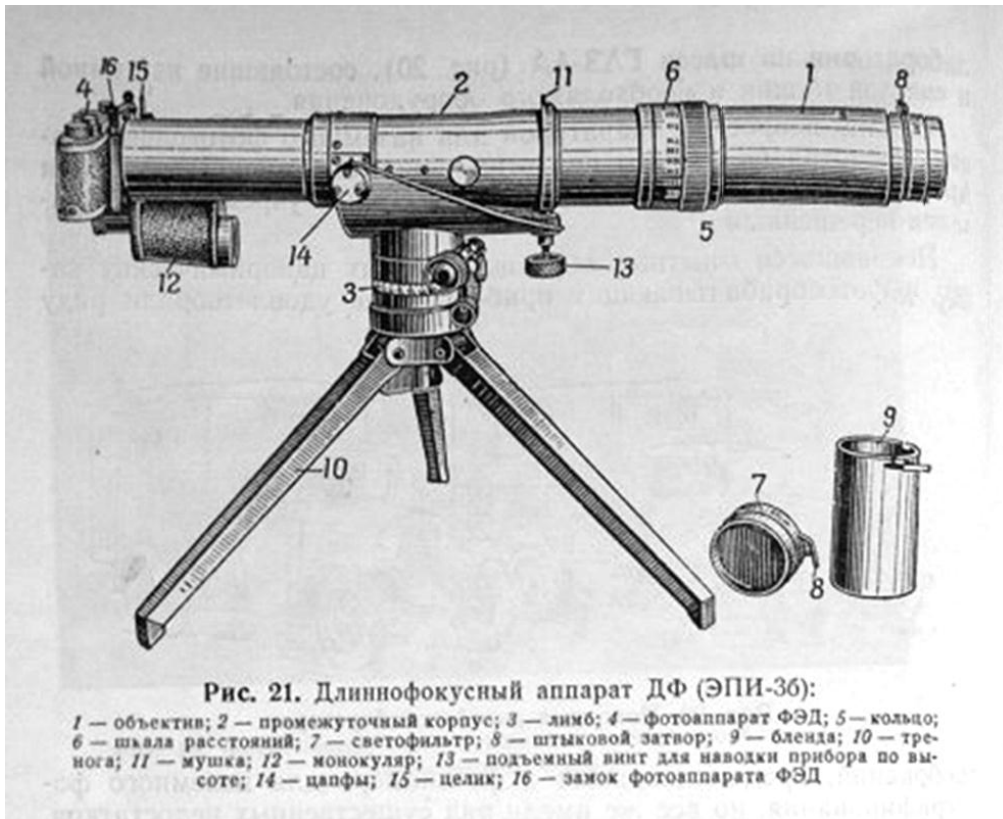
Minimum focus at 100m



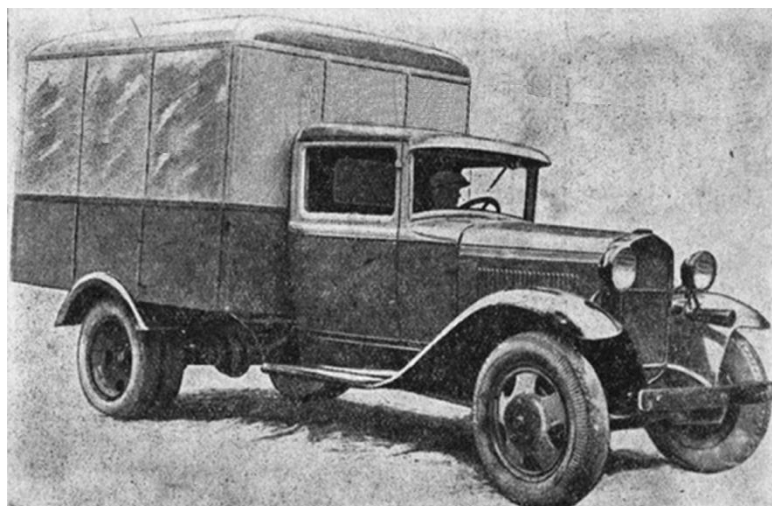
ПРИБОР ПДФ



ФОТОУВЕЛИЧИТЕЛЬ УДФ



Also a portable enlarger that needs no darkroom being used in battle field for immediate distribution of pictures to strategists. This enlarger uses car headlamps and is exclusively built for 35mm negatives (24x36mm), and 9x12cm enlargements. The equipment were used in mobile laboratories assembled in cars or trucks aimed to military seeing quickly the Picture results.



GAZ AA Automobile (Polutorka) used as auto photo laboratory

On June 27th 1941, was organized the civilian population defense, and over a million of citizens were engaged in the construction of fortifications. It is said that the guns of the cruiser *Aurora* were

moved to the Pulkovo Heights, place of the Observatory "World Capital of Astronomy" since 1840.

Food and artillery supply were done via the Lake Ladoga known as "The Ice Road". The city literally starved in complete isolation until November 20th 1941, when the ice road over Lake Ladoga became operational. This road was named the Road of Life.

The siege was finally broken in after fierce battles of the Operation Iskra started in the morning of January 12th 1943, providing some relief to the besieged population of Leningrad.

Finally in January 27th 1944, the Soviet expelled German forces from the southern area and in June of 1944, the Finnish Defense Forces returned to their land.



The Peace came

During the early peace years it was necessary to reconstruct the city and the mind of citizens. A new Hope for everyone. About one year after the war's end, GOMZ introduced a brand new camera. This new camera was called "Komsomolets". The new camera was a real landmark in Soviet camera industry. For the first time they accepted a standard roll film. Previous cameras in Soviet Union only accepted roll film made from 35mm film Now for the first time a standardization. The name "Komsomolets" was careful chosen. During WW I several inexperienced countrymen were killed in the war front and their sons invaded the city bringing social problems to citizens. Now in similar situations these young people who lost their families would be the hope for the future of the Country. The youth is now organized in their schools. Komsomolets means acronym of **Kommunisticheskii Soyuz Molodyozhi** [All-Union Young Communist (League)], a kind of

scout boys organization, that way an homage to the young boys and girls, the future of the Soviet Country.

THE LUBITEL FAMILY

(from the book *Love from Waist Level*)

Born From The Ashes

To put things in perspective, let's first take a look at the time frame. The Soviet Union stood victorious in the aftermath of World War II and laid claim to Eastern Germany. With this new territory came a crucial resource for their burgeoning nation – the knowledge and tools of the world-famous German optical & photographic industry. Whole factories were dismantled and shipped East – destined to supply the Soviets with world-class means of documenting their daily lives and great loves.

One beneficiary of this new technology was "GOMZ" – which elegantly stands for "Gosularstvennyi Optiko-Mekhanicheskii Zavod" (State Optical-Mechanical Factory). Established in St. Petersburg (Leningrad) since 1914, this was one of the oldest Russian optical companies. In 1965, they changed their name to something a bit more familiar to folks like us: Leningradskoe Optiko Mekhanicheskoe Obiedinenie (Leningrad Optical-Mechanical Union) – or simply, "LOMO."

About one year after the war's end, GOMZ introduced a brand new camera. Dedicated to and named after the Soviet Union's Communist Youth Organization, this small twin-lens medium format camera was called the "Komsomolets." On the surface, it was an obvious copy of the Voightlander Brilliant – a ground-breaking TLR camera that was created nearly 10 years prior. It featured a glass lens and a lightweight Bakelite (an early form of plastic) body. Despite the Komsomolet's simplicity and clear "homage" design, it was a pretty incredible achievement for a country that just emerged from a huge and damaging war.

Komsomolets although a copy of Voightlander Brilliant, it had another technology in its base. The shutter and lens are completely based in Zeiss technology. The T21 lens from Komsomolets is a continuation of the project "Nettar" which is quite different from "Voigtar" or "Vaskar" and focusing Lubitel camera is not a copy of focusing Brilliant once its T22 also based in "Nettar" is a complete different lens from Skopar. The shutter ZT-series is a Russian concept, although based on early Klio shutter used on Zeiss cameras. The basic block Shutter/Lens suffered many variations and were employed on Smena, Yunost, Sputnik, Effekta, Estafeta, Vympel, Vesna, Schkolnik, and in more advanced forms in Smena Symbol, Rapid, LOMO 135, Smena

Stereo and Etюд(LOMO). Lubitel generations was a landmark in amateur world photography This camera is still produced (in China) and Smena put the quality camera affordable to every one's pocket.



The origins of Komsomoles and Lubitel: left: Voigtlander Brilliant V6, right: Focusing Brilliant

The Amateur's Delight

After three years of producing Komsomolets, the GOMZ factory proudly introduced a new camera with a radically important feature – coupled lenses. This meant that focusing the viewing lens focused the taking lens in kind, allowing the photographer to hone in precisely on their subject. This camera was given the name “Lubitel” – which roughly translates into “Amateur” in Russian. From these humble beginnings, a grand lineage was born.

Over the next few paragraphs, we'll take you through each individual Lubitel model and details their many charms and features – so we don't have to get into the specifics right now. But chew on this for a second – from the Lubitel's original conception in 1949 to the end of its production in the early 90's, something between 4 and 5 MILLION cameras were produced. That's somewhere between 8 and 10 MILLION little Russian lenses mounted low and high. Given these staggering numbers, it's easy to appreciate the impact that the Lubitel had on its fans and owners – both inside and outside of the Soviet Union. Allow us to take you through it's grand “family tree” – beginning with a few individuals that predated those fateful days following WWII.



THE LUBITEL MODELS

KOMSOMOLETS “YOUNG COMMUNIST”

Produced 1946-1950 / Approximately 25,000 units
Central shutter with B, 1/25, 1/50, 1/100s
T-21 80/6.3 taking lens, 75/4.5 viewing lens

Appropriately named after the Communist Youth organization “Komsomol,” this camera is one of the very first products created by the burgeoning Soviet photo industry. It is also the very FIRST TLR camera created in the Soviet Union. Overall, it’s pretty much an exact copy of the original non-focusing Voigtländer Brilliant, albeit with a few simplifications to the body design. It’s produced in Bakelite – a predecessor to modern-day plastics. Although the focusing Voigtländer Brilliant was released eight years earlier, the Komsomolets was modeled after the first Brilliant, so the taking and viewing lenses are not connected.

As with the Brilliant, the Komsomolets has a small internal compartment for storing filters and supplementary lenses.





LUBITEL “ AMATEUR”

Produced 1949 – 1956 / Over one million units
Central shutter “ZT-5”: 1/10 – 1/200s
T22 75/4.5 taking lens (coated), 60/2.8 viewing lens

The successor to the Komsomolets has one major innovation – as inspired by the 1938 Voigtlander Brilliant – a coupled gearing to connect the taking and viewing lenses, allowing each to be focused in sync. It’s shutter had a larger range of speeds, and it’s shooting and taking lens both opened up to a nice n’ bright f/2.8 and had a wider angle of view.

The name “Lubitel” roughly translates to “Amateur” – the type of person who would have been a seriously lucky goose to have one of these appear under the Christmas tree. Like the Komsomolets, it was produced in Bakelite. And just for kicks – a Chinese copy of this original Lubitel emerged in 1961 under the mysteriously hilarious name, “Changle.”

LUBITEL 2

Produced 1955 – 1980 / Over two million units
Another Bakelite beauty, the Lubitel 2 is pretty much identical to the original Lubitel, but with a few small changes. A gentleman by the name of G. Barkovski, is credited with the creation of this “upgrade.” Most notably, the camera now featured a self-timer and flash sync. It also has a small housing on the side for two lens filters.

As you can see from its production dates, the scope of its manufacture is HUGE. We’re talking over two and a half decades of Lubitel 2’s! An interesting note is the Bakelite texture from camera to camera. Bakelite molds only work for so long before they have to be replaced. As they wear out, they’ll impart different patterns and “mistakes” to the body parts that they produce. If you compare a few Lubitel 2’s from different years, you’ll often see a marked difference in the texture. Lubitel 2’s were produced with both Latin and Cyrillic nameplates – and were produced for a variety of export markets and foreign

partners. One notable variant (pictured here) is the Kalimar TLR100 – which is simply a re-branded Lubi 2.



LUBITEL 166

Produced 1976 – 1986 / Approx 70,000 units

Starting in '76, the Lubitel was cast in modern-day plastic, rather than Bakelite. The original 166 is a somewhat rare model – as it's production number (70,000) is far beneath the mammoth quantities commanded by the other models. It featured a few significant improvements over the Lubitel 2, namely a film counter (rather than a red window) and a coupled advance and shutter cock. One of the most collectible variants was made in 1980 to commemorate the Moscow Olympic Games.

LUBITEL 166B

Produced 1980 – 1990 / Approx 900,000 units

This model took the innovative Lubitel 166 and simplified it. Gone is the film counter and coupled shutter & advance. In exchange, you get a set of handy weather symbols to guide your exposure settings.



LUBITEL 166 UNIVERSAL

Produced 1983 – 1993 / Approx 400,000 units

It's with this beauty that the folks at LOMO in St. Petersburg closed the book on classic Lubitel production. This camera is essentially identical to the 166B, but

includes a mask for two film formats: 6x6cm and 6x4.5cm. It was actively manufactured until 1993.

LUBITEL CURIOSITIES

SPUTNIK STEREO CAMERA

Produced 1955 – 1973 / Approx 400,000 units

This three-eyed beauty is often mistaken for a pair of Lubitel 2's which have been joined at the hip. Although they share a lot of the same basic mechanics, the Sputnik is definitely a separate beastie of its own.

But given its similarity, we decided to feature it here as a “family friend.” Fashioned in Bakelite, the Sputnik was created at the LOMO St. Petersburg factory and featured twin 75/4.5 lenses, speeds from 1/10-1/250, and a ground glass waist-level viewfinder. Each click of the shutter fires two nearly identical images – with “nearly” being the operative word. Both shots have a slightly different perspective – allowing you to get the full 3D effect when you view them with the included – and very special – stereo viewing glasses.



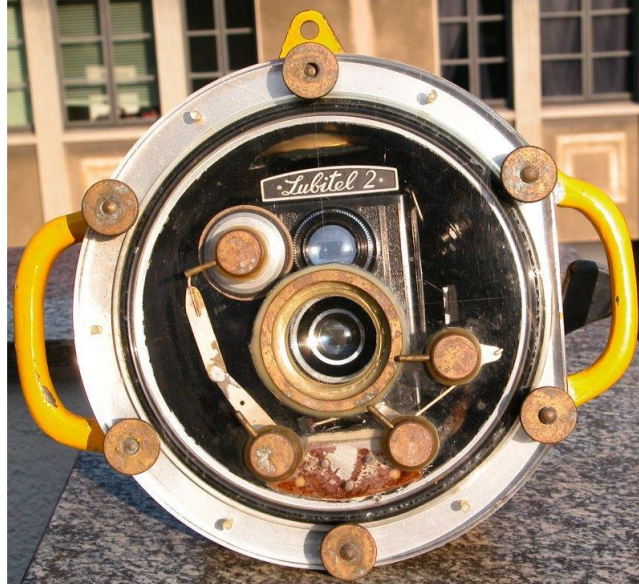
At the chapter *Foreign Country Experiences* you may see in the section Brazil a series of interesting adaptations and further developments up-dating these cameras and Smena.

You can also see a Single Lens Reflex with the same philosophy.

Those cameras were not limited to these models. At the mind of people, the inventive people and those who had skillfulness and possibilities came a lot of several variations. At the times being the doing yourself and inventiveness were great and every task was encouraged. That was the reason tools were produced in large quantities and affordable to everyone. House shops were

working abroad and who had no skill, requested to the one who had. In the factories, workers had access to high quality tools and special machine tools during the spare times and so were born....

Other Curiosities in 6x6



Underwater housing above for Lubitel camera, down for Sputnik no data obtained. Unknown authors.



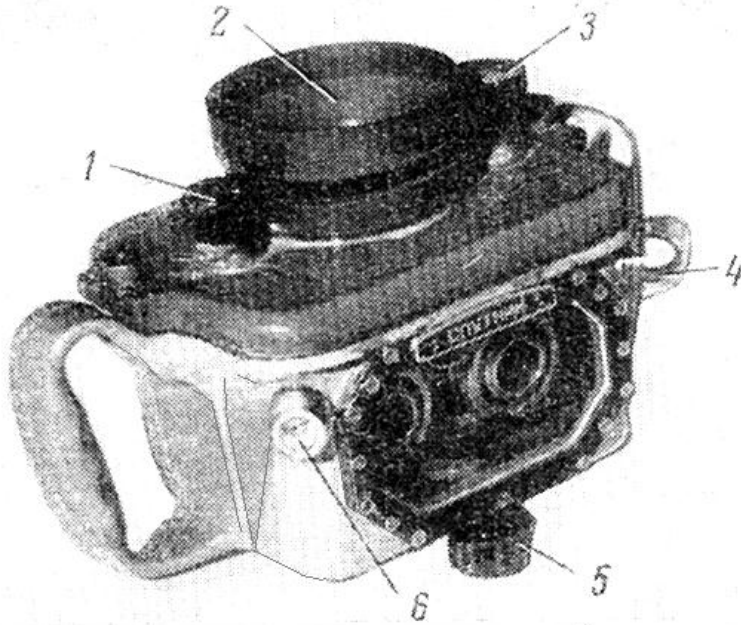


Рис. 33. Бокс для стереоаппарата „Спутник“:
 1 — рукоятка взвода и спуска затвора; 2 — иллюминатор для наводки на резкость по матовому стеклу; 3 — рукоятка перемотки пленки; 4 — рукоятка фокусировки объективов; 5 — рукоятка установки диафрагмы; 6 — гнездо подключения лампы-вспышки.

Two more housings commercially available in small quantities.

Above from Original LOMO housings. Down conceived by A. Rogovym (Underwater Sportsman)

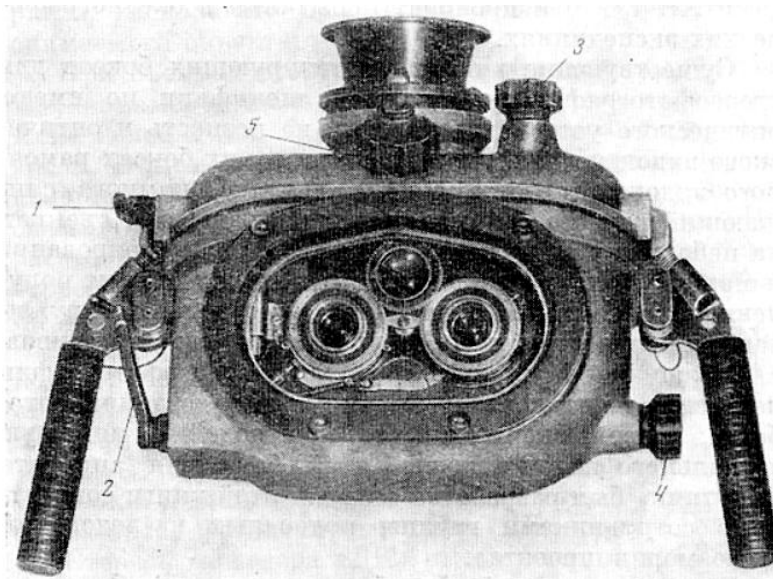


Рис. 25. Внешний вид герметизирующего бокса для стереофотоаппарата «Спутник»
 1 — рычаг для взвода пружины затвора; 2 — рычаг спуска пружины затвора; 3 — рукоятка для перемотки пленки; 4 — рукоятка для регулирования диафрагмы; 5 — рукоятка привода для фокусирования объективов



Lubitel Screen compendium for oscilloscopes made by LOMO



Device UPL-1 using the Lubitel body as enlarger part



Twin paired handmade Lubitels for stereo



Photography
USSRPhoto



experimental Stereo

Factory men made



Elektron independently built-in electronic flash combining a Lubitel 2 camera and a Luch 57 flash, and Lubitel with high capacity 35mm film adapter



The Panorama 22 has its roots on Lubitel and Horizont. Format 55 x 137mm

Meanwhile LOMO technicians were developing together German experts cameras would create a new status. These were the cameras they were working, and appeared in 1949.

First Leningrad experiments:



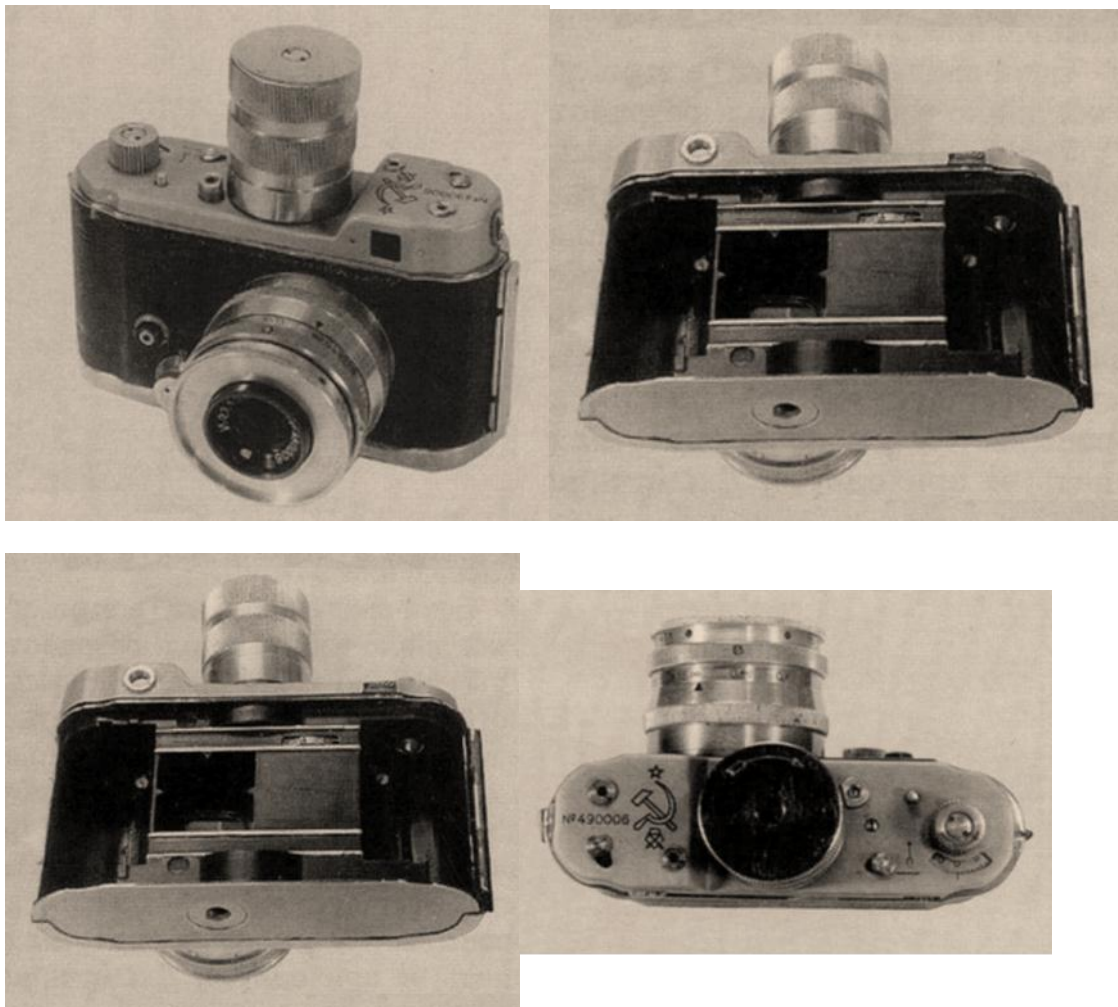
Leningrad 1st generation (1949)



Leningrad 2nd generation (1952)

First FCH experiments:

1949 was a year of results. Then it was also born the FCH a Luftwaffe Robot copy made for the Soviet Army.



The new FCH camera made also in two different series made use of the recently developed Industar 22 lens from KMZ. Observe that the second Leningrad generation (1952) it was a motor driven camera.



From then, one spring motor drive camera was a request of Soviet government. This represent a union of efforts making a "fusion" of previous Leningrad and the FCH. All cameras had rigid metal focal plane shutters.

KOMSOMOLETS

Producer: GOMZ
Years of production: 1946-1950
Lens: Triplet-21 6.3/80
Shutter: 1/25, 1/50, 1/100, + B.



LUBITEL

Producer: GOMZ
Years of production: 1949-1956
Lens: Triplet 22 4.5/75
Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.

See development and variants at the beginning.



SMENA 1ST GENERATION

Producer: GOMZ
Years of production: 1953-1960
Lens: Triplet-22 4.5/40
Shutter: 1/25, 1/50, 1/100, 1/200 + B.



Smena 1



Smena 2

Detailed smena evolution
In the next segment



Smena 3



Smena 4

MOMENT

Producer: GOMZ

Years of production: 1952-1954

Lens: Triplet 26 6.3/130

Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.

For Polaroid film type



UCHENIK

Producer: GOMZ

Years of production: 1952-1954

Lens: Triplet 26 6.3/130

Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.

For 9x12 plate film



SPUTNIK SPUTNIK-2

Producer: GOMZ/LOMO

Years of production: 1955-1975

Lens: 2x Triplet 22 4.5/75

Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.

Sputnik 2: Lens: 2x Triplet 35 4/75

Shutter: 1/15, 1/30, 1/60, 1/125, 1/250
+ B.



NEVA

Producer: GOMZ

Years of production: 1956-1958

Lens: Industar 6 3.5/75

Shutter: 1/8, 1/15, 1/30, 1/60, 1/125,
1/250 + B.



Courtesy of ussrphoto.com

LENINGRAD

Producer: GOMZ/LOMO

Years of production: 1956-1968

Lens: Jupiter 8 2/50

Shutter: 1 sec to 1/1000, in logarithmic or linear scale according to the production year. Original project began in 1949 – See the article

Three Leningrad generations:

A Landmark of an Era

A great success at 1958 Brussels Fair receiving the Gold Medal of Peace.



EFFEKTA

Producer: GOMZ

Years of production: 1955-1956

Lens: Triplet 22 4.5/75

Shutter: 1/10, 1/25, 1/50, 1/100, 1/200 + B.

Forerunner study of Estafeta and Vympel



ESTAFETA

Producer: GOMZ

Years of production: 1957-1958

Lens: Triplet 35 4/75

Shutter: 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B. with LVS

Simplified version of the Yunost, now in 6x6 frame size.



ESTAFETA (MMZ)

Producer: MMZ

Years of production: 1959-1961

Same as GOMZ model.



VYMPEL

Producer: GOMZ

Years of production: 1957-1958

Lens: Triplet 35 4/75 (or Industar 6 in first units)

Shutter: 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B. with LVS

Version Yunost, now in 6x6 frame size.
Maintaining rangefinder.



VYMPEL (MMZ)

Producer: MMZ

Years of production: 1960

Same as GOMZ model.



SPORT

Producer: GOMZ
Years of production: 1957
Lens: Triplet 32 3.5/45
Shutter: 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B. with LVS
Upgrade model of Smena incorporating coupled rangefinder. Together Estafeta and Vympel, the first Soviet camera to incorporate LVS shutter.



YUNOST

Producer: GOMZ
Years of production: 1957-1960
Same as Sport with a general face lift. Name was changed not to be confused with prewar SLR Sport also from GOMZ.

A great success at 1958 Brussels Fair



MAYAK

Producer: GOMZ
Years of production: 1961
Same as previous Yunost with a new top housing and rangefinder through a single ocular
Only prototypes made.



OGONIOK

Normal Yunost camera associated to a new bottom cover carrying a small electronic flash unit. Together Smena 2 Ogoniok and Lubitel Elektron these were early attempts towards a built-in flash on camera.

Years of production: 1961 (probably)

Russians came first on electronic units. Previous models built for single use lamps already existed.

See the Curiosities section.



KOMPAKTA

Producer: GOMZ

Years of production: 1956-1958

Lens: Industar 65 2.8/28

Shutter: 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B.

This camera uses 16mm film and is a real curiosity. Really it is a rangefinder version of the 1951 Minicord from Goerz in a reversed construction and smaller body.

Was announced at Western press through Science et Vie magazine in 1961



KOMPAKTA 2

Producer: GOMZ
Years of production: 1960
Lens: Industar 65 2.8/28
Shutter: 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B.

Intriguing Reflex camera, once the previous model was well established, they decided to copy the original Minicord, that is smaller than the first version. Same specifications as above.



VOSKHOD

Producer: LOMO
Years of production: 1964-1968
Lens: Triplet 48 2.8/45
Shutter: 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B.

This camera was the successor of the Yunost the exposure meter was tied with the speed and diaphragm giving the correct diaphragm for each speed and vice-versa.

It is said the Triplet 48 was developed together with the Emtar 2.8/45 applied on Polish Fenix cameras.



VOSKHOD STEREO

The Voskhod inspired two stereo prototypes: This is the second one.
Producer: LOMO
Years of production: 1967
Double lens and shutter. Possibilities of working in stereo or mono 24x32 size.



ALEI

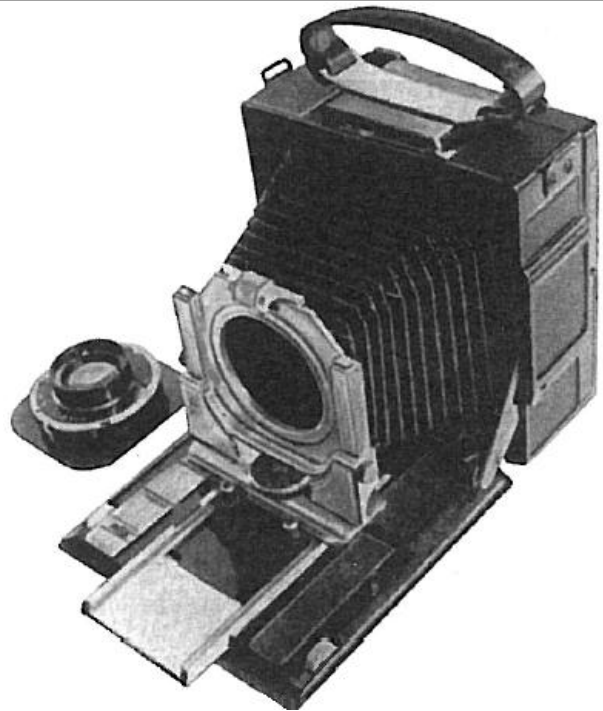
This is the first one.
Producer: LOMO
Years of production: 1964
Double Voskhod lens and shutter.
Possibilities of working only in stereo mode 24x32 size. But has panorama capabilities 24x70 size.



TECHNO

Producer: GOMZ
Years of production: 1958
Lens: choice of Industar 55 4.5/140 and Orion 6.3/80
Shutter: "Temp" (Compur type) 1, 1/2, 1/5, 1/10, 1/25, 1/50, 1/100, 1/200 + K(B) & D(T).

A re-edition of the prewar model with some refinements. Double front extension bellows with off center movements and rear extension with tiltability



SELENA 2

Producer: LOMO

Years of production: 1966-1969

Lens: Industar 73 2.8/40 or Helios 79 2/45

Shutter: 1/30, 1/60, 1/125, 1/250, 1/500 + B. At a choice of diaphragm the speed is set automatically; At a choice of speed the diaphragm automatically goes to the ambient light.

Shutter is fired by the left hand in the bottom front of the camera.



SELENA 2.8

An odd characteristic is the lens out of the center of the shutter barrel



SOKOL 6 CELL

Producer: LOMO

Years of production: 1966-1969

Lens: Industar 70 2.8/50

Shutter: 1/30, 1/60, 1/125, 1/250, 1/500 + B. At a choice of diaphragm the speed is set automatically; At a choice of speed the diaphragm automatically goes to the ambient light.



SOKOL 3 CELL

Completely automatic and identical to the previous series. Those cameras has only one operating hole hiding the cell. The other ones are merely decorative.



SOKOL -2

These cameras have only X synch and no addition of a hot shoe.

All the models have the most sophisticated rangefinder found on a camera. Parallax correcting and all indications seen in the viewfinder. Extra bright and contrasty view.

These cameras were sold under various names: Aurora, Revue Auto and Ladoga



All Sokol and LOMO 130 cameras were developed in a pool together with Fuji Photo Film and CPL Copal Precision Ltd.



LOMO 130

Same as all Sokol models slightly simplified made for the internal market. The one single cell is the real unique operating in all models.



ETIUD

Producer: LOMO
Years of production: 1969
Lens: Triplet 48 2.8/45
Shutter: 1/30, to 1/500, in continuous mood. Shutter adapted from Smena
Symbol
Was planned to be the successor of Voskhod but did not enter in production



FKM-1

Microscope version of Etiud
Years of production: 1969-1980
No lens no shutter



COSMIK 117

Producer: LOMO
Years of production: 1973
Lens: Industar 87 5.6/25
Shutter: Electronic continuous mood.
Uses the Film ORWO K-16 similar to the 110 type



ALMAZ 101

Producer: LOMO
Years of production: 1980-1981
Lens: Volna 4 1.4/50
Shutter: completely electronic with
stepless control 30 sec 1/2000s
Only prototypes



ALMAZ 102

Producer: LOMO
Years of production: 1979-1984
Lens: Volna 4 1.4/50
Shutter: electro mechanical shutter 1s to
1/1000 data transference from TTL
prism.



ALMAZ 103

Producer: LOMO
Years of production: 1979-1986
Lens: Volna 1.8/55
Shutter: Completely mechanical shutter
1s to 1/1000 and plain prism.



ALMAZ 104

Producer: LOMO
Years of production: 1986-1989
Lens: Volna 4 1.4/50
Redeveloped camera from model 102
extra contacts in body and prism shows
speed numbers on screen through LED
displays.



ELEKTRA 112

Producer: LOMO
Years of production: 1979-1984
Lens: Industar 73 2.8/40
Shutter: Point and shoot conjugated
shutter from 30sec, to 1/500 automatic
shutter



1

LOMO КОМПАКТ

Three series

Producer: LOMO
Years of production: 1983-2005
Lens: Minitar 1 2.8/32
Shutter: 2 sec to 1/500 Production
transferred to China



First model (Russian style)



Variation M for internal market



Production and export model

ZENIT 35F



Evolution of Smena family setting a new generation of cameras towards a popular model. With built in flash.
Diaphragm is set by film speed.

Year of production 1987-1992
Lens: Triplet 4.5/35 fixed focus
Shutter: Fixed shutter speed 1/125.

LOMO 35F-1

Producer: LOMO

Second variation of Zenit 35F

Years of production: 1992- 1993

Lens: Triplet 4.5/35 fixed focus

Shutter: Fixed shutter speed 1/80.

In this model the flash automatically set its level of light according to conditions.



LOMO 35FM

Producer: LOMO

Years of production: 1992-1993

Lens: Triplet 57 3.5/35 fixed focus

Shutter: Fixed shutter speed 1/125.

Motor driven film

In this model the flash automatically set its level of light according to conditions

The prototype was made for developing motor driven cameras intended to be used in future SLR Almazes.



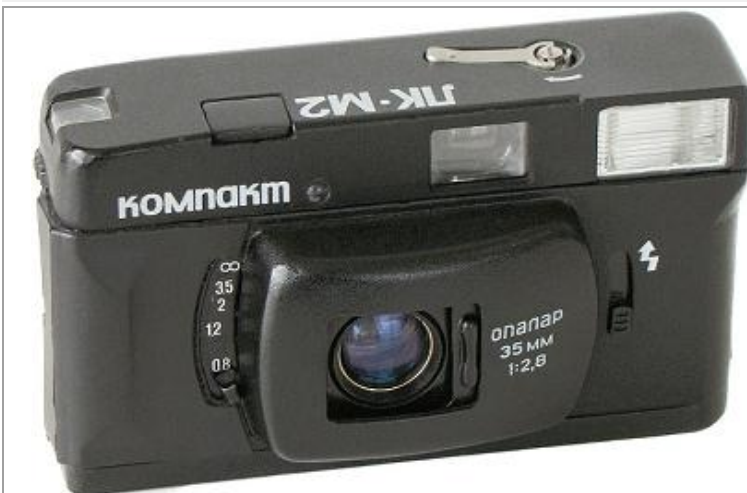
KOMPAKT – M2

Based on LOMO LCA with built-in flash

Producer: LOMO

Years of production: 1990

Lens: Minitar 2.8/32 or Opalar 2.8/35



KRAB

Underwater housing for LOMO LC-A

Year of production 1989-1999



AKVAKON

Underwater adaptation of model LCA
For direct underwater use.

Producer: LOMO

Years of production: 1988

Lens: Minitar-1 2.8/32mm

Shutter: Same as LCA



LOMO KOMPAKT

The Five types of LOMO Kompakt
Including the **Spy LOMO** variation made
to be disguised when used.



Spy LOMO Soap-box camera

SMENA 18

Produced: 1988 years



These cameras are mechanical prototypes of LOMO Kompakt. Include models using the optical-mechanical block of Smena 19.



AKVAKON 2



Underwater adaptation of model LOMO
35FM with motor wind
Producer: LOMO
Years of production: 1990
Lens: Triplet 57 3.5/35
Shutter: Same as LCA



Why a new Smena?

The Smena was the second camera intended to be mass produced by LOMO. It finally reached the market in 1953.

The post war years were reconstruction years and LOMO was in a stage to re-obtain the supremacy of previous days. It was said that when the war began, There were an unsold stock of Sport –Pioneer of SLR cameras. Those cameras came in wood cases that were used as firewood during the terrible Leningrad's winter days, while the cameras itself were thrown away.

The Komsomolets and further the Lubitel set new parameters of standards directing to a poor population that wanted cameras. Russia and all Soviet Union were employing how many people as possible in the reconstruction of the country, and specially the war destroyed Leningrad. In those post war years it was needed burn stages to the progress. Automobile factories grew producing trucks and autos, tractors etc. a standardization was felt needed. It was born the GOST State normalization. America sent a lot of war materials mainly in trucks tanks, military radios and planes. Every item was adapted for their internal production. Under this climate appeared the ZIS trucks, busses and cars, the GAZ trucks, the Lisunov Plane and EST radios and televisions. Just after the war there was decided to become a top of line world camera producer and cameras like Leningrad, first as GOI, The FCN and the TSVVS began to appear. The popular 35mm camera had to wait a bit. The idea was still difficult. The world did not see none yet. The Smena camera opened a new trend. A camera the western world had not see and we shall discuss this later.

The main goal was: - The new Smena must be one of the best cameras. Affordable and easy to use to oppose against snob (Capitalists) who think (and make other people believe) that he needs to use an expensive camera to take satisfying photos.

Some examples of the first post war days Soviet products:



ZIS-115



ZIS 15



ZIS-150



ZIS 154 busses 1946/1950



ZIS 155 1949/1957



GAZ M20 the most advanced passanger car of the era.



GAZ 12



GAZ-63



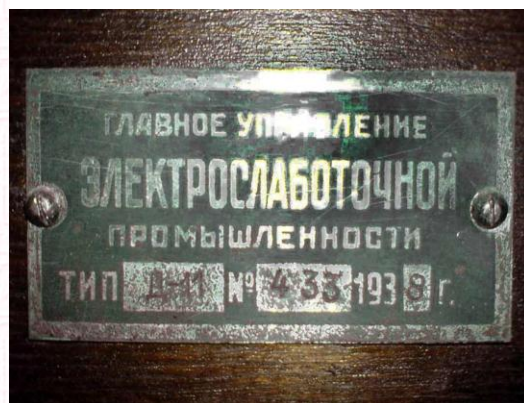
GAZ 56



MAZ 200



Lisunov LI-2



EST- D-11 similar RCA -15-3

The Birth of the Smena



The Kodak Bantam (1935-1938) (first model-picture above) began the Smena Saga before the war. In post war days everything was different. The camera had to reach the masses but make a professional level pictures. A study of all existing technology was established. The sma developer of the Smena pre-war, undertook the task of the Smena first generation. He was I. Shapiro. Were put on analysis the western greatest successes.

Three cameras were basically elected by their characteristics in each of the market segment and together intelligently amalgamated everything in the already available Russian resources.

The low priced cameras were:

The American Argus A; The American Kodak 35; The German Agfa Karat.

The quality cameras were three German cameras:

The Leica Compur; the Leica II; The Nettax; The Contaflex I

The Russian side was given by:

The VOOMP; The Lubitel; The Industar 22

In an era of so much American influence, The Smena became the "American" camera the Americans did not build.

The low priced cameras:



Argus A (1936)



Kodak 35 (1938)



Agfa Karat (1938)

The quality cameras:



Leica Compur (1930) Leica II (1932)



Zeiss Nettax (1937)



Zeiss Contaflex I (1953)

The Russian stuff:

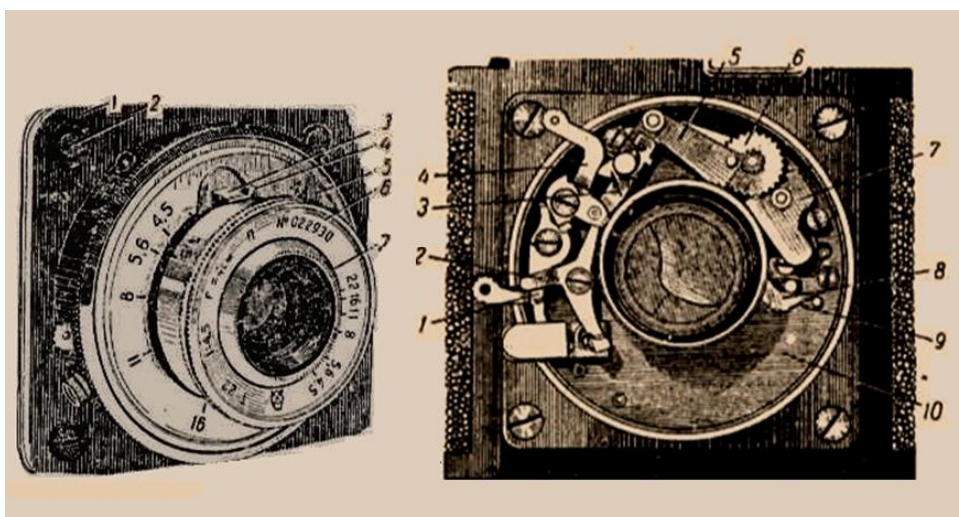
VOOMP Pioner camera



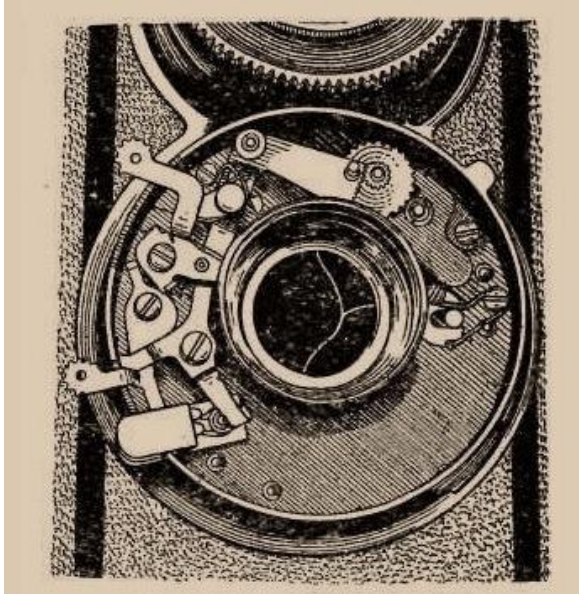
Lubitel and Smena shutter and lens comparison



The T-22 lens schematics

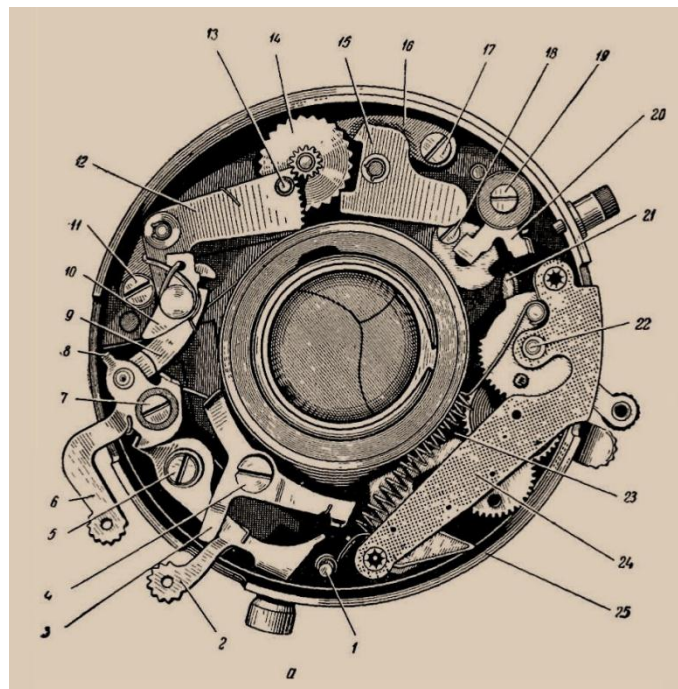


The Smena shutter



The Lubitel shutter

In both pictures self-timer removed.



Complete shutter assembled for both models

The Smena 1st Generation Chromosomal composition

From Argus A; the plastic body, the left hand advance, the film as part of the mechanics.

From Kodak 35; the all plastic body, the combined metal parts, the shape of knob.

From Agfa Karat; the compactness, the cartridge to cartridge load, the 32mm slip-on filters.

From Leica Compur; the all black construction, with shiny metal parts, the between the lens shutter; the lens quality level.

From the Leica II; the all black construction, the parallelipedical viewfinder house.

From Nettax; the general lens shape, the polygonal faced body, the removable back and the Zeiss look.

From Contaflex I; the proportions and all the polygonal Zeiss body

From the VOOMP; the complete parallelipedical viewfinder top and used the same already done viewfinder lens pair. *A Leica alike view!*

From Lubitel; the lens and shutter. -The lens is the same T-22 reduced to 40mm focal length. The glasses already existed it was needed only to correct the curves for the new focal. Reduce the FL to 40mm was a goal. *It maintained the Elmar relationship between focal length/lines per mm resolution in the center of the image.High quality results.* Was the first European camera to use this FL. (The first of all was the Olympus 35 of 1948). - LOMO used the same Lubitel shutter without iris diaphragm. The diaphragm was put into the lens.

The Industar 22 lent to Smena the external crown ring diaphragm "modus operandi".



Now, the name Smena discretely repeats the Komsomolets homage to the New Breed.



The possible postwar Smena would be a Zenit.

In the picture above the very first example of the Zenit prototype
Before adopt the name Zenit, the new camera was baptized as Smena. As Smena was in pre-war days a very simple camera, the KMZ engineers changed the name to Zenit because the name begins with "Z" so well received through Zeiss cameras.



The first Smena series with its 32mm yellow filter.



General view

Images: Courtesy of Camaras sin Fronteras



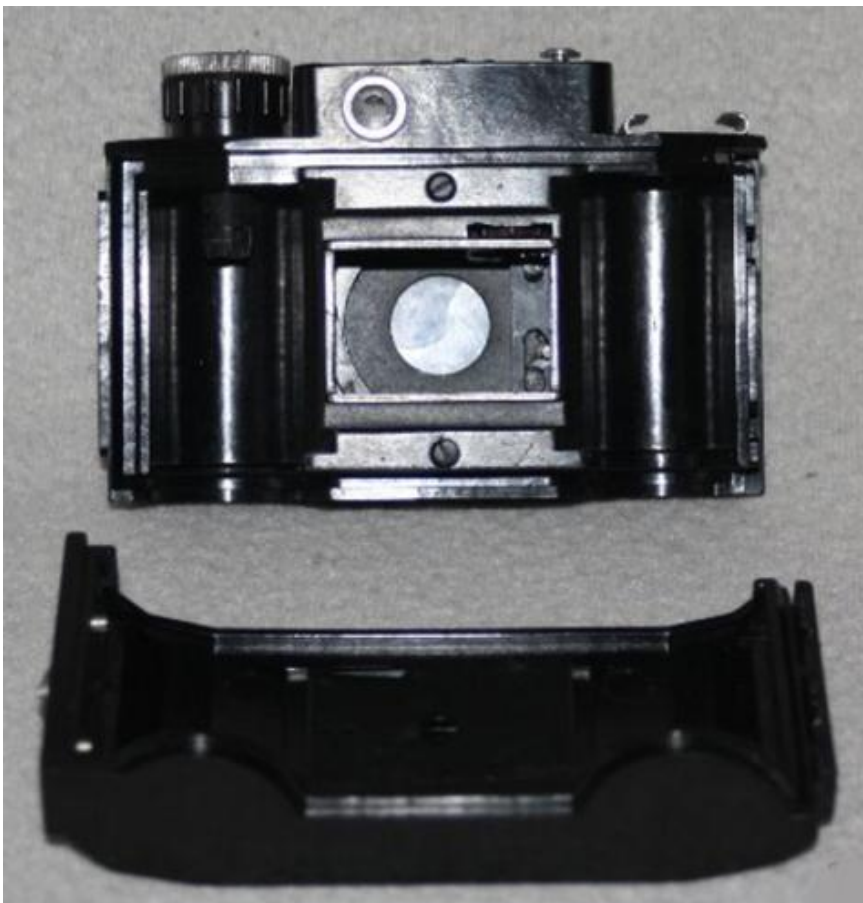
Back view



Bottom view



Top view



Rear internal view

These five pictures correspond to a later series with black face plate, plastic advance knob with film speed reminder and a new crown indicator of frame counter.

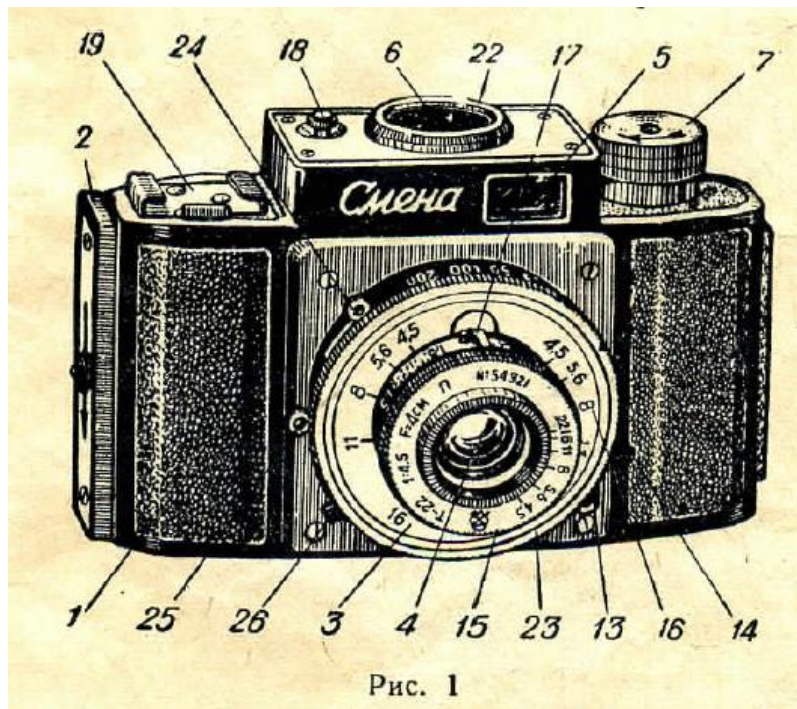


Рис. 1

1-body; 2-back; 3-shutter front disc; 4-lens; 5-finder window; 6-counter; 7-wind button; 13-self timer lever; 14-synchro flash; 15-front barrel; 16-depth scale; 17-limiter; 18-film release; 19-accessory shoe; 22-frame indicator; 23-speed dial; 24-shutter cocking; 25-release; 26-cable release input.

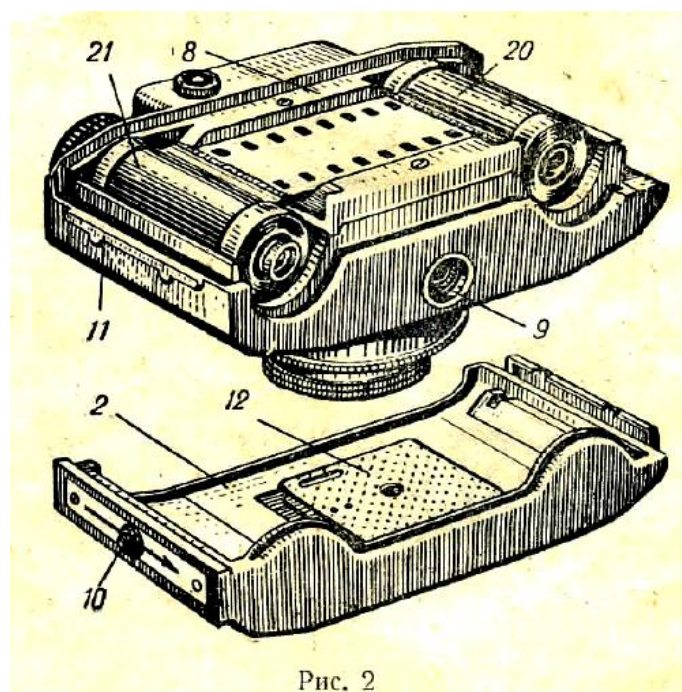


Рис. 2

2-back; 8-film guides; 9-tripod screw; 10-lock; 11-lock repairs; 12-pressure plate; 20-unexposed film magazine; 21-exposed film magazine.

Удобный спуск

При съемке «Сменой» быстродвижущихся объектов быстро нащупать спуск не всегда удается.



Предлагаемое мною приспособление делает камеру более удобной в работе. Его устройство показано на рисунке и не требует пояснений.

Комсомольск,
Ивановская обл.

А. Мироничев

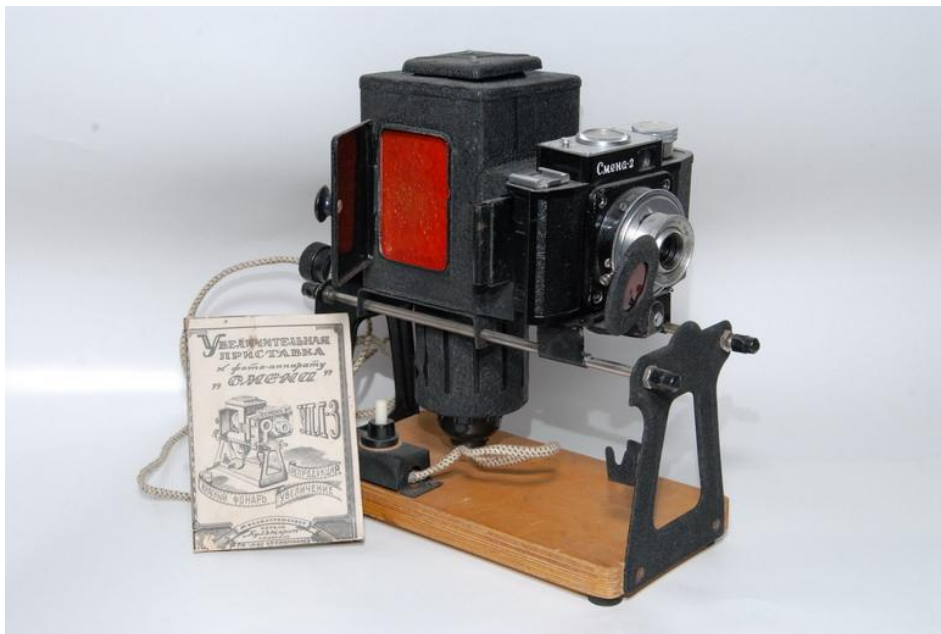
A Comfortable release for the old Smenas.



LOMO and MMZ logos in Smena backs



And front



A Smena enlarger UPL-3



Ogoniok a tentative built-in miniature flash Smena
(after A. Berry) – See similar on Yunost



Camera built by David Kravtsov inventor and developer of the stereo
printed view without glasses

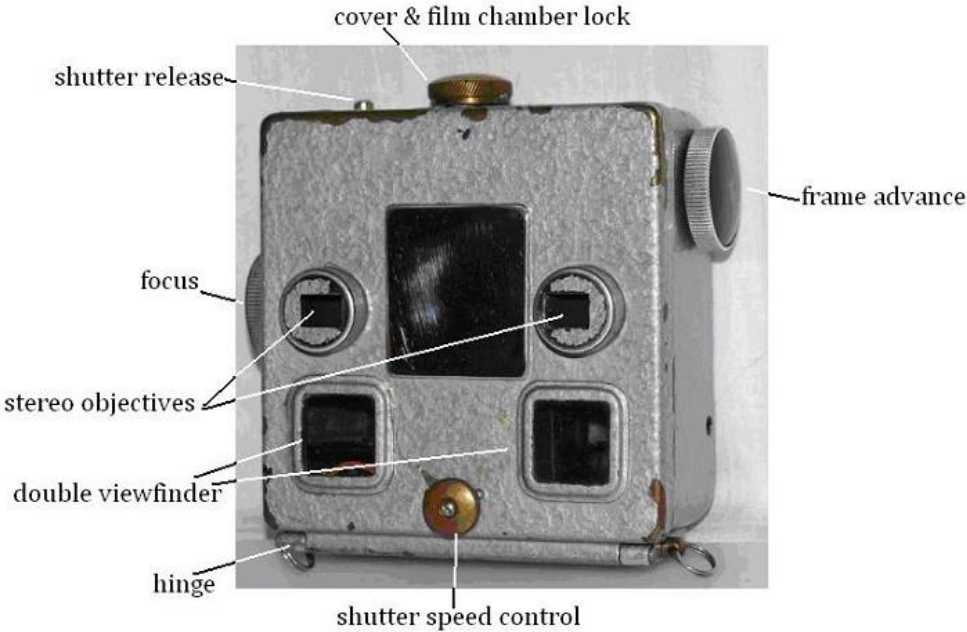
A complementary field



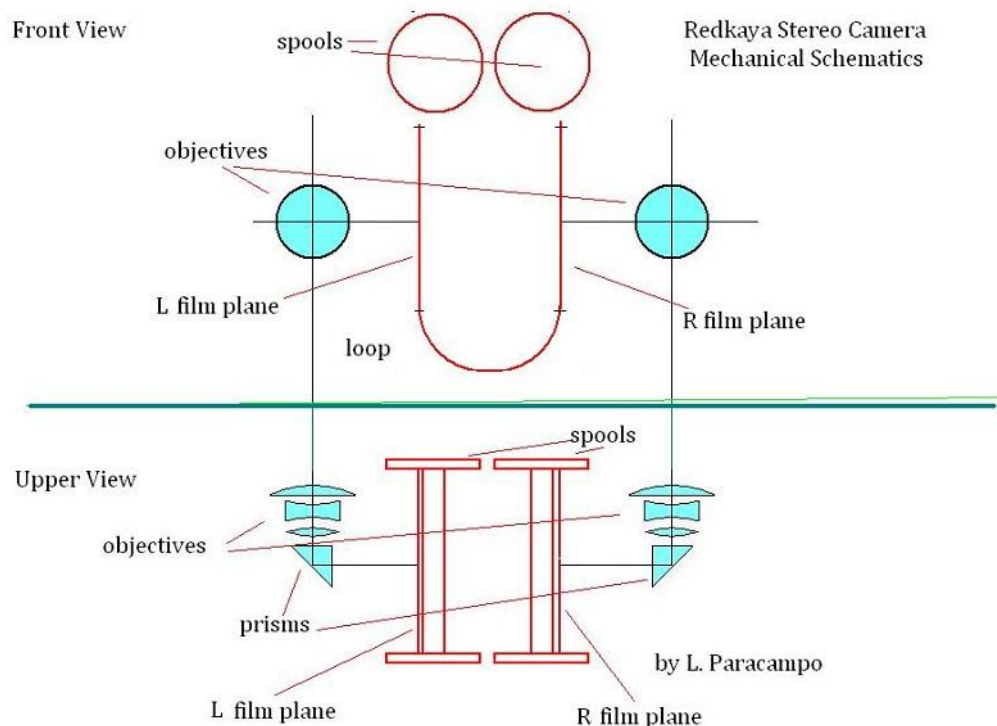
camera



Can you believe this could be a Stereo Smena?



This prototype Redkaya camera certainly built in the LOMO factory is a special stereo test camera with automatic picture transposing and convergence of optical axes.

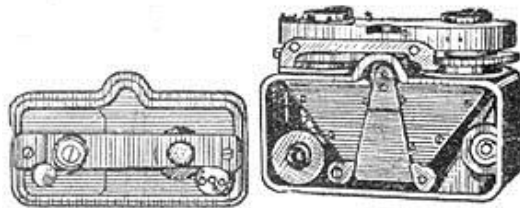
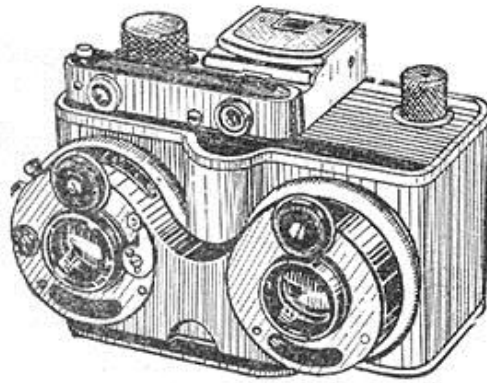


It is a further development probable made for NIKFI

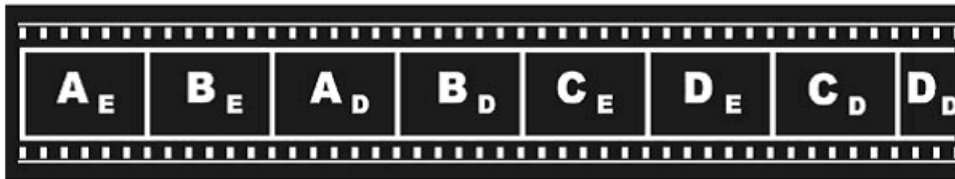
NIKFI Stereo camera beginning years '50

At NIKFI Stereo laboratory during the beginning of years 1950, L. A. Akimakinov proposed a camera constructed by A. V. Sokolovym for 35mm film and frames – 24X30mm. The original camera built has film movement identical to the European advance system 1-3; 1-3.a Another new version does not need the film advance in one and three strokes which is common to all cameras using this picture size. The stereo pairs in the new version are successively positioned after a single and constant stroke and are not interleaved with images of other stereo pairs. The system is practical once are not needed cutting and transposition of stereo pairs and simplifies the separation by them.

Another version using the format 33x54 proved satisfactory and compatible with the old 45x107 format using all picture area.



Sentido do deslocamento do filme

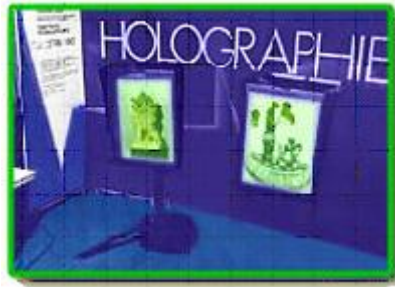


Sequência "Veroscope" (7p) "R"

The new proposed camera aims eliminate cutting and transposing of stereo pairs easing the Picture taking and preparing slides for the show. Obtaining:

- 1) More precision, homogeneity, quickness and standardizing stereoscopic mountings.
- 2) Minimizing visual fatigue.

Holographic studio of NIKFI



Scientific Research Cinema & Photo Institute (NIKFI) is the state institute, founded in 1929, is the single in Russia and unique in the world scientific center on the development of technique and technology of professional cinematograph, photography and other imaging facilities.

NIKFI is widely known as the leader in the field of three-dimensional stereoscopic and holographic images creation technique. In the 40-s' for the first time in the world the stereoscopic film projection without glasses on perspective lenticular screen was realized, invented in NIKFI by S.P. Ivanov.

The system of stereoscopic cinematograph "Stereo - 70", developed in NIKFI, is considered as the best in the world in the category of qualitative reproducing stereoscopic motion-picture image and it is used in stereo movie theatres both in Russia, and in many other countries abroad. In 1991 NIKFI was awarded by the "Oscar" of American Academy of Cinema for technical achievements in the part of stereoscopic cinematograph.

In early 70-s' complex works in the new area of the three-dimensional images creation – holography were begun in NIKFI The researchers developed holographic materials and their chemical-photographic processing, methods of hologram recording, copying and reconstruction methods, laser sources and other parts of holography processes. One of the first high-quality image holograms, that was written by the Yuri N. Denisuk method, were made in NIKFI by G.A. Sobolev.

Under the management of prof. Komar the development of the holographic cinematograph system offered by him with the three-dimensional color image were kept in NIKFI For the first time in the world the holographic one-color 20-seconds film was demonstrated on the special holographic screen in 1976 at the UNIATEC congress in Moscow. Holographic screen 0.6x0.8 sq.m. formed four vision areas, from which one-color three-dimensional scene of moving human was

observed. Two-color 3-D cartoon on the screen with five vision areas was demonstrated in 1984.

At present under the management of Yuri N. Ovechkis works on pictorial holography are kept in NIKFI in the part of new technological facilities of hologram production development, improvement of holographic photo materials and their chemical-photographic processing.

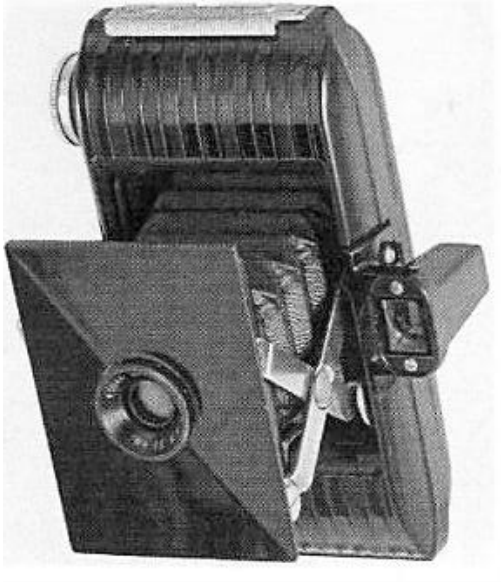
Pictorial holograms of NIKFI, including multicolor three-dimensional images, were demonstrated on many international exhibitions (Austria, Hungary, France, Finland and many other countries) and every time were considered as one of the best in the world.

PRE-WAR SMENA (SMENA ORIGINAL)

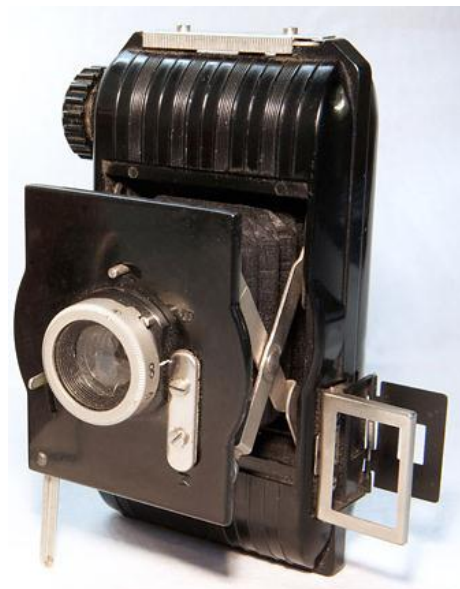
Produced: 1939-1941 (GOMZ)



Foldable camera. Triplet, 6,3/50. Single speed shutter 1/50 ("M") plus "B". 25 frames in 35mm paper baked film. Scale focusing lens. Based on the 1935 Kodak Bantam camera Bakelite construction . Dimensions : 114x72x42 mm, weight 210g. the Smena original, the first generation and series 5 to 9 were designed by A. Shapiro.



Kodak Bantam camera



POST-WAR SMENA (FIRST GENERATION)

Produced from: 1953 (GOMZ)
and 1957 (MMZ)

The new Smena generation was a camera intended for the masses. Its project borrowed the most desirable features of FED/Zorki (finder and lens block) and Kiev (removable back and cartridge to cartridge loadings) and used the acclaimed T-22 lens formula for a wider angle (4.5/40mm) and similar resolution and contrast to the famed Industar 22. Finally, Leica and Contax features and final picture quality at a price of a box camera.



SMENA 1 (SMENA)

Produced: 1953-1955 (GOMZ)



Name: „Смена“

Producer: GOMZ/MMZ

Frame size: 24x36

Lens: Triplet-22 4.5/40

Shutter: 1/10, 1/25, 1/50, 1/100, 1/200 + B.

Year of release: 1953-1960 GOMZ
c.1958 MMZ.

Quantity: 1.774.847 units (MMZ model is not included).

Original price (in year 1961) 11 rouble



This simple bakelite camera was announced by soviet press in 1953, with regular production starting in 1954.

Shutter plate - 51x51mm. Film advance knob -plain (grooves in the middle on later samples). 4 white screws on the shutter plate. White lens faceplate with serial number (with date prefix) and Gomz logo in black/red paints. Big GOMZ or MMZ logo on camera rear door.



SMENA 2

Produced: 1955-1962 (GOMZ)
1957-1961 (MMZ)



Name: „Смена“

Producer: GOMZ/MMZ

Frame size: 24x36

Lens: Triplet-22 4.5/40

Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.

model introduced in 1955 and made from
1957 also at Minsk Mehanicheski Zavod
from detachable pieces.

This model introduced the self timer



SMENA M

Produced: 1962



Name „Смена-М“

Producer: MMZ

Lens: Triplet-22M 4.5/40

Shutter: 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 + B.

Made only at MMZ. Introduction of self concepts.



Different synchronized shutter speeds and release system. Produced only by MMZ



SMENA 2M

Produced: 1963



Name: „Смена“
Producer: MMZ

Slight modifications from Smena M

Includes self-timer unit.



As Smena M, produced in small quantities.
These were transitional cameras forseeing a departure to new models.

Smena MMZ gave birth to Vesna and a new series of Smena GOMZ were born.



SMENA 3

Produced: 1958-1960 (GOMZ)



Name: „Смена“
Producer: GOMZ
Frame size: 24x36
Lens: Triplet-22 4.5/40
Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.
Year of release: 1958-1960 GOMZ



This model introduced the left lever film advance à la Exakta



SMENA 4

Produced: 1958-1960



Name: „Смена“
Producer: GOMZ
Frame size: 24x36
Lens: Triplet-22 4.5/40
Shutter: 1/10, 1/25, 1/50, 1/100, 1/200
+ B.
Year of release: 1958-1961 GOMZ

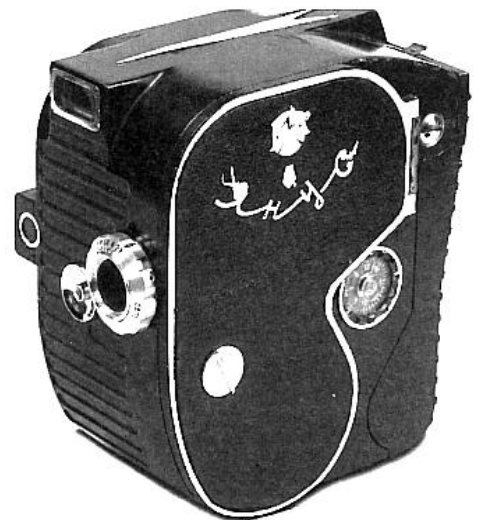
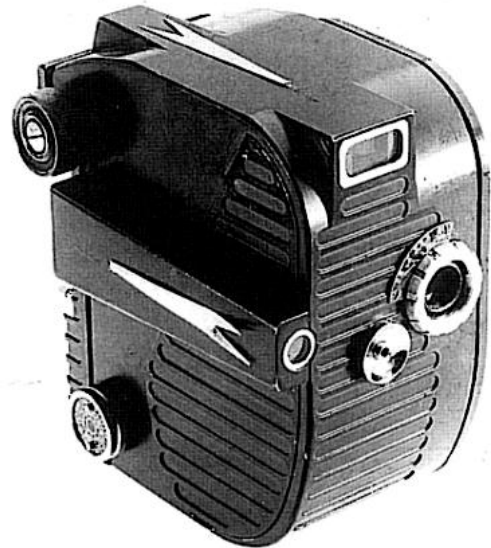


Synchro version of model 3



JANUS

Produced: Prototype-1960
This prototype is a fusion of the Smena 3
And the Sport 2 movie camera

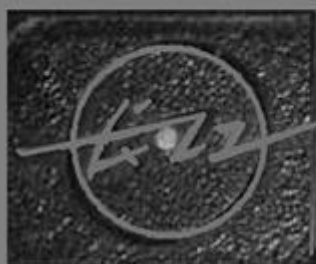


HUA SHAN CHIANG JIANG

Produced in China: 1961-1962



Hua Shan



Chiang Jiang



Above: HUA SHAN (Sparking Mountain) Made in Sichuan

Middle: CHIANG JIANG 1 (Yang Tse River) made in Xibei

Bottom: CHIANG JIANG 2

Above, the logos in the camera back



THE SPLITTING

The two factories decided make their own personalized models. GOMZ began the new Smena generation and MMZ introduced the Vesna.



These new types were influenced by new German Werra and both used the crystal finder piece used on original Werra, but retained the previous cartridge to cartridge loading. While Vesna used a complete own design, the new Smena generation had its body influenced by the top class Leningrad camera. Smena, now shares the accessory filters and close up lenses of FED and Zorki.



Werra 1st series



Leningrad 2nd series