



ZENIT 122K

35 mm SLR Mechanical Camera

CONTENTS

- 5 Purpose and Advantages**
- 7 Handling Rules**
- 8 Specifications**
- 10 Camera Design**
- 12 Camera Loading**
- 14 Shutter Speed Setting**
- 15 Stop Setting**
- 15 Focusing**
- 17 Exposure Setting with the Help of Exposure Meter**
- 18 Picture Taking**
- 19 Camera Unloading**
- 20 Operating the Self-timer**
- 21 Taking Flash Pictures**
- 22 Changing Lenses**

PURPOSE AND ADVANTAGES

ZENIT-122K is a 35-mm single lens reflex camera intended for taking various amateur pictures on black-and-white and color films. It can be used for special kinds of photography as well, such as copying, taking close-up pictures of small-size objects at short distances (ultra-close-up photography), taking pictures with the help of a microscope (photomicrography), etc.

The camera takes lenses with bayonet fittings and via a special adapter it accepts interchangeable lenses with M42x1 screw fittings and mechanical back focal distance of 45.5 mm without automatic diaphragm control.

The following features are remarkable with the camera:

- semi-automatic exposure meter operating through the lens (TTL system) provides for correct exposure setting when taking pictures with the standard lens as well as with interchangeable lenses, light filters, supplementary lenses, extension tubes;
- light-emitting diodes in the viewfinder, indicating correct exposure setting, can be clearly seen both with the diaphragm fully open and stopped down;
- instant return mirror ensures continuous viewing of a subject before and after exposure;
- high speed lens is provided with a pre-set diaphragm mechanism which automatically closes the diaphragm down for the moment of shutter operation;

- fully open diaphragm ensures maximum brightness of the image in the viewfinder which is very important for viewing and focusing;
- composite focusing device provides excellent image sharpness in various conditions of shooting;
- speedy exposure setting, simplified film loading procedure and frame counter automatically re-setting to "0" upon pressing the film rewind button reduce the time required for preparing the camera for picture taking;
- built-in self-timer enables you to take picture of yourselves among your friends or to make a self-portrait;
- secret lock of the back door interlocked with the film rewind knob provides for reliable locking of the back door and convenient unloading of the camera;
- flash unit connector socket and hot-shoe enable to use flash units both with cable and cableless connection;
- shutter disengaging bush of stay-put type simplifies the film rewind procedure.

Before using the camera, make thorough study of the present Description. In so doing bear in mind that the present Description can not be regarded as a handbook on photography.

Due to ever-advancing development in camera construction, minor differences may occur between the text and your camera.

HANDLING RULES

- The camera is a precise optical-mechanical instrument. It should be handled carefully, kept clean and protected from jolts, dust, moisture, and sharp temperature fluctuations.
- Do not remove the camera from its case the moment it is brought indoors from cold to avoid sweating of its parts, especially the optical ones.
- Do not touch the surfaces of the optical parts with fingers since it may damage their coatings. Clean the optical coated lens surfaces with a clean soft cloth or cotton wool wad slightly moistened with rectified alcohol or ether. The surfaces of the mirror and the focusing device may be cleaned only if absolutely necessary with a dry soft brush but in no case with humid cleaning agents.
- Keep the camera closed in its case with the cap put on the lens.
- Do not remove the lens from the camera without need to prevent dirt and dust from getting both onto the surfaces of the lens optical parts and into the camera itself.
- If you don't use your camera for some period of time (a month and more) remove the batteries from the camera. Keep the batteries separately in places inaccessible for children.
- Load and unload your camera either indoors or in shade protecting it against direct sun light and bright artificial light.
- Always cock the shutter as far as it will go to avoid blank exposures.
- Do not keep the camera with the shutter cocked for a long period of time since it is likely to impair the shutter operation.
- Do not try to rotate the shutter speed dial with the index moving along its short



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section from "500" to "B". Do not rotate shutter speed dial when self-timer is running and when setting the release button in "T" position.

When taking pictures in frosty weather, keep the camera under your street-clothes but not in the open air and take it out only for the moment of picture taking.

Since the camera is a complex instrument, its repair and adjustment should be performed in repair shops only.

SPECIFICATIONS

Frame size	24 × 36 mm
Film used	35mm, perforated
Length of film in cassette	1.65 m
Number of frames	36
Shutter speeds	from 1/30 to 1/500 s, B (by hand) and long exposure
Lens	MC HELIOS-44K-4
Focal length	58 mm
Maximum aperture	f/2
Aperture scale	from 2 to 16
Distance scale	from 0.5m to ∞
Lens fitting	bayonet (K mount)
Light filter fitting	M52 × 0.75

Sun shade fitting	∅ 54 mm
Viewfinder field of view	20 × 28 mm
Eyepiece magnification	4.3 ×
Flange/film distance	45.5 mm
Tripod bush thread	1/4"
Overall dimensions (without case)	142 × 100 × 115 mm
Power supply voltage	3 (2 × 1.5)V
Power supply	from 2 batteries of Mallory D 386, Seiko SB-B8, CLJ-32, MLI0.105 types
Mass	0.82 kg

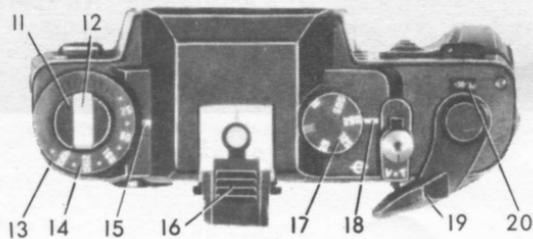
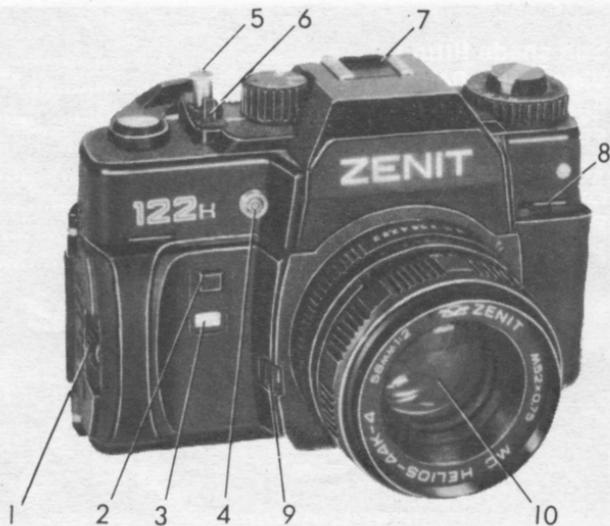
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**No 102683; No 150360; No 153652; No 178682; No 366447; No 476534; No 1015330;
No 1247817**

CAMERA DESIGN



- 1—self-timer cocking handwheel
- 2—self-timer release button
- 3—self-timer window
- 4—flash unit connector socket
- 5—release button threaded for cable release
- 6—shutter disengaging knob of stay-put type
- 7—shoe for mounting flash units and other accessories
- 8—eyelet of strap securing
- 9—bayonet lock key
- 10—lens
- 11—film rewind knob
- 12—film rewind crank
- 13—film speed dial
- 14—film speed scale
- 15—film speed index mark
- 16—protective strip

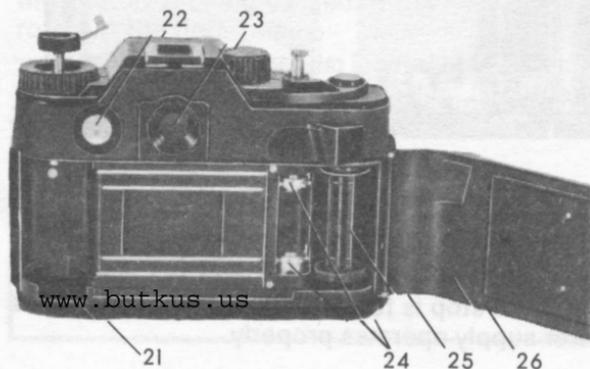


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- 17—shutter speed dial
- 18—shutter speed index mark
- 19—shutter cocking and film advance lever
- 20—frame counter
- 21—cassette chamber
- 22—battery compartment end cap
- 23—viewfinder eyepiece
- 24—sprocket teeth
- 25—take-up spool
- 26—back door



- 27—control pin
- 28—aperture setting ring
- 29—aperture scale
- 30—depth-of-field scale
- 31—distance scale
- 32—focusing ring

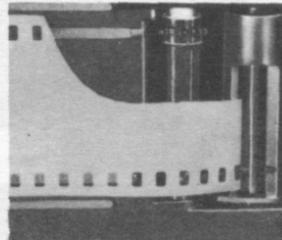
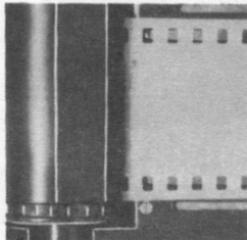
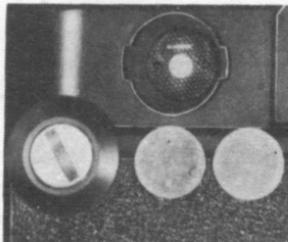


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CAMERA LOADING

Put the batteries into the camera in the following way: turn cap 22 counter-clockwise as far as it will go, remove the cap and take out the exhausted batteries should there be any. Put new batteries into the compartment with signs "+" outward (upwards). Replace the cap and turn it clockwise as far as it will go.



Check the indicating light for operation. To do this, looking through the viewfinder eyepiece press the release button 5 till a definite stop is felt. If the light-emitting diodes (one or both) light up it means that the power supply operates properly.

Load the camera with film in the following way:

- lift the film rewind crank 12, pull out the rewind knob 11 as far as it will go, open the camera back door;
 - put a loaded cassette into the chamber 21;
 - return the rewind knob 11 to a locked position slightly turning it, if required, to let the spool guide enter the cassette;
 - draw out a film leader as long as to reach the camera edge and insert it into the slot of the take-up spool 25; in so doing make sure that a sprocket 24 tooth engage a film perforation hole;
 - close the back door 26, tightly pressing it to make the lock latch;
 - to transport a nonexposed portion of film to the film gate, cock and fire the shutter twice. In so doing the frame counter should be set at "0".
- Should the film be wound tightly in the cassette, the film rewind knob will rotate when the shutter is being cocked. If the film is loose in the cassette, the rewind knob will fail to rotate at the first frames;
- set the speed of the film loaded in the camera by turning dial 13 till a corresponding film speed value is click-stopped against the index mark 15.

BEAR IN MIND

**that wrong setting of the film speed with the dial 13
will result in wrong exposure.**

Reference Table of Film Speed Units

Designation on film speed scale	16 .	25 .	50 .	100 .	200 .	400 .											
GOST/ISO	16	20	25	32	40	50	64	80	100	125	160	200	250	320	400	500	640
DIN	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

SHUTTER SPEED SETTING

Turn the shutter speed dial 17 to bring a selected shutter speed opposite to the index mark 18 on the camera top plate. In so doing the dial is click-stopped. Figures on the shutter speed dial show shutter speeds in corresponding fractions of a second and "B" indicates a hand-controlled shutter speed. Shutter speed can be set with the shutter both cocked and released. When taking pictures at "B" the shutter remains open for as long as the release button 5 is pressed down. To obtain a long exposure turn the depressed release button counter-clockwise as far as it will go ("T" position). Exposure over, return the release button 5 to its normal (middle) position and release it. This will result in closing the shutter.

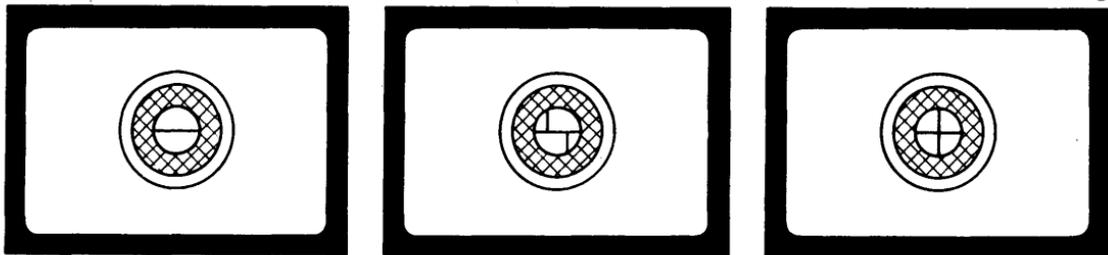
To take a picture at "B" or long exposures one is recommended to use a cable release which can be screwed into the release button thread. In so doing the camera should be mounted on a tripod.

STOP SETTING

Set a selected aperture against the index mark by turning the aperture setting ring 28. When taking pictures with a self-timer, the procedure of stop setting is somewhat different as described in the section "Operating the Self-timer".

FOCUSING

The camera viewfinder is provided with a composite focusing device consisting of microprism collar and ground glass collar or focusing wedges, microprism collar and ground glass collar. Before shooting remove the lens cap. Focusing should be done at all shooting



distances including infinity (∞). Looking through the viewfinder turn the lens focusing ring to obtain sharp image of the object within the ground glass and microprism collars and for

cameras with focusing wedges to match the upper and lower parts of the split image. The best sharpness is obtained when focusing is done at full aperture.

It should be noted that the focusing wedges and microprism collar, ensuring the best possible focusing, are of no use when low speed interchangeable lenses are used and focusing is done at apertures more than 4. In these cases as well as in photomicrography and macrophotography focusing should be done on the ground glass collar.

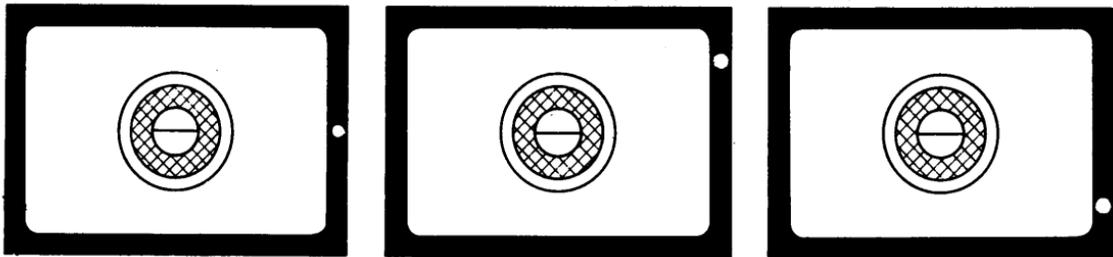
The small index mark with letter "R" is used for shooting on infra-red films. In such a case focus the image and introduce a correction by bringing the distance figure you have obtained opposite to the index mark "R".

Focusing over; you can determine distances from the film plane to the near and far limits of the depth of field making use of scales 30 and 31. On scale 31 against two identical figures of scale 30 corresponding to the aperture with which you are going to take pictures there will be set two figures, indicating the distance range within which all the subjects will be sharp on film. For example, the lens is focused for 3 m and the aperture to be used is that of 8. In such a case on scale 31 against two figures 8 of scale 30 you can read that the image will be sharp within the distance range from 2.3 to 4.5 m.

Approximate depth-of-field limits can be determined visually as well by pressing the release button till a definite stop is felt with the aperture value set beforehand. On the ground glass collar of the viewfinder you will see what subjects will be sharp on film.

EXPOSURE SETTING WITH THE HELP OF EXPOSURE METER

The camera semi-automatic exposure meter measures the light passing through the lens (TTL system). As a result, making use of various combinations of aperture and shutter speed values, you can set the exposure depending upon the brightness of an object and the speed of film being used with a high degree of accuracy. It remains true as well when interchangeable lenses, light filters, supplementary lenses and extension tubes are used. For more accurate exposure determination in conditions of poor brightness of the subject to be photographed the lens cap should be removed a bit earlier, before shooting.



Looking through the viewfinder eyepiece in such a way that the whole lens frame could be clearly seen, press the release button till a definite stop is felt but not till the shutter "firing", should it be cocked, and hold the button in this position. On the right-hand side of the viewfinder light-emitting diodes (two red and one green) can be seen.

Lighting of the upper (red) diode indicates over-exposure and of the lower (red) one under-exposure. Turn the aperture setting ring 28 and shutter speed dial 17 till the moment when the middle (green) diode is lighting continuously. It indicates the best possible combination of the shutter speed and aperture providing for correct exposure. However, if you fail to obtain continuous blinking of the middle (green) diode, and changing the shutter speed and aperture values over between the two neighbouring ones results in switching the lighting from one red diode to the other red one, you may select one of these values. In such a case the exposure will be still acceptably correct.

PICTURE TAKING

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Having prepared the camera for picture taking, cock the shutter, make sure of correct focusing, framing and exposure setting and smoothly press the release button to take a picture.

BEAR IN MIND that sharp pressure on the release button results in camera shaking at the moment of exposure and thus in blurring of the picture.

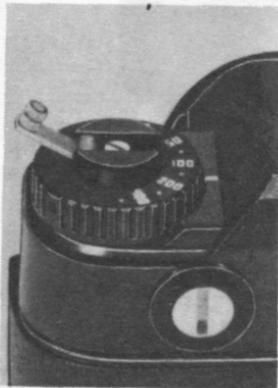
When taking pictures see to it that index marks on the release button and the camera top plate (between "T" and "V") should be lined up.

To take a picture with long exposure mount the camera on a tripod, set the shutter speed dial 17 at "B", slightly press release button 5 (the shutter should be set

beforehand in the "ready to fire" position) and turn it counter-clockwise as far as it will go ("T" position).

Exposure over, return the button to its normal (middle) position and release it. As a result the shutter will close.

CAMERA UNLOADING



When the exposure counter shows figure 36, rewind the film into the cassette.

To do this:

- release the shutter, pressing release button 5;
- mount the cap on the lens and shade the viewfinder eyepiece;
- press bush 6 downwards as far as it will go;
- flip open crank 12 and rotate it in the arrow direction until the film leaves the take-up spool. Try and rotate the crank smoothly, without jerks, and not too fast to avoid traces of static electricity on film;

- pull film rewind knob 11 all the way out, open the back door and remove the cassette;
- turn the cocking lever 19 and, holding the sprocket teeth 24 with your finger, make sure that it is engaged.

Do not try to take more than 36 shots. However if it has happened and the film, fixed in the cassette, prevents full shutter cocking, unload the camera in the following way:

- press button 6 and hold it down rewinding the film into the cassette;
- remove the cassette;
- cock and fire the shutter;
- press button 6 to reset the frame counter to "0".

OPERATING THE SELF-TIMER

To use self-timer mount the camera on a tripod, then do the following:

- focus the image;
- press the release button 5 till a definite stop is felt and turn it clockwise ("V" position). This will enable you to set the aperture manually since the diaphragm does not operate automatically when the self-timer is used;
- set the aperture and the shutter speed;
- cock the shutter;
- wind the self-timer by turning lever 1 downwards as far as it will go in the direction of the camera top plate. Red light in the self-timer window indicates that the self-timer mechanism is not cocked, green light indicates that it is cocked;

- press the self-timer release button 2 and take your place in front of the lens. The shutter will operate no sooner than in 7 seconds after pressing the button;
- self-timer operation over, return button 5 to its home position.

TAKING FLASH PICTURES



The camera shutter is synchronized for use with electronic flashes. To connect a flash unit with the camera, the latter is fitted with socket 4 on the front wall of the camera.

The camera design provides as well for cableless connection of flash units. For this aim it is fitted with hot-shoe 7.

Before mounting a flash unit on the camera remove protective strip 16 from shoe 7.

The shutter speed of 1/30 s only can be used for flash photography.

The aperture is selected in accordance with the instructions given in the Instruction Manual on a flash unit being used.

CHANGING LENSES



To remove the lens, press the bayonet lock key 9 and turn the lens counter-clockwise. To mount a lens on the camera, align the red dots on the lens mount and the camera bayonet ring, then turn the lens clockwise as far as it will go.

To mount a lens with M42X1 screw fitting on the camera, first screw tightly an adapter on to the lens mount. Insert the lens with adapter into the bayonet seat so that the red dots of the camera and adapter align, then turn the lens clockwise up to the stop.

If the lens is fitted with an automatic diaphragm, the operating mode selector should be set to "M". You can't use lenses without operating mode selector "A" and "M".

You can't use an interchangeable lens having parts jutting out of the fitting surface or having fitting surface diameter less than that of the adapter (48.5 mm). To set correct automatic exposure with actual aperture (when an interchangeable lens is used) you should focus on the subject, close down the diaphragm to a selected aperture and shoot after 2-3 sec. interval.

The automatic exposure meter has the best correspondence with the standard lens, so for getting optimum exposure when other lenses are used, introduce exposure compensation. Exposure compensation value is found out experimentally. These recommendations are true of other accessories.



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