

Zorki-10



THE ZORKI-10
WAS AWARDED
THE GOLD MEDAL
AT THE 1965
LEIPZIG WORLD FAIR

This text is identical to the one in the User manual, English version, edition 1965.

1. Photographic Camera

The wide-known family of “Zorki” cameras has been refilled with a new model — “Zorki-10” camera. Unlike its earlier models, the “Zorki-10” camera is a fully automatic camera with automatic exposure settings. This considerably simplifies the shooting process. The fact that the range-finder is coupled with the viewfinder allows to make fast focusing. Between the lens diaphragm shutter with adder-mechanism automatically sets diaphragm and exposure time depending on the set film sensitivity and brightness of the object to be photographed. Before proceeding to take pictures, thoroughly study the operation of the camera and its handling instructions presented in this Manual.

Remember, that the automatic setting lever should always be set against the index “A”, except cases when photographing with exposure time “B”. Set the self-timer lever only after the shutter is cocked. Always press the shutter release key until it goes.

2. Specification of the camera

The “Zorki-10” camera has fully automatic exposure settings and is designed for using the 35-mm perforated film having 24×36 mm picture sizes. The camera is fitted with a high-precision “Industar-63” lens, which is built-in in the between the lens diaphragm shutter.

Focal length of the lens — 45 mm

Relative aperture — 1 : 2.8

Angular field — 50°

The lens is focussed by moving the whole of the unit with the aid of a focusing ring. The camera is equipped with a rangefinder (base 38 mm and viewfinder magnification 0,65^x).

The optical viewfinder and the rangefinder are coupled in one window. The collimator viewfinder has fluorescent frames, limiting the field of view. To eliminate parallax while photographing at a distance of 1,5 m (5 ft.) there is an additional frame, shifted to the right and downwards. To signalize of insufficient illumination of the object to be photographed there is a red line in the viewfinder field of view on which the exposure meter pointer, seen in the field of view, stays.

The camera has a FZA-18 diaphragm shutter with exposure speeds from 1/30 to 1/500 sec and “B” exposure. The exposure speeds smoothly change over the whole range.

The shutter is provided with a self-timer and a contact to switch on electronic flashes. The self-timer operates not earlier than 8—15 seconds after the key has been pressed. The shutter is released by a shutter release key. When the release key is pressed, desired exposure time and diaphragm are set, according to set film sensitivity.

The camera has a device, which switches off automation and allows handle diaphragming from 1:2.8 to 1:22. In this case the exposure time does not change and equals 1/30 sec.

The sensitivity range of the used films equals from 20 to 320 ASA units and from 14 to 26 DIN grades.

Camera shutter cocking, film transporting and setting the exposure counter take place simultaneously when turning the lever until it goes.

The exposure counter shows the number of unexposed frames and returns to initial position while opening the back cover.

The camera is loaded with standard cassette for 36 frames. Film capacity of the cassette is 1.65 m. M52×0.75 thread on the lens is provided for mounting filters.

Light passing through filter gets not only into the lens but — on the circular electric eye window, which surrounds the lens. Therefore the correction for filter factor is practically not needed.

The camera has a tripod screw-in bushing with 3/8" standard thread intended for mounting the camera on the tripod.

The camera is provided with an accessory shoe for attaching the flash lamp.

The camera has a convenient leather case. You can take hand-held pictures without taking the camera out of the case. Overall dimensions of the camera (without case) with a lens — not more than 129×77×76 mm

Weight of the camera without case — not more than 750 g.

The "Zorki-10" camera is designed for versatile amateur photography, for photographing architectural ensembles, landscapes, portraits etc.

3. Principal parts

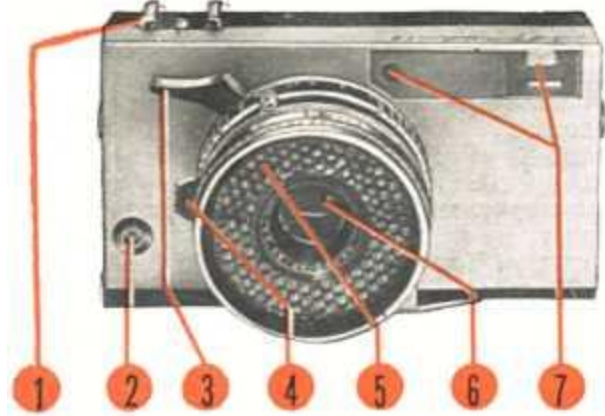


Fig. 1

1. Accessory shoe
2. Plug connector for flash lamp
3. Shutter release key
4. Self-timer lever
5. Circular electric eye window
6. Lens
7. Range and viewfinder



Fig. 2

8. Focusing ring
9. Film sensitivity setting ring
10. Lever of hand-controlled shutter speeds

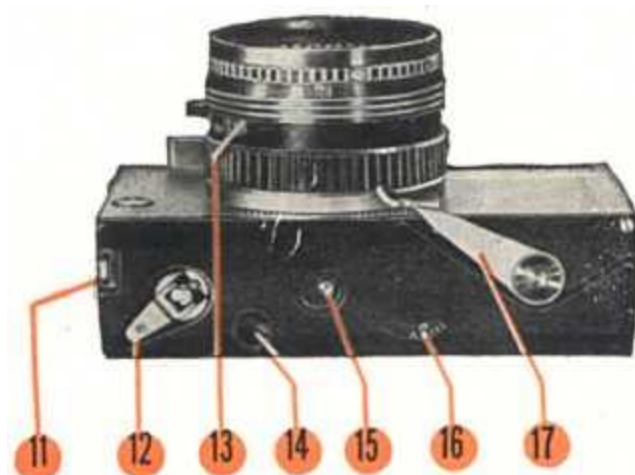
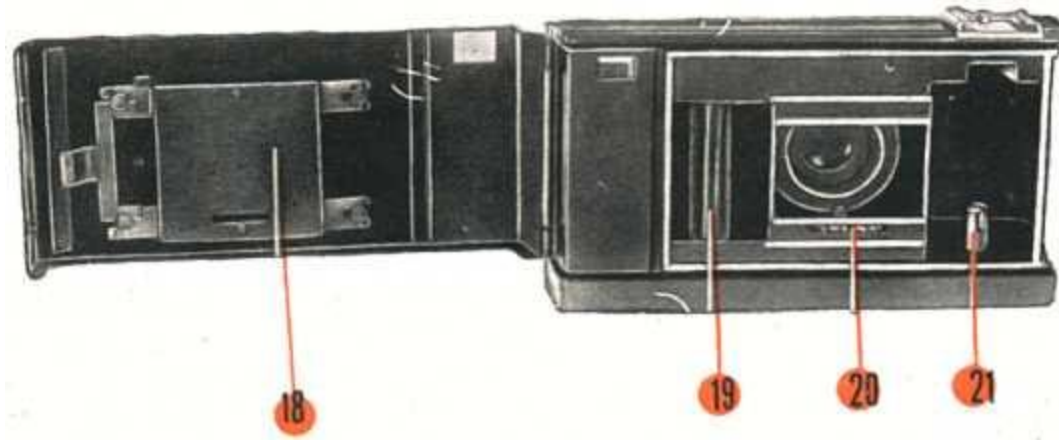


Fig. 3

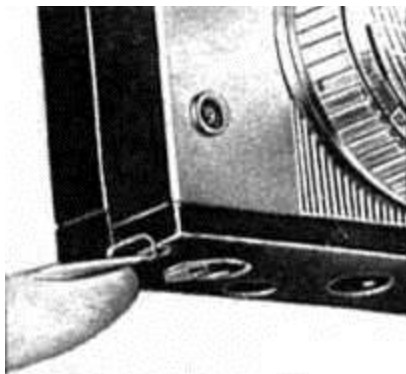
11. Back cover lock
12. Film rewind head
13. Automatic and diaphragm setting lever
14. Tripod screw-in bushing
15. Rewind release button
16. Exposure counter scale
17. Shutter cocking and film winding lever

**Fig. 4**

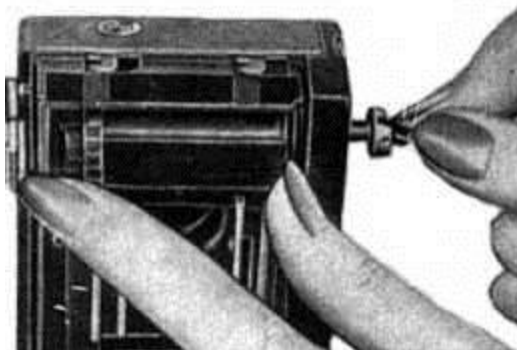
- 18. Film pressure plate
- 19. Take-up spool
- 20. Film advance sprocket
- 21. Rewind spool spindle

4. Loading the Camera

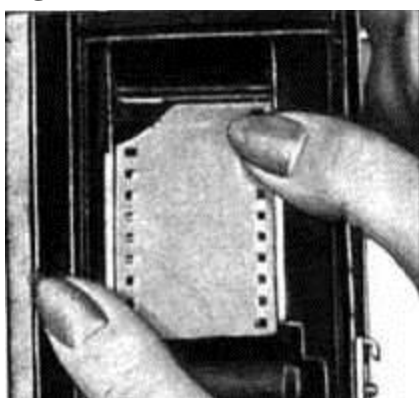
When loading the camera avoid direct sunlight. Always load and unload film in subdued light or shade. Place the camera on some soft material to prevent any damage when loading the camera and load in the following order:

**Fig. 5**

1. Pull up the back cover lock and open the back cover (Fig. 5).

**Fig. 6**

2. Turn the film rewind head 12 (Fig. 3) clockwise, pull until it stops and remove cassette out of the camera (Fig. 6). Place the loaded cassette into the camera and bring the film rewind crank to its original position.

**Fig. 7**

3. Turn the cocking shutter lever until the take-up spool slot appears at top. Insert the exposed film strip tip firmly into the take-up spool slot (Fig. 7).

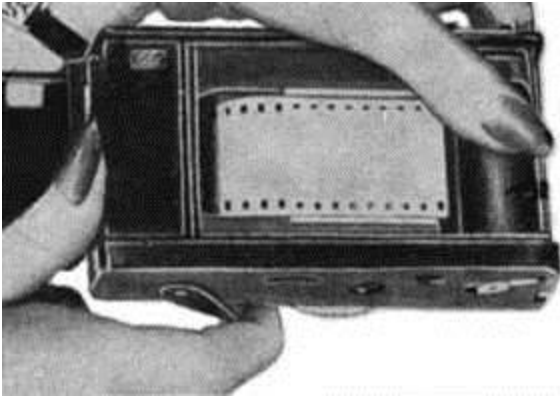


Fig. 8

4. If the shutter is cocked, release it, pushing the shutter release key, and then begin to turn the shutter cocking lever. As you work the shutter release key make sure the film perforations are firmly and properly engaged with the film advance sprocket teeth (Fig. 8).



Fig. 9

5. Close the back cover. Cock the shutter, then release it. Do this operation until the number 36 on the exposure counter scale matches the index (Fig. 9).

5. Setting the Film Sensitivity



Fig. 11

1. Set the film sensitivity, rotating the film sensitivity ring until necessary number of ASA units or DIN grades appears in the window (Fig. 11).

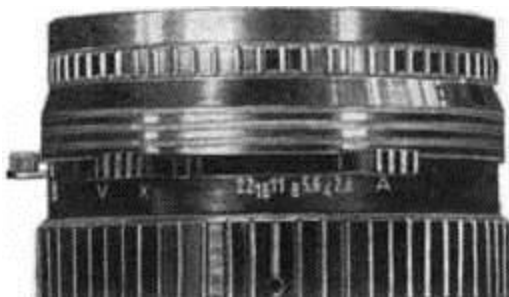


Fig. 10

2. Set the automatic setting lever 13 (Fig. 3) at "A" or "Automatic" (Fig. 10).

It is possible to take pictures with the "Zorki-10" camera without diaphragm and exposure time presetting. Point the camera at the subject to be taken. Observing the object, bring it to the center of the bright-line frame and pressing gently (without jerking) shutter release key until it goes, release the shutter.

6. Taking the Picture

When the light levels are not suitable for photography the viewfinder needle appears in the zone of red-colored line (Fig. 12). To photograph at this light change the film for one with higher sensitivity, or work with flash-lamp or with "B" time exposure.



Fig. 12

When taking a photograph at around 1.5 m (5 ft.) use the inside markings just inside the bright-line frame (small frame) (Fig. 13), and at other distances use the outside markings (large frame).

To take photographs automatically set the automatic setting lever at "A".

The mechanism of automatic exposure setting is so designed that, when changing the brightness of the object to be photographed, the exposure time and the diaphragm are simultaneously changing according to the set film sensitivity.

At bright light after the shutter release key is pressed the short exposure time and small aperture are set automatically, and in subdued light, on the contrary, the longer exposure time and larger aperture are set.

In the viewfinder we see the exposure meter needle, which moves from left to right when the light grows higher. There is a triangular mark at the top of the viewfinder. Observing the position of the needle relative to the triangle it is possible to determine the set exposure time. Interval of the needle between the right end of the red line and the triangle corresponds to exposure times from 1/30 to 1/200 sec (Fig. 14).

If the needle is positioned to the right of the triangle, the shutter sets automatically the exposure times in the range from 1/200 and less (Fig. 15).

Construction of the "Zorki-10" camera enables setting the lens opening from 1:2,8 to 1:22 for photographing without automation. To do this move the automatic setting lever from "A" to desired lens opening. The shutter exposure time will be equal to 1/30 sec. To obtain slower shutter speeds (hand-controlled exposure) the lever of hand-controlled time exposure should be set at "B" (Fig. 16). When doing this, it is possible to change the lens opening from 1:2,8 to 1:22.

When you want to operate with automatic shutter speeds after hand-controlled ones, set the automatic setting lever at "A". In this case the lever of hand-controlled shutter speeds will return to its initial position.

7. Focusing the Lens

Focus the lens by turning the focusing ring 8 (Fig. 2). In this case two images of the subject to photograph observed in the finder will shift relative to each other.

The focussing will be correct, when the two images are exactly matched into one.



Fig. 13



Fig. 14



Fig. 15



Fig. 16



8. Photographing with self-timer

Engage the self-timer mechanism only after the shutter is cocked. To take pictures with the self-timer set the lever 4 (Fig. 1) against letter "V" (Fig. 17) and press the release key. In 8—15 seconds the shutter will operate.

When taking sequence pictures with the self-timer, each time set the self-timer lever against the letter "V".

With exposure time "B" the self-timer does not operate.

Note. When pressing the release key, do not shade the circular electric eye window from getting the light, which is reflected by the object to be photographed. At the same time do not shade the light illuminating the object, taking into account that the exposure is set automatically and corresponds to the illumination of the object by the light which is reflected by the photographed object at the moment of pressing the release key.

If the brightness of the photographed object at the time (8—15 sec) of self-timer operation changes, the exposure time, set by the automatic mechanism of the camera at the moment of pressing the key, will not correspond to the brightness of the photographed object at the moment when the shutter comes into action.

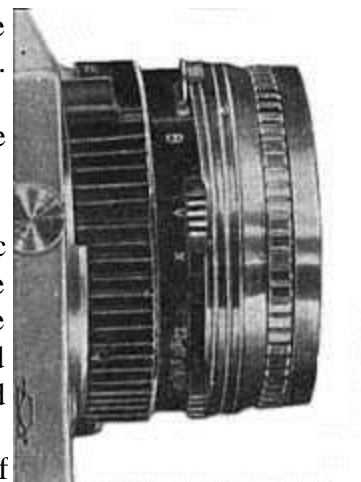


Fig. 17

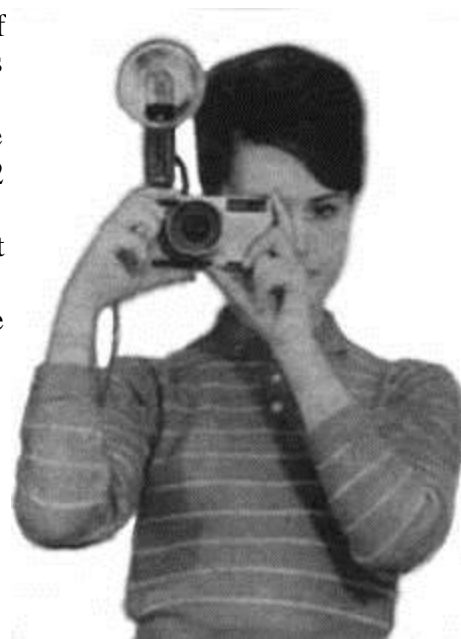
9. Photographing with Flash Lamps

In insufficient light when the needle is within the red line zone of the viewfinder as well as in other necessary cases, take pictures with flash lamps.

In this case mount the flash lamp on the accessory shoe 1 of the camera and insert the plug of the flash lamp into the connector 2 (Fig. 1).

Switching on the flash lamp, disengage the automation and set desired diaphragm.

If the self-timer lever is set against letter "X" you can take pictures only with electronic flash lamps.



10. Unloading the Camera

To rewind the exposed film, press button 15 (Fig. 3) and having raised, by turning, the film rewind crank rotate it clockwise (Fig. 18).

When the film is completely rewound loose the rewind release button and open the back cover.

Before removing the cassette with exposed film, pull out the film rewind head as far as it will go.

Unload the camera in subdued light or in shade.

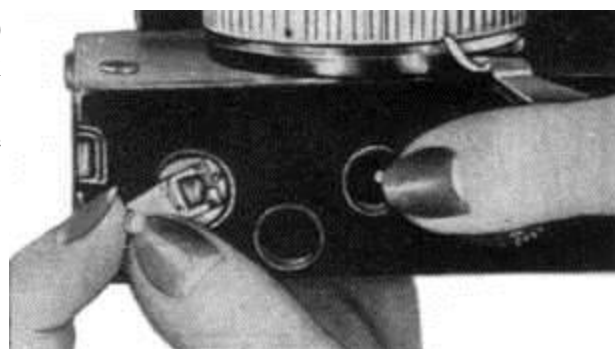


Fig. 18

11. Care of the Camera

1. Keep the camera clean and handle it with great care. Protect it from mechanical shocks and damages as well as against moisture and sharp temperature fluctuations.
2. The lens is the heart of the camera therefore it requires the best care. Wipe off the optical coated surfaces only on the outside using for this purpose fatless soft brush or clean soft fatless cloth or cotton wool. Slightly moisten the cloth or cotton wool with alcohol and wring out to avoid traces of liquid.
3. If the camera is suddenly brought into a warm room from a cold place do not open the case and do not uncover the optics for 1—1.5 hours to avoid clouding up. When photographing in wet weather thoroughly wipe the camera.
4. Keep the camera in a closed case. The shutter should be released. Do not disassemble the camera. When the camera is out of order apply to a special repair shop.



Note to “Taking the picture”

When there is considerable contrast between the brightness of the background and the object to be photographed, correction should be introduced on account of setting the film sensitivity with the aid of the film sensitivity setting ring (Fig. 2). For example:

1. The main object of photographing is less bright than the surrounding background. Such a case usually occurs when taking pictures against snow, sky or water background. If to take a picture without correction, the main object (for example, a face of a man) will be underexposed and all the light surrounding objects will be correctly reproduced.

To obtain the correct exposure of the main (dark) object of photographing set smaller value of the film sensitivity as compared with practically used one.

In this case good results are usually obtained when sensitivity decreases on one step of the sensitivity scale. For example, when photographing on the film of 80 ASA units sensitivity, set 40 ASA units on the scale.

If the film sensitivity is given in DIN grades, then, for instance, 17 DIN grades should be set on the scale instead of the used film of 20 DIN grades.

2. The main object of photographing is brighter than the surrounding background, for instance, when photographing an illuminated face of a person against the dark background. When photographing without correction, this picture of a person's face will be overexposed. In this case for obtaining the correct exposure of the main object set the larger film sensitivity as compared with the sensitivity of the film used. In practice there can be stronger contrasts, then the correct exposure of the main object is correspondingly obtained by other corrections.