



Instructions for Use.

The camera you have bought may slightly differ in appearance from the pictures presented in this booklet, since in manufacture the appearance and performance of the cameras are continuously improved.

## 1. General directions

### 1.1. Purpose of Camera and its Features

The КИЕВ-19М (KIEV-19M) camera is a miniature reflex camera of system TTL with semiautomatic setting of exposure. It is intended for amateur photographing.

The camera is designed for using the 35 mm photographic film in the standard magazines (36 pictures sizing 24×36 mm in loading of 1.65 m of film).

The KIEV-19M camera is released with the MC HELIOS-81H lens (diaphragm setting range 16, focusing distance 50 mm, relative aperture 1:2). The lens is provided with special multilayer anti-reflection coating of which the marking (MC) is indicative. The multilayer anti-reflection coating improves the quality of an image and increases its contrast grade on account of increasing the integral transparency and decreasing the light dispersion by the lens.

The lens joint is of a bayonet type, the thread for a light filter is M52×0.75.

The design of the camera envisages the use of the change lenses which are specially released for the KIEV-19 and KIEV-20 cameras. The list of change lenses is given in Table 1.

Description	Relative aperture	Focal length, mm	Angle of field of vision, ...°
MC MIR-20H	1 : 3,5	20	94
MC MIR-24H	1 : 2	35	63
MC CALEYNAR-5H	1 : 2,8	100	24,5
TELEAR H	1 : 3,5	200	12
MC GRANIT-11H	1 : 4,5	80–200	30–12

The metal curtain shutter ensures the speeds in the range from 1/500 to 1/2 s and “B”.

The curtain travel occurs along the short side of the picture from bottom to top.

The viewfinder is of a reflecting brilliant type.

The Fresnel lens and the condenser lens in the finder ensure the increasing brightness of an image and thus the opportunity of shooting under conditions of weak lighting.

The field of vision of the finder occupies 93% of picture area.

The focusing is carried out with the aid of a microscreen and ground glass.

To decrease an eye fatigue during photographing the camera viewing system has the minus 1 diopter. The dioptric lens can be installed instead the eyepiece protective glass.

The shutter cocking mechanism is interlocked with the film transport mechanism.

The picture counter counts off the number of the pictures taken and is automatically reset to the initial position when the back is opened.

The exposure meter of the camera of system TTL enables you to determine the exposure by the light passing through the lens with the diaphragm fully opened.

The working range of the exposure meter is equal to 4.8...13900 cd/m<sup>2</sup> when the regular lens (relative aperture 1:2), is used. While determining the exposure, take into account the film sensitivity value in the range from 25 to 3200 units as per GOST/ISO.

The cell of type PX-28 or the set of cells whose voltage is 6 V (diameter 13 mm, height 25 mm) serves as a power source for the exposure meter.

The camera is provided with a synchronizer for combined operation with flash lamps.

The camera back is folding, hinged and can be removed from the camera, when necessary.

The camera design comprises the ergonomic attachment.

## 1.2. Camera Care

The KIEV-19M camera is a modern opto-mechanical instrument fitted with electronics. Handle the camera with care, keep it clean, protect it from jolts, impacts, dust, moisture and sharp temperature variations. In shooting in the frosty weather (below minus 10°C), do not leave the camera outdoors, carry it under your outdoor clothing and take it out only for the time of shooting.

Having brought the camera from frost into the warm premises do not take it out of the case immediately, let it get warm in the case for two hours to avoid the sweating of parts, optics especially.

Do not touch the camera optics with your fingers to avoid getting it dirty.

Try to avoid removing the lens from the camera without special need since it would result in dust and dirt getting onto optics' surfaces.

Wipe the optics' surfaces with clean soft cloth or cotton wool slightly moistened with rectified alcohol or ether. The mirror and Fresnel lens may be cleaned only on a special need with a soft dry brush.

The electrical contact in the battery recess is to be wiped with a soft cloth or cotton wool with alcohol. Take the cells out of the camera and keep them separately in case of long interruptions (weeks, months) between shots.

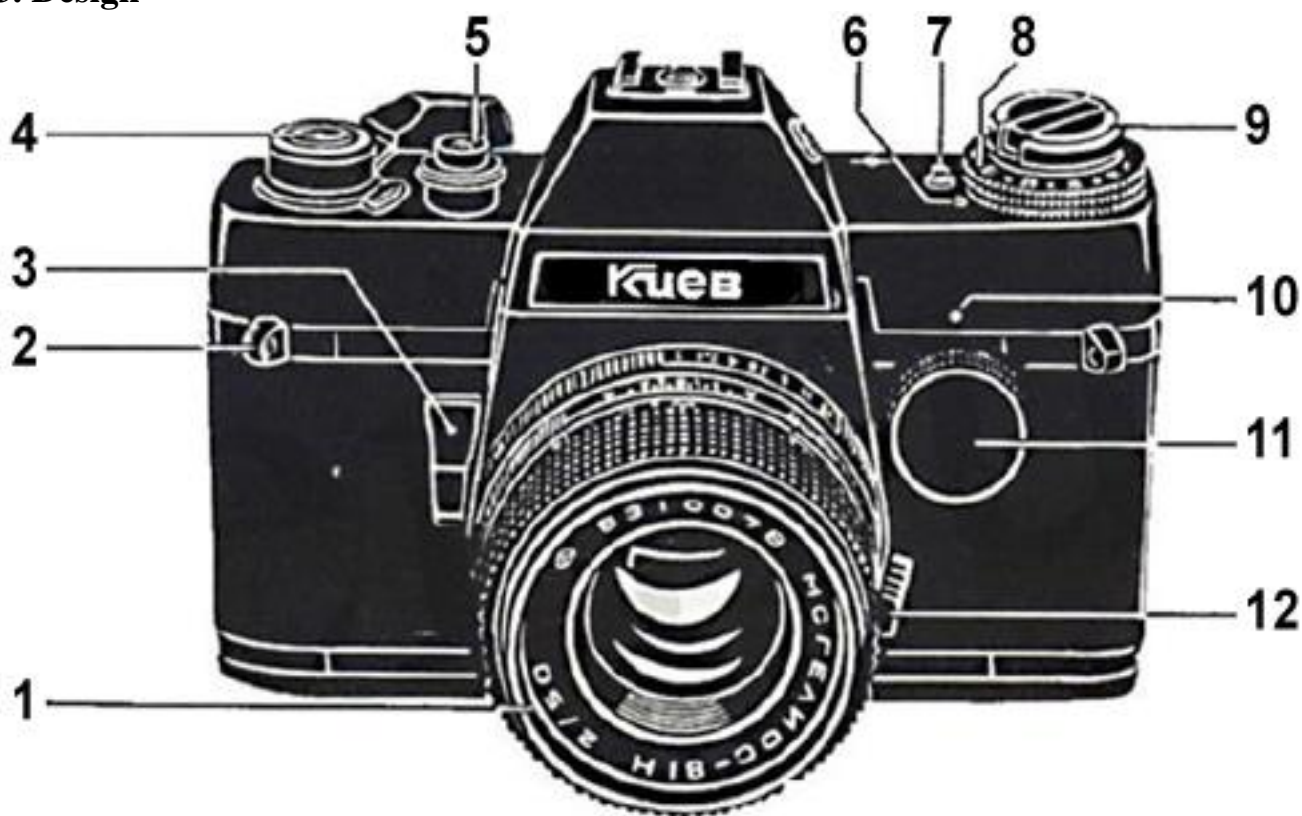
Do not exert the undue force in manipulating the camera.

Any repair and adjustment of the camera are to be carried out only by the specialists.

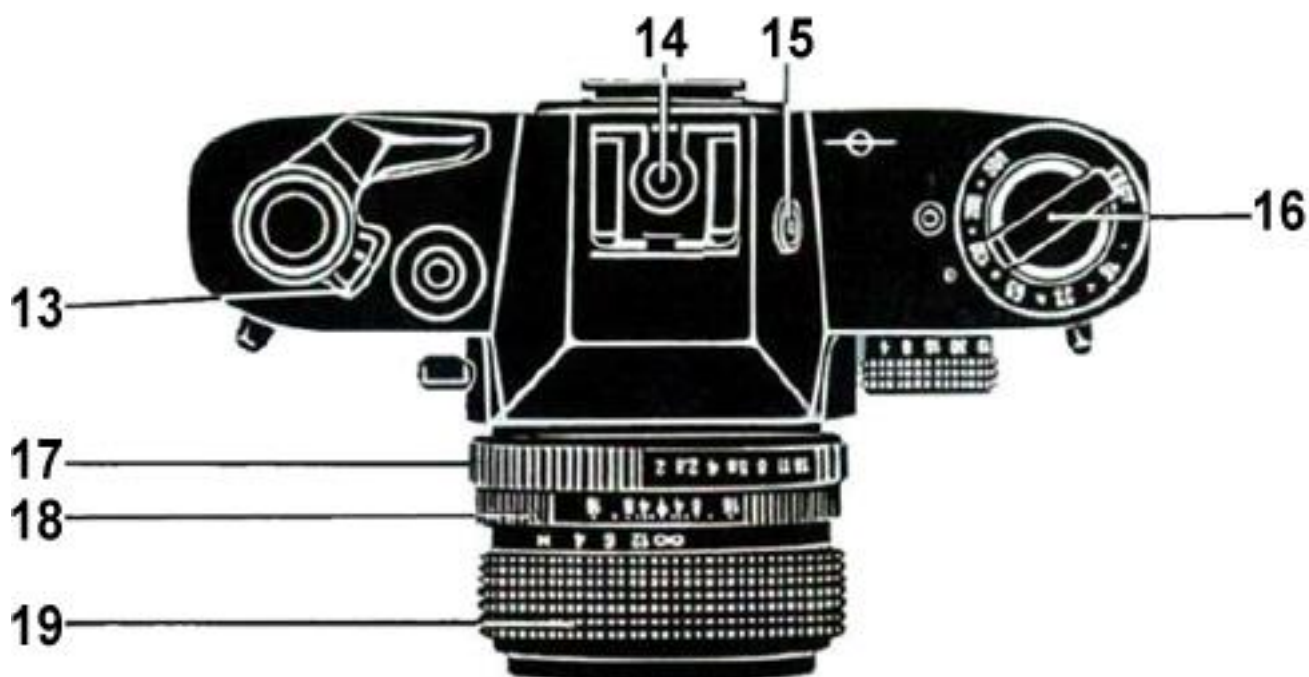
## 2. Delivery set

Camera with MC HELIOS-81H lens	1
Lens cap (front)	1
Shoulder strap	1
Guide clip insert	1
Eye-cup	1
Strap with screw	1
Case	1
Packing box	1
Instructions for use	1

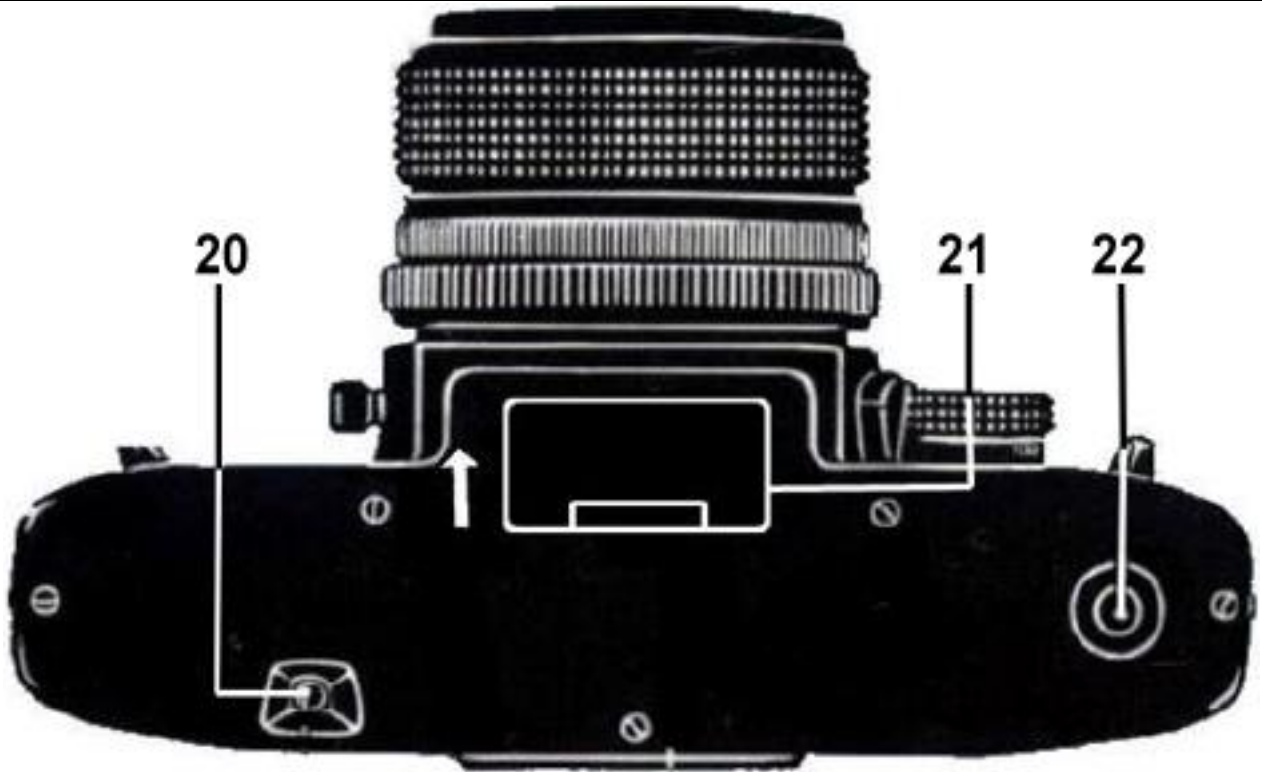
### 3. Design



- |   |  |
|---|--|
| 1. lens;  | 7. film sensitivity scale fixing button; |
| 2. eye for strap attachment;                                    | 8. film sensitivity scale;               |
| 3. depth-of field preview lever;                                | 9. rewinding head;                       |
| 4. shutter cocking lever;                                       | 10. exposure setting index;              |
| 5. button for switching on exposure meter and releasing camera; | 11. exposure setting head;               |
| 6. film sensitivity setting index;                              | 12. bayonet lock lever;                  |

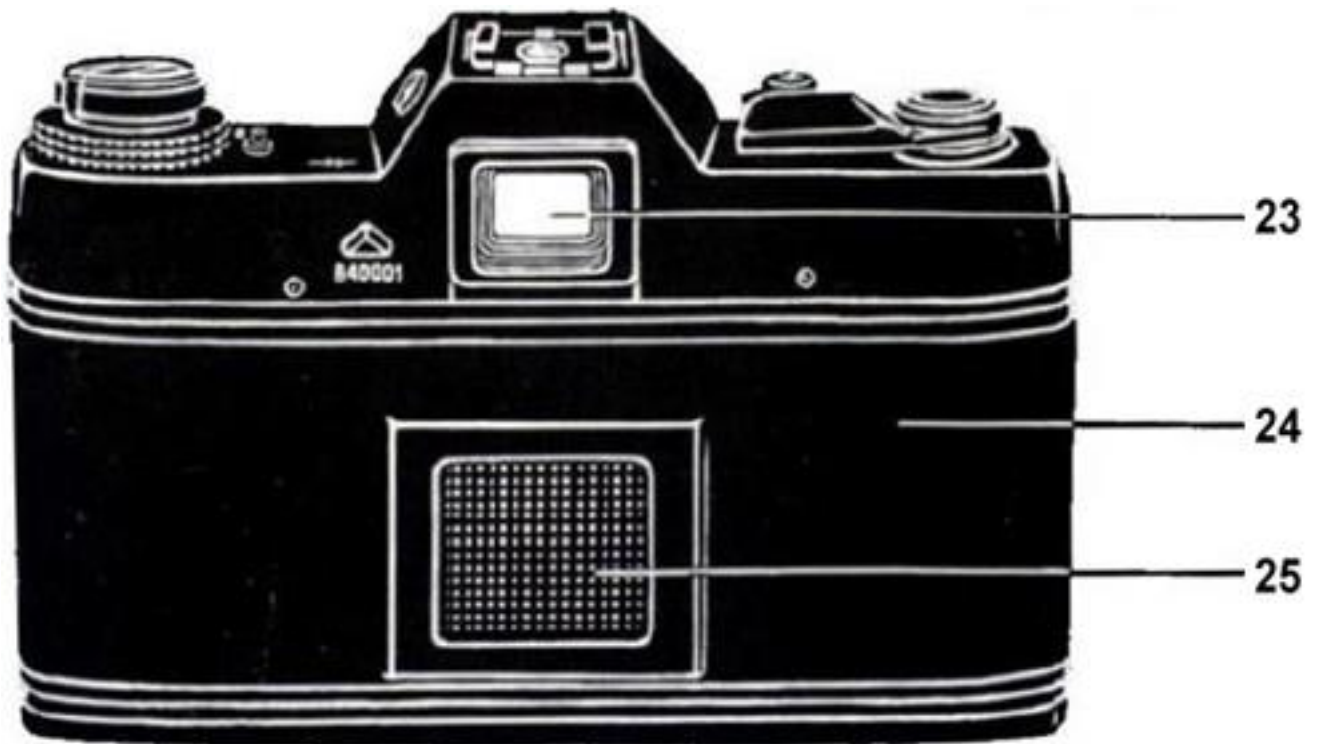


- |   |                             |
|---|-----------------------------|
| 13. picture counter window;                     | 17. diaphragm setting ring; |
| 14. clip with contact for cableless flash lamp; | 18. focal depth scale;      |
| 15. plug jack;                                  | 19. lens focusing ring;     |
| 16. folding handle of film rewinding head;      |                             |



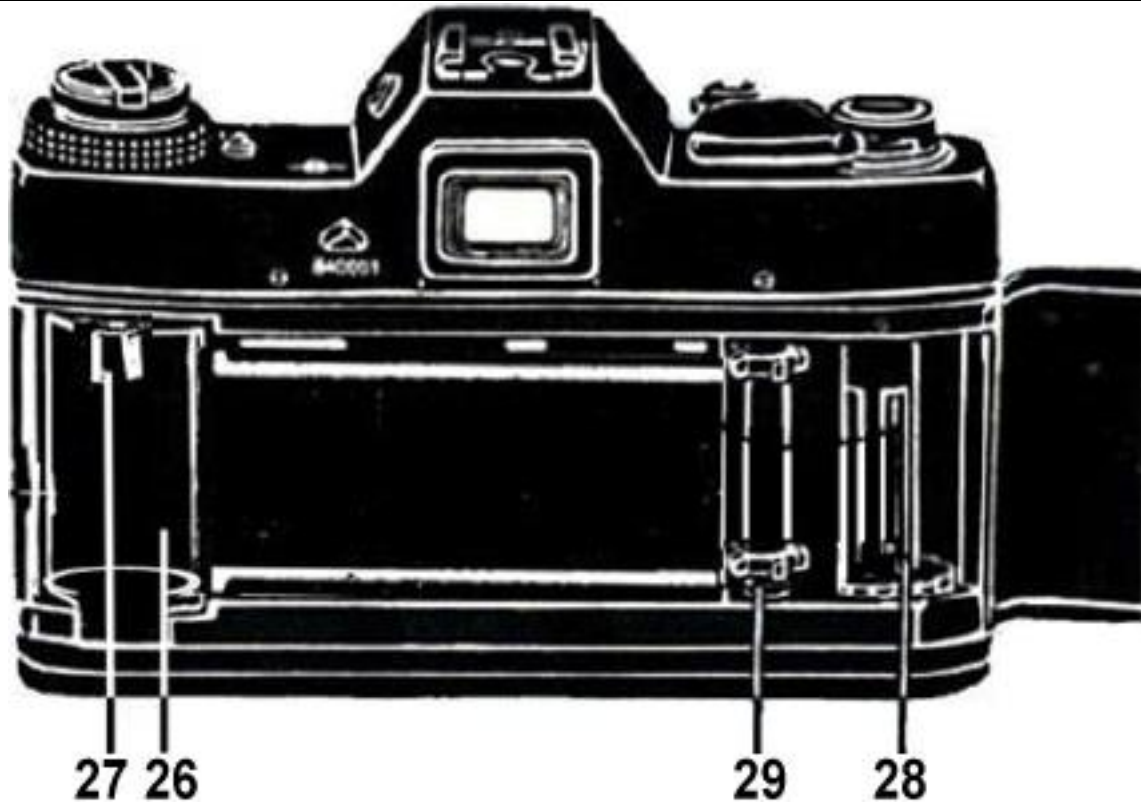
20. film transport mechanism release;  
21. power source recess cover;

22. tripod nut 1/4";



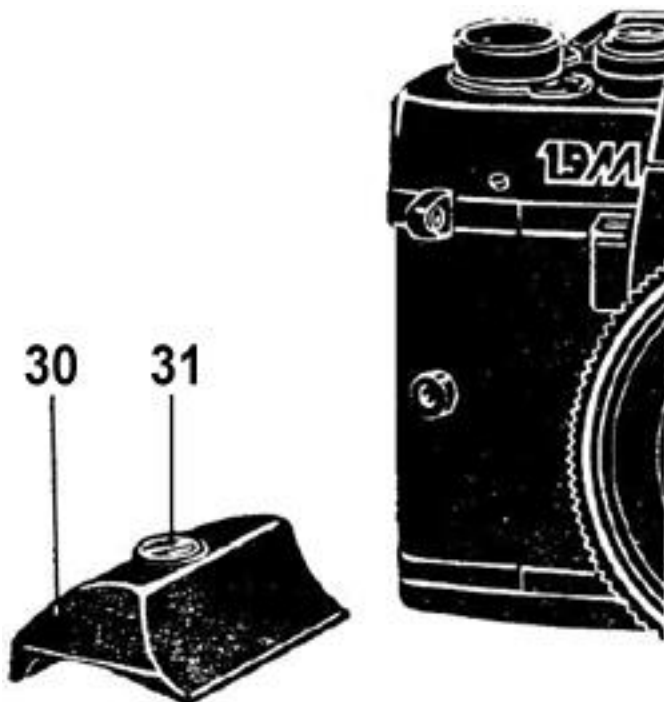
23. viewfinder eyepiece protective glass;  
24. camera back;

25. frame for arrangement of information on film  
to be used;



26. magazine recess;  
27. rewinding head dog;

28. take-up spool;  
29. measuring shaft tooth;



30. strap;  
31. strap fixing screw.

## 4. Camera Operation Procedure

### 4.1. Installation of Power Source

To install the power source open cover **21** by moving it in the direction of the arrow. Observing the polarity install the power source above the fixed in the *recess* tape. In so doing the tape end should be outside.

Close the cover and check the operation of the power source by pressing slightly (about 0.8 mm) on release button **5**. In this case the light signals (one or two) must light up from the left-hand side of the viewfinder field of vision.

## 4.2. Camera Loading

The camera can be loaded with the 35 mm unperforated film of any type in standard magazines. If you fit the film in the magazine by yourself thread it thoroughly in the spool to avoid its loosening during transportation. The magazines are light-proof but it is preferably to load the camera at weak lighting, at least in the shadow from your own body.

Do as follows:

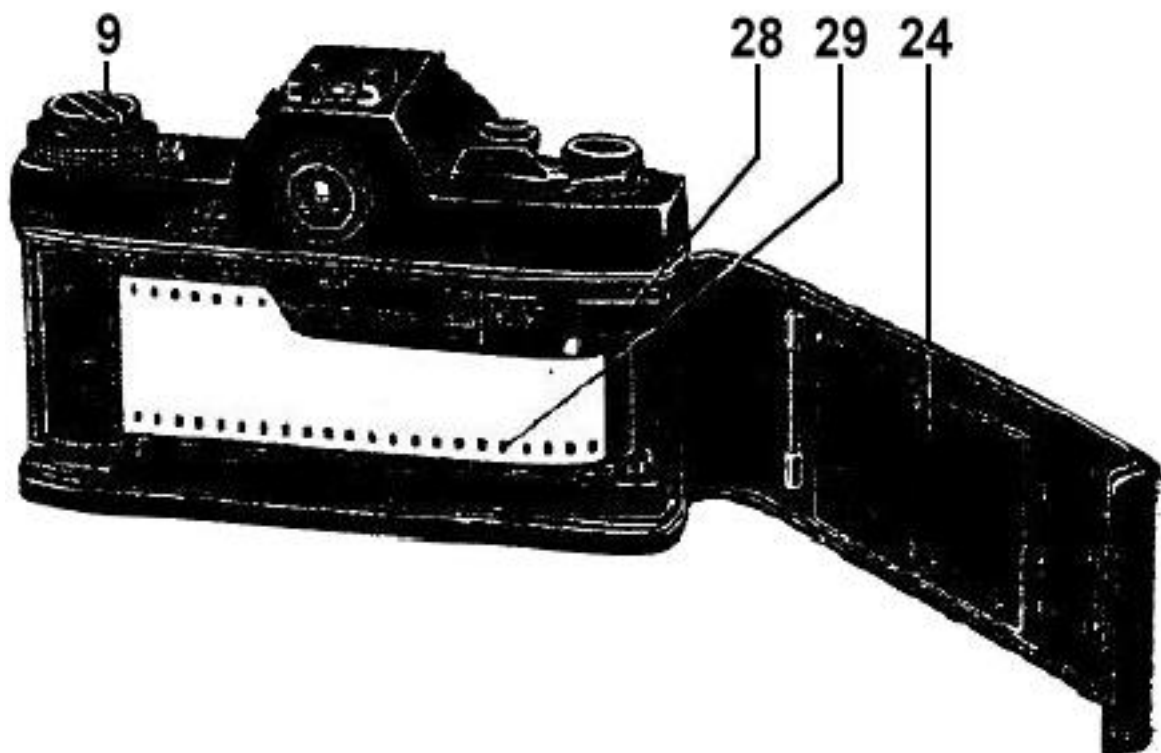
pull up rewinding head **9** as far as it will go. In this case back **27** must get opened;

insert the magazine with film into recess **26**;

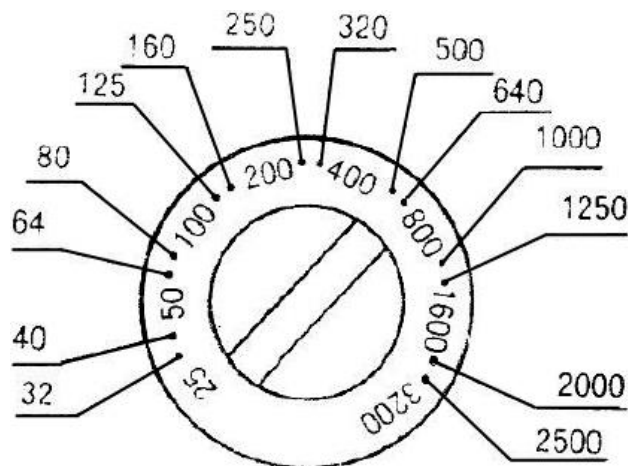
slightly turning rewinding head **9** lower it down as far as it will go that dog **27** enters the spool holes;

pull out the film end from the magazine approximately to the camera edge, insert it into the hole of take-up spool **28**. In this case tooth **29** of the measuring shaft should enter the film perforation hole. The film should rest on the skids of the picture counter window without skewing. If necessary, the film can be straightened by rotation of the take-up spool;

close camera back **24** by pressing it tightly until the shutter operates.



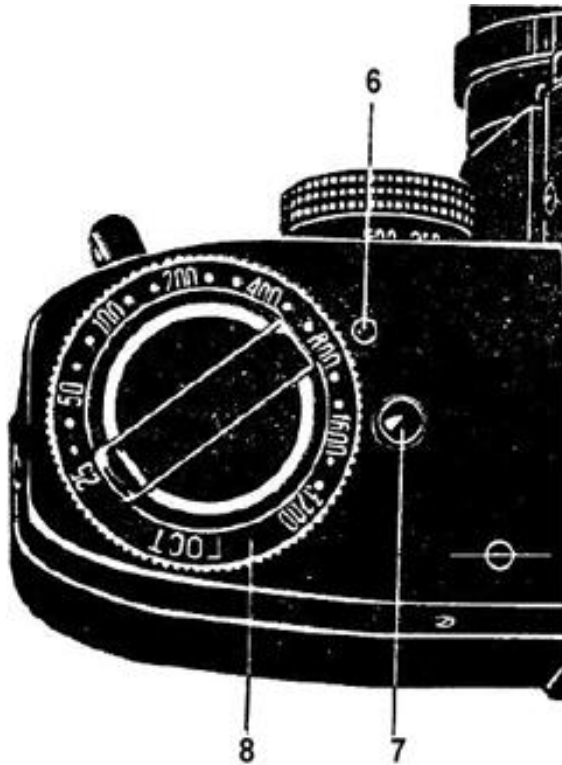
Set the sensitivity of the film loaded into the camera by pressing on button **7** and turning scale **8** until the film sensitivity value coincides with red index **6** on the upper cover. The intermediate values of the film sensitivity are marked with dots and shown in the picture.



### 4.3. Preparing the Camera for Shooting

Cock the shutter twice by lever **4** pressing on release button **5** after each cocking. At the next cocking of the shutter the digit "1" of the picture counter is set opposite the index. If the camera has been loaded correctly during the cocking of the shutter rewinding head **9** rotates.

When the film winding is not tight, it may happen that during the first pictures the rewinding head does not rotate.



### 4.4. Shooting

The shooting process consists of the following jobs:  
 shutter cocking and film transporting;  
 determining the exposure (shutter speed and diaphragm);  
 viewing and framing;  
 focusing;  
 releasing the shutter.

The shutter cocking and the film transporting are carried out by turning lever **4** counter-clockwise as far as it will go. In this case the scale of the picture counter turns through one division.

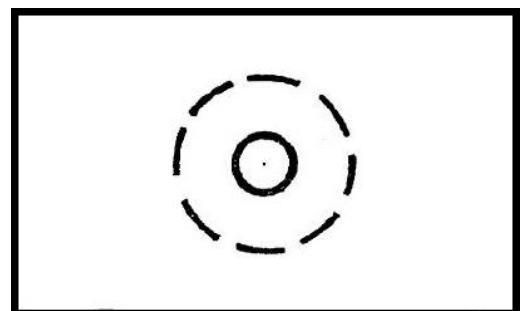
The free travel of the cock within 35° is envisaged for convenience in operation.

When the shutter is fully cocked, the lever is automatically returned to the initial position. When the shutter cocking is incomplete, the lever remains in the intermediate position (in this case the shutter must be additionally cocked).

To determine the exposure, direct the camera onto the subject so that its image would be arranged within the field of vision of the viewfinder.

The field of measurement of exposure meter has an oval shape, arranged in the middle part of the viewfinder frame with the offset to the lower side of the frame. The determining of the exposure mostly depends on light passing through the 12 mm diameter zone in the central part of the frame (ref. to Figure).

By pressing slightly on release button **5** switch on the exposure meter. Keep button **5** in the depressed position until the end of determining the exposure.



**Note.** In operation with the exposure meter do not use the depth-of-field preview lever because it can cause incorrect determining the exposure parameters.

The light indication of the exposure meter is arranged from the left-hand side of the field of vision of the viewfinder: upper signal CBETA MHOFO (MUCH LIGHT), lower signal – CBETA MAJO (LITTLE LIGHT). The simultaneous lighting of two signals is a normal condition for shooting HOPMA (NORM).

Set the exposure required for shooting preliminarily by turning head **11** until the fixing of the selected exposure value opposite index **10**. Then, while keeping button **5** in the depressed position, turn lens diaphragm setting ring **17** until the instant of illumination of two signals.

The diaphragm value, which will be set automatically upon pressing on the release button, will be opposite the index on scale **18**.

When released, the exposure meter is switched off.

By setting the definite diaphragm it can be determined by analogy the corresponding shutter speed. But bear in mind that if at changing the shutter speed scale by one value the signal opposite to the previous one appears (e. g., instead of LITTLE LIGHT appears MUCH LIGHT), that for getting the NORM signal it is necessary to correct the diaphragm value in the interval of 1/2 of step.

When the subject of shooting is quickly changed from much lighted to darkened the photodetector persistence can be shown. In this case switch on the exposure meter in 10–15 s after aiming at a subject to be shot. It is recommended to set maximum shutter speed value depending on the film sensitivity in accordance with Table 2 (at diaphragm 2).

**T a b l e 2**

Film sensitivity, units at GOST/ISO	3200	1600	800	400	200	100	50	25
Maximum shutter speed, s	1/250	1/125	1/60	1/30	1/15	1/8	1/4	1/2

When setting more long shutter speeds the photodetector lightening can be less than rated one. In this case the exposure can be determined incorrectly.

The exposure meter determines the exposure by the integrated (total) brightness of the subjects which are in the field of measurement. Therefore in shooting the subjects which sharply differ in the brightness (e. g. a man on the snow background), the exposure for the main subject can be determined incorrectly. In this case you are required to make a correction (e. g. increase the diaphragm opening).

**Notes:** 1. To prolong the service life of the power source, limit the time of operation of the exposure meter. 5...10 s are sufficient for determining the exposure.

Under such operating conditions the exposure of 8–10 films per month within a year is ensured without replacement of the power source.

Switch on the exposure meter for only the time required for determining the 16 exposure so as to save the energy of the power source.

2. At the “B” speed the operation with the exposure meter is not envisaged. Even if one of signals lights, it is impossible to determine the exposure at this speed.

Carry out the viewing and framing of a subject to be shot by examining its image in the field of vision of the viewfinder.

Perform the focusing by turning lens ring **19** until the image on the microscreen becomes sharp.

Check the depth of field by an image of parts of a subject to be shot on the ground glass, having preliminarily pressed on lever **3** so as to set the lens, diaphragm.

Release the shutter by smooth pressing on release button **5** as far as it will go. Prior to operation of the shutter the lens diaphragm is automatically set to the preliminarily set value.

Do not carry out the next cocking of the shutter until its complete operation as well as when the release button and lever **3** are depressed.

At the exposure “B” the shutter remains opened until the released button is depressed.

To obtain the sharp images in the pictures, you are recommended to shoot at speeds from 1/30 to 1/2 s from the tripod and use the straight thread for releasing the shutter.

The straight thread is to be screwed into the thread of release button **5**. The tripod nut in the camera is provided with thread 1/4”.



#### 4.5. Camera Unloading

After having exposed 36 pictures unload the camera by rewinding the film into the magazine. For this do as follows:

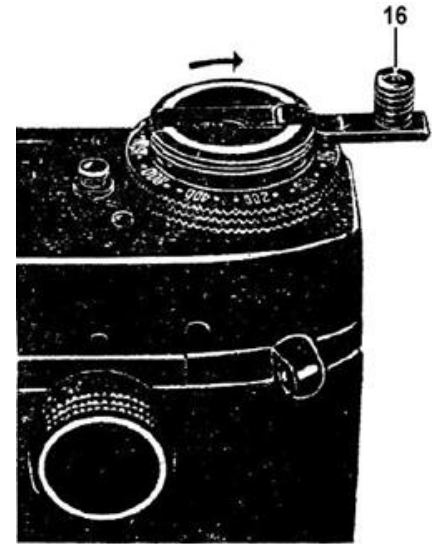
by pressing button **20** arranged on the lower cover of the camera switch off the measuring shaft;

throw out handle **16** on rewinding head **9** and rotate it in the direction of the arrow until the film is completely rewound into the magazine of which the abrupt weakening of the rotation force is indicative;

try to rotate the head smoothly without jerks and not so fast to avoid the appearance of static electricity on the film;

lift head **9** fully (in so doing camera back **24** opens) and remove the magazine.

If it is necessary the camera can be unloaded after any number of pictures are exposed.



#### 4.6. Shooting with Flash Lamp

Different flash lamps can be used in shooting with camera KIEV-19M.

For connection of the flash lamp to the camera the latter is provided with a central contact in clip **14** and plug jack **13**.

This provides an opportunity of using the flash lamp with a central contact (cableless connection) or the flash lamp with a plug connector (cable connection).

The minimum shutter speed in operation with the flash lamp is equal to 1/60 s.

Prior to fitting the flash lamp into clip **14**, remove the safety insert from the clip.

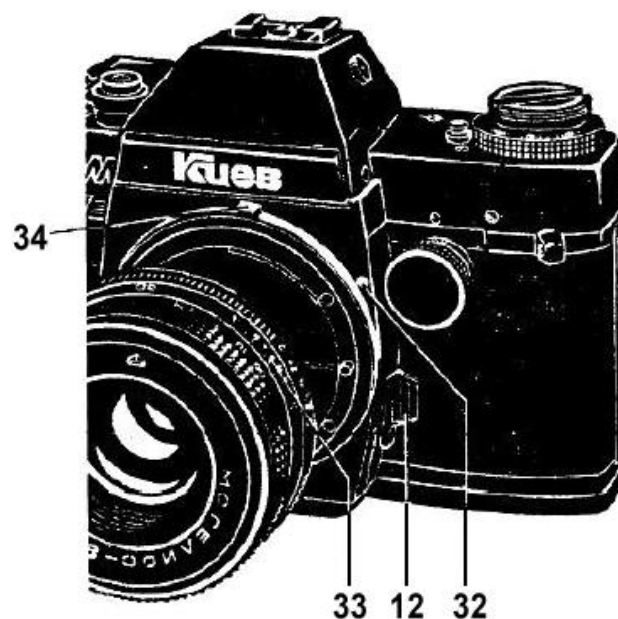


#### 4.7. Lens Replacement

To remove the lens, press on bayonet lock lever **12** as far as it will go and disconnect the lens from the camera by turning it clockwise.

When installing the lens, match index **33** with index **32** on the camera body, insert the lens into the camera and turn it counter-clockwise until the lens is fixed.

In this case the right-hand ledge of the diaphragm scale opening catches dog **34**, and ensures the diaphragm values automatic enter the exposure meter.



#### **4.8. Installation of Dioptric Lens**

If it is necessary use the dioptric lens in shooting. It is inserted into the mounting of the eyepiece protective glass.

To install the dioptric lens unscrew the mounting with protective glass **23**, remove the spring ring and take out the protective glass. Install the dioptric lens on the protective glass place and insert the spring ring.

The dioptric lens diameter is 18 mm.

Bear in mind that the camera viewing system has the minus 1 diopter.

#### **4.9. Replacement of Power Source**

When the voltage of the power source drops below an admissible level, the signals in the field of vision of the viewfinder go out or when the exposure parameters are set to the NORM position the signals begin to blink. In this case replace the power source.

To replace the power source do as follows:

open cover **21** by moving it in the direction of the arrow (ref. to Figure);

by pulling the tape end take the faulty power source out from the recess;

install a new power source observing the polarity shown on the cover;

check the power source for operation by pressing cover **5**.

#### **4.10. Installation of Attachment**

For convenient holding the camera without the case it is possible to install ergonomic attachment **30** which is fixed on the camera body by screw **31**.

### **5. Acceptance Certificate**

It is hereby certified that KIEV-19M camera, Serial No. \_\_\_\_\_ with lens No. \_\_\_\_\_ meets the requirements of the engineering documentation and is found fit for service.

Date of release \_\_\_\_\_

Signatures of persons in charge of acceptance \_\_\_\_\_