



# **KIEV 88 CM CAMERA**

Instructions for use

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## 1. GENERAL

The KIEV 88 CM is a medium-size reflex camera with a curtain shutter and interchangeable film magazines of sizes 6x6 and 6x4,5 cm.

The camera is intended for amateur photography. With a proper handling and care it will enable you to obtain high-quality slides, large-size black-and-white or colour pictures.

The camera is designed for use of a 61.5 mm wide roll film (type 120 or 220).

The camera curtain shutter offers exposure times over a range from 1/1000 to 1/2 s and manual exposure "B".

The shutter cocking mechanism is interlocked with the film transport mechanism, thus preventing double film exposure.

The camera is provided with a prism viewfinder TTL/SPOT measuring the exposure in integral or spot metering mode.

The camera comes complete with ARSAT C2,8/80 with a multilayer antireflection coating which upgrades the image quality and enhances its contrast due to better integrated transparency and reduced light dispersion.

The focal length of the lens is 80 mm, the relative aperture is 1:2.8, the diaphragm setting limit is 22, the near focusing limit is 0.6 m.

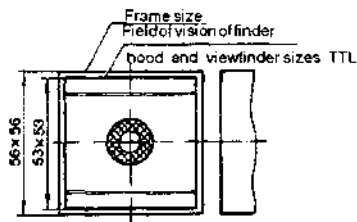
The sharp focusing is carried out with the aid of a microraster or a rangefinder wedge arranged in the centre of the field of view and with the aid of a ground-glass surface or distance scale.

The camera design envisages the use of interchangeable lenses fitted on a bayonet of "Pentacon Six" type.

The hood-type viewfinder enables the picture to be viewed on the ground glass with

or without a magnifying lens. The field of vision of the hood-type viewfinder measures 53x53 mm. Magnification of the TTL/SPOT prism finder eyepiece is  $2,8^{\times}$ , the field of vision measures 53x53 mm.

Schematic representation of the field of vision when operating with the interchangeable viewfinders is given in the Figure.



The camera operates with interchangeable film magazines which allow to obtain 12 pictures of 6x6 cm size or 15 pictures of 6x4,5 cm size on film type 120 as well as

24 pictures of 6x6 cm size on film type 220. The interchangeable film magazines offer the opportunity for quick change in the process of photographing from a black-and-white to colour film or to a more or less sensitive film. The film magazine may be removed from the camera irrespective of the number of the pictures taken.

The camera is provided with a synchronizer for photographing with cable and cableless flash lamps.

The camera operates in the temperature interval from minus 15 to 45 °C.

Before starting the photographing, please get acquainted in detail with these Instructions and you will know all the peculiarities of the camera.

## 2. DELIVERY SET

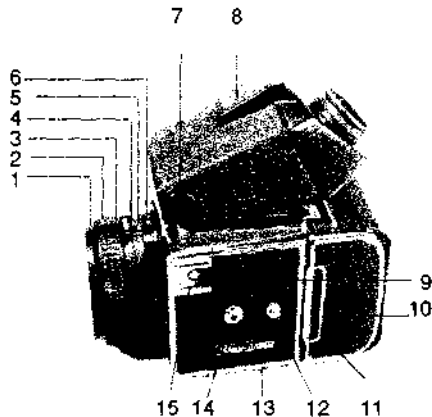
Camera with ARSAT C 2,8/80 lens with a cover, finder hood, film magazine with spool and insert	1
TTL/Spot prism viewfinder	1
Eyecap	1
Lens hood	1
Shoulder strap	1
Packing box	1
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NOTE. The KIEV 88 CM camera set can include one or two magazines of similar or different frame sizes.

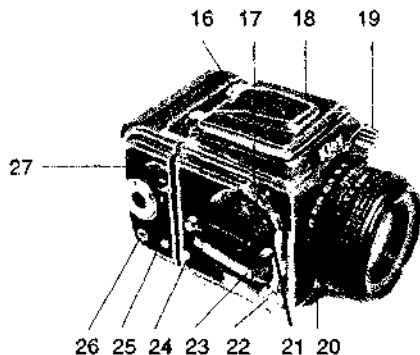
Your camera complete set is given in section 11 "Acceptance certificate".

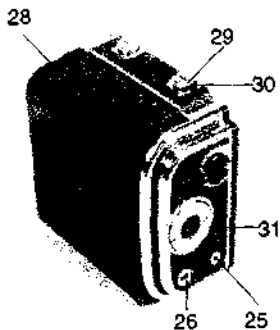
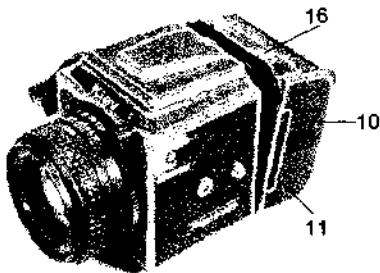
### 3. MAIN UNITS AND PARTS

- 1 — lens;
- 2 — lens focusing ring;
- 3 — distance scale;
- 4 — depth-of-field scale;
- 5 — diaphragm and distance scale index;
- 6 — diaphragm scale;
- 7 — battery seat cap;
- 8 — prism finder;
- 9 — insulating plate ;
- 10 — film magazine;
- 11 — shutter;
- 12 — strap fitting eye;
- 13 — tripod socket and guide of attaching handle;
- 14 — synchronizer plug socket;
- 15 — flash lamp yoke;
- 16 — film magazine lock button ;
- 17 — exposure scale index;
- 18 — finder hood;



- 19 — bayonet clamping ring;
- 20 — depth-of-field visual check lever;
- 21 — exposure scale;
- 22 — release button;
- 23 — shutter cocking and exposure time setting knob;
- 24 — shutter cocking indicator window;
- 25 — film exposure indicator window;
- 26 — picture counter window;
- 27 — film transport unlock handle.





## 4. OPERATING PROCEDURE

### 4.1. Preparing the camera for loading

Take the camera out of the case. Insert shutter 11 as far as it will go. Having displaced button 16 in direction of the arrow and having turned film magazine 10 as shown in the Figure, remove it from the camera.

The film magazine lock will open only with the shutter pushed home.

### 4.2. Film magazine loading

The magazine is loaded with the film in daylight (preferably in a shade). Remove film magazine cover 28. For this purpose first turn lever 30 and then shift button 29 in the direction of arrows. Take out transport mechanism 34. Tear off

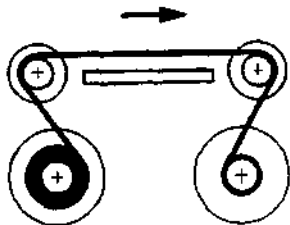
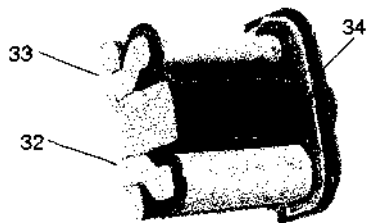


the paper label from the leader end. Shift plate 32 through 90°, place the spool with the film into the seat and reset plate 32 to the initial position. In this case the protruding centre of the plate should enter the spool hole.

Shift plate 33 through 90° and insert the take-up spool into the seat. Set plate 33 to the initial position so that the protruding centre of the plate will enter the spool hole.

Pass the film leader on the guide rollers, as shown in the Figure, fit the leader end in the take-up spool and wind the leader by rotating the take-up spool. Be sure that the leader would be wound without skewing or crumpling of its edges.

Lift one of halves of knob 31 by turning through 90° and by rotating it in the direction of the arrow set the arrow on the leader opposite the red index on the transport mechanism. Insert shutter 11 into the seat



as far as it will go. Close film magazine cover 28. Turn handle 31 in the direction of the arrow until it stops. The Figure "1" will be set in picture counter window 26 which corresponds to the first picture in the film and the white colour indicator will appear in window 25.

### 4.3. Preparing the camera for shooting

Cock the shutter by turning knob 23 until it stops. Fit loaded magazine 10 on the camera catches and, turning the magazine attach it to the camera until the lock operates.

When installing the film magazine with a partially exposed film, be sure that the colour of signals in windows 24 and 25 should be similar otherwise a double exposure or a picture omission may occur. The state of film is determined by the colour of signals in these windows (ref. to

the Table).

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Signal colour	Window in the film magazine	Window in the camera
White	Film in the picture window has not been exposed	Shutter cocked
Red	Film in the picture window has been exposed	Shutter released

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### 4.4. Shooting

The process of photographing consists of the following operations:  
shutter cocking and film transporting;  
exposure setting;  
diaphragm setting;

viewing;  
focusing;  
shutter releasing.

**Cock the shutter and transport the film** by turning knob 23 fully. It is necessary to avoid incomplete cocking.

At the beginning of the shutter cocking a slight increase of the force applied to the knob may be required.

When the shutter is being cocked:

- the film is automatically rewound;
- the next picture number is set in window 26;
- the white signals are set in windows 24 and 25;
- the mirror is lowered to the operating position;
- the lens diaphragm aperture is fully opened.

**Set the exposure time** by knob 23 when the shutter is cocked.

Pull the knob in the direction of the arrow and turn it in any direction until the exposure

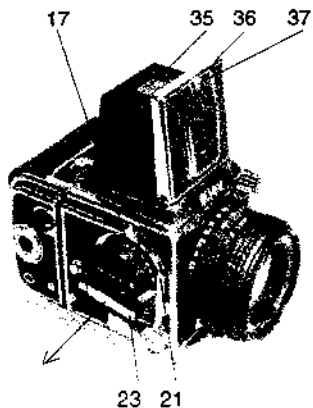
time value on scale 21 coincides with index 17 arranged on the camera body. Lower the knob in this position so that it would be fixed.

**Set the lens diaphragm** by turning ring 6 with the scale until the chosen diaphragm aperture value coincides with the index. The scale is fixed on all marked divisions of diaphragm apertures.

Open **finder hood 18 for viewing** by shifting button 37 in the direction of the arrow. With the repeated shifting of the button viewfinder magnifying lens 35 is set to the operating position.

If the film magazine 6x4.5 cm frame size is attached to the camera the framing should be carried out by the thickened lines in the finders field of view.

**Focus** the camera with the aid of the ground-glass surface with a micro-



raster and a rangefinder wedge or with the aid of the distance scale by turning ring 2 with the scale. The focusing is to be carried out only with the shutter cocked when the mirror is in the working position and the diaphragm is fully opened. The depth of field is determined with the

aid of the distance scale 3 by means of additional scale 4.

The depth of field can be visually checked by the image of the object components on the ground-glass surface in the field of view of the viewfinder after pressing of lever 20 fully downwards. In this case the lens is stopped down to the earlier preset value. When released, the lever automatically returns to the initial position and the diaphragm is fully opened.

The framing and focusing over, remove the shutter 11 and **release the camera shutter** by pressing smoothly on release button 22 as far as it will go.

When the camera shutter is being released:

- the mirror automatically swings to the upper position;
- the diaphragm aperture closes to the

preset value;


- the film is exposed;
- the red signals are set in windows 24 and 25. Since the main operations at shooting are possible only with the cocked shutter get used to cock the shutter after shooting immediately.

At the exposure times over 1/30 s it is recommended to carry out the photographing from a tripod.

With the use of exposure times from 1/8 to 1/2 s the release button is to be released after the complete operation of the shutter.

Tripod sockets 13 in the camera are provided with thread 3/8".

The camera shutter can be released with the aid of a straight thread which is screwed into threaded hole of release button.

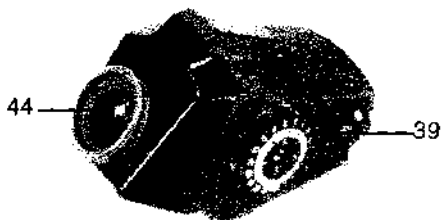
The film magazine has the device which permits double film exposure. For this purpose set handle 27 to the position  and

cock the shutter of the camera. The handle will return to the initial position after cocking the shutter.

The shooting over, fold the finder hood. For this purpose press the viewfinder magnifying lens 35 to cap 36 until it is fixed, fold the side walls then the rear wall and while holding the rear wall, close cap 36 until it is fixed by a lock.

## **5.DETERMINING THE EXPOSURE TIME WITH THE AID OF PRISM VIEWFINDER TTL/SPOT**

The viewfinder TTL/SPOT provides a direct image of the photographed object at viewing. It permits to determine the exposure time and the diaphragm aperture with the aid of built-in exposure meter and has two exposure metering modes: integral and spot modes. The integral metering mode provides metering in the brightness range from



2 to 16000 cd/m<sup>2</sup> and the spot mode - from 8 to 16000 cd/m<sup>2</sup>. The exposure meter is activated by pressing button 39, operates for about 20 s and then automatically turns off. To change the metering modes it is necessary to press the button once more.

As a power supply source of the exposure meter serves a battery with initial voltage of 4-4.5 V (diameter of 11.6 mm, length of 16.2 mm), for example, the battery comprising three elements of PX675, RM675 or MS76 types.

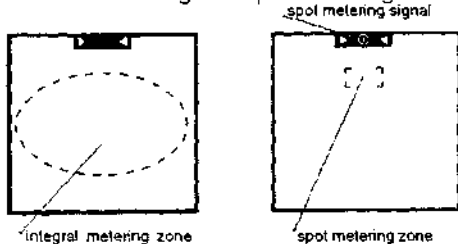
The power supply source ensures the ex-


posure meter operation in the temperature range from minus 5 to 45°C.

When preparing the prism viewfinder for operation set the film sensitivity on its calculator by turning handle 42 until the film speed value in ISO units appears in window 43.

Set on the calculator the value of the lens speed by turning scale 41 until the appropriate value coincides with index.

The lens speed is a number corresponding to the maximum relative aperture. For example, it is 2.8 for MC ARSAT C lens. When switching the spot metering in the



viewfinder field of view appears the signal .

While viewing in the eyepiece, aim the camera at the object so that its image would be arranged within the viewfinder metering zone.

Depending on the brightness of the object being photographed, in the upper part of the field of view of the viewfinder you will see the luminescence of one of the signals.

Slowly turning ring 40 of the calculator achieve simultaneous luminescence of both signals.

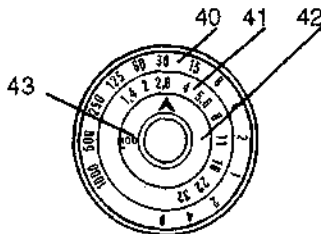


"Little light"

"Much light"

"Sufficient light"

With the calculator in this position, choose the "exposure-diaphragm" pair required for photographing, e. g. exposure  $1/30$  s in



opposite diaphragm value 2.8,  $1/15$  s is opposite 4,  $1/8$  s is opposite 5.6,  $1/2$  s is opposite 11.

The chosen values of exposure and diaphragm set on the camera exposure scale and on the lens diaphragm scale.

Note: The eyepiece design makes it possible to employ dioptric lenses. For mounting the dioptric lens it is necessary to unscrew the clamping ring of eyepiece 44,

insert the lens of 23 mm in diameter in the mounting seat and fix it with the clamping ring.

## **6. UNLOADING THE CAMERA**

The shooting can last until letter "K" (end) appears in the picture counter window indicating that the film has been fully used. After this fully insert shutter 11 and remove the film magazine from the camera having moved button 16 in the direction of the arrow. Using handle 31 rewind the remained paper leader onto take-up spool (at the end of rewinding the force applied to the handle should be reduced).

Open the film magazine cover. Remove transport mechanism 34. Turn plate 33, remove the spool with exposed film and glue the leader with a paper label.

Return plate 33 to the initial position, install the transport mechanism 34 into the magazine body and close the cover.

## **7. REPLACEMENT OF LENS**

Design of the camera envisages the use of interchangeable lenses.

To remove the lens turn with a guide clamping ring 19 of the bayonet counterclockwise until it stops and remove the lens. When fitting the lens insert it on the camera in a such manner that a guide pin of lens would enter the slit on the camera ring. Then by turning bayonet ring 19 clockwise clamp the lens fully.

The interchangeable lenses ARSAT C for the camera KIEV 88 CM are released.



Description, ARSAT C	Focal length, mm	Angle of vision, mm	Maximum relative aperture	Filter thread, mm
3,5/30	30	180	1:3,5	M38x0,5
3,5/45	45	83	1:3,5	M82x0,75
PCS 4,5/55	55	69*/84**	1:4,5	M72x0,75
3,5/65	65	66	1:3,5	M72x0,75
2,8/80	80	45	1:2,8	M62x0,75
2,8/120	120	36	1:2,8	M62x0,75
2,8/150	150	29	1:2,8	M82x0,75
3,5/250	250	19	1:3,5	M82x0,75
5,6/250	250	18	1:5,6	M62x0,75
5,6/500	500	9	1:5,6	M95x1

\* - without shift

\*\* - with shift

## **8. FLASH PHOTOGRAPHY**

When photographing with KIEV 88 CM you can use different flash lamps for which attachment the camera incorporates a hot shoe in yoke 15 and plug socket 14. This allows to use flash lamps with the hot shoe (cableless connection) and flash lamps with plug socket (cable connection).

When operating the pulse flash lamp the minimum exposure is  $1/30$  s.

Before installing the flash lamp into yoke 15 you have to remove insulating plate 9 from the yoke.

## **9. REPLACEMENT OF POWER SUPPLY SOURCE**

The power supply source operating is

checked by lighting signals which light up in the field of view of finder eyepiece. If the signals are absent with the pressed button 39 it means that the power supply source is to be replaced.

To replace or install the power supply source, unscrew battery seat cap 7 and observing the polarity ("+" of the power supply source should be arranged from the end of chuck "-" symbol is engraved on the cap) install it into the seat.

## **10. CARE**

Protect the camera from dust, moisture, snow, harmful vapours, jerks, jolting, impacts and sharp temperature variations.

Handle the camera with care, do not exert the excessive efforts in handling it, keep the camera clean.

Do not remove the lens without an

utmost necessity since this may result in dirt and dust getting into the camera. Clean the camera regularly. Remove the dust from its external and internal surfaces with a soft brush or blow off the dust with the aid of a rubber bulb. Thoroughly protect the optical components from getting dusty or dirty, try to avoid touching them with fingers.

Having brought the camera from the frosty weather into the warm premises, do not open it immediately, let it become gradually warmed up for 2-3 hours.

When some defects or faults have been discovered, do not carry out the repair on your own. The repair and adjustment should be carried out by the qualified specialists.

## 11. ACCEPTANCE CERTIFICATE

It is hereby certified that camera KIEV 88  
CM, Serial No. \_\_\_\_\_,

with lens No. \_\_\_\_\_,

prism viewfinder No. \_\_\_\_\_,

magazines No. \_\_\_\_\_

and \_\_\_\_\_

complies with the requirements of the  
engineering documentation and is found  
fit for service.

Date of manufacture \_\_\_\_\_