

# English manual for LOMO LC-A camera

## OPERATION MANUAL

LOMO COMPACT AUTOMAT camera is designed for operation in temperature range from minus 15 to +45 °C, direct solar radiation and precipitation excluded.

Camera LC-A has some distinctive features. It is so small that you can carry it in your pocket. Automatic exposure working is ensured in a wide range of object brightness. The camera is provided with a device protecting the photo objective and viewfinder objective from mechanical damages and contamination in storage.

The camera is powered from a D.C. source, type SR-44, S-76.

**NOTE** - When using another power source with temperature operation range lower than that of your camera, the camera temperature operation range is to be limited with that of the power source.

A light indicator for control over power cells level and a light indicator warning of expected shutter speeds longer than 1/30 s are in the field of vision of the viewfinder.

A wide-angle high power objective is rigidly built in the camera, which considerably extends opportunities of the camera (photographing of architectural subjects and landscapes at short distances, photographing of landscapes in small premises and so on). In this case, some vignetting (decrease of brightness and definition towards the margin of the field) is possible that is admissible for a camera of this type.

Focusing is performed by the distance scale.

For photographing with a flash bulb, a manual diaphragm setting in the range of 2.8 to 16 is provided. At switching-over from automatic operation ("A") to manual diaphragm setting, a shutter speed 1/60 s is set.

## 2. TECHNICAL SPECIFICATIONS

Film accepted, mm	35
Frame size, mm	24x36
Number of frames	36
Photographic objective:	
Focal length, mm	32
Relative aperture	1:2.8
Field of view angle	63°
Focusing range, m	from 0.8 to ∞

Stopping down limits	from 2.8 to 16
Electromechanical program shutter is controlled with electronic exposure meter.	
Shutter speeds, s	from 1/500 to 2
Operation range of exposure meter with 100 ISO film light sensitivity, cd/m <sup>2</sup>	from 0.6 to 19000
Range of film light sensitivity, ASA/ISO	from 25 to 400
Telescopic shutter.	
X-type synchronization with flash bulb.	
Shutter speed for tacking with flash bulb, s	1/60
Tripod socket thread	1/4"
Overall dimensions, mm, not over	107 x 68 x 43.5
Weight, kg, not over	0.25

### 3. DELIVERY SET

Camera LC-A	1
Shoulder strap	1
Operation manual	1
Box	1

### 4. CAMERA DESIGN

General view and the controls of the camera are given in Fig. 1-5.

- 1 - Guard cover;
- 2 - Guard curtains;
- 3 - Photographic objective;
- 4 - Light-limiting device of photo detector;
- 5 - Viewfinder;
- 6 - Film light sensitivity setting knob;
- 7 - Film light sensitivity window;
- 8 - Objective focusing key;
- 9 - Manual diaphragm setting and operation modes key;
- 10 - Release knob;
- 11 - Decorative plug;
- 12 - Frame counter window;
- 13 - Flash bulb joint;
- 14 - Guard curtains control key;
- 15 - Film advance gear disengagement knob;
- 16 - Cells container cover;
- 17-Cells container;
- 18 - Tripod socket;
- 19 - Shoulder strap;

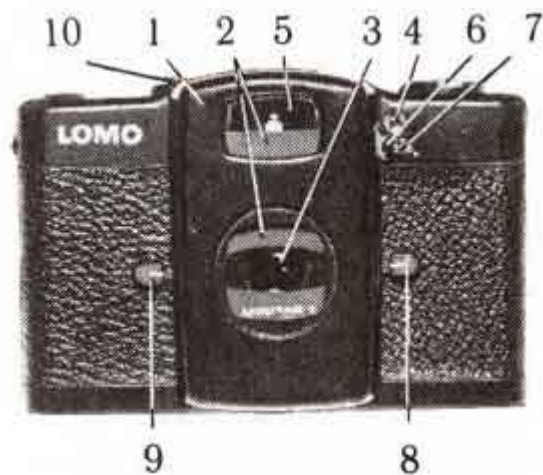


Fig. 2

- 20 - Shutter cocking and film feed
- 21 - Viewfinder inspection window;
- 22 - Rewind handwheel;
- 23 - Rewind knob;
- 24 - Rewind handwheel axle yoke;
- 25 - Cassette receptacle;
- 26 - Film position limiters;
- 27 - Film advance gear;
- 28 - Take-up spool;
- 29 - Pressure plate;
- 30 - Camera back

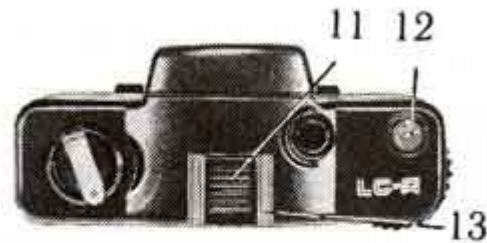


Fig. 3

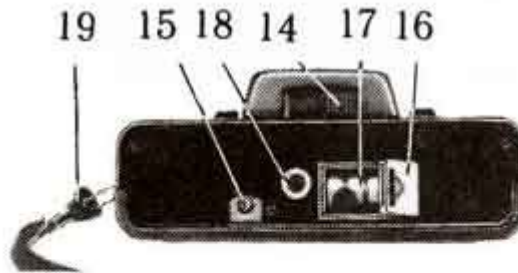


Fig. 4

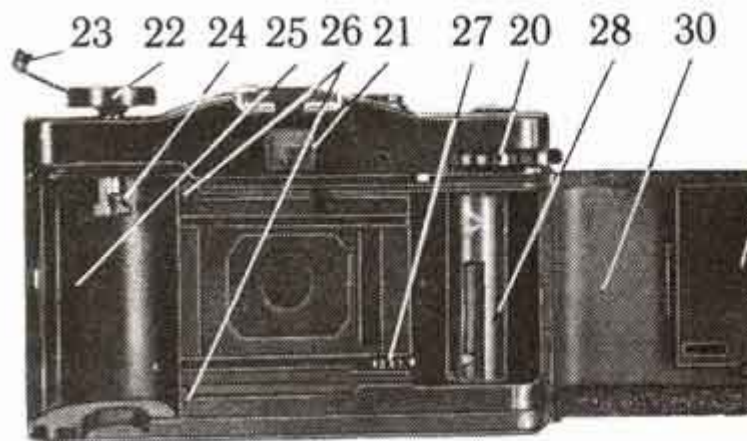


Fig. 5

## 5. PRE-STARTING PROCEDURE

### 5.1. Installing and checking the cells

To install the power source into the camera, move cover 16 (Fig. 4) in a direction pointed with the arrow. Put the cells into the container so that sign "+" on the cells is looking towards sign "+" on the camera container. Meanwhile the flexible tape serving for removing the power source must be under the power source and its end must jut out.

Close the container cover. The cells installed check them for serviceability. For this aim, move curtains control key 14 and open the objective and the

viewfinder. Looking through the inspection window 21 (Fig. 5) of the viewfinder press down the release knob 10 (Fig.2) until it is stopped slightly.

If the cells are serviceable and inserted in a correct way, a red color indicator should shine at the upper left corner of the viewfinder. If the indicator does not shine check up whether the cells are inserted in a correct way and contact areas are clean. If the indicator does not yet shine replace all the cells.

Checking up energetic level of power cells during taking pictures is made according to the indicator (shines or does not shine) on pressing down the release knob.

## 5.2. Camera loading

To insert the cassette with film into the camera, swing out knob 23 (Fig.5) of handwheel 22 and pulling it upward until stop, open the camera back 30. Insert the cassette into receptacle 25 so that a film leader is facing to the right. Lower handwheel 22 so that yoke 24 enters the cassette spool plug.

Put the film leader (Fig.6) into the slot of the take-out spool so that film perforation engages into mesh with a tooth of take-up spool 28 (Fig.5). Holding the cassette with film by your hand and rotating handwheel 20 with the other hand, take up film slack. Make sure the film is positioned between limiters 26 that it is engaged with gear 27 and is fixed reliably at take-up spool 28.

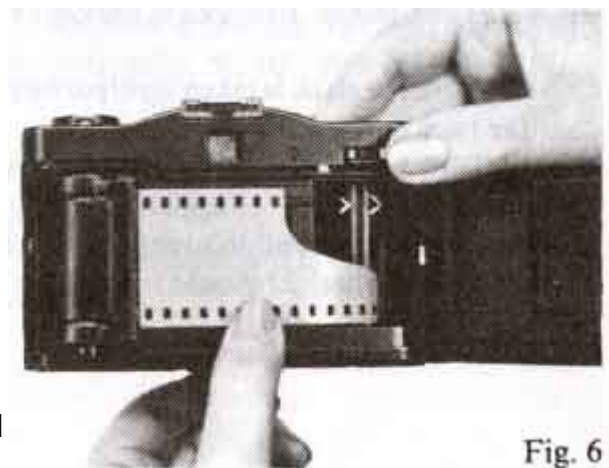


Fig. 6

If handwheel 20 has turned up to stop while the film slack has not yet taken up, press down release knob 10 (Fig.2) and continue taking up the slack.

**ATTENTION!** If the objective and viewfinder are covered with the guard curtains, release knob 10 is interlocked. To unlock it, use key 14 (Fig.4) to open protective curtains of the taking objective.

After the slack is taken up close camera back 30 (Fig.5) and press it slightly to the body so that the back is fixed.

Turn handwheel 20 against the stop and press the release knob. Repeat this procedure twice or thrice till digit "1" appears in the frame counter window against the index. While pulling the film, pay your attention to rewind handwheel 22 (Fig.5). If the camera is loaded with the film correctly, handwheel 22 should rotate also on rotation of handwheel 20.

### **5.3. Setting value of film light sensitivity**

After installing the cassette with film into the camera, it is required to introduce into the exposure meter a value of light sensitivity of film applied (the value given on the package). For this aim rotate film light sensitivity setting knob 6 (Fig.2) till a value required appears in window 7. Loading the camera with a new film, it is required to introduce a new value of light sensitivity.

The light sensitivity scale in the camera has numberings 25, 50, 100, 200, 400 ASA/ISO.

### **5.4. Focusing**

Objective in LC-A camera is focused by distance scale.

To focus by distance scale, estimate camera-to-object distance and bring key 8 (Fig. 2) to the corresponding position with respect to the distance scale.

## **6. PHOTOGRAPHY**

### **6.1. Automatic photography**

Draw apart curtains 2 (Fig.2) covering objective 3 and viewfinder 5.

Bring diaphragm setting key 9 to position "A".

Look at window 7 to check up whether film sensitivity value is set correctly.

Check up for serviceability of the power source slightly pressing down release knob 10 (Fig.2) and watching the indicator in viewfinder inspection window 21.

Focus the objective and find subject borders by means of the picture-limiting frame.

Check to see that you have not shut with your fingers light-limiting device 4 and objective 3.

Press release knob 10 until stop. Release the knob only after shutter responded.

### **6.2. Photography with a flash bulb**

With slight pressing of the release knob, you can see in the viewfinder a red-color indicator at the upper right corner simultaneously with the red-color indicator at the upper left corner. Its luminescence is a witness of an exposure times longer than  $1/30$  s.

In this case in order to avoid somewhat blurred image on the film it is necessary to ensure steadiness of the camera, i.e. photography from a support, from a tripod or to use a flash bulb.

Camera design is intended for use of the flash bulb with cable-free connection.

Operation mode of the camera with the flash bulb differs from automatic operation only by determination of diaphragm value and input of this data into the camera mechanism. Shutter speed of 1/60 s is set automatically when diaphragm values from 2.8 to 16 are set.

To determine diaphragm value, divide the flash bulb guide number by an object distance value in meters.

Put key 9 (Fig.2) against the calculated diaphragm value and bring key 8 to a corresponding position with respect to distance scale. The camera is prepared for photography.

## **7. FRAME COUNTER**

The frame counter operates on the addition principle and shows number of frames taken. It is advisable to take the first picture when counter digit " 1" is against the index. Numbers " 12", "24", "36" and the initial point on the frame counter scale are marked yellow.

With the camera back open, the frame counter is set to initial position automatically.

## **8. FILM ADVANCE AND TAKING OUT**

Cocking of the shutter and advance of the film are effected in the camera simultaneously, with complete revolution of handwheel 20 (Fig. 5). Sometimes however, the complete revolution of handwheel 20 is impossible because the film end is lacking for a full frame. Do not force the handwheel in this case, otherwise the film can break loose from the spool core.

To rewind the film to the cassette, press the film advance gear disengagement knob 15 (Fig.4). Hinge away knob 23 (Fig.5) and turn it in the direction pointed with the arrow. Rewind over, you will feel a slight jerk of the film and an easier run of handwheel 22.

Pull handwheel 22 upward taking hold on knob 23. At the end of handwheel run, when the camera back is opened, take out the cassette with the film.

Now the camera is prepared for subsequent loading with film.

## **9. OPERATIONS INSTRUCTIONS**

In order the camera to be always serviceable and to make high quality pictures, you should:

- Protect the camera against shocks and jerks in order to avoid damage of precise mechanical and electronic systems;
- Protect the camera against humidity and dust;
- Do not allow heating of the camera, never leave in the sun, on the hot sand, etc. As it can cause damage of the film, power source or electronic system and lead thus to a wrong exposure;
- Pay attention to the cleanness of lenses as their contamination deteriorates quality of film image.

Never disassemble the camera.

Only skilled experts of repair shops can eliminate damages.

For long-term storage, the shutter should not be cocked. Take power source cells out of their container also. The guard curtains should close the objective and the viewfinder.

Never wipe non-metal parts of the camera with alcohol, acetone, petrol and other active solvents.