

## Smena Symbol



Operation manual.

### 1. General Directions

«Smena-Symbol» is a present-day, small in size camera intended for amateurs.

The camera incorporates a hard coated lens, an optical viewfinder, a between-the-lens shutter with wide diapason of shutter speeds, a weather and distance symbols scales, and flash-synchronizer and assures the widest choice of shooting.

One of the characteristic features of the camera «Smena-Symbol» is the system of symbols used for the exposure and distance setting.

The camera is rated for work in temperature range from minus 15 to +45°C, without direct effect of solar radiation and atmospheric precipitation.

Before using your camera, please acquaint yourself with the present Technical Description and Operation Instructions.

### 2. Specifications

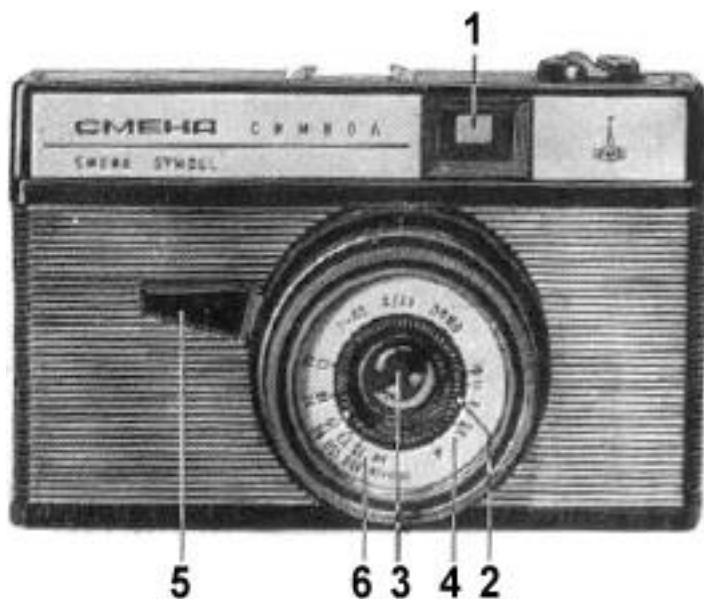
Film accepted, mm . . . . .	35
Picture size, mm . . . . .	2436
Picture number . . . . .	36
Lens: hard coated three-element anastigmat T-43:	
focal length, cm . . . . .	4
relative aperture . . . . .	f/4
Shutter speeds, s . . . . .	1/250; 1/125; 1/60; 1/30; 1/15 s plus «B»
Distance scale . . . . .	from 1 m up to ∞ (infinity), from 3.5 ft up to ∞
Light sensitivity scale of photomaterial . . . . .	from 16 to 250 GOST-ASA units or from 13 to 25 DIN units.
Thread diameter for the light filter mount, mm . .	35.5

### 3. Set of Delivery

Camera «Smena Symbol» . . . . .	1
Casing . . . . .	1
Operation Manual . . . . .	1
Packing box . . . . .	1

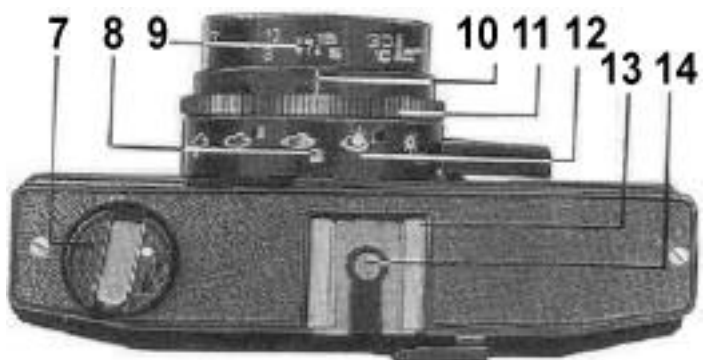
## 4. Design

### 4.1. Principal parts (Fig. 1, 2, 3, 4, 5, 6)



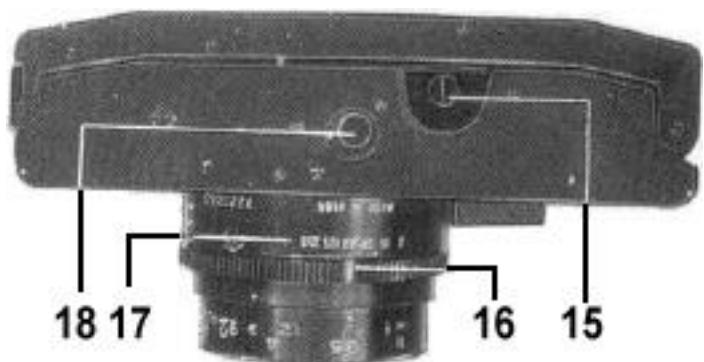
- 1 — Viewfinder.
- 2 — Indices ring.
- 3 — Lens.
- 4 — Diaphragm scale.
- 5 — Shutter release lever.
- 6 — Film light sensitivity scale.

Fig. 1



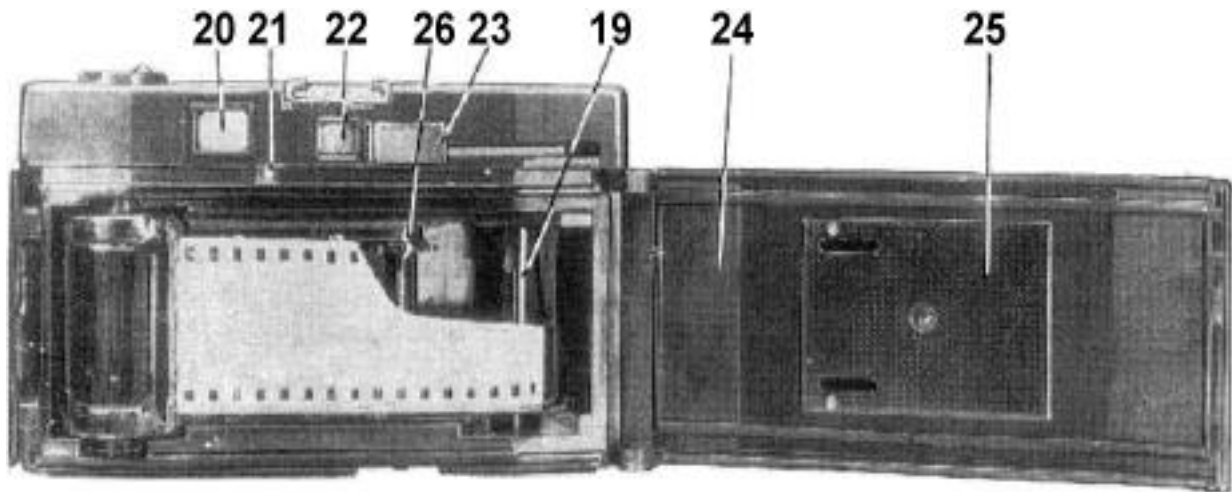
- 7 — Rewind crank.
- 8 — Movable index of weather symbol scale.
- 9 — Distance scale.
- 10 — Distance scale index.
- 11 — Weather symbols (shutter speed) setting ring.
- 12 — Weather symbol scale.
- 13 — Accessory shoe.
- 14 — Synchro contact.

Fig. 2

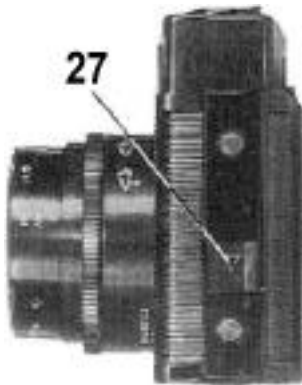


- 15 — Film wind mechanism disengagement knob.
- 16 — Shutter speed scale index.
- 17 — Shutter speed scale.
- 18 — Tripod socket.

Fig. 3

**Fig. 4**

- |                                   |                             |
|-----------------------------------|-----------------------------|
| 19 — Take-up spool.               | 23 — Lever to cock shutter. |
| 20 — Viewfinder window.           | 24 — Camera back.           |
| 21 — Picture counter reset lever. | 25 — Pressure pad.          |
| 22 — Picture counter.             | 26 — Feed shaft.            |

**Fig. 5**

- 27 — Back latch.

**Fig. 6**

- 28 — Reminder scale.

#### 4.2. Application

The weather symbol scale is intended for shutter speed determination and its setting.






The camera work program for determination and setting the exposure based on the weather symbols and film light sensitivity is given in the table.

When setting the sensitivity of the loaded film by the scale (Fig. 7) which is on the front lens part, at the same time the required diaphragm which is given in the table is stopped. For instance diaphragm f/8 corresponds to the sensitivity or 65 GOST units.

The shutter speed setting is made in accordance with the symbols, corresponding to the weather at the moment of taking pictures.

If there is the sun in the sky and there are no clouds, symbol «bright sun» should be set, that will correspond to the shutter speed of 1/250 s. Thus, every beginner having no elementary knowledge in photography can operate with camera «Smena Symbol» outdoors.

**Fig. 7**

Film light sensitivity		Weather symbol and corresponding shutter speed (s)				
		Thunder clouds	Overcast sky	Sun in clouds	Veiled sun	Bright sun
GOST-ASA units	DIN units					
		1/15	1/30	1/60	1/125	1/250
Diaphragm						
16	13	4	4	4	4	4
32	16	5,6	5,6	5,6	5,6	5,6
65	19	8	8	8	8	8
130	22	11	11	11	11	11
250	25	16	16	16	16	16

**Note.** It is necessary to remember that it is expediently to use the weather symbols approximately from 8 a. m to 17—18 p. m. in the period from April to August and from 10 a. m to 14—16 p. m. from September to March. When taking pictures in the deep shade in the sunny weather it is recommended to make a correction at weather symbols setting. For instance, symbol «veiled sun» should be set instead of symbol «bright sun».

The shutter speed setting method in accordance with the weather symbols cannot guarantee good pictures in the early morning hours as well as in twilight and in the other bad light conditions especially when there is a dark period of year. Therefore in such cases the exnometer may be used or test shots can be done.

Then, if there is any wish, the photo amateur can take pictures by the shutter speed or diaphragm scale, using his creative abilities.

The between-the-lens shutter offers the following automatic shutter speeds: 1/250; 1/125; 1/60; 1/30, 1/15 s.

Any shutter speeds which are regulated by hand are got when the shutter speed scale is set at index «B».

The shutter is cocked by turning the shutter's and the film wind lever till it will stop.

The required shutter speed setting is performed by turning the weather symbol ring (shutter speed) to its coincidence with the index.

The lens diaphragm serves for adjusting the light aperture diameter.

The change of the lens opening is effected by fuming the diaphragm ring. The lens opening is changed in cases when it is desirable to increase the depth of sharpness or when the light is too intensive at a selected shutter speed.

The steps of the shutter speed and diaphragm scales are calculated so that the increase and decrease of the shutter speed and the diaphragm by one setting doubles or makes two times less amount of light reaching the film. For instance, the exposure time is 1/60 s with an aperture ratio f/5.6, and the exposure time must be 1/30 s with an aperture ratio f/8, all other conditions being the same.

The figures engraved on the shutter and diaphragm scales indicate only fraction denominators: for example «250» instead of 1 : 250, «8» instead of 1 : 8 etc.

The viewfinder gives the sharp frame edges.

The picture counter points to the number of shots you've taken. When the camera back is opened the counter is automatically set on «—2» pictures. If it does not occur, cock the shutter without closing the camera back.

## 5. Preparation for Operation

Before loading your camera, make sure that the film is loaded into the cassette properly.

For most convenient loading of the camera, let an even end of the film, without fractures and folds, protrude from the cassette at length of not more than 50—60 mm.

If a longer than 50—60 mm end of the film is protruding from the cassette, wind the unnecessary length of the film back into the cassette turning for this purpose the spool lug. Cut off the fractured or folded end of the film.

On having convinced that an even end of the film no longer than 50—60 mm protrudes from the cassette, you can proceed to load the camera.

It is necessary, for this aim:

1. Open the latch, hinge away the camera back and pull the rewind crank out of its socket.

2. While holding the cassette in Your left hand and retaining the lug of the take-up spool by the finger of Your right hand, engage the perforation of the film end with the claw of the take-up spool.

3. Pulling the film (it will go out of the cassette) insert the cassette into the camera (Fig. 8).

4. Check up whether the film is located in the film channel in the proper way. The film should be rest on the slides of the projection aperture without warnings. The claws of the feed shaft should enter the slots of perforated film.

5. Turn the rewind crank to lower it into its socket.

6. Close the camera back.

7. Turning the shutter cock lever and pressing down the shutter release lever, advance the film for two pictures until division «0» is set against the index of the counter.

Set the reminder scale (Fig. 6) for a film you are going to expose, lest you should forget it. To this end, match a relevant value of film light sensitivity in COST, ASA or DIN units with the symbol of the film type The reminder scale has the following denominations: «bright sun» which corresponds to the colour film in the daylight, «lamp» which corresponds to the colour film in the artificial light, a sector — to the white-and-black film.

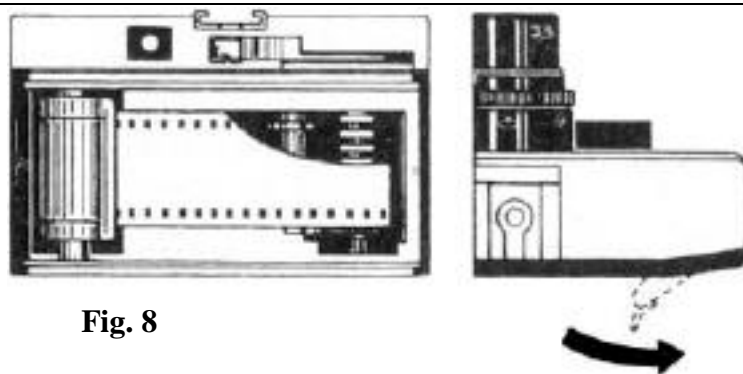


Fig. 8

## 6. To Take Pictures

Before taking pictures set the shutter speed and diaphragm. In camera «Smena Symbol» it can be done in two ways: according to the weather symbols and by shutter speed scale and diaphragm scale.

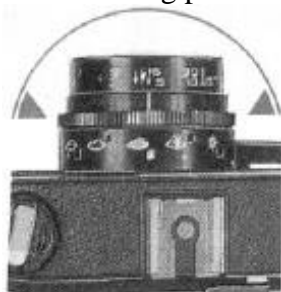


Fig. 9

To set the shutter speed and the diaphragm using the weather symbols it is necessary beforehand to set the film sensitivity on the scale, which is mounted on the front part of the lens by rotating the indexed ring up to its coincidence with the corresponding value of film light sensitivity. At this moment the diaphragm on the lens will be set up to definite reading which is seen on the diaphragm scale.

This done, we must see what is the weather like (the colour of the sky) and turning the weather symbols ring (the shutter speed) set the index in front of the corresponding weather symbol (Fig. 9).

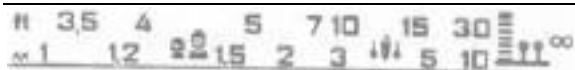
**Note:** When choosing the weather symbols it is permitted to have certain difference between the sky and the symbol as all five symbols cannot cover all weather (sky) conditions. In spite of this, the negatives got after taking pictures in accordance with the weather symbols may be used in printing when taking the enlarger and choosing the corresponding photo paper. Taking pictures on colour film, the best quality can be obtained with the lens stopped down to f/5.6 and more.



Fig. 10

Taking pictures by the scales, shutter speed is set on the shutter speed scale by turning the weather symbols (shutter speed) setting ring (Fig. 10). The required reading of the diaphragm is set by turning indexed ring relative to diaphragm scale. This ring is in the front part of the lens.

Then if is necessary to focus the lens for sharp image. To do this the distance to the object should be determined and the lens should be set in accordance with the symbols («group», «landscape» etc.) or with the distance scale digitized in meters and feet (Fig. 11).

**Fig. 11**

the film to get ready for another shot by turning the cocking lever as far as it goes.

The camera incorporates a design which makes it possible to use a flash bulb (Fig. 13). To synchronize the bulb flash with the full opening of the shutter, provision is made for a synchronizer which gets actuated automatically as soon as the shutter is released.

The camera has a diaphragm shutter which enables shooting with the electronic flash at any shutter speed.

**ATTENTION!** The camera «Smena Symbol» is designed for cableless connection with the flash bulb, therefore, the connecting terminals are provided in the shoe to be used for fixing the accessories.

**Fig. 13**

After shooting the last picture, the film should be wound into the cassette. To this end, depress the knob disengaging the film wind mechanism, the knob remaining dipped, put aside the lever of the film rewind crank and turn the latter in the direction of an arrow. After winding open the camera back latch, pull the rewind crank and take cassette out of the camera.

**Note.** If the disengaging knob of the film wind mechanism has failed to be fixed in the sunken position keep the knob pressed down by your finger and bring the shutter cock lever up to the stop.

## 7. Maintenance

Handle the camera with care.

Contaminated lenses deteriorate pictures sharpness, so it is necessary to keep lenses always clean. The objective and viewfinder could be wiped from the outside only using a clean cambric or linen cloth, on having breathed on them.

Never take the camera apart.

Never wipe the plastic parts of the camera with alcohol, acetone and active solvents.

## 8. Acceptance Certificate

Camera «Smena Symbol» No. \_\_\_\_\_ complies with the requirement of the technical documentation and is found fit for service.

Output date \_\_\_\_\_ 19\_\_\_\_

Looking through the viewfinder frame the shot (Fig. 12).

To take the pictures release the shutter by smoothly depressing shutter release lever. Advance

**Fig. 12**