CAMERA

СМЕНА 8М

SMENA 8M

OPERATION MANUAL

1. GENERAL

"Smena 8M"is an up-to-date miniature camera intended for broad circle of photo amateurs.

The camera incorporates a hard coated lens, life-size viewfinder (one to one viewing ratio), distance symbol scale, X flash synchronized diaphragm shutter. a flash synchronizer and assures the widest choice of needle-sharp full-toned negatives both black-and-white and in full colour.

Weather symbol and film sensitivity scales facilitate exposure setting and ensure good shooting outdoors even for any unskilled photo amateur

Film rewind mechanism makes it possible to use one cassette; camera design ensures operation with two cassettes, also.

Foolproof and trouble-free operation, modern appearance plus other attractive features of "Smena 8M" never cease amazing the admired beginners and top-notch amateurs alike.

The camera is produced for operation at a temperature from minus 15 to +45°C without direct influence of solar radiation and atmospheric precipitation.

Before taking, please read these operation instructions.

2. FEATURES

Film accepted, mm	35
Frame size, mm	24x36
Pictures on the film	36
Lens: hard coated, three-element anastigmat T-43:	
focal length., mm	40
relative aperture	f/4
Shutter speeds, s	1/15, 1/30, 1/60, 1/125, 1/250 plus "B"
Distance scale, m	from 1 to (infinity)
Diaphragm scale	4; 5.6; 8; 11; 16
Film light sensitivity scale:	
GOST/ISO unit,	16, 32, 64, 125, 250
DIN units	13, 16, 19, 22, 25
Thread diameter for light filter mount Co	M35.5X0.5

3. COMPLETE SET

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4. DESIGN

Figures 1, 2 and 3 show the principal parts of the camera:

1 — camera body;
2 — lever to cock shutter;
3 — weather symbol scale,
4—shutter release button;
5 — accessory shoe;
6 — rewind crank;
7 — view finder;,
8 — weather Symbols (shutter speed) setting ring:
9 — ring with index and field depth scale;

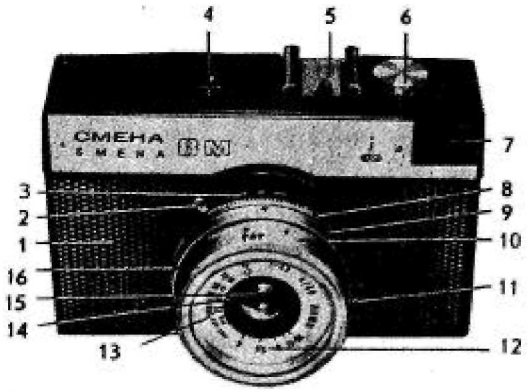

Fig. 1.

10— distance symbol scale:
11—synchronizer;
12—diaphragm scale;
13—film light sensitivity scale;
14 — ring for setting diaphragm and film light sensitivity;
15 — objective;

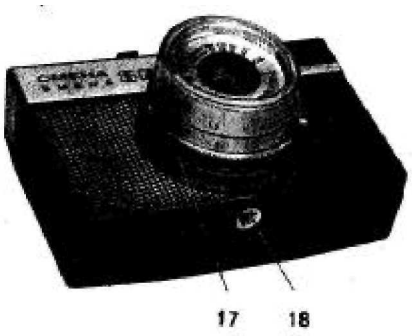

Fig. 2

16 — ring with distance scale,
17 —shutter speed scale:
18— socket for tripod;
19 — viewfinder window;
20 — frame counter scale;
21 — film rewind knob;
22 — take-up spool;
23 — camera back;
24 —pressure, plate:
25 — latch knob.

The diaphragm is intended to stop down of open up the lens, which is effected by rotating the aperture control ring.

The lens is usually stopped down to extend the. depth of field or when the available light is too intensive.

The diaphragm is f-numbered in such a manner that closing down one stop will require twice the amount of light for exposure and, vice versa, opening up a stop will warrant half the exposure time. For instance, the exposure time is 1/60 second at f/5.6, and if the lens has been stopped down to f/8 in ihe same lighling conditions, the shutter should be reset to 1/30 second.

The shutter speeds and f-numbers carry the denominators only, as "250" instead of 1/250, "8" inslead of f/8 etc.

The field depth scale is located symmetrically on both sides of (he distance scale indicator and intended For approximate determination of the depth of Field, i.e., the field within which all the objects will be En sharp focus.

The near and far field depth limits can easily be read against the similar f-numbers on both sides of the depth of field scale. For instance, with (he distance scale set to read 2m, and with the lens stopped down to f/5.6 you can see 3 and 1.5 m each against f/5.6.

With the lens closed down, the near Limit of field depth will approach: the camera, while the far limit will run away. So, at f/11 the camera will be critically focused on all objecis within 1.2m up to 8m. For 1 m and 1.2 m the near limit of field depth can be read Only up to 1 m. For instance, if the lens is racked to 1.2 m and stopped down to f/16, the field depth far limit will be 2.5 m, the near limit being 1 m.

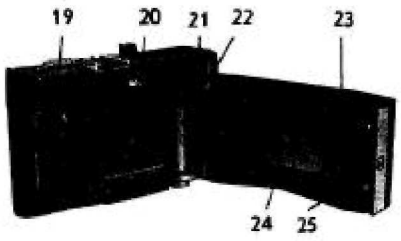

Fig. 3

For 2.5, *2.* 4 and 8m settings, the far limit of the field depth will *be* infinity. Example: the lens is racked to 3 m and stopped down to f/11| — the depth of field scale will read from 1.5 m to infinity.

Distance symbol scale with metrage scale is positioned on the objective tube; each symbol corresponds to a certain value.

Symbol  corresponds to 1 m long distance and is set when taking portraits with vertically positioned frames; symbol  corresponds to 1.4 m long distance and is set when taking portraits with horizontally positioned frames; symbol  corresponds to 4 m long distance and is set when taking small groups of people; symbol  corresponds to 8 m long distance and is set when taking landscapes and architectural subjects with foreground.

The weather symbol scale is intended for shutter speed, determination and its setting, The camera work program for determination and exposure setting 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 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 of 64 GOST/IS0 (19 DIN) units.

The shutter speed settings 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 to 1/250s.

Film light sensitivity		Weather symbol and corresponding shutter speed (s)				
		Thunder clouds	Overcast sky	Clouds	Veiled sun	Bright sun
GOST, ISO units	DIN units	1/15	1/30	1/60	1/125	1/250
16	13	4	4	4	4	4
32	16	5.6	5.6	5.6	5.6	5.6
64	19	8	8	8	8	8
125	22	11	11	11	11	11
250	25	16	16	16	16	16

When choosing the weather symbols it is permitted to have some differences between the sky and the symbol as all five symbols cannot correspond to all the weather conditions (to the sky).

In spite of this, the negatives got after taking pictures in accordance with the weather symbols should be fit for use in printing when taking the enlarger and choosing the corresponding photo paper.

It is necessary to remember that it is expediently to use the weather symbols approximately from 8 a. m, to 17-18p, m. in the period from April to August and from 10 a. m. to14—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 "velled sun" should be set instead of symbol "bright sun".

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

Having got a necessary experience, photo amateur can take pictures if there is any wish, by the shutter speed and diaphragm scales, using his creative abilities,

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

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

The shutter is coceked by turning the lever *2* (Fig, 1) down till it will stop.

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

The camera is provided with synchronizer, intended for agreement of the moment of. flash explosion with the moment of shutter complete opening,

When using the electronic flash the shutter can be set to any speed, When using the single flash the shutter is to be set to 1/15 s or "B".

The synchronization comes in automatically after the shutter being released,

Film counter shows the number of frames taken. Each division of counter scale corresponds to two frames.

5, OPERATION PROCEDURE

5.1. To Load the Cassette

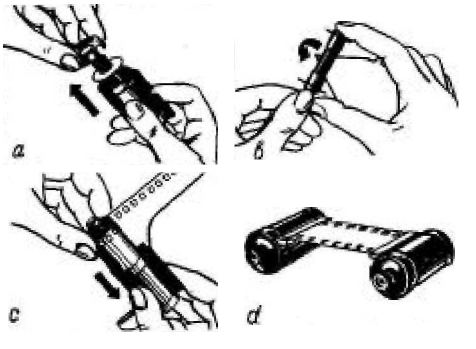

Fig. 4

Both home-made and import cassettes can be employed in the. camera. Cassette includes housing, spool with a lock to Fasten the film, and two covers.

Before loading the cassette. open the cover and take out the spool, as is shown in Fig. 4 a. Load the cassette in darkness. At first cut an end of the film and pulling the spring, fix the film thereunder so that emulsion layer faces spool axis, as is shown in Fig;. 4b. Wind the film tightly, yet without too much effort, holding it on the edges and not touching the emulsion. Then insert the spool into the housing ana cover it (Fig. 4c). Further operations can be conducted in daylight.

When working with one cassette, insert spool into the right recess of camera body.

When using two cassettes they should be prepared for loading into the camera *as* is shown in Fig. 4 *d.*

5.2. To Load the Camera

When operating with one cassette, place the latter into the left recess of the camera. Be sure the rewinding knob fork has entered the spool of the cassette. In this case the cross-piece of the spool should enter the fork slot. To introduce the cassette into the recess, depress free end of the spool.

The free end of the film should be inserted into the slot of the take-up spool so that the perforations be meshed with, the slot tooth. Rotate the winding knob for one turn (Fig. 5).

When operating with two cassettes, take out the take-up spool and insert both cassettes so that both forks enter the cassette spools. Turning the rewind knob, slightly pull the film and make it even retaining the cassettes from rotation, The film should comfortably rest against, the film gate, while perforations be meshed with the film advance sprocket wheel.

Fig. 5

Put the camera back in position and lock it. Then place the camera into the carrying case and fix it there by means of the tripod nut.

Advance the film for the equivalent of two frames to wind up the exposed portion. To this end, depress and release the shutter release button and smoothly rotate winding knob as far as it will go.

By rotating the film counter ring set the counter for zero division.

5,3. To Take Picturts

Before taking pictures set the shutter for the required speed and diaphragm. In camera "Smena 8M" it can be done in two ways: according to the weather symbols and by coinciding the shutter speed scale and the diaphragm with the corresponding index

To set the shutter speed and the diaphragm using the weather symbols do as follows:

set the film sensitivity on the scale, which is mounted on the front part of the lens by rotating the diaphragm and sensitivity ring up to its coincidence with the corresponding index. At this moment the diaphragm on the lens, will be set up to a definite reading which is seen on the diaphragm scale;

see what is the weather like (the colour of the sky) and turning the weather symbols (the shutter speed) ring set the index in front of the corresponding weather symbol (Fig. 6),

For setting shutter speeds and diaphragms by the scales it is necessary;

to set shutter speed by rotating weather symbol (shutter speed) ring until the index coincides with the selected shutter speed on the scale in the side part of shutter body (Fig. 2),

Fig. 6

turning the diaphragm ring, set the diaphragm until the index coincides with a corresponding value on the scale in the front part of the objective.

N o t e. When photographing on colour film, the highest quality of the picture is obtained if the objective is diaphragmed to 1: 5,6 and more.

This done, focus the objective To do this the distance to the object should be determined and the lens should be set in accordance with the symbols ("portrait", "ilandscape" etc.) or with the distance scale, Looking through the viewfinder, frame the shot, keeping the eye as close as possible to the view finder window.

To take the picture cock the shutter and smoothly depress the shutter release button.

Rewind the film for one frame turning the rewind knob up to stop.

To unload the camera when operating with one cassette, wind the film back into the cassette. To this aim, depress and hold the shutter release. Lift the rewind crank: and turning it along lhe arrow, rewind the film. Reset the rewind crank into the initial position and make free the shutter release knob. If, during rewinding procedure, the shutter release knob was made free accidentally and

at repeated depressing of the knob the film rewinds into cassette with difficulty, give knob *21* (Fig, 3) some turn in both directions.

Note. Bear In mind that rewind mechanism operates normally only at smooth feed of the film into cassette slots.

Then take the camera out of the case, remove the camera back, Lake out the cassette and put the camera back in position.

When operating with, two cassettes, film rewind is not to be performed.

6. MAINTENANCE

Handle the camera with care. Soiled 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, having breathed on them.

ATTENTION! Never try do-it-yourself repairs.

It *is* prohibited to wipe the plastic parts of the camera with alcohol, acetone and other active solvents.

7. ACCEPTANCE CERTIFECATE

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