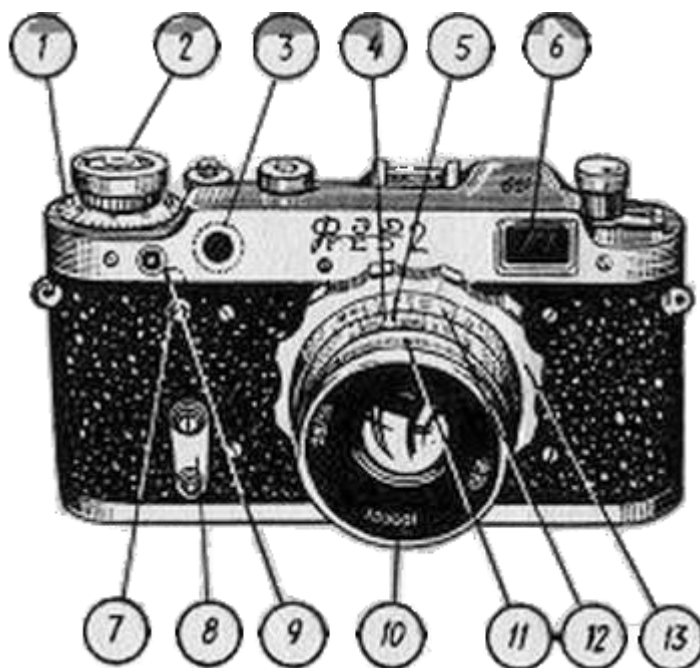


## FED 2

### Fed-2 35mm FILM CAMERA instruction manual



This text is NOT identical to the one in the official Instruction Manual.



Fed-2 frontal View

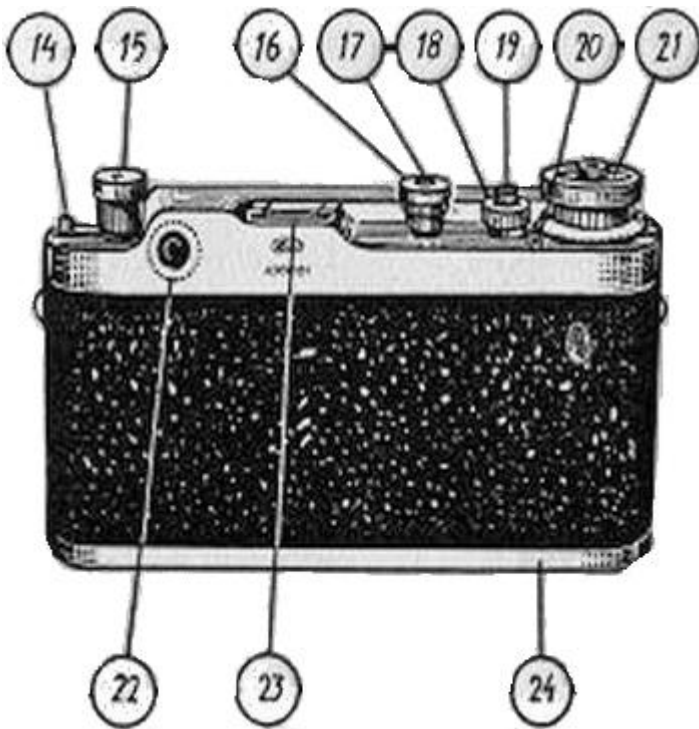
1. Film Counter
2. Film wind knob
3. Rangefinder optic
4. Aperture index dot
5. Scale setting ring
6. Viewfinder aperture
7. Automatic releaser button
8. Automatic releaser lever
9. Synchronizer socket
10. Front lens nut
11. Aperture setting ring
12. Depth of field scale
13. Focusing ring

This manual contains a brief description of camera Fed-2 and the basic rules for using the camera. It cannot serve as a photography manual.

Slight differences between the description and the camera may occur as a result of technical modification being introduced in the design of the camera.

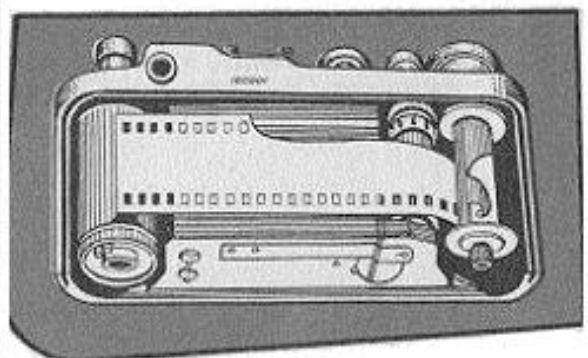
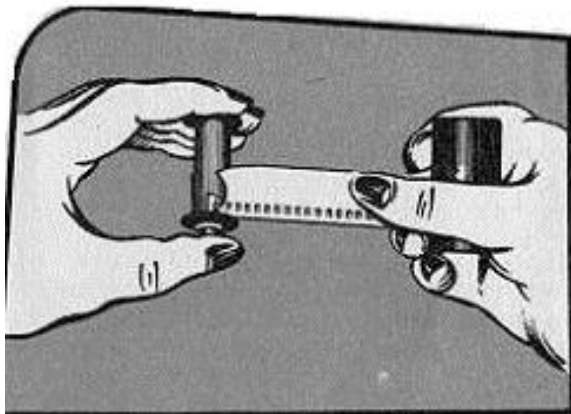
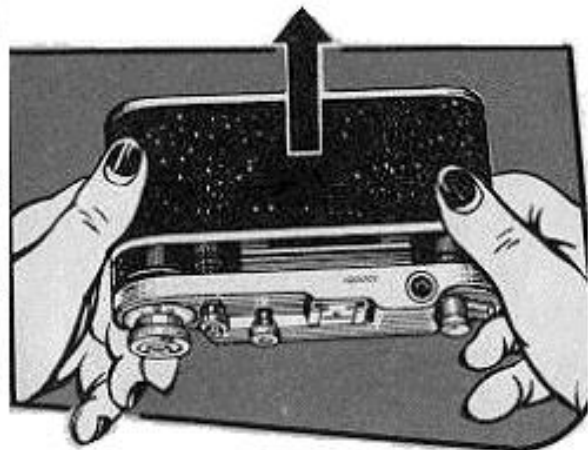
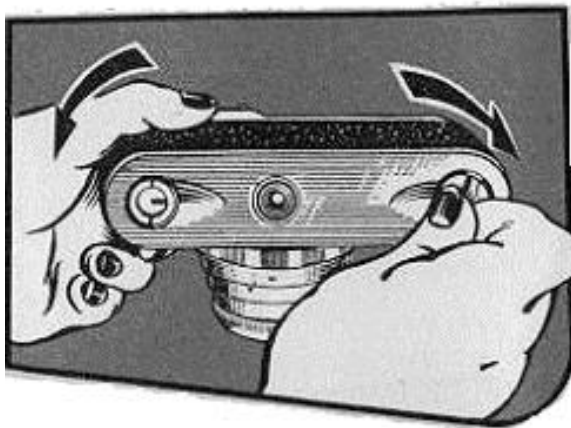
Camera Fed-2 operated on standard 35 mm film with a picture size of 24×36 mm. The great resolving power of the lens makes it possible to obtain perfect large-size pictures. The wide range of shutter speeds, the trigger winder, synchronizer, automatic releaser, dioptric view-finder setting, the light weight and compactness of the camera will satisfy the requirements of either amateur or professional photographer. The camera is fitted with lens Industar-26M or with Industar-61 with lanthanum Optics. The camera is so designed that it is also possible to use interchangeable lenses Industar-50, Jupiter-9, Jupiter-11, Jupiter-12 and others. In taking a picture the camera is focused with the help of the range-finder. The automatic releaser incorporated in the camera allows

the photographer to take pictures of himself. The automatic shutter speed ranging from 1/500 to 1/25 (1/30) sec permits the photographer to use the camera under any lighting conditions. At the bottom of the camera there is a socket for a tripod. It is possible to photograph with a tripod without taking the camera out of its case.



- 14. Dioptic correction level
- 15. Rewind knob
- 16. Shutter speed selection knob
- 17. Shutter speed scale
- 18. Rewind release ring
- 19. Shutter release button
- 20. Frame counter disc
- 21. GOST film speed reminder
- 22. Range and viewfinder eyepiece
- 23. Accessory shoe
- 24. Base locking latch.

Fed-2 rear View



The camera can be loaded under ordinary soft lighting conditions in the following way. By turning the nut on the case bottom unscrew the tripod screw retaining the camera, remove the camera from the case. Raise the lock shackles with the nail and turn them half-way round as far as they will go. Then pressing with the thumbs, shift the camera back in such a way that its edge comes out of the camera slot and remove it.

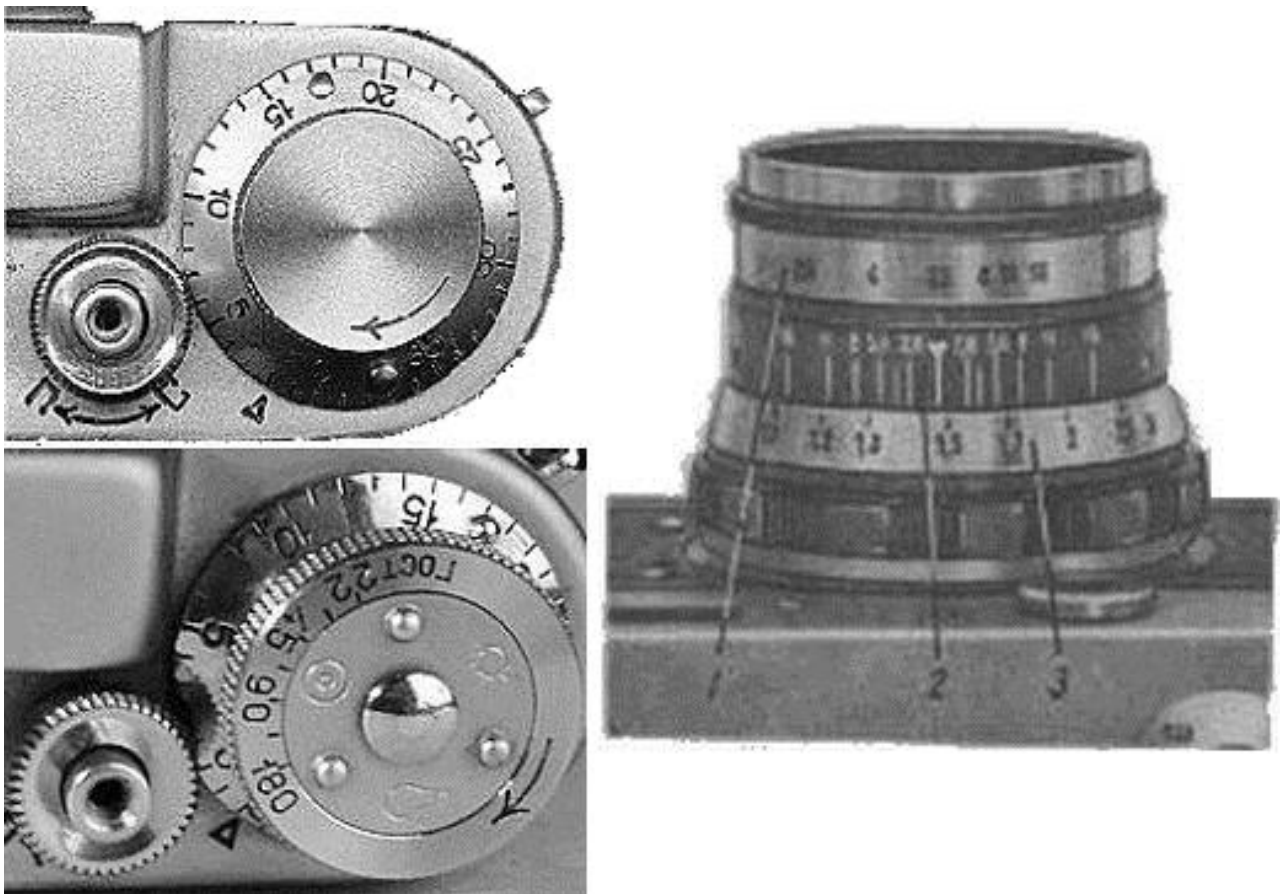
Open the camera and take out the take-up reel and magazine. The reel is removed with a certain amount of effort. Load the magazine with film (the magazine is loaded in the darkness). Having pulled out a free end of film about 10cm long from the magazine, fasten it on the reel in such a way that the spring tooth enters one of the perforations.

Fit the take-up reel on the bush and then place the magazine in the camera. At this point the film should be slightly stretched and the teeth of the sprocket should enter the perforations of the film. Close the camera.

The unexposed film is fed to the picture aperture by winding the shutter twice pressing the release button after each winding. The winding lever should be turned as far as it will go.

When properly loaded the camera is wound easily without jerky motions and noticeable efforts. Then by turning the dial scale set the "O" point of the picture counter opposite the indicator. Align the sensitivity scale dial with the film-type indicator index in accordance with the data of the film loaded in the camera. The film indicator is a memory device consisting of a movable sensitivity scale in film speed units (ASA, DIN) and a stationary indicator with conventional designations of film types.

The camera is equipped with lens "Industar-26M" or "Industar-61" with lanthanum optics. The scales are located on the lens mount. The diaphragm scale **1** indicates changes in the lens speed. When focusing, the depth-of-field scale **2** indicates on the distance scale the limits within which the range sharpness will be satisfactory for each selected diaphragm value. The distance scale **3** serves for focusing the lens. The scale designations correspond to the distance from the object being photographed to the surface of the film in meters.



The camera is focused with the help of optical range-finder. In order to set the camera at an accurate and proper focus turn the lever of the dioptic focusing, focus the view-finder by sight (the dioptic focusing mechanism provides a correction of  $\pm$  diopters).

Then aim the camera at the object to be photographed. In the center of the field of view of the view- and range-finder a disc differing in color is seen, in which the image will be doubled.

By turning the distance ring of the lens align the image into one. It is recommended to set the camera approximately in the middle third of the light field.

In order to set the necessary exposure, slightly raise the head, turn it till index coincides with the division of the exposure scale and lower the head back in place. The exposure can be set only with the shutter wound up. Do not turn the head in the interval between 30 and 1.

The number on the scale show the exposure values provided automatically by the shutter (1/25(1/30)-1/500sec) "B" serves for obtaining prolonged exposures "by hand".

In order to wind the automatic releaser the lever is turned counter clock-wise from the bottom position and into the top position. Then press the release button of

the automatic releaser and stand in the spot selected beforehand. The shutter will go of from 9 to 15 sec after the automatic releaser is switched on.

It is possible to wind the shutter with the automatic releaser either released or wound up. A flash lamp can be used only at a 1/30 (1/25) sec exposure. When photographing with a lamp place the lamp reflector in the camera shoe and insert the lamp plug pin wire in the synchronizer socket. The diaphragm should be selected in accordance with the sensitivity of the film, the distance to the photographed object and the lamp power.

More detailed information on photographing with flash lamps can be obtained by referring to a manual on lamps and photography.

**The following order of working with the camera is recommended.**

Open the case; remove the protective cover from the lens. Looking into eyepiece of the view- and range finder select the spot to be photographed and the desired arrangement of image in the picture. Focus the lens.

Set the diaphragm in accordance with the required field depth. Turning the lever, wind up the camera shutter. Set the shutter exposure head at the required exposure. Aim the camera at the object to be photographed and smoothly and evenly press the release button. If the light source is in front of the camera, use a sunshade.

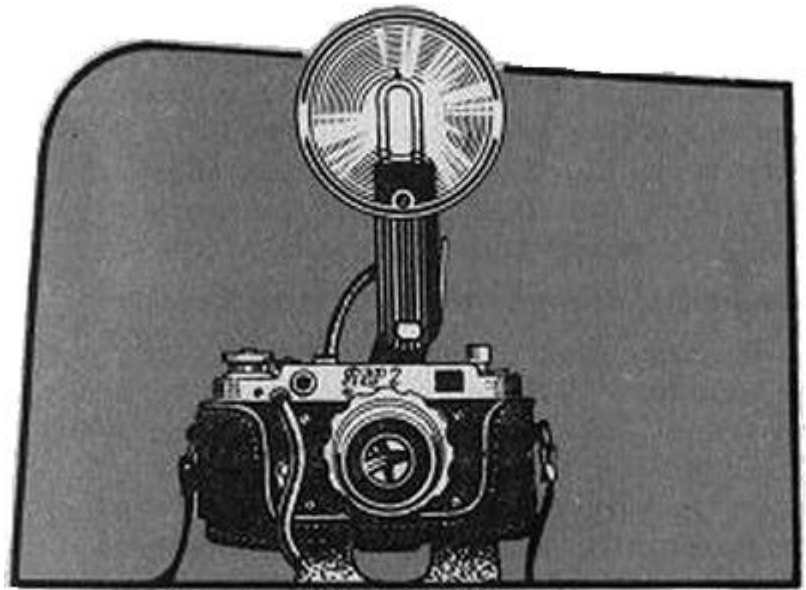
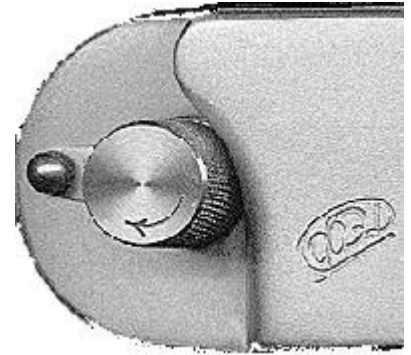
**IMPORTANT!!! NEVER CHANGE SHUTTER SPEEDS WITHOUT FIRST COCKING THE SHUTTER!!!**

In the worst case, you may do major damage to the mechanism. At best, you will find the shutter behaves erratically for a few frames.

Before opening the camera the exposed film should be rewound into the magazine. For rewinding the film disengage the shutter mechanism by pressing the fluted edge of the disengaging bush downwards with the thumb of the right hand and turning the bush towards letter "B" (return) whereupon the disengaging bush should sink. In rewinding the film the lens should be covered.

The rewinding head is turned in the direction indicated by the arrow. Complete rewind of the film is defined by the effort needed for pulling out the film from the take-up reel. Open the camera and take out the film.

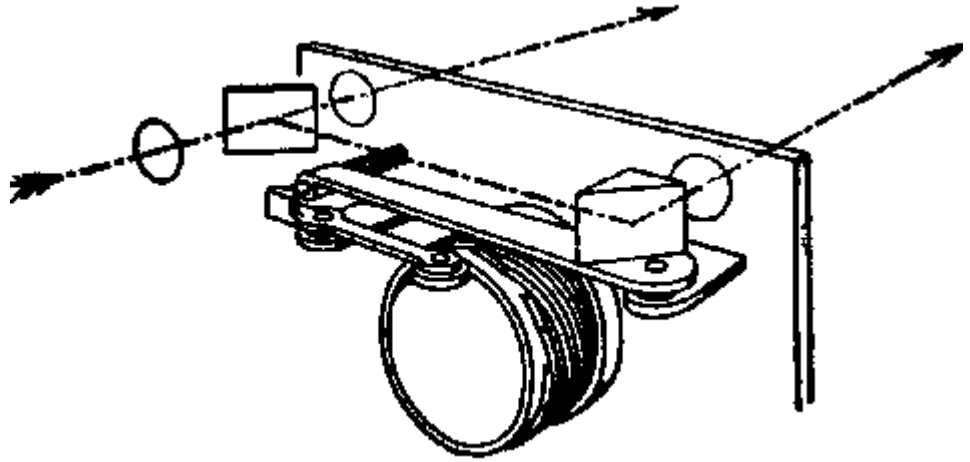
The camera is designed for long service life when used properly.



## POSSIBLE PROBLEMS

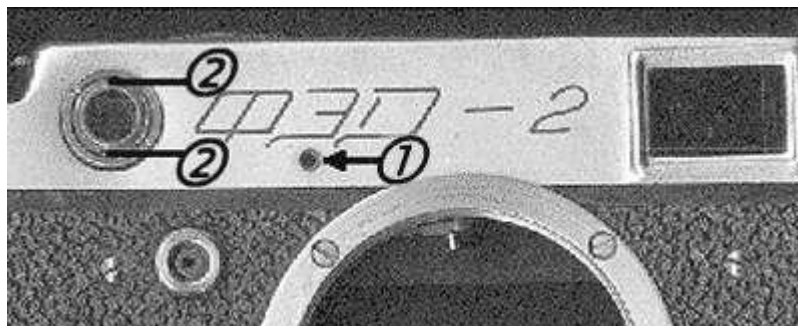
### FED 2 RANGEFINDER ADJUSTMENT

It is highly unlikely that the rangefinder may be out of adjustment. You will only know if this is a problem after you have put a film through the camera. You will be able to ascertain if it needs adjustment from a selection of photographs taken at various distances from infinity right down to a metre or so. It is also possible for the distance scale on the lens to be slightly out. From my experiences it is going to be unusual for a FED 2 to be out of adjustment and even if it is I would recommend that you adjust it only if it causing you problems.



#### 1. Rangefinder horizontal alignment

You can adjust the rangefinder horizontal alignment by removing the screw adjacent to the E on the FED logo seen on the front of camera. Under this screw you will find access to a smaller diameter screw. Set the lens to infinity and looking through the rangefinder turn the screw very gently using no force whatsoever so that the two images line up.



#### 2. Rangefinder vertical alignment

You can adjust the rangefinder vertical alignment by removing the circular knurled metal surround on the rangefinder window adjacent to the letter F or flash socket. Rotate the brass inner ring not the outer ring. There are two slots opposite each other that you can insert a pin into and turn. Do not use any force.

I must point out that the rangefinder is only a guide and I cannot emphasize this enough, it is probably not worth adjusting it even if it is out of adjustment. They are all slightly off; even contemporary Leicas and Contax rangefinders are slightly out of adjustment at infinity or close up. The best you can realistically hope for is that it is accurate from 5 metres to infinity or from 1 to 20 metres. If you are willing to accept these limitations, then the good thing about a long 67 mm base rangefinder is that it can be particularly accurate at focusing.

The other problem that you can have with rangefinders is that they can be seized up and need to be freed with some lubricant. If you remove the lens you will see the rangefinder lever and shaft running through from the lens chamber to the rangefinder chamber lever backwards and forwards. Apply a small drop of oil to this shaft very carefully working the lever. Do not use any force and be careful not to get oil everywhere.

You'll need to do the following: (look at the picture) open the bottom, you'll see 4 bolts.

You can regulate the first curtain (it opens the shutter) with the bolts 1 and 2. The bolts 3 and 4 are for the second curtain (it closes the shutter). The bolt 1 and 3 are for fixing, the bolt 2 and 4 are for regulation of the curtains. Take off the lens, put the shutter speed in position "B", cock a lever and press a shutter button. Look at which of the curtains moves slowly.

For example, the second curtain (it closes the shutter) moves slowly. In that case you need to unscrew the bolt 3, and turn around one or twice the bolt 4 (anticlockwise).

For example two, the second curtain (it closes the shutter) moves quickly. In that case you need to unscrew the bolt 3, and turn the bolt 4 (clockwise) once or twice. This method is used for all Leica type cameras, Zorki and FED.

