

TAIR-11

The lens for
“Zenit” cameras



Set of lenses with the “TAIR-11”
lens in it was awarded with
Grand Prix and Golden Medal
at World Exhibition in Brussel.

1 Purpose

The lens “Tair-11” is interchangeable lens of “Zenit” camera. It is purposed mainly for landscape shots of distant objects, but it can be used for other shots as well – portraits, group pictures, sport events, wild animals and birds etc.

The lens is made in the focusing mount with the aperture preset mechanism.

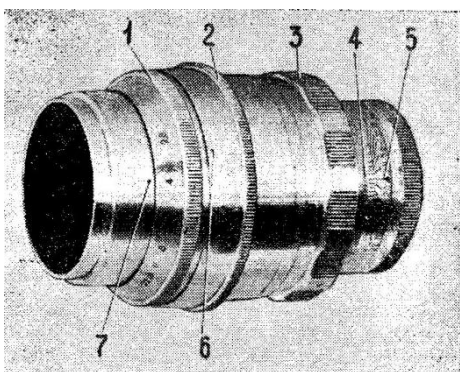
2 Specifications

Focal length	133mm
Relative aperture	1:2.8
Field of view	18°
Flange focal distance	45.2mm
Number of elements	4
Aperture values	1:2.8-1:22
Focus distance	1.5m-inf.
Length with caps	118mm
Max. diameter of the barrel	72mm

3 Mount construction

Focusing is accomplished turning the ring (3) with scale distance marked on it.

Index of the distance scale is the central red line (5) on the depth-of-field scale. The lens has built-in aperture preset mechanism for user convenience. It is necessary feature for lenses working with SLR cameras since focusing in such cameras is accomplished by ground glass, and aperture should be fully opened to make this process easier. The preset mechanism has adjustable stopper that can set limiting value of the aperture by turn of the ring (1) with aperture scale on it.



The index of the stopper is dot (7) on the lens barrel.

Actual change of aperture is accomplished with ring (2).

Mount thread of the lens is M39x1.

You can use different accessories (color filters, dioptic attachments, lens hoods) that can be screwed into the front part of the lens having M49x0.5 thread. Also, they can be mounted on to smooth front part (diameter is 51mm).

4 Operation

Take off the rear cap of the lens, make sure that threads of the lens and camera are clean, and screw the lens into the camera. Tighten the lens a bit after stop. Handle the lens with care to avoid damage of the threads.

Open the diaphragm fully turning the ring (2) left till stop. Two red dots (6) and (7) should be aligned in the result.

Turn the ring (1) to set necessary limit value against the index (7). You should hear a click when the ring is set to one of the marked positions.

Focus the lens by the ground glass turning the ring (3), with fully opened aperture. Continue to observe the object through the camera viewfinder, set the preset aperture value turning the ring (2) right till stop, and press the shutter release button.

The preset mechanism makes switching between fully opened and necessary aperture fast and precise.

To focus by the ground glass, turn the ring (3) till you get most sharp image of the object.

If you know distance to the object, you can set it aligning corresponding value of the distance scale (3) with the red index (5).

Distance to the object is counted from the film plane (close to the rear side of the camera) to the object plane. If you want to take sharp image of few objects locate at different distances, check the depth-of-field scale.

The scale consists of the aperture value pairs marked symmetrically to the both sides of the index. After you focus the lens, you can read near and far limits of depth-of-field on the distance scale (4) against values of the set aperture. You'll get sharp image within this range.

For example, you've set focus to 3m with aperture of 16. Then you'll get sharp image within about 2.5-3.5m range (these values you can see against '16' numbers on the depth-of-field scale). If far limit is at infinity mark or beyond of it, you'll get sharp image of objects located from the near limit to infinity.

5 Maintenance

Protect the lens against strikes, shakes, dust, high humidity and fast temperature changes. Keep the lens protected with the caps when it is not in use. Store the lens in its case. Handle the coated surfaces with care – they can be damaged during rough cleaning. Protect these surfaces from dirt. Humidity may damage coating and cause appearance of spots. Long storing and operating in non-appropriate environment may damage the coating completely.

If you bring the lens from cold into warm premise, do not open the case to avoid condensing of water on the glass. Let the lens warm up in the closed case.

Even with damaged coating layer this lens will transmit more light and will give sharper image than non-coated lens of same type.

Remember that the lens is complex precise device. Do not disassemble it if you don't have a skilled specialist and necessary tools to adjust it after assembling.

6 Cleaning of the coated lenses

Dust should be removed with clean degreased hair brush. If you don't have such brush, you can use cotton piece on a stick or match, or clean flannel or cambric cloth. Dirt (fingerprints, condensate paths etc.) should be removed with a cotton wool, linen or flannel moistured in ether or spirit a bit. Apply circular motion of the cotton wool proceeding from the lens center to the edge. Remember that some hard particles may present in the napkin or cotton wool. These particles can damage coating and even glass. So, use inner surface of the napkin after you unfold it.

7 Notes on bubbles in optical glass

Elements of modern lenses are made of special sorts of optical glass. In most cases it is impossible to avoid appearance of bubbles in such glass during manufacturing. They are often present both in Russian and foreign complex lenses. These bubbles don't affect image quality. That is why manufacturer doesn't accept claims on these bubbles, and doesn't replace such lenses.

8 Delivery set

The delivery set of the lens consists of:

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|-------------------|-----|
| a) Lens "Tair-11" | 1pc |
| b) Front cap | 1pc |
| c) Rear cap | 1pc |
| d) Container | 1pc |
| e) Passport | 1pc |
| f) Manual | 1pc |

9 Warranty

Manufacturer guarantees free-of-charge repair of the lens within one year since sale date if owner uses and stores the lens carefully. If the malfunction appeared in result of rough handling or due to inappropriate storage conditions, the manufacturer can't be responsible.

If you decide to send the lens to the factory, please include its passport with a retail store stamp and sale date specified. Also, include list of the noted problems.