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INSTRUCTION

for using the

TENAX 1×1"

(24 × 24 mm)

with instant winding mechanism for

35 m.m cine film

ZEISS IKON

MECHANIK · ZEISS IKON · VEB · DRESDEN A 21

The Pocket Tenax, or Tenax I, is a miniature camera for perforated 35 mm film taking cartridges for black and white and color film. The standard 35 mm cartridge in the Tenax yields 50 square exposures 1×1″ (24×24 mm). Any cut lenght of 35 mm film can also be used. The extensive depth-of-field in the short focus lens renders quick snap-shooting possible. A pressure of the finger suffices to set the shutter and advance the film to the next picture, without removing the camera from the eye. Double and blank exposures are impossible. The camera is equipped with an automatic picture counter and a large optical direct-vision view finder. Film loading is greatly facilitated owing to the removable camera back. Red-dot focusing and depth-of-focus scale help to optain successful results also. It is under all circumstances advisable to practise using the camera over and over again without a film in it before actually making exposures. The single manipulations should be carried out in the following succession.

I. Loading the Film

1. Set the shutter by means of the lever (1) to number 100 = 1/100th second. (Any other speed except 1/500th second and B can also be chosen, but 1/100th second is generally to be preferred).
2. The shutter is wound up by depressing the tension lever (7). Swing forward the hinged top until it stops hard. The tension lever will automatically jump back, whereby the finger should remain lightly resting on it. If the tension lever (7) is not pressed down properly until it stops it will not return to its starting point but will remain in an in-between position, from which it must not be pushed up with force, as this would damage the spring mechanism. It will have to be pressed down again to the stop, from where it springs back automatically to its original position.
3. Turn the milled knob (14) in the bottom of the camera 90° until the engraved arrow points to the "A" and then push the knob towards the "A". The camera back is now unlocked. Pull the camera back away and take it off.

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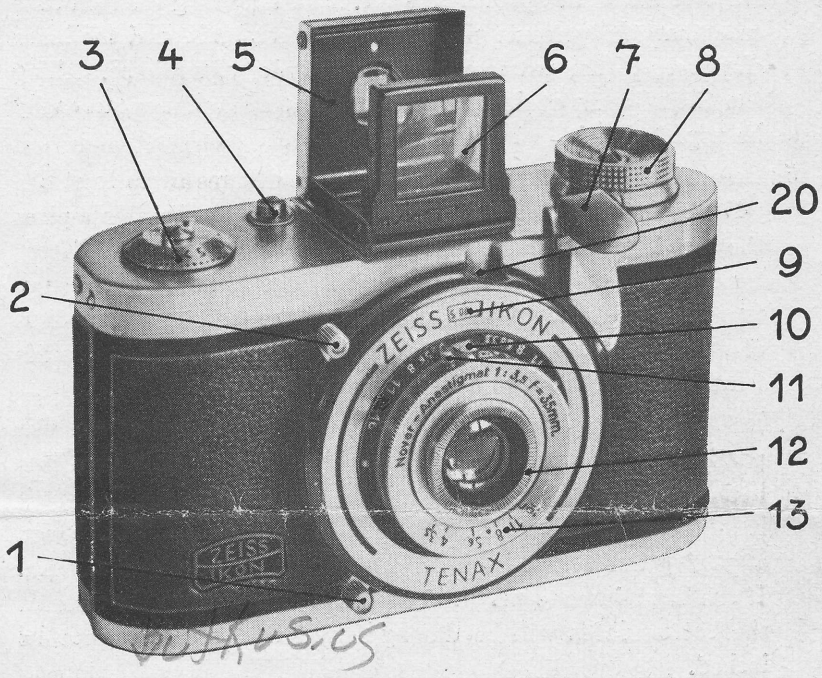

1 = Speed-setting lever

2 = Shutter-release lever

3 = Film counting dial

4 = Rewind release-knob

5 = Rear aperature of optical finder

6 = Optical finder

7 = Lever for winding the shutter

8 = Rewinding knob

9 = Window showing the speed setting

10 = Index pointer showing the distance setting

11 = Outer lens ring with distance scale

12 = Inner, milled lens ring with index dot for diaphragm setting

13 = Diaphragm scale

20 = Flash contact

4. Take the empty spool (receiving spool) out of the right-hand spool bed, at the same time pressing the spool holding spring (18) sideways to allow the spool to slip out. Before loading the film take care that the pressure plate in the camera back, and the inner chambers of the camera are clean in order to avoid scratching the film. Specks of dust or other slight uncleanliness can easily be wiped off with a little brush.

5. Before inserting the cartridge set the counting dial (3) to stroke "47" by turning the two projecting pins clockwise. Now place the cartridge into the left-hand (feeding) spool chamber. Fasten the film tongue projecting from the cartridge in the slit of the empty spool, and roll up just as much of the film on the spool to allow the sprocket wheel to catch the perforation on both sides when the core is inserted in the spool bed.

6. Let the camera back into the grooves from above as close as possible to the upper edge (without pushing it), only give it a little final push upwards to make it close completely. Then lock it by means of the milled button (14). (Compare I, § 3). When attaching the camera back, the bottom lock must stand at "A". If the knob is set to "Z" and the back forced on to the camera, the bottom latch will be damaged and the camera cannot be locked.

7. Depress the shutter release lever (2) — this causes the shutter to run down — and keep it pressed in this position. Press the winding lever (7) down to its stop repeatedly until the counter shows the number "0". During this manipulation the rewinding knob (8) has to rotate in the opposite direction to the arrow. Should this not happen, a mistake has been made in loading. The camera must be opened to put matters right.

8. Release the shutter lever, wind up the tension lever (7) once more, and the counter will now stand at number "I" (one stroke after "0"). The Tenax is ready for 50 exposures.

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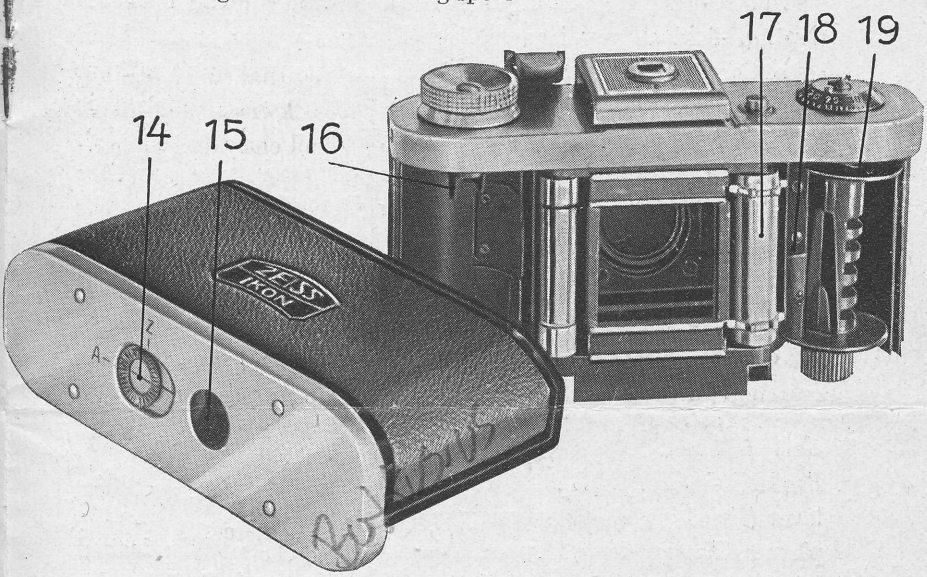
14 = Milled locking button for the camera back
15 = Tripod bush
16 = Winding claw for feeding spool
17 = Film transport sprocket
18 = Spring holding the spool in place
19 = Winding claw with receiving spool



II. Setting the Lens Aperture and Distance Meter

1. The aperture is set by turning the inner milled front ring (12) of the objective. The red dot on the lens mount is set against the stroke for the desired diaphragm number on the outer ring. The larger the diaphragm number, the smaller the lens aperture, the greater the depth-of-field, the longer the exposure required. First set the diaphragm and then the distance.
2. The focusing scale is engraved into the outer ring of the objective. The distance set appears on the edge of the pointer (10) above

the lens. Distances ranging from infinity to 4 feet can be set by turning the milled lens ring. In-between lengths can easily be estimated from the figures on the scale. The distance is measured from the film level which practically means the camera back. The distance scale, together with the diaphragm numbers above it, serve for measuring the depth-of-field, so that you can read the depth-of-field at any lens setting. If e.g. the distance has been set at 8 feet, and the diaphragm at 11, the sharpness reaches from 24 feet to 5 feet, The depth-of-focus scale on the camera is calculated for a confusion circle of 1/30th mm (1/150th of an inch.). The highly valued Zeiss Ikon two point-focusing system renders the Tenax I ever ready for immediate action. The red dot on the diaphragm scale is between the numbers 5.6 and 8, while the distance scale has the red dot at 18 feet.

This setting yields a depth-of-sharpness reaching from 10 feet to infinity which will no doubt suffice in most cases.

III. Setting the Shutter

1. The built-in Compur Shutter is wound up by means of the tension lever (7) which simultaneously moves the film on to the next picture. The speed is set by actuating the lever (1) until the desired number appears in the window (9). The figures 1, 2, 5, 10, 25, 100 and 250 signify fractions of a second, the speed values are therefore 1/1 (= 1 second), 1/2, 1/5th, 1/10th, 1/25th second etc. For time exposures the letter "B" has to appear in the window. All of the speeds except 1/500th second, can be set either before or after the shutter is wound up.

   To set the shutter at 1/500th second press the lever (1) downwards until it stops, whereby a slight resistance will be felt. When setting to 1/500th second make sure that the shutter is not wound up. Should the shutter already be wound, it cannot be set to 1/500th second. If, on the other hand, the shutter is wound up

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after 1/500th has been set you can change over to any other instantaneous speed or to "B".

The exposure is made by depressing the shutter release lever (2) with the forefinger of the right hand. When set at "B" the shutter remains open until pressure is relaxed.

IV. Flash Contact

1. The synchronized Flash Contact built into the shutter allows for flashlight exposures, also at instantaneous speeds, with regular and electronic flashes as well as with electrically ignited flash powder. The flashlight attachment required can be mounted to the tripod socket in the camera by means of a special holding device. A cable, having a plug at one end to fit into the contact nipple (20) in the shutter, provides the electric connection between the flash contact in the shutter and the flash unit. Such a cable, 30 cm in length, including fittings, is available for the Tenax. The electric current to be used must not exceed 24 volts and 2 ampères. The instant speed setting of the shutter depends on the ignition delay and the duration of the flash used for the exposure. Where these two values are unknown, set the shutter at 1/10th sec. At this speed the flash is certain to be fully utilized. If the duration and ignition delay of the flash are known, the shutter can be set at a shorter speed, as indicated in the following chart:

Duration plus ignition delay of flash:				
2—4	5—7	8—16	17—30	31—45 milliseconds
1/500th	1/250th	1/100th	1/50th	1/25th second
Shutter Speeds				

In the last two groups, shorter speeds may be set in connection with the flash, which, however, means a decrease in the transmission of light.

Electronic flashes, which have no intervals, can always be used with a shutter speed of 1/500th second.

V. The Exposure

1. Press the little milled knob on the side of the finder to the left, lift the finder cover (5) which serves as eye piece and the finder lens (6) opens up. When in use the finder must be held close to the eye so that the edges of the rectangular frame at the back coincide with the edges of the finder lens in front. Any pressure on the back frame will cause distortion of the image. To avoid slanting walls etc. in your pictures be sure that vertical lines stand parallel to the vertical edges of the finder.
2. Hold the camera firmly in both hands with the right forefirger on the release lever (2) and the left forefirger on the tension lever (7). Press the tension lever (7) down until it stops. It will jump back to its original position automatically. Keep the firger restirg lightly on the lever. If so desired, the camera can be screwed on to a tripod. A tripod bush (15) is for this purpose built into the base of the camera, next to the latch.

VI. Removing the Film

1. The film, after havirg been exposed, must be spooled back into the cartridge. Depress the knob (4), at the same time turnirg the rewindirg knob (8) in the direction of the arrow, whereby the film is rolled back into the cartridge. A slight noticeable resistance has to be overcome. This signifies that the film strip is slippirg out of the hold of the receivirg spool.
2. Remove the camera back (see I, § 3) and the cartridge can easily be taken out.
3. Should you have made 50 exposures without observing the countirg disc you will suddenly feel that the windirg lever stops half-way when beirg pressed down. In this case do not use force, but only rewind the film, otherwise the perforation might be damaged and the rewindirg of the film perhaps become impossible.

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