ZEISS IKON

Instructions for using the

IKOFLEX III

taking 2¼" square (6×6 cm) pictures
with double exposure prevention device

ZEISS IKON AG.
DRESDEN

C 2629 E

1 = Right wall of finder hood
2 = Shutter release button with nipple for flexible wire release
3 = Signal disc of double exposure prevention device
4 = Eye for neck sling
5 = Film winding knob
6 = Picture counter
7 = Milled disc setting picture counter
8 = Lever to adjust exposure times of shutter
9 = Lever winding the shutter
10 = Lever setting the lens aperture
11 = Camera lens
12 = Finder lens
13 = Window indicating aperture of lens in use
14 = Window indicating shutter speed in use
15 = Outer frame of front finder hood wall
16 = Hinged centre of front finder hood wall

A good film is essential for perfect pictures: use Zeiss Ikon film!

17 = Focussing magnifier
18 = Left side wall of finder hood
19 = Aperture in rear wall of finder hood
20 = Locking button for finder hood
21 = Knob used to open the camera back
22 = Knob of spool-holder in upper spool chamber
23 = Depth of focus scale
24 = Knob used for focussing
25 = Knob of spool-holder in lower spool chamber

26 – Red window in camera back.
27 – Peg for holding spool in feed chamber
28 – Peg for holding spool in take up chamber

Important! Before loading the camera with film it is necessary to practice the few necessary operations in order to avoid as far as possible any trouble due to unfamiliarity with the controls.

A good film is essential for perfect pictures: use Zeiss Ikon film!

I. The film spool

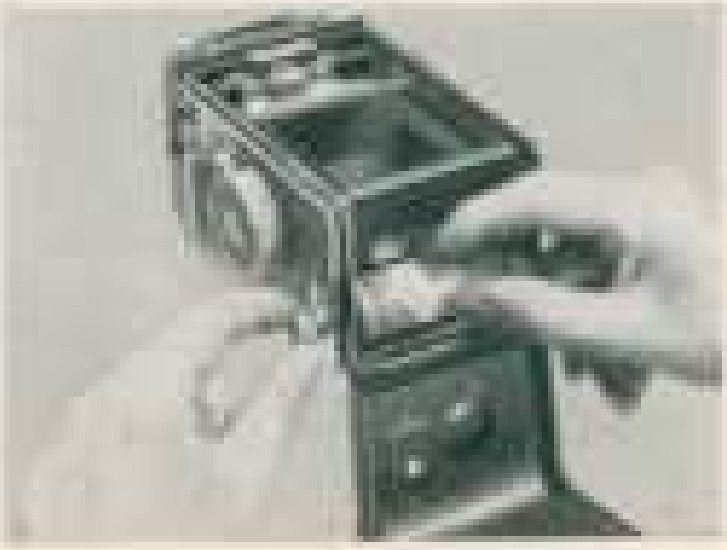
The Ikoflex takes a picture $2^1/_4{}''$ square (6×6 cm), and is loaded with the normal B2 roll-film. In the Ikoflex, this film gives 12 exposures in the $2^1/_4{}''$ square format. It is strongly recommended that the high-sensitivity Zeiss Ikon Orthochrom or Panchrom films are used, since these materials will give excellent negatives even in unfavourable light. Panchrom differs from Orthochrom in that it reproduces colours very much more correctly: the colour sensitivity of an orthochromatic film only includes the colours between blue and yellow-green, while a panchromatic film is sensitive to every colour of the spectrum, including orange and red. The sensitivities of the two films in daylight are virtually identical, but in artificial light Panchrom should be chosen as being more sensitive to this light quality, and consequently requiring less exposure.

The spools of film are light-tight when the end of the backing paper is stuck down, but it is always advisable to load and unload the camera in diffused daylight or else in the shade. Direct sunlight should not be allowed to strike the spools.

II. Loading the camera

1. The knob (21) is moved in the direction of the arrow and the camera back simultaneously pulled open.

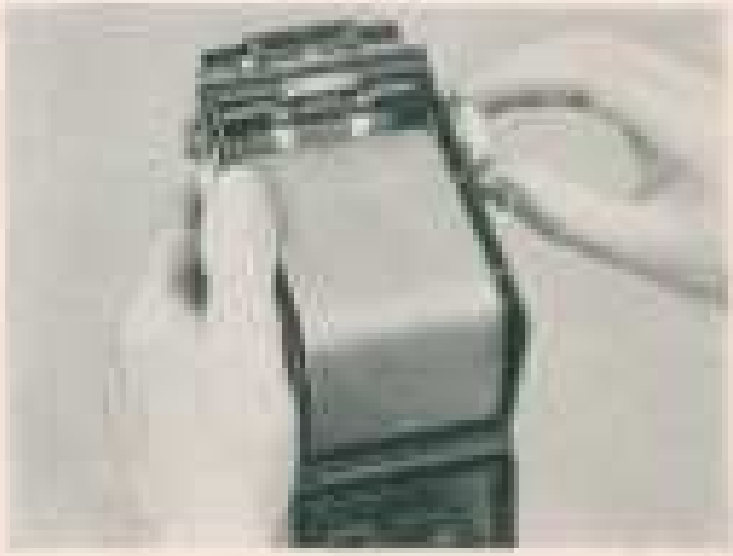
2. The knob attached to the peg holding the spool in the lower or feed chamber (25) is now pulled out and turned slightly to lock it in the outer position. The full spool of film is placed on the right-hand (fixed) peg in the lower or receiving spool chamber: the pointed end of the backing paper must point towards the other spool chamber, and the black side of the paper must face inwards. The knob (25) is then turned back, and the peg allowed to enter the circular hole bored in the core of the full spool. The spool is now held firmly in place.



3. The paper strip holding down the pointed end of the backing paper is now broken, and the backing paper itself pulled out over the open back of the camera until its pointed end can be pushed through the larger slot of the empty spool core in the upper chamber.

4. By turning the film winding knob (5) once or twice round, the paper is tightened and a little of it wound on to the spool. The paper must run evenly between the flanges of the spool: should it chafe or rub the flanges, it must be loosened and made to run flat between them.

5. The camera is then closed by pressing the hinged back firmly against the main body. The lock must snap audibly into place.



6. The cover over the red window (26) in the base of the camera is now slid away, and the film winding knob (5) turned forward continuously until a hand appears in the red window. This is a warning sign, and just after it the number '1' will appear. As soon as the number '1' appears in the red window the first section of film has been wound into the focal plane of the camera and is ready for exposure. The red window is now covered once more with the slide, in order to avoid any risk of fogging a panchromatic film.

7. As the paper has been wound through the camera, the picture counter will also have moved on. When the number '1' has appeared in the red window (26), the picture counter is set back to '1' by turning the small milled disc (7) in an anti-clockwise direction as far as may be necessary.

III. Unloading the camera

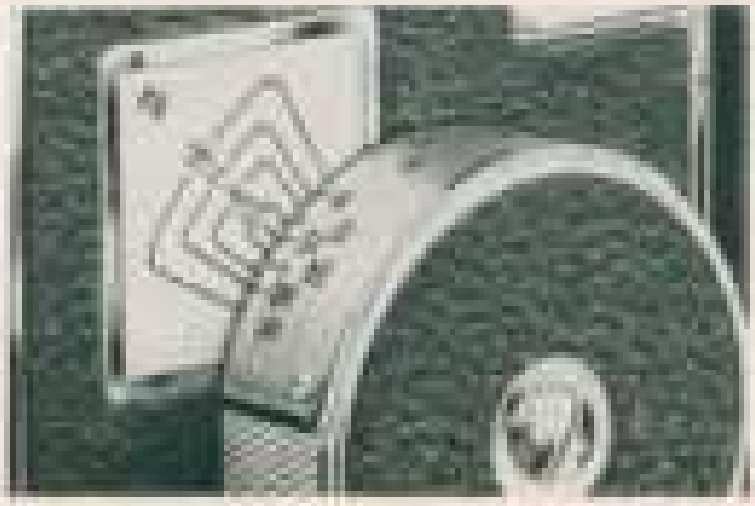
1. After the last (i. e. twelfth) exposure has been made, the film winding knob (5) is turned continuously forward until the end of the backing paper has moved past the red window (26).
2. The camera back is then opened as described on page 6, and the end of the backing paper on the exposed film spool sealed down firmly with the gummstrip provided. The knob (22) is now pulled outwards, locked in the outer position by turning it slightly, and the exposed spool lifted from its holder.
3. The knob (23) in the lower spool chamber is then pulled out and held in the outer position by turning it slightly. The empty spool from which the exposed film has been unwound, is then removed and placed in the upper spool chamber. One end of the spool has a

circular hole and the other a circular hole with a cross-slot; the slot must be placed on the same side as the film winding knob and engaged with the metal dogs on the winding knob peg (20) so that the spool is carried round with the knob. The knob (22) is then turned slightly back, and will spring inwards and hold the empty spool firmly in position. The camera can then be loaded with a new spool of film.

IV. Taking the picture

The picture to be taken is focussed and composed on the ground-glass screen inside the finder hood.

The amount of the subject that is in sharp focus is shown by the depth of focus scale (23) placed next to the focussing control knob. As may be seen in the illustration, at *f*/11 objects at all distances between about 9 and 43 feet will be sharp when the focussing distance is 15 feet.



1. Move the locking button (20) to the left, as shown, and the finder hood will spring automatically into position for use.

2. In use, the camera is slung round the neck, and adjusted to a convenient height by altering the length of the strap used.
On glancing down into the finder hood, an upright picture of the scene before the camera will appear. This picture is reversed left to right, as in the case of all reflex cameras.

In order to obtain critical focus, particularly when using large lens apertures, it is useful to use the focussing magnifier (17).

3. After pushing down the right-hand side wall (1) on the finder hood, the built-in magnifier is raised with the forefinger of the right hand by means of the lug on its side.

4. When focussing, the eye must be directly over the centre of the magnifier.

5. Should it be necessary the camera may be used at eye-level by means of the frame finder in the hood.

To use this frame finder, the central portion (16) on the front wall is pushed backwards and upwards with the finger until it catches into position.

For exposure, the eye is placed behind the rectangular hole (19) in the back wall of the finder hood, and the subject observed through the frame in the front wall. The outlines of the two frames as seen should cover each other, and it is important to keep verticals in the subject parallel to the edges of the frame, since otherwise they will be distorted in the picture.

6. Focussing on the ground-glass screen is done by turning the control knob (24), and the shutter release is best operated with the thumb of the right hand, as shown. Using this method of holding the camera, the instrument is always ready for rapid use.

7. When using the longer snapshot exposure times, it is very advisable to steady the camera after focussing by placing the left hand under it as shown.

8. After exposing, the film must at once be turned on by means of the knob (5) until the next higher number appears on the picture counter.

Prevention of double exposures

It is impossible to expose one section of the film twice, since the shutter will not operate until the winding knob (5) has been turned forward, and a new section of film wound into the focal plane of the camera.
Winding on is indicated in the window (3) by the appearance of a red disc. When the disc can be seen, the film has been wound on, and releasing the shutter will expose a fresh section.

Two-point focus settings

In exceptional cases it is impossible to focus rapidly enough on the ground glass, so that the Ikoflex is fitted with the Zeiss Ikon system of two-point focus setting.
The lens aperture is adjusted in advance to the red dot on the scale between *f*/8 and *f*/11, and the focussing distance also adjusted to the red dot between 20 and 30 feet on the scale. With these two settings, everything between 13 feet and infinity will be in sharp focus, and if the shutter time is set to $^1/_{25}$th of a second, it will seldom be necessary to make any adjustments whatever to the camera in normal snapshot work, where lack of time sometimes makes it out of the question to focus critically.
The exposure given at these settings is enough to give well exposed negatives on Zeiss Ikon films even in bright winter weather.

The lens aperture

The lens aperture is adjusted by moving the lever (10) to one side or the other. The aperture numbers are indicated on the scale seen through the window (13). The larger the aperture number, the smaller the size of the aperture of the lens, and the greater the depth of focus – but also, the larger the aperture number, the longer must be the exposure.

The shutter

The Compur shutter gives snapshot exposures of 1 second to $^1/_{300}$th second, and the Compur Rapid those of 1 second to $^1/_{500}$th second. In each case, long or brief time exposures may also be given at will.

Snapshot exposures:

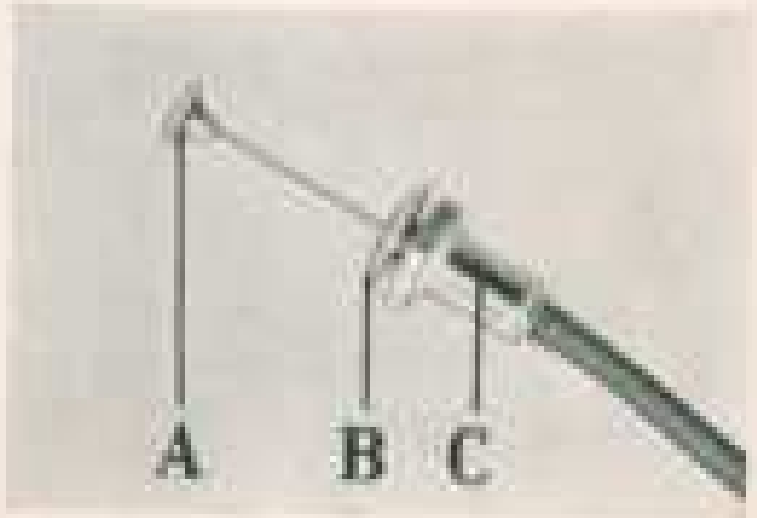
The lever (0) is raised or lowered until the required shutter speed has appeared in the window (14). The numbers seen mean

fractions of a second. The shutter is then wound up by moving lever (9) along in its slot, and released by pressing the button (2). A flexible wire release may alternatively be used, and it is screwed into the nipple of the button (2).

Important: When the shutter has been set, it must not be altered from a slow shutter speed to its highest speed, since this would put too much of a strain on the internal mechanism.

Brief time exposures: Move the lever (8) until the letter "B" appears in the window (14). A pressure on the release (2) will then open the shutter, and the latter will remain open until the pressure on the release is relaxed.

Long time exposures: These are given with the aid of the special flexible wire release, which is screwed into the nipple of the release button (2). It differs from normal flexible releases by the fact that it has a moveable plate B between the body C and plunger A. The shutter is set to "B" as above, and when the plunger A is pressed, the shutter opens. It will then remain open until the plate B on the wire release is pressed. This



special release can be used as a perfectly normal one when brief time exposures and snapshots are to be taken. The plate B is pressed against the body C and then turned gently to the right. This operation will lock it in the lower position, and the plunger A will move up and down in the normal manner.

The exposure table

On the left-hand wall of the finder hood will be found a table of exposure values, which will give a general idea of the values required in different circumstances. The printed exposure table supplied with the camera gives more information, but best of all as an accurate exposure guide is the special Hélios photo-electric exposure meter, made by Zeiss Ikon.

V. Accessories for the Ikoflex

1. Zeiss Ikon filters

The series of filters numbered 317/0 to 317/55 are suitable for use with the Ikoflex. The filters are delivered in slip-on mounts, the latter fitting the front mount of the camera lens (11). Yellow filters are the most commonly used, but green filters are used on panchromatic film for tone-correct rendering of greens and reds in such subjects as still life, copies of paintings, etc., orange and red filters with red-sensitive film for night effects in full sunlight, or long-distance work in misty weather. The use of specialised types of filters will widen the range of work that can be undertaken very greatly.

2. Proxar and other supplementary lenses

For exposures on subjects at close range, supplementary lenses are required: they are made to focus between 40 inches and 20 inches, and between 20 inches and 13½ inches. In order to focus conveniently, a supplementary lens must also be used on the finder lens as well as the camera lens. Zeiss Proxar lenses may be obtained in stereoscopic pairs for this purpose.

When exposing at these distances, the lens should preferably be stopped down to f/8. When ordering supplementary or Proxar lenses, it is essential to state the lens type and aperture, as well as the diameter of its front mount, since varied lens types are not all the same size.

3. The ever-ready carrying case

A valuable camera must be protected from the weather, and a leather case is essential for the purpose. The ever-ready case is, however, not a leather carrying case in the ordinary sense of the word, for it is fitted with an easily-opened flap which — when lowered — permits all the camera controls to be operated without hindrance, and thus makes it unnecessary to remove the camera from the case for use.

The camera is fixed in the case by screwing the bolt in the base of the case into the tripod bush on the bottom of the camera. This operation may be done from the outside of the case.

4. Zeiss Ikon lens hood, No. 1281/3

The purpose of a lens hood is to stop all undesirable side and top ligh particularly in exposures against the light, from reaching the glasses of th lens, and affecting the picture. The use of a lens hood makes the negative very much clearer and more brilliant in gradation.

5. Supplementary finder hood extension, No. 851/45

This extension is pushed over the normal finder hood of the camera, an since it removes all extraneous light from the ground glass, makes th observation of the image particularly convenient.

6. Zeiss Ikon synchronised flash-bulb release, No. 3613/16

Flash-bulbs are a source of flashlight that have neither the inconvenienc of smoke and smell nor make any noise when fired. The light output is very high. The synchronised release is fitted to the Ikoflex by an extensio piece, and fires the flash-bulb the same moment the shutter opens.

7. Zeiss Ikon delayed-action shutter releases

These are external clockwork releases that are clipped on to the flexibl wire release of the camera. Model No. 1394/7 is only suitable for givin snapshot exposures, and model No. 1394/3 gives snapshot and time expo sures, the latter up to 15 seconds duration.

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