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INSTRUCTIONS

for using the

CONTAX S & D

B. H. K. 105

INTRODUCTION

The Contax-S is an one-lens reflex camera, taking the 35 mm perforated cinemafilm, and giving pictures of 24×36 mm ($1\frac{3}{8} \times 1\frac{5}{16}$ ") size. With the aid of the novel prism-telescope-finder, eye-level focussing is made possible. When viewed through the ocular lens and the pentagonal slanting prism, the image produced by the camera lens, over the mirror, on a fine-grain ground glass appears to the observer in vertical, right-side-up position and, with the standard lens in the camera, in the natural size of the picture. The compact build of the prism-telescope-finder facilitates selecting and focussing the image.

Moreover, the Contax-S possesses all the advantages of a modern precision miniature camera, such as coupled shutter-winder and film advancement, lock against double exposures, interchangeability of the lens, and synchronized flashlight contact.

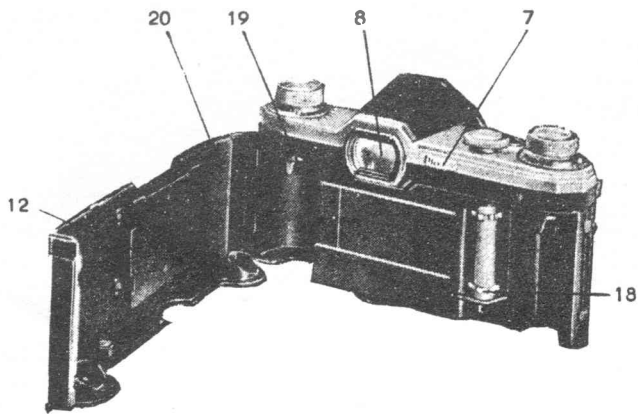
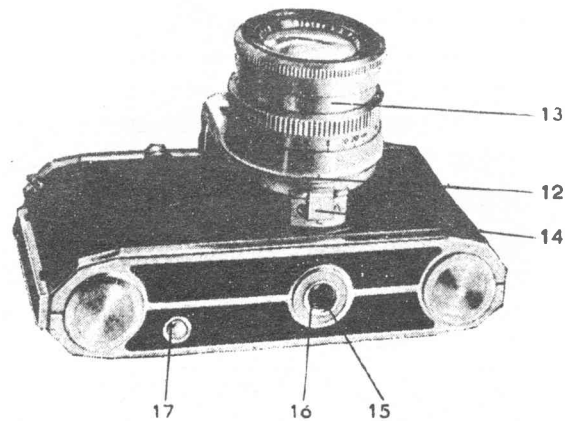
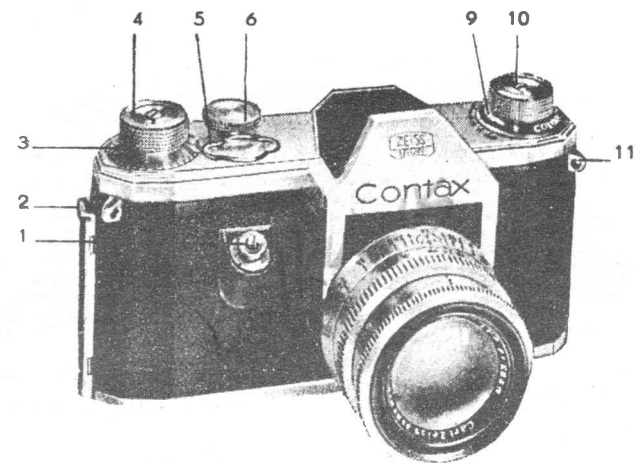
Successful photographic results with the Contax-S depend by all means on careful operating and thoughtful handling. It is recommended in particular that the pages relating to the technic of exposure should be specially studied, and the handling of the camera practised without loading it with film. When an understanding of the Contax has been gained by this practice, the camera may be loaded with film and experience in practical work can then begin.

The Contax-S is designed to take the orthodox daylight film-cartridge for 36 exposures, all other standard miniature film-fillings, and any 35 mm perforated film in cut lengths up to 1.60 metres. (5 feet.)

EXPLANATION OF SIGNS

- | | |
|---|--|
| 1 = Shutter-release knob | 7 = Knob for setting the speed groups |
| 2 = Latch for camera back | 8 = Eye-lens (ocular)
of the prism-telescope-finder |
| 3 = Picture-counting disc | 9 = Film-marking disc |
| 4 = Knob for winding the
shutter and film-transport | 10 = Film rewind-knob |
| 5 = Disc showing shutter speeds | 11 = Eyelets for holding the carrying strap |
| 6 = Knob for setting the shutter speeds | 12 = Screw-in thread for the camera lens |
| 13 = Interchangeable lens, mounted with distance-meter and diaphragm rings and
with scales for setting distance, diaphragm, and depth-of focus | |
| 14 = Camera stand | 18 = Film-transporting drum |
| 15 = Tripod bush | 19 = Focal plane |
| 16 = Flash-light contact | 20 = Camera back |
| 17 = Release-knob for rewinding the film | 21 = Pressure plate |

The illustrations do not in every part correspond to the execution of the camera.



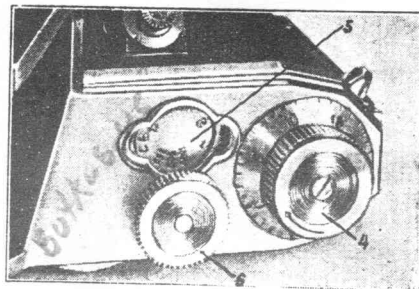
I. SHUTTER AND FILM-TRANSPORT

1. *Winding the shutter*

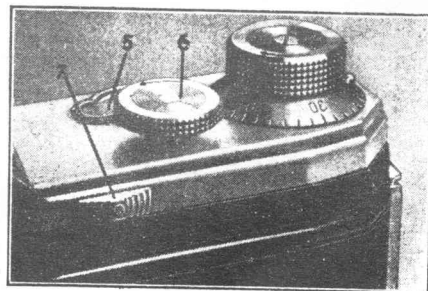
The shutter is wound up by means of a full turn of the knob (4) (Ill. No. 1) as far as it will go in the direction of the arrow. This manipulation simultaneously moves the film and the picture counter on to the next picture, and swings the mirror into position for the observation of the image in the finder.

2. *Setting the shutter speeds*

The speeds are set by using the knob (6) and the knob (7) next to the speed disc (5) (Ill. No. 2). On the speed disc (5) are black figures indicating the short speeds of $\frac{1}{1000}$ th to $\frac{1}{50}$ th second, and red figures indicating the long speeds of $\frac{1}{20}$ th to 1 second and "B" exposures running for any length of time (Ill. No. 1).



Ill. No. 1



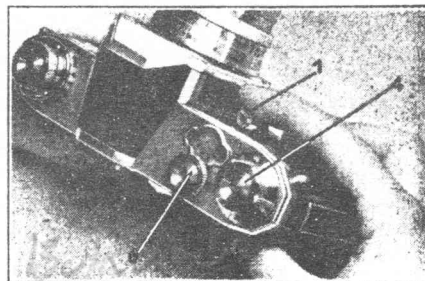
Ill. No. 2

First set the shutter to the short (black) or long (red) speed group by moving the knob (7). and, accordingly, the black or red pointer must appear in the window of the speed indicating disc (5). Now adjust the exposure time in the colour of the indicator (black or red) by pressing down, and at the same time rotating, the knob (6). This knob is operated by the thumb and the forefinger of the right hand, or by the thumb only, by rolling it over the milled edge of the knob.

Turning the knob is possible in both directions and can be made either before or after the shutter has been wound up.

3. Releasing the shutter

To make the exposure, the shutter has to be released by pressure on the knob (1). Avoid shaking the pictures by jerkly pressing the knob. Release smoothly. This can be achieved by putting the fore limb of the finger on the border of the ring and pressing the knob with this limb like a lever (Ill. No. 3).

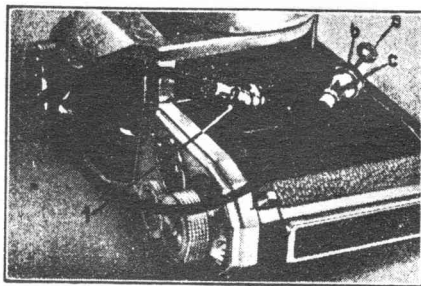


Ill. No. 3

When using the "B" setting of the shutter, the release knob has to remain pressed down as long as the exposure is to last. The release knob can be locked in this position by turning it to the left, if longer time exposures are desired by means of a tripod. To close the shutter, disengage the knob by rotating it to the right.

4. The wire release

The release knob (1) incorporates a thread to take a flexible wire release (Ill. No. 4). For longer time exposures a wire release differing from the usual type can be supplied. This is fitted with a locking device in the shape of a moveable plate (b) between the neck (c) and the head (a). When set at "B" and released by pressure on the knob (a), the shutter remains open until the plate (b) is pressed down. In case of short time exposures

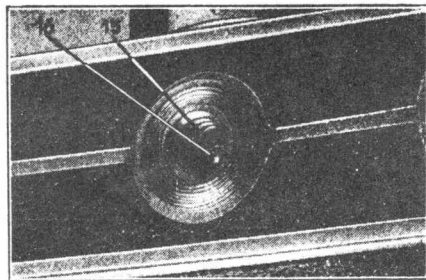


Ill. No. 4

and instantaneous snaps, the plate (b) is pressed against the neck (c) and fixed by turning it to the right. This puts the locking device out of action.

5. The contact for flash-light connection

The electric flash-light attachment is connected by means of the contact in the tripod socket (Ill. No. 5). It is arranged for tensions up to 24 volts and up to 2 amp. intensity of current. For flash-light exposures, set the shutter at $\frac{1}{10}$ th second or longer, and release the knob (1).

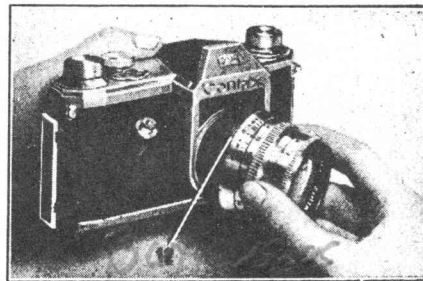


Ill. No. 5

II. CAMERA LENS AND FINDER

1. Changing the lens

The lens in the camera body is interchangeable within its threaded flange (12) (Ill. No. 6). By being turned to the left (anti-clockwise), the lens can be removed from the camera body. Should the lens be screwed out of the loaded camera, take care to shield the aperture from glaring light. Beware of touching the unprotected surface mirror with the fingers.



Ill. No. 6

Lenses and supplementary rings are inserted by screwing to the right (clockwise) in the threaded opening. The index points for the diaphragm and distance must be visible from above when the mount is screwed tightly.

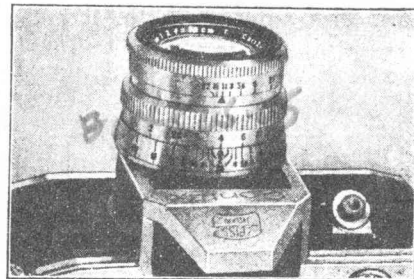
2. The lens scales

The lens mount bears the following engravings:

On the front ring the diaphragm scale with the index point,

on the middle ring the distance scale, on the back ring a diaphragm scale, showing the depth-of-focus for each distance setting.

According to this scale, for instance, the Biotar lens $f/2$, with 5.8 cm ($2\frac{1}{4}$ ") focal length, at a distance setting of 12 ft. (4 m) feet and $f/11$ aperture, gives a sharpness reaching from 7 ft. 6 ins. to 30 ft. (Ill. No. 7).



Ill. No. 7

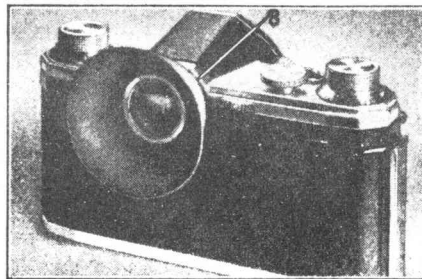
3. Focussing the image with regard to sharpness and outline

Sharpness and outline of the picture are viewed through the prism-telescope-finder. The camera must be held with the ocular lens close to the eye (8), and the image will be

visible, but only as long as the shutter is wound up (see note I, 1). If the finder appears dark, the shutter knob (4) has to be rotated in the direction of the arrow. Now turn the milled ring which is next to the camera body on the lens mount, until the image is sharp on the ground glass. In order to obtain greater brilliance, it will occasionally be found more convenient to focus the picture with the widest lens aperture and then to stop down for the exposure by turning the diaphragm ring. The outline of the picture is indicated by the light-rim in the finder. The field of vision in the finder is somewhat smaller than the size of the picture itself and can be used in its full extension. Persons wearing spectacles for the correction of wrong-sightedness should perform the focussing with their distance-glasses on. An additional corrective lens, corresponding to the spectacles, which can be fixed to the ocular glass, is also available (see note II, 4).

4. Lighthood and corrective glasses

In order to avoid the penetration of sidelights into the finder, a lighthood (Ill. No. 8) can be supplied. This renders it easier for the eye to become adapted to the brilliance of the finder, thus giving greater accuracy and rapidity in focussing.



III. No. 8

For persons who are obliged to wear spectacles when focussing, a corrective glass in a special mount to fit the finder lens is obtainable, by means of which it is possible for the eye to approach the finder more closely. The awkward changing of spectacles between focussing and setting the shutter is hereby eliminated.

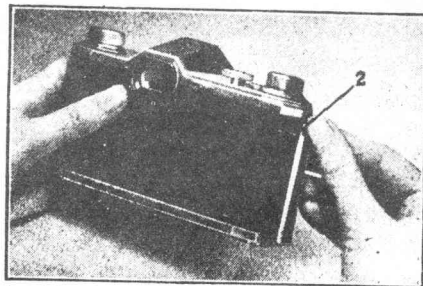
These small parts can conveniently be fixed to the holding device in the ocular-lens mount (8).

5. Camera stand

Under the screw-in opening for the camera lens is a little foot which, when drawn out, serves as a camera stand (14).

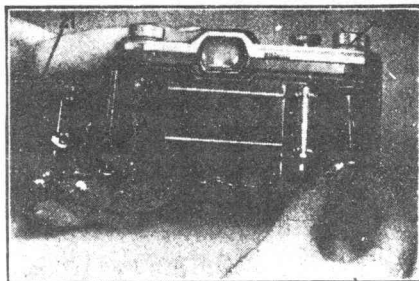
III. LOADING THE FILM

1. Hold the camera, facing the back, push the bolt (2) on the right-hand side upwards and pull open the camera back by slight pressure on the edge (Ill. No. 9).



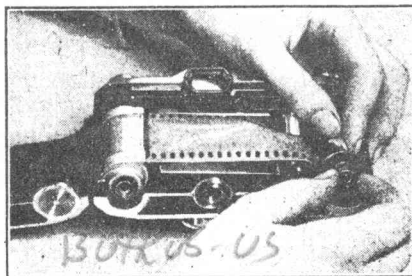
Ill. No. 9

2. Take the empty spool (receiving spool) from the right-hand spool chamber (Ill. No. 10) and remove any possible remains of film chips or coating from the pressure plate (21). from the film gate and the spool chambers. Wind up the shutter by turning the knob (4).



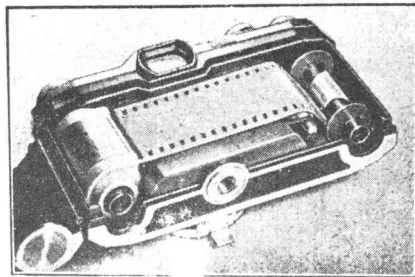
Ill. No. 10

3. For daylight loading (beware of glaring light!) a film-cartridge is necessary. Place the cartridge into the left-hand spool chamber, with the beginning of the film pointing in the direction of the focal plane. Insert the projecting tongue of film in the slit of the taking-up spool. Bend in a few millimetres of the film-tongue — coating outwards — and roll as much of the film on to the spool as to allow the sprocket to catch both perforations (Ill. No. 11).



Ill. No. 11

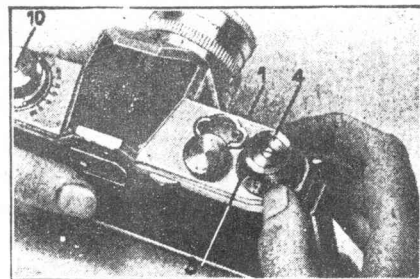
4. With the film in the right position on the film track and the sprocket (Ill. No. 12), the camera back can be closed down and locked.



Ill. No. 12

5. Set the counting disc (3) two strokes before 0 to the index point (Ill. No. 13) and make two blank exposures by actuating the shutter release (1) and the transporting knob (4). The rewinding knob (10) must turn in the opposite direction of the arrow if the film is being properly transported.

With the counter at stroke No. 1, the camera is ready for the first exposure.



Ill. No. 13

6. The film-marking disc (9), and the sensibility scale at the base of the rewinding knob (Ill. No. 14) serve for recording the species and sensibility of the film in the camera. The disc is divided into three sections as follows.

Black-and-white film section:

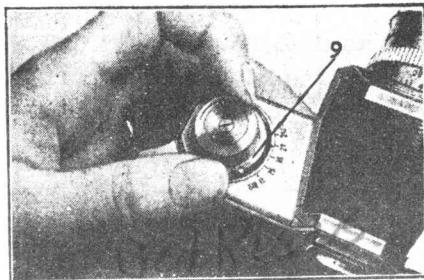
for black-and-white films without special marking.

Daylight colour-film section:

white stripe marked "Colour".

Artificial light colour-film section:

black stripe marked "Colour".



Ill. No. 14

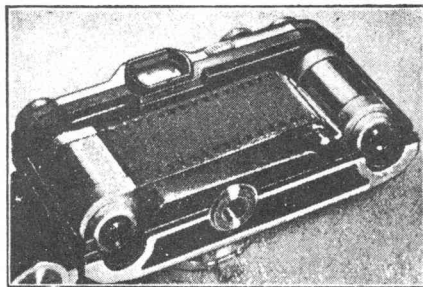
7. When working with loose cine film which is rolled on to an empty spool in the dark-room, the end of the film should be inserted on the film spool in such a way that it can easily slip out. This saves rewinding the film if it is rolled into a second cartridge. The beginning of the film must be fixed into the slit of the empty spool — coating outwards — and this spool, like the spool in the feeding cartridge, is then placed into the receiving cartridge.

The cartridge must now be so placed into the right-hand spool chamber, that the film will smoothly run over the sprocket into the opening of the cartridge, which means that this opening, below the sprocket, must point upwards. (Ill. No. 15).

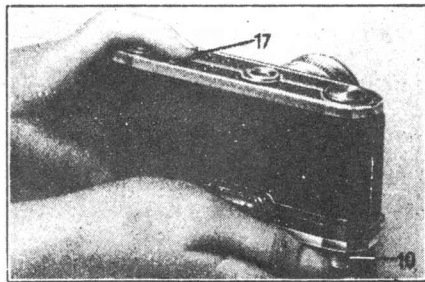
IV. CHANGING THE FILM

When using the standard film cartridge for 36 exposures, a certain resistance, due to the film being fixed to the core of the spool, will be noticed after the 36th picture. If exchanged in daylight, the film must first be spooled back into the cartridge.

This is done by pressing the knob (17) in the bottom of the camera body and at the same time rotating the rewind-knob (10) in the direction of the arrow (Ill. No. 16), until the beginning of the film is loosened and slips off the taking-up spool.



Ill. No. 15



Ill. No. 16

At this point, slight resistance will set in, after which the camera back can be opened and the film-cartridge removed.

It is not necessary to rewind the film on to the feeding spool if it is taken out in the dark-room or if the receiving spool is protected by a cartridge (see note III, 7).

Do not charge the film in bright sunlight, but, if possible, in the shade. After having been taken out of the camera, the film-cartridge should be kept in lightproof paper or in a metal box.

V. HOW TO HOLD THE CAMERA DURING THE EXPOSURE

The manner in which to hold the camera depends on the kind of lens being used. The Contax-S is very convenient both for horizontal as well as for upright pictures. We recommend the following:

1. The camera is held in both hands, lying firmly in the palms. The shutter is wound up and set with the thumb and the forefinger of the right hand, whereas focussing and diaphragm-setting are performed with the middle fingers of the left and right hands.

When in proper focus, the shutter is released with the forefinger of the right hand (Ill. No. 17).



Ill. No. 17

2. The camera is held firmly in the left hand, while the manipulations are executed with the right hand. Thumb and forefinger wind the shutter, the middle finger sets the diaphragm and the focussing, and the forefinger releases the shutter (Ill. No. 18).



Ill. No. 18

3. The right hand holds the camera, the thumb, forefinger and middle finger of the right hand actuate the shutter and film-transport mechanism, while the thumb and forefinger of the left hand set the focussing and the diaphragm. The camera is supported by the ball of the left hand (Ill. No. 19).



Ill. No. 19

Butkus.03

This method of holding the camera is especially suitable for upright pictures (Ill. No. 20).



Ill. No. 20

4. The camera can also be held with its back pressed against the forehead. In this position the shutter is manipulated with the left hand, and the lens with the right hand (Ill. No. 21).

5. For work with a tripod, the camera is screwed to the tripod socket (15).

6. An ever-ready case is available for the protection of the camera. The camera is fastened in the case by means of the tripod screw (15). For carrying the camera without the case, a strap can be linked into the eyelets (11).



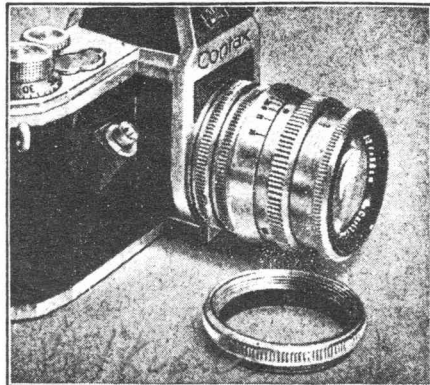
Ill. No. 21

Flash Strobe #50 S.M.'s 250
at 1/20

1/50 th for focal plane bulbs

VI. CLOSE-UP EXPOSURES

Close-up pictures can be taken with supplementary distance rings which are mounted between the lens and the camera body (see note II, 1). In this case, sharpness and outlines of the pictures as well as depth of focus are obtained by means of the prism telescopic view-finder in the same manner as for long-distance objects. The following sheet shows the distances of objects given by using one, two or three distance rings.



Biotar f/2 focus = 5.8 cm	Distance of object measured from the front rim of the lens	Scale of picture produced
without distance ring	inf. to $2'8\frac{1}{2}"$	inf. to 1 : 13.6
with distance ring 208/04	5' to 1'1"	1 : 27 to 1 : 9
with one distance ring 208/03	$1'6\frac{1}{4}"$ to 1'	1 : 9.2 to 1 : 5.8
with two distance rings 208/03	11" to $8\frac{5}{8}"$	1 : 4.9 to 1 : 3.5
with three distance rings 208/03	$8\frac{1}{4}"$ to $7\frac{1}{8}"$	1 : 3.2 to 1 : 2.5

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