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**ZEISS IKON**  
STUTTGART

**ZEISS IKON**  
Instruction Manual

## Contessamat SBE

### Care of the CONTESSAMAT SBE

Dust the spool chambers and the inside of the camera back from time to time with a soft brush. The lens should be cleaned only when it is absolutely necessary, by wiping it carefully with a soft, well-washed linen cloth (not wash-leather); first remove all dust with a fine brush.

A serial number is engraved in the back of every CONTESSAMAT SBE. Make a careful note of this number in order to be able to establish your ownership in the event of loss or misappropriation.

In the interest of technical development changes may be made without further notice



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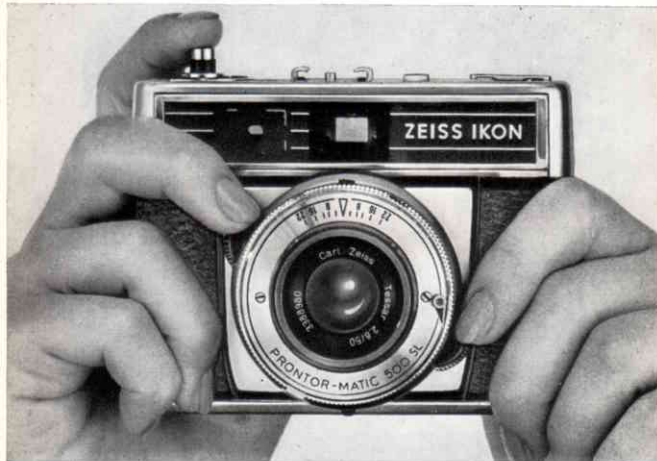
2.0666/04-3

## Contessamat SBE



## *In your own interest...*

...we recommend that you read these instructions carefully. Unfold the inner leaves of the cover so that you can keep a constant check on the positions of the various controls. Before you load the first film, be thoroughly familiar with your CONTESSAMAT SBE. You can readily obtain



advice and information free of charge on all photographic problems from your photo-dealer, or from the Photo Customer's Service department (Fotoberatung) of ZEISS IKON - VOIGTLÄNDER 7 Stuttgart, Postfach 540, WEST GERMANY.

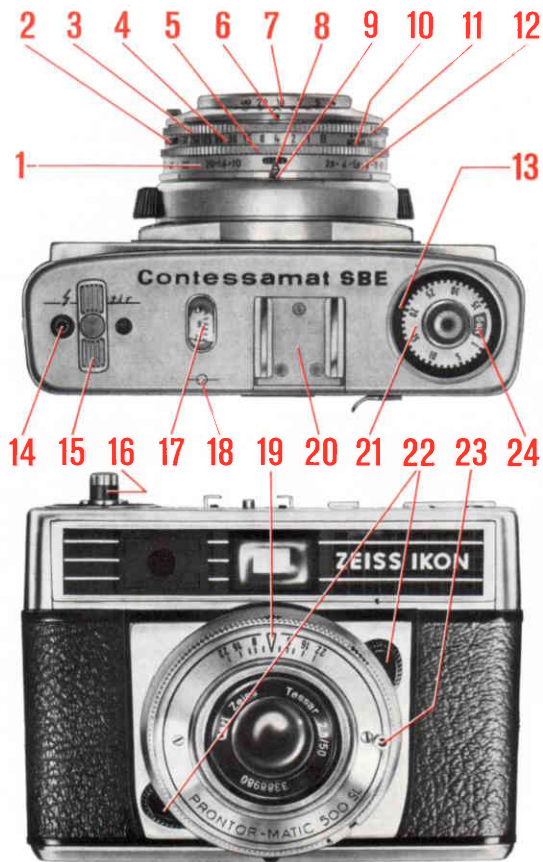
Reference numbers 25—37 refer to the illustration on the rear cover flap.

- 25 Setting mark for DIN film speed**
- 26 Film-speed scale (DIN)**
- 27 Catch for opening camera back**
- 28 Rewind fork — must engage with bar in film cartridge core**
- 29 Locking knob for releasing the rewind crank**
- 30 Tripod bushing**
- 31 Viewfinder eyepiece**
- 32 Retractable rewind crank**
- 33 Axle of rewind crank (must rotate when film is advanced)**
- 34 Rapid-wind lever**
- 35 Film transport roller with sprocket wheels for engaging in perforations of film**
- 36 Flange of take-up spool**
- 37 Take-up spool with slot and lug for securing beginning of film**

## **Loading and unloading**

Standard 35 mm cartridges — black-and-white or colour — giving 20 or 36 exposures can be used in the CONTESSAMAT SBE.

## Operating instructions



- 1 Flash guide-number scale
- 2 Push-button for setting film speed (ASA or DIN)
- 3 Shutter-speed setting ring
- 4 Shutter-speed scale
- 5 Setting ring for engaging and disengaging the automatic exposure control, also for setting aperture and flash guide numbers
- 6 Shutter-speed setting mark
- 7 Distance (focusing) scale
- 8 Locking catch for engaging and disengaging the automatic exposure control in conjunction with setting ring 5
- 9 Setting mark for A ("Automatic"), flash guide-number scale 1 and aperture scale ("Normal") 12
- 10 Film-speed scale (ASA)
- 11 Setting mark for ASA film speed
- 12 Aperture scale
- 13 Setting mark for frame counter
- 14 Flash contact
- 15 Rotating safety cover for flash contact
- 16 Release button with screw thread for cable release
- 17 Exposure-meter pointer with f/stops and red warning fields
- 18 Film-plane mark (reference plane for focusing scale)
- 19 Distance-setting mark and depth-of-field scale
- 20 Accessory shoe
- 21 Knob for adjusting the film-type reminder disc
- 22 Finger grips for focusing
- 23 Delayed-action release lever
- 24 Indicator window for film-type reminder disc

### Loading the film

(See also illustration on rear cover flap)

Never load the camera in direct sunlight but only in the shade.

Open camera back by pressing catch 27 downwards.

Fit the rewind fork 28 into the base of the film cartridge, so that the bar across the recess in the cartridge core engages in the slot of the fork. Then move locking knob 29 in the direction of the arrow until rewind crank 32 jumps out (thus disengaging clutch of film transport roller 35).

Guide the beginning of the film leader into slot 37 of the take-up spool and hook the third perforation hole over the lug in this slot. Wind the film on by turning the spool flange 36 until the sprocket wheels of the film transport roller 35 engage the perforation on both sides of the film. After closing the camera back rotate the rewind crank in the direction of the arrow until a resistance is felt: the film is then wound tightly within the cartridge.

**Then push the rewind crank back into its recess until you hear it click home.**

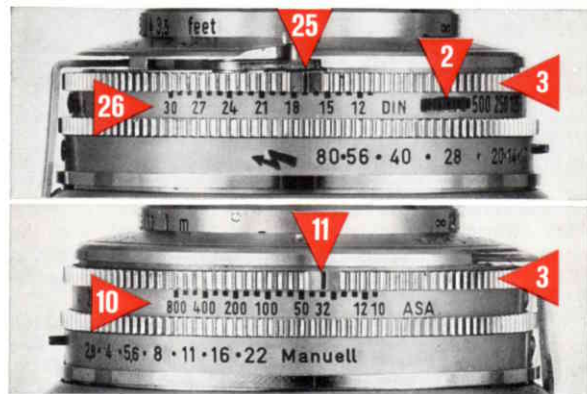


Fig. 1

### Film-type reminder disc

Set this by means of knob 21. Its sole purpose is to assist your memory; the following symbols will appear in the indicator window 24:



### Setting the film speed — extremely important!

Use the ASA or DIN film-speed rating printed on the film carton.

Depress button 2 and rotate ring 3 so as to move the setting marks 11 and 25 until they line up with the appropriate figures on the respective film-speed scales 10 (ASA) or 26 (DIN).

1 Camera empty

2 Black-and-white film

3 Colour negative film

4 Colour reversal film clear flash

5 Colour reversal film daylight

6 Colour reversal film artificial light

## Checking the film advance and setting the frame counter

Swing rapid-wind lever 34 **right up to its stop** and release the shutter by pressing button 16; then repeat both operations in this sequence.

The spindle 33 of the rewind crank (marked with a red dot) should then rotate in the opposite direction to that shown by the arrow. This allows you to check that the film is being wound on correctly; the red dot can also be observed through the hole in the base of the eveready case.

After swinging the rapid-wind lever for a third time, the white mark 13 on the milled ring of the frame counter disc should be set to the number of exposures provided by the film you are using (e.g. to 36).

The frame counter always shows the number of frames still to be exposed. After the last exposure (when the frame counter indicates "1"), it will not be possible to operate the rapid-wind lever 34; the film should then be rewound.

## Unloading the film

After the last exposure, release the rewind crank 32 by means of locking knob 29 and then turn the crank in the direction shown by the arrow until a **gentle** resistance is felt, indicating that the film has come off the take-up spool. Now open the camera back and take out the film cartridge. Always keep the take-up spool and film track perfectly clean.

## Taking pictures

### Setting the distance (focusing)

Hold the camera up to your eye and turn the finger grips 22 until the two semi-circular images visible in the centre of the viewfinder field line up accurately, so that the image can be clearly seen (Fig. 2). The focused distance can then be read off from scale 7, against the setting mark 19.



Fig. 2

sharp

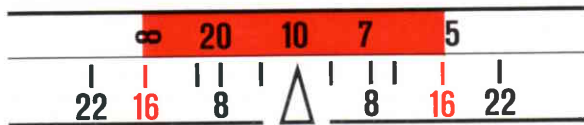


unsharp

### Aperture and depth of field

Every photographic lens will form a sharp image of objects only at a limited range in front and behind the distance setting of the lens. This range called "depth of field" is increased with smaller lens stops; its ranges (at various lens stops) are shown on the depth-of-field scale 19.

Example (see Fig.) Distance setting 10 ft  
Depth of field at f/16:  
from 5 ft to  $\infty$



### Always remember:

Large aperture (f/2.8) means **limited depth of field**  
Small aperture (f/22) means **maximum depth of field**

For exacting photographic work, accurate depth-of-field values will be found in the table on the rear cover flap.

## Selecting the shutter speed

Turn ring 3 and set the desired shutter speed against the setting mark 6.

The correct shutter speed depends on the movement of the subject. The faster the subject is moving, the shorter should be the exposure time. The figures on scale 4 represent fractions of seconds (60 means  $\frac{1}{60}$  second, etc.).

When set to "B" the shutter will remain open for as long as the release button 16 is depressed. The B setting cannot be used when the automatic exposure control is engaged.

## Using the automatic exposure control

Locking catch 8 (A = "Automatic") must snap in at the setting mark 9. Select the shutter speed (intermediate speeds

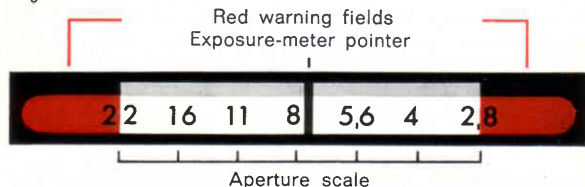


Fig. 3

should not be set; "B" cannot be selected when the automatic control is engaged). Hold the camera up to your eye and point it toward the subject. If the exposure-meter pointer (above the viewfinder field) remains within the green field, the light is sufficient for taking a picture and you can then press the shutter release. (See also section "Exposure Meter").

The automatically selected lens aperture (f/number) can be read off both in the viewfinder and in the meter window 17 on the camera body.

Fig. 4



If the light is too bright or too dim the exposure meter pointer will remain within one of the red warning fields, which indicate that the photograph will be incorrectly exposed. Readjust the shutter speed, until the pointer swings into the green field. If the light is unsuitable for an automatic exposure under any circumstances, the meter needle will either remain within the red field as the shutter speed is adjusted, or the red warning field will move together with the needle (this will occur particularly with film speeds above 25 ASA and the slowest shutter speeds).

Remedy: use flash (see page 14).

By rotating the shutter speed ring 3, any desired aperture can be pre-selected for use with the automatic exposure control. This, however, can only be done when the shutter speed is set to one of the click-stop settings.

## Releasing the shutter

Hold the CONTESSAMAT SBE as shown on the front page of this instruction booklet. To take a picture, depress the release button 16 gently and smoothly — never jerk it. Everything which you can see within the bright line frame of the viewfinder will be recorded on the film. When taking



pictures at 3—4 ft distance, keep the top of your subject below the two notches in the viewfinder frame. At slower shutter speeds than  $\frac{1}{30}$  sec, the camera should be placed on a tripod. The shutter can be left tensioned for long periods of time without any harm.



Fig. 5

### Disengaging the automatic exposure control

Depress catch 8 and rotate the setting ring 5 so as to turn the aperture scale 12 marked "Manual" round to the setting mark 9 (Fig. 5).

By switching over to manual control, it is now possible to select any aperture and shutter-speed setting desired, either independently of the exposure meter or as indicated by it. You can, for example, correct the exposure (preferably by altering the aperture setting) in either direction and by any amount. When the camera is switched to "Manual", the exposure-meter coupling is disengaged (the needle therefore remains within the red field). This is a safety precaution designed to make errors impossible, whenever the needle is visible within the green field, then you can be certain that the automatic control is in operation.

### The exposure meter

is calibrated for normal conditions and will indicate the correct exposure accordingly.

It will therefore be necessary to apply a correction to the meter reading when photographing open landscapes with dark foregrounds and large areas of sky, low-contrast subjects (under overcast sky) on colour reversal film and particularly with all types of back-lighted scenes.

This correction can be made by any of the following methods:

1. The meter reading is measured only from the darker portions of the subject, either by holding the camera close to these areas or by pointing the camera towards the darker foreground. By giving a gentle pressure on the release button, the meter reading can be "held" until the camera is re-positioned so as to cover the desired picture area. Finally, the release button should be pressed right down to take the picture.
2. Read off the aperture setting indicated by the normal exposure-measuring technique, then switch over to "Manual" and re-set the aperture to a larger f/stop (normally 1 stop larger, e.g. indicated aperture f/8, set aperture to f/5.6).
3. The film speed can be set to a lower figure (1 stop slower = —3 DIN or half the ASA rating), then measure the exposure normally.

This method is particularly recommended when taking a series of pictures under the same conditions, i.e. under an overcast sky.

### Delayed-action release

Tension the delayed-action mechanism by pressing lever 23 downwards; this can be done either before or after winding the shutter. Then press the release button and after about



12 seconds the shutter will open; the lever 23 will then return to its original position. Time exposures (B setting) cannot be made with the delayed-action release.

### Using filters

The majority of filters involve increasing the exposure: this "filter factor" is usually marked on the rim of the filter mount (2x, 4x, etc.).

When using filters, the film-speed setting on scale 10 or 26 should be reduced as mentioned below:

For filter factor	Reduce DIN setting (scale 26) by:
1 x	0 DIN
2 x	3 DIN
3 x	5 DIN
4 x	6 DIN
5 x	7 DIN
6 x	8 DIN
7 x	8 DIN
8 x	9 DIN

The film-speed setting on the ASA scale (10) should be reduced by same number of scale divisions as indicated for the DIN scale.

Do not forget to re-set the setting mark 11 or 25 after removing the filter.

### Taking pictures with flash

The ZEISS IKON IKOBLITZ 5 "CORDLESS" flash unit can be directly plugged into the flash contact 14.

Other types of flash unit should either be fitted in the accessory shoe 20 or attached by means of a bracket to the tripod bushing 30. Plug the cable into the contact 14. Then determine the correct guide number\* for the flash you are using in relation to the speed of the film in the camera: this will be found either on the flashbulb carton or in the instruction manual for your flash unit.

\* The "Guide Number" is the product of lens aperture x flash-subject distance (expressed in feet or metres).

Turn scale 1 by means of locking catch 8 to bring the guide number of your flash light-source in line with the setting mark 9 (Fig. 6). If the exact guide number for your flash unit is not engraved on the scale, then set it to the numerically nearest number. Do not attempt to set intermediate values where there are no click-stops.



Fig. 6

The following guide numbers can be set:

**260 220 180 155 130 110 90 78 65 55 45 38 32**

For greater clarity in reading, the guide numbers here printed in small type are represented by dots on the scale.

### Automatic flash-exposure control

Set the shutter to  $\frac{1}{30}$  sec.

Hold the camera up to your eye, focus, and press the release button. The aperture setting required to ensure correct exposure will be selected automatically by focusing the lens. In order to prevent incorrectly-exposed flash pictures, the focusing movement will be arrested automatically at the nearest and farthest distances at which a successful picture can be taken with the pre-set guide number.

Depth-of-field table for CONTESSAMAT SBE with ZEISS TESSAR f/2.8, 50 mm

Dis- tance	Aperture f/2.8	Aperture f/4	Aperture f/5.6	Aperture f/8	Aperture f/11	Aperture f/16	Aperture f/22
∞	64'4" - ∞	45'1" - ∞	32'4" - ∞	22'9" - ∞	16'8" - ∞	11'6½" - ∞	8'6" - ∞
20'	15'4" - 28'9"	14' - 35'6"	12'6" - 51'7"	10'8¾" - 162'5"	9'2" - ∞	7'4½" - ∞	5'11¾" - ∞
10'	8'8½" - 11'9"	8'3" - 12'8"	7'8¾" - 14'3"	7½" - 17'5"	5¼" - 11'8"	5'5½" - 71'4"	4'8" - ∞
7'	6'4¼" - 7'9½"	6'1½" - 8'2¼"	5'10" - 8'9½"	5'5¼" - 9'10½"	5¼" - 11'8"	4'5½" - 17'	3'11¼" - 37'4"
5'	4'8" - 5'4½"	4'6½" - 5'6¼"	4'4¾" - 5'3¾"	4'2" - 6'3"	3'11¼" - 6'11"	3'7" - 8'5"	3'3" - 11'5"
4'	3'9½" - 4'2¾"	3'8½" - 4'4"	3'7¼" - 4'6"	3'5½" - 4'9"	3'3½" - 5'1¼"	3'¾" - 5'10"	2'9¾" - 7'1"
3.5'	3'4" - 3'7"	3'3½" - 3'9½"	3'2½" - 3'10½"	3'1" - 4'1"	2'11½" - 4'4"	2'9½" - 4'10"	2'9" - 5'8½"

The distances are measured from the film plane (mark 18)

If you want to set other exposure times set the shutter speed as indicated in the below table. The standard shutter speed normally used with flashbulbs (1/30 sec) is marked in yellow. The guide number provided by the flash manufacturer will also be calculated for this speed. The automatic flash-exposure control however functions at all shutter-speed settings. There are no restrictions on the choice of shutter speed (1—1/500 sec) when using electronic flash, and the same guide number holds good for all speed settings.

Flashbulb	Shutter speeds X
Osram	
XM 1, XM 5	1—1/30
XM 1 B, XM 5 B	1—1/30
Philips	
PF 1, PF 5	1—1/30
PF 1/blue, PF 5/blue	1—1/30
General Electric and Westinghouse	
5, 8, 11, 22, M 3, M 3 B, M 5	1—1/30
M 5 B	1—1/30
M 2, M 2 B, M 25 B	1—1/40
SM	1—1/125
50	1—1/15
Sylvania	
No 0, No 2, Bantam 8,	1—1/30
Press 25, 40, M 5	1—1/30
M 5 B	1—1/40
M 2, M 2 B, M 25, M 25 B	1—1/125
SF	1—1/15
3	1—1/500
Electronic flash	1—1/500

## Accessories

key:  $\phi$  = Diameter of mount in mm  
S = Screw-in mount  
A = Push-on mount

G = Yellow  
O = Orange

Order No.  
GR = Green  
R = Red

### Ever-ready case

Colour filters G — G R — O — R — UV,  
Ikolor B — C — F,  $\phi$  27  
Lens cap

23.0009

20.1000

20.0602

### Lenshoods

Rubber,  $\phi$  27

(need not be screwed off for closing the ever-ready case)

20.0713

### ZEISS PROXAR Lenses

$\phi$  A 28.5 for close-up pictures

from 40 to 20 in. approx. ( $f = 1$  m)

from 20½ to 13½ in. approx. ( $f = 0.5$  m)

from 13½ to 10 in. approx. ( $f = 0.3$  m)

from 8¾ to 6¾ in. approx. ( $f = 0.2$  m)

20.0800

20.0801

20.0802

20.0803

1 set of Proxar lenses with depth-of-field calculator and container

20.7070

ZEISS PROXAR doublet lens, for close-ups  
down to 3⅛ in.,  $\phi$  27

20.0804

### Other accessories

Cable release with time-exposure lock

20.0281

IKOBLITZ 5 "cordless" capacitor flashgun

for capless flashbulbs

22.0006

for No. 5 bulbs, and M 5 & M 25 bulbs

22.0007

IKOBLITZ M, the multi-flash unit with

quick-five repeater action: 1 loading = 4 flashes

22.0014

IKOTRON S 2, electronic flash unit

22.0102

IKOTRON C 1, electronic flash unit with built-in

flash gun for bulbs

22.0103

