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ZEISS IKON

leader in progress

Camera care and maintenance

Both the cartridge chambers and the film track of the CONTESSA matic should be cleaned with a soft brush from time to time. The lens however should be cleaned only when absolutely necessary, using a soft, clean linen rag, first removing the dust with a soft brush. The windows of both the exposure meter and the viewfinder should also be cleaned in this way.

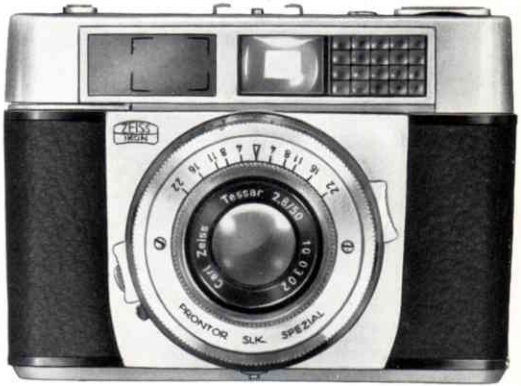
A serial number is engraved on the back of every CONTESSA matic and every lens has its serial number engraved on the mount. A record of both numbers should be kept since this will be of great value when establishing your ownership in cases of loss or theft.

Your dealer will be pleased to help and advise you on all photographic questions – free of charge.

Subject to alterations in the interests of technical progress.

englisch GA/10.0634 Printed in Germany, Author: Prof. Dr. J. Stüper 10 0960

ZEISS IKON



INSTRUCTIONS FOR USE ②

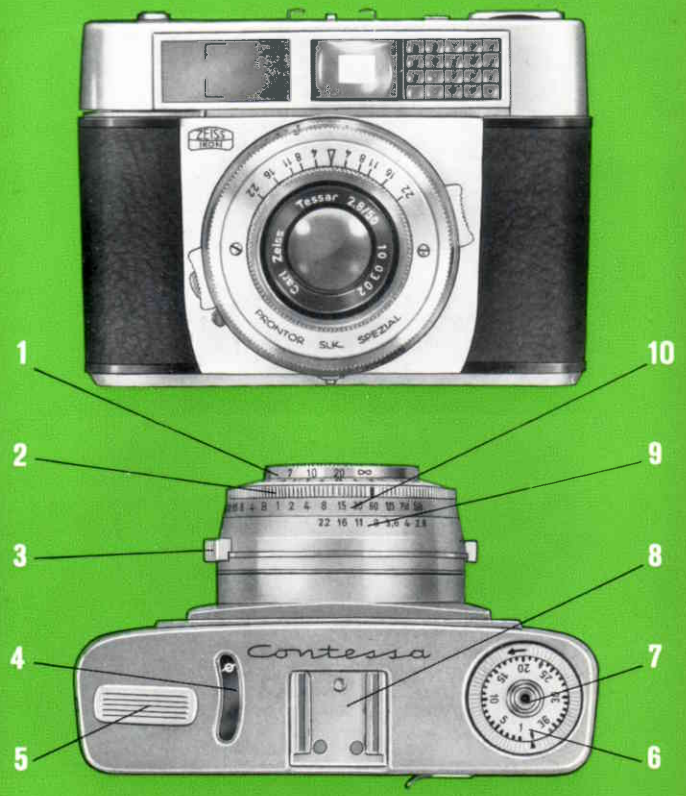
Contessa matic

The Contessa matic

makes photography easy and enjoyable. From the start, and even under unfavourable lighting conditions, the automatic exposure control and the unique ZEISS IKON interlocking device of the camera ensure pictures of the highest quality.

With the aid of the rapid wind and the crystal-clear brightline viewfinder, your picture-taking will be off to a quick start.

The "eagle eye" of your camera is the outstanding f/2.8, 50 mm ZEISS TESSAR lens. You will be justifiably enthusiastic about the performance of this lens, no matter whether you take monochrome or colour photos. So long as you make yourself familiar with the handling of the camera by practising its operation as described here before you insert the first film, you will have a source of constant pleasure in your CONTESSA matic.



1 Distance setting ring
2 Automatic exposure control setting
3 Shutter speed and aperture setting ring
4 Exposure indicator
5 Safety plug for flash connection
6 Frame counter disc
7 Release knob
8 Accessory shoe
9 Aperture scale
10 Shutter speed scale
11 Viewfinder
12 Locking bar for camera back
13 Film speed setting knob
14 Lever for flash and delayed action
15 Tripod bush
16 Locking knob for rewind crank
17 Spindle of rewind crank
18 Rewind crank
19 Film speed setting mark
20 Film type setting disc
21 Rapid wind lever

Setting the distance

Rotate the setting ring (1) with the distance scale until the required distance figure is set against the distance setting mark.

Operating the automatic exposure control

The correct shutter settings for both black-and-white and colour shots and for negative or reversal films is easily determined for you by the coupled exposure meter. The speed of the film to be used should be set on the camera. For instructions see page 14.

Fig. 1

Before measuring the exposure, we advise pre-setting the shutter speed by turning the ring (3) until its red mark locks in at the value required (fig. 1).

The motion of the subject to be photographed dictates the shutter speed to be used. The faster its motion, the faster should be the shutter speed. The black figures on the scale denote fractions of seconds (60 = 1/60 sec.). When using the orange figures on the scale, the camera should be screwed to a tripod or placed on any steady support. When set to "B" (green) the shutter remains open for as long as the release knob is depressed. The importance of the green figures will be explained later on.

For measuring the exposure, the CONTESSA matic should be directed towards the subject. This causes the white pointer (4) to deflect. Use the thumb and the index finger to rotate the two finger grips (3), simultaneously depressing the small locking knob near the right grip. This rotation causes the white circular mark to move. When seen from above the white mark should coincide with the pointer (4); this automatically sets the required aperture. As soon as you have framed your subject in the finder, you can release the shutter.

Under certain conditions, it is advisable to select a different pair of coupled aperture and shutter speed settings (see depth-of-field scale, page 9). As a rule: the larger the aperture (smaller figure), the smaller is the depth-of-field range. By turning the setting ring (3) you can select the most suitable combination of aperture and shutter speed yourself. The unique ZEISS IKON interlocking device will prevent you from selecting wrong values.

If at any time the red mark of the ring (3) coincides with the green "B", an exposure of 2 seconds is required. Should further stopping down become necessary, the required shutter speed in whole seconds is the green figure opposite the selected aperture value. By rotating the 2 finger grips (3) the desired aperture value should be set to "B" which stops at the red setting mark on the ring (3). In this way the exposure time is then controlled by the length of time for which the release (7) ist depressed.

The pre-set stop value is thus cancelled. When changing from time exposures ("B" settings) to instantaneous exposures, it is necessary to take a new light reading.

Depth-of-field scale

A photographic lens can record sharply only a limited range in front of and behind the set distance. This zone of sharp definition is called the depth-of-field range which gets progressively larger the more the lens is stopped down. The depth-of-field scale gives its range for each individual aperture setting. To obtain the correct setting, read off from the distance-setting scale the distance figures to the right and left of the distance setting mark opposite the f/stop values in use. In fig. 2, for instance, the distance is set to 10 feet and f/8; the depth of field extends from about 7 feet to 20 feet. Exact depth-of-field values are given in the table on the last cover flap.

Fig. 2

Cocking and releasing the shutter

Hold the camera firmly with both hands. A glance into the finder will give you a pre-view of your picture within the bright frame. For close-up shots at a distance of about 1 m (3 ft.), you should not allow the top of your subject to extend above the two pointers below the upper edge of the finder.

Gently depressing the release knob (7) releases the shutter. After each exposure, swing the rapid wind (21) until it stops. This movement cocks the shutter, transports the film by one frame and advances the frame counter by one number (fig. 3). Since the shutter can be released only after the rapid wind has been tensioned, and tensioning can only be done after release, both double exposures and blanks are virtually impossible. However, the rapid wind lever (21) must be pressed home until it stops. The shutter will not be damaged by being kept tensioned even for a long period.

Fig. 3

Flash and time exposures

The fully-synchronized Pronto-SLK special shutter can be set for use with every type of flash equipment. It has a built-in self timer and the lever (14) permits three different settings.

When set to "X" the ignition impulse is given at the moment the shutter opens. Electronic flash units are always operated at the "X" setting.

When set to "M", there is pre-ignition corresponding to the delay-to-peak of most flashbulbs.

The most suitable setting (X or M) for flashbulbs and flash capsules is listed in the manufacturers' instructions for their use.

When set to "V" the self-timer is ready for operation. When the release knob (7) is depressed the delayed action mechanism is set in motion, releasing the shutter after about 8 seconds. Time exposures ("B" setting) are not possible. If flash lamps are connected whilst the shutter is set to "V", the flash will be fired as at the "X" setting.

The lever (14) can be set to "V" only when the shutter is tensioned and will automatically return to "X" after the shutter has been released. If required, the lever should again be set

to "V". For flash photography with the IKOBLITZ 4, without cable, the safety plug (5) should be removed and the Ikoblitz 4 plugged directly into the two socket holes. Other types of flash equipment are fitted into the accessory shoe (8), connecting their leads to the flash nipple (below the safety plug). The ever-ready case will accommodate the safety plug when removed.

Loading the camera

The CONTESSA matic will take all types of 36- or 20-exposure cartridges containing either black-and-white or colour 35 mm miniature film. Film loading should be done in subdued light only.

The camera back will spring open when the locking bar (12) on the narrow side of the camera is pressed down. Insert the bottom of the cartridge first, slipping it over the pin in the spool chamber, with the beginning of the film pointing towards the take-up spool (fig. 4). The bar in the base of the cartridge should engage the slot in the pin. Depress the locking knob (16) and rotate the take-up spool by its milled flange until the

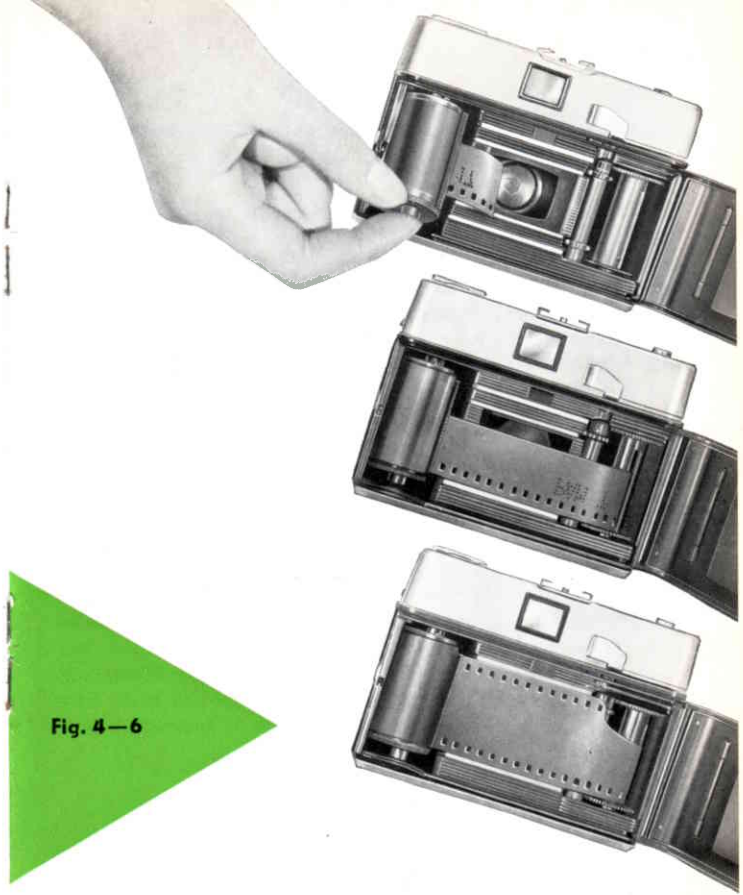
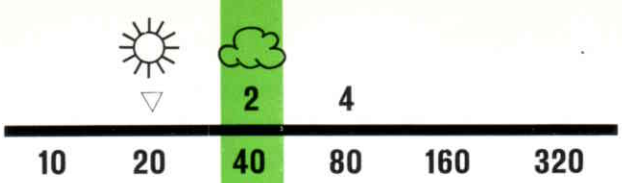


Fig. 4—6

slot in the spool is on top. Insert the film into this slot until the third or fourth perforation hole of the film hooks into the lug of the slot (fig. 5). Turn the milled flange of the take-up spool until the teeth of the sprocket drum evenly engage the perforations of the film on both sides (fig. 6). The rewind crank (18) should now be pressed home into its holder and the back of the CONTESSA matic closed securely. Set the mark of the frame counter disc (6) to the red mark preceding the number of exposures, which will be clearly indicated on the film cartridge, by turning the knurled ring in the direction of the arrow. Tension and release the rapid wind lever (21) twice in succession and make sure that the spindle (17) of the rewind crank (18) rotates simultaneously, showing that the film is being transported correctly (fig. 7). When tensioning the shutter for the third time the mark on the frame counter will be set to either 36 oder 20 and everything is ready for the first exposure. The frame counter always indicates the number of frames left to be exposed.

After loading, the speed of the film in use should now be set on the camera. Exert a slight pressure on the small lever (13) and turn it either to the right or left until the ASA

Fig. 7



value marked on the package coincides with the triangular mark with the sun symbol (19). Intermediate values can be set also. In dull weather and when taking against-the-light shots, the film speed value should be set to the figure 2 with the cloud symbol. However, this only applies when using colour reversal film. The use of the sun symbol is correct for all shots on black-and-white and colour negative material and good-weather shots on colour reversal film.

As soon as the camera is loaded with film, both the type and the speed of the film should now be set on the indicator on the back of the camera. This film-type indicator serves solely as an aid to your memory and does not affect the exposure.

Removing the film

When the frame counter dial finally shows the figure "1" and the shutter is released, the last frame has been exposed and the film should be wound back into the cartridge so that you can remove it in daylight. Depress fully the locking knob (16) on the base of the camera, which causes the rewind crank

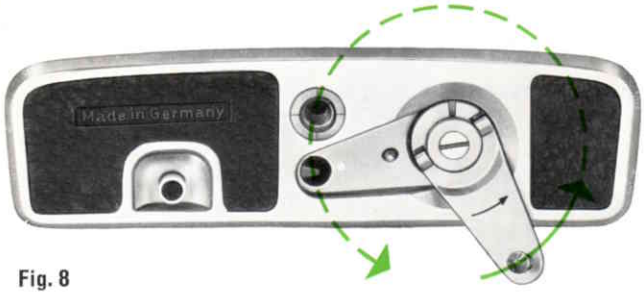


Fig. 8

(18) to spring up (fig. 8). Unfold the crank and turn it in the direction of the arrow until a slight resistance is felt, which is caused by the film coming free from the take-up spool. Open the camera back by pressing on the locking bar (12) and remove the film. The rewind crank is then folded back again firmly so that the locking knob springs out visibly.

Accessories

The **ever-ready case** protects the CONTESSA matic from external damage. The camera is screwed into the case by means of the tripod screw and need not be removed when taking photographs. You can observe the spindle of the rewind crank (17) through the hole in the bottom of the case. This spindle must rotate as the film is advanced.

ZEISS IKON precision filters enhance the "atmosphere" of your photos. They are made of high-quality glass and ground to perfection so that the high performance of the ZEISS TESSAR lens is not impaired. The 27 mm diameter filters are screwed on to the lens; the following filters are available:

For black-and-white film

yellow filter (x 2)	improves tonal reproduction of clouds, darkens blue, lightens yellow, yellow-green and orange.
yellow-green (x 2)	lightens yellow and green, darkens red and blue and adds "impact" to cloud formations.
orange filter (x 5)	gives a still darker blue, lighter yellow and red tones, penetrates light haze.
red filter (x 8)	dramatises to unreality by rendering the sky very dark and gives a moonlight effect with intentional under-exposure.

For black-and-white and colour film

CONTAPOL (x 3) — polarizing filter diminishes disturbing reflections on glass, polished surfaces, lacquer. In certain conditions gives more saturated colour reproduction when used with colour film.

UV-filter (x 1) — absorbs excessive ultra-violet rays at high altitudes and at the seaside.

For colour film

IKOLOR A (x 1.5) — for daylight exposures on artificial light colour film.

IKOLOR B (x 2.5) — for artificial light exposures on daylight colour film. (Also for use as blue filter with black-and-white film).

IKOLOR C (x 1) (skylight) — diminishes blue cast in shadow areas when used with daylight colour film.

IKOLOR F (x 1.5) — for daylight exposures on clear-flash colour film.

The exposure must be increased according to the filter factor engraved on the mount of all ZEISS IKON filters.

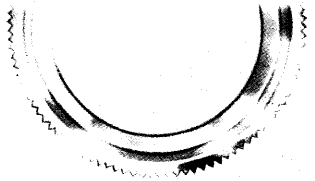
The increase in exposure will be taken into account by the automatic exposure control of the CONTESSA matic if the filter correction factor is set prior to measuring the exposure. For this purpose the film speed figure should be set to the filter factor value (2 or 4) next to the setting mark with the sun symbol by moving the lever (13). For other filter factors appropriate intermediate values should be employed. After this, the light should be measured and the exposure set as usual.

When the filter is removed, the film speed must be re-set to the triangular mark. The speed of the film in use should always be set correctly on the film type setting disc (20), as it can easily be forgotten.

Close-up supplementary lenses (ZEISS PROXAR)

When the CONTESSA matic is used for close-up shots, the coated ZEISS PROXAR lenses (28.5 mm diameter) should be employed. Four different types are available and lens as well as distance settings are listed on page 21.

The camera/subject distance is measured from the front rim of the lens mount. To ensure sufficient depth of field the lens should be stopped down to at least f/8.



Finder parallax caused by the use of PROXAR lenses of shorter focal length can be compensated for by suitably adjusting the position of either the camera or the subject.

Cable release

For photographs taken while a tripod is used, a cable release should be employed. This is screwed into the thread of the release knob. The ZEISS IKON cable release is fitted with a time lock permitting long time exposures (with "B" setting).

The lenshood

For preventing flare and fog in against-the-light shots, the use of a lenshood is essential. It also protects the lens from rain and snow. Besides a metal lenshood, a rubber lenshood is also available which may remain on the lens when the ever-ready case is closed.

IKOBLITZ 4—the capacitor flashgun

This flashgun can be attached to the CONTESSA matic without a cable lead and gives an outstanding light intensity. The reflector folds up, making it very easy to carry (fig. 9).

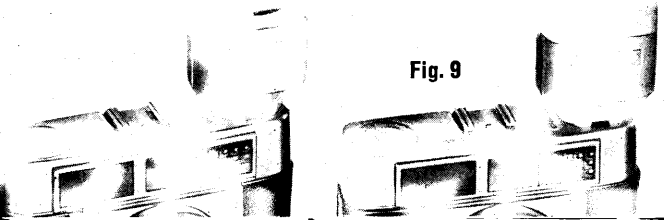


Fig. 9

Depth-of-field table for the CONTESSA matic with ZEISS TESSAR f/2.8 50 mm.

Distance	Aperture							
	f/2.8	f/4	f/5.6	f/8	f/11	f/16	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"-∞	5'11⅜"-∞
10'	8'8½"-11'9"	8'3"-12'8"	7'8¾"-14'3"	7'1½"-17'5"	6'4½"-24'3"	5'5½"-71'4"	4'8"-∞
7'	6'4¼"-7'9½"	6'1½"-8'2¼"	5'10"-8'9½"	5'5¼"-9'10½"	5'1¼"-11'8"	4'5½"-17'	3'11¼"-37'4"
5'	4'8"-5'4½"	4'6½"-5'6¾"	4'4⅜"-5'9¾"	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"	3'3"-5'10"	2'9¾"-7'1"
3.5'	3'4"-3'7"	3'3⅛"-3'9⅕"	3'2⅛"-3'10½"	3'1"-4'1"	2'11⅛"-4'4"	2'9⅛"-4'10"	2'9"-5'8⅓"

The depth of field is measured from the film plane

Table for using Zeiss Proxar supplementary lenses with 50 mm. f/2.8 Zeiss Tessar lens

	Lens set to	Subject Distance	Reduction 1 :	Field Size
PROXAR lens f = 1 m	∞	3'3 1/8"	19.0	1'5 1/4" x 2'2 1/4"
	20'	2'10"	16.2	1'2 3/4" x 1'10 1/4"
	10'	2'5 3/4"	14.1	1'3/4" x 1'7 1/2"
	7'	2'2 1/2"	12.7	11 1/2" x 1'5 1/2"
	5'	2'	11.4	10 1/4" x 1'3 1/2"
	4'	1'9"	9.9	9" x 1'1 3/4"
	3.5'	1'8"	9.2	8 1/4" x 1'3/4"
PROXAR lens f = 0.5 m	∞	1'8 1/4"	9.8	8 3/4" x 1'1 1/2"
	20'	1'6 5/8"	9.0	8 1/4" x 1'1/2"
	10'	1'5 1/4"	8.2	7 1/2" x 11 1/4"
	7'	1'4 1/4"	7.7	7" x 10 1/2"
	5'	1'3"	7.3	6 1/2" x 10"
	4'	1'2"	6.6	6" x 9"
	3.5'	1'1 1/2"	6.2	5 1/2" x 8 1/2"
PROXAR lens f = 0.3 m	∞	1'1 5/8"	6.4	5 3/4" x 8 3/4"
	20'	1' 5/8"	6.0	5 1/2" x 8 1/4"
	10'	1' 1/8"	5.7	5 1/8" x 7 7/8"
	7'	11 1/8"	5.4	4 7/8" x 7 1/2"
	5'	10 7/8"	5.2	4 3/4" x 7 1/8"
	4'	10 5/8"	4.8	4 1/4" x 6 5/8"
	3.5'	10"	4.6	4 1/8" x 6 1/4"
PROXAR lens f = 0.2 m	∞	8 1/8"	3.9	3 1/2" x 5 3/8"
	20'	7 7/8"	3.8	3 3/8" x 5 1/4"
	10'	7 5/8"	3.6	3 1/4" x 5"
	7'	7 1/2"	3.5	3 1/8" x 4 7/8"
	5'	7 1/8"	3.4	3" x 4 5/8"
	4'	6 7/8"	3.2	2 7/8" x 4 3/8"
	3.5'	6 3/4"	3.1	2 3/4" x 4 1/4"