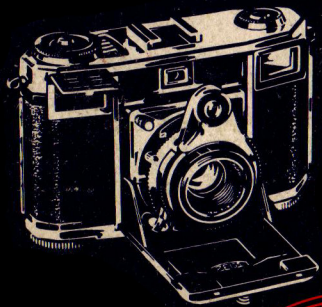


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CONTESSA

ZEISS IKON A.G. STUTTGART

In order to make the CONTESSA a source of constant pleasure, we suggest a careful study of these instructions. Reading them attentively will make you a successful photographer with the CONTESSA from the very beginning.

The CONTESSA, a product of ZEISS IKON AG. STUTTGART US. Zone of Germany, is a 35mm camera for picture size 1 x 1½ ins. The distance meter of the CONTESSA, a rotating-wedge type range finder which guarantees accurate focusing, is coupled to the lens. Furthermore, the CONTESSA is equipped with a highly accurate exposure meter which is built into the camera housing. This exposure meter has two measuring ranges and indicates the correct exposure time for any lens opening which you select for your individual photographs.

The CONTESSA is loaded with standard 35 mm. cartridges, furnishing 20 or 36 exposures on black-and-white or colour film. It is the ideal camera for colour photography because its lens, the world famous ZEISS-TESSAR, is highly corrected for both colour and black-and-white emulsions.

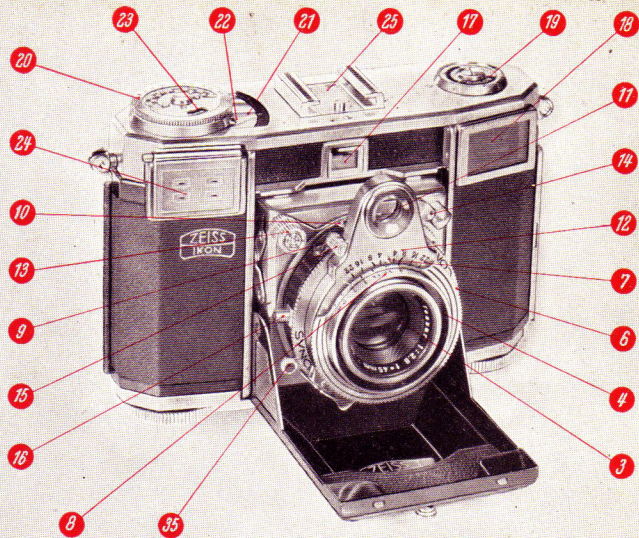
We are convinced that in buying a camera you could not make a better selection than the CONTESSA, and we know you will be delighted with this wonderful achievement in photographic camera design.

The lens of the CONTESSA is the high speed, coated ZEISS TESSAR 2,8 (3). The distance is set by turning the milled ring (6) and indicated by a mark (7) on the distance scale (8). The controls for shutter speed (9) and lens aperture (10) can be seen from above at a glance.

Seen in front of the camera, the shutter release knob (13) is at the left top corner of the shutter housing. The thread for the cable release (14) is located below. Between these two are the shutter cocking lever (15) and the flash synchronizer socket (16). The window in the middle of the camera body is one of the range finder windows, the other one is combined with the view finder window (18). The type of film inserted is set on the "tell tale" indicator disc (19). Opposite of it you see the setting disc (20) and dial (21) of the exposure meter. Its window (24) is located below. The shoe (25) in the center atop the housing serves for slip-on accessories.

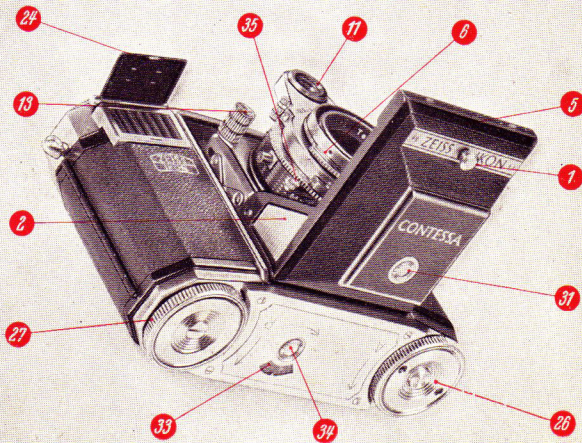
Countersunk into the bottom of the camera are the film winding knob, marked "A" (26), the rewind knob, marked "R" (27), the picture counter (33) and its setting knob (34).

At the back of the camera you will find a small support (28) which should be pulled out when placing the camera on a flat surface. To push the support back, press it slightly in the direction of the arrow. The bolt (29) locks the camera back. Eyelets (30) serve for fastening the neckstrap and attaching the Eveready carrying case.



LIST OF PARTS OF THE CONTESSA 35

- | | |
|---------------------------------------|--|
| 1 Knob for opening and closing camera | 19 "Tell-tale" film indicator |
| 2 Struts | 20 Setting disc for exposure meter |
| 3 Lens | 21 Exposure meter dial |
| 4 Thread for filter | 22 Indicating mark of exposure meter |
| 5 Bed of camera | 23 ASA setting of exposure meter |
| 6 Lens focusing ring | 24 Exposure meter lid |
| 7 Distance setting mark | 25 Shoe for accessories |
| 8 Distance scale | 26 Film winding knob with rewinding release button |
| 9 Ring for setting shutter speeds | 27 Rewind knob |
| 10 Diaphragm ring | 28 Support |
| 11 Rotating wedges of range finder | 29 Back lock |
| 12 Depth of field scale | 30 Eyelets |
| 13 Shutter release | 31 Tripod bushing covered by protection screw |
| 14 Thread for cable release | 32 View finder eyepiece |
| 15 Shutter winding lever | 33 Picture counter |
| 16 Flash socket | 34 Setting knob for frame counter |
| 17 Range finder window | 35 Synchro switch |
| 18 View finder window | |



The technical development may require slight changes on the camera as compared to the description.

OPENING AND CLOSING THE CONTESSA

The CONTESSA is opened by pushing down the little knob (1) on the ZEISS-IKON nameplate on the front of the camera. The bed (5) is pressed down until the opening mechanism clicks into place.

Close the CONTESSA by pressing both milled struts (2) of the self-opening mechanism together inward, and at the same time press the camera bed upward until the lock catches. See illustration at lower right.

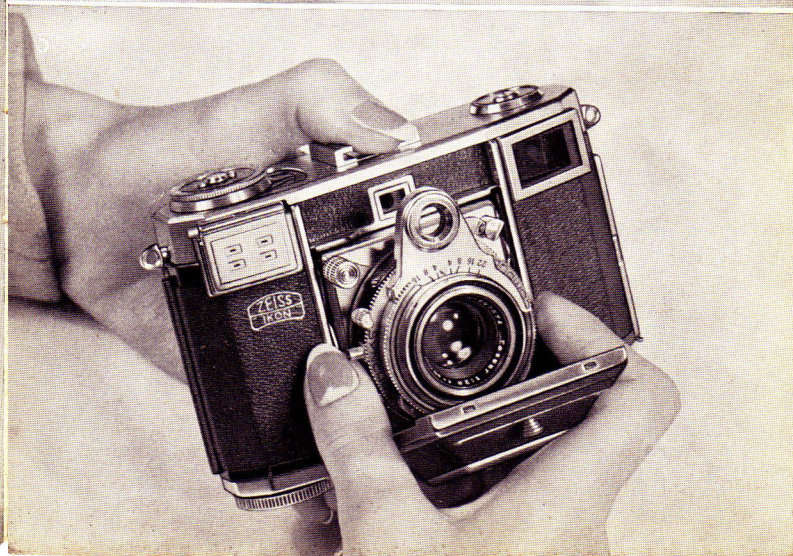
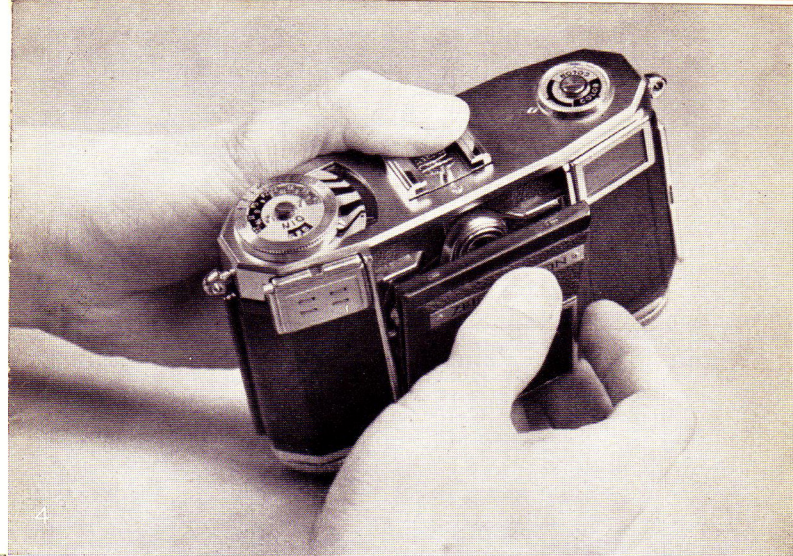


TABLE OF COMPARISON

for the Film Speeds Most Used

ASA Exp. Ind.	Scheiner Europa	Scheiner USA	Weston	DIN in / 10 ⁰
2,5	16	10	2	6
3	17	11	2,5	7
4	18	12	3	8
5	19	13	4	9
6	20	14	5	10
8	21	15	6	11
10	22	16	8	12
12	23	17	10	13
16	24	18	12	14
20	25	19	16	15
25	26	20	20	16
32	27	21	24	17
40	28	22	32	18
50	29	23	40	19
64	30	24	50	20
80	31	25	64	21
100	32	26	80	22
125	33	27	100	23
160	34	28	125	24
200	35	29	160	25
250	36	30	200	26
320	37	31	250	27
400	38	32	320	28
500	39	33	400	29
650	40	34	500	30

DETERMINING THE EXPOSURE TIME

Before taking a picture with the CONTESSA, determine the required exposure time with the aid of the built-in exposure meter (6). The exposure meter can be read off directly without any conversion.

See illustration on page 10. At first set the film speed on the ASA scale (23) of the exposure meter. Turn the disc with the two knobs until the ASA number of the film speed appears at the indicating mark in the ASA aperture. When using film speeds of another speed rating system, find the corresponding ASA value in the table on the preceding page.

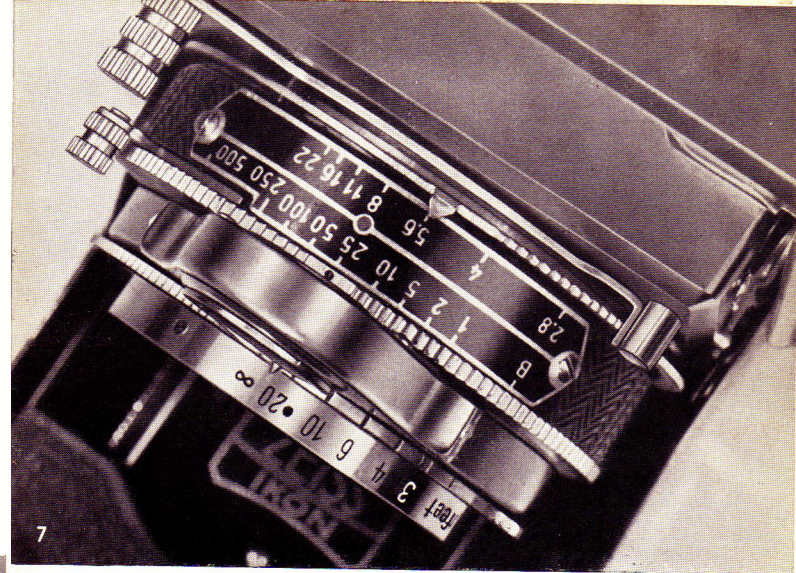
When measuring the exposure time, turn your camera to the object as you will do in taking the picture. The white indicator of the exposure meter will move along the dial (21). Now turn the setting disc (20) until the engraved mark (22) is in the range where the indicator points.

In strong light measure with the lid (24) closed and use the diaphragm (lens opening) scale of the green zone of the disc. You will then find the exposure time on the ring opposite a lens opening on the green zone. In poor light the indicator of the exposure meter will react only if the lid (24) is opened, and you will find

the exposure time on the ring opposite a lens opening in the black zone of the disc.

On the hinge of the lid is a green dot which can be seen only when the lid is closed. When the green dot is visible from above, it is a reminder that the exposure time must be read off opposite the green zone.

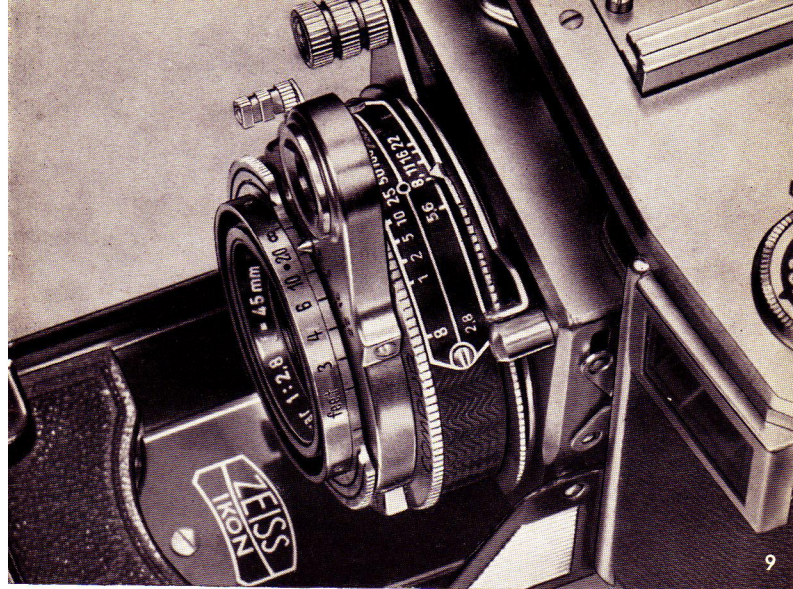
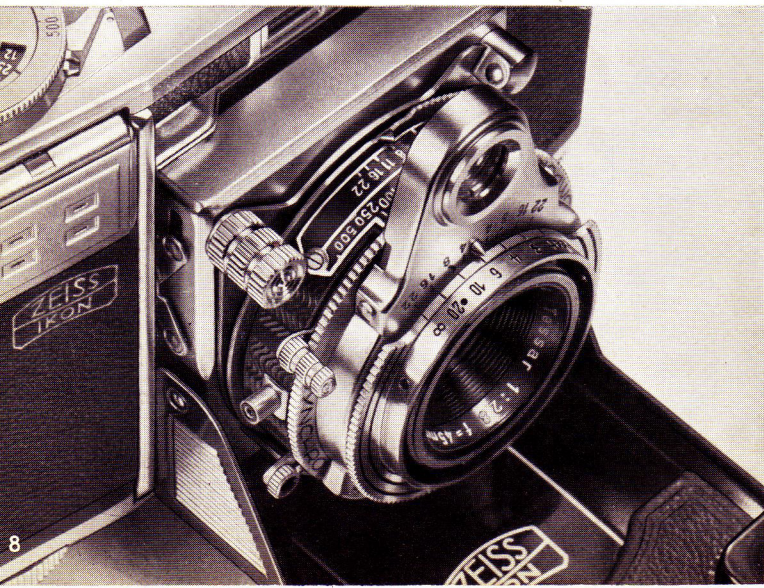
In front of the photo-electric cell you will find a glass formed like a system of prisms. It directs the incident light in order that the angle of view taken by the exposure meter be identical with that of the Tessar lens.



SETTING OF THE DIAPHRAGM AND DEPTH OF FIELD

The diaphragm lens opening is adjusted by means of the diaphragm setting ring (10) in such a manner that the indicating mark points exactly to the desired lens opening. Lens opening and shutter speed may be checked at a glance from above (8).

The smaller the lens opening, the greater the depth of field. The depth of field scale (12) indicates for any distance and lens opening set, the near and far distances which will be sharply reproduced on the film. For this purpose there are engraved to the right and left side of the distance setting mark (7) the f/stops. For instance, in setting the lens for a distance of 10 feet (3 meters), while using a lens opening of f/8, you can read off on the left side of the setting mark (7) opposite the f/8 the distance $6\frac{2}{3}$ feet (2 meters), and on the right side opposite the f/8 the distance 20 feet (6 meters), showing that any objects within a distance from $6\frac{2}{3}$ feet to 20 feet from the lens will be sharp in the picture.



THE ZEISS IKON RED-DOT SETTING

In good light (sunshine for instance); the ZEISS-IKON red-dot setting on the CONTESSA permits constant readiness for action at all times. Set the lens opening and the distance, on the red dots, and you are ready at a moment's notice to photograph anything without having to make further adjustments. All objects from $8\frac{1}{3}$ feet (2,5 meters) to infinity will be sharp. (See illustration above).

If set in such a way, the CONTESSA may be closed, fully prepared for the next snapshot. When using the red-dot setting, you will not miss a single worth-while snapshot of surprising situations for which an ever-ready camera is a necessity. With this method you will produce photos with a good average in definition and exposure.

DEPTH OF FIELD

How to make good use of the range of sharpness at various lens stops:

The short focal length of 45 mm of the ZEISS-TESSAR f/2.8 on the CONTESSA affords great depth of field. Apart from the red-dot focusing system (see page 13) the following convenient settings are recommended:

	Lens Stop. f	Focused at: feet	Range of sharpness	
			From:	To:
Close-Ups	11	3	2' 4" - 4' 0"	
	8	4	3' 3" - 4' 11"	
	8	6	4' 2" - 9' 10"	
	5,6	4	3' 6" - 4' 8"	
Medium Distances	5,6	10	7' 3" - 18' 5"	
	4	20	12' 6" - 46' 2"	
	2,8	20	14' 2" - 33' 4"	
Infinity to nearest sharp point	8	20	9' 3" - ∞	
	11	20	7' 7" - ∞	
	16	10	4' 8" - ∞	
	22	6	3' 4" - ∞	

More detailed information concerning depth of field is contained in the depth of field table on the next page.

DEPTH OF FIELD TABLE FOR CONTESSA 35

Depth of field figures in feet and inches for various lens openings and distance settings
Infinity on the scale is marked ∞

Lens focused at feet	Lens stopped down to												
	f/2.8		f/4		f/5.6		f/11		f/16		f/22		
	From	To	From	To	From	To	From	To	From	To	From	To	
∞	52' 10"	∞	37' 1"	∞	26' 7"	∞	13' 5"	∞	9' 6"	∞	6' 10"	∞	6' 10"
20'	14' 1"	33' 2"	12' 5"	47' 3"	10' 10", 107'	∞	7' 6"	∞	6' 1"	∞	4' 9"	∞	4' 9"
10'	8' 2"	12' 1"	7' 5"	13' 9"	7' 2"	18' 4"	5' 7"	46' 3"	4' 8"	∞	4'	∞	4'
6,	5' 1"	8' 10"	4' 11"	7' 4"	4' 7"	8' 2"	3' 8"	12' 9"	3' 1"	25' 7"	3' 2"	∞	3' 2"
4'	3' 8"	4' 4"	3' 7"	4' 1"	3' 6"	4' 8"	3' 1"	5' 7"	2' 9"	6' 11"	2' 4"	9' 1"	2' 4"
3'	2' 10"	3' 2"	2' 8"	3' 3"	2' 7"	3' 6"	2' 4"	4'	2' 2"	4' 9"	1' 11"	6' 1"	1' 11"

COMBINED VIEW AND RANGE FINDER

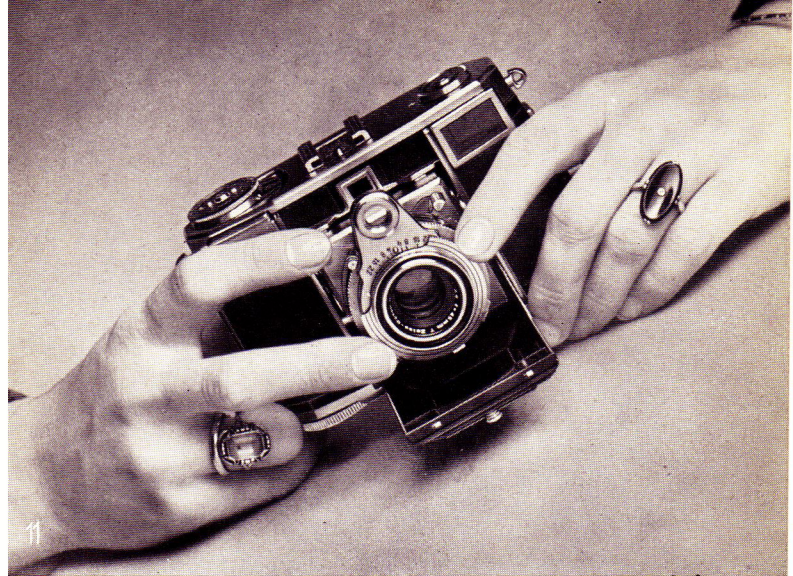
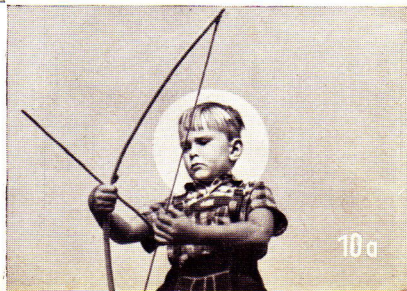
ADJUSTING THE DISTANCE

The view finder and the range finder of the CONTESSA are combined, and coupled to the lens focusing mechanism. Looking through the eyepiece (32), you see the image as it will be recorded by the camera, and within the light circular portion two images of the object overlapping each other. (See illustration below at left).



*Images in range
finder overlapping*

*Images in range
finder co-inciding*



If you now turn the lens focusing ring (6) (see illustration above) until the two images merge into one (see illustration on preceding page, lower right), the lens will be accurately focused. The best objects for obtaining accurate focus are sharply defined vertical contours. Precise focusing is the more essential the greater the lens opening.

The measured distance may be read off on the distance scale (8). This is especially important in selecting the proper lens opening to obtain adequate depth of field.

HOW TO HOLD THE

TAKING HORIZONTAL PICTURES

The CONTESSA is securely held in the palm of the right hand. The right thumb is placed on the back of the camera, the right index finger rests on the shutter release (13). The left hand holds the camera with thumb and middle finger. The left index finger touches and actuates the milled ring of the lens focusing mechanism (6) which is coupled to the combined view-and-range-finder. To assure greater steadiness the elbows should

touch the body. When taking pictures with longer exposure times, it is advisable to rest both elbows firmly on some support.

The left eye is most suitable for focusing, because the right eye need not be closed. If the right eye be used, the left must be closed. The shutter is released with the right index finger.



CONTESSA

TAKING VERTICAL PICTURES

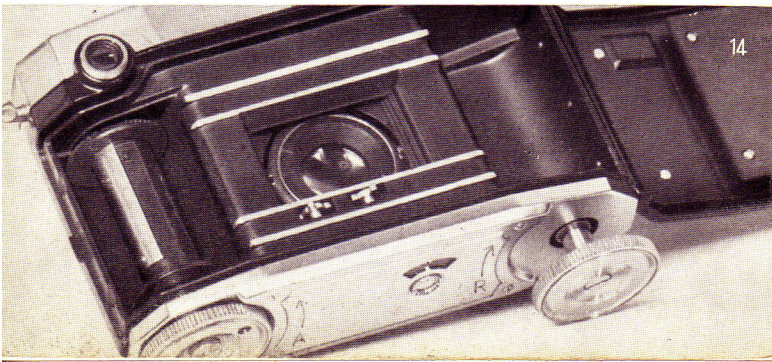
The way of holding the CONTESSA and the position of fingers and manipulations are the same as when taking horizontal pictures. According to your liking you may grasp the camera with the left or the right hand from above, and you may focus with the right or left eye. It is essential however, that the camera be not moved during the exposure, which is easily accomplished owing to the CONTESSA's small size and weight and to its easy controls. Practice how to operate the camera before going picture hunting. When taking pictures in rapid succession, keep the CONTESSA at the eye, and with the left hand quickly wind the film without taking the camera from the eye. This way is especially recommended for taking series and snap-shots.



RELEASING THE SHUTTER

After every exposure, advance the film by means of the film winding knob (26) until the lock catches. This can be done most conveniently and fastest with the left thumb. Thereupon, wind the shutter so that you are ready to take the next picture. The shutter cannot be released unless the film is fully wound to the next frame. Furthermore, the film can only be advanced after having released the shutter. Consequently, it is impossible to make double exposures or blanks. – For cocking the shutter, press the shutter winding lever (15) upwards until it catches. The shutter is released by pressing the release knob (13) slowly downwards, with jerking. Press it down as far as possible and do not stop when you feel a slight resistance. In case the release knob cannot be pressed down, you have forgotten to wind, either the shutter or the film.

The picture counter (33) indicates the number of exposures. After having made the last exposure, the film must be rewound.



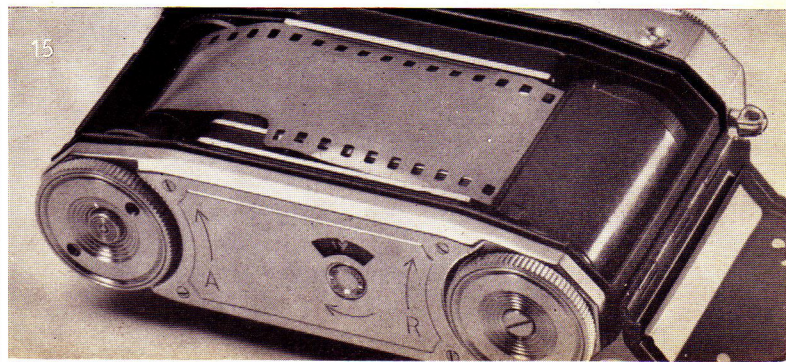
INSERTING THE FILM

Place the CONTESSA while closed, front down, on a table so that its lower side with the film wind and rewind discs faces you. Open the back by pulling out the catch (29) (See ill. page 20). Pull rewind knob out, then place cartridge in feeding spool chamber, push rewind knob back and turn it until the rewind prong engages fully with the hole at the side of the cartridge.

Now turn the film winding knob (26) until the black tooth next to the flat spring of the take up spool core lies uppermost. Insert film end under flat spring and hook second hole of perforation into small black tooth.

Turn the film winding knob (see illustration below) with the Camera still open, until the perforation engages in both sprockets on the lower side of the picture frame.

Then close the camera and set picture counter (33) with the aid of the milled knob (34) on the diamond mark. After having turned the film winding knob until



it catches, number 1 will appear in the picture counter (33) and the first picture can be taken.

After having loaded the camera, set "tell-tale" indicator disc (19) at type of film in camera (black-and-white, daylight colour, artificial-light colour film). In addition turn the inner disc (23) to the ASA speed of the film used.

REWINDING THE FILM

After the last exposure the film is rewound by turning the rewind knob (27) in the direction of the arrow. Press down the knob in the center of the film winding knob (26) when rewinding the film. When nearing the end, the resistance will lessen, indicating that the film is fully rewound on the feeding spool. To make sure that the film is completely rewound, remove your finger from the rewind clutch button. If the rewind knob then can be turned freely, it is an indication that the film has been fully rewound. Now open the back of the camera, pull out the rewind knob and remove the cartridge containing the exposed film.

THE SYNCHRO-COMPUR SHUTTER

The fully synchronized Synchro-Compur shutter does not only fire a flash at the very moment the shutter is

wide open (synchro-switch in position "X"), but also permits igniting a flash before the shutter opens (synchro-switch in position "M"). With the latter setting the flash reaches its peak light intensity when the shutter is wide open, so that synchronized shots can be taken even with shortest shutter speeds, if the proper flash bulb is used. On the upper right side the Synchro-Compur shutter has a contact nipple on which the connecting cord of the flash unit or the electronic flash is slipped. On the lower left side of the shutter is the synchro-switch, which can be set on "X" or "M". The camera being ready for flash photography when the shutter is wound, the only manipulation to be made for obtaining perfectly synchronized shots is to set the synchro-switch on "X" or "M".

With the synchro-switch in position "X", the ignition impulse is transmitted at the very moment when the shutter is wide open. All electronic flashes are fired with the synchro-switch in position "X".

With the synchro-switch in position "M", the flash synchronization mechanism is set on the pre-ignition impulse required by the majority of flash lamps. With the synchro-switch in position "M", perfectly synchronized shots can be taken even with shortest shutter speeds. The following table indicates which exposure times are to be used for the different types of flashes in conjunction with the "X" or "M" position of the synchro-switch.

SHUTTER SPEEDS TO BE USED FOR FLASH BULBS

Type of Flash	Synchro-Switch in Position	
	X	M
Osram F 0	1-1/50	-
Osram F 1, F 2	1-1/25	-
General Electric } SM	1-1/100	-
Westinghouse }	1-1/100	-
Sylvania } SF	1-1/100	-
Wabash }	1-1/100	-
Osrams 1	1-1/25	1/50-1/500
Osrams 2	1-1/10	1/25-1/500
Philips Pf 14	1-1/25	1/50-1/500
Philips Pf 25	1-1/25	1/50-1/500
Philips Pf 56	1-1/25	1/50-1/500
Philips Pf 110	1-1/10	1/25-1/50
General Electric } No. 5, 11, 22	1-1/25	1/50-1/500
Westinghouse }		
Sylvania } Press 25, 40, 50, No. 0, 2	1-1/25	1/50-1/500
Wabash }		
General Electric } No. 50, 6	1-1/10	1/25-1/50
Westinghouse }		
Sylvania } No. 3	1-1/10	1/25-1/50
Wabash }		
Electronic flashes		
without ignition delay	1-1/500	-
with delayed ignition after 5 milliseconds	1-1/100	-

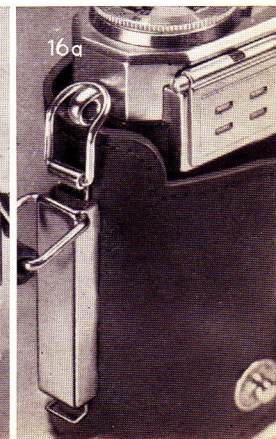
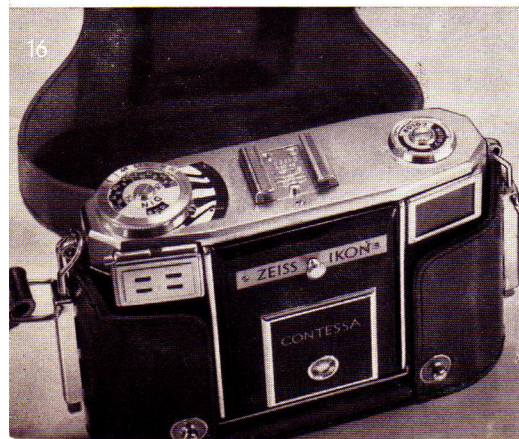
ACCESSORIES FOR CONTESSA

SUPPLEMENTARY LENSES (PROXAR LENSES)

are used for taking pictures at distances of less than 3 feet. These supplementary lenses are slipped over the lens mount. The ratio of reduction and the size of field covered by the lens may be ascertained from the table on page 33.

THE ZEISS IKON EVEREADY CARRYING CASE

for the CONTESSA protects this high-quality camera from detrimental external influences. (See ill. below). The camera needs not be taken out of the case for taking pictures. After having



pressed lightly on the spring of the two hooks, the carrying case can be attached to the eyelets (30) of the CONTESSA. In doing so, turn the film winding knob on the case so that its two prongs engage with the winding knob of the camera. Through an aperture on the lower side of the case you can see the picture counter (33).

THE LENS SHADE

is screwed on the lens mount. It is needed for exposures against the light.

FILTERS

In order to produce better pictures, you may screw any of the ZEISS IKON filters on the thread (4) of the lens. It is not necessary to remove the filter when you close the camera. However, when setting the shutter speed, you have to consider the filter factor engraved on the various filters.

THE LOCKING CABLE RELEASE

is screwed into the thread of the socket (14) on the lens. It is used primarily for taking pictures from a tripod. The cable release has a locking device for keeping the shutter open during long-time exposures with the shutter speed ring set on "B".

HOW TO TAKE PICTURES WITH THE CONTESSA

Snapshots

Snapshots are easy to make in good weather: Lens opening, exposure time, distance scale, are simply set on the red dots. Then anything beyond a distance of 8-1/3 feet can be photographed without trouble. Side lighting will furnish a pleasing effect. Photographing against the light requires great care but with the camera shaded can produce a pleasant effect. Take in as much as possible of the object. Never forget that the nicest snapshots are taken when a person is unaware of being photographed.

Landscape Photography

In almost any case a yellow filter is required for landscape photography especially if clouds are in the scene. Distant views alone are not impressive; only a well chosen foreground will give depth to a picture.

Landscape photography at sunrise or sunset is most impressive because of long shadows; where as bright sunshine, especially around noontime, is generally unfavourable. Mist, haze and snow will furnish an interesting motif for effective photographs.

Animal Pictures

Our four-legged pets are not bashful in front of

a camera. They are always natural in their behaviour. It is advisable to take unposed pictures of animals; never try to teach them special tricks for the sake of the picture which you want to take. It is advantageous to use the lens wide open in order to obtain a soft back-ground. Accurate focusing is essential. You can also take indoor action pictures.

Children

Children should be unaware of being photographed. The ever ready CONTESSA is well suited for photographing children. Close-ups of children are especially desirable. There are uncountable occasions to take portraits: Children playing in sunshine, bathing, sledding, eating, or standing by the Christmas tree. Little funny incidents may even be recorded in serial shots.

Sports Photography

Objects in quick motion are best recorded by using shortest exposure times and wide lens aperture. The distance meter is an invaluable aid in sports photography. Pictures of moving objects should not be taken at a right angle. Best results are obtained by photographing these objects at an oblique angle. Focus in advance the spot where you intend to take the picture of the object or set the scale on a certain distance, let the object move up to you and at the predetermined distance release the shutter.

Portrait

Do not pose your subjects. Photograph your friends when they are engaged in a conversation, in same activity, at sports or at work. Avoid bright sunshine in making outdoor portraits, soft lighting is preferable. Indoors, best results are obtained near the window or the source of light. When shooting portraits always remember: Large lens opening, focus accurately on the subject's eyes. Move closely to the subject to get large pictures of your friends.

Group Photographs

Often when friends meet they wish to have a picture of the whole group. Do not pose your friends but try to assemble them around some object, assign them to some task, or even better, let them sit or stand around freely as, for instance, in a conversation. If the group is divided into foreground and background, it is advisable to use a medium lens aperture.

Artificial Lighting

It does not require expert knowledge to take good interiors with artificial lighting. The only difficulty is to find the proper exposure time. This is automatically obtained with the built-in exposure meter of the CONTESSA. For indoor photography use most sensitive films and large lens openings to permit you to take pictures

even with shutter speeds of $\frac{1}{5}$ sec. or $\frac{1}{10}$ sec. Support arms holding the camera. If you use high-wattage photo flood lamps, you can reduce the exposure time considerably. Bright average artificial light will, however, be sufficient for indoor photography.

Flash Photography

With the aid of the Synchro contact it is very convenient to shoot good flash pictures. If you use flash bulbs, follow instructions on page 23 and those supplied with the bulb. Everything else is routine work. In order to avoid unnatural expression of the subjects, room lamps should not be turned off.

Night Photography

Owing to the TESSAR lens of the CONTESSA, action photographs in brightly illuminated streets can be taken with shutter speeds of $\frac{1}{5}$ sec. or $\frac{1}{10}$ sec. (Some support may be necessary). Use the most sensitive films for night photography. Rainy streets with illuminated neon signs make wonderful night pictures. Employ a tripod for long time exposures.

COLOUR PHOTOGRAPHY

with the CONTESSA

Often we think how nice it would be to have a lasting record in colours. Load your CONTESSA with colour film! This miniature camera with its built-in exposure meter and its highly corrected TESSAR is excellently suited for colour photography. You will surely be fascinated by the results obtained.

The main requirement for good colour-photography is accurate exposure time. This need not bother you at all as the CONTESSA is equipped with a photo-electric exposure meter of highest accuracy. Set the ASA index of your film in the small window of the exposure meter. Measure also the dark areas of your object.

Brilliant and highly saturated colours are rendered if the sun is exactly behind the photographer and shines directly upon the object. Shadows always have a hue of the predominant colour of the object. Therefore avoid large shadows. Colour photography against the light involves great difficulties. It requires practice and experience. Do not record too many colours at one time, until your technique of composing colours is perfected. Colours of high brilliance and low saturation are most suitable for an ideal colour picture.

Colour pictures in artificial light require special colour films, the emulsion of which is made for artificial lighting conditions. Here too, the source of light should be opposite the object to be taken. Avoid large shadows.

Indoor colour photographs with artificial light may well be prepared by proper arrangement of clothes, background, and all the other colour areas of the room which included in the picture.

You will get a great deal of pleasure out of showing your colour pictures on a screen to your friends.

If you take colour pictures by using the negative-positive procedure which is customary in Europe, you may use your colour film negative also for black-and-white enlargements.



Two Important Hints

Serial numbers are engraved in the accessory shoe of your miniature CONTESSA camera as well as on the lens. It is advisable to keep a record of these two numbers, in case the camera is lost or stolen.

If the lens is dusty or dirty, never rub it. Dust it with a fine brush or wipe it gently with a soft, clean linen cloth (not chamois). Once in a while also clean the inside of the camera with a soft brush, particularly the film guide and the spool chambers.



TABLE FOR THE USE OF ZEISS PROXAR LENSES FOR
CLOSE-UP PHOTOGRAPHY

Lens focused at: feet	Proxar A 32, f = 1 m., 1 diopter			Proxar A 32, f = 0.5 m., 2 diopters		
	Distance* of object and camera inches	Reduction Factor	Size of Picture Field inches	Distance* between object and camera inches	Reduction Factor	Size of Picture Field inches
infinity	39 1/2	21	21 x 32	19 3/4	10.5	10 1/2 x 15 1/2
20	33 1/2	18	18 x 27	18	10	10 x 15
10	29 1/2	16	16 x 24	17	9	9 x 14
6	25 1/2	13	13 x 20	15 1/2	8	8 x 12
4	21	11.5	11 1/2 x 17	13 1/2	7.5	7 1/2 x 11
3	18 1/2	9.5	9 1/2 x 14	12 3/4	7.0	7 x 10 1/2

*The distance between object and camera must be measured from the rim of the Proxar lens to the object. For obtaining adequate depth of field it is advisable to stop down to f/8 or smaller.

