PLEASE PAY ATTENTION

to the directions for use of the

IHAGEE EXAKTA

for Roll Films 4 x 6.5 cm.

Ihagee
CAMERA WORKS
STEENBERGEN & Co

Introduction. The Exakta is a precision camera the handling of which differs essentially from any other ; it is therefore absolutely necessary to study these directions before using it.

Loading the Camera. Hold the camera in left hand (see Fig. 2), taking care not to soil the Lens with the fingers. Then push back the knob B with the right forefinger in the direction of the arrow, then open the back of the camera by pressing on it with the thumb. The spool of film must now be placed in the lower chamber where it rests on the spring and the spool ends engaged in the slots provided. The end of the protecting paper is then drawn across the camera up to

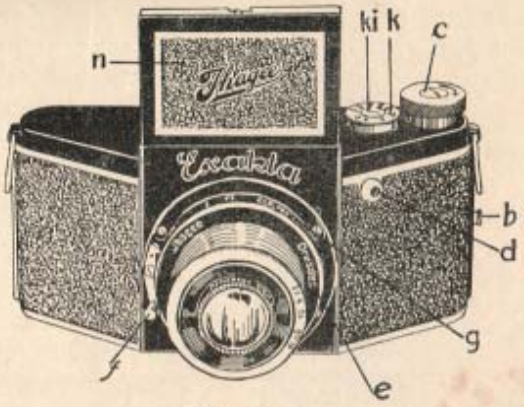

Fig. No. 1.

Fig. No. 2.

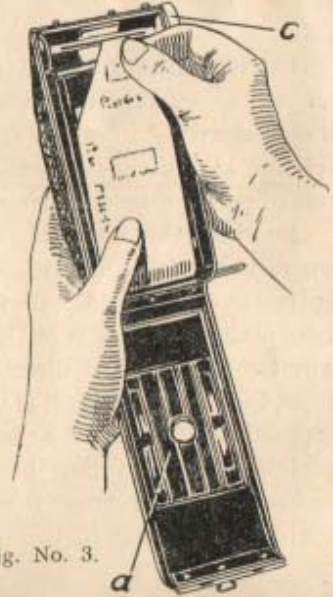

Fig. No. 3.

the empty spool. Attention is called to the fact that the film must be held tight so that it does not slip and get loose on the spool, otherwise fogging will result. The paper covering must be pulled far enough to allow the end to engage in the slot of the empty spool. It can then be wound a few times round the receiving spool by means of the Winding Key. Then close the back of camera, continue winding the film until the No. 1 is seen in the red window at the back.

The act of winding the film sets the shutter and after the necessary length has been wound off a braking device comes into operation which controls the winding and makes it almost impossible to pass over the number and also stretches the film taut over the opening. As soon as No. 1 appears in the window the film is ready and the shutter set for making an exposure.

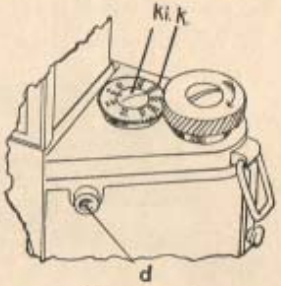

Fig. No. 4.

Taking. As mentioned above, the act of winding the film automatically sets the shutter, and then the necessary speed adjustment can be made. This is done by pulling up the knob K,

which can now be turned round until the desired exposure is indicated on the speed ring K i.

The numbers indicate the fractions of a second.

For short time exposures (Bulb) the knob K must be set opposite the index point B, and for long time exposures Z must be set opposite the index, when the shutter will remain open. It will be found necessary to exert considerably more pressure to release the shutter when it is set at Z. The first pressure will open the shutter and the second one will close it. For time exposures the camera must be placed on some fixed object, or preferably on a tripod, a "bush" being provided in the camera.

Fig. No. 5.

To Focus Lens. Turn the large milled ring to the left until it engages in the catch (see Fig. 5). The Lens is now focussed at infinity. To focus for nearer objects, release the lever and continue turning to the left until the small point

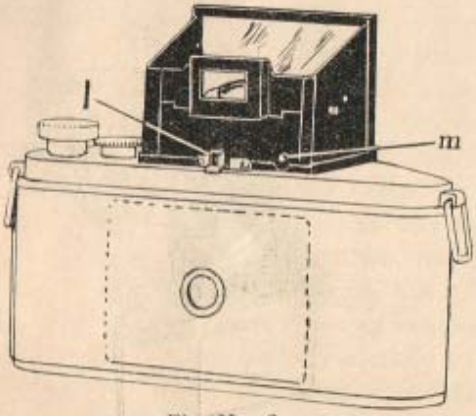

Fig. No. 6.

on the tube below the milled ring is opposite the distance of the object that one is about to take. The distance numbers are in feet on the scale G.

Focussing Hood. This springs open automatically by pressing down the spring L (Fig. 6) and then perfect focussing can be effected on the ground glass. The small magnifier, which is brought into position by releasing the little lever M, facilitates critical focussing.


Fig. No. 7.

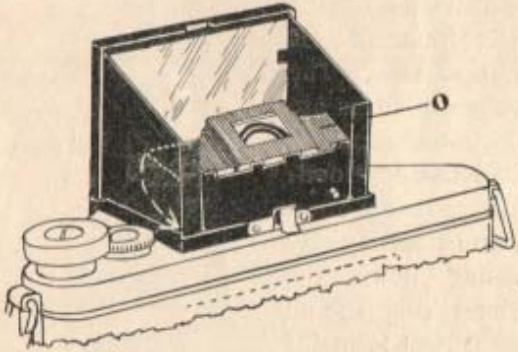

Fig. No. 8.

Fig. No. 9.

Fig. No. 10.

Eye Level Reflected Finder. Press down the Mirror N until it is at an angle of 45°, when it will be stopped by the catch at the side, close down the magnifier and the back frame ; the object or view can now be seen reflected in the mirror, but at eye level.

Eye Level Direct Finder. By pressing down the Mirror N (Fig. 9) until it snaps close above the Magnifier, the back frame will be clear to enable one to use it as a direct finder at eye level (Figs. 10 and 11).

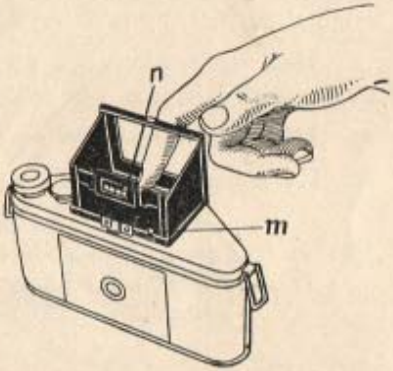

Fig. No. 11.

Closing Hood. *This cannot be done* until the mirror has been returned to its

original position by pressing down the little lever P (Fig. 12).

Then the sections q, r and s must be folded successively inwards, afterwards the Frame with Mirror can be folded down and snaps into position and forms a cover.

Film Changing. When the entire spool has been exposed, the film must be wound

Fig. No. 12.

off until the winder runs free. The camera can then be opened and the spool carefully taken out. Care must be exercised so that the paper covering does not get loose or unwind itself, until the spool is firmly held, the gummed flap moistened, and sealed down.

The empty spool must now be taken out and placed in the upper compartment and the camera is now ready to be reloaded with a new spool of film.

As already mentioned the action of setting the Shutter changes the film, so that a second exposure is practically impossible but the change of film must, of course, be complete.

To close the Camera. The large milled ring that operates the Helical Lens Mount must be turned to the right until it is quite home.

Note. Until the Lens Mount is focussed for infinity the Mirror does not come into position and therefore an image is not visible on the ground glass focussing screen.

Lens Diaphragm. Every lens is fitted with an Iris Diaphragm which can be reduced or enlarged as required, and the size of the stop is indicated on the small ring round the Lens.

For very rapid exposures on moving objects, or late in the day when the light is poor, the larger stops are necessary. For Time exposures or when exceeding sharpness

over the whole plane of the picture is necessary, then the lens must be stopped down.

Reference to the following tables will give a good idea of the time of exposure requisite for various subjects but the use of one of the many excellent exposure meters can also be recommended.

Directions for use of Exposure Table*

Select the object to be photographed, with its corresponding number in Table 1, according to the character of the light available. In Table 2, the day of the month and hour of day are given and these numbers must be added to that of Table 1. In Table 3 the sensitivity of the film, also the extra value if a Filter is used ; this number is added to that of Tables 1 and 2. Then on Table 4, the sum of the three numbers must be taken and set against the value of the Diaphragm stop in use. The necessary exposure will then be found in the vertical column under the " Stop " figure.

Cine Pictures. To find the necessary diaphragm to use for Cine work add together the results from Tables 1, 2 and 3, then the correct relative diaphragm opening will be found in Table 4A, in the column under the number of turns per second.

Flash Light Exposures. For Flashlight work, add together the figures found from Tables 1A, 3 and 4 ; the sum of these figures will be the number of grammes of Flash powder necessary. If a diffusing screen is used, the quantity must be increased by half.

* System : Jos. Schneider & Co., Optical Works, Kreuznach/Rh 1.

Table 1.

Subjects in direct sun-light	Sky			Subjects in diffused day-light	Sky		
Subjects	sultry	slightly hazy	strongly hazy	Subjects	sultry	slightly hazy	strongly hazy
monuments standing free	3	5	6	monuments bright in the shadow	6	8	9
" on places	4	6	7	" dark in the shadow	10	12	13
" in streets	5	7	8	architectures bright in the shadow	6	8	9
narrow streets	9	11	12	" dark in the shadow	9	11	12
architectures bright	5	7	8	groups in the shadow	10	12	13
" dark	8	10	11	" under trees	14	16	17
ships on see	4	6	7	interiors bright sun-side	19	21	22
open landscape	3	5	6	" dark sun-side	23	25	27
landscape with bright fore-ground	4	6	7	" bright shadow side	23	25	27
" with dark fore-ground	6	8	9	" dark shadow side	27	30	33
" with dark trees	7	9	10	portraits in the shadow	10	12	13
portraits & groups in the open air	8	10	11	" in studios	13	15	16
snow, landscape, sea	1	3	4	" in a bright room	15	17	19
ditto with accessories	2	4	5	" in a dark room	18	20	22
sea-shore-scenes	3	5	6	reproductions at the window	10	12	13
street-scenes bright	5	7	8	street-scenes bright in the shadow	7	9	10
" " dark	8	10	11	" dark in the shadow	10	12	13
forest interior bright	12	14	15	portraits bright under trees	13	15	16
" " dark	16	17	18	" dark under trees	15	17	18
clouds & water falls	0	1	2	" in a room at the window	14	16	17

Table 2. Hour

Fore	After
12	
11	1
10	2
9	3
8	4
7	5
6	6
5	7

Jan. Dec.	Febr. Nov.	March Oct.	April Sept.	May Aug.	June July
5	4	3	2	1	1
5	4	3	2	1	1
6	4	3	2	2	1
7	5	4	3	2	2
9	7	6	4	3	2
	9	7	5	4	3
		9	7	6	4
			8	7	6

Table 3.

	Scheiner *	13	14 15	16	17 18	19	20 21	22	23 24	25	26 27
	H. & D. *	133	190	226	400	570	830	1170	1680	2400	3050
without yellow screen		2	1	0	−1	−2	−3	−4	−5	−6	−7
light	" "	5	4	3	2	1	0	−1	−2	−3	−4
medium	" "	6	5	4	3	2	1	0	−1	−2	−3
dark	" "	8	7	6	5	4	3	2	1	0	−1

Frequency images in one second

64	32	16	8	2
Additional numbers for the 180° Sector				
13	15	17	19	23
12	14	16	18	22
11	13	15	17	21
10	12	14	16	20
9	11	13	15	19
8	10	12	14	18
6	8	10	12	16
4	6	8	10	14
2	4	6	8	12
—	2	4	6	10

Table 4a

Opening	Additional numbers
2	2
2,3	2,7
2,7	3,2
3,2	3,8
3,8	4,5
4,5	5,6
5,6	8
8	11
11	16

Table 4b.

Flash-light-photos									
distance of objects from the flash-light in yards									
1	2	3	4	5	7	9	11	13	
additional-numbers	12	16	19	20	22	23	24	25	26

In this case the values found on table 4 are the required quantity of flash-light powder in grammes.

Tab 4.	1:20	2.9	3.5	4.5	5.6	6.3	8	11	16	23	32	
1	1/	3800	2500	1500	1000	750	500	250	120	60	30	
2	5000	2500	1600	1000	650	350	400	200	100	50	25	
3	3500	1700	1200	700	500	250	250	120	60	30	15	
4	2800	1400	900	600	400	300	200	100	50	25	12	
5	1700	900	600	350	250	180	120	60	30	15	8	
6	1400	700	450	300	200	150	100	50	25	12	6	
7	900	450	300	180	120	100	60	30	15	8	4	
8	700	360	250	150	100	75	50	25	12	6	3	
9	450	250	150	100	60	50	30	15	8	4	2	
10	360	180	120	75	50	40	25	12	6	3	1½	
11	250	120	90	50	30	25	15	8	4	2	1	
12	180	90	60	40	25	20	12	6	3	1½	1¼	
13	120	60	40	25	15	12	8	4	2	1	2	
14	90	45	30	20	12	8	6	3	¾	1¼	3	
15	60	30	20	12	8	6	4	2	1	2	4	
16	45	20	15	8	6	4	3	¾	1¼	3	6	
17	30	15	10	6	4	3	2	1	2	4	8	
18	20	10	7	4	3	2	¾	1¼	3	6	12	
19	15	7	5	3	2	¾	1	2	4	8	15	
20	10	5	3	2	¾	1	1¼	3	6	12	25	
21	7	3	2	¾	1	1¼	2	4	8	15	30	
22	5	2	¾	1	1¼	2	3	6	12	25	50	
23	3	¾	1	1¼	2	3	4	8	15	30	1	
24	2	1	1¼	2	3	4	6	12	25	50	1¼	
25	¾	1¼	2	3	4	6	8	15	30	1	2	
26	1	2	3	4	6	8	12	25	50	1¼	3	
27	1¼	3	4	6	8	12	15	30	1	2	4	
28	2	4	5	8	12	16	25	50	1¼	3	6	
29	3	5	7	12	15	25	30	1	2	4	8	
30	4	7	9	15	25	32	50	1¼	3	6	12	
31	5	9	15	25	30	50	1	2	4	8	16	
32	7	15	20	32	50	1	1¼	3	6	12	25	
33	9	20	30	50	1	1¼	2	4	8	16	30	
34	15	30	45	1	1¼	2	3	6	12	25	50	
35	20	45	1	1¼	2	3	4	8	16	30	60	
36	30	1	1¼	2	3	4	6	12	25	50		
37	45	1¼	2	3	4	6	8	16	30	60		
38	1	2	3	4	6	8	12	25	50			
39	1¼	3	4	6	8	12	16	30	60			
40	2	4	5	8	12	16	25	50				
41	3	5	7	12	16	25	30	60				
42	4	7	9	16	25	30	50					
43	5	9	15	25	30	50	60					
44	7	15	20	30	50	60						
45	9	20	30	50	60							
46	15	30	45	60								
47	20	45	60									
48	30	60										

parts of seconds * seconds * minutes

*For flashlight powder quantities in grammes.

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