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PRAKTISIX

INSTRUCTIONS FOR USE





T h e P R A K T I S I X

is a single-lens reflex camera with focal-plane shutter for the 6 x 6 cm ($2\frac{1}{4} \times 2\frac{1}{4}$ ") picture format. It possesses all the advantages of a modern precision camera, as there are:

Fully automatic diaphragm release

Coupled shutter wind and film transport (rapid wind)

Lock against double exposures and blanks

Interchangeable lenses

Interchangeable finder elements

Interchangeable field lenses

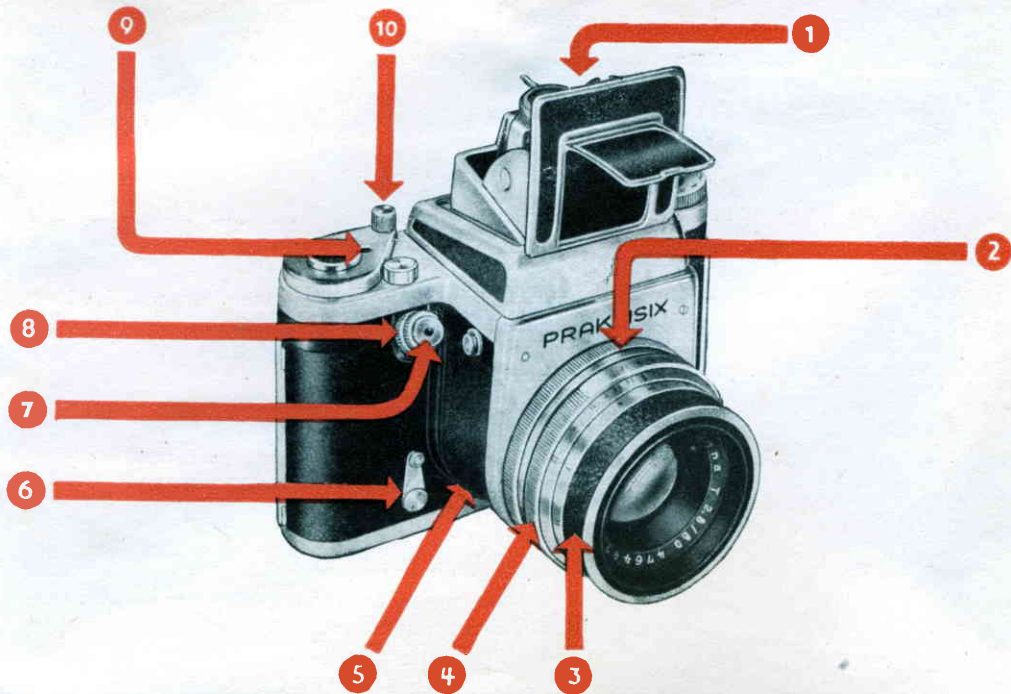
Synchronization (X-contact) for flash tubes and flash bulbs

Focal-plane shutter calibrated in speeds from

1 sec. to $\frac{1}{1000}$ sec. and B

Built-in delayed action (self-timer)

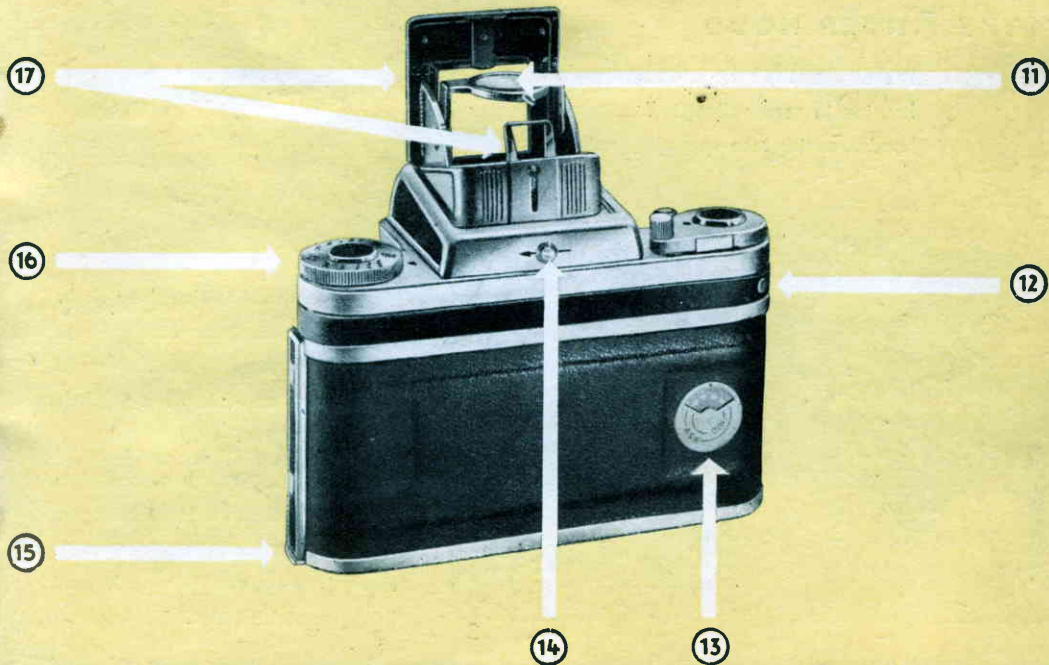
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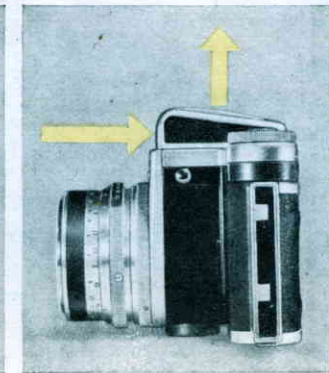
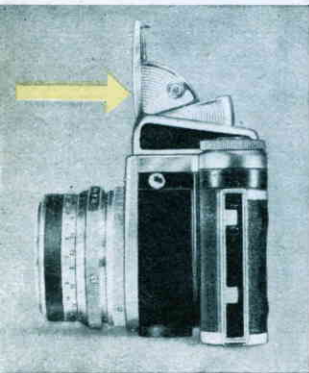
LIST OF IMPORTANT OPERATING CONTROLS

- | | | | |
|----|--|-----------------------------------|----|
| 1 | Finder hood | | |
| 2 | Milled ring for fastening the lens | | |
| 3 | Focusing ring | | |
| 4 | Diaphragm-setting ring | | |
| 5 | Flash contact | | |
| 6 | Lever for setting the delayed action mechanism | Focusing magnifier | 11 |
| 7 | Shutter release knob with cable release connection | Set-back knob for picture counter | 12 |
| | | Film speed indicator | 13 |
| 8 | Locking device for shutter release | Knob for opening the finder hood | 14 |
| 9 | Picture-counting disk | Latch for camera back | 15 |
| 10 | Shutter-cocking lever (rapid wind) | Speed-setting disk | 16 |
| | | Frame finder | 17 |



THE FINDER HOOD

Pressure on the little knob on the finder hood housing in arrow direction causes the finder hood to spring into operating position.



1

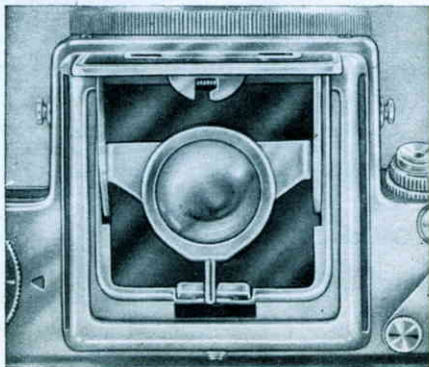
2

The finder hood is closed by slight pressure of the finger on the finder hood cover, whereby all the parts of the finder hood fold back to their original position.

By pulling the finder hood out of its spring catches towards the back you are able to lift it off the camera body. Fixing it to the camera is performed in the opposite order.

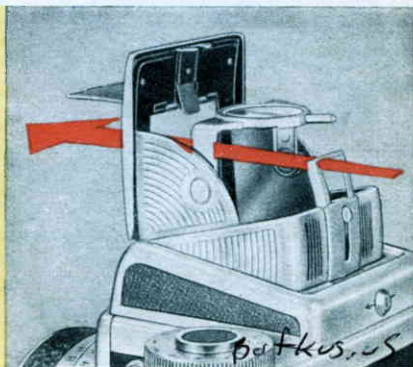
THE FOCUSING MAGNIFIER

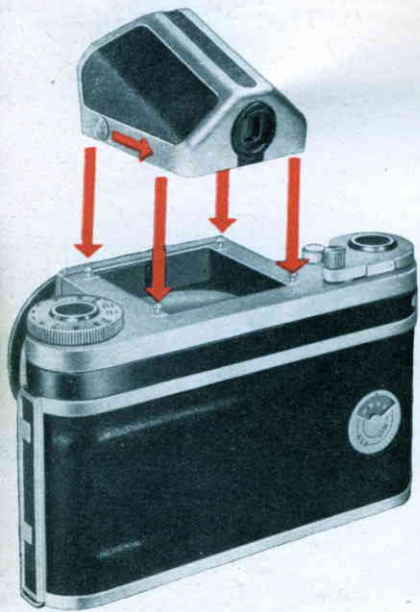
For critical focusing, and to facilitate picture composition, a magnifying lens yielding a four-fold enlargement may be swung into parallel position with the image field lens.



THE SPORTS FINDER

By pushing up the inner front flap of the finder hood and pulling out the little eye-piece frame at the back you are able to convert the finder hood into a sports finder for direct vision.





THE PENTA PRISM

For focusing at eye level the finder hood is interchangeable with a penta prism. This prism reveals the image in approximately fourfold enlargement and with sides unreversed. Persons with faulty eyesight may insert a corrective glass into the eyepiece of the viewfinder and work without their spectacles on. You pull the two catches towards the back and place the prism finder on to the top of the camera, making sure that the four connecting pins on the camera cover engage in the corresponding holes in the bottom of the prism finder, whereupon you let the catches go, and the prism finder snaps in and fits tightly to the camera.

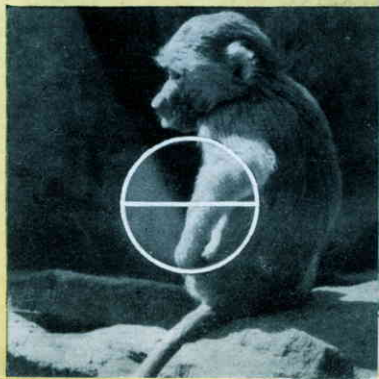
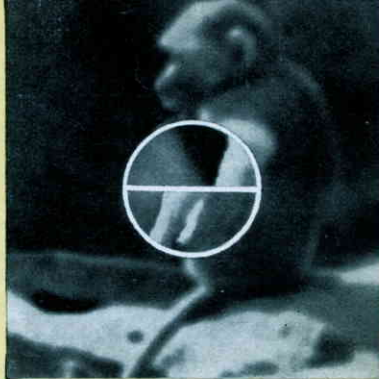
FOCUSING

Focusing in the PRAKTISIX is performed by turning the distance ring on the lens mount and viewing the ground-glass image. The image is visible only as long as the shutter is cocked. You may, of course,

set the distance by the scale, if you wish to, using the ground-glass image only for determining picture composition and outline. Also the depth of sharpness can be read off the focusing ring. To the left and right of the triangular mark are diaphragm numbers, and the distance figures above these diaphragm numbers show the range of sharpness.

When using the sports finder you may either determine the sharpness on the ground glass beforehand or you set the distance estimated or measured in accordance with the distance scale engraved on the lens mount.

In case your camera is equipped with a rangefinder lens you focus your image exactly as if you were using a coupled split-image rangefinder. On the ground glass you see a circular clear-glass spot divided into two equal parts. As the object distance changes, the two part images within the measuring field move towards or away from each other. This can be observed best on straight vertical lines. If these lines join precisely where the two clear-glass sections meet, the image is in correct focus and appears sharp on the ground glass. In the finder hood, the magnifying lens should be used for determining image sharpness.



HOW TO EXCHANGE FIELD LENSES

Should you intend exchanging the plain image field lens for a special type of field lens (e. g. the rangefinder lens) you first remove the finder element from the camera and then loosen the screws on the three retaining springs with a small screwdriver, whereupon the springs are swung aside the snap ring is removed and the field lens tilted out. Fixing the other field lens is performed in reverse order. When inserting the new lens take care that the thinner part comes to lie towards the back. We would rather advise you to have this little job done by a photo dealer or mechanic.

THE DIAPHRAGM

The diaphragm is set by means of the milled ring on the lens mount. With the shutter cocked, the diaphragm opens to its widest aperture (see also Focusing Aperture), and on pressure of the shutter release it closes down automatically to the pre-set value.

If you so desire, you may judge your picture composition at any predetermined diaphragm opening: in the Tessar lens by movement of a small projecting lever, and in the Primotar by turning the diaphragm ring from the red mark to the black mark. (For details please refer to "The Lens".)

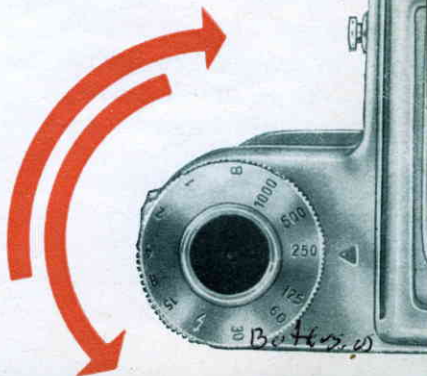
THE SHUTTER


The PRAKTISIX is equipped with a focal-plane shutter allowing for instant exposure speeds from 1 sec. to $\frac{1}{1000}$ sec. When set at "B", the shutter remains open as long as the release is depressed. For longer time exposures it is advisable to use a special wire release with locking device.

The speeds are so graduated that every single number between 1 sec. and $\frac{1}{1000}$ sec. indicates one half of the next higher or double the next lower number on the scale. The diaphragm scale works in a similar manner. As long as the light values are to be maintained you have to employ the next smaller stop for twice the exposure time, or vice versa.

SETTING THE SHUTTER SPEEDS

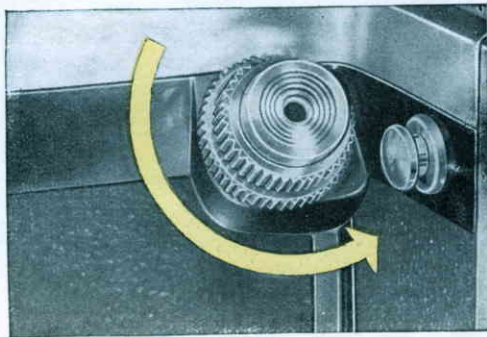
The shutter speeds are set by means of the speed disk. The disk is rotatable in either direction, before or after the shutter has been wound. The number clicked in opposite the triangular mark on the top of the camera indicates the speed desired for the exposure.



The flash arrow () on the speed-setting disk signifies the shortest exposure speed at which the width of the shutter slit is greater than the image width, for which reason this setting is preferred for exposures with electronic flash units. The shutter may be released at any speed either by direct pressure on the release knob, by means of a cable release, or by the self-timer.

LOCKING THE RELEASE KNOB

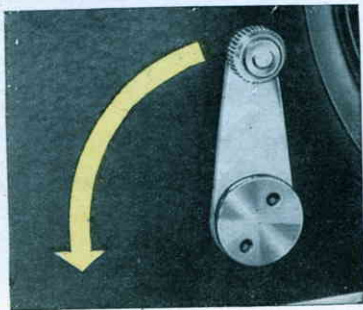
The lower milled ring on the release knob, when turned anticlockwise as far as it will go, locks the release mechanism. The shutter release is locked when the red dot on the milled ring is visible from above. This makes inadvertent tripping of the shutter impossible, thus avoiding unintended exposures. The shutter release mechanism is freed by turning the ring in the opposite direction.



THE DELAYED-ACTION MECHANISM (SELF-TIMER)

The delayed-action mechanism is set by a 90° swing of the winding lever and released by pressure on the release knob. It runs for approximately 10 seconds and may be employed with all the shutter speeds.

The delayed-action device (self-timer) must not be set before the rapid wind lever is wound.

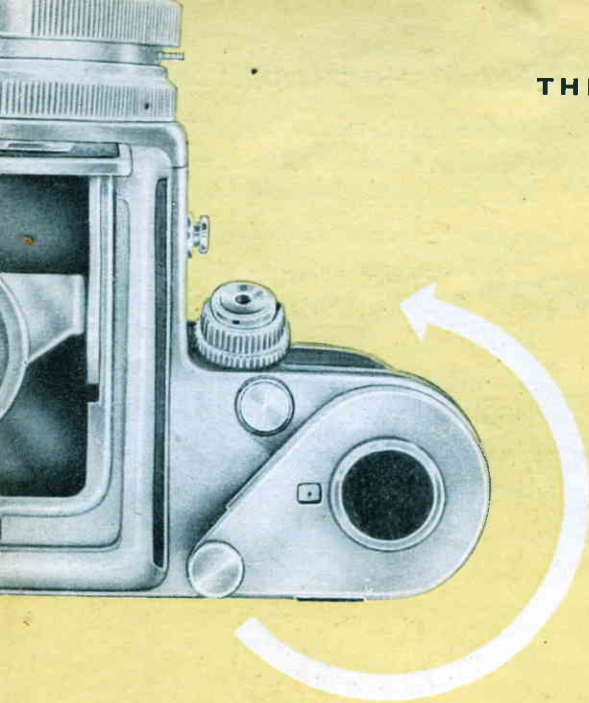


FLASH SYNCHRONIZATION

Synchronization is effected over the X contact on the base of the camera body, next to the tripod bushing. For electronic flash it is advisable to set the shutter to the speed marked by the flash arrow ($\frac{1}{2}$), but longer speeds may also be used.

The X contact is likewise designed for the use of flash bulbs, with a shutter speed of $\frac{1}{15}$ sec. for short-burning bulbs and $\frac{1}{8}$ sec. for bulbs of a longer flash duration. The correct diaphragm setting is computable from the guide number and flash-to-subject distance.

Attention! Never insert the flash bulb before winding the shutter!



THE PRAKTISIX RAPID WIND

Swing the cocking lever around to its stop and turn it back to its original position. The shutter is thus cocked, the film is advanced by one frame, the diaphragm set to its widest aperture, the counting mechanism transported to the next number and, the mirror having been set, the path is open for the light rays to reach the ground glass.



EXCHANGING THE LENSES

Turn the large milled ring next to the camera front plate anticlockwise until it stops. The lens is now unlocked and can easily be removed from the camera.

When inserting the lens, make sure that the screw (or pin) on one of the bayonet tabs fits into the upper recess in the lens seat. With the lens attached to the camera opening you tighten the milled ring by a gentle clockwise turn.



THE INTERCHANGEABLE LENSES

The standard lens in the PRAKTISIX is either an 80 mm Jena Bm, f/2.8, an 80 mm Jena T, f/2.8, or an 80 mm Meyer Primotar E, f/3.5. These lenses differ somewhat in their operative characteristics, so we think we ought to give a few details regarding performance. All three lenses are equipped with fully automatic diaphragm. They require no extra manipulation beside setting the desired diaphragm value. The diaphragm is automatically controlled by the camera mechanism.

Supplementary lenses not equipped with the fully automatic diaphragm, as for instance, the 300 mm Telemegor, f/45, are employed as follows:

The setting ring on the lens mount, directly behind the diaphragm scale, is pressed backwards and adjusted so that its mark stands against the desired diaphragm number, where it clicks in. The image is then previewed at full aperture, and immediately before the exposure is made, the diaphragm ring is turned back to the preselected opening without the camera having to be removed from the eye. To avoid a vignetting effect when working with lenses of a focal length greater than 300 mm, you may move the automatic diaphragm lever in the camera away from its normal position towards the camera body (you will find that it is difficult to turn). Of course, the lever has to be swung back to its normal working position before a lens with automatic diaphragm release is attached to the camera.

65 mm Jena Flektogon f/2.8
80 mm Jena T f/2.8

80 mm Jena Bm f/2.8
120 mm Jena Bm f/2.8



Leather-covered focusing ring

Distance scale

Depth-of-field scale

Diaphragm-setting ring

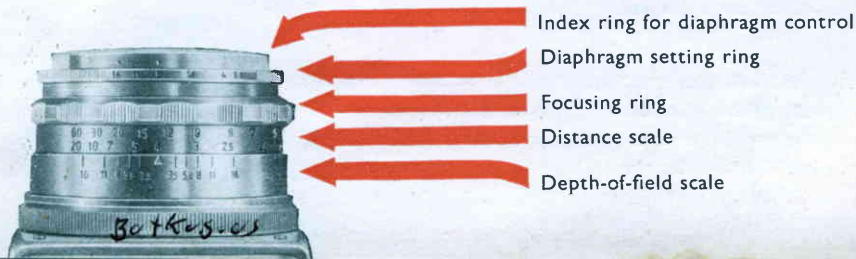
www.orphancameras.com for diaphragm control

If you wish to view your image in the Jena T or in the Jena Bm lens with the diaphragm closed down to the preselected value you exert persistent pressure on the small lateral lever. As soon as you relax your pressure, the diaphragm jumps back to its largest aperture. This applies also to the 65 mm Flektogon, f/2.8 and to the 120 mm Jena Bm, f/2.8.

With the red dot on the front index ring opposite the red diaphragm indicator in the Meyer Primotar E, the diaphragm mechanism is wide open and the shutter cocked. If the black dot on the index ring stands opposite the diaphragm indicator, you may view your image at the pre-set diaphragm stop. For the purpose of brightening up the finder image, the focusing aperture is somewhat larger than f/3.5, whereas for the exposure, the actual preselected opening becomes effective.

80 mm Meyer Primotar E f/3.5

300 mm Meyer Telemegor f/4.5



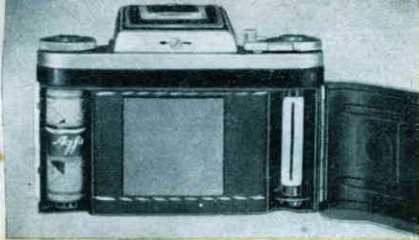
INSERTING THE FILM

Unlock and open the camera back. Place an empty spool into the right-hand spool chamber (underneath the rapid wind) and make sure that the driving mechanism catches the spool core. At the same time pull away the lower resilient counter-bearing, which then snaps back automatically into the spool core.

The unexposed film (commercial roll film for 12 exposures $6 \times 6 \text{ cm} = 2\frac{1}{4} \times 2\frac{1}{4}''$) is installed into the left-hand spool chamber in the same manner. The trimmed leader of the protective paper must point in the travelling direction of the film, so that later on the printed surface of the paper is on the outside.

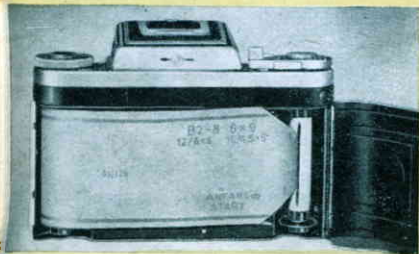
Do not loosen the gumstrip before the spool is held by the pivot pins and the brake springs prevent unintentional slackening of the film. The gumstrip should be completely removed. Pull the beginning of the paper leader across the picture gate and introduce it into the broader slit of the receiving spool. A well centered and tautly guided film is absolutely prerequisite for correct advancement of the film.

Swing the rapid-wind lever around once as far as it will go and then move the lever in small cycles (without letting it return to its initial position), in this way advancing the paper leader up to the point where the imprinted arrow mark stands against the white dot on the picture gate. You then let the rapid-wind lever return to its original position.

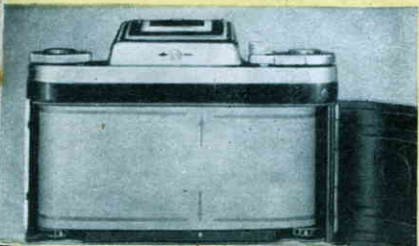


1

Close the camera and fix the latch. Slight pressure on the set-back knob in the rounded-off edge of the camera body, underneath the rapid-wind lever, causes the counting mechanism to jump back to its starting point, and a red dot becomes visible in the counter window. Release and wind up the shutter four times (full sweep of the lever), to make the number 1 appear, which means that the first section of film is in the picture gate and the camera is ready for the exposure. At every subsequent cocking of the shutter, the counting mechanism advances to the next number until, after the 12th exposure, a red E shows up. Every cocking of the lever must be one continuous movement as far as it will go.



2



3

To protect the camera mechanism it is advisable to support the rapid-wind lever with your thumb on its way back instead of letting it jump.

INSIDE THE PRAKTISIX

is a surface mirror which projects the image designed by the lens on to the ground glass screen.

At the moment of the exposure, i. e. by pressure on the release knob, this mirror is swung out of the path of rays and, forming a lighttight cover over the ground glass, allows the light rays to pass freely on to the picture level. As soon as the mirror has reached its topmost position, an ingenious mechanism opens the shutter for the exposure.

Taking lens and finder lens being one and the same, there is no danger of parallax error. Everything that you see in the finder must necessarily also appear on the film. Never, even in extreme close-ups, is there a single piece of the picture missing.

Lack of parallax, therefore, makes it possible to work with special lenses and intermediate rings for close-ups without requiring any extra finder attachments.

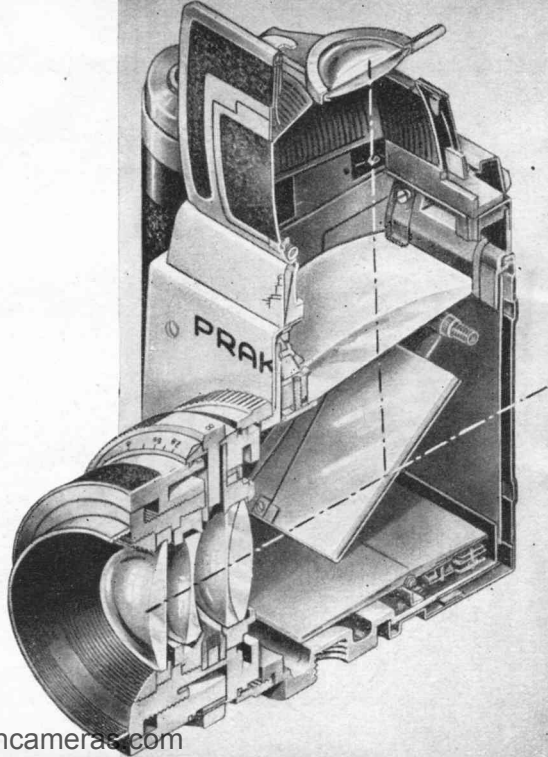


TABLE FOR CLOSE-UP WORK

The values given below are valid for the 80 mm lens Jena Bm, f/2.8, while slight deviations ensue when other lenses of the same focal length are being used.

For focal length- (mm)	Intermediate ring	Length (mm)	Scale of reproduction	Distance from front rim of lens to object (mm)	Size of object (mm)	Exposure factor
80 mm	A+B	18	0.21 bis 0.31	449 bis 293	266×266-180×180	1.5 bis 1.7
	A+I+B	26	0.31 bis 0.40	318 bis 239	180×180-140×140	1.7 bis 2.0
	A+II+B	34	0.40 bis 0.50	258 bis 199	140×140-112×112	2.0 bis 2.2
	A+I+II+B	42	0.50 bis 0.60	215 bis 173	112×112- 93× 93	2.2 bis 2.5
	A+III+B	50	0.60 bis 0.69	197 bis 157	93× 93- 81× 81	2.5 bis 2.9
	A+I+III+B	58	0.69 bis 0.78	169 bis 145	81× 81- 72× 72	2.9 bis 3.2
	A+II+III+B	66	0.78 bis 0.88	156 bis 133	72× 72- 64× 64	3.2 bis 3.5
	A+I+II+III+B	74	0.88 bis 0.98	143 bis 124	64× 64- 57× 57	3.5 bis 3.9
80 mm with intermediate ring for dia- phragm release	A+B+Z	38	0.45 bis 0.55	233 bis 185	124×124-101×101	2.1 bis 2.4
	A+I+B+Z	46	0.55 bis 0.64	199 bis 167	101×101- 87× 87	2.4 bis 2.7
	A+II+B+Z	54	0.64 bis 0.74	179 bis 149	87× 87- 76× 76	2.7 bis 3.0
	A+I+II+B+Z	62	0.74 bis 0.83	160 bis 139	76× 76- 67× 67	3.0 bis 3.3
	A+III+B+Z	70	0.83 bis 0.93	148 bis 129	67× 67- 60× 60	3.3 bis 3.7
	A+II+III+B+Z	78	0.93 bis 1.02	137 bis 122	60× 60- 55× 55	3.7 bis 4.1

THE FILM

SPEED INDICATOR

A film speed indicator is built into the camera back. It is operated by rotation of the disk — most conveniently during film loading — from the inner side of the camera (to avoid accidental displacement). The indicator shows immediately, also when the camera is closed, which type of film has been loaded.

REMOVING THE FILM

To permit taking the film out of the camera in daylight, the paper backing must first be wound up to the end. This is done by one full sweep of the cocking lever up to its stop followed by small cycling movements. Not before this procedure is concluded, may the camera back be opened, the paper strip gummed down and the spool with the exposed film removed by daylight.

Special ring Z (20 mm) serves to connect a double wire release for use with the automatic diaphragm at close range. The double wire release simultaneously releases the lens diaphragm and the shutter mechanism.



RING A



RING I



RING II



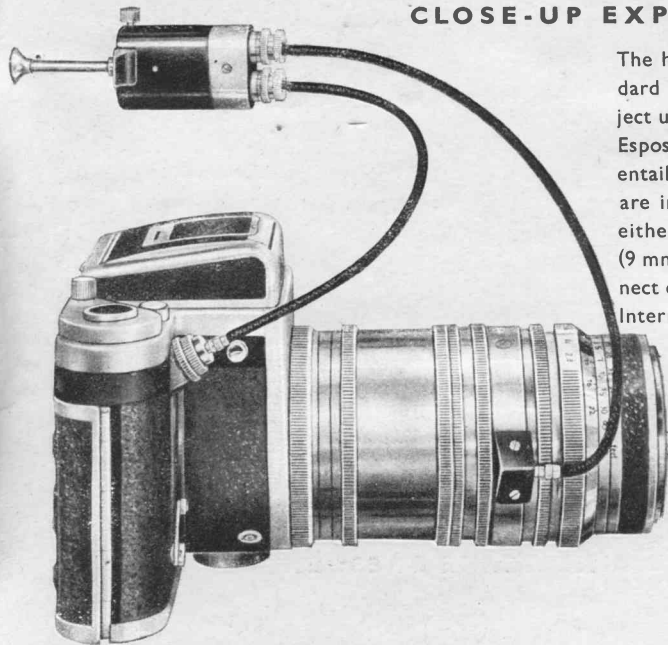
RING III



RING B



CLOSE-UP EXPOSURES



The helical focusing mount of the standard lens permits approaching the object up to approximately 1 meter (3' 4"). Exposures at a shorter object distance entail the use of intermediate rings which are inserted between camera and lens, either singly or in sets. Rings A and B (9 mm each) are always required to connect camera and lens.

Intermediate rings I, II and III together yield a picture ratio of 1:1.

Connecting possibilities, distance values, exposure factors, etc. may be seen from the table opposite.