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PENTACON PRAKTICA L



PENTACON PRAKTICA L

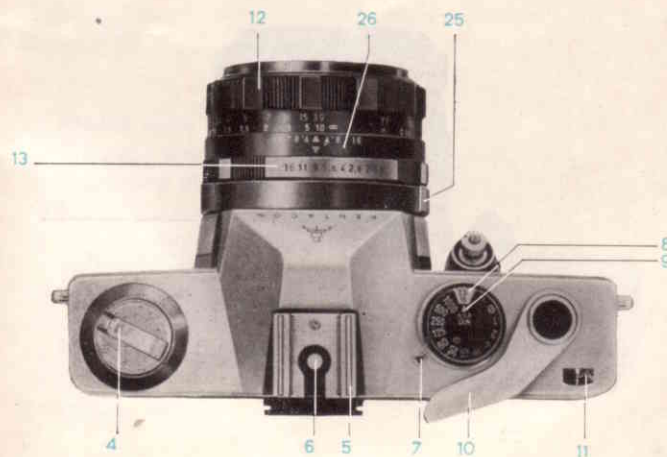
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Deutsche Demokratische Republik

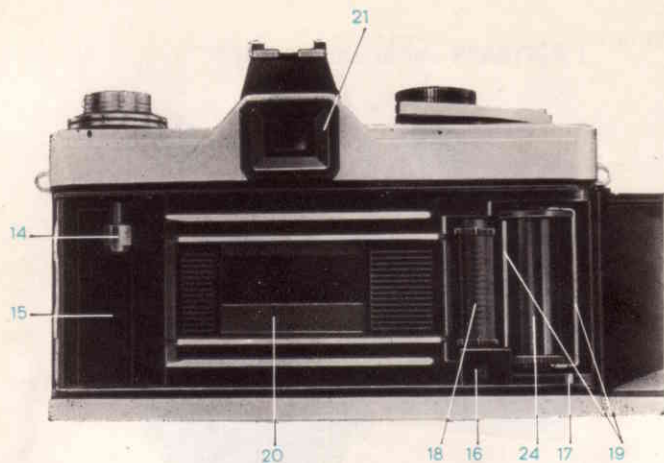
I N S T R U C T I O N S F O R U S E



Control Parts of the PRAKTICA L

- 1 Knob for setting shutter speeds
- 2 Shutter release
- 3 Rewind knob
- 4 Rewind crank
- 5 Accessory shoe
- 6 Centre flash contact
- 7 Exposure speed index
- 8 Film speed reminder dial
- 9 Film speed indicator
- 10 Rapid wind lever
- 11 Exposure counter
- 12 Distance setting ring
- 13 Diaphragm setting ring
- 25 Manual stop down key
- 26 Depth-of-field scale





Control Parts of the PRAKTICA L

- 14 Rewind catch
- 15 Cartridge chamber
- 16 Supporting piece
- 17 Marking point for inserting the film
- 18 Film transport sprocket
- 19 Wire bracket
- 20 Metal-bladed focal-plane shutter
- 21 Ocular mount with fitting for accessories
- 22 Rewind release knob
- 23 Tripod socket
- 24 Take-up spool

We congratulate you on having chosen the high-quality PRAK-TICA L and wish you every success in working with this modern reflex camera.

Before using your camera, however, we would request you to read these Instructions for Use very carefully. This will help you to avoid trouble caused by wrong handling.

The PRAKTICA L is a miniature single-lens reflex camera for the 24 x 36 mm picture format. Its novel type of steel-bladed focal-plane shutter, which travels across the shorter side of the frame, has a range of speeds from 1 sec. to $\frac{1}{1000}$ sec. and B. It is synchronized for the use of bulbs and electronic flash units. Owing to the extremely rapid movement of the steel curtains, the electronic flash can be synchronized at $\frac{1}{125}$ sec. The centre contact in the accessory shoe makes it possible to connect camera and flash unit without using a cable.

The pentaprism is firmly built in, and the focusing system with its Fresnel lens reveals a finder image of maximum corner-to-corner brightness. The microprism screen and a ground-glass area assure quick and perfect sharp focusing.

For use as interchangeable lens systems, the well-known PRAK-TICA lenses are available. Up to a focal length of 300 mm they have automatic diaphragm control. In connection with the automatic mechanism in the camera they function as spring-diaphragm lenses which means that the diaphragm closes within the shortest time and opens again immediately after the shutter has run down. Through the instant return mirror the image is visible practically all the time, except for the short moment of the exposure.

Abridged Instructions

For further details
please turn to page:

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| A | Opening the camera back | 8 |
| | Pull out rewind knob (3) as far as it will go. | |
| B | Inserting the film | 8 |
| | Place film cartridge into cartridge chamber (15), push in rewind knob (3). Push film from above underneath the supporting piece (16) over the transport sprocket (18). Place beginning of film strip on to core of take-up spool (24) as far as the green marking point (17). | |
| | Wire bracket (19) on the take-up spool must not stand upwards. | |
| C | Close the camera back | 10 |
| D | Preparing for the exposure | 10 |
| | Actuate rapid wind lever (10) and shutter release (2) until exposure counter (11) stands on number "1". | |
| E | Setting the film speed reminder dial | 12 |
| | Lift the milled ring of speed setting knob (1) and rotate it until the speed value of the film in the camera stands opposite the film speed indicator (9). | |
| F | Setting the exposure speed | 12 |
| | Rotate speed setting knob (1) until the desired speed numeral stands opposite the orange coloured triangle (7) on the cover plate of the camera. | |

Abridged Instructions

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please turn to page:

G	Setting the diaphragm	14
	Rotate diaphragm setting ring (13) on lens mount to bring the desired diaphragm numeral against the red index mark.	
H	Focusing	16
	Rotate distance setting ring (12) until the image in the microprism screen or in the groundglass field appears perfectly sharp.	
I	Releasing and cocking the shutter	20
	Depress shutter release (2) to beyond the pressure point. After the shutter has run down a signal appears in the left-hand side of the viewfinder. — Swing cocking lever (10) around as far as it will go and move it back again.	
K	Changing the film	22
	After the last exposure, depress rewind release knob (22), swing out rewind crank (4) and turn it in direction of arrow to rewind the film. Open the camera back and remove the cartridge.	
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Abridged Instructions

For further details
please turn to page:

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The Abridged Instructions are a short summary of the most important items. A detailed description is given in the following main section. On page 1 and 2 you will find specified illustrations with numbers referring to the control parts. In the text these numbers are printed in parentheses.

Complete Instructions for Use →

A**Opening the camera back**

Pull rewind knob (3) upwards until you feel hard resistance. The camera back is thus unlocked and can be opened. The exposure counter (11) will automatically jump to zero position.

B**Inserting the film**

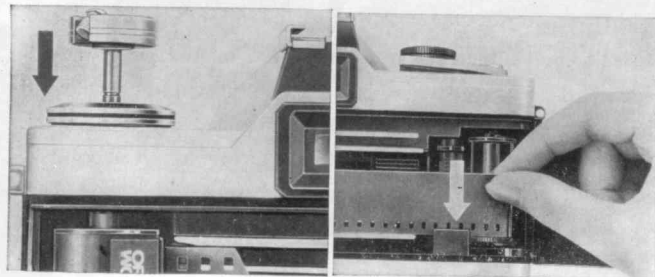
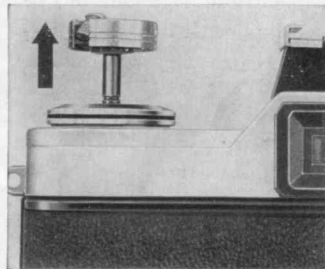
Any type of 35 mm film in commercially available standard cartridges may be used. The cartridges contain film lengths for 36, 20 or 12 exposures in the 24 x 36 mm picture format. To assure that no light enters the slit of the cartridge the film should not be loaded in direct sunlight. The shade provided by your own body will suffice.

By having pulled out the rewind knob (3) to open the camera back you have withdrawn the rewind catch (14) from the cartridge chamber (15), so that you can now place the cartridge into the cartridge chamber.

Push the rewind knob, with slight backward and forward movements, right back into the camera. The rewind catch will engage in the core of the cartridge.

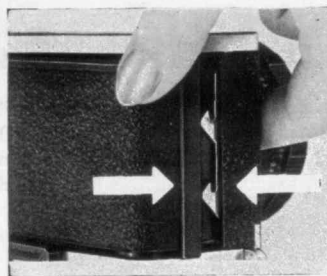
Push the beginning of the film projecting from the cartridge from above underneath the supporting piece (16) over the transport sprocket (18), so that the beginning of the film rests on the core of take-up spool (24) as far as the green marking point (17).

The wire bracket (19) of the take-up spool must not stand upwards. Should this happen to be the case the milled flange of the spool has to be turned to bring the bracket wires to the lateral position.



C**Closing the camera back**

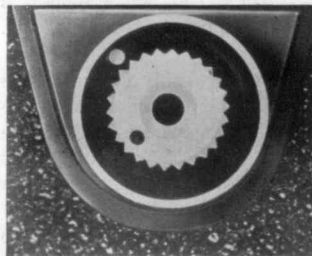
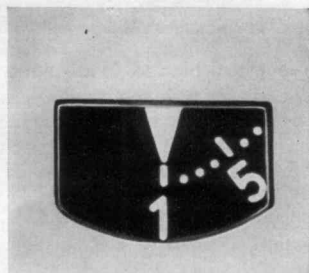
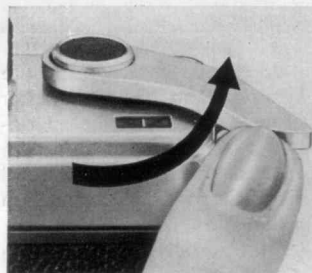
Press the camera back firmly on to the camera body. It locks automatically.

**D****Preparing for the exposure**

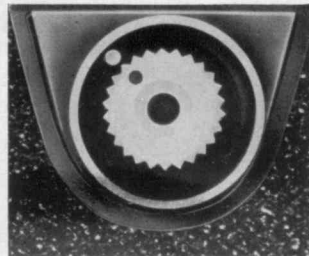
The rapid wind lever (10) has an idle stroke of about 15°, so that it can be moved from its rest position into readiness for action. It can thus be easily grasped – a great advantage especially in serial shots.

Swing the cocking lever around as far as it will go, move it back again, and depress shutter release knob (2). Repeat these operations and then cock the shutter once more. The automatic exposure counter (11) now stands on number "1". Special setting of the exposure counter is not necessary since it starts working automatically when the camera back is closed.

To avoid inadvertent tripping, the shutter release (2) is provided with a locking device. The release mechanism is locked when the red dots on the knob and on the the outer ring meet. The mechanism is unlocked by rotation of the knob through 90°.



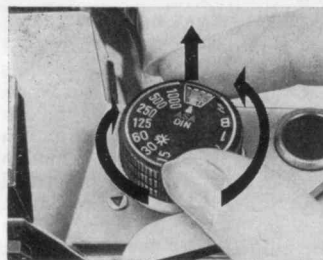
Shutter can be released



Shutter cannot be released

E**Setting the film speed reminder dial**

Lift the milled ring of speed setting knob (1) and rotate it until the speed value of the film in the camera (DIN or ASA) stands opposite the white film speed indicator (9). When lowered, the milled ring clicks in next to the selected film speed numeral.

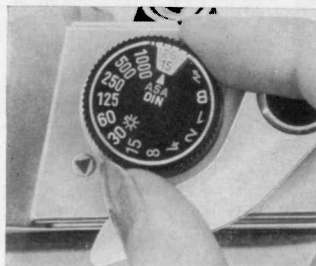
**F****Setting the exposure speed**

The metal-bladed focal-plane shutter can be set for exposure speeds from 1 sec. to $\frac{1}{1000}$ sec. When set on "B" the shutter remains open as long as the release knob (2) is being depressed. For longer time exposures a cable release with locking device should be used, which can be screwed into the thread in the body release knob. For exposure speeds in connection with flash units please refer to Section M.

The orange-coloured numerals on the shutter-speed setting knob (1) stand for slow speed exposures from 1 sec. to $\frac{1}{15}$ sec. which require the use of a tripod. The white numerals indicate the values for instantaneous exposures from $\frac{1}{30}$ sec. to $\frac{1}{1000}$ sec.

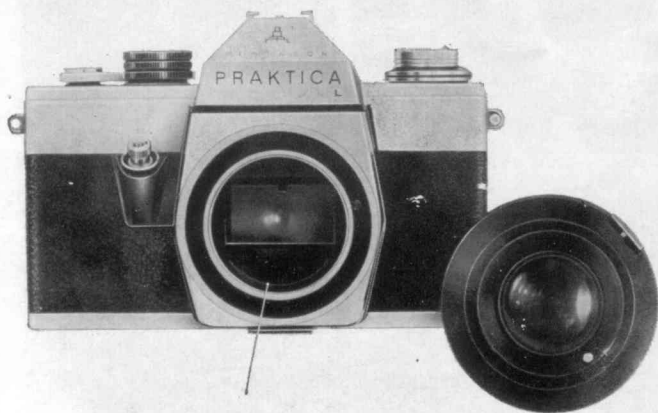
The exposure speeds are set by rotating knob (1) until the desired numeral meets the orange-coloured triangle (7) on the cover plate of the camera. Please note, when setting the exposure speeds, that the milled ring of the setting knob must not be lifted up since this would alter the position of the film speed reminder dial.

The exposure speeds can be set either before or after the shutter has been cocked. The setting knob clicks in at every numeral. Intermediate values are not adjustable.



On the lenses with automatic pressure diaphragm (APD) the desired aperture numeral on the diaphragm setting ring (13) need only to be brought to meet the red index on the lens mount. The diaphragm thus remains fully open at first and closes down to the preselected value when the shutter release is depressed. The automatic diaphragm connecting mechanism in the PRAKTICA L causes the pressure diaphragm to function as an automatic spring diaphragm. Regardless of the speed with which the shutter release (2) is depressed, the diaphragm will spring to the preselected value and then open again immediately after the shutter has run down.

For checking the depth of field in the viewfinder image, most lenses can be stopped down to the preselected value by means of a manually operable key (25) on the lens mount before the exposure is made.



Swing-in-mechanism for automatic diaphragm



To brighten up the image, the prism viewfinder of the PRAK-TICA L is fitted with a Fresnel lens in the centre of which are the two focusing systems:

- the microprism screen right in the middle and
- the circular groundglass area around it.

Focusing is performed by rotating the distance setting ring (12) on the taking lens. To achieve utmost definition when using lenses with pre-set diaphragm or simple diaphragm adjustment, it is advisable to focus with the lens at full aperture (smallest diaphragm numeral).

Focusing on the microprism screen

The image in the microprism screen is in correct focus as soon as it appears clear and free from fuzziness. It is out of focus if it looks fuzzy and crumbles into screen elements. The microprism screen is usually employed for focusing if the subject to be photographed is in resting position or only slightly moving.

Focusing on the circular groundglass area

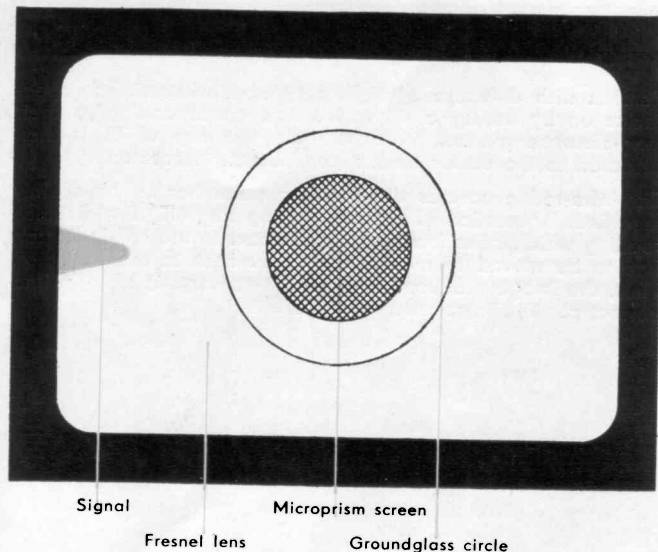
The groundglass area is used for focusing if the subject is moving more rapidly. Also, it is often most appropriate in macrophotography and photomicrography. The Fresnel section of the viewfinder is not meant to be used for focusing.

Depth-of-field indication

The depth of field is determined by means of the depth-of-field scale (26) running to the right and left of the red index mark on the lens mount.

While the camera-to-subject distance figure stands opposite the red mark, the limits of the range of definition can be read from the distance scale above the numerals on the depth-of-field scale, which latter are equivalent to the diaphragm numerals. As an example, the illustration shows a zone of sharpness from 2 m to 5 m (7 ft. to 16 ft.) for a distance setting of 3 m (10 ft.) and an f/8 aperture.

Depress the manual stop down key, and you will also be able to judge the depth of definition in the finder image.



Microprism screen
is fuzzy = unsharp



Microprism screen
not fuzzy = sharp

100

For infra-red exposures the focusing point has to be slightly modified. By rotation of distance setting ring (12) the distance reading which, after focusing, stands next to the red indicator, has to be moved to meet the red dot next to the indicator. Thus, the image produced by the infra-red rays is brought into correct position in relation to the film.



Before releasing the shutter, please note the following:

1. Make sure that the shutter release is unlocked (see Section D).
2. If the signal is visible in the viewfinder, the **camera is not ready for exposing**. The shutter has to be cocked!
3. For exposure speeds slower than $\frac{1}{30}$ sec. a tripod and a cable release should be used.

We advise you to hold your PRAKTICA L so that it lies firmly in both hands and you are able to actuate the shutter release (2) comfortably.

Depress the shutter release steadily — never with a jerk — past the soft-running limit until the shutter runs down.

After the exposure, the signal on the left side of the viewfinder image becomes visible again, a sign that the shutter has to be cocked.



When the exposure counter (11) indicates the maximum number of frames obtainable with the film in the camera (12, 20 or 36 exposures) the film has to be rewound and taken out of the camera.

Depress rewind release knob (22) in the base plate of the camera. It will remain locked in this position. Unfold rewind crank (4) out of rewind knob (3) and rotate it, not too quickly, in the direction of the arrow. Rewinding at too great a speed causes electrostatic charge and statics on the film.

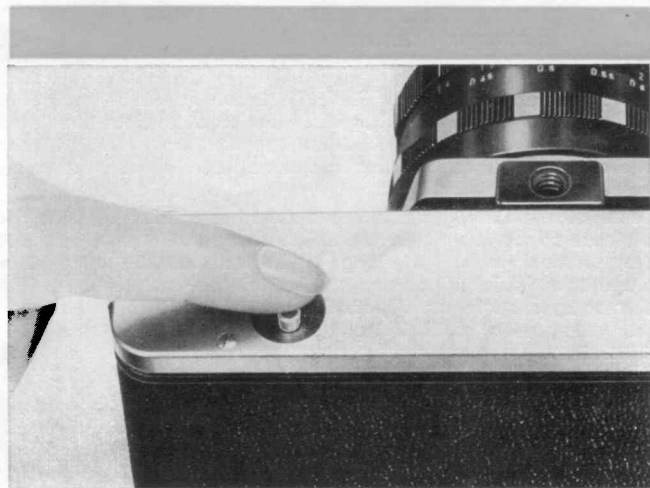
As rewinding is completed, greater resistance becomes noticeable until the film is disengaged from the take-up spool. After this, the crank turns quite easily.

Fold the rewind crank back into the knob and pull the knob upwards as far as it will go. The camera back is thus unlocked and can be opened. Remove the cartridge with the exposed film from the cartridge chamber.

Loading a new film, and subsequent cocking of the shutter, cause the rewind knob (22) to spring back automatically out of its click-stop position.

Should you have attempted to expose more frames than the number marked on your film packet, the cocking lever might, at the end of the film, get jammed so that it cannot be swung around completely. Do not, in such a case, use force, as this might cause damage to the perforation of the film, or the end of the film might slip off the spool inside the cartridge. Rewinding would then be impossible.

If the cocking lever — as described above — has not been fully tensioned, this must be completed, and the shutter released, after removing the exposed film and before inserting a new one.



The standard lens of the PRAKTICA L can easily be replaced by lenses of other focal lengths. You take hold of the lens body, as shown in the illustration opposite, and turn it in an anti-clockwise direction. The exchange lens is inserted analogously and screwed tight.

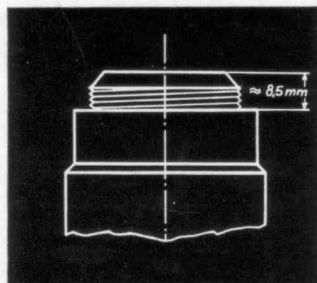
Some of the older type lenses without automatic diaphragm protrude so far into the inside of the camera body as to impede the functioning of the swing mechanism for the automatic diaphragm. Thus, mirror and shutter cannot work. Such lenses **cannot be used** in the PRAKTICA L. They are recognizable by the construction of their barrels, as may be seen from the illustration.

List of interchangeable lenses

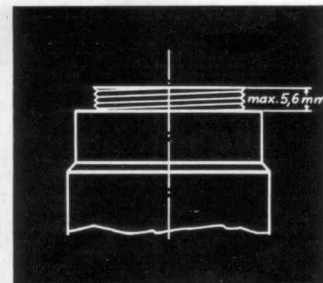
Zeiss Flektogon	20 mm f/4	APD
Meyer Orestegon	29 mm f/2.8	APD
Meyer Lydith	30 mm f/3.5	PD
Zeiss Flektogon	35 mm f/2.8	APD
Zeiss Pancolar	50 mm f/1.8	APD
Meyer Oreston	50 mm f/1.8	APD
Meyer Domiplan	50 mm f/2.8	APD
Zeiss Tessar	50 mm f/2.8	APD
Zeiss Pancolar	55 mm f/1.4	APD
Zeiss Pancolar	75 mm f/1.4	APD
Meyer Orestor	100 mm f/2.8	APD
from Jena S	135 mm f/3.5	APD
Meyer Orestor	135 mm f/2.8	PD
from Jena S	180 mm f/2.8	APD
Meyer Orestegor	200 mm f/4	PD
from Jena S	300 mm f/4	APD
Meyer Orestegor	300 mm f/4	PD
Meyer Orestegor	500 mm f/5.6	PD
Zeiss Catoptric Lens	500 mm f/4	
Zeiss Catoptric Lens	1000 mm f/5.6	

APD = automatic pressure diaphragm

PD = pre-set diaphragm



Unsuitable for use



Suitable for use



The shutter of the PRAKTICA L is designed for synchronization with flash bulbs and electronic flash units.

When the flash unit is attached to the camera, the electric connection between camera and unit is automatically effected by means of the centre contact (6) in accessory shoe (5). No synchronization cable is required. Modern flashbulb and electronic units are equipped for this purpose with a suitable co-operation contact.

For the use of flash units fitted with synchronizing cable, an adapter piece with flash socket to accept the cable plug has to be pushed on to the accessory shoe of the PRAKTICA L.

Flash bulb exposures

In connection with bulbs for short flash duration, the shutter has to be set for a speed of $\frac{1}{30}$ sec. — marked by the lamp symbol — or slower. The ignition circuit is closed only as long as the shutter runs down and is open during the tensioning procedure, so that flash bulbs can be exchanged also before the shutter is cocked.

Electronic flash exposures

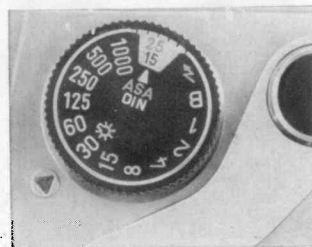
Owing to the extremely rapid travel of the curtains in the metal-bladed focal-plane shutter, synchronization up to a shutter speed of $\frac{1}{125}$ sec. is made possible. The knob for setting the shutter speeds has to be moved to the flash symbol setting \leq next to "B".

The guide number

The diaphragm numeral to be set on the lens mount for flash exposures can be found with the aid of the "guide number". Manufacturers of bulbs and electronic flash units give these guide numbers on the wrappings or in the instructions for use as required for the various sensitivity grades of the negative material.

The correct aperture is determined by dividing the guide number for the flash in use by the flash-to-subject distance figure. Formula for the flash unit attached to the accessory shoe of the camera:

$$\text{Diaphragm numeral} = \frac{\text{guide number}}{\text{flash-to-subject distance}}$$



The PRAKTICA L is a highly valuable precision instrument. Perfect functioning of the camera depends very largely on proper handling and careful maintenance.

The camera must, above all, be protected against shock, dust and moisture. That is why the everready case should be used wherever possible.

From time to time the cartridge chamber and spool chamber, also the film track and camera back with film pressure plate must be cleaned with a soft brush. But be careful not to exert pressure on the steel blades of the shutter nor to touch them with your fingers.

Neither should the optical parts (lens, eyepiece of viewfinder, mirror) be touched. Should this have happened accidentally, any fingerprints must be removed immediately with a piece of fine linen after a soft brush has been used to remove any possible dust. The mirror should be dusted only in urgent cases with a very soft brush.

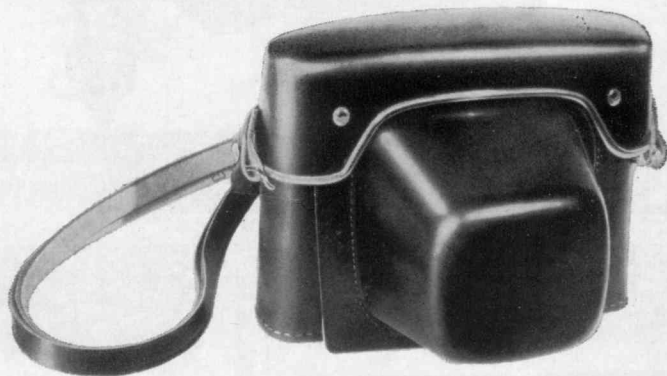
Never interfere with the mechanism of the camera. Repair work should be carried out only by one of our special Repair Workshops.



The various accessories make the single-lens reflex camera universally applicable and help to open up many new fields of activity.

Everready Case

It protects the camera against shock and dirt.



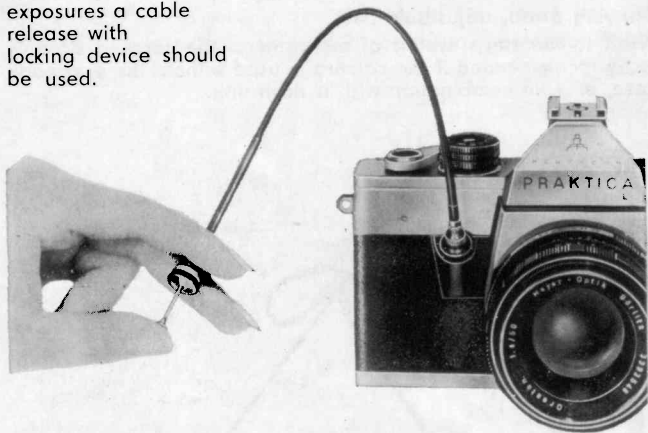
Carrying Strap, adjustable

Fixed to the strap eyelets of the camera, the carrying strap is to be recommended if the camera is used without the everready case, e. g. in combination with a flash unit.



Cable Release

For longer exposure periods involving the use of a tripod, and also in photomicrography it is indispensable. For long time exposures a cable release with locking device should be used.



Lens Hood

Eliminates disturbing flares in counterlight photography and protects the lens surface in rainy weather from getting wet. The lens hood must be adjusted to the image angle of the lens.

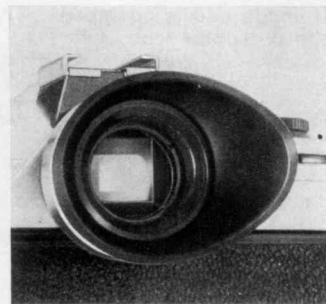


Filters

These are screwed into the filter thread of the lens mount. The filters for black-and-white photography — except UV filters and polarizing filters — are not suitable for colour work, for which special types of filter are available.

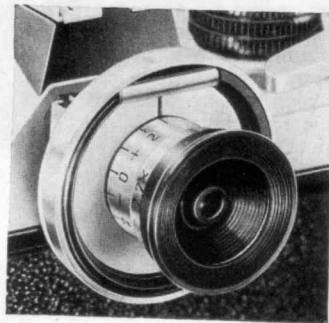
Rubber Eye Cup with Mount for Correcting Lenses

The eye cup keeps out extraneous light during focusing. Persons with defective eyesight may have a correcting lens corresponding to their long-distance glasses fitted into the mount designed for this purpose and are thus able to work without their spectacles on.



Focusing Telescope

The focusing telescope yields an additional 2.7-fold magnification of a section of the finder image. It is adjustable to faulty eyesight by means of a dioptre focusing mount.



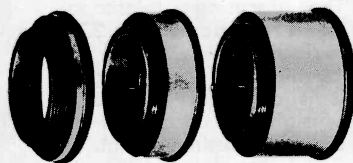
Angle Finder

This finder also is attached to the ocular mount of the camera. It is rotatable and thus permits a convenient choice of any viewing direction. The angle finder reveals the complete finder image and is equipped with a diopetre scale.



Intermediate Rings

For the PRAKTIKA L, intermediate rings either with or without plunger for connecting the automatic diaphragm are available. They are screwed in between camera and lens to increase the scale of reproduction in close-up photography.



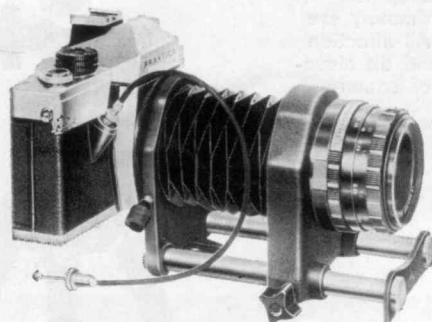
Reversing Ring

To screw the lens into the camera by its filter thread for extreme close-ups with an image ratio exceeding $\times 1.5$.



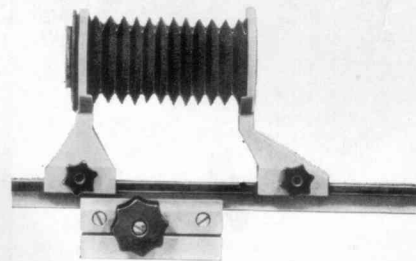
Miniature Close-up Bellows Attachment

This equipment permits an infinite variation of the image ratio in close-up work within a range of $0.7 \times$ to $2.5 \times$ in combination with the standard lens.



Close-up Bellows Attachment

Infinite variation of the image ratio with the 50 mm lens from $0.7 \times$ to $4.4 \times$.



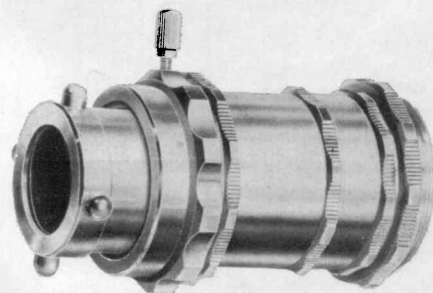
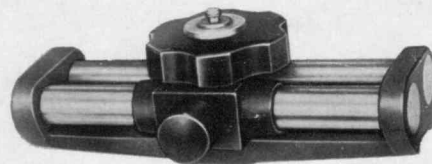
Universal Tripod

Extremely rigid, permits varying position of the camera from close to ground up to approximately eye level. All-direction pan and tilt movement of camera.



Focusing Slide

Of great advantage in close-up work with a tripod (e. g. the Universal Tripod). Makes it possible to adjust the camera-to-object distance without having to move the tripod.



Microscope Attachment Piece

For connecting camera and microscope.

Please follow these instructions for Use carefully. Improper handling of the camera may cause damage for which we can accept no liability.

Kombinat

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German Democratic Republic

Further development of the PRAKTICA L and its accessories may lead to slight alterations of the details given in this booklet.