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# PENTACON PENTAFLEX SL

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

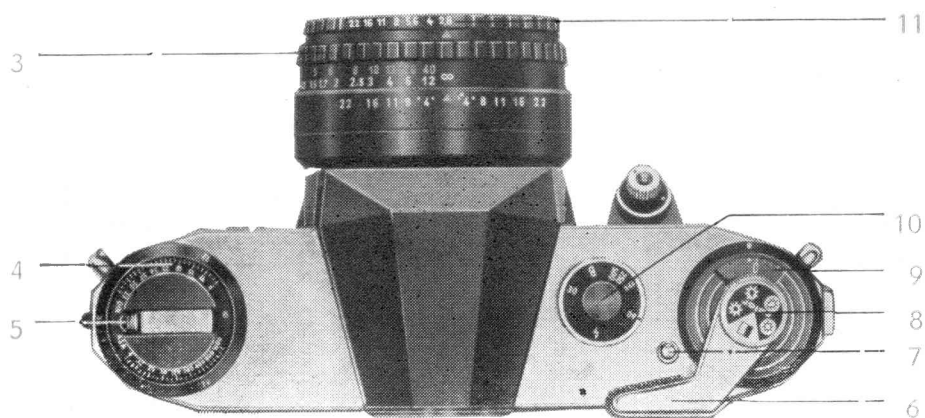
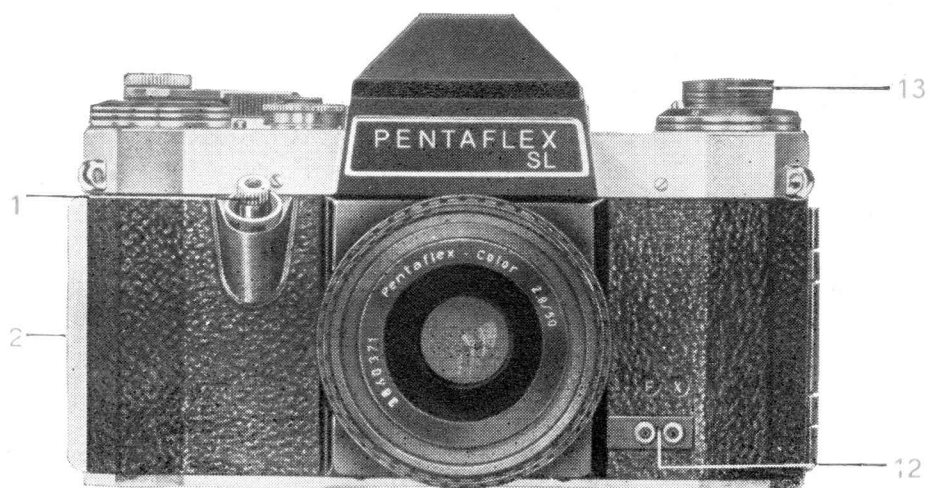


The PENTAFLEX SL is too valuable

... for playful experimenting which might only cause annoyance – and then the Instructions for Use will be needed after all. That is why we ask you to read this booklet beforehand, keeping the camera at hand, so that you may be able to test and practise all the manipulations.

One thing more, before you insert your first film and start taking pictures. On the inside cover pages you will find illustrations bearing numbers. These reference numbers are printed in parentheses ( ) in the descriptive text.

We wish you much pleasure and success with your PENTAFLEX SL.



**The most important  
controls**

- 1 Shutter release
- 2 Latch for camera back
- 3 Distance setting ring
- 4 Film speed reminder dial
- 5 Rewind crank
- 6 Cocking lever
- 7 Rewind release knob
- 8 Film type reminder dial
- 9 Exposure counter
- 10 Dial for setting shutter speeds
- 11 Diaphragm setting ring
- 12 Flash sockets
- 13 Rewind knob
- 14 Carrier catch
- 15 Camera back
- 16 Cartridge chamber
- 17 Tripod socket
- 18 Take-up spool
- 19 Film transport sprocket

The PENTAFLEX SL is a single-lens reflex camera for the 24 x 36 mm picture format. The firmly built-in pentaprism reveals an unreversed and parallax-free finder image which, through the instant return mirror, is permanently visible except for the moment of exposing.

### **Special features of the PENTAFLEX SL**

- Instant return mirror
- Image field lens for focusing
- Conveniently placed rapid wind lever
- Smoothly working, oblique finger tip shutter release with locking device
- Shutter wind coupled with film transport
- Lock against double exposures and blanks
- Focal-plane shutter with geometrical speed graduations from  $\frac{1}{30}$  sec. to  $\frac{1}{500}$  sec. and B (any desired length of time)
- Synchronization for electronic flash and bulbs
- Interchangeable lenses with focal lengths from 20 mm to 1000 mm
- Automatic pressure diaphragm
- Hinged camera back
- Automatic exposure counter
- Rewind crank
- Self-locking rewind release knob
- Wide range of accessories

## **Abridged Instructions**

- 1. Open the camera back.**
- 2. Pull up rewind knob (13). Place full cartridge into cartridge chamber (16), push rewind knob in. Insert beginning of film into slit of take-up spool (18) until it stops, wind up film (coating outwards) till teeth of transport sprocket (19) engage in upper and lower perforations of film. The film must be drawn tightly across the picture gate.**
- 3. Close the camera back (15).**
- 4. Adjust film speed reminder dial (4) and film type reminder dial (symbols 8).**
- 5. Cock the shutter (cocking lever (6) and release it (shutter release 1), repeat this until exposure counter (9) stands on 1.**
- 6. Determine shutter speed and aperture setting (exposure meter).**
- 7. Lift setting dial for shutter speeds (10) and rotate it until index mark and speed number meet.**

8. Rotate distance setting ring (3) to bring finder image on groundglass screen into sharp focus.
9. Release the shutter.
10. After the last exposure, actuate rewind release knob (7). (Should rewind release knob (7) not remain depressed, keep your finger pressed on it while at the same time swinging cocking lever (6) around as far as it will go). Swing out rewind crank (5). Rewind the film in direction of arrow.
11. Open the camera and remove the film.

Beside these points, it is very important for you to study the following pages of the Instructions for Use carefully.



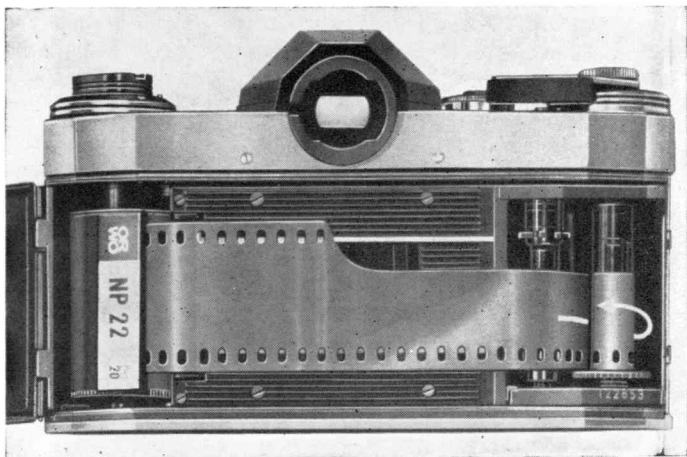
## **Inserting the film**

The camera accepts all types of perforated 35 mm film (black-and-white or colour) in commercially available cartridges. Push latch (2) for camera back downwards. Open camera back (15), pull out rewind knob (13) as far as it will go. Place full cartridge into cartridge chamber (16).

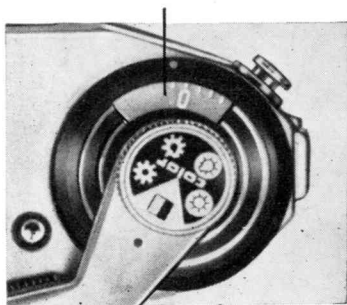
Push rewind knob with slight backward and forward movements in again. (Carrier catch (14) engages in core of cartridge). Depress rewind release knob (7). Insert beginning of film as far as it will go into slit of take-up spool (18). Rotate milled flange of take-up spool (18) to wind up the film (coating outwards), until the teeth of transport sprocket (19) catch the perforations on both edges of the film. Tighten the film with the aid of rewind knob (13). Close camera back (15) (press it on, it locks of its own accord).

## **Exposure counter**

The exposure counter (9) does not have to be set. It starts working automatically when the camera back is closed.



Exposure counter



## Setting the film speed reminder dial

Set the DIN or ASA value on film speed reminder dial (4) (speed of film in camera) against one of the figures 12, 20, or 36 (number of frames on the film strip).

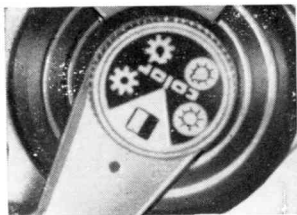
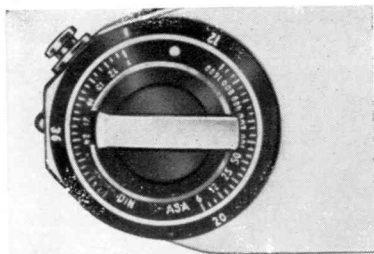


Set the symbol (8) signifying the film in the camera against the marking point on cocking lever (6).

## Preparing for the exposure

Swing cocking lever (6) around as far as it will go and let it glide back. Release the shutter, cock it once more: the automatic exposure counter (9) now stands on number 1. The camera is ready for picture taking.

The coupling of shutter wind and film transport makes double exposures and blanks impossible.



Black-and  
white



Colour reversal  
daylight



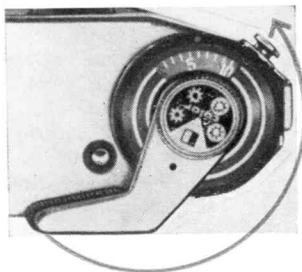
Colour reversal  
artificial light



Colour negative  
daylight



Colour negative  
artificial light



### Attention!

Move cocking lever only in wind-  
ing direction, until it stops.  
Forced movement in opposite  
direction will cause damage.

## Measuring the exposure speed

Use a photoelectric exposure meter, or an exposure table, to find the correct shutter speed and aperture settings. Set the shutter speed by means of dial (10) and the aperture by rotating diaphragm setting ring (11) on lens mount.

### Setting the shutter speed

Lift setting dial (10) and rotate it only in clockwise direction until the red index point meets the desired speed number. The ring clicks in when dropped down.

The following shutter speeds are marked on the dial:

$30 = \frac{1}{30}$  sec.,  $60 = \frac{1}{60}$  sec.,  $125 = \frac{1}{125}$  sec.,  $250 = \frac{1}{250}$  sec.,  
 $500 = \frac{1}{500}$  sec., B = time exposure as long as the shutter is being depressed.

$\downarrow = \frac{1}{40}$  sec. (see "Flash synchronization").

The speeds are graduated so that each figure indicates double, or one half of the speed marked by the neighbouring figure on the scale.

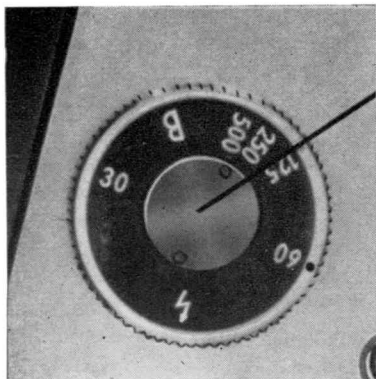
The shutter speeds can be set either before or after the shutter has been cocked.

## Setting the diaphragm number

On the modern lenses with automatic pressure diaphragm in the PENTAFLEX SL the desired aperture numeral need only to be clicked in by means of diaphragm setting ring (11). The diaphragm closes automatically when the shutter release is depressed.

Most lenses can be stopped down before the exposure, by a manually operable lever, to the preselected value for checking depth of field.

**Attention!** When using lenses without automatic diaphragm control, please note special reference under "Exchanging lenses".



Dial for setting  
shutter speeds

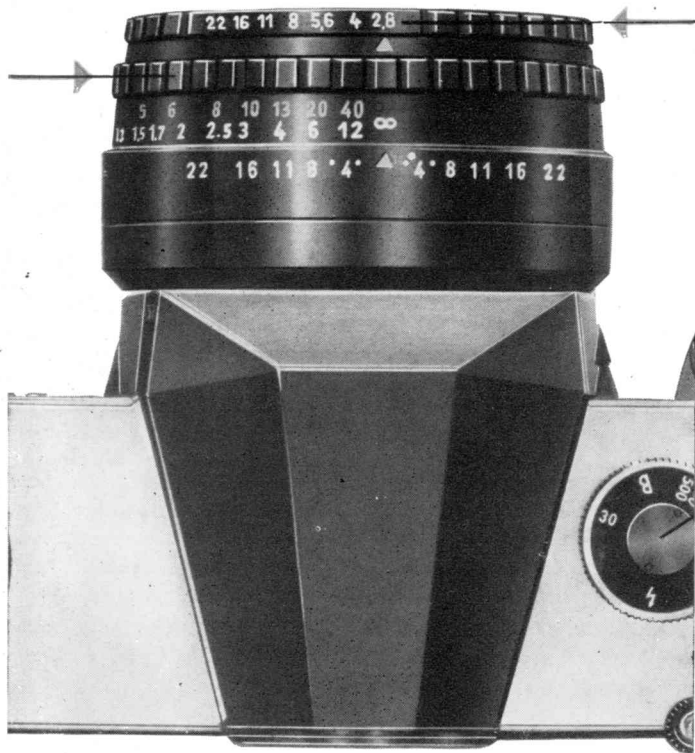


## Focusing

The PENTAFLEX SL is provided with an image field lens. Focusing and judging picture composition are performed on base of the groundglass image in the viewfinder. For this purpose, the distance setting ring (3) has to be rotated in either direction until the object in the image field appears perfectly sharp. The lens is not stopped down during focusing, a great advantage, since it reveals an image of corner-to-corner brightness. On release of the shutter (1), immediately before the exposure takes place, the diaphragm closes to the preselected value. No further manipulations are required, the camera remains in taking position, demanding a minimum of time between focusing and making the exposure.

Taking lens and finder lens being one and the same, there is no danger of parallax error. Persons with faulty eyesight may insert a corrective lens in special mount into the eyepiece of the viewfinder (connecting point for further special finder equipment).

On lenses with pre-set diaphragm, first set the desired aperture by means of the diaphragm setting ring. Bring the image into focus with the lens at full aperture and, without removing the camera from your eye, stop down to the pre-set diaphragm setting. The depth of definition is indicated by the depth-of-field scale on the lens mount. On the left and right of the distance setting index (triangle or stroke) are diaphragm numerals. Next to them are the distance figures showing the limits of the zone of sharpness.





## Releasing the shutter

Depress shutter release (1) smoothly until the shutter has run down. Accidental tripping of the shutter can be prevented by rotation of the milled ring to make the red dots meet. Unlocking is performed accordingly. For exposures longer than  $\frac{1}{30}$  sec. (B setting) it is advisable to use a tripod and a cable release.

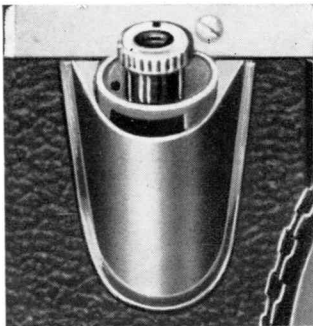
Cable release connection in body release.

## Exchanging the film

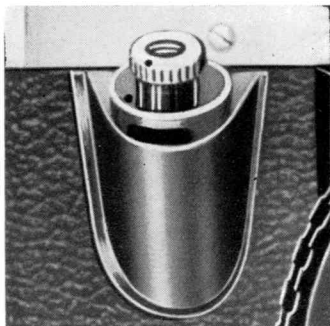
When the exposure counter indicates the number of frames marked on the wrapping of the film in the camera, rewind release knob (7) has to be depressed, rewind crank (5) swung out and the film rewound in the direction of the arrow. Towards the beginning of the film strip the crank begins to turn more easily.

If, when the film is to be rewound, the shutter is not, or only partly, cocked, rewind release knob (7) has to be depressed and, at the same time, shutter cocking lever (6) wound up to its stop. The rewind release knob then remains in depressed position and the film can be rewound as described above. On release of the shutter, the rewind release knob jumps out again.

A new film, if required, is inserted as described under „Inserting the film“.



Shutter can be released



Shutter cannot be released



## Exchanging lenses

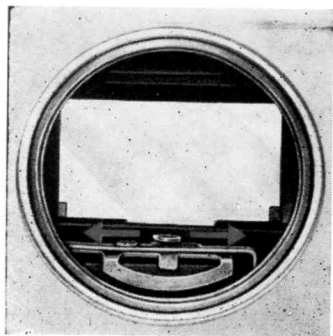
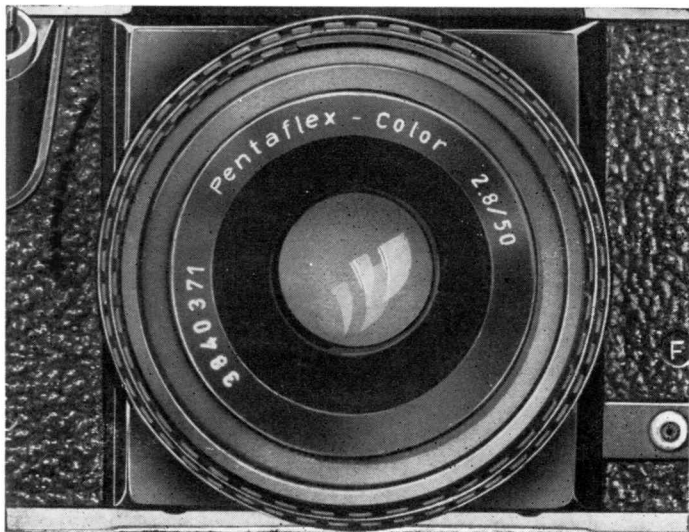
Take hold of lens mount and rotate it in anti-clockwise direction. The exchange lens is inserted accordingly.

The camera accepts any lens with the M 42 x 1 screw fitting, with focal lengths from 20 mm to 1000 mm. When using filters, please observe the slip-on or screw-in dimensions of the mounts.

For the use of interchangeable lenses without automatic diaphragm control, the diaphragm mechanism in the camera, underneath the instant return mirror, has to be disconnected (see arrow).

Lift the mirror carefully by its frame (do not touch the coated surface with your fingers) and move the red-marked knob (→) to the right as far as it will go; then let the mirror return to its 45° position.

Proceed in reverse order when using lenses with automatic diaphragm – red-marked knob must be moved to the left (←). Should the mirror be accidentally pushed up too far while the shutter is cocked it will remain in the horizontal position. One blank exposure will bring the mirror back to 45°.



## Flash synchronization

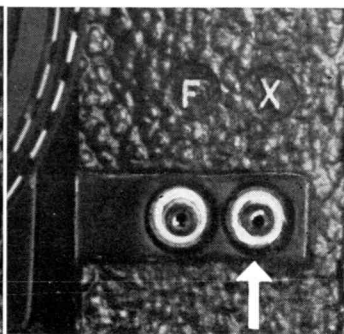
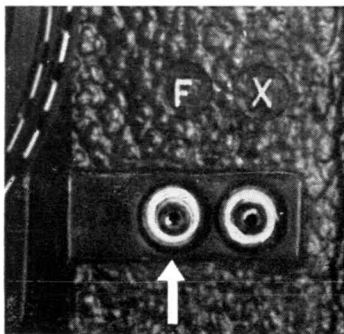
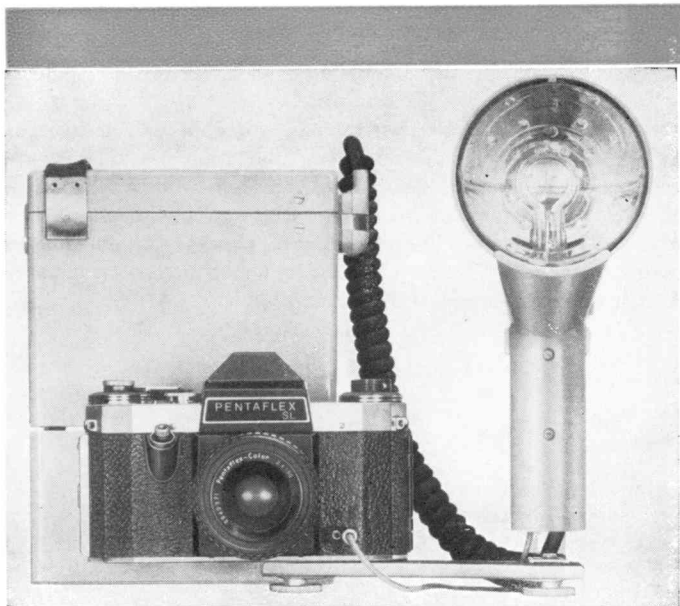
There are two ways of synchronizing flash light to the PENTAFLEX SL. The cable of the flash equipment has to be plugged into the corresponding socket (12) in the camera.

### F synchronization

The F switch releases the flash about 10 ms before the image gate is completely uncovered by the shutter. It is used for short burning flash bulbs. Using the F switch with these bulbs has the advantage, as compared with the X switch, of permitting a faster shutter speed setting. An exposure speed of  $\frac{1}{30}$  sec. can be recommended for short burning bulbs.

### X synchronization

The shortest exposure time for this flash connection is  $\frac{1}{40}$  sec. ( $\frac{1}{40}$ ). The X switch is designed for synchronizing electronic flash units. It releases the flash when the shutter has completely uncovered the image gate.



## Maintenance and care

The PENTAFLEX SL, as a highly valuable instrument, must be protected from shock and dust. From time to time dust and film emulsion deposits have to be removed with a soft brush from cartridge chamber, spool chamber and film track. Do not touch the optical parts (lens, viewfinder, mirror) with your fingers. Should this have happened, remove finger marks immediately with a soft brush or piece of soft linen.

Further development of the camera may lead to slight alterations of the details given here.

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We request you kindly to follow these Instructions for Use carefully, since we can accept no liability for damage caused by improper handling of the camera.

## Accessories for PENTAFLEX SL

Everready Case

Cable Release

Filters

Lens Hoods

Carrying Strap, adjustable

Intermediate Rings

Special Intermediate Ring  
with Double Cable Release

Intermediate Rings with Plunger

Reversing Ring

Close-up Bellows Attachment

Focusing Slide

Focusing Telescope

Angle Finder

Rubber Eye Cup

Mount for corrective lenses

Universal Tripod

Microscope Attachment Piece

Accessory Shoe,  
attachable, for fixing other accessories



### **Cross section**

of the PENTAFLEX SL. A surface-coated mirror deflects the image designed by the lens to the focusing system. By pressure on the shutter release, the mirror is swung out of the path of rays and, forming a light-tight cover over the focusing system, allows the light rays to pass on to the image plane. The mirror having reached its uppermost position, the shutter opens for the exposure. After the exposure the mirror immediately returns to its viewfinder position ( $45^\circ$ ). This means that the finder image is almost permanently visible, showing what is going to appear on the negative.

Since the taking lens acts as finder lens, there is no parallax error. The finder image is somewhat smaller than the picture format. Everything visible in the viewfinder is sure to appear on the film. In picture composition, therefore, the finder image can be utilized to its very edges. This renders it possible to use lenses of various focal lengths, and also the accessories, without any extra finder attachments. The parallax-free, unreversed reflex finder image always shows you what your picture will be like.

