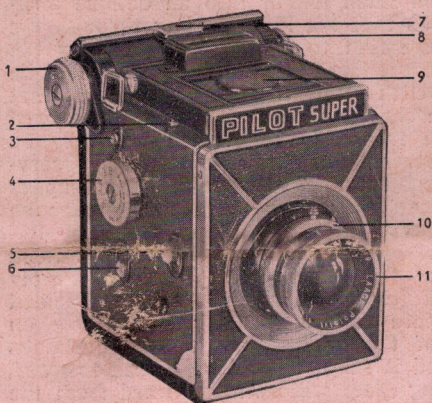


Instructions for using the **PILOT SUPER**



1. Film winding knob.
2. Nipple for flexible shutter release.
3. Button to release the shutter lock.
4. Knob for winding and setting the shutter.
5. Shutter release.
6. Button for giving time exposures.
7. Spring lock for removing back.
8. Knob for spring peg holding spool.
9. Cover of finder hood with frame finder and exposure meter.
10. Ring for adjusting lens aperture.
11. Focusing ring.

PRELIMINARY:

Nearly every unsatisfactory exposure is the result of some small point having been forgotten. To prevent such things occurring, it is most important to practise using the camera without any film in it, purely as a technical exercise, in order that all its movements become thoroughly familiar. If in doubt on any point, a friend who is more expert in photographic matters should be consulted, and he will be able to recommend suitable instruction books on the subject.

The technical points of the Pilot Super:

The hood of the view-finder is opened by lifting the two small knobs placed at its sides. The other sides of the hood will then be automatically raised. When folding down the hood into the closed position, it is important to fold down first the left-hand side, then the right-hand side, next the rear side, and finally the front.

The picture is focused by examining the ground-glass screen placed inside the view-finder hood. After opening the latter, the shutter winding knob (4) is turned towards the photographer as far as it will go, which will wind up the shutter and also lower a small mirror into an oblique position inside the camera so that the light passing through the lens is diverted from the film to the ground glass. If the shutter knob will not move, the film winding knob should be turned forward until a click inside the camera indicates that the lock preventing the shutter from being wound has been released. The scene in front of the camera will now be visible on the focusing screen, and it can be carefully observed to find out the most suitable view point. This implies composing the picture, an operation that should always be carried out with great care, in order to get the very best possible effect in the picture seen. It should then be decided which particular part of the subject must be most sharply in focus, and the lens adjusted by turning slowly the milled focusing ring (11). Where critical focusing is desirable on some particular part of the subject, the two small knobs by which the finder hood is raised should be turned forward, upon which a magnifying glass will swing forward from the front of the finder hood and snap into a horizontal position. After examining the image through this magnifier, it may be replaced in its original position by pulling the front of the finder hood slightly forward.

Important note: The button for giving time exposures (6) must be placed so that it is at the lower end of its slot. If not already in this position it should be pressed in the opposite direction to the arrow until it catches audibly in the lower end of the slot. This is most important, and should always be watched, for if the button is allowed to rise, there may possibly be trouble later on.

To obtain evenly sharp focus on objects that are at considerably differing distances from the camera, the iris diaphragm of the lens must be adjusted so that a small lens aperture is set. This is done by turning the small ring (10) on the front of the lens, which is engraved with a scale of

aperture values, and is provided with a small lever for convenience in setting. By observing the image on the ground glass, it will be seen that as the lens aperture becomes smaller (i. e. a higher number is set on the aperture scale) the „depth of focus“ becomes greater in the image, but that the latter becomes less and less bright. By tilting the camera to the left, a scale indicating the nearest and farthest distances at which objects are sharp at any given lens aperture and focusing distance will be seen. This is a true depth of focus scale, and is frequently very useful.

If the camera is to be used at eye-level, the direct-vision frame finder may be used: the central portion of the front of the finder hood is pushed backwards and will disclose a rectangular frame. By bringing the eye close to the small aperture in the back of the hood, the frame in the front will indicate the limits of the subject covered by the camera. The full aperture of the frame is used for $2\frac{1}{4}$ “ square pictures: when taking pictures in the $2\frac{1}{4}\times 1\frac{5}{8}$ “ size only the area within the two cross-wires will appear on the film later on. By slightly tilting the front of the hood forward, the inner section will be released and spring into its original position once more. When using the frame finder, it is not possible to focus on the ground-glass screen, so that the following settings may conveniently be used:

Lens aperture f/8, focusing distance (on scale) 16 feet. Everything between 10 feet and 35 feet will then be sharp. For more distant objects, the lens aperture may be f/8, and the focusing distance 25 feet: here everything between 13 feet and infinity will be in focus.

To find the correct exposure, the built-in exposure meter may be used. To find the correct time of exposure and lens aperture, the device is first shielded from strong light by the hand, and observed directly from above. The last number that can be seen of the series is then used in conjunction with the table on the left-hand side of the camera. Here, the lens aperture and shutter time corresponding to any particular number read from the optical meter will be found. The normal numbers for shutter time indicate fractions of a second, but figures with a thick line round them (in the right-hand lower corner of the table) imply full seconds exposure. The meter has been designed for use with a film of sensitivity 18/10⁰ DIN (28⁰ Scheiner): with a film of 16/10⁰ DIN the next higher number should be chosen, and with film of 21/10⁰ DIN the next lower. Instead of doing this, the next longer or shorter exposure time may be chosen, or

alternatively the next larger or smaller aperture (i. e. smaller or larger aperture **number**).

The small lever on the side of the exposure meter should be raised into its upper position when the light is good, and only lowered into its alternative position in dull weather, during the evening, or indoors. This lever must be set correctly **before** a reading is taken.

It must not be expected that a simple exposure meter of this type will give quite so reliable readings as a photo-electric instrument that costs perhaps ten times as much to manufacture, and some care is necessary in using the former under extremes in lighting. It is thus best to give a rather fuller exposure than that indicated in dull light or interior exposures, and to reduce the indicated exposure to some extent when the sun is very brilliant. By the sea, or in mountainous districts, half the indicated exposure may, for example, be given with advantage.

To set the shutter speed the knob (4) is pulled outwards from the side of the camera, and rotated until the shutter speed to be used (or rather, the small dot placed next to it on the scale) is against the dot on the central fixed portion of the knob. On releasing the moveable outer ring of the knob, it will slip into the correct position and the correct shutter speed will be set.

The exposure is made by gentle pressure on the release (5). It is even better to screw a flexible wire release into the nipple (2) on the camera, and to make the exposure by gently pressing the end of the release itself. Exposures that last longer than $1/20$ th of a second should only be made from a tripod or other firm support, in order to avoid the risk of blurring the picture by moving the camera while the shutter is open. Short time exposures are best made by setting the shutter to the letter „B“ on its winding knob: at this position the shutter opens when the release is pressed, and remains open until pressure is relaxed.

Long time exposures involve the use of the time exposure button (6). This button is first moved upwards in the direction of the engraved arrow, and the shutter is wound. (It is immaterial what shutter speed is set on the knob). On pressing the release, the shutter opens, and remains open until the time exposure button (6) is pressed downwards to the bottom of its slot in the opposite direction to the arrow.

Special note: After using the time exposure button, it is essential to make sure that it is replaced correctly at the bottom of its travel in the slot. If this is not done, the shutter will not work correctly for the next exposure:

A shutter lock is fitted to the Pilot Super by means of which double exposures on one section of the film are made impossible. The shutter can only be wound after exposing when the film has been wound on to the next picture. To make a second exposure on one section of the film **without** winding the latter on, the small button (3) which releases the shutter lock must be moved upwards. The shutter knob will then rotate freely once more.

The Pilot Super lens is interchangeable: by turning the mount in an anti-clockwise direction in its holding ring the lens may be removed, and a telephoto lens or large-aperture anastigmat put in its place. When using either of these special lenses, the field covered by the camera, the focusing, and the depth of focus can all be seen on the ground-glass focusing screen, though not through the direct-vision frame finder.

After practising the above movements in the first place, and becoming familiar with them, the next step is to **load the first film**. The camera back is first opened by pressing down the spring lock (7) with the right hand while the back is pulled away from the body with the left. (Some models are fitted with a sliding lock, which is merely pulled to the side before opening the back.) The empty spool in the upper chamber is then turned (by rotating the film winding knob) until the broad slot in its core is outwards. The full spool of film is then taken from its carton, and the gumstrip sealing its paper strip down removed. The full spool is pressed into the lower spool chamber next to the hinge for the camera back, and is held in place firmly with the thumb of the left hand while the free end of the paper is drawn across the open back of the camera and its pointed end pushed into the slot in the core of the empty spool. By turning the film winding key two or three turns, the paper is firmly gripped, and the full width of the paper adjusted so that it lies evenly between the flanges of the empty spool, without rubbing or chafing there. The camera back is now closed once more, and pressed to the body until the spring lock snaps shut. Finally, the red window in the back of the camera is uncovered, and the film winding knob turned on until the number „1“ appears. The first section of film is now ready for exposure. Each time an exposure is made, the film is wound on until the next higher number appears in the red window. If this is not done, the shutter will refuse to wind.

After the 12th (i.e. last) exposure on the film, the film winding knob is turned continuously once more until it can

be felt that the end of the paper strip has come off the lower spool and is moving upwards on to the full one. At this point, the camera back is opened once more, the peg (8) and the film winding knob (1) pulled outwards from the camera body, and the spool removed by inverting the camera over the palm of the hand and giving it a gentle tap against the latter. The empty spool is now changed over to the upper spool chamber, with the metal key on the end of the film winding knob engaging correctly in the slot at its end.

The Pilot Super takes two sizes of pictures:

When taking $2\frac{1}{4}$ " square pictures the mask is removed from the interior of the camera, and the centre red window in the camera back used for observing the printed numbers on the film. A normal $3\frac{1}{4} \times 2\frac{1}{4}$ " „20" size film will give 12 exposures.

When taking the $2\frac{1}{4} \times 1\frac{5}{8}$ " picture size, the mask must be correctly placed inside the camera. The mask is put in position with the side marked with a dot under the metal strip inside the camera that is marked with a similar dot. By sliding the mask into the slot under the strip, its farther end can be introduced under the second strip at the other side of the camera, and it will remain in its proper position. The film must be wound so that the number of the picture taken first appears in the lowest red window on the camera back, and then for the next exposure in the top red window. When changing from one picture size to another, it is important to note that the marked lines on the ground glass and the cross-strips seen in the frame finder indicate the limits of the camera field with the smaller picture size.

The Ever-Ready Case No. 220 is specially designed to keep dust and dirt from the camera. It opens with a single movement, and the camera is immediately ready for use without taking it from the case.

A final word: However carefully a camera may be designed and made, it can only take good pictures when it is correctly used. It is the mind behind the camera that makes the picture, and the camera is merely a mechanical device for carrying out instructions. For this reason, the finest and most expensive camera is no kind of substitute for personal thought and care in handling it.

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