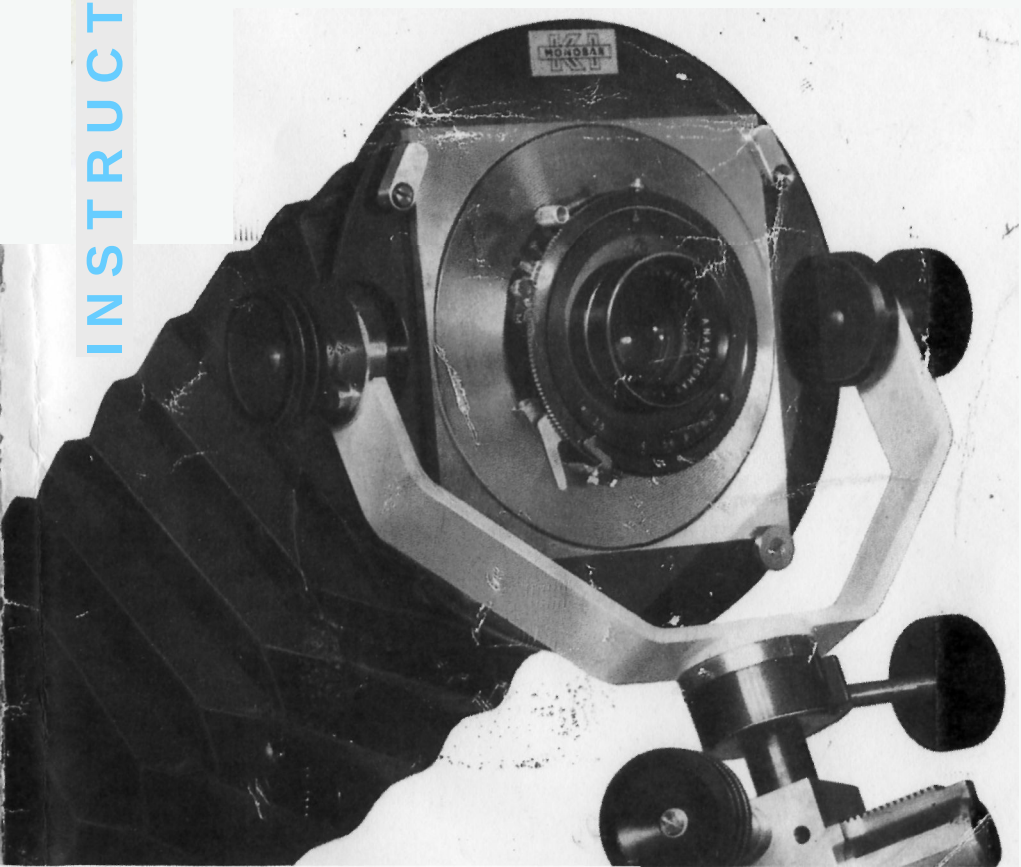
ILFORD CAMERAS

INSTRUCTIONS FOR K. I. MONOBAR

For Applied Photography in Science and Industry.



ILFORD K.I. MONOBAR CAMERA

type U

The Ilford Monobar Camera Type U represents a major advance in the design of 35 mm. cameras for scientific and technical purposes. Precision engineered within very fine tolerances, the camera is suited to a wide variety of industrial, medical and scientific applications.

The Ilford Monobar Type U has been designed to achieve maximum flexibility of operation, yet it retains simplicity of control. The monobar system, combining precise camera movements, permits the use of the camera in difficult and awkward situations whilst maintaining a high degree of accuracy. The monobar and tilting and swinging movements are graduated, an essential feature in precision and close-up work. All controls are simple and positive in use.

A suitable choice of lenses and ancillary fittings is available which increases the camera's versatility.

The extreme flexibility of the camera movements of the Ilford Monobar Camera Type U is achieved by the instruction of the camera in three basic parts:

1. **The Monobar.**
2. **Front Panel Assembly.**
3. **Rear Panel Assembly.**

The controls on the front and rear panels are similarly situated for simplicity of operation and each camera movement has its own locking device to provide rigidity in any position.

The Monobar

The unit consists of a rigid bar with a rack and pinion gearing, mounted in a pan and tilt head. The monobar, 12 in. long, has a millimetre scale engraved along its length from which measurements can be taken against index marks on the front and rear assemblies. For true-to-scale and other accurate applications of photography the position of the monobar and camera can be read from the rear face of the pan and tilt head.

The pan and tilt head carries the controls for the monobar and the pan and tilt movements. The base is threaded to accept an English thread tripod.

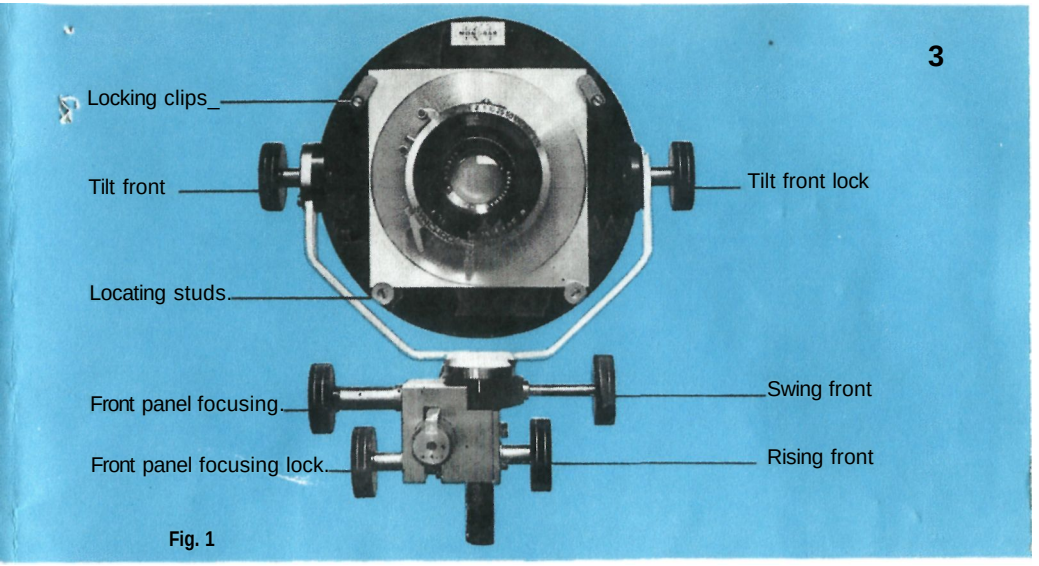


Fig. 1

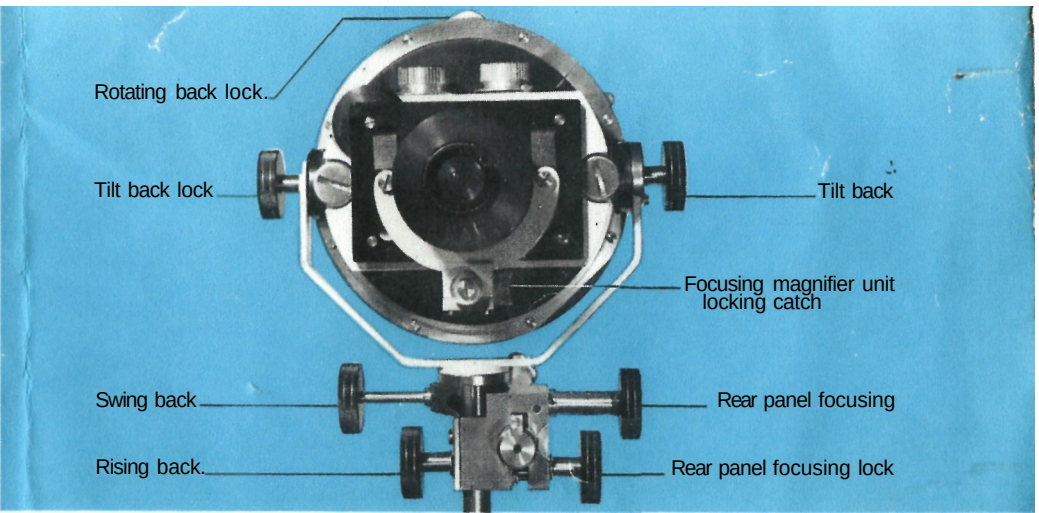
The Front and Rear Panel Assemblies

Each has a rack and pinion movement for focusing, a stirrup to which the panels are attached, and each has rising, swinging and tilting movements. Locating studs and locking clips are fitted to the face of the panels for the attachment of the lens panel and bellows.

The circular front panel is designed for interchangeability of lenses. The lenses, mounted in black square lens panels, can be fitted quickly and easily. (Figure 1.)

The circular rear panel accommodates the magazine and the focusing magnifier unit which also serves to hold the magazine in position. (Figure 2.)

The front and rear panels are connected by square bellows which are quickly fitted or removed.



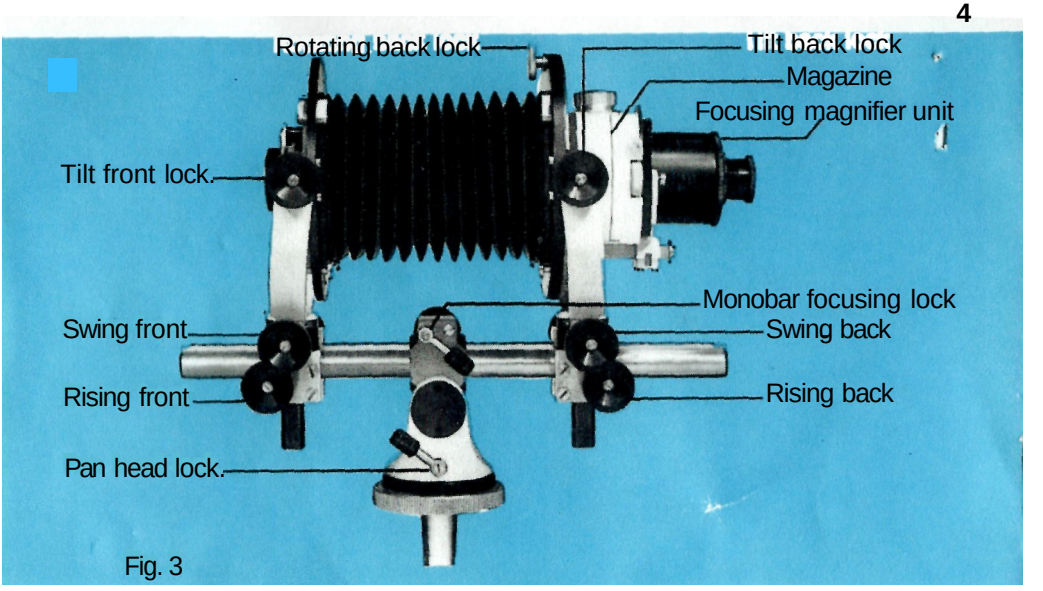


Fig. 3

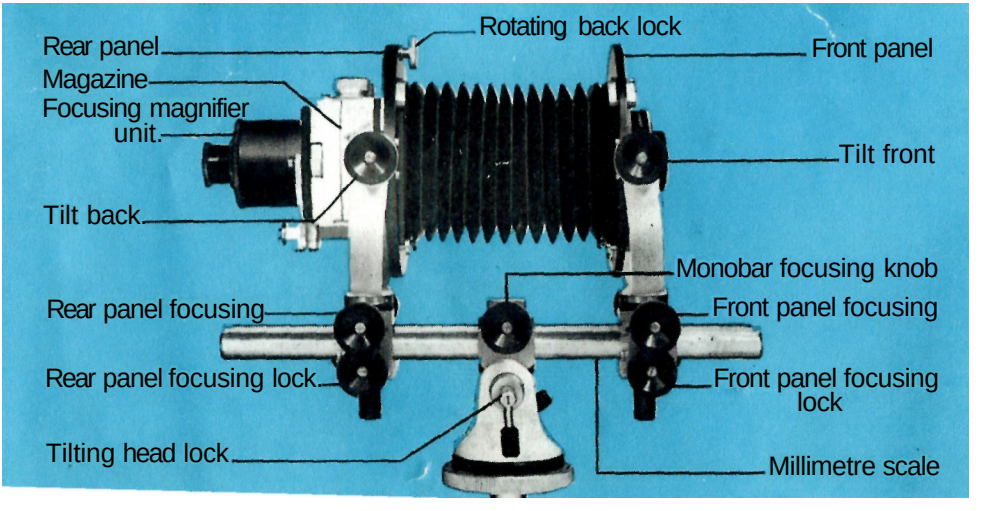
Camera Movements

With the exception of the rotating back, all movements on the front and rear panels are similar in operation and extent. The amount of travel of the camera movements is governed by the focal length of the lens in use, the camera extension and the bellows fitted.

It is important not to over-tighten locking screws; finger tightness is sufficient for rigidity.

Rise and Fall

This is controlled by the knob at the bottom of each bearing block (see Figure 3). The panels may be moved up or down anywhere within the 1½ in. length of travel.



Tilt Control

The tilt movements, located on top of the stirrups carrying the panels, operate about the horizontal centre of each panel. The panels can be rotated through 30° in 5° steps on either side of the vertical (see Figure 4).

Rotating Back

The rotating back revolves through 360° and is locked by the knurled knob immediately above the bellows (see Figure 2), Indicator marks are provided to show when the back is in the vertical or horizontal position.

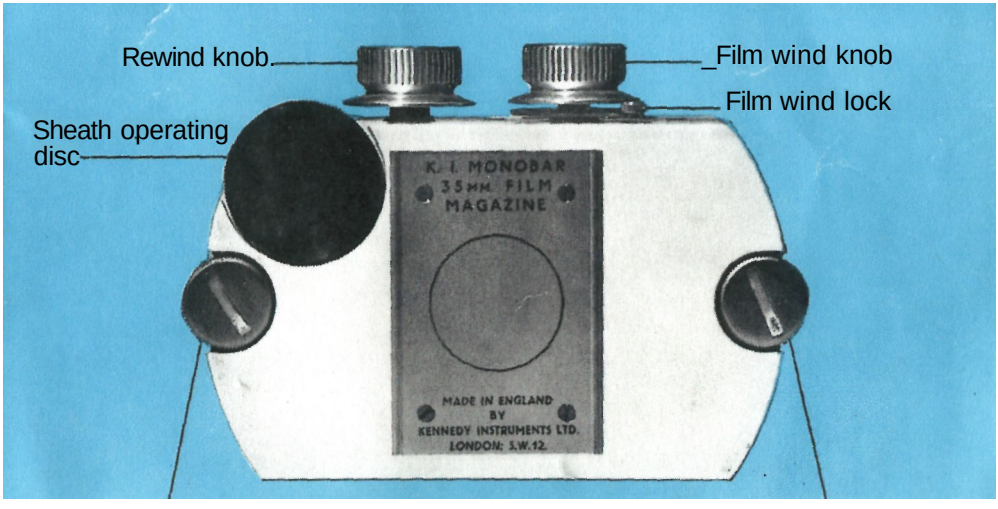
Lens Panels and Bellows

These are located by two positioning studs at the bottom of the panels and are held in position by two clips which swing inwards.

The front and rear panels are joined by square bellows of sufficient size to enable the maximum extension of the camera to be used. Bag bellows are available for the wider angle lenses.

Focusing Magnifier

The fine-focus magnifier unit fitted to the camera also serves to hold the magazine in position. It is located or withdrawn by finger pressure on the spring catch at the bottom of the stirrup. Coarse and fine adjustments are provided so that the focusing magnifier can be adjusted to the user's eye. The magnifier can be withdrawn from the unit for full-frame viewing. A right-angle focusing magnifier is available as an extra.



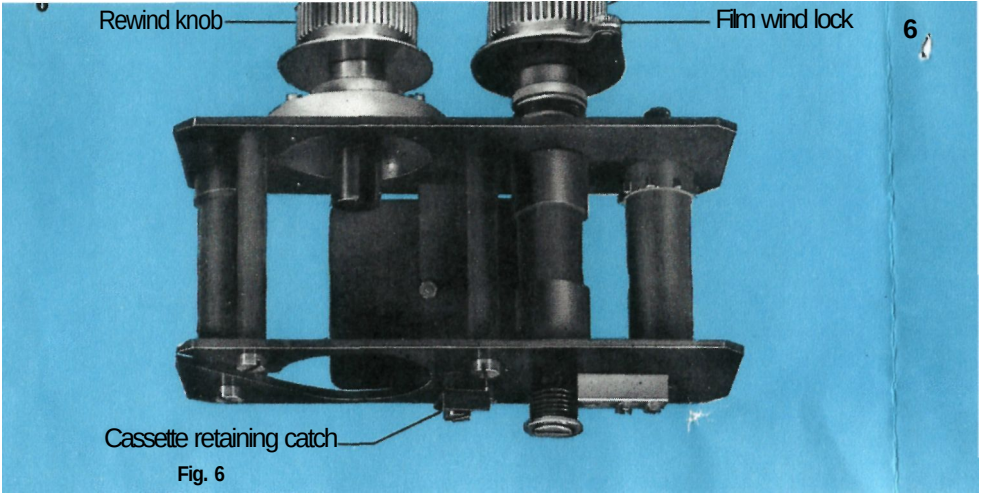


Fig. 6

The Magazine (Figures 5 & 6)

The film magazine is in three parts:

1. The front body which incorporates the camera registration plate, the sheath and the film gate.
2. The lid which includes the sheath operating disc, two locking screws and a data plate.
3. The film transport mechanism and pressure plate.

The magazine, designed for daylight loading, accepts standard daylight-loading cassettes and is simple to operate.

To Load the Magazine (Figure 7)

Loosen the two locking screws on the magazine lid, remove the lid and withdraw the film transport mechanism.

With the pressure plate downwards, lift the film wind knob (on the right) to disengage the gears, then rotate the knob anti-clockwise until the slot in the take-up spool is uppermost.

Lift the rewind knob, move the cassette locking catch away and insert the cassette through the aperture in the bottom of the film mechanism, ensuring that the film leader is outward with the emulsion uppermost. Lock the cassette in position with the locking catch and then push down the rewind knob to engage with the film cassette inside core.

Sufficient film leader must be withdrawn from the cassette for the film to pass around the roller, across the pressure plate and sprocket teeth spool for attachment to the take-up spool.

Insert the film in the take-up spool in the direction of travel (anti-clockwise), press the wind knob down and wind on until the sprocket teeth engage the film perforations on both edges.

Replace the film transport mechanism in the front body, pressure plate downwards, so that it is positioned by the small locating studs at the bottom, with the wind and rewind knobs engaged in the slots of the front body.

Replace the magazine lid, making sure that when it is pressed downwards the film sheath disc actuates the film sheath. Tighten the locking screws (finger tightness is sufficient).

With the film sheath closed, wind on three frames to bring the unexposed film into position in the gate.

Set the exposure counter to 19 or 35 depending on the film which has boon loaded. The exposure counter indicates how many exposures remain In the cassette.

Press the wind knob down to engage the gearing and the magazine is then ready for use.

Loading the Magazine on to the Camera

Withdraw the focusing magnifier unit to its full extent by gripping the thumb piece at the bottom of the stirrup.

Insert the magazine from the top so that the registration plate is located in the aperture in the rear panel.

Push the focusing magnifier unit forward until the locking catch locates in the notch in the bar. Make sure the locking catch is engaged correctly by firm forward pressure.

Open the sheath with an anti-clockwise movement of the sheath operating disc (in the open position the sheath can be Boon over the top of the magazine). The camera is now ready for use.

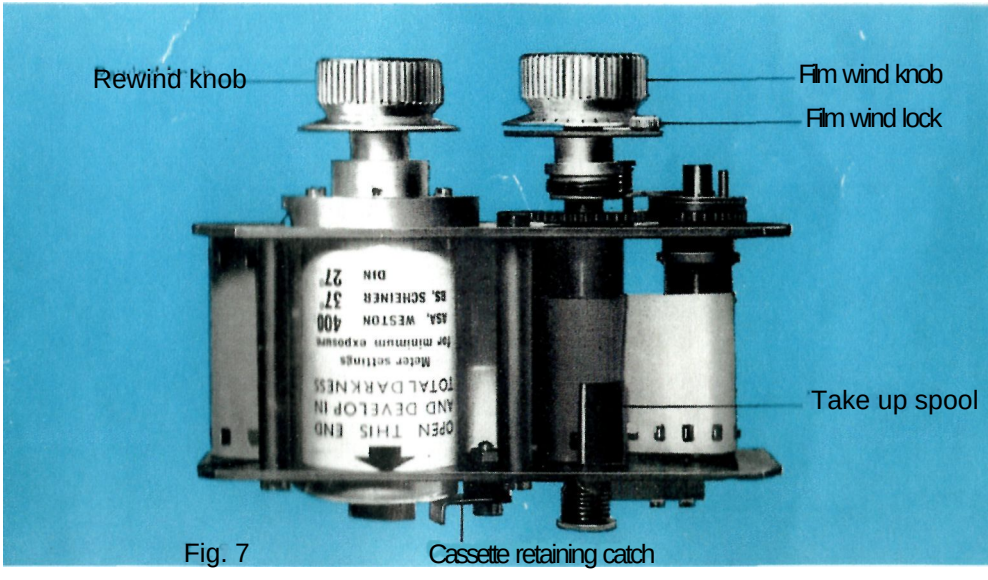


Fig. 7

To Unload the Magazine

Close the sheath and remove the magazine by withdrawing the focusing magnifier to its full extent.

Pull up the film wind knob to release the winding mechanism and rewind the film by turning the rewind knob in the direction of the arrow.

Remove the cassette from the magazine by adopting the reverse sequence to that used for loading.

IMPORTANT: When removing the magazine for focusing purposes during operation, **DO NOT FORGET TO CLOSE** THE **SHEATH.**

ILFORD K.I. MONOBAR CAMERA

type F

The Monobar Camera Type F, precision engineered with the same accuracy as the type U, is designed to fulfil the needs' of certain specialised branches of photography, such as photomicrography and photomacrography, where camera corrections are not needed.

The front and rear panels are rigidly mounted on bearing blocks and, with the monobar, are fitted with focusing controls and locking devices for positive location.

The rotating back can be moved through 360° and is locked by the knurled knob immediately above the bellows. Indicator marks show when the back is in the vertical or horizontal positions.

The lenses, bellows and magazines are fully interchangeable with the type U camera.

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