

This camera manual library is for reference and historical purposes, all rights reserved.

This page is copyright by mike@butkus.org M. Butkus, N.J.

**This page may not be sold or distributed without the expressed
permission of the producer**

I have no connection with any camera company

If you find this manual useful, how about a donation of \$3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your E-mail address too so I can thank you. Most other places would charge you \$7.50 for a electronic copy or \$18.00 for a hard to read Xerox copy. These donations allow me to continue to buy new manuals and maintain these pages. It'll make you feel better, won't it?

If you use Pay Pal, use the link below. Use the above address for a check, M.O. or cash. Use the E-mail of butkusmi@ptd.net for PayPal.



[back to my "Orphancameras" manuals /flash and light meter site](#)

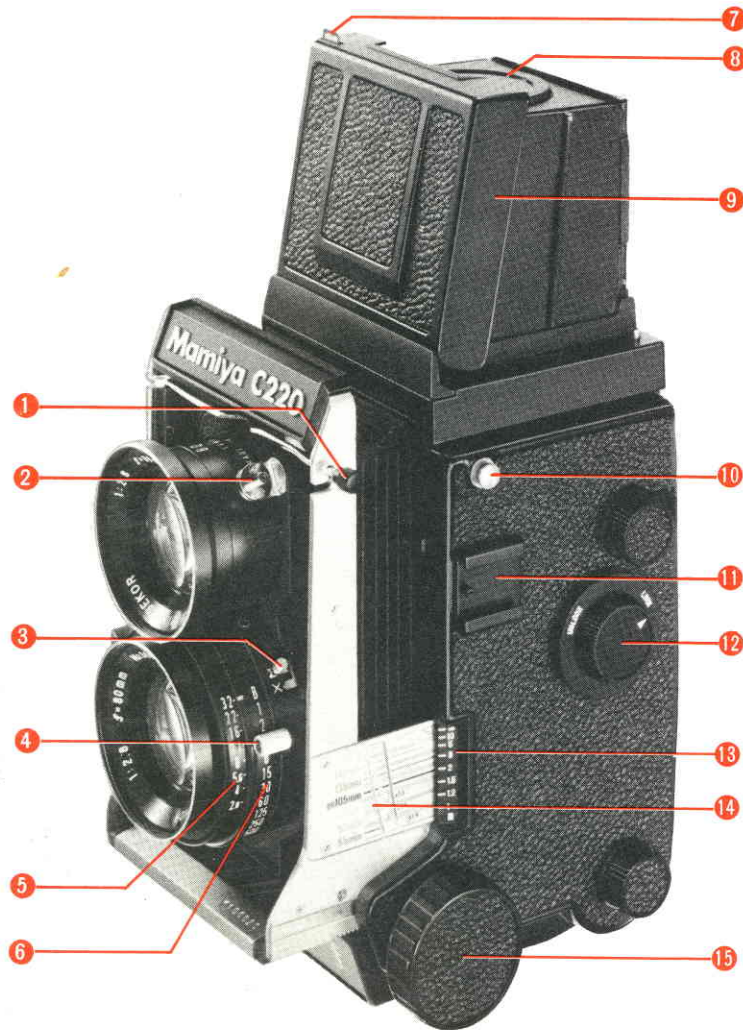
Only one "donation" needed per manual, not per multiple section of a manual !

The large manuals are split only for easy download size.

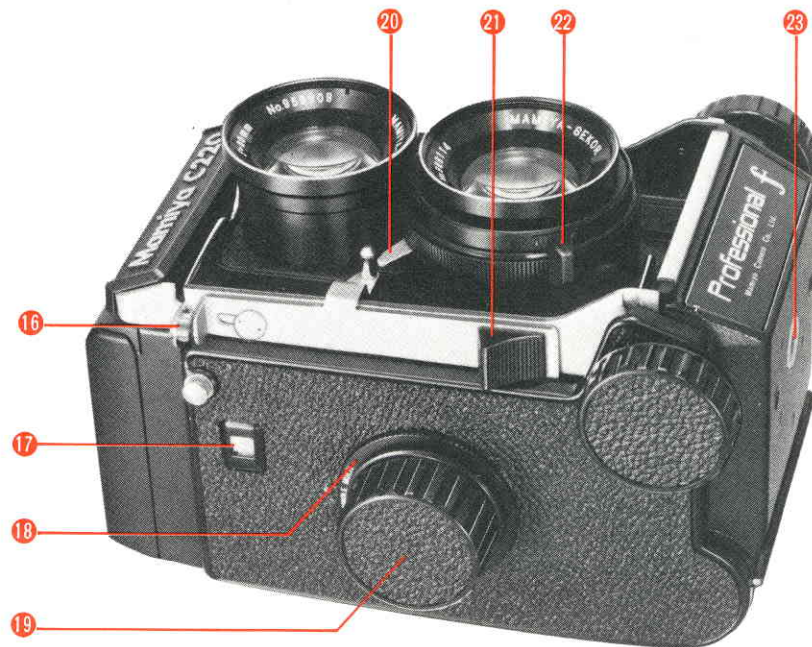
Mamiya C220f

Instructions

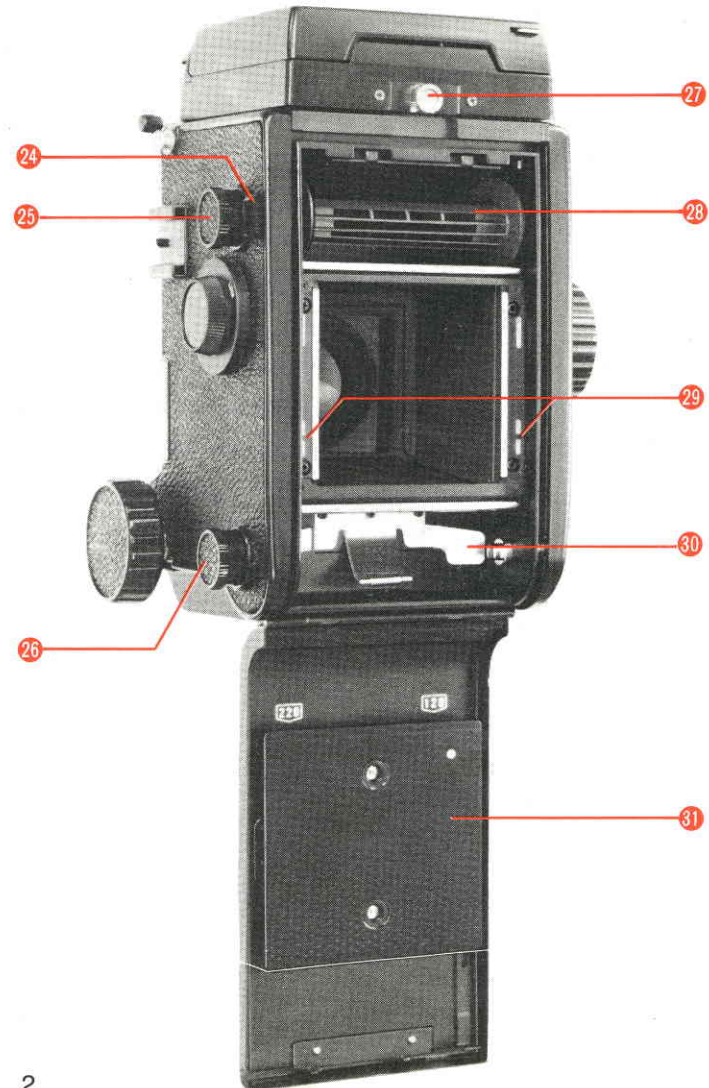




1. Lens clamp bracket
2. Synchro socket
3. M-X synchro selector
4. Shutter cocking lever
5. Aperture ring
6. Shutter speed ring
7. Magnifier setting lever



8. Magnifier
9. Focusing hood front panel
10. Neck strap lug
11. Accessory shoe
12. Lens lock knob
13. Distance graduation
14. Distance scale/Exposure compensation scale
15. Focusing knob
16. Cable release socket
17. Exposure counter
18. Multiple exposure dial
19. Film advance knob
20. Shutter release lever
21. Shutter release button
22. Aperture control knob
23. Tripod socket
24. Back cover lock button
25. Back cover open knob/Spool change knob
26. Spool change knob
27. Focusing hood lock screw
28. Take-up spool chamber
29. Start marks
30. Film chamber
31. Film pressure plate



Specifications

Type	6 × 6 Twin-Lens Reflex Camera with Interchangeable Lens System
Picture Size	56 × 56 mm (actual picture area)
Film Size	120 roll film (12 exposures) 220 roll film (24 exposures) Changeover effected by turning pressure plate
Lens (standard)	Mamiyal-Sekor 80 mm f/2.8
Shutter	Seiko #0 (B, 1-1/500 sec., M-X synchronization)
Focusing	Front extension system by rack-and-pinion with focusing knobs.
Focusing hood	One-touch operation facilitates interchange of dioptic lenses. Removable and replaceable by other types of finders.
Film wind	By winding ratchet knob. Automatic winding stop. Double exposure prevention device.
Exposure counter	Progressive type, automatic re-set. (120/220 changeover by turning the pressure plate)
Other features	Parallax and exposure compensation scale. Multiple exposure possible.
Dimensions	123 (W) × 172 (H) × 113 (D) mm.
Weight	1,500 grams (with 80 mm f/2.8 lens).

- Due to a modification of the product, specifications and appearance are subject to change without notice.

Congratulation on your choice of Mamiya C220 Professional "f" twin-lens reflex camera.

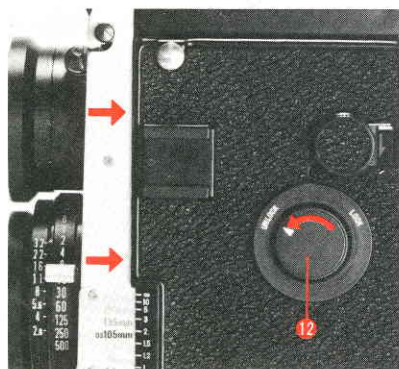
Before using the camera, please read these instructions very carefully, and learn the correct method of handling it. By becoming completely familiarized with the Mamiya C220 Professional "f", you can make the most of the splended opportunities this fine camera offers for many years to come.

Mamiya C series twin-lens reflex cameras are highly reputed by professional cameramen the world over as the only twin lens camera (2-1/4 in. square format) with interchangeable lenses. This Mamiya C220 Professional "f" is a popular version of the versatile Mamiya C series with all of the series' characteristic versatilities topped by further improvements, especially in light weight, ease of handling and genuine economy.

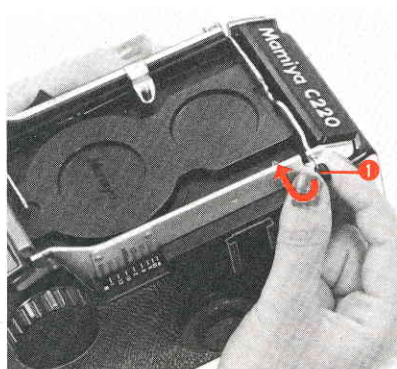
Not only designed for professional cameramen, the superb Mamiya C220 is also ideal for many advanced amateurs who wish to take advantage of the fine details in enlargements which only a large-format camera offers.

Contents

	Page
Names of parts	1
Specifications	3
Lens mounting/removal	5
Handling neck strap	6
Handling focusing hood	7
Shutter operation	8
Opening and closing the back cover	9
Before loading film	10
Loading film	11
Photographing	13
Reading the distance scale	14
Close-up photography	14
Changing the focusing hood	15
Flash photography	17
Handling the 105mm f/3.5DS lens	18
Multiple exposures	19
Precautions on shutter operation	20
Mamiya-Sekor lenses	21
Accessories	23
Depth-of-field tables	28
System chart	30



Turn the focusing knob and fully retract the lens into the camera body. Then, turn the lens lock knob (12) until the triangle mark points to UNLOCK.



Place the camera so that the lens mount faces upward and pinch the head of the lens clamp bracket (1), press the head toward the camera body, and move it along the groove to release the lens clamp. Now the body cap or lens can be removed.



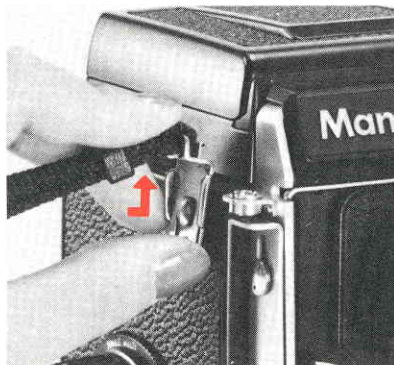
Insert the lens into the lens mount, hook the lens clamp as it was and turn the lens lock knob until the triangle mark points to LOCK.

Precautions

1. While the lens lock knob (12) indicates UNLOCK, a red warning signal appears on the ground glass focusing screen, and the film in the camera is protected from light by an internal cover. Should this cover be pushed purposely or inadvertently while the lens is removed, light will strike the film. NEVER PUSH IT!

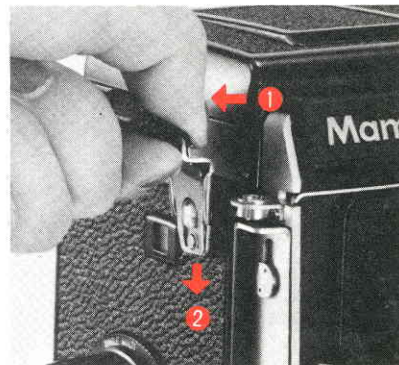
2. After changing a lens, be sure to turn the lens lock knob until the triangle mark points to LOCK; otherwise, the shutter release button can not be pressed.

Attaching to camera



Place the neck strap fastener over the neck strap lug on the camera body and slide it toward the hanging direction, while pressing it toward the body until it clicks and locks in place.

Removing from camera



While pushing in on the rear blade of the neck strap fastener with your thumb, slide it in reverse direction to attaching, then the fastener can be removed.

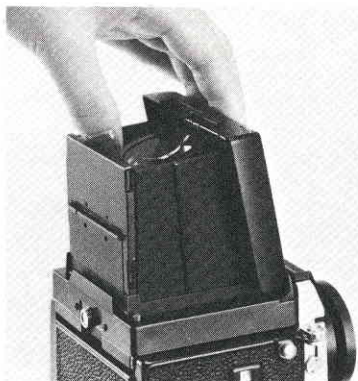
Raising the focusing hood

Raise the rear of the focusing hood, then it will automatically spring up into position.

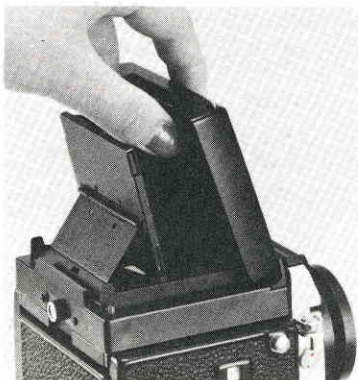
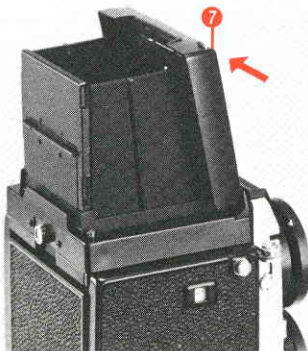


Folding the focusing hood

Return the magnifier to its original position by depressing the base plate of the magnifier until it hooks in place.



By moving the magnifier setting lever (7) inward, the magnifier (8) will automatically set up. While looking into the ground glass focusing screen, turn the focusing knob until the image appears clear and sharp.



Press the front frame while pushing the both side panels inward.

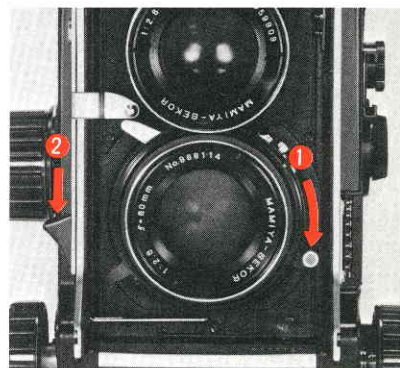


To familiarize yourself with the operation of your camera, practice the shutter release before loading film.

1. Make sure that the triangle mark on the lens lock knob points to LOCK.
2. Turn the multiple exposure dial and set the MULTI to the red dot on the camera body.



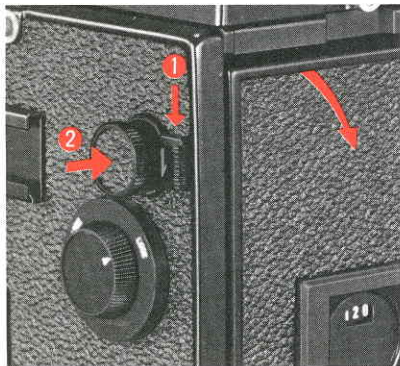
3. Turn the shutter speed ring and align a desired shutter speed with the index line. The shutter speed ring must be set at click stop positions.
4. Turn the aperture ring and set a desired f/stop to the index line. The aperture ring may be set at intermediate click stop positions.



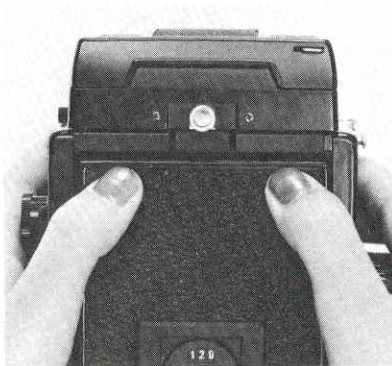
5. Cock the shutter by depressing the shutter cocking lever, then gently depress the shutter release button.

- Be sure to cock the shutter, before press the shutter release button. Unless the shutter is cocked, the shutter release button will not move because of the double-exposure prevention mechanism of the lens-shutter. Do not use any force to release shutter.

Opening and Closing the Back Cover



Push the back cover open knob (25) while the back cover lock button (24) is depressed, and the back cover will open. When the back cover opens, the figure in the exposure counter automatically returns to "0".



When closing the back cover, firmly press both sides of the back cover, making sure that neither side of the back cover is open or loose. Unless the back cover is closed tightly, the automatic film stopper will not work.

This camera accepts either 120 or 220 roll film. It has an automatic film stopper and a double exposure prevention device. Take the following steps before loading a film:

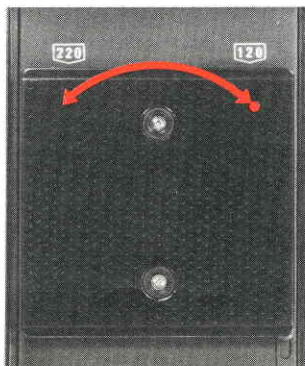
1. Preventing double exposures

Turn the multiple exposure dial (18) until SINGLE matches the red dot of the side plate. This action locks the shutter release button until the film is wound, preventing accidental double exposures.



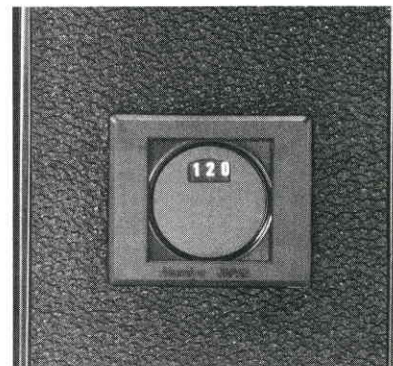
2. Adjust the film pressure plate according to the film used (120 or 220)

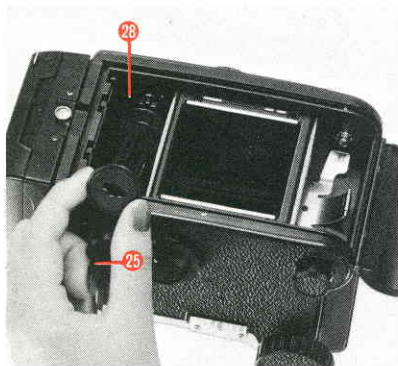
Open the back cover and turn the film pressure plate (31) either to the right or left 90 degrees until the red mark on the film pressure plate matches either the figure 120 or 220.



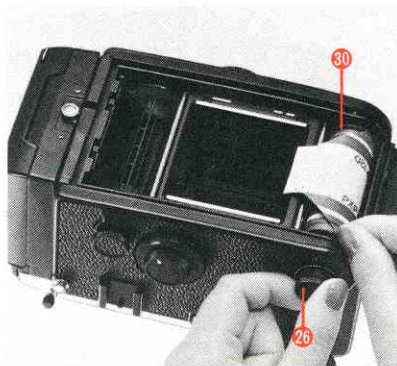
The exposure counter is automatically set to match the used film size when the back cover is closed.

The figure 120 or 220 will appear in the film size indicating window at the center of the back cover.



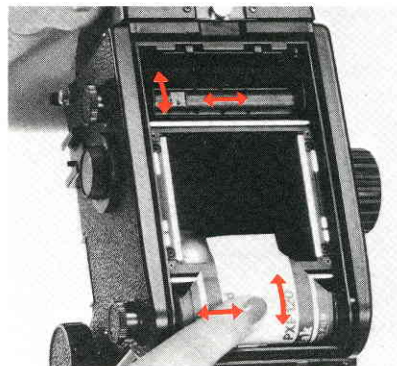


1. To insert a take-up spool in the take-up spool chamber (28), first, open the back cover, pull out the upper spool change knob (25) and engage the spool with the winding axis, then return the spool change knob.

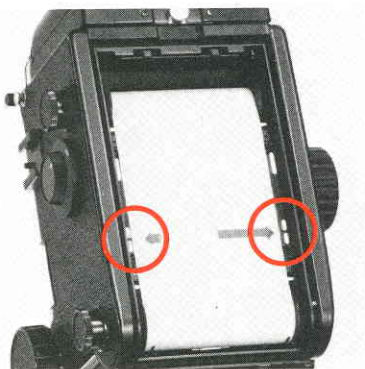


2. Pull out the lower spool change knob (26) and insert a roll of film in the film chamber (30).

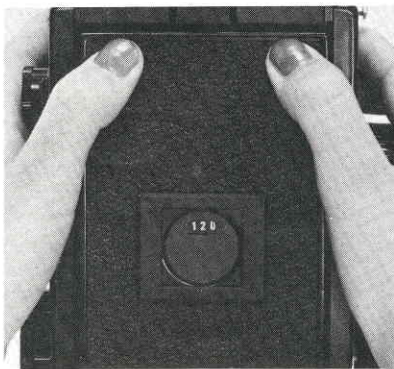
- By turning the spool change knobs either to the right or left after pulling them outward, the knobs stay at their protruded positions. Turn the knobs backward to reinsert them.



- If both spool shafts are not returned to their original positions after loading a film, unbalanced film winding will result. Slightly move the spools up and down or rotate them by your finger tip to fit them in correct positions.



3. Take off the sealed tape of the film, and pull out the leader paper of the film and insert it into the slit of the take-up spool, turn the film advance knob clockwise until the start marks on the leader paper align with the start marks on the camera, and then close the back cover.



- When closing the back cover, firmly press both sides at the upper portions of the back cover as indicated in the photo.

Memo holder

As a reminder of the type and number of exposures of the film loaded in the camera, tear off the end of the film box and insert it in the memo holder on the back cover.

4. Turn the film advance knob clockwise until it stops and the number 1 will appear in the exposure counter (17). Now, the camera is ready for the first exposure. The film advance knob can be operated by several small turns of the knob while keeping the fingers on the knob.

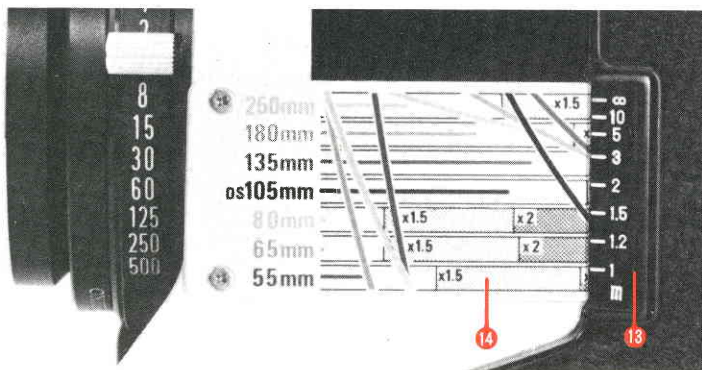


1. After focusing, turn the shutter speed ring (6) to set the shutter speed, then adjust the aperture of the lens by turning the aperture control knob (22). Cock the shutter by pushing down the shutter cocking lever (4). Any of three procedures mentioned above can be performed first.
2. Release the shutter by pressing the shutter release button (21). When a cable release is used, screw it into the cable release socket (16).
3. After each exposure, wind the film by turning the film advance knob, then follow the same routine as mentioned above.
4. When you have exposed a roll of film, wind up to the end of the leader paper completely. Open the back cover and remove the film and seal it to prevent from loosening.

- Both the aperture ring and the shutter speed ring have click stops at one step intervals. Although the aperture ring can be used in-between clicks, the shutter speed ring cannot be used at intermediate positions.

Winding up the roll film

To remove the film before exposing the entire roll, or to wind up the trailer of backing paper of a short roll of film after exposure (certain color films have only 6 exposures), turn the film advance knob and cock the shutter as when preparing for another exposure. By turning the film advance knob while the shutter release button (21) is depressed, the roll film can be completely wound without stopping.



The curve and the scale (shown in the photo) is the distance scale which indicates distance from the film plane to the subject being photographed. The vertical scale on the camera body, which meets the curves printed for each lens, shows the distance of the focused subject from the camera. When a flash unit is used for photographing, this scale is very convenient to use.

The DS 105mm line cannot be used for lenses other than 105mm f/3.5 DS and D lenses.

When the lens is extended for close-up photography, and distance between the lens and the film plane increases beyond normal, image brightness on the film plane decreases, requiring an increase in exposure, and also the parallax must be compensated as follows.

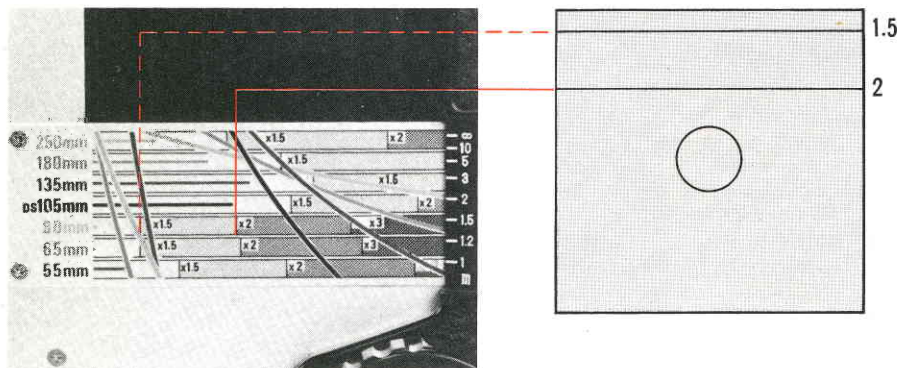
Exposure compensation

For compensating exposures, use the distance scale/exposure compensation scale (14) on the camera body. After focusing, read the exposure factor for the lens used, and increase the exposure by this factor.

For example, when an 80mm lens is focused on a subject and the exposure compensation scale (14) shows like that in the photo, the exposure must be doubled. If a hand-held lightmeter indicates a combination of 1/60 sec. at f/8, the actual combination must be 1/60 sec. at f/5.6 or 1/30 sec. at f/8.

If the exposure factor reads "3", the actual combination must be 1/60 sec. at an intermediate position between f/4 and f/5.6 or 1/30 sec. at an intermediate position between f/5.6 and f/8.

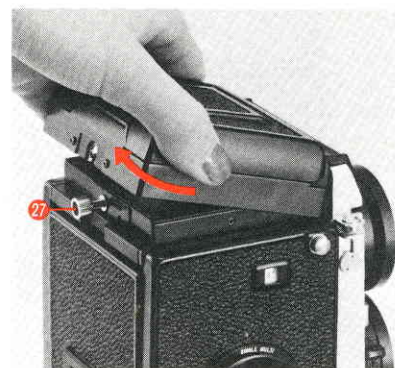
Correcting parallax



When the camera is hand-held, use the parallax scale on the ground glass focusing screen. The greater the distance between the lens and the film, the more parallax increases.

For instance, when the exposure compensation scale (14) indicates a 1.5X exposure factor, the area appearing above the corresponding 1.5 line (first line from the lens side) on the ground glass focusing screen

will not be recorded on the film. When even nearer close-ups are wanted and the scale shows a factor of 2, the area above the second line on the screen will not be photographed. When using a tripod, you can easily photograph the exact area viewed in the ground glass focusing screen by using the Paramender (parallax correction device).



The focusing hood can be replaced with various finders available for this camera as optional accessories.

Removing the focusing hood

Turn the focusing hood lock screw (27) counterclockwise and pull back the hood and move it upward; then the hood can be taken off.