Mamiya C330 Professional

Mamiya C330S & C330

This manual was adapted for the web from scans of an original C330S manual. The scans were done by Erik Jonker. During the conversion to the web version I made a few style changes as well as a couple of grammer changes, mainly to make the document more web friendly. Also thanks to Keven Fedirko for finding all of my typos.

There are also a few additions that I made; pointing out where the C330S differs from the original C330, and the color photos on page 3 are of a C330, and not a C330s. (the color photos are by Bob Erdman).

Scans of the tables on pages 40 and 41 were difficult to read and I am hoping to get some better scans so that I can complete them. At the moment they are empty...eventually they should contain the depth of field tables for the 7 lenses listed in the manual.

Hope you find this helpful...John M. Brewer of a few propellerheads.

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Mamiya C330 Professional

Before using the camera, read these instructions very carefully, and learn the correct method of hanlding it. By becoming completely families with the Mamiya C330 Professional "S", you can for many years to come make the most of the splendid opportunities this fine camera offers.

Congratulations on your choice of Mamiya C330 Professional "S" twin-lens reflex camera.

This mamiya C330S, an exceptionally high-grade camera, was designed by emphasizing further improvements on the popular Mamiya C series. Retaining the many features of the Mamiya C series cameras which have won highest praise from professional photographers the world over as unique twin-lens reflex cameras (2-1/4 in. square format) with interchangeable lenses.

Final results reveal that this Mamiya C330S, an ideal camera for professional photographers, is also a wise choice for the many advanced amateurs who wish to take advantage of fine details in enlargements which only a large format camera truly makes possible.

The Mamiya C330S accepts all interchangeable lenses of the current Mamiya C series as well as all of the accessories except the single exposure attachment.

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With the wide selection of all these interchangeable lenses and accessories, you can further widen your scope of photography by making the most of the unlimited versatility of Mamiya C330S offers.

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Specifications 2

Type	6 x 6 Twin-Lens Reflex Camera with Interchangeable Lens System
Picture Size	56 x 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)	Mamiya/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 screen	Changeable
Focusing hood	One-touch operation facilitates interchange of dioptric lenses. Removable and replaceable by other types of finders.
Film wind	By winding crank. Automatic shutter cocking and winding stop. Double exposure prevention device.
Exposure counter	Progressive type, automatic re-set. (120/220 changeover coupled with the pressure plate)
Other features	Parallax and exposure compensation are readable on the focusing screen in the finder. Multiple exposure possible. Shutter release lock provided.
Dimensions	123 (W) x 171 (H) x 113 (D) mm
Weight	1,650 grams (with 80 mm f/2.8 lens)

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

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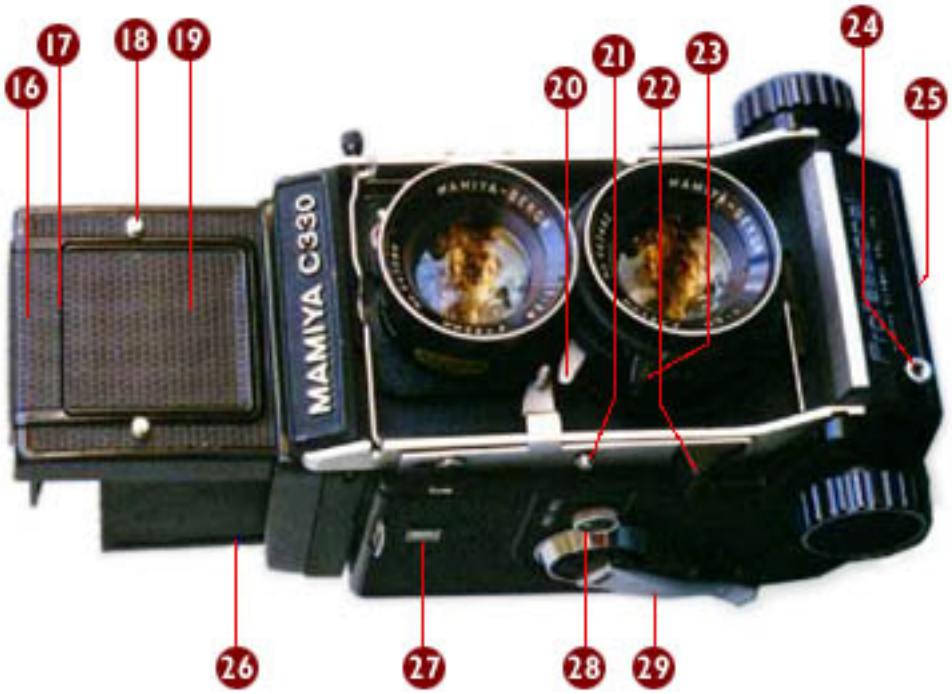
Names of Parts

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
8. Neck strap lug*
9. Accessory shoe
10. Parallax correcting dial
11. Lens lock knob
12. Distance scale window
13. Distance scale revolving knob
14. Focusing knob fixing lever**
15. Focusing knob



16. Sportsfinder frame (for 65mm lens)**
17. Sportsfinder frame (for 80mm lens)
18. Sportsfinder mask stud
19. Sportsfinder flap
20. Shutter release lever
21. Shutter release lock
22. Shutter release button (upper)
23. Aperture control knob
24. Shutter release button (lower) with cable release socket
25. Tripod Socket
26. Release button for sportsfinder frame and flap**
27. Exposure counter
28. Multiple exposure dial
29. Film advance crank

* Standard C330 has loops not lugs. ** Not available on standard C330.

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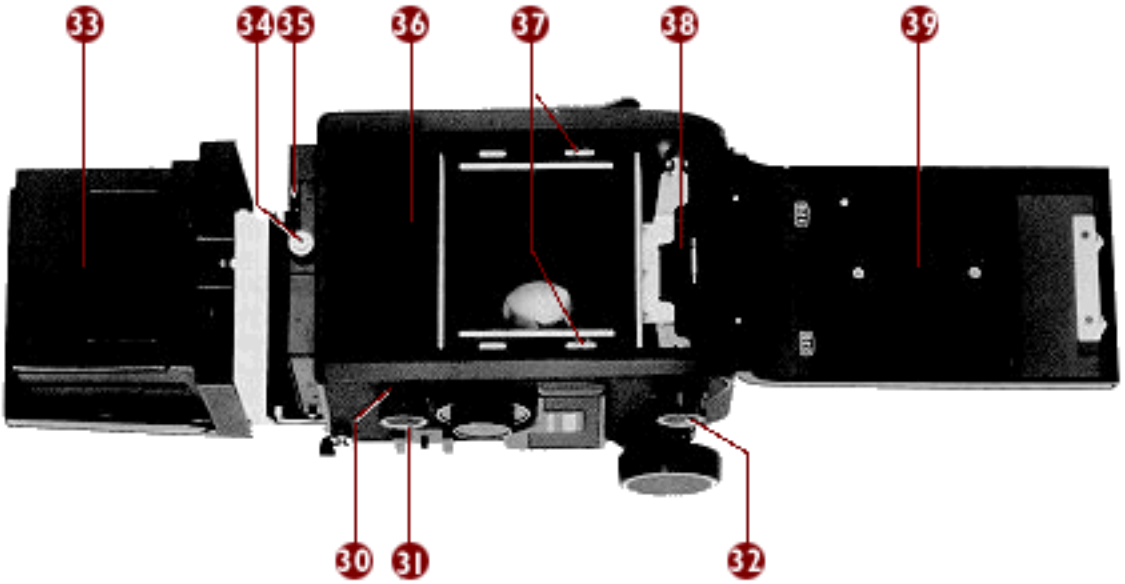
Names of Parts

30. Back cover lock button
31. Back cover open knob and spool change knob (upper)
32. Spool change knob (lower)
33. Eye opening for sportsfinder
34. Focusing hood lock screw
35. Focusing screen frame lock
36. Take-up spool chamber
37. Start marks
38. Film chamber
39. Film pressure plate



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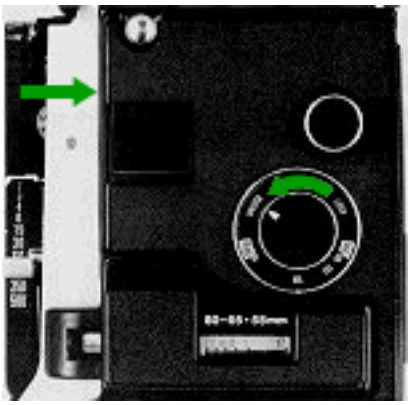
Lens Mounting/Removal



Wind up the film advance crank and fold it into the camera body. Turn the focusing knob and fully retract the lens into the camera body. Then, turn the lens lock knob (11) until the triangle mark points to UNLOCK.

Place the camera so that the lens mount faces upward and pinch 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 and/or lens can be removed.

Insert the lens into the lens mount so that the lens shutter cocking lever (4) connects with the cocking lever on the camera body. This operation is more easily performed by cocking the lens shutter with the fingers and inserting the lens from the cocking lever side on the body.

Hook the lens clamp bracket (1) to its original position, and turn the lens lock knob (11) clockwise to the LOCK position.

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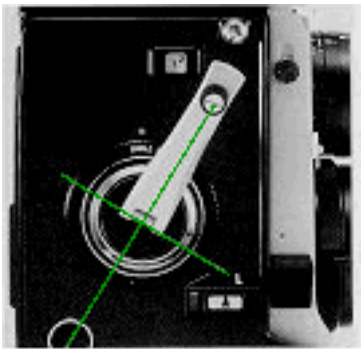
Lens Mounting/Removal (cont.) 6

After changing a lens, set the parrallax correcting dial (10) to the focal length value of the mounted lens. For 55mm and 65mm lenses, set the parallax correcting dial to 80, then attach the parallax correction plate for 55mm/65mm lenses to the focusing hood. (Refer to p.22). For the 250mm lens, set the parallax correcting dial to 180.

Precautions

1 If the film advance crank is not kept positioned diagonally upward, (the same angle as the crank housing position), the cocking lever (4) cannot be connected to the cocking lever on the camera body.

2 For the cocking lever on the 180mm lens, an auxiliary lever for connection is provided on the side of the lens barrel. Since this lever is constantly pushed upward by a spring, when mounting the lens, hold the auxiliary lever downward with a finger tip to prevent obstructing installation.



3 When the lens lock knob (11) is in the UNLOCK position, the portion to which the picture taking lens (lower lens) is attached is protected from the camera interior by a cover to shield the film from exposure to light and a red warning signal is visible on the focusing screen surface. Should this cover be pushed while removing the lens, light will strike the film. Don't push it.

4 After changing a lens, turn the lens lock knob (11) to the LOCK position, otherwise, the shutter release button cannot be depressed.

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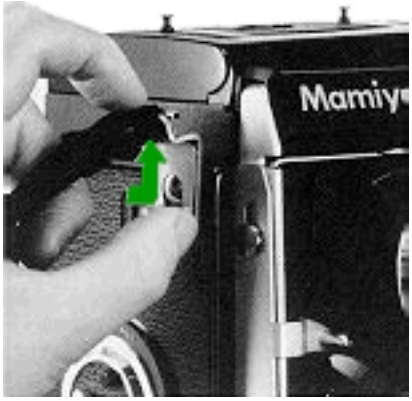
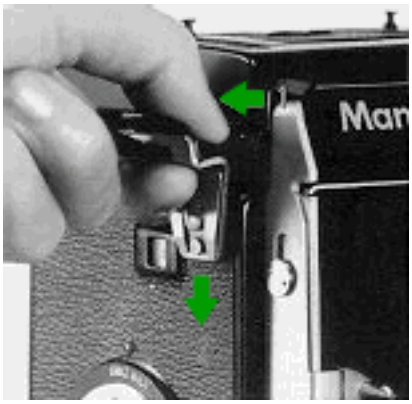
Handling the Neck Strap

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 the direction opposite to that for attaching, and remove the fastener.

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Handling the Focusing Hood

Raising the Focusing Hood

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

Using the Magnifier

By pushing in the top of the sportsfinder flap (19) at the center of the finder frame, the magnifier swings up into position.

While looking into the focusing screen, turn the focusing knob until the image becomes clear and sharp.

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Handling Focusing Hood

Using the Focusing Hood as a Sportsfinder

1. By setting up the magnifier and pushing down the sportsfinder flap, and by retaining the latter to the catch at the bottom of the focusing hood, the hood can be used as a sportsfinder for the 80mm standard lens.

2. After pushing down the flap (19), also, fold down the finder frame (17) to obtain the field of view for the 65mm lens.

3. When using the 105mm, 135mm, 180mm, or 250mm lens, attach the sportsfinder mask corresponding with the lens used to the sportsfinder mask stud (18) to obtain the correct field of view.

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Handling Focusing Hood (cont.) 10

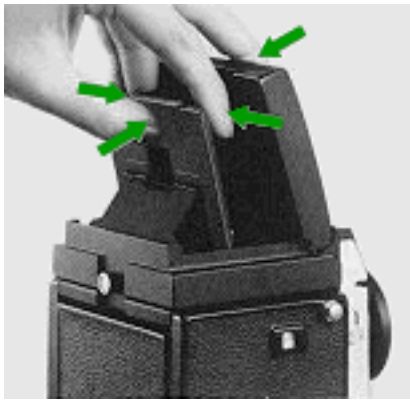
Using the Focusing Hood as a Sportsfinder

4. To return the sportsfinder frame (17), and the flap (19) to their original position, move the release button (26)* towards the arrow mark and the frame and the flap will automatically return to position.

5. To fold the magnifier, simply depress the base plate of the magnifier.

Folding the Focusing Hood

Return the sportsfinder frame and flap; then fold the magnifier. In this condition, the focusing hood can be folded by pressing the front frame inward while pushing both side panels inward.**.



* The original focusing hood does not have a release button, simply jiggle the sportsfinder flap with your finger to release.

** The original focusing hood does not have hinged flaps. You will need to fold the side flaps down before folding down the back, and finally the front flaps.

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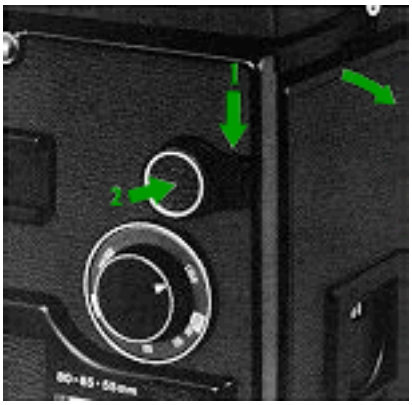
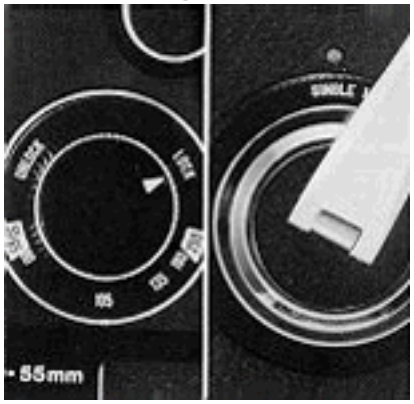
Opening & Closing the Back Cover 11



Push the back cover open knob (31) while the back cover lock button (30) is pulled down, and the back cover is 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.

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



1. Check to make sure that the triangle mark on the lens lock knob points to LOCK and SINGLE on the multiple exposure dial matches the red dot.

2. The shutter release lock should be fully pulled backward. If the triangle mark of the release lock is aligned with the "L", the shutter button cannot be depressed.

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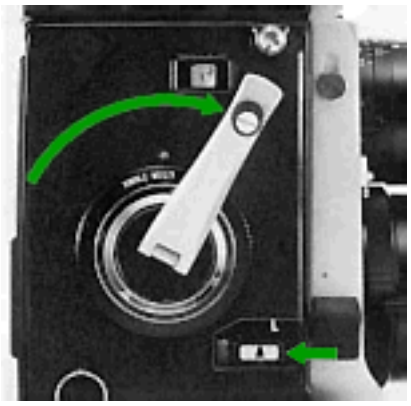
Winding & Shutter Test Without Film



Open the back cover and make sure that a spool has been inserted into the take-up spool chamber.

3. By closing the back cover and turning the film advance crank, the exposure counter will advance. When figure 1 appears on the counter, the crank will be stopped.

Turn the shutter speed ring and align a desired shutter speed with the index line. The shutter speed ring must be set on a click stop position. 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. Depress the shutter button and the shutter will be released. By turning the film advance crank until it stops the shutter button may be depressed again.

•Depending on the kind of take-up spools (especially in case of metal one) the shutter may not be cocked by a single winding.

•When the shutter speed ring is set on "B" (Bulb), the shutter will remain open as long as the shutter button is depressed and it will close as soon as the shutter button is released. This method is used for a long exposure of 2 seconds or more.

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Before Loading Film 13

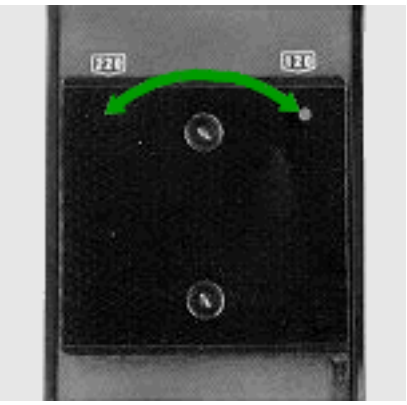
This camera accepts either 120 or 220 roll film. It has an automatic film stopper and a double exposure prevention device. Take the following steps before loading film:

1. Preventing Double Exposures Turn the multiple exposure dial (28) until SINGLE matches the red dot of the side plate. This action locks the shutter release button until the film is wound, and prevents 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 either to the right or to the left 90 degrees until the red dot on the film pressure plate matches the figure 120 or 220 respectively.

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.



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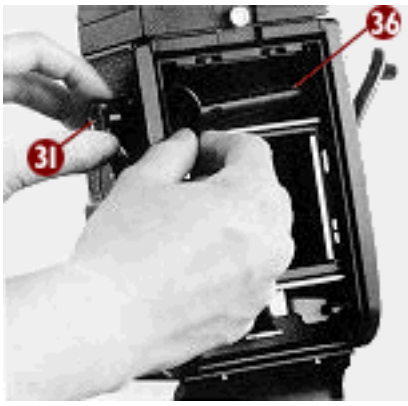
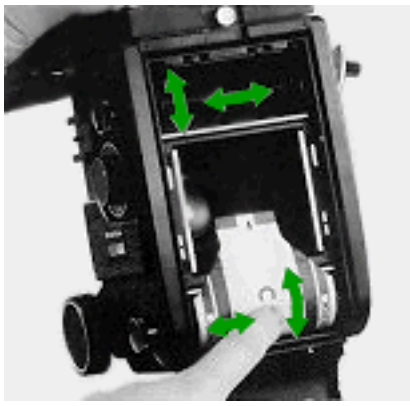
Loading Film



1. Open the back cover and pull out the upper spool change knob (31), then insert an empty spool into the take-up spool chamber (36) so that it engages the winding axis. Let go of the spool change knob.

2. Pull out the lower spool change knob (32), and insert a roll of film into the film chamber (38).

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



・If either spool change knob is not returned to its original position after loading film, unbalanced film winding will result.

To make sure that the spool change knobs fit their original positions, move the spools slightly to the right and to the left or up and down.

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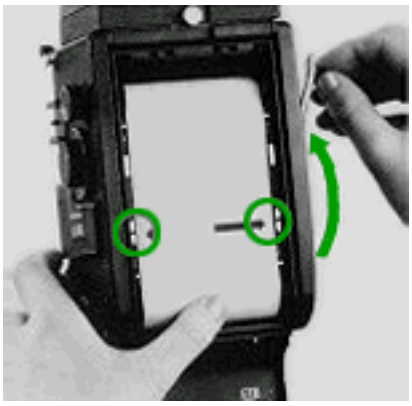
Loading Film (cont.)



3. Pull out the leader paper of the film and insert it into the slit of the take-up spool, turn the film advance crank clockwise until the start mark on the leader paper matches the start marks on the camera.

4. 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.

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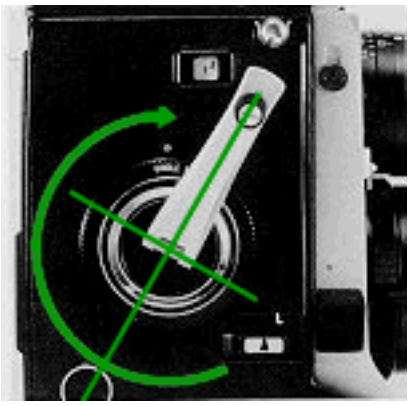
Loading Film (cont.) 16



5. Turn the film advance crank clockwise until it stops. The figure 1 appears on the exposure counter at the position where the crank stops diagonally upward, and the shutter is automatically set. Now the camera is ready for the first exposure.

Turn the crank each time one picture is exposed. Regardless of the number of pictures taken, the crank always stops at a diagonally upward position. In this position, when folding the crank in the opposite direction, the crank can be recessed into the body.

The crank cannot be turned in reverse direction, and the shutter release button can only be pressed at the crank stops position.

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Photographing

1. After focusing, turn the shutter speed ring (6) and set the shutter speed, then adjust the aperture of the lens by turning the aperture control knob (23). Any of three procedures mentioned above can be performed first.

2. Release the shutter by pressing the shutter release button (21) or (24). When a cable release is used, screw its tip into the cable release socket in the lower button (24).

3. After each exposure, wind the film by turning the film advance crank, then follow the same procedure as mentioned above.

Focusing Knob Fixing

After adjusting the focus, turn the focusing knob fixing lever (14) forward and appropriately clamp it, whereby the focusing mechanism is secured.

・Deviation in focusing can be prevented in this manner, when continuously taking pictures, taking snapshots with wide-angle lenses, close-up photographs, and using telephoto lenses.

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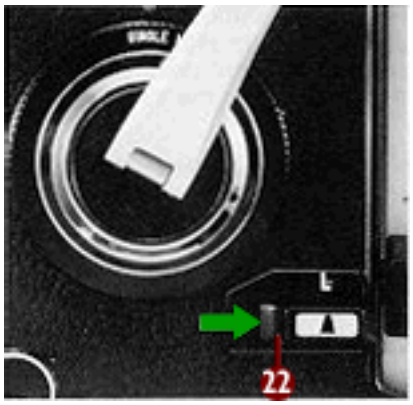
Photographing (cont.) 18



Locking the Shutter Button*
By shifting the triangle mark on the lock button (22) to the letter 'L', the shutter button is locked. During a period when the camera is not in use and is stored in the case, inadvertent shutter release can be prevented.

How to Remove Film
When all film frames have been exposed, the film winding stop mechanism is automatically disengaged. Remove the film after winding the remaining backing paper on the film end.

Winding Up the Roll Film
To remove film before exposing the entire roll, or to wind up a short roll of film after exposure (6-exposure color films), turn the film advance crank while depressing the shutter button on the camera body after winding the exposed frame. In this manner, film can be completely wound without stopping.

* On the earlier C330, the shutter locking button is a small round button found on the metal lever above the side shutter release button.

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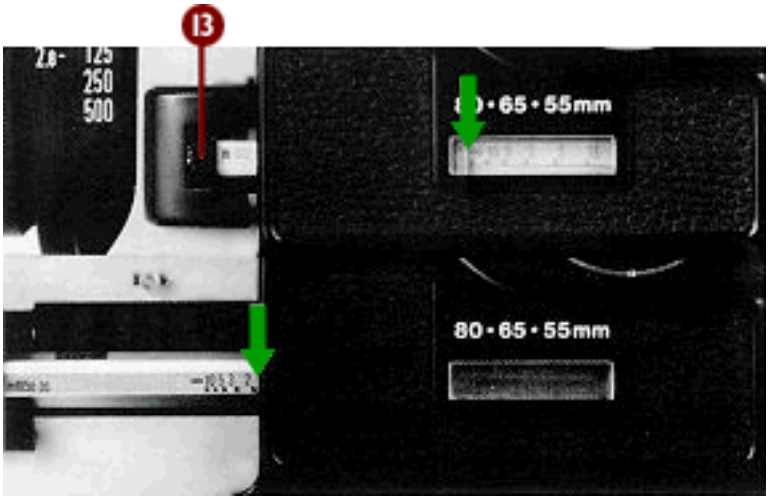
Distance Scale

A distance scale is provided on the left side (viewing the camera held for photographing). By turning the knob (13), set the distance scale to coincide with the lens used, so that the scale faces horizontally.

Distance scales for 55mm, 65mm, and 80mm lenses are indicated in orange. Read these scales at the index position in the window.

Distance scales for 105mm DS, 135mm, 180mm, and 250mm lenses are indicated in black. Read these scales at the front end of the camera body side plate.

Since the flange-focal length varies between the 105mm f/3.5 DS or 105mm f/3.5D lens and the former 105mm f/3/5 lens, a special distance scale is provided. A distance scale marked 105D·DS is used for 105mm D and 105mm DS lenses. A distance scale marked 105 is used for the former 105mm lens.



· The former distance scale for the C330f cannot be used for the C330S.

· The distance scales are available in two types, scaled in feet or meters.

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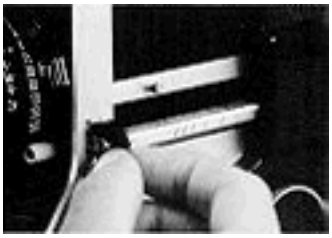
Distance Scale (cont.)

Replacing the Distance Scale

To remove the distance scale, first, fully extend the bellow by turning the focusing knob, then remove the scale end cover by sliding it to the front. Next, detach the distance scale from the bearing, while pressing in the distance scale shaft with a pointed, fine wire.



When installing the distance scale, insert the shaft end opposite the revolving knob into the camera body bearing. Insert the shaft end while pressing the spring located near the bearing to the inner side with the side of the scale. Next, fit the shaft to the front bearing while pushing in the shaft tip with a finger nail; then install the cover as it originally was.

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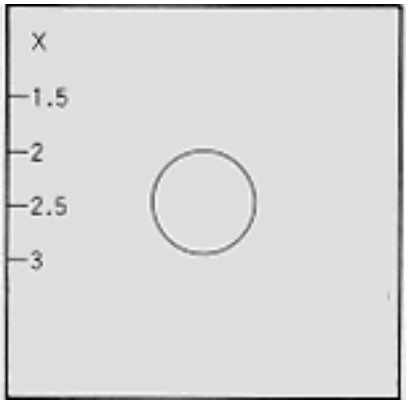
Close-up Photography

Setting the Parallax Correcting Dial:
By turning the parallax correcting dial (10), set the dial index to the focal lenght of the lens used. Subsequently, while the lens is being extended, the pointer will appear on the upper left portion of the focusing screen. The position of this pointer indicates parallax and the exposure factor.

Correcting Parallax:
When the pointer appears on the focusing screen, the upper portion visible above the pointer will be cut off on the film. Be sure that the subject satisfactorily appears under the lower portion of this pointer. When using the camera on a tripod, use the Paramender (parallax correcting device) to ensure that the camera photographs the same image viewed on the focusing screen through simple operations.



Compensating Exposure:
As distance between the lens and film increases, image brightness on the film is reduced even though aperture size remains the same. Consequently, it is necessary to increase the exposure.

The figures on the focusing screen left side indicate the exposure factor. Compensate in the exposure after reading the figure indicated by the pointer while focusing. For instance, assuming that the correct exposure value measured by an exposure meter is 1/125 sec. at f/11,

compensate in the exposure as follows:

If the pointer indicates 2, 1/125 sec., f/8
or 1/60 sec., f/11

If the pointer indicates 3, 1/125 sec., between f/8 & f/5.6
or 1/60 sec., between f/11 & f/8

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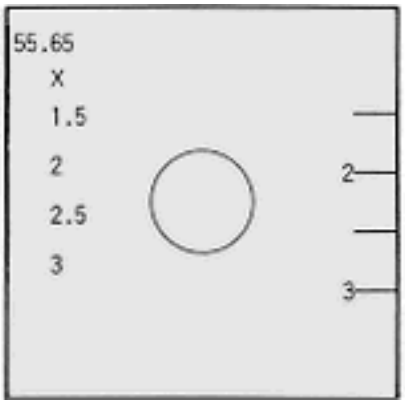
Close-up Photography (cont.)

When Using a 55mm or 65mm Lens:
When using a 55mm or 65mm lens, set the dial (10) to 80 and attach the parallax correction plate for 55mm/65mm lenses to the focusing hood.



How to Install the Parallax Correction Plate:
Remove the focusing hood from the camera and turn it inside out. Also turn the correction plate inside out and insert its chamfered edge into the two catches on the hood, then fit the correction plate while pulling out the slide lock on the opposite side. When the slide lock is released, the plate is secured.

The figures visible on the left side of the correction plate after attaching the focusing hood to the camera reveal the exposure factor. Observe the line on the right for correcting parallax. When the pointer indicates 1.5, the upper portion of the first line will be cut off. In turn, this becomes a correcting scale when the exposure factor is 2, 2.5 and 3.

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Changing the Focusing Hood

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 (34) counterclockwise and pull back the hood and move it upward; then the hood can be taken off.

Attaching the Focusing Hood
Match the grooves on the hood's front sides to the pins of the camera body, fit the groove on the hood's rear to the focusing hood lock screw, then tighten it.

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Changing the Magnifier

Changing the Magnifier (for diopter correction)
In addition to the standard magnifier (-1.5 diopter), diopter lenses of +2, +1, 0, -2 and -3 diopter are available for near and farsighted persons.

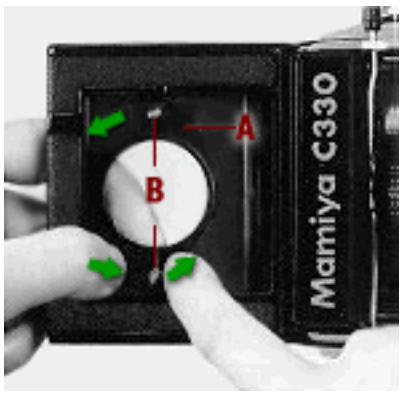
The standard -1.5 diopter magnifier is designed for users, wether or not they wear eyeglasses, who have no trouble seeing clearly a subject up to 2.5 ft. (70cm) away. Those who have difficulty seeing clearly at such a distance should use an appropriate diopter lens available as an optional accessory. However, before making a purchase, test the diopter lens at your Mamiya dealer to make sure it matches your eye.

Changing Method
1. Raise the focusing hood; then depress the sportsfinder flap and frame.

2. Fold the raised magnifier, then lay the camera down with the lens facing upward.

3. Hold the base plate of the magnifier from inside and under the focusing hood, with the backs of the pins (B) held by your fingers, thus preventing the base plate from being depressed.

4. By turning the retainer (A) towards the arrow direction in the photo, the retainer and the magnifier can be removed. In this case, turn the retainer one side at a time while pushing it towards the base plate, also holding the base plate from the back as mentioned above.



5. To attach the magnifier, place the magnifier and the retainer on the base plate, facing the flat surface of the magnifier downward; then, by turning the retainer clockwise while pressing it towards the base plate, the retainer will snap into the pins (B). When looking through the magnifier for focusing, the flat surface of the glass will face one's eyes.

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Changing the Focusing Screen

Various types of focusing hoods are available to meet individual needs or preferences.

Removing the Focusing Screen
Remove the focusing hood and slide the focusing screen frame lock (35) in the direction of the arrow, then the focusing screen holder will pop-up. Remove the focusing screen by holding its both side edges.

Attaching the Focusing Screen
Hold both side edges of the focusing screen so that the Fresnel lens surface faces upward, then insert the focusing screen into the screen holder.

After checking to make sure the screen is correctly fitted into the screen holder, depress the focusing screen frame. Then the focusing screen will be locked in place.

Since the focusing screens surfaces are soft and easily damaged, handle them carefully. Never touch the surface with bare fingers, should dust settle on it, merely blow away by using a blower.

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Flash Photography

When a falsh unit is used for photographing, connect the synchro cord to the synchro socket (2).

When using an electronic flash unit, set the M-X synchro selector (3) on X to synchronize all shutter speeds.

When using M-class flash bulbs, set the M-X synchro selector (3) on M to synchronize flash at all shutter speeds. This M-X synchro selector can be switched even after cocking the shutter.

When photographing without flash, keep the M-X synchro selector on X.

Flash Synchronization Table

Contact	Type of Flash	Shutter Speed										
		B	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500
M	M class	o	o	o	o	o	o	o	o	o	o	o
X	Electronic Flash	o	o	o	o	o	o	o	o	o	o	o
	M class	o	o	o	o	o	o	o	x	x	x	x

Combinations with the o mark synchronize.
Combinations with the x mark do not synchronize.

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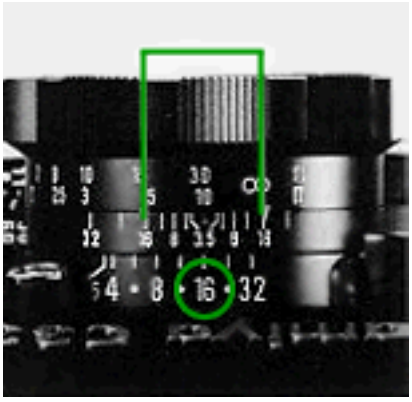
Handling the 105mm f/3.5 DS Lens

The 105mm f/3.5 DS lens is equiped with diaphragms on the viewing lens, thus enabling you to observe the depth-of-field on the focusing screen. In addition, this lens-shutter has a built in self-timer.



Depth-of-Field Control
When the camera is focused on a subject, a certain area in front of and behind the subject is also in focus; this is called the depth-of-field. Depth-of-field varies in relation to the aperture in use; it increases as the aperture is stopped down to smaller apertures, and decreases as the lens is opened up to larger apertures.

Viewing on the Focusing Screen
After focusing, set the desired aperture to the central index mark by turning the aperture scale ring of the viewing lens. Now, the depth-of-field can be ovserved on the focusing screen.

Using the Depth-of-Field Scale
Turn the distance scale ring and set the focused distance to the centra index mark. Next, select and aperture and set it to the central index mark, and look at the corresponding figures on the depth-of-field scale on both sides of the central index mark. This is the extent of the depth-of-field that will be obtained with the aperture you are using.

For example, if the camera is focused at 30 ft. (10m) at an aperture of f/16, the range of sharp focus will be approximately from 15 ft. (5m) to infinity.

Note:
The aperture scale of the viewing lens does not interlock with the taking lens, so in actual photography, never forget to set the aperture of the taking lens.

The distance scale of the viewing lens is provided to read the depth-of-field, and has no relation with actual focusing.

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Handling the 105mm f/3.5 DS Lens (cont.) 28

Self-Timer Operation
By setting M-X synchro selector to the V position, the shutter is released approximately 10 seconds after pressing the shutter release button. At this V setting, X flash synchronization is offered.

The M-X synchro selector (3) can be moved before or after cocking the shutter.

After finishing photographing with the self-timer, return the selector to the X position. If left on the V position, the self-timer will be activated for the next picture.

If you notice that the self-timer is activated after releasing the shutter for ordinary photography, depress the shutter cocking lever immediately to switch off the self-timer. Then set the synchro selector to X or M to restore ordinary shutter action.

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Multiple Exposures/Precautions on Shutter Ops. 29

Turn the multiple exposure dial (28) and set the word 'MULTI' to the red dot, then the double exposure prevention is disengaged. The shutter button can be depressed without advancing the film, whenever the shutter is cocked manually.

Upon finishing photography, be sure to set the word 'SINGLE' of the dial back to the red dot.

When photographing is suspended with the shutter button depressed halfway, it very rarely happens that the shutter button cannot be depressed on the next attempt. In this case, the shutter can be released by setting the 'MULTI' to the red dot, without needlessly advancing the film.

Precautions on Shutter Operations

In any of the following situations, the safety mechanism prevents the shutter release button from being depressed.

1. When the triangle mark of the lens lock knob points to UNLOCK. Red warning mark will appear on the ground glass focusing screen in the finder.

2. When the triangle mark on the shutter release lock is set to 'L'.

3. When 'SINGLE' on the multiple exposure dial is set to the red dot, and...

(1) When film is not loaded (exposure counter indicates '0').

(2) When the film has not been wound completely.

(3) When the shutter release button has already been pressed.

(4) When the last film in roll is exposed (after 12 or 24 exposures).

To freely release the shutter or for multiple exposures, set the multiple exposure dial so that the 'MULTI' matches the red dot.

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Precautions on Shutter Operations (cont.) 30

250mm f/6.3 and 80mm f/3.7 lenses.

Shutters of these lenses have no self-cocking system, requiring the shutter to be set manually after each film advance.

For certain lens-shutter assemblies (such as the formar 80mm f/3.7 lens), the release lever of the lens-shutter can be depressed many times even though the shutter is not cocked. When the shutter is not cocked, the shutter blades do not open.

When using this type of lens-shutter, no picture will be recorded on the film if the shutter button is depressed without cocking the shutter. If you find the shutter blades are unopened after depressing the shutter button, the shutter button cannot be depressed again by the double exposure prevention device even if the shutter is cocked afterwards. In this case, set the multiple exposure dial to the 'MULTI' and depress the shutter button, or release the shutter by pushing the release lever on the lens-shutter assembly.

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Mamiya-Sekor Lenses

55mm f/4.5

65mm f/3.5

80mm f/2.8

105mm f/3.5DS

135mm f/4.5

Super 180mm f/4.5

250mm f/6.3

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Mamiya-Sekor Lenses (cont.)

Lens	Composition	Picture Angle	Minimum Aperture	Filter Diameter (mm)	Lens Hood Diameter (mm)	Close-Up Capabilities	
						Shortest Distance from Film to Subject	Subject Coverage
55mm f/4.5	9 element 7 group	70°30'	f/22	46ø	48ø	9 1/2 in. (24.1 cm)	2 17/32 in.^{2} (6.4 cm^2)
65mm f/3.5	6 element 5 group	63°	f/32	49ø	50ø	10 11/16 in. (27.1 cm)	2 21/32 in.^{2} (6.7 cm^2)
80mm f/2.8	5 element 3 group	50°40'	f/32	46ø	48ø	1 ft. 1 15/16 in. (35.4 cm)	3 25/64 in.^{2} (8.6 cm^2)
105mm f/3.5DS	5 element 3 group	41°20'	f/32	46ø	48ø	1 ft. 11 in. (58.4 cm)	7 1/4 in.^{2} (18.4 cm^2)
135mm f/4.5	4 element 3 group	33°	f/45	46ø	48ø	2 ft. 11 1/2 in. (90.2 cm)	9 15/16 in.^{2} (25.2 cm^2)
Super 180mm f/4.5	5 element 4 group	24°30'	f/45	49ø	50ø	4 ft. 2 3/4 in. (1 m 29 cm)	10 53/64 in.^{2} (27.5 cm^2)
250mm f/6.3	6 element 4 group	18°	f/64	49ø	50ø	6 ft. 8 3/4 in. (2 m 5 cm)	1 ft. 1/4 in.^{2} (31.1 cm^2)

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Accessories

Filter
Filters are available in five types: SY48 (Y2), SO56 (O2), SL39 (UV), YG, SL-1B (skylight). Filter sizes for each lens are shown in the system chart.

・When using a 49mm diameter filter, employ the 49mm filter for Mamiya C; otherwise attaching the lens hood might be impossible. When you order filters, always specify the Mamiya C Professional type.

・To attach a filter to a lens of 49mm filter diameter, place your palm on the protective lens ring screwed into the front barrel of the lens, turn the ring counter-clockwise to remove it, and then screw in the filter. When a filter is not used, always replace the ring to protect the lens barrel.

Lens Hood
There are four different types of lens hoods available for interchangeable lenses.

1. Lens hood for 55mm lens*.
2. Lens hood for 65mm lens*
3. Lens hood 48mm ø for 80mm f/2.8, 105mm f/3.5 DS and 135mm f/4.5 lenses.
4. Lens hood for super 180mm and 250mm lenses*.

* Marked lens hoods have a side plate which can be inclined. Attach the lens hood to the lens with this plate upward. When light reflected from the lens hood to the viewing lens becomes annoying while focusing, due to a certain light condition, incline the side plate to eliminate the annoying reflection.

・All of these lens hoods are comparatively new type attached only to the taking lens. Old type lens hoods are also acceptable.

Diopter Lens
For persons whose vision is not adapted to the magnifier (-1.5 diopter) mounted on the focusing hood as standard equipment, five additional types of lens (-3,-2,0,+1,+2 diopters) are available to effect diopter correction.

Lens Case
To protect and easily carry interchangeable lenses, the following hard cases (4 types) are available:
(1) Case for 55, 80, and 105mm lenses
(2) Case for 65 and 135mm lenses
(3) Case for 180mm lens
(4) Case for 250mm lens

Soft Lens Case
The soft lens case is widely applicable to protect interchangeable lenses for the Mamiya C Professional or to store accessories.

This case also can hold lenses for the Mamiya Press and Mamiya RB.

Focusing Screen
A focusing screen is necessary to focus quickly and accurately. Mamiya offers the following seven types, and advises you to use these focusing screens by changing them according to the lens used, the photographing purpose, and/or the subject condition. Each focusing screen has exposure factor graduations.

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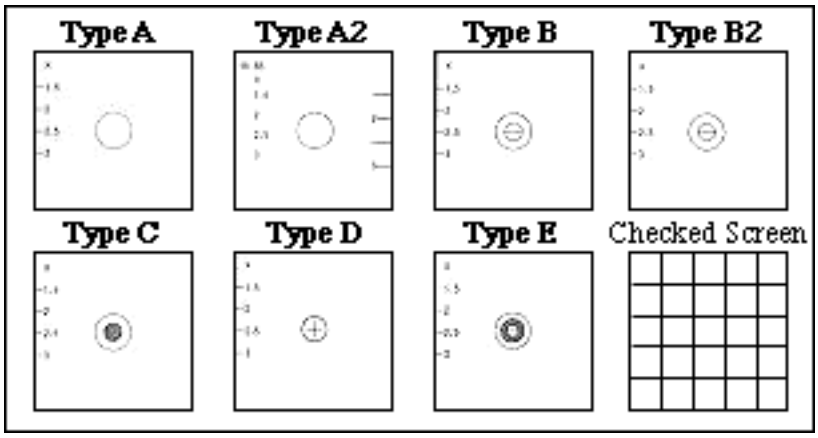
Accessories (Focusing Screens) 34



Type A: Matte
Entirely matted with Fresnel lens.
For general photography.
Suitable for any focal length lens.

Type A2: Matte for wide-angle lens
Entirely matted with Fresnel lens.
Clear view-field is objeained when using the 55mm and 65mm wide-angle lenses since the parallax correction plate need not be used.

Type B: Rangefinder Spot 4°
Entirely matted with Fresnel lens, and split prism.
For general photography.
Quick, accurate focusing is possible through the matted surface and the split prism.

Type B2 Rangefinder Spot 6°
Entirely matted with Fresnel lens, and split prism.
For general photography.
Focusing precision by the split prism is more sensitive than the type B Range Finder Spot 4°.

Type C: Microprism
Entirely matted with Fresnel lens, and microprism.
For general photography.
Focusing is performed through the matted surface and the center microprism portion.

Type D: Cross Hair
Entirely matted, center small circular portion is transparent without Fresnel lens.
For special photography.
Suiteable for close-up photography by extending the bellows; also for dim, distant views and astrophotography.

Type E: Rangefinder Spot/Microprism
Entirely matted with Fresnel lens, split prism at center; microprism surrounding the center.
For General photography.
Convenient for quick, accurate focusing with either the central split prism or a doughnut-shaped microprism. Focusing can also be done in the surrounding matte area.

Checked Screen
Convenient in arranging composition.
Most suitable for close-ups, copying, and photographing buildings.
The checked screen can be used with any focusing screen by simply putting it onto the focusing screen frame, placing the thing edge toward the back cober. The screen will be fixed by installing the focusing hood.

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Accessories (cont.)

(1) CdS Magnifying Hood

This is a spot metering finder with a CdS exposure meter incorporated in the magnifying hood. Since the meter measures light which passes through the lens, the correct exposure setting is easily obtained. A compensating exposure factor need not be considered even if the bellows is extended. When employing a color filter, however, compensating exposure must be made by considering the filter exposure factor. (By attaching the same color filter to the viewing lens, such compensation is unnecessary.)

(2) Prism Finder

As with the magnifying hood, this prism finder may be used instead of the focusing hood. Through this prism finder, the image on the ground glass focusing screen appears exactly as the subject is seen. Really an indispensable accessory for eye-level photo-journal photos or candid shots.

Magnification of this finder is approximately 2.5 times the image on the ground glass focusing screen, particularly bright and clear.

(3) CdS Porrofinder

This is a Porrofinder with built-in CdS exposure meter. Match the index needles within the finder by turning the dial on the back of the finder, and read the dial scale. This device measures the amount of light traveling through the viewing lens, offering correct exposure setting even for amateurs.

Eye Correction Lens

This lens, designed to correct visibility, is installed inside the eyepiece ring of the CdS Porrofinder, or Prism Finder.

Nine types of lenses are provided from +2.5 to -2 diopter (each diopter is +2.5, +2.0, +1.5, + 1.0, +0.5, -0.5, -1.0, -1.5, and -2.0).

When installing the lens on the finder, hold the milled portion of the eyepiece ring with the thumb and finger, and turn it counterclockwise to remove the ring. When the lens is a plus (convex) lens, position it with the flat surface outside, and when it is a minus (concave) lens, place the concave surface on the exterior, then screw the ring into its original position.

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Accessories (cont.) 36

(4a) Grip Holder

The grip holder is a very convenient accessory for hand holding the camera while taking pictures or for carrying the camera. Its accesory shoe is attached on the top of the grip.

(4b) Grip Holder (for Mamiya C330 and RZ/RB)

The camera shutter can be released by triggering the shutter button of this grip. This grip can also be used for the Mamiya RZ/RB.

(5) Multi-angle Grip (for Mamiya C330 and RZ/RB)

The grip mounting angle can be freely turned by single action, when one's finger is removed, the grip is secured after each 20-degree turn.

A trigger-type design is adopted for this grip, interlocked with the camera shutter release button. It is equipped with a lock device so that the trigger cannot be depressed inadvertently.

The accessory shoe on the grip can be freely turned in either direction and secured.

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Accessories (cont.)

(6) Pistol Grip Model 2 (for Mamiya C330 and RZ/RB)
A trigger-type shutter release button is interlocked with the camera. By replacing the changeable base plate, an optional flashgun bracket may be attached. When a subgrip is mounted instead of the flashgun bracket, further stabilized eye-level photography becomse possible.

(7) Paramender Model 2
This is a parallax-correcting instrument used between the camera base and a tripod. Keep the part attached to the camera base downward while focusing, then raise the camera position by turning the handle unit it stops prior to releasing the shutter. Thus, the taking lens is lifted to the position where the viewing lens was, and parallax is hereby automatically corrected.

(8) Focusing Knob Adapter DSF-2/DSM-2 (for Mamiya C330S and C220f)
An adapter for attaching to the focusing knob to facilitate precise focusing. Focused distance can be read easily by using distance scales (for 65, 80, and 105mm lenses) which comes with the adapter. The DSF is calibrated in foot and the DSM, in meter.

From left to right:
Flashgun bracket **Type M** (for Mamiya flashgun), **Type H** (for Heiland flashgun), **Type G** (for Graflex flashgun), and **Subgrip**.

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Accessories (cont.)

(9) Quick-Show Model 2

A two piece set in which one piece is attached to the camera and the other to the tripod. When this is done, the camera can instantly be mounted to, or removed from, a tripod without the need to fumble with screws.

(10) Mamiyalite MZ 36R

This grip-type auto electronic flash has a guide number of 36 (ASA 100m); 28 when wide-angle adapter is attached.

The head of unit can be swung upward 90° and rotated almost one full turn, so bounce flash operation on auto is possible. You can select three different apertures and the flash unit automatically controls flash intensity according to the subject distance. In addition, you can select on of five different flash intensities for your purpose,

so it is highly convenient for close-up work and daylight synchro flash.

Power source: Eight AA-size alkaline or rechargeable Ni-Cad batteries.

(11) Electronic Flash Auto 480 Model 2

The Auto 480 Model 2 is an automatic electronic flash which features superior bursts of light with a guide number of 48 (with ASA 100, in meters), superb flashlight delivery characteristics and three f-stop value settings.

As the bracket can be set to three different angles, the Auto 480 Model 2 may be used in a bounced automatic flash mode with a sensor, which is available as an accessory.

Flash angle: 60° vertically, 70° horizontally.

Power source: 12 AA-size alkaline batteries in the TR Pack. A Ni-Cad cartridge is seperately available.

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Accessories (cont.)

(12) Compartment Case

In addition to the Camera and Standard Lens set, this convenient, heavy-duty camera case holds interchangeable lenses and camera accessories in separate compartments. Panels inside the case may be rearanged freely for accomodating various items. Accessory wrapping cloth for protection of the camera body and lenses is also provided.

Inside Dimensions

Length	Width	Height (top cover)
13 9/16"	7 7/8"	6 7/8" +2"
34.5cm	20cm	17.5cm +5cm

(13) Aluminum Custom Case

The Mamiya Custom Case is a smartly portable, luggage-type aluminum case.

The Custom Case is designed to accomodate and to easily hand-carry normally required interchangeable lenses and accessories as well as standard equipment. By changing the inserts, the Custom Case conveniently accomodates the Mamiya C, Mamiya RZ/RB, or Mamiya Press and related equipment.

The interchangeable inserts, made of sponge rubber, provide effective shock absorption and sufficient protection of the equipment.

The case measures 18 3/8" x 13 7/8" x 6 3/4" (47 x 35 x 17cm) and weighs 8 lbs, 2 1/2 oz. (3.7 kg).

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Depth of Field Tables

55mm f/4.5

Aperture	Distance (in feet)										
	∞	30	15	7	5	3	2.5	2	1.5	1	9 1/2"
4.5	29' 1" ∞	14' 11" ∞	10' 30' 1"	5' 9" 9'	4' 4 1/4" 5' 11"	2' 9 1/4" 3' 3 1/4"	2' 4 5/8" 2' 8 3/4"	1' 10 7/8" 2' 1 1/8"	1' 5 1/2" 1' 6 1/2"	11 13/16" 1'1/8"	9 7/16" 9 9/16"
5.6	23' 2" ∞	13' 3" ∞	9' 3" 40' 8'	5' 6" 9' 8 1/2"	4' 2 1/2" 6' 2"	2' 8 1/2" 3' 4 1/4"	2' 4 1/4" 2' 9 1/2"	1' 10 5/8" 2' 1 1/2"	1' 5 3/8" 1'6 3/4"	11 13/16" 1'3/16"	9 7/16" 9 9/16"
8	16' 5" ∞	10' 9" ∞	8' 145'	5' 1" 11' 7"	3' 11 1/2" 6' 10"	2' 7 1/2" 3' 6 1/4"	2' 3 3/8" 2' 10 3/4"	1' 10 1/8" 2' 2 1/4"	1' 5 1/8" 1' 7"	11 3/4" 1' 1/4"	9 7/16" 9 9/16"
11	11' 8" ∞	8' 6" ∞	6' 9" ∞	4' 6 1/2" 16' 1"	3' 7 3/4" 8' 2"	2' 5 7/8" 3' 9 1/2"	2' 2 1/4" 3' 3/4"	1' 9 1/2" 2' 3 1/4"	1' 4 3/4" 1' 7 1/2"	11 5/8" 1' 3/8"	9 3/8" 9 9/16"
16	8' 4" ∞	6' 8" ∞	5' 6" ∞	3' 11 3/4" 35' 10"	3' 3 1/2" 11' 1"	2' 4 1/8" 4' 3 1/4"	2' 7/8" 3' 4 1/4"	1' 8 5/8" 2' 5"	1' 4 1/4" 1' 8 1/4"	11 1/2" 1' 5/8"	9 3/8" 9 5/8"
22	5' 11 1/2" ∞	5' 1" ∞	4' 5" ∞	3' 4 3/4" ∞	2' 10 3/4" 23' 8"	2' 1 3/4" 5' 1"	1' 11 1/8" 3' 10 3/4"	1' 7 1/2" 2' 7 3/4"	1' 3 3/4" 1' 9 1/4"	11 5/16" 1' 7/8"	9 5/16" 9 11/16"

65mm f/3.5

Aperture	Distance (in feet)										
	∞	30	15	7	5	3	2	1.75	1.5	1.25	1
3.5	50' 2 3/4" ∞	18' 11 1/4" 73' 1 1/4"	11' 8" 21' 1"	6' 2 1/2" 8'1/4"	4' 7 1/4" 5' 5 3/4"	2' 10 1/2" 3' 1 3/4"	1' 11 1/4" 2'1/2"	1' 8 9/16" 1' 9 15/32"	1' 5 11/16" 1' 6 5/16"	1' 2 13/16" 1' 3 3/16"	11 29/32" 1'3/32"
4	43' 11 1/2" ∞	17' 11 3/4" 92' 1 1/4"	11' 3 3/4" 22' 4 1/2"	6' 1 1/2" 8' 2 1/4"	4' 6 1/2" 5' 6 3/4"	2' 10 1/4" 3' 2"	1' 11 1/4" 2'3/4"	1' 8 1/2" 1' 9 17/32"	1' 5 21/32" 1' 6 11/32"	1' 2 13/16" 1' 3 7/32"	11 29/32" 1'3/32"
5.6	31' 5 1/2" ∞	15' 6 1/4" 155' 9"	10' 3 1/2" 27' 11"	5' 9 3/4" 8' 9 3/4"	4' 4 3/4" 5' 9 3/4"	2' 9 1/2" 3' 3"	1' 11" 2' 1"	1' 8 9/32" 1' 9 25/32"	1' 5 17/32" 1' 6 1/2"	1' 2 23/32" 1' 3 9/32"	11 7/8" 1'1/8"
8	22' 1" ∞	12' 10 1/2" ∞	9' 1" 44' 5 3/4"	5' 5 1/4" 9' 11"	4' 2" 6' 3"	2' 8 1/2" 3' 4 1/2"	1' 10 1/2" 2' 1 1/2"	1' 8" 1' 10 1/8"	1' 5 11/32" 1' 6 3/4"	1' 2 19/32" 1' 3 7/16"	11 13/16" 1'3/16"
11	16' 1 1/2" ∞	10' 7 1/2" ∞	7' 11 1/4" 175' 8"	5'1/4" 11' 9 1/4"	3' 11 1/4" 6' 11"	2' 7 1/2" 3' 6 1/4"	1' 10 1/4" 2' 2 1/4"	1' 7 21/32" 1' 10 19/32"	1' 5 3/32" 1' 7 1/32"	1' 2 15/32" 1' 3 19/32"	11 3/4" 1'1/4"
16	11' 1 3/4" ∞	8' 3" ∞	6' 6 3/4" ∞	4' 5 1/2" 17' 2 1/4"	3' 7 1/4" 8' 5"	2' 5 3/4" 3' 10 1/4"	1' 9 1/2" 2' 3 1/2"	1' 7 3/32" 1' 11 13/32"	1' 4 23/32" 1' 7 9/16"	1' 2 1/4" 1' 3 7/8"	11 21/32" 1'3/8"
22	8' 2" ∞	6' 6 1/4" ∞	5' 5 1/4" ∞	3' 11 1/4" 39'3/4"	3' 3" 11' 5"	2' 4" 4' 3 3/4"	1' 8 1/2" 2' 5"	1' 6 1/2" 2'15/32"	1' 4 9/32" 1' 8 1/4"	1' 1 31/32" 1' 4 1/4"	11 17/32 1'17/32"
32	5' 8 1/3" ∞	4' 10 1/4" ∞	4' 3" ∞	3' 3 1/2" ∞	2' 10" 29'3/4"	2' 1 1/2" 5' 5 1/4"	1' 7 1/4" 2' 8 1/4"	1' 5 9/16" 2' 2 9/16"	1' 3 5/8" 1' 9 15/32"	1' 1 9/16" 1' 4 29/32"	11 11/32" 1'25/32"

80mm f/2.8

Aperture	Distance (in feet)								
	∞	30	15	10	7	5	4	3	1.5
2.8	102' 7" ∞	29' 4 1/4" 42'1/4"	13' 2" 17' 5"	9' 2" 11'	6' 7 3/4" 7' 5 1/2"	4' 9 1/4" 5' 2 1/2"	3' 10 1/2" 4' 1 3/8"	2' 11 1/4" 3'3/4"	1' 5 7/8" 1' 6 1/2"

4	71' 10 1/2" ∞	21' 4" 50' 9 1/4"	12" 6 1/4" 18' 8 3/4"	8' 10 1/2" 11' 5 3/4"	6' 5 1/4" 7' 8"	4' 8 3/4" 5' 3 3/4"	3' 10" 4' 2 1/4"	2' 11" 3' 1 1/4"	1' 5 27/32" 1' 6 5/32"
5.6	51' 5" ∞	19' 1 1/2" 70' 4"	11' 9" 20' 9 1/2"	8' 5 3/4" 12' 2 1/2"	6' 3" 7'11 3/4"	4' 7 1/2" 5' 5 1/2"	3' 9 1/4" 4' 3 1/4"	2' 10 1/2" 3' 1 1/2"	1' 5 25/32" 1' 6 1/4"
8	36'3/4" ∞	16' 7" 167' 5 3/4"	10' 9 1/4" 24' 11 1/2"	7' 11 1/2" 13' 5 3/4"	5' 11 3/4" 8' 5 3/4"	4' 5 3/4" 5' 8"	3' 8" 4' 4 3/4"	2' 10" 3' 2 1/4"	1' 5 21/32" 1' 6 11/32"
11	26' 3 1/2" ∞	14' 2 1/2" ∞	9' 8 3/4" 33' 3 3/4"	7' 5" 15' 6 1/2"	5' 8" 9' 2 1/2"	4' 3 3/4" 5' 11 3/4"	3' 6 3/4" 4' 6 3/4"	2' 9 1/4" 3' 3 1/4"	1' 5 9/16" 1' 6 15/32"
16	18' 1 3/4" ∞	11' 6" ∞	8' 5" 76' 3 1/4"	6' 7 1/2" 20' 10 1/4"	5' 2 1/2" 10' 9 1/2"	4'3/4" 6' 6 3/4"	3' 4 3/4" 4' 10 1/2"	2' 8" 3' 5"	1' 5 11/32" 1' 6 23/32"
22	13' 3 1/4" ∞	9' 4 1/2" ∞	7' 3" ∞	5' 10 3/4" 35' 8"	4' 9 1/4" 13' 7"	3' 9 1/2" 7' 5 1/4"	3' 2 3/4" 5' 4"	2' 7" 3' 7 1/2"	1' 5 1/8" 1' 7"
32	9' 2 1/4" ∞	7' 2 1/4" ∞	5' 10 3/4" ∞	5' ∞	4' 2 1/4" 24' 2 3/4"	3' 5 1/4" 9' 7 3/4"	2' 11 1/2" 6' 3 3/4"	2' 5" 4'	1' 4 25/32" 1' 7 1/2"

105mm f/3.5DS

Aperture	Distance (in feet)								
	∞	30	15	10	7	5	4.5	4	3
3.5	131' 5 1/4" ∞	24' 7" 38' 6 1/2"	13' 6 3/4" 16' 9 1/2"	9' 4 1/4" 10' 8 3/4"	6' 8 1/4" 7' 4"	4' 10 1/4" 5' 2"	4' 4 1/2" 4' 7 1/2"	3' 11" 4' 1"	2' 11 15/32" 3' 9/16"
4	115' 1/2" ∞	23' 11 1/2" 40' 2"	13' 4 1/2" 17' 1"	9' 3 1/4" 10' 10 1/4"	6' 7 3/4" 7' 4 1/2"	4' 10" 5' 2 1/4"	4' 4 1/2" 4' 7 3/4"	3' 10 3/4" 4' 1 1/4"	2' 11 13/32" 3' 5/8"
5.6	82' 3 1/4" ∞	22' 2 1/4" 46' 6 1/4"	12' 9 3/4" 18' 1 1/4"	9' 1/4" 11' 2 3/4"	6' 6 1/4" 7' 6 3/4"	4' 9 1/4" 5' 3"	4' 3 3/4" 4' 8 1/2"	3' 10 1/4" 4' 1 3/4"	2' 11 5/32" 3' 7/8"
8	57' 8 1/4" ∞	19' 11 3/4" 60' 11 3/4"	12' 1" 19' 10 1/2"	8' 7 3/4" 11' 10 1/2"	6' 4" 7' 9 3/4"	4' 8 1/4" 5' 4 1/2"	4' 3" 4' 9 1/2"	3' 9 3/4" 4' 2 3/4"	2' 10 13/16" 3' 1 9/32"
11	42' 1/2" ∞	17' 9 1/4" 100'1/2"	11' 3" 22' 7 3/4"	8' 3" 12' 9 1/4"	6' 1 1/2" 8' 2 1/4"	4' 6 3/4" 5' 6 1/4"	4' 2" 4' 11"	3' 8 3/4" 4'3 3/4"	2' 10 13/32" 3' 1 25/32"
16	28' 11 1/2" ∞	15' ∞	10' 1 1/2" 29' 7"	7' 7 3/4" 14' 7 1/2"	5' 9 3/4" 8' 10 1/2"	4' 4 3/4" 5' 9 3/4"	4'1/4" 5' 1 1/2"	3' 7 1/2" 4' 5 1/2"	2' 9 23/32" 3' 2 11/16"
22	21' 2 1/4" ∞	12' 8" ∞	9' 1/2" 38' 6 1/2"	7' 1/4" 17' 9"	5' 5 1/2" 9' 10 1/2"	4' 2 1/2" 6' 2 1/4"	3' 10 1/2" 5' 5"	3' 6" 4' 8"	2' 8 15/16" 3' 3 25/32"
32	14' 8" ∞	10' 1" ∞	7' 8 1/4" ∞	6' 2 1/2" 27' 9 1/4"	4' 11 3/4" 12' 2 1/4"	3' 11 1/4" 6' 11 3/4"	3' 7 3/4" 5' 11 3/4"	3' 4" 4' 3/4"	2' 7 3/4" 3' 5 27/32"

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Depth of Field Tables (cont.) 41

135mm f/4.5

Aperture	Distance (in feet)								
	∞	30	15	10	7	6	4	3.5	3
4.5	159' 3 1/2" ∞	25' 4 3/4" 36' 8"	13' 9 1/2" 16' 5 1/4"	9' 5 3/4" 10' 7"	6' 9" 7' 3 1/4"	5' 10" 6' 2 1/4"	3' 11 1/4" 4' 3/4"	3' 5 1/2" 3' 6 1/2"	2' 11 1/2" 3' 1/2"
5.6	128' 3/4" ∞	24' 5 3/4" 38' 9 1/4"	13' 6 1/2" 16' 10"	9' 4 1/4" 10' 9"	6' 8 1/4" 7' 4"	5' 9 1/2" 6' 2 3/4"	3' 11" 4' 1"	3' 5 1/4" 3' 6 3/4"	2' 11 1/2" 3' 1/2"
8	89' 8 3/4" ∞	22' 8 1/2" 44' 4 1/4"	13' 17' 9"	9' 1 1/4" 11' 1 1/4"	6' 7" 7' 5 3/4"	5' 8 1/4" 6' 4"	3' 10 1/2" 4' 1 1/2"	3' 5" 3' 7"	2' 11 1/4" 3' 3/4"
11	65' 4" ∞	20' 9 3/4" 54' 1 1/4"	12' 4 1/2" 19' 1"	8' 9 3/4" 11' 9"	6' 5 1/4" 7' 8 1/4"	5' 7" 6' 5 ?"	3' 10" 4' 2 1/4"	3' 4 1/2" 3' 7 1/2"	2' 11" 3' 1"
16	45' 1/4" ∞	18' 3 1/2" 85' 6 3/4"	11' 5 3/4" 21' 9 1/2"	8' 4 1/4" 12' 5 3/4"	6' 2 1/2" 8' 3/4"	5' 5" 6' 8 3/4"	3' 9 1/4" 4' 3 1/4"	3' 4" 3' 8 1/4"	2' 10 3/4" 3' 1 1/2"
22	32' 10" ∞	15' 11 3/4" 286 2 1/4"	10' 6 3/4" 26' 3 1/2"	7' 10 1/2" 13' 9 1/4"	5' 11 1/4" 8' 6 1/2"	5' 2 3/4" 7' 3/4"	3' 8 1/4" 4' 4 1/2"	3' 3 1/4" 3' 9 1/4"	2' 10 1/4" 3' 2"
32	22' 8" ∞	13' 2 1/2"	9' 3 3/4" 40' 2 3/4"	7' 2 1/4" 16' 8"	5' 6 3/4" 9' 6"	4' 11 1/4" 7' 8"	3' 6 3/4" 4' 7"	3' 2 1/4" 3' 10 3/4"	2' 9 1/4" 3' 3 1/4"
45	16' 2 1/2" ∞	10' 9 1/2"	8' 1" 132' 8"	6' 5 3/4" 23' 1/2"	5' 1 3/4" 11' 2"	4' 7 1/2" 8' 8 1/4"	3' 5" 4' 10 1/2"	3' 3/4" 4' 3 3/4"	2' 8 1/2" 3' 4 3/4"

180mm f/4.5

Aperture	Distance (in feet)										
	∞	60	30	15	12	10	8	7	6	5	4.5
4.5	299' ∞	50' 2" 74'8"	27' 4 1/2" 33' 2 1/4"	14' 4 1/4" 15' 8 1/2"	11' 7" 12' 5 1/4"	9' 8 3/4" 10' 3 1/2"	7' 10" 8' 2 1/4"	6' 10 1/2" 7' 1 1/2"	5' 11" 6' 1"	4' 11 1/4" 5' 3/4"	4' 5 1/2" 4' 6 1/2"
5.6	240' ∞	48' 3" 79' 5"	26' 9 3/4" 34' 3/4"	14' 2 1/2" 15' 10 3/4"	11' 6" 12' 6 1/2"	9' 8" 10' 4 1/2"	7' 9 1/2" 8' 2 3/4"	6' 10" 7' 2"	5' 10 3/4" 6' 1 1/4"	4' 11 1/4" 5' 1"	4' 5 1/4" 4' 6 3/4"
8	168' ∞	44' 6" 92' 3"	25' 7 3/4" 36' 2"	13' 10 1/2" 16' 3 3/4"	11' 3 1/2" 12' 9 3/4"	9' 6 1/4" 10' 6 1/2"	7' 8 1/2" 8' 3 3/4"	6' 9 1/4" 7' 2 3/4"	5' 10 1/4" 6' 2"	4' 10 3/4" 5' 1 1/4"	4' 5" 4' 7"
11	122' ∞	40' 7" 115' 7"	24' 4" 39' 2 1/4"	13' 6" 16' 10 1/2"	11' 1/2" 13' 1 1/2"	9' 4 1/4" 10' 9"	7' 7 1/4" 8' 5 1/2"	6' 1/2" 7' 4"	5' 9 1/2" 6' 2 3/4"	4' 10 1/4" 5' 1 3/4"	4' 4 3/4" 4' 7 1/4"
16	84' 2" ∞	35' 5" 200'	22' 4 3/4" 45' 6 1/2"	12' 11" 17' 10 3/4"	10' 8" 13' 8 3/4"	9' 1" 11' 1 1/2"	7' 5" 8' 8"	6' 6 3/4" 7' 6"	5' 8 1/4" 6' 4"	4' 9 3/4" 5' 2 1/2"	4' 4 1/4" 4' 8"
22	61' 3" ∞	30' 8" 1664'	20' 5 1/2" 56' 7"	12' 3 1/2" 19' 3 1/2"	10' 3" 14' 6 1/4"	8' 9 1/4" 11' 7 1/2"	7' 2 3/4" 8' 11 1/2"	6' 5" 7' 8 1/4"	5' 7" 6' 5 3/4"	4' 8 3/4" 5' 3 1/2"	4' 3 1/2" 4' 8 3/4"
32	42' 3" ∞	25' 2" ∞	17' 10 3/4" 95' 2"	11' 4 1/4" 22' 2 1/2"	9' 7 1/4" 16' 1/2"	8' 3 3/4" 12' 6 3/4"	6' 11 1/4" 9' 5 3/4"	6' 2 1/4" 8' 3/4"	5' 5" 6' 8 3/4"	4' 7 1/2" 5' 5 1/2"	4' 2 1/2" 4' 10"
45	30' 1" ∞	20' 4" ∞	15' 4 3/4" 874'	10' 4 1/4" 27' 8"	8' 10 3/4" 18' 7 1/2"	7' 9 1/2" 14' 1/2"	6' 7" 10' 3"	5' 11" 8' 7 1/4"	5' 2 3/4" 7' 3/4"	4' 5 3/4" 5' 8"	4' 1 1/4" 5'

250mm f/6.3

Aperture	Distance (in feet)										
	∞	200	100	50	30	20	15	12	10	8	7
6.3	412' ∞	135' 385'	81' 131'	44' 11" 56' 5"	28' 2" 32' 1"	19' 2" 20' 10"	14' 7" 15' 5"	11' 9" 12' 3"	9' 10" 10' 2"	7' 11" 8' 1"	6' 11 1/2" 7' 1/2"
8	325' ∞	125' 513'	77' 143'	43' 8" 58'6"	27' 8" 32' 8"	19' 21' 1"	14' 5" 15' 7"	11' 8" 12' 4"	9' 9 1/2" 10' 2"	7' 10 1/2" 8' 1 1/2"	6' 11" 7' 1"
11	230' ∞	108' 1474'	70' 4" 174'	41' 6" 62' 11"	26' 10" 34'	18' 7" 21' 7"	14' 3" 15' 10"	11' 6" 12' 6"	9' 8 1/2" 10' 3"	7' 10" 8' 2"	6' 10 1/2" 7' 1 1/2"
16	163' ∞	90' 7" ∞	62' 9" 252'	38' 10" 70' 6"	25' 9" 36'	18' 1" 22' 4"	14' 16' 2"	11' 3" 12' 8"	9' 7" 10' 5"	7' 9" 8' 3"	6' 10" 7' 2"
22	116' ∞	74' ∞	54' 5" 688'	35' 7" 85' 2"	24' 4" 39' 3"	17' 5" 23' 6"	13' 7" 16' 9"	11' 2" 13'	9' 5" 10' 8"	7' 8" 8' 4 1/2"	6' 9" 7' 2 1/2"
32	82' 1" ∞	58' 10" ∞	45' 11" ∞	31' 10" 121'	22' 7" 45' 2"	16' 7" 25' 4"	13' 1" 17' 7"	10' 10" 13' 7"	9' 2 1/2" 10' 11"	7' 6 1/2" 8' 6"	6' 8" 7' 4"
45	58' 5" ∞	45' 9" ∞	37' 7" ∞	27' 9" 303'	20' 6" 57' 6"	15' 6" 28' 7"	12' 5" 19'	10' 5" 14' 3"	8' 11 1/2" 11' 4"	7' 4 1/2" 8' 9"	6' 6 1/2" 7' 6"
64	41' 8" ∞	34' 11" ∞	30' 1" ∞	23' 6" ∞	18' 3" 94' 4"	14' 3" 34' 11"	11' 8" 21' 5"	9' 10 1/2" 15' 6"	8' 6 1/2" 12' 1"	7' 1 1/2" 9' 1 1/2"	6' 4 1/2" 7' 9"

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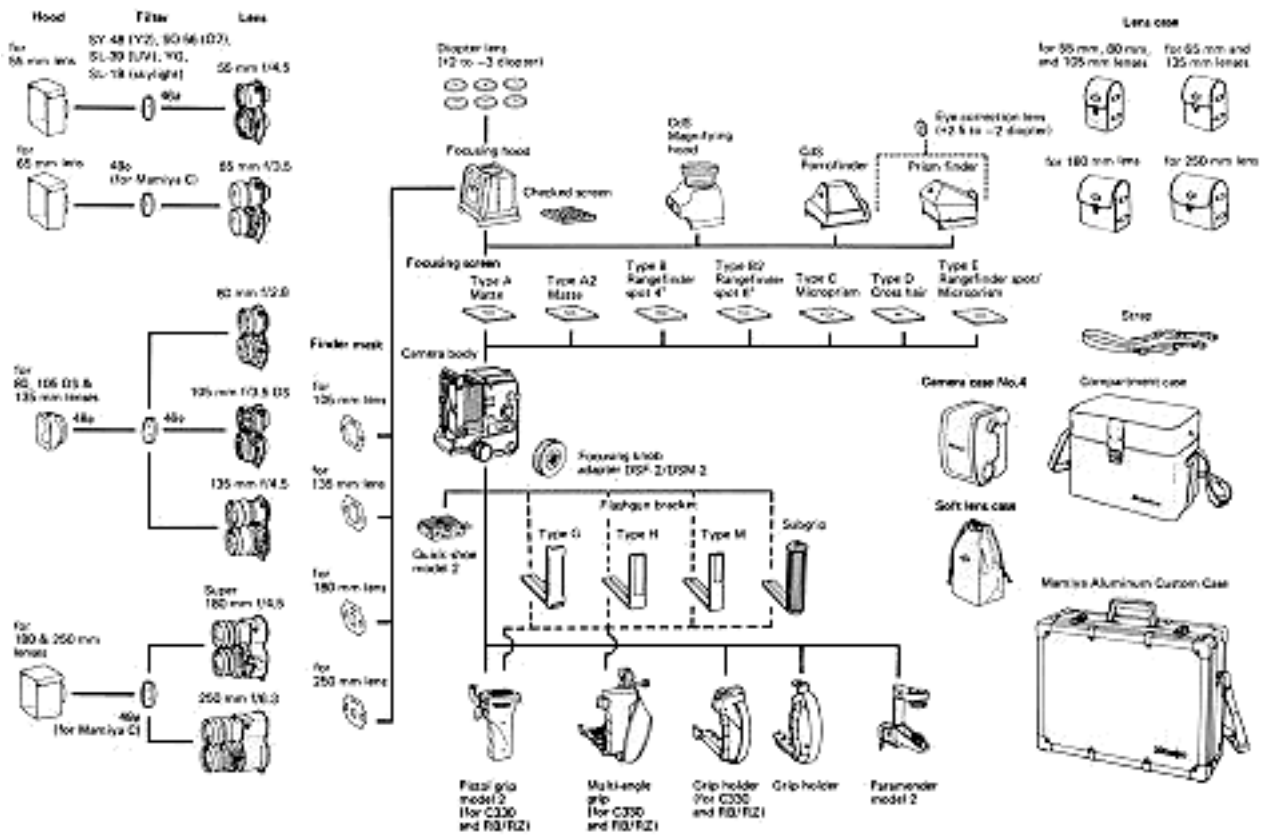
System Chart for Mamiya C330S



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