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Mamiya Universal

INSTRUCTIONS

M Adapter

This is an accessory for attaching a roll film holder for 6×9 or 6×7, roll film holder model K, focusing hood, focusing screen holder, or a right-angle focusing back.

To attach the M adapter to the camera, push down the adapter locking slides (5) on both sides of the camera body while keeping the lock buttons (5') pressed, match the red mark of the adapter against the red mark of the camera body, fit the adapter on the camera, and firmly push up both locking slides.

Do not raise the camera by holding the back in a condition that only one side is secured.

While pushing up the slide, the lock button will spring out automatically. The lock button functions to prevent the back from being detached unexpectedly from the camera body.

To attach the above-mentioned accessories to the adapter, keep the flattened edges of the two locking knobs of the M adapter parallel with the bottom line of the picture format, insert the top of the holder in the upper groove, and push in the bottom; then rotate the two knobs 90 degrees either to the right or left.
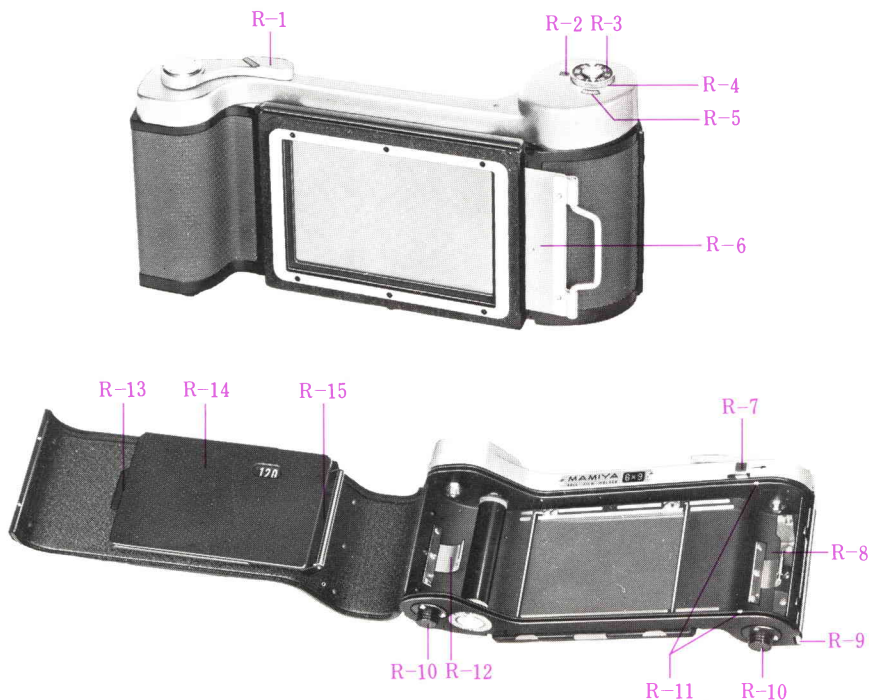
CONTENTS

Nomenclature

There are two types of roll film holders —one for 6×9cm and the other for 6×7cm formats. Both types accept 120 and 220 roll films.

R- 1. Film Advance Lever
R- 2. Film Counter Window
R- 3. Film Sensitivity Reminder Dial
R- 4. Counter Change-over Knob
R- 5. Film Indicator Window
R- 6. Dark Slide
R. 7. Film Wind-stop Release Lever
R- 8. Film Chamber
R- 9. Back Cover Latch
R-10. Spool Change Knob
R-11. Start Mark
R-12. Take-up Spool Chamber
R-13. Plate Catch (Left)
R-14. Pressure Plate
R-15. Plate Catch (Right)

Holder Type	Films	Number of exposure
6×9	120	8
6×9	220	16
6×7	120	10
6×7	220	20

Before Loading Roll Film

Set the automatic film wind stop device for the film to be used (120 or 220).
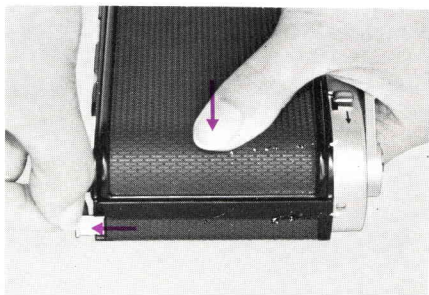
Turn the counter change-over knob (R-4) either to the right or left until the figure appearing in the film indicator window (R-5) corresponds to that of the film to be used (120 or 220).
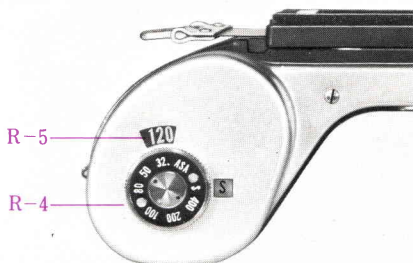
Open the back cover

By pulling out the back cover latch while pressing the back cover to the holder, the back cover can be opened.

**Make sure that the correct side of the pressure plate corresponds to the film used.**

One side of the pressure plate (R-14) is for No. 120 roll film, and the other side is for No. 220. The figure "120" or "220" is indicated on the window of the pressure plate.

Reverse the pressure plate if it does not match the film.

Remove the plate by pushing its right side to the left, pulling it out from the plate catch (R-15).

Reattaching the plate: while aligning the upper and lower edges of the plate with the flange, insert the groove into the plate catch (R-13) on the left, then hook the plate catch (R-15) on the right while pushing it slightly to the left. Always ascertain that the correct side of the pressure plate corresponds to the film used.

Use the convenient film sensitivity reminder dial (R-3) as a memo of film speed in the holder, turning the dial corresponding to the loaded film speed to the red mark.
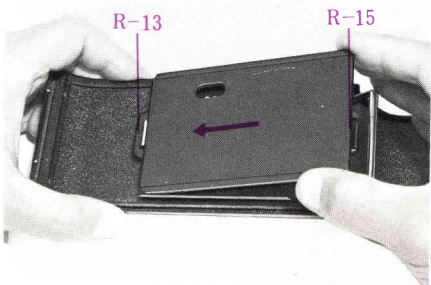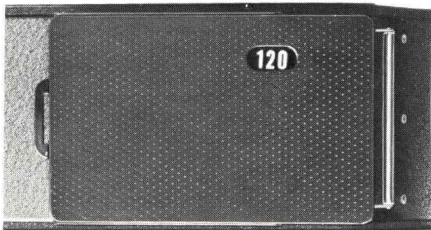
Loading Roll Film

Avoid direct sunlight while loading or unloading film. Do it in the shade.

Pull out the spool change knob (R-10) and place an empty spool into the spool chamber (R-12).

Pull out the other spool change knob (R-10) and place a roll film into the film chamber (R-8).

By turning the spool change knob either to the right or left after pulling it out, the knob will remain projected. By turning back the knob, the knob will snap back to its original retracted position.

Draw out the end of the leader paper of the film, inserting the tip into the slit of the take-up spool.

If the spool is not in the proper position or the leader paper of the film is not correctly inserted into the take-up spool slit, film winding cannot be operated properly or smoothly.

Wind the film advance lever (R-1) gradually until the start mark on the leader paper aligns with the start marks (R-11) on the holder.

Close the back cover and push in the back cover latch, keeping the back cover pressed to the holder.

When the back cover is closed, the start marks will be slightly separated; however, this implies no bad effect whatsoever.

As the film advance lever is carefully wound, figure " 1 " appears in the film counter window and the lever stops winding. Even before figure " 1 " appears in the film counter window, a heavy drag may be felt; however, continue winding until the lever actually stops. Now the first film frame is now ready to be exposed.
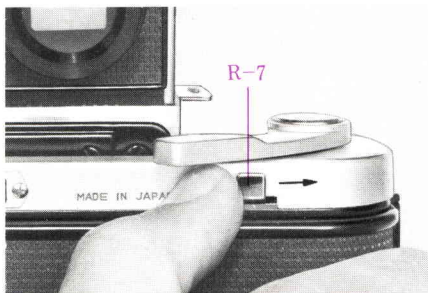
www.orphancameras.com
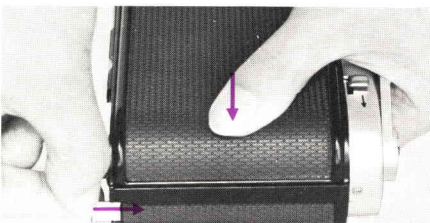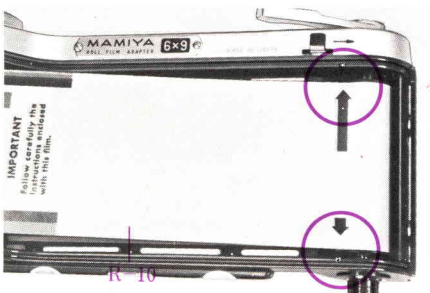
Photographing

Attach the loaded roll film holder to the camera body.

Pull out the dark slide (R-6); now, start taking photographs.
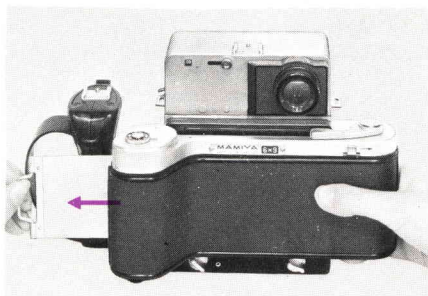
After each exposure, by moving the film wind-stop release lever (R-7) in the direction of the arrow, the film can be advanced by turning the film advance lever.


R-7

Since the film will not advance far enough with only one stroke of the film advance lever, turn the lever until it stops at the second stroke. Winding may be accomplished by moving the lever with several short, definite strokes until the lever stops, although never wind the lever too rapidly.

After all frames have been exposed, move the wind-stop release lever (R-7) once, then continue turning the film advance lever until you feel tension on the advance lever lessen as the leader end of the film slips off the spool, finally turning it freely in the take-up chamber. Now open the back cover and remove the film.

Fully insert the dark slide when the roll film holder is to be detached or when the lens is interchanged before completing a roll of film.

Without a film loaded, turning the film advance lever will not advance the film counter which remains at the start (S) mark. When some other mark is visible in the film counter window, it is your assurance that a film is loaded.
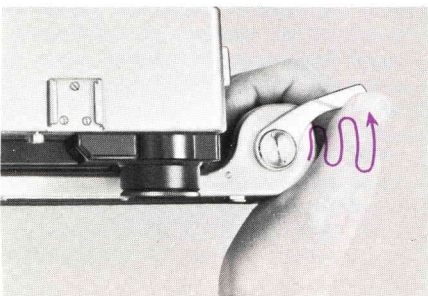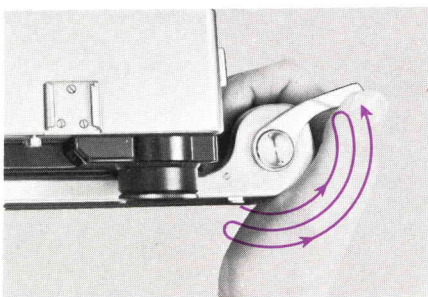
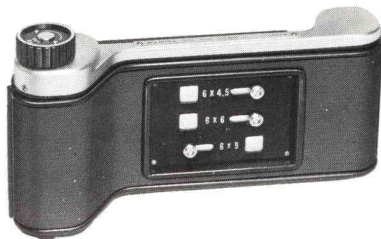This holder is for taking 6×9, 6×6 and 6×4.5 format pictures with a No. 120 roll film. The film is advanced by turning the knob. The number of exposures are read on the back of the holder.

Prior to Loading a Film

Unless photographing in 6×9 format, the viewfinder field as well as the picture format of the holder must be changed.

Installing the Picture Frame

Attach the picture frame for 6×6 or 6×4.5 format into the holder while a dark slide is inserted in the holder. Insert the picture frame so that the folded portion enters the dark slide side (inner side). Insert the claws on both ends into the grooves of the picture frame of the holder while slightly bending the picture frame lengthwise (as shown in the photo).
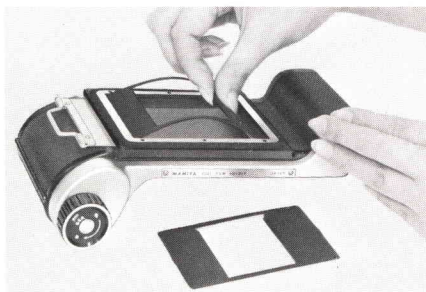
Loading a Film

When loading or unloading a film, avoid direct sunlight. Do it in the shade.

By pulling out the back cover latch while pushing the back cover toward the holder, the back cover can be opened.

Pull out the spool change knob and place a roll film in the film chamber.

Pull out the leader paper of the film, insert the edge of the leader paper into the slit of the take-up spool and wind it around the spool once; then close the back cover. When closing the back cover, press the back cover toward the holder, pushing into the back cover latch.

While observing the window for the picture format to be photographed, turn the film advance knob clockwise until figure " 1 " appears in the window.

Avoid direct sunlight when opening the back window.
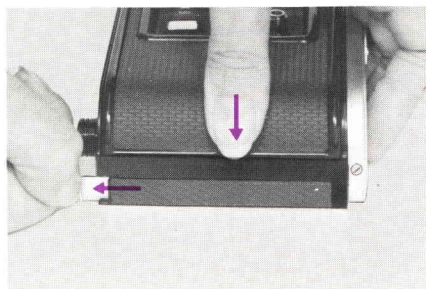
Attach the holder to the camera body, pull out the dark slide, and start to photograph.

After each exposure, open the back window, and turn the film advance knob until the next figure appears in the window.

When removing the holder from the camera or changing the lens while the film is loaded, be sure to insert the dark slide.

Viewfinder Field for Photographing in 6×6 or 6×4.5 Format

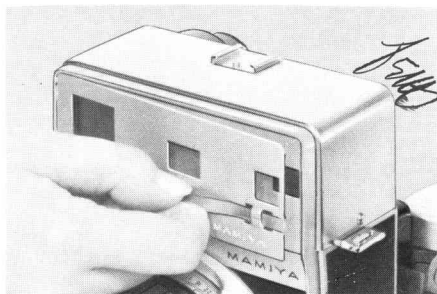Attach a finder mask for 100mm lens to the viewfinder window of the camera body (this mask is for 6×6 format). For photographing in 6×4.5 format, insert the mask for 6×4.5 format into the back of the 6×6 format mask.

To attach the mask to the camera body, raise the flat spring attached in front of the mask by holding it with the thumb and forefinger, and apply the mask to the top cover front frame and releasing the raised flat spring.

To correct parallax, select the brilliant frame for 250mm lens, moving the eye around while looking into the viewfinder until the brilliant frame is centered in the entire viewfinder field.
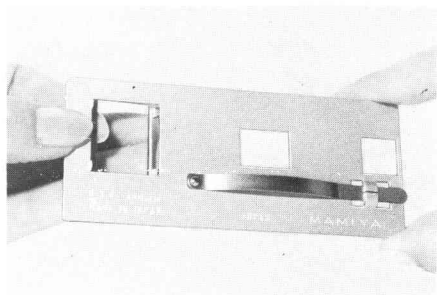
Focusing Hood

For accurate focusing or for confirming the depth of field, use the focusing hood. A Fresnel lens is used with this focusing hood to make the whole image brighter and easier to focus.
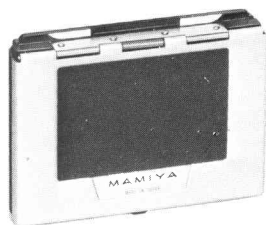
Focusing Screen Holder

Immediately after focusing with the focusing screen, a cut film/plate holder or a film pack adapter can be inserted from one side of the focusing screen holder.

How to Open the Back Cover of the Holder:

By moving the back cover catch button at the bottom of the back cover in the direction of the arrow, the back cover will open. With the opening angle adjustment slide kept UP, the back cover will open horizontally; and with the opening angle adjustment slide kept DOWN, the cover will open upward.

Focusing:

To focus with the ground glass image, keep the shutter open and the lens at its fullest aperture, focusing by rotating the focusing ring (15).

Depth of field can be observed on the ground glass screen through stopping down the diaphragm by turning the aperture control lever (10).

Full size of the focusing ground glass is for 6×9cm format, the light vertical lines indicating the 6×7cm format.

After focusing, press the focusing screen release lever to permit the screen to retract, and insert the cut film/plate holder or the film pack adapter from one side of the focusing screen holder.

To remove the film holder, press the focusing screen release lever with your left hand, hold the film holder or film pack adapter, and draw it out by pulling it toward you.

Be sure to close the shutter before attaching the film holder. Pull out the dark slide before photographing. Insert the dark slide before removing the film holder.

Opening angle adjustment slide

Back cover

Back cover catch button

Focusing screen release lever

9
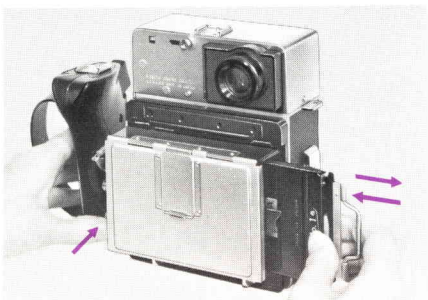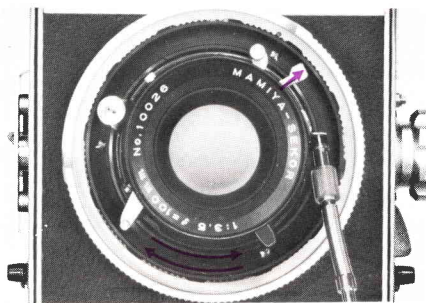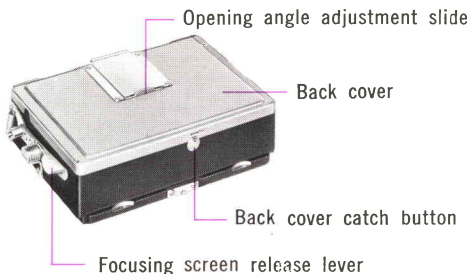
This enables you to look into the ground glass image vertically against the optical axis. The mirror housing can be turned upward or sideward by simple operation, making it easy to focus from any camera angle. Since a Fresnel lens is used as the focusing screen, the entire ground glass image is very bright: focusing can be easily accomplished because no extraneous light enters. The focusing screen has light lines to indicate a 6×7 format.

After focusing, insert the cut film/plate holder or the film pack adapter from the side (as with the focusing screen holder).

Attaching and Detaching the Mirror Housing:

The mirror housing can be removed by swinging it around the bottom of the housing while depressing the button of the mirror housing.

To attach the mirror housing, match the projections at the bottom of the mirror housing to the holes of the holder, and press in the upper part. When attaching the mirror housing, the button does not need to be pressed.

The mirror housing can be attached for up, down, right, and left directions. Merely attach it in the direction necessary for the camera angle employed.

When looking from above or below, the image assumes the correct right-side-up position, but the right and left will be reversed. When looking from the side, right and left are correct but the image will be upside down.

Eyecup

Locking button

Mirror housing

Focusing screen release lever
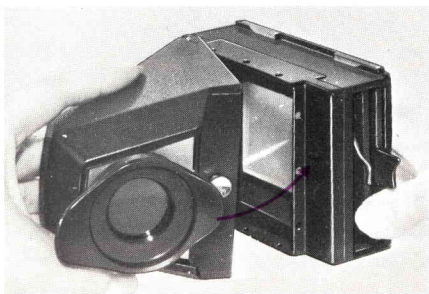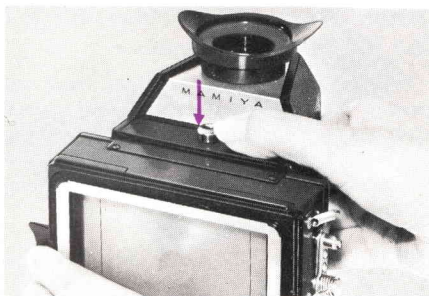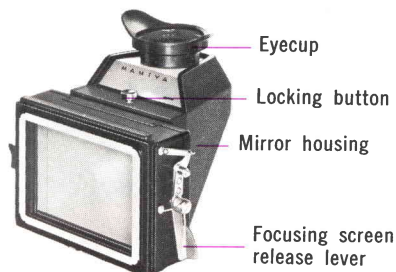
Cut Film/Plate Holder (Type J)

Open tne Back Lid:

By pulling out the back lid catch, the back lid can be swung open by applying finger pressure to the finger grip.

Finger grip

Back lid catch

Dark slide

When Using a Dry Plate 2-1/2× 3-1/2 inch (6.5×9cm):

Remove the adapter frame from the holder, insert the dry plate with the emulsion side facing the dark slide, close the back lid, and push it back to its original position. In this case, the adapter frame is not used.
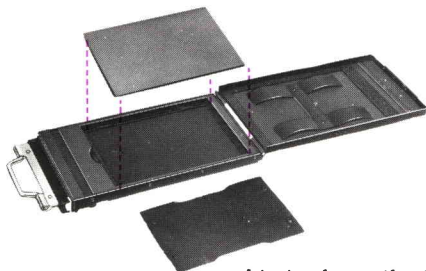
When Using a Cut Film 2-1/2× 3-1/2 inch (6.5×9cm):

Remove the adapter frame from the holder, place the cut film with its emulsion side facing the dark slide, then place the adapter frame with the film catch side up, and close the back lid. Instead of the adapter frame, a discarded dry plate may be used.

Adapter frame (for type J)

When Using a Cut Film Taken by Cutting a 4-3/4×6-1/2 inch Cut Film into Four One-quarter Sizes:

Insert the cut film in the adapter frame with its emulsion side up, placing the frame in the holder.

Mamiya's cutter is convenient for cutting 4-3/4×6-1/2 inch (12×16.5cm) cut film exactly into four one-quarter size 2-21/64×3-13/64 inch (59×81.5cm) cut films.

When a color film is cut, sometimes the film is not developed at a developing laboratory. For color photography, therefore, use factory-cut 2-1/2×3-1/2 inch (6.5×9cm) color film.

11
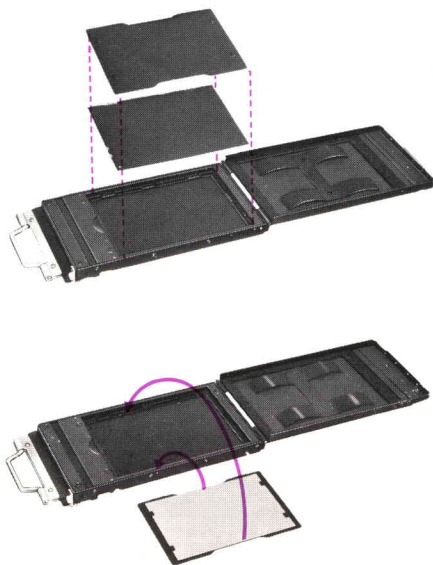
Cut Film/Plate Holder (Type A)

When Using a Dry Plate 2-1/2× 3-1/2 inch (6.5×9cm):

Use it exactly as with the cut film/plate holder type J.

Finger grip

Back lid catch

Dark slide
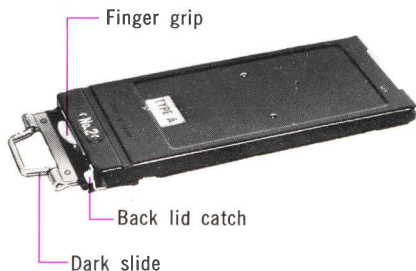
When Using a Cut Film 2-1/4× 3-1/4 inch:

Use the cut film/plate holder (type A). Insert a film in the adapter frame, place it in the holder, and close the back lid. This adapter frame is exclusive for type A; do not use it with a type J holder.

Adapter frame (for type A)
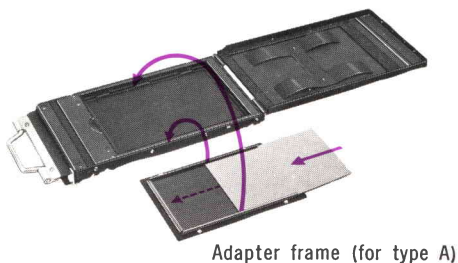
Film Pack Adapter

Catch buttons

Both 2-1/2×3-1/2 inch (6.5×9cm) or 2-1/4×3-1/4 inch film packs are available.

Open the back lid of the film pack adapter by pressing the two catch buttons simultaneously, lifting up the back lid. Load the tab end first in the film pack adapter, and by pressing the tab side to the spring, push in the entire film pack. Close the back lid, keeping the paper tab protruding.

Dark slide
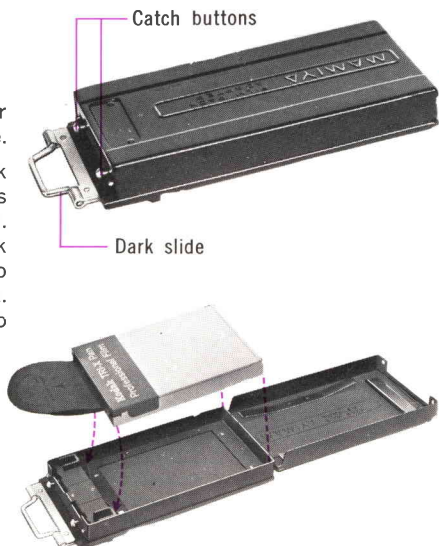
Acceptable Photosensitive Material and Actual Picture Size

Type of holder	Photosensitive material			Number of exposures
	Type	Nominal size	Actual picture size	
6×9 cm roll film holder	Roll film	120	$2\,^{13}/_{64}\times3\,^{5}/_{16}$ in. 56×84 mm	8
		220	"	16
6×7 cm roll film holder	Roll film	120	$2\,^{13}/_{64}\times2\,^{43}/_{64}$ in. 56×68 mm	10
		220	"	20
Cut film/plate holder (type J)	Plate	$2\,^{1}/_{2}\times3\,^{1}/_{2}$ in. 6.5×9 cm	$2\,^{1}/_{4}\times3\,^{5}/_{16}$ in. 57×84 mm	1
	Cut film	$2\,^{1}/_{2}\times3\,^{1}/_{2}$ in. 6.5×9 cm	"	
	Cut film	$4\,^{3}/_{4}\times6\,^{1}/_{2}$ in. size divided into 4 equal parts	$2\,^{1}/_{4}\times3\,^{1}/_{32}$ in. 57×77 mm	
Cut film/plate holder (type A)	Plate	$2\,^{1}/_{2}\times3\,^{1}/_{2}$ in. 6.5×9 cm	$2\,^{1}/_{4}\times3\,^{5}/_{16}$ in. 57×84 mm	
	Cut film	$2\,^{1}/_{4}\times3\,^{1}/_{4}$ in.	$2\,^{3}/_{64}\times3\,^{7}/_{64}$ in. 52×79 mm	
Film pack adapter	Film pack	$2\,^{1}/_{2}\times3\,^{1}/_{2}$ in. 6.5×9 cm	Minimum size $2\,^{11}/_{64}\times3\,^{5}/_{32}$ in. 55×80 mm	12
		$2\,^{1}/_{4}\times3\,^{1}/_{4}$ in.	Minimum size $2\,^{1}/_{4}\times3\,^{5}/_{32}$ in. 57×80 mm	16
		6×9 cm	Minimum size $2\,^{1}/_{4}\times3\,^{17}/_{64}$ in. 57×83 mm	
Polaroid Land pack film holder	Polaroid film pack series 100	$3\,^{1}/_{4}\times4\,^{1}/_{4}$ in. (8.3×10.8 cm)	$2\,^{7}/_{8}\times3\,^{3}/_{4}$ in. 73×95 mm	8

Composing the Picture by Ground Glass Focusing Screen for Film Pack or Cut Film

When dry plates or 2-1/2×3-1/2 inch (6.5×9cm) cut films are used, the actual picture format is exactly the same as seen on the focusing screen.

When " one-quarter size " cut film, 2-1/4 ×3-1/4 inch cut film, or film packs are used, since the actual picture size of these films is a little smaller than the ground glass focusing screen, compose the picture within the frame of the dotted lines as shown in the drawings.

For " one-quarter size " cut film taken from 4-3/4×6-1/2 inch (12×16.5cm) cut film, or for a film pack ;
Dimension A is approx. 1/8 in. (3mm)
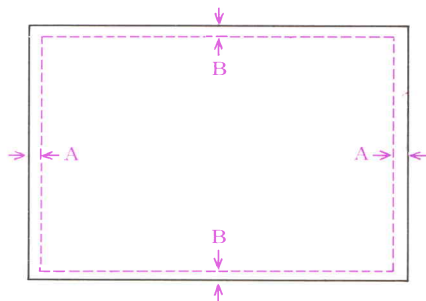
For 2-1/4×3-1/4 inch cut film ;
Dimension A is approx. 1/8 in. (3mm)
Dimension B is approx. 1/16 in. (2mm)

Use a set of five extension rings in various combinations between the lens-shutter assembly and the camera body for close-up photography.

The values in the table represent those when the five extension rings are attached and the lens distance scale is set at the closest distance.

The lens-to-subject distance represents the distance of the subject from the front extremity of the lens barrel. The asterisked figures(*) represent those of black-finished lenses.

Subject coverage is the area of the subject registered on the focusing screen (2-1/4×3-5/16 in. 57×84mm).

Precaution

When using many extension rings for photographing in the 6×9cm format, certain lenses may produce pictures with darker corners. By stopping down the aperture while looking into the focusing screen, how much darker the corners appear can be observed.

The 250mm f/5 lens cannot be mounted with extension rings.

Maximum Close-up Photographing Table

Lens	Lens-to-subject Distance	Magnification	Subject Coverage		Exposure Factor
			6×9	6×7	
50 mm f/6.3	$1\,^{7}/_{8}''$ (47.9 mm)	2.04	$1\,^{5}/_{64}''\times1\,^{5}/_{8}''$ 28×41 mm	$1\,^{5}/_{64}''\times1\,^{25}/_{64}''$ 28×35 mm	9.2
65 mm f/6.3	$3\,^{7}/_{64}''$ (79 mm)	1.59	$1\,^{11}/_{32}''\times1\,^{31}/_{32}''$ 34×50 mm	$1\,^{11}/_{32}''\times1\,^{5}/_{8}''$ 34×41 mm	6.7
100 mm f/2.8	$5\,^{1}/_{8}''$ (130 mm)	1.13	$2''\times2\,^{61}/_{64}''$ 51×75 mm	$2''\times2\,^{13}/_{32}''$ 51×61 mm	4.6
100 mm f/3.5	$*6\,^{37}/_{64}''$ (167 mm)	1.14	$1\,^{31}/_{32}''\times2\,^{7}/_{8}''$ 50×73 mm	$1\,^{31}/_{32}''\times2\,^{23}/_{64}''$ 50×60 mm	4.6
127 mm f/4.7	$10\,^{5}/_{64}''$ (256 mm)	0.90	$2\,^{31}/_{64}''\times3\,^{5}/_{8}''$ 63×92 mm	$2\,^{31}/_{64}''\times3''$ 63×76 mm	3.6
150 mm f/5.6	$*1'\,^{19}/_{32}''$ (320 mm)	0.77	$2\,^{7}/_{8}''\times4\,^{1}/_{4}''$ 73×108 mm	$2\,^{7}/_{8}''\times3\,^{17}/_{64}''$ 73×83 mm	3.1
250 mm f/8	$3'\,^{1}/_{32}''$ (921 mm)	0.49	$4\,^{17}/_{32}''\times6\,^{21}/_{32}''$ 115×169 mm	$4\,^{17}/_{32}''\times5\,^{15}/_{32}''$ 115×139 mm	2.2

Flashgun

Attaching a Flashgun to the Camera Body:

Screw in the flashgun mounting piece to the flashgun socket (4) on the camera body. Plug the cord into the flash terminal (22) of the shutter.

The flashgun has two extension cord sockets; thus, when desired, supplementary flash equipment can be synchronized simultaneously for additional coverage or for special lighting effects.

When a single flashgun is used, connect the cord to the socket marked SHUTTER.


Flashgun mounting piece

Flash Synchronizing Table

Terminal	Flash bulb	Shutter speed									
		I	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{15}$	$\frac{1}{30}$	$\frac{1}{60}$	$\frac{1}{125}$	$\frac{1}{250}$	$\frac{1}{500}$
M	M-class										
X	Electronic flash										
	F-class										
	M-class										

Shaded area of the above table indicates the synchronizing shutter speed.

Move the MX-selector lever to obtain the right terminal.

When the MX-selector is set to M, M-class bulbs synchronize to all shutter speeds.

When the MX-selector is set to X, electronic flash synchronizes to all shutter speeds.
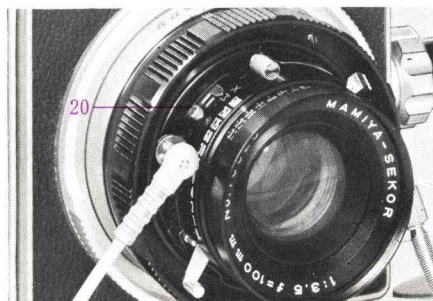
For both Mamiya Universal and the Mamiya Press Super 23, this is available in 6×9 and 6×7 formats, both with wire frames for 100mm and 150mm lenses.

Really an undispensable accessory for photographing quick-moving subjects.
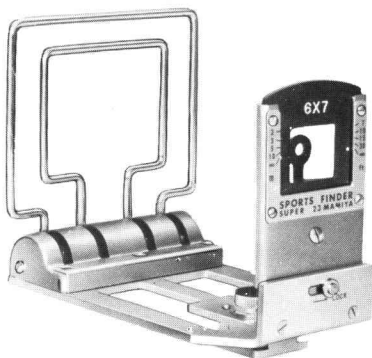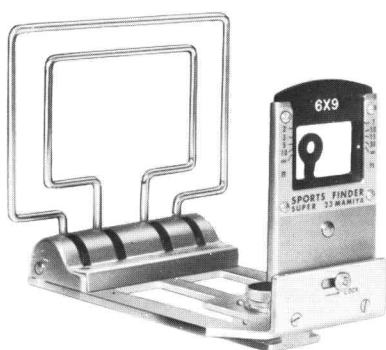
Eyecup

Maintains the correct eye position and prevents extraneous light from entering the viewfinder from the back when looking into the viewfinder.   Attach this to the eyepiece.
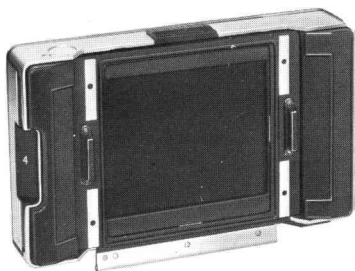
Polaroid® Land Pack Film Holder

With a Polaroid Land film pack, you can obtain a color print in 60 seconds, and a black-and-white print in 15 seconds.

For color pictures, use Polaroid Polacolor film, Type 108. For black and white pictures, use Polaroid 3000 speed film, Type 107.

Both color and black-and-white films are eight-exposure film packs.

Focusing Hood Model P

This focusing hood has the same size format as the Polaroid Land film pack type 107 and type 108. The focusing screen has a Fresnel lens, offering a bright, sharp image on the screen. Use this focusing hood to confirm accurate focus or the actual picture format.

Since this focusing screen has indicating lines for 6×9 and 6×7 formats, it can be used as a focusing screen for composing with the roll film holder.

The hood can be separated from the focusing screen panel, by sliding the locking slides on both upper and lower edges.
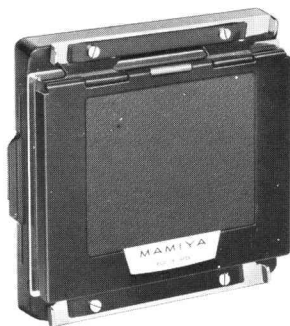
Optical Viewfinder Model P for 75mm, 100mm, and 127mm Lenses

This optical viewfinder is especially designed for 75 mm, 100 mm and 127 mm lenses to permit observing an accurate field of view when taking pictures with the Polaroid Land film pack; series 100 (3-1/4×4-1/4 inch).

By attaching the viewfinder to the accessory shoe, and looking through the viewfinder eyepiece, the field of view corresponding to the lens used can be determined.

To compensate for parallax, turn the knob on the back of the viewfinder, and set the focused distance to subject.

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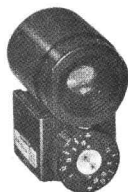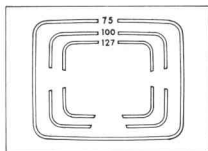
Tripod Adapter

For Photographing Vertical Format Pictures:

When mounting the camera on a tripod for photographing vertical format pictures, remove the hand grip and attach this tripod adapter.


Tripod Adapter Type P

Use this adapter when mounting the camera on a tripod with the Polaroid Land pack film holder attached.

This adapter can be attached to either a U 1 4 inch or 3 8 inch tripod screw. Also this adapter permits coupling with the quick-shoe, enables rapid camera mounting on the tripod.
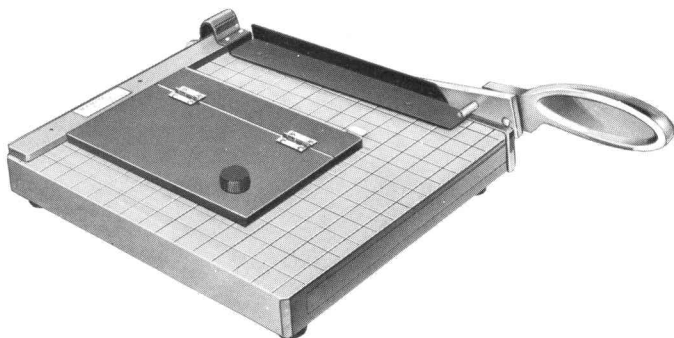

Quick-shoe

The quick-shoe can be coupled with the tripod adapter type P, enabling the camera to be rapidly attached to the tripod.
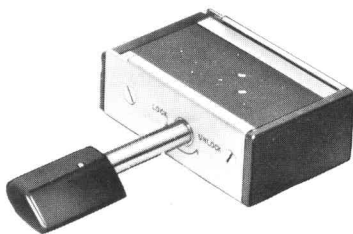
This is very convenient for cutting 4-3/4×6-1/2 inch (12×16.5 cm) size film into four one-quarter sizes in a darkroom. By placing a film to the guide of the cutter and cutting, the film will be cut into the required sizes.

Eye-correction Lens

The finder image is adjusted for those people with normal eyesight. Near-sighted or far-sighted people without glasses, or those with improper glasses, will have difficulty looking into the image. Use this lens in such cases.

There are eight diopter lenses available (+3, +2, +1, −0.5, −1, −2, −3 and −4).

The diopter has no relation to the figures used for eye tests such as " 1.0 ",

and cannot be converted into such figures. Have the diopter of your glasses checked by an optometrist. For instance, when your glasses have a diopter of +2, by using a +2 diopter lens, you will find it easier to observe the image. To attach the lens to the eyepiece, turn the ring on the eyepiece counterclockwise and remove it, insert the lens, and screw the ring back in as it was.

Compartment Case

This is a shoulder bag which can hold a camera with 100 mm lens, hand grip, focusing screen holder or roll film holder attached. Any lens from 50 mm to 150 mm focal lengths can be mounted on the camera even when the camera is carried in the case.

In addition the compartment case holds:
```
65 mm lens and its viewfinder .........1
150 mm lens, or 127 mm lens
     and/or extension rings .................1
Roll film holder  .............................1
Film pack adapter ...........................1
Cut film/plate holder .......................4
Sports finder ..................................1
Tripod adapter .................................1
Plus filters and films
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