

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

**This page is copyright© by M. Butkus, NJ.**

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

I have no connection with any camera company

On-line camera manual library

This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

**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 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.**

**This will allow me to continue to buy new manuals and pay their shipping costs.**

**It'll make you feel better, won't it?**

**If you use Pay Pal or wish to use your credit card,  
click on the secure site on my main page.**

# **Mamiya RZ67**

**Instructions**



Building upon its long experience since the introduction in 1970 of the revolutionary RB67 SLR with revolving back and the later refinements incorporated into the RB67 Pro-S, Mamiya Camera Company has utilized the latest electronic technology in order to fulfill its commitment to advanced amateurs and professional photographers by producing the ultimate 6 × 7cm camera, the Mamiya RZ67.

The result is a camera with incredible versatility and handling ease, ideally suited for commercial, industrial, scientific, news, portrait, scenic, and fashion photography. In fact, the Mamiya RZ67 knows no bounds in photographic applications. However, in order to fully take advantage of its capabilities, as well as avoid possible mishandling, be sure to carefully read this instruction manual before attempting to use your new camera.

## Contents

Mamiya RZ67 Specifications .....	1
Special Features of the Mamiya RZ67 .....	2
Outline of Names and Functions of Parts .....	4
Inserting a Battery .....	10
Attaching/Removing Lenses .....	11
Focusing Hood Operation .....	12
Releasing the Shutter .....	14
Shutter Speed and Aperture .....	17
Focusing and Locking the Focusing Knob .....	18
The Revolving Back .....	19
The Roll Film Holder .....	20
Loading the Film Holder .....	21
Taking Photographs .....	24
Unloading the Film .....	25
Distance Scale/Depth-of-Field .....	26
Close-up Photography .....	27
Using a Tripod/Long Exposures .....	28
Mirror-up Operation .....	29
Multiple Exposures .....	30
Flash Photography .....	31
Close-up Photography with Auto Extension Tubes .....	32
How to Use the Carrying Strap .....	33
Interchanging Magnifier/Focusing Hood/Focusing Screen .....	34
Attaching a Lens with Shutter Released or Mirror Raised .....	35
Camera Back Lock System .....	37
RB Series Lenses and Accessories .....	38
Troubleshooting/Care of the Camera .....	39
Mamiya-Sekor Z Lenses .....	40
Accessories .....	43

# Mamiya RZ67 Specifications

<b>Camera Type:</b>	6 × 7cm roll film SLR with lens shutter.
<b>Film Type:</b>	Uses 120 (10 exposure) or 220 (20 exposure) roll film. Actual negative size of 56 × 69.5mm.
<b>Standard Lenses:</b>	Mamiya-Sekor Z 90 mm f/3.5 (6 elements in 6 groups). Mamiya-Sekor Z 110mm f/2.8 (6 elements in 5 groups). Mamiya-Sekor Z 127mm f/3.8 (5 elements in 3 groups).
<b>Lens Mount:</b>	Large diameter (61mm) bayonet (breech lock) mount with built-in safety lock and 12 electrical contacts. Accepts RB lenses without an adapter.
<b>Shutter:</b>	Seiko #1 electronic shutter; B, T, 8-1/400 sec.; mechanical shutter speed of 1/400 sec. usable without a battery; built-in Shutter Release Button safety lock and manual lock provided.
<b>Focusing Hood:</b>	Opens and closes with a single touch; equipped with 3.2 × Magnifier (interchangeable with 5 other diopter lenses); 95% of the field of view visible; several interchangeable viewfinders available.
<b>Focusing Screen:</b>	All matter with Fresnel lens and instantly interchangeable.
<b>Viewfinder Information:</b>	Orange warning lamp illuminates when Cocking Lever has not been set or properly advanced. Red lamp illuminates when Dark Slide has not been withdrawn; also doubles as battery check lamp. Green lamp illuminates when Mamiyalite electronic flash unit is fully charged.
<b>Revolving Back:</b>	Back revolves 90° to change from horizontal to vertical format, or vice versa. Viewfinder format automatically changes as back revolves.
<b>Focusing Method:</b>	Rack and pinion focusing extends built-in bellows up to a maximum of 46mm. Focusing Knob provided with Lock Lever.
<b>Film Transport:</b>	A single 114° stroke of the Cocking Lever advances the film and Exposure Counter, sets the mirror and Light Baffle, and cocks the shutter.
<b>Film Holder:</b>	Interchangeable holders are available for various film types.
<b>Multiple Exposure:</b>	The built-in automatic double exposure prevention mechanism can be overridden with a single touch of a lever, providing multiple exposure provision.
<b>Battery Type:</b>	One 6V silver-oxide battery (4SR44) or 6V alkaline battery (4LR44).
<b>Additional:</b>	Camera has remote control capability and mirror-up capability (for vibrationless photography).
<b>Dimensions:</b>	(with 110mm f/2.8 lens) 104mm (width) × 133.5mm (height) × 211.5mm (length).
<b>Weight:</b>	2.4 kg with 110mm f/2.8 lens.

- Specifications and appearance are subject to change without notice.

# Special Features of the Mamiya RZ67

The following exemplify how the outstanding features of the RB67 have been further refined in the Mamiya RZ67, resulting in unprecedented quality and performance.

## 1. Ultra Performance Lenses

Without changing the outer diameter of the lens mount on the camera body, the inner diameter of the mount on the RZ67 has been increased by 7mm (from 54mm on the RB to 61mm on the RZ). Furthermore, the flange back (distance of the lens mount to film plane) has been reduced by the same amount (from 111mm on the RB to 104mm on the RZ).

The increase in size of the diameter of the mount and decrease in the distance of the flange back have made it possible to design a new series of ultra performance lenses designed exclusively for the Mamiya RZ67, offering performance previously believed unattainable. It is now also possible to design new, specialized optics, such as shift or high speed lenses.

Moreover, any RB lenses already in the possession of the photographer can be used on the RZ67 without an adapter or loss in performance.

## 2. Improved Handling

It is now possible to advance the film and Exposure Counter, set the mirror and Light Baffle, and cock the lens with a single stroke of the Cocking Lever.

With Winder RZ attached to the camera body, a gentle touch of the electromagnetic release makes it possible to effortlessly take consecutive photographs.

As the revolving back is rotated to change from horizontal to vertical format, or vice versa, the viewfinder masks also simultaneously change automatically, preventing the photographer from seeing anything other than the area actually being photographed.

While retaining the "T" (time) setting on the lens, a "B" (bulb) setting has been incorporated into the Shutter Speed Dial of the camera body for added versatility.

The mirror-up mechanism is now automatically engaged as soon as a cable release is attached to the Mirror-up Socket.

## 3. Improved Performance

Shutter speed accuracy and durability have been significantly enhanced by utilizing an electromagnetic release and Mamiya's own Moving Coil system in conjunction with the Seiko #1 electronic shutter. Additionally, the longest fixed shutter speed has been increased to 8 seconds, making the camera more flexible than ever.

When the camera is not prepared for use, the shutter release automatically locks and a warning lamp illuminates in the viewfinder, informing the photographer precisely what needs to be done, a red lamp indicating that the Dark Slide must be removed from the Film Holder, and an orange lamp reminding the photographer to advance the Cocking Lever.

When using a Mamiyalite electronic flash, a green LED illuminates in the viewfinder when the unit is fully charged and ready to fire.

For viewfinders with built-in exposure meters, the film speed, shutter speed, and aperture information is electronically transmitted to the exposure meter.

With a Mamiyalite MZ36R or MZ18R attached to the RZ67, aperture and film speed information is automatically and electronically relayed to the flash unit, controlling its light output.

By attaching Winder RZ and Receiver MZ to the RZ67, remote control of the camera is possible with Transmitter MZ, thereby immensely increasing the applications of the camera.

## (Special Features Shared with the RB67)

### The Ideal Format

The  $6 \times 7$ cm format not only offers an area approximately  $4.5 \times$  greater than the 35mm negative size, but it enlarges to standard sizes, such as  $8 \times 10$ ", with virtually no cropping, making it possible to utilize the full negative area. Ideally suited for publication and standard print sizes, the  $6 \times 7$ cm format makes the ideal choice for professional photographers.

## **Instant Change in Format**

By revolving the back 90°, the photographer can instantly change from horizontal to vertical format, or vice versa. In the RZ67, viewfinder masks also change automatically, totally eliminating the chance of exposing the film with the incorrect composition.

## **Peerless Film Flatness**

After prolonged testing and research, Mamiya has developed Film Holders which solve the problem of film curl by retaining the film perfectly flat across the entire film plane. Thus, the full potential of Mamiya-Sekor ultra performance lenses and the large negative size are realized.

In addition to unparalleled film flatness, the Roll Film Holders also incorporate a double exposure prevention mechanism, with multiple exposure provision as well.

## **Interchangeable Film Holders**

120, 220 and Polaroid holders are available which not only allow the photographer to select a holder in accordance with the application, but also make it possible to change film in mid-roll from color to black and white, or color negative to color reversal.

## **Viewing Ease**

The standard Focusing Hood opens with a single touch, exposing a large, bright image on the Focusing Screen. With another touch, the Magnifier instantly rises for critical focusing. The four sides of the Focusing Hood totally block the screen from extraneous light so that the image always remains bright and clear, enabling the photographer to work speedily and accurately. Both hood and screen are instantly interchangeable.

## **Lens Shutter Design**

Use of a lens shutter makes it possible to synchronize electronic flash at all shutter speeds, not only eliminating the problem of ghost images (secondary images recorded by available light) occasionally encountered with focal plane shutters, but also enabling the photographer to balance flash illumination with available light.

## **Mirror-up Photography**

For occasions when the camera is mounted on a tripod, both the RB and RZ67 allow the photographer to raise the mirror well before releasing the shutter. Since "mirror shock" is thereby completely eliminated, razor-sharp photographs are still possible when working at high magnifications or long shutter speeds. This feature is especially useful for close-up work, telephoto photography, and use of "slow" shutter speeds.

## **Built-in Bellows**

Since the RB and RZ67 have a built-in bellows with a maximum extension of 46mm, close-up photography is possible without accessories. Moreover, by adding an extension tube, a magnification ratio of greater than 1:1 (lifesize) is possible.

## **Additional Features**

The Film Holder can not be removed from the camera back unless the Dark Slide is first inserted into the holder, thereby protecting the film from accidental exposure to light. Additionally, after the holder is removed, the Dark Slide remains locked to the holder, again guarding the film from light.

When using wide-angle lenses, the Focusing Knob of the camera can be locked at the hyperfocal distance for focus-free photography. The Focusing Knob Lock Lever also proves useful when engaged in close-up photography, using telephoto lenses, or taking consecutive exposures of a stationary subject.

Finally, multiple exposures become possible with a mere flick of the RM Lever.

## ● Outline of Names and Functions of Parts (Detailed instructions follow.)

### R-M Lever

For double exposure prevention and normal operation, keep R-M Lever aligned with central index mark.

R: The lever is set to this position before revolving the back.

M: Set the lever to this position when desiring to take multiple exposures. The lever is also kept at this position when releasing the shutter without film in the camera.

### Cocking Lever

In a single operation this lever advances the films, cocks the shutter, and sets the mirror. For proper operation, be sure to push the lever completely down.

### Dark Slide

As a safety feature, the shutter can not be released unless the Dark Slide is first removed. Make it a habit to first remove the Dark Slide before attempting to take a photograph.

### Distance Graduation

A single scale indicating distance in meters and feet is used for all lenses.

### Focal Length Scale

Curved lines representing most focal lengths appear on this scale. The point at which the appropriate focal length curve intersects the Distance Graduation indicates the distance focused upon by the lens.

### Focusing Knob

### Carrying Strap Lug

### Focusing Hood Lock Button

To remove the hood, push in on both (right and left) lock buttons and lift hood off camera body.

### Lens Alignment Dot

### Mirror

Do not touch the mirror under any circumstances.

### Shutter Release Jack Cover

Sliding the cover upwards reveals electrical contacts (jack) for an auxiliary shutter release.

### Shutter Release Button

### Collar Stop Lever

As a safety feature, the Release Button Collar can not be rotated to the orange dot position until the Collar Stop Lever is first depressed.

### Release Button Collar

For normal operation the white dot on the Release Button Collar is kept aligned with the white dot on the Collar Stop Lever. Aligning the white dot of the collar with the red dot on the camera body locks the Shutter Release Button. Aligning the collar with the orange dot makes it possible to operate the shutter at approximately 1/400 sec. without batteries in the camera.




### Electrical Contact Cover

Remove this cover when using finders with electrical contacts (such as the PD Prism Finder). Be sure to replace the cover if using the RB CdS Finder or RB CdS Prism Finder, for the finder switches will not operate without the cover in place.

### Shutter Speed Dial

### Lock Release Button

When the  mark on the Shutter Speed Dial is aligned with the index mark on the camera body, the dial will lock in place. To unlock it, rotate the dial while pushing in on the Lock Release Button.

### Hot-Shoe

### Focusing Knob Lock Lever

### Magnifier Release

To raise the magnifier, push the Magnifier Release to the left.

### Magnifier

Interchangeable with other magnifiers in various diopter strengths.

### Focusing Hood Catch

### Focusing Screen

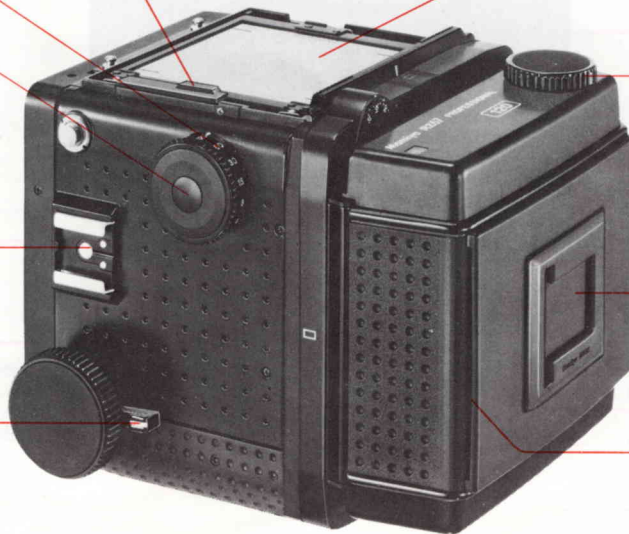
The visible field of the focusing screen automatically changes from vertical to horizontal format, or vice-versa, as the revolving back is rotated. The screen itself is also interchangeable.

### Film Advance Knob

### Memo Clip

Holds the film box top, or memo, as a film-type reminder.

### Dark Slide Slot





### Alignment Mark

### Revolving Ring

The small circle appearing on the Revolving Ring should be aligned with either the uppermost ("12 o' clock") or right-hand side ("3 o' clock") index.

### Light Baffle

To avoid damaging the camera, do not touch the Light Baffle.

### Camera Back Mount Pin

### Battery Chamber Cover

The camera uses a 6 volt alkaline or silver oxide battery.

### Winder Coupler Cover

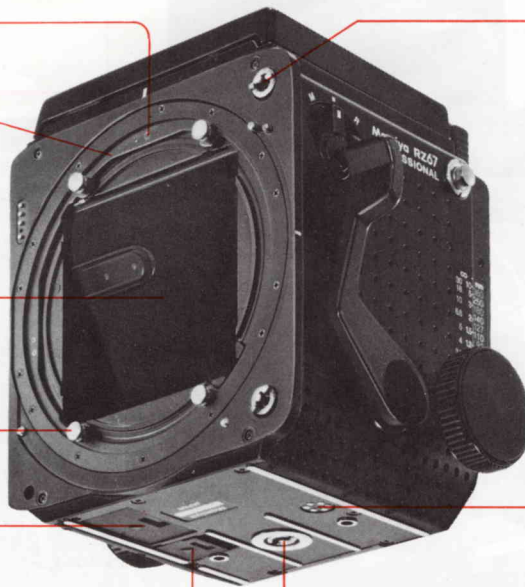
### Film Advance Coupler

The central pin transmits a signal to the film holder which disengages the film advance-stop and activates the multiple exposure prevention mechanism.

### Winder RZ Contacts

### Tripod Socket

The socket has standard U 1/4" threads which can be removed, converting it to a 3/8" socket.



**Flash Sync Terminal (X-sync)**

**Lens Distance Scale Knob**

**Depth-of-Field Preview Lever**



### **Bayonet Ring**

The Bayonet Ring is a breech mount which secures the lens onto the camera body. As a safety feature, the lens can not be removed from the camera body unless the mirror is set (lowered), thereby assisting the Light Baffle in shielding the film from light.

### **Depth-of-Field Scale**

### **Lens Distance Scale**

### **Aperture Ring**

**Time Exposure Lever**

### **Mirror-up Socket**

Merely screwing a cable release into the Mirror-up Socket prepares the camera for mirror-up, or vibration-free, photography. When this is done and the Shutter Release Button is depressed, the mirror and Light Baffle rise. After rising, and any trace of vibration is eliminated, the shutter can be released with the cable release.



### **Shutter Lock Pin**

When the lens is removed from the camera body, the spring-loaded Shutter Lock Pin emerges, locking the shutter and preventing accidental shutter release. If desired, the shutter can be released by rotating the Shutter Cocking Pins clockwise while depressing the Shutter Lock Pin.

### **Cocking Position Marks**

### **Shutter Cocking Pins**

When manually cocking the shutter, be sure to rotate the Shutter Cocking Pins as far as they will go (to the red dot).

## Roll Film Holder RZ



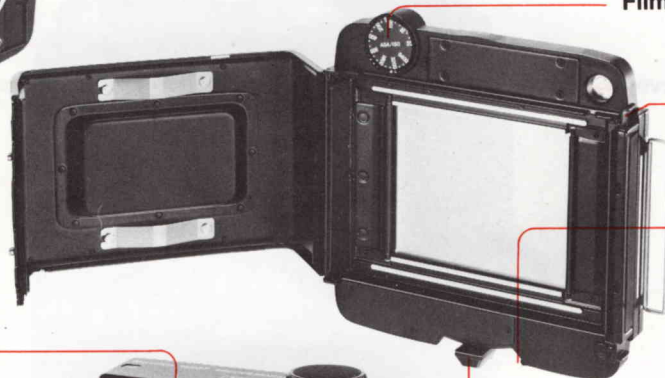
**Alignment Mark**

### Dark Slide Release Pin

When the Film Holder is removed from the camera back, the Dark Slide is automatically locked in the holder, preventing accidental removal. Placing the Film Holder onto the camera back automatically unlocks the Dark Slide, so that it can easily be removed.

### Exposure Counter

After releasing the shutter, a red band appears next to the frame number in the Exposure Counter. Upon advancing the film, the red band disappears, informing the photographer that the film is advanced and ready to be exposed.



**Film Speed Dial (ASA/ISO)**

**Back Cover Latch**

**Lock Release Lever**

### Spool Release Pins

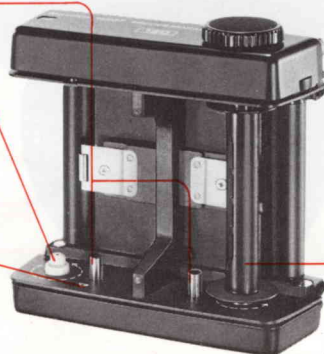
Depress these pins to load or unload a film spool.

### Film Spool Stud

A new roll of film is loaded on this stud with the paper leader pulled over the roller in the direction indicated by the dotted line and arrow which appears around the stud.

### Start Mark

The Film Advance Knob is rotated until the arrow on the backing paper is aligned with this mark. After alignment, the back cover of the film holder is closed, and the film advanced until the numeral "1" appears in the Exposer Counter.



**Holder Lock Lever**

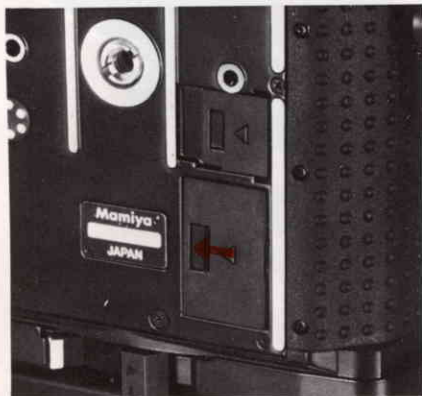
Should one inadvertently attempt to remove the Film Holder without first inserting the Dark Slide, the Holder Lock Lever will not unlock, thereby preventing accidental exposure of the film to light.

### Take-up Spool

After removing an exposed roll of film, place the empty spool at this position.

RZ67

# Inserting a Battery



Because the Mamiya RZ67 does not function properly without a battery, be sure to load one into the Battery Chamber before attempting to use the camera.

The camera uses one of either of the following batteries:

4LR44 (6V alkaline manganese battery)

4SR44 (6V silver oxide battery)

1. Pull the Battery Chamber Cover in the direction of the arrowhead to open it.



2. Insert the battery into the chamber, taking care to match the  $\pm$  poles of the battery with those shown in the diagram found in the chamber. Future replacement of the battery will be simplified if the Battery Removal Ribbon (A) is placed under and over the battery.

● Even if battery power is depleted, aligning the Release Button Collar with the orange dot will make it possible to release the shutter at approximately 1/400 sec.

## CAUTION:

1. Be sure to match the poles of the battery with those shown in the diagram in the chamber.

2. Carefully wipe the contacts of the battery before inserting it into the chamber. Failure to do so could result in poor electrical contact and consequent erratic functioning of the camera.

3. When not using the camera for a long period of time, remove the battery and store it in a dry, cool place.

4. Used batteries can be dangerous. Consequently, when disposing of a battery, do not place it in a fire or short circuit it.

5. Battery life varies considerably in accordance with the following factors: battery type, battery brand, freshness of the battery when purchased, the conditions under which the battery was stored before purchase and is stored after purchase, temperature at the time of use, whether the battery receives frequent or intermittent use.

6. Silver oxide batteries have longer battery life than alkaline batteries.

# Attaching/Removing Lenses

## Attaching Lenses



Before attaching a lens to the camera body, the mirror of the body must be set and the shutter of the lens cocked.

### (A) Setting the Mirror

1. Remove the Body Cap from the camera.
2. Make sure the mirror is set (lowered). If the mirror is raised, lower it by pushing the Cocking Lever as far as it will go toward the front of the camera body.

### (B) Cocking the Lens Shutter

1. Remove the Rear Lens Cap.
2. If the lens shutter is not cocked, firmly rotate the Shutter Cocking Pins as far as they will go (to the red dot). When releasing the pins, they will return to the green dot and the shutter blades will remain open.

- Moving the Shutter Cocking Pins only as far as the green dot will result in incomplete shutter cocking. Be sure to rotate them as far as the red dot.
- Whenever a lens is removed from the camera body, it is already cocked.



### (C) Attaching the Lens

1. With the front of the lens facing you, rotate the Bayonet Ring counterclockwise as far as it will go (the white dot on the Bayonet Ring will be aligned with the central index of the lens).
2. Seat the lens on the camera body with the central index of the lens lined up with the red Alignment Dot of the camera body. Next, rotate the Bayonet Ring of the lens firmly in a clockwise direction, securing the lens to the camera body.



### Removing Lenses

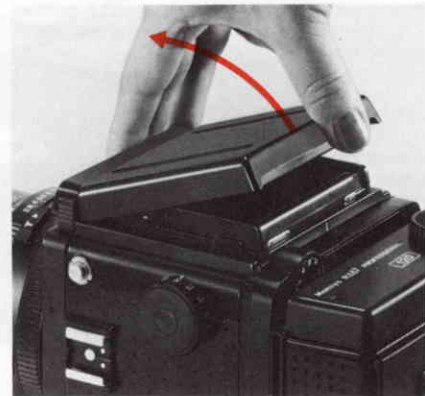


1. Push the Cocking Lever of the camera body completely down, setting the mirror and cocking the lens shutter.

2. Rotate the Bayonet Ring of the lens counterclockwise as far as it will go (white dot of Bayonet Ring will align with central index of lens) and remove lens.

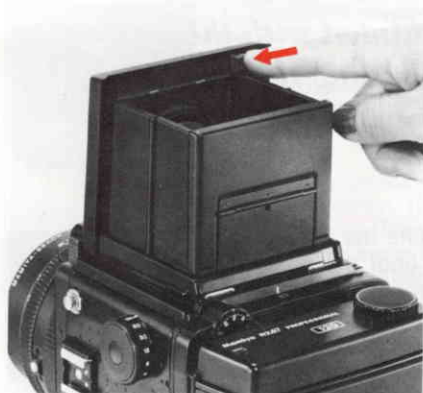
● If you try to rotate the Bayonet Ring counterclockwise without first depressing the Cocking Lever of the camera body, the movement of the ring will be interrupted, making it impossible to remove the lens. This safety feature assures that the mirror is always lowered whenever the lens is removed, thereby assisting the Light Baffle in shielding the film from light.

### Raising the Focusing Hood



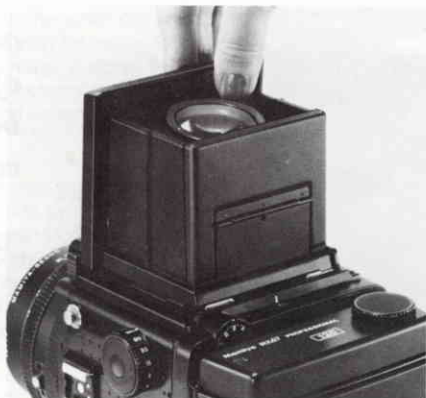
Merely lift the back of the hood until it opens completely.

### Raising the Magnifier



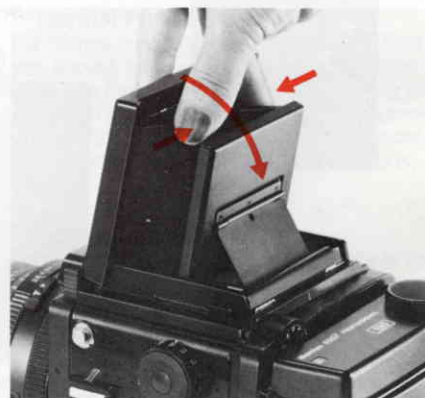
Slide the Magnifier Release slightly to the left and the Magnifier will pop up into position.

### Lowering the Magnifier



Gently push the base plate of the Magnifier all the way down until it locks in place.

### Folding the Focusing Hood



After lowering the Magnifier, gently squeeze the right and left panels of the hood together while closing it.

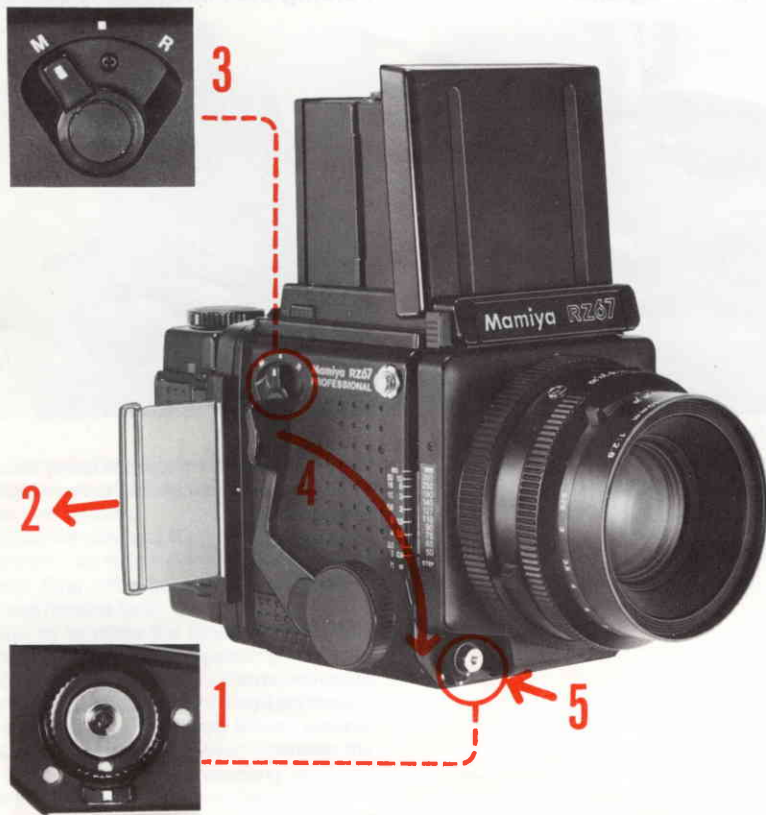


## Releasing the Shutter

*It is best to become acquainted with the method of releasing the shutter before using film in the camera.*

1. Rotate the Release Button Collar until the white dot on it is aligned with the one immediately below (on the Collar Stop Lever).
2. Remove the Dark Slide.
3. Set the R-M Lever to the "M" (multiple exposure) position.
4. Push the Cocking Lever all the way down.
5. Press the Shutter Release Button.

The first 4 steps can be done in any order. After you are thoroughly familiar with the above steps, return the RM Lever to its normal setting (the center position).



## Using the Release Button Collar



1. For normal operation, align the white dot on the Release Button Collar (A) with the white dot on the lever below (B). When this is done, the Shutter Release functions electromagnetically and the various safety mechanisms operate electrically.



2. When the camera is not in use, lock the Shutter Release Button. This is done by aligning the white dot of the Release Button Collar with the red dot (C) on the camera body. By locking the Shutter Release Button, you not only prevent unintentional exposure of film, but also prevent accidental battery drainage caused by pressure on the Release Button. For this reason, be sure to lock the Release Button when carrying the camera in a bag.



### Emergency Shutter Operation

If you were to suddenly find yourself with a dead battery in the midst of a photographic session, switch over to the emergency shutter operation mode. In order to do so, push the Collar Stop Lever (D) toward the camera body and while holding it there align the white dot of the Release Button Collar with the orange dot (E) on the camera body. The shutter will now operate (even without a battery) at approximately 1/400 sec., regardless of the setting of the Shutter Speed Dial.

Because electricity is not being used in the emergency shutter operation mode, the Monitor Lamps in the viewfinder will not illuminate. Moreover, even if the Dark Slide is not withdrawn, the shutter can still be released, so exercise care.

## The R-M Lever



### The Normal Position

For normal operation of the camera, the R-M Lever should be kept in the center position, aligned with the index mark. Setting the lever to this position activates the double exposure prevention mechanism so that photo after photo can be taken without fear of accidental double exposures.



### Multiple Exposure Position

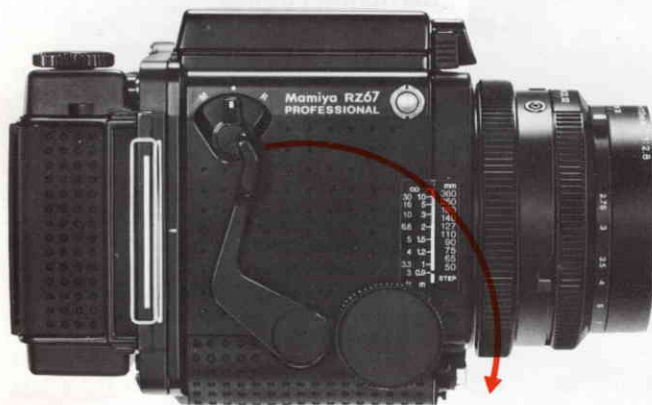
When desiring to make deliberate double or multiple exposures, set the R-M Lever to the 'M' position. When this is done, pushing down on the Cocking Lever will cock the lens shutter, but will not advance the film. Upon completion of the multiple exposure, do not forget to return the R-M Lever to its normal (center) position. The lever is also set to 'M' when testing the shutter without film in the camera.



### Revolving Back Position

Before revolving the back, set the R-M Lever to the 'R' position. After this is done, the lever will automatically return to the normal position when the Shutter Release Button or Cocking Lever is next used.

## Operating the Cocking Lever



When depressing the Cocking Lever, be sure to push it all the way forward (toward the Shutter Release Button).

If the Cocking Lever is not pressed forward as far as it will go, it will return to its original position when released, but the shutter will not be cocked. At such a time, the shutter will not operate and an orange warning lamp will illuminate in the viewfinder when the Shutter Release Button is depressed.

Depressing the Cocking Lever advances the film, sets the Light Baffle and mirror, and cocks the shutter.

## Monitor Lamps

Under the following circumstances an orange, red, or green lamp will illuminate in the viewfinder when the Shutter Release Button is depressed.



### 1. Cocking Lever Not Set (Orange warning lamp)

If the Cocking Lever has not been depressed or has been only partially depressed, an orange warning lamp will illuminate in the viewfinder when the Shutter Release Button is pressed, warning the user that the film has not been advanced, the mirror not been set, and the shutter not been cocked.

### 2. Dark Slide in Holder (Red warning lamp)

When attempting to take a photograph without removing the Dark Slide from the Film Holder, the Shutter Release Button will lock and a red warning lamp acts as a reminder to withdraw the Dark Slide.

### 3. Mamiyalite Charged (Green signal lamp)

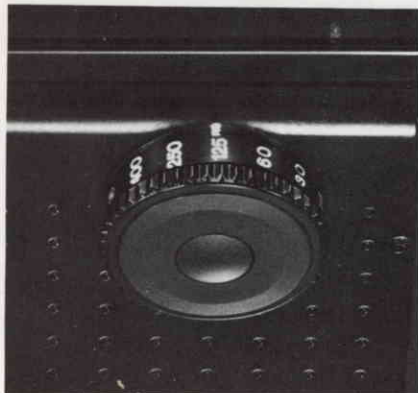
When a Mamiyalite ZE, MZ 18 R, or MZ 36 R is connected to the Hot-Shoe and fully charged, a green lamp will illuminate upon pressing the Shutter Release Button halfway, indicating that the flash unit is ready to fire.

### 4. Battery Check


To check the condition of the battery, insert the Dark Slide into the Film Holder and depress the Shutter Release Button; the red warning lamp should illuminate with a steady glow. If the red lamp flickers, it indicates that battery voltage is low and the battery should be replaced as soon as possible.

# Shutter Speed and Aperture

## The Shutter Speed Dial



When the Shutter Speed Dial is set to "B" (bulb), the shutter will remain open as long as pressure is applied to the Shutter Release Button and will close as soon as pressure is released.

The  mark which appears between "B" and 400 on the Shutter Speed Dial is the setting for the AE Finder (which will be available in the future). When set at this position, the dial locks in place. To unlock it, rotate the dial while depressing the Lock Release Button which appears in the center of the dial.

Select the shutter speed desired and rotate the Shutter Speed Dial until the appropriate figure is aligned with the shutter speed index mark.

The Shutter Speed Dial must be set to a click-stop position and can not be used at in-between settings.

The numerals as they appear on the dial and the shutter speeds they represent are shown in the following table.

	Fractions of a second										Whole seconds
Numerals	400	250	125	60	30	15	8	4	2		1 2 4 8
Shutter Speed	1/400	1/250	1/125	1/60	1/30	1/15	1/8	1/4	1/2		1 2 4 8

## The Aperture Ring



To set the diaphragm to a desired aperture, rotate the Aperture Ring until the appropriate figure is aligned with the central index line. It is perfectly acceptable to use the Aperture Ring at in-between click-stop settings.

When the Shutter Release Button is depressed, the diaphragm will automatically stop down to the preselected aperture before the shutter opens for the exposure.

# Focusing and Locking the Focusing Knob

## Focusing



Depressing the Cocking Lever sets the mirror, projecting a bright image on the focusing screen. Focus by rotating to-and-fro either of the two Focusing Knobs until the image appears sharp.

## Locking the Focusing Knob



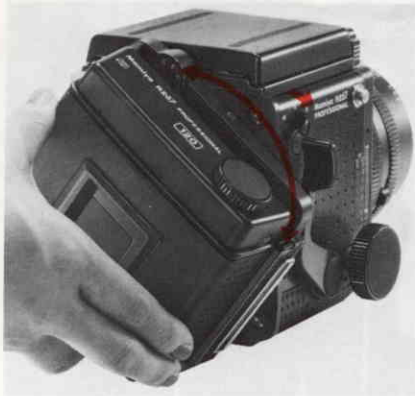
After adjusting the focus, focusing deviation can be prevented by locking the Focusing Knob with the Focusing Knob Lock Lever, which is found at the rear of the left-hand Focusing Knob. Simply raise the lever and push it forward, clamping the Focusing Knob in place.

When working with wide-angle lenses, the lens can be prefocused at the hyperfocal distance, and the knob locked with the Focusing Knob Lock Lever so that snap-shots can freely be taken without the need of focusing. Examples of other occasions on which the lock lever will prove useful include when copying, engaging in macrophotography, or using telephoto lenses.



# The Revolving Back

## The Vertical and Horizontal Formats



Before attempting to revolve the back, set the R-M Lever to "R". To change from horizontal to vertical format, rotate the Film Holder clockwise as far as it will go. Rotating it counter-clockwise, changes the format from vertical back to horizontal.

Be sure to rotate the Film Holder gently, as undue use of force can result in damage to the camera.

The R-M Lever will automatically return from "R" to its normal position upon depressing the Cocking Lever or Shutter Release Button. However, as long as the R-M Lever remains at the "R" setting, the Film Holder can inadvertently be moved off-center. Consequently, we recommend manually returning the lever to its normal position (center index mark) immediately after revolving the back.

## Change in Viewfinder Format

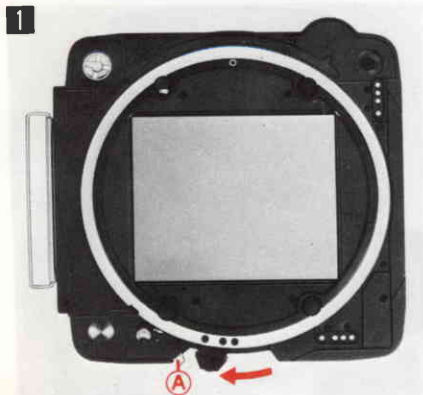


As the revolving back is rotated, the viewfinder format automatically changes from horizontal to vertical, or vice versa. This is accomplished by viewfinder masks which are coupled to the revolving back.

Additionally, when viewed from the top, a small rectangle appears at the upper edge of the Film Holder. Visible at a glance, this rectangle acts as a reminder, indicating whether the holder has been set for the vertical or horizontal format.

# The Roll Film Holder

## Attaching the Holder



Remove the rear body cap by sliding it upwards.

**CAUTION:** Do not touch the Light Baffle or mirror.

Touching the Baffle could result in a light leak or malfunction.



1. Slide the Holder Lock Lever of the Film Holder completely toward the Lock Release Lever (A).

2. Align the orange circle (B) of the Revolving Ring (found at the rear of the camera) with one of the two white index marks on the camera body.

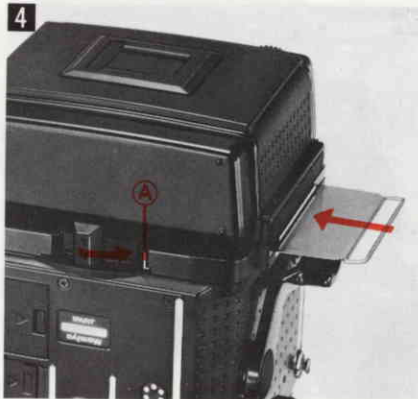
Hold the Film Holder so that its orange circle is at the same position as the one on the Revolving Ring (B) and fit the holder onto the camera back, taking care that the four Camera Back Mount Pins fit into the four openings of the holder.



3. Lock the holder on the camera body by moving the Slide Lock as far as it will go in the direction of the arrow.

# Loading the Film Holder

## Removing the Holder



4. Insert the Dark Slide into the Roll Film Holder. For instant recognition, the Dark Slide Slot is bordered by white reference lines.

The Film Holder can be removed after moving the Holder Lock Lever as far as it will go toward the Lock Release Lever (A). It is recommended that you remove the holder on a table or similar support, or in your lap, to avoid the possibility of dropping the holder or having it fall off the camera.

If you attempt to remove the holder without replacing the Dark Slide, the Holder Lock Lever will automatically lock in place, preventing accidental removal of the holder and exposure of the film.

However, if you must remove the holder without the Dark Slide in place, the automatic lock can be overridden by pulling the Lock Release Lever toward the Holder Lock Lever, holding the lever there, and then moving the Lock Lever.



1. Pull out the upper and lower Back Cover Latches and the back cover will open.

Because of the double safety lock, pulling out just one of the two Back Cover Latches will not open the back cover.

After opening the back cover of the Roll Film Holder, remove the Film Insert. When loading film, it is not necessary to remove the holder from the camera back.

When loading film, avoid direct sunlight, either loading the film in the shade or turning your body away from the sun and loading it in the shade of your own body.



2. While holding down the left-hand Spool Release Pin of the Film Insert, fit a roll of film between the upper and lower left-hand Film Spool Studs.

Pull the backing paper in the direction of the dotted line and arrow around the stud, over the roller, across the back, over the right-hand roller, and feed it into the Take-up Spool. When loaded correctly, the inside of the backing paper (black side) will appear outside of the insert back. If it does not, remove the roll of film, turn it upside-down, and reload it.





# Loading the Film Holder

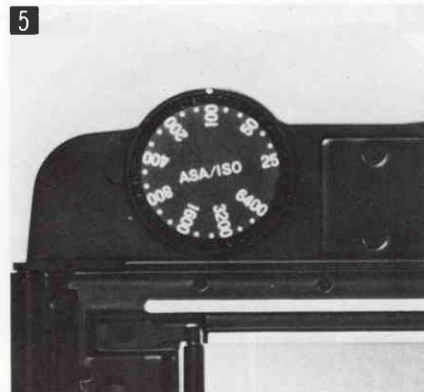


3. After feeding the tip of the backing paper into the slot of the Take-up Spool.



4. Gently wind the Film Advance Knob until the arrow of the backing paper aligns with the insert Start Mark.

As you gently advance the backing paper, make sure it advances evenly between the spool flanges and does not begin to slant. If it advances unevenly, remove the backing paper from the Take-up Spool and refeed, starting again. Heeding this point will eliminate the possibility of crinkling the edge of the film.



5. Set the correct film speed value on the Film Speed Dial of the Roll Film Holder.



6. Place the Film Insert into the outer cassette, making sure the film advance coupler of the insert fits into the appropriate opening of the cassette.



7. After correctly placing the insert into the cassette, close the back cover, and while gently holding it in place, push both of the Back Cover Latches as far as they will go.

The RZ Roll Film Holder outer cassette will accept either 120 or 220 Film Inserts.

## Advancing the Film



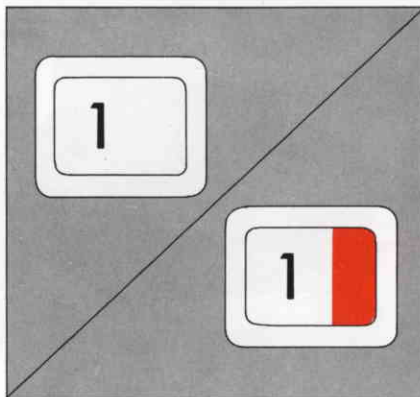
Before attempting to advance the film to the first frame, make sure the R-M Lever is set to its normal (center) position. If the lever is set to 'M' (multiple exposure), it will not be possible to advance the film with the Cocking Lever.



The film can be advanced in either of two ways.

A) By winding the Film Advance Knob of the Film Insert until it stops.

B) By pressing the Cocking Lever of the camera body several times, until it stops. (The lens shutter will not be cocked unless the Cocking Lever is consecutively pressed until it stops.)



When the film is completely advanced, the numeral '1' will appear in the Exposure Counter and the red, film-unadvanced warning will disappear.

While advancing the film from S (start) to 1 with the Cocking Lever, the shutter releasing mechanism is automatically locked until the film is fully advanced to frame 1.

After removing the Dark Slide and releasing the shutter, the red warning mark will reappear in the Exposure Counter, indicating that the exposure has been made and the camera needs to be set for the next exposure.

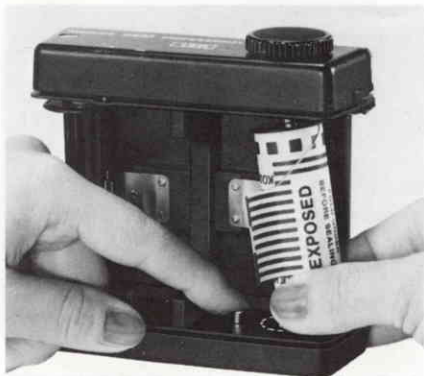
When the film is advanced to the next frame, the numeral in the Exposure Counter will automatically change and the red mark will disappear.

Operate the Cocking Lever gently. If it is pressed very rapidly, the spacing between frames may not be uniform.

After an exposure is made, the automatic double exposure prevention mechanism will make it impossible to release the shutter until the film is advanced.

After completing the last exposure, press the Cocking Lever several times, until the film and backing paper is completely wound onto the Take-up Spool. Instead of using the Cocking Lever, you can use the Film Advance Knob of the Film Insert, if you prefer.

## Unloading the Film



1. Open the back cover of the Film Holder and remove the Film Insert.
2. While holding down the right-hand Spool Release Pin, remove the film, exercising care that the backing paper does not unroll or become loose.
3. In preparation for the future, remove the empty spool from the Film Insert, replacing it on the right-hand side so that it will act as the new Take-up Spool.

When the back cover of the holder is opened, the Exposure Counter will automatically return to 'S' (Start).

If anything other than 'S' appears in the Exposure Counter, it indicates that there is film in the holder. To prevent accidental exposure of the film to light, always check the Exposure Counter before opening the back cover of the holder.



When desiring to turn in for processing a roll of film that has been only partially exposed, first remove the holder after inserting the Dark Slide. Next, while holding in the pin in the center of the coupler(A), completely wind the film onto the Take-up Spool with the Film Advance Knob. Instead of continuously holding in the coupler pin, you can push it in once after each frame, if preferred.



During exposures, the Dark Slide can be stored in the Dark Slide Slot in the back of the holder.

The Memo Clip on the back cover can be used for holding the film box-top as a film reminder or for holding a piece of paper with special notes.