MAMIYA

PRISMAT

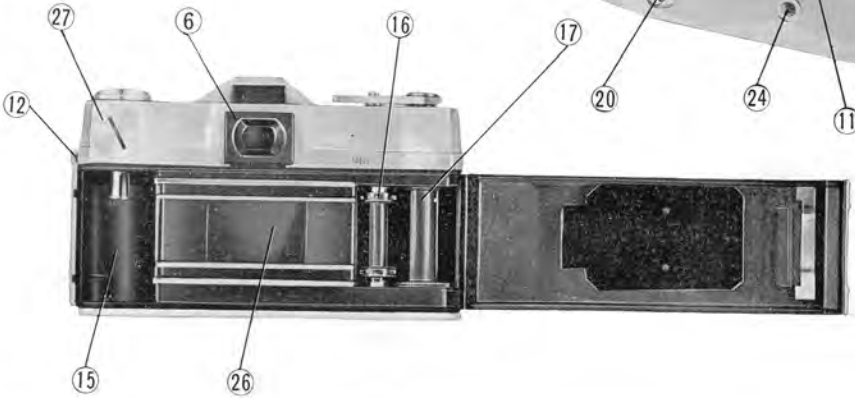
model CPH

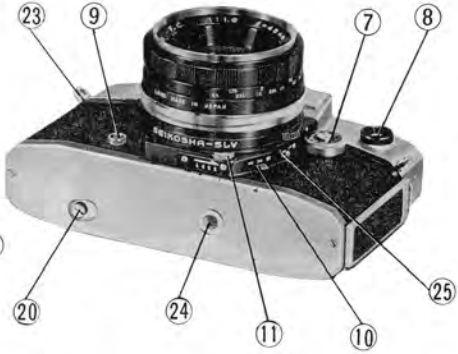
OWNER'S MANUAL

NOMENCLATURE

① Film advance lever
② Shutter release button
③ Focusing ring
④ Aperture setting ring
⑤ Shutter speed ring
⑥ Viewfinder window
⑦ Film speed dial
⑧ Exposure meter
⑨ Synchro socket
⑩ MXV selector
⑪ Lens lock lever
⑫ Back cover slide lock
⑬ Rewinding crank & knob
⑭ Automatic exposure counter
⑮ Film chamber
⑯ Sprocket
⑰ Take-up spool
⑱ Distance scale
⑲ Depth of field scale
⑳ Rewinding button

㉑ Upper synchro contact
㉒ Accessory shoe
㉓ Neck strap loops (left and right)
㉔ Tripod socket
㉕ Time release button
㉖ Light baffle
㉗ Battery cover





PRECAUTIONS

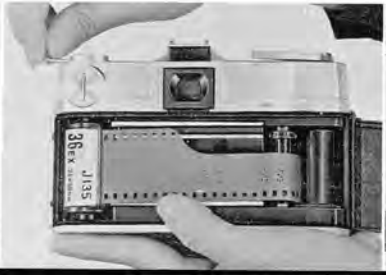
This camera is a precision instrument built with great care. By reading the instructions carefully before using the camera and heeding a few precautions you will be assured of trouble-free years of fine picture taking.

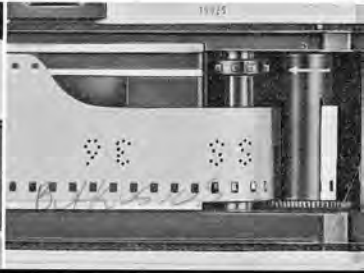
1. Do not touch or press the light baffle ㉖ when the back cover is open.
2. Do not touch the mirror: smudges will affect the clarity of the viewing.
3. When the camera is not to be used for a long time
   —the mercury battery should be removed.
   —the shutter should not be kept in the wound position.
4. Do not use chemicals to clean the exposure meter window.

HOW TO LOAD

LOADING FILM

1. Use 35 mm film in either black and white or color, in 20 or 36 exposure cartridges. Pull out the slide lock ⑫ to open the back cover.
2. Pull out the film rewind knob ⑬, insert the film cartridge in the chamber ⑮ and ther push in the rewind knob ⑬.
3. Insert the end of the film into the take-up spool ⑰; turn the spool in the direction of the arrow and wind the film on the spool one full turn.
4. Raise the film rewinding crank ⑬; while holding the film cartridge, slowly turn the crank in the direction of the arrow and take the slack out of the film. After making sure the perforations of the film engage the sprocket teeth ⑯, close the back cover.





5. Next, advance the film until it stops and press the shutter button. Repeat this procedure a second time. During this time, watch the film rewind crank ⑬ : if it turns in reverse, it indicates that the film is properly inserted and is being advanced.

6. At third advance, the figure 1 will be shown in the automatic exposure counter ⑭. The camera is now ready to take pictures.

SETTING THE FILM SPEED

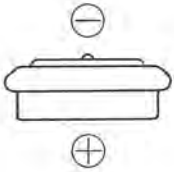
When the film has been loaded, be sure to set the proper film speed. To do this, turn the film speed dial ⑦ and set its indicator on the number corresponding to the film speed (ASA value). The scale readings with red circles indicate ASA 32 and 160.

FILM WINDING

The film advance lever ① has a 15° action posi tion. When using the camera, it is more convenient f the lever is placed in this position as shown in the diagram. With a single stroke, advance the lever as far as it will go: one frame is now positioned and the shutter is cocked. Another frame cannot be advanced until the shutter is released. Double exposure is impossible.

INSERTING THE MERCURY BATTERY

1. Turn the battery cover ㉗ counterclockwise with a coin.
2. Insert the battery into the chamber, negative side forward.
3. Replace cover ㉗.



Concerning the mercury battery:

The exposure meter's effectiveness depends on the condition of the battery, which can be checked with a voltmeter of high internal resistance, or at your local photography shop.

Use one of the following 1.3 Volt batteries:

Toshiba	TH-MC
National	M-D
Mallory	RM 625

PRECAUTION IN HANDLING MERCURY BATTERY

- The battery must be inserted perfectly clean and dry. Wipe carefully.
- Avoid shorting out of the positive and negative sides with any metallic tool such as tweezers.
- Avoid excessive heat and humidity. Store in cool and dry place.
- When discarding the battery do not throw into a fire. Do not attempt to disassemble.

PROCEDURE FOR PHOTOGRAPHING

Since the Mamiya Prismat is a single lens reflex, everything you see through the viewfinder will be on the film. Composing your picture is simplified.

1. Apply principles of good composition.
2. Determine the exposure.
3. Focus.
4. Finally, press the shutter button to take the picture.

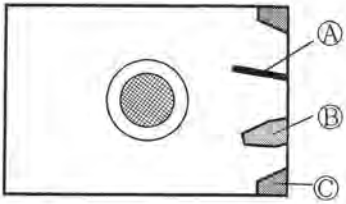
DETERMINING EXPOSURE

a. Selecting the shutter speed

Turn the shutter speed ring ⑤ and bring the selected speed opposite the red triangular mark. The shutter speeds are indicated by T, 1, 2, 4, 8, 15, 30, 60, 125, 250, 500. T indicates "Time" (to be explained later).

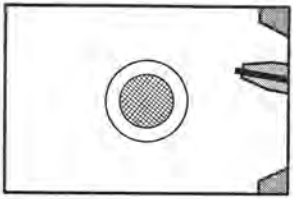
b. Viewing the object to be photographed

The exposure meter pointer Ⓐ will indicate the brightness of the object, as seen through the viewfinder.



The aperture ring ④ moves the blue tracking indicator Ⓑ : when the tracking and the exposure pointers coincide, the exposure is perfect. If the tracking and exposure meter pointers do not coincide when the aperture ring is turned, change the shutter speed and repeat the procedure.

Note 1. The numbers indicating the aperture opening may not always appear in the center of the aperture ring ④. This does not, however, affect the picture taking procedure.



Note 2. The exposure meter at ASA 100 has a working range from EV4 to EV17. This range is indicated by the orange plate (working range indicator Ⓒ) which is seen inside the finder. If the exposure meter pointer is within the orange section at the lower side, the object to be photographed is too dark and the exposure meter will not work.

USING THE EXPOSURE METER

The exposure meter is a reflected light type; used properly, excellent exposures can be expected every time. Here are some helpful hints on exposure:

Since this type exposure meter measures the light reflected from the object oto be photographed, it is necessary to take a meter reading as near to the object as possible and thereby exclude extraneous light which can affect the exposure. The pointers are matched in this position and the picture is taken as far back as good composition demands. Thus when the shutter is released the pointers inside the finder do not necessarily have to be in matching position.

Portraits

Approach the subject and take a meter reading off the face. If part of the face is darker, measure both light and dark areas and use the average.

Landscapes

To expose properly for landscapes, tilt the camera slightly downward, thereby restricting the amount of light from the sky affecting the meter reading.

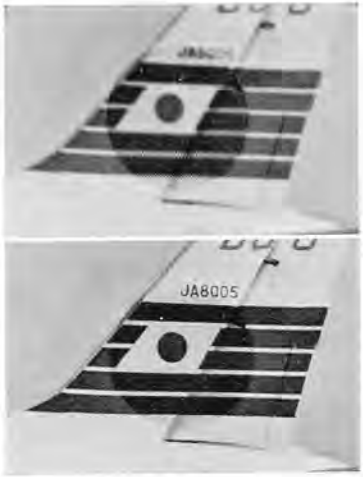
Backlighting photography

When making a silhouette of an object, measure the light from the bright part of the background and expose. When an object is to be photographed by backlighting, measure the light from the object at close range so that the light from the background

will not influence the meter reading. When the object and the background are to be photographed at the same time, first measure the dark part of the object, then measure the light from the background and use the average value.

FOCUSING

This camera has an automatic pre-set type lens and an instant-return mirror system which permits continuous viewing of the subject before and after taking the picture. Focusing is done by turning the focusing ring ③ right or left until the screen image becomes sharp and clear. The center of the ground glass screen contains a microdiamond prism range finder. When your subject is in focus, the image in the microprism will be sharp and perfectly clear. If your subject is not in focus, the microprism will break the image up into many small diamonds, much like an engraver's screen. You can focus on your subject at any portion of the ground glass. This system permits rapid and precise focusing at all distances and can be used with normal, wide angle and telephoto lenses.



DEPTH OF FIELD SCALE

The maximum sharpness of a lens lies in a plane at the distance to which the lens has been set. The sharpness decreases to the foreground and to the background. This range of sharpness is called the "depth of field" and depends on the aperture setting and distance to subject focused on.

The smaller the aperture setting the greater will be the depth of field and the nearer the distance the smaller the depth of field.

To read the depth of field scale ⑲, assume that the aperture of your standard lens is set at F-11 and focused at 5 m. You will notice that F-11 is opposite the infinity setting on the right side and approximately 2.5 m on the left. Everything from 2.5 m to infinity will be in sharp focus.

The depth of field table is a ready reference for other settings.

DEPTH OF FIELD TABLE

Standard Lens

MAMIYA-SEKOR F1.9, 48 mm (Circle of Confusion, 1.7/1,000 inch)

Aperture	Focused Distances (in feet)										
	∞	30	15	10	7	5	4	3	2.5	2	1.75
1.9	91′ 1½″ ∞	22′ 7¾″ 44′ 5¾″	12′ 11¼″ 17′ 10½″	9′ ½″ 11′ 2″	6′ 6¼″ 7′ 6½″	4′ 9¼″ 5′ 3¼″	3′ 10¼″ 4′ 2″	2′ 11″ 3′ 1″	2′ 5¼″ 2′ 6¾″	1′ 11½″ 2′ ½″	1′ 8¾″ 1′ 9¼″
2.8	61′ 10½″ ∞	20′ 3½″ 57′ 8¼″	12′ 1¾″ 19′ 7¾″	8′ 8″ 11′ 10″	6′ 4″ 7′ 10″	4′ 8″ 5′ 4¾″	3′ 9½″ 4′ 3″	2′ 10½″ 3′ 1½″	2′ 5″ 2′ 7″	1′ 11½″ 2′ ½″	1′ 8½″ 1′ 9½″
4	43′ 4¼″ ∞	17′ 10″ 95′ ½″	11′ 2¾″ 22′ 8″	8′ 2¼″ 12′ 10¼″	6′ 1″ 8′ 3″	4′ 6¼″ 5′ 7″	3′ 8¼″ 4′ 4¼″	2′ 10″ 3′ 2¼″	2′ 4¾″ 2′ 7½″	1′ 11¼″ 2′ 1″	1′ 8½″ 1′ 9¾″
5.6	31′ ∞	15′ 4¼″ 795′ 11¼″	10′ 2½″ 28′ 6¼″	7′ 7¾″ 14′ 6¼″	5′ 9¼″ 8′ 10¾″	4′ 4¼″ 5′ 10½″	3′ 7″ 4′ 6¼″	2′ 9¼″ 3′ 3¼″	2′ 4¼″ 2′ 8¼″	1′ 10¾″ 2′ 1¼″	1′ 8¼″ 1′ 10″
8	21′ 9″ ∞	12′ 8½″ ∞	8′ 11¾″ 46′ 8″	6′ 11¼″ 18′ ½″	5′ 4½″ 10′ 1″	4′ 1½″ 6′ 4¼″	3′ 5¼″ 4′ 9½″	2′ 8¼″ 3′ 5″	2′ 3½″ 2′ 9¼″	1′ 10½″ 2′ 2″	1′ 7¾″ 1′ 10¼″
11	15′ 10¼″ ∞	10′ 5¾″ ∞	7′ 9¾″ 232′ ½″	6′ 2¾″ 25′ 11″	4′ 11½″ 12′ 1¼″	3′ 10½″ 7′ ¾″	3′ 3¼″ 5′ 2¾″	2′ 7″ 3′ 7″	2′ 2½″ 2′ 10½″	1′ 9¾″ 2′ 2¾″	1′ 7½″ 1′ 11″
16	10′ 11¼″ ∞	8′ 1¼″ ∞	6′ 5¼″ ∞	5′ 4″ 97′ 2¼″	4′ 4½″ 18′ 2½″	3′ 6¼″ 8′ 9″	3′ ¼″ 6′	2′ 5¼″ 3′ 11½″	2′ 1¼″ 3′ 1¼″	1′ 9″ 2′ 4″	1′ 6¾″ 2′
22	8′ ∞	6′ 4¾″ ∞	5′ 3¾″ ∞	4′ 6¾″ ∞	3′ 10¼″ 46′ 10¾″	3′ 2¼″ 12′ 2¾″	2′ 9¼″ 7′ 5¼″	2′ 3¼″ 4′ 6″	1′ 1¾″ 3′ 5″	1′ 8″ 2′ 6″	1′ 6″ 2′ 1¼″

DEPTH OF FIELD TABLE

Wide Angle Lens

MAMIYA-SEKOR F3.5, 38 mm (Circle of Confusion, 1.7/1,000 inch)

Aperture	Focused Distances (in feet)										
	∞	30	15	10	7	5	4	3	2.5	2	1.75
3.5	31′ 5″ ∞	15′ 5 1/4″ 608′ 5 1/2″	10′ 2 3/4″ 28′ 3″	7′ 8 ⅋ 14′ 5 1/2 ⅋	5′ 9 1/2″ 8′ 10 3/4″	4′ 4 1/4″ 5′ 10 1/2″	3′ 7″ 4′ 6 1/4″	2′ 9 1/4″ 3′ 3 1/4″	2′ 4″ 2′ 8 1/4″	1′ 10 3/4″ 2′ 1 1/4″	1′ 8 1/4″ 1′ 10″
4	27′ 6″ ∞	14′ 5 1/4″ ∞	9′ 9 1/2″ 32′ 4 1/4″	7′ 5 ⅋ 15′ 5 1/2 ⅋	5′ 7 3/4″ 9′ 3″	4′ 3 1/2″ 6′ 1/4″	3′ 6 1/2″ 4′ 7 1/4″	2′ 9″ 3′ 3 3/4″	2′ 3 3/4″ 2′ 8 1/2″	1′ 10 3/4″ 2′ 1 1/2″	1′ 8″ 1′ 10″
5.6	19′ 8 1/4″ ∞	11′ 11 3/4″ ∞	8′ 7 1/4″ 60′ 7 1/2″	6′ 8 3/4″ 19′ 9 3/4″	5′ 3″ 10′ 7 1/4″	4′ 1/2″ 6′ 6 3/4″	3′ 4 1/2″ 4′ 11″	2′ 7 3/4″ 3′ 5 1/2″	2′ 3″ 2′ 9 3/4″	1′ 10 1/4″ 2′ 2 1/4″	1′ 7 3/4″ 1′ 10 1/2″
8	13′ 9 3/4″ ∞	9′ 6 1/2″ ∞	7′ 3 1/2″ ∞	5′ 10 3/4″ 34′ 4 3/4″	4′ 8 3/4″ 13′ 8″	3′ 9″ 7′ 7″	3′ 2″ 5′ 5 1/2″	2′ 6 1/4″ 3′ 8 1/2″	2′ 2″ 2′ 11 1/2″	1′ 9 1/2″ 2′ 3 1/4″	1′ 7″ 1′ 11 1/4″
11	10′ 1″ ∞	7′ 7 1/2″ ∞	6′ 1 1/2″ ∞	5′ 1 1/2″ 473′ 8 ⅋	4′ 2 3/4″ 21′ 5 1/4″	3′ 5 1/4″ 9′ 5 1/4″	2′ 11 1/4″ 6′ 5″	2′ 4 1/2″ 4′ 1″	2′ 3/4″ 3′ 2 1/4″	1′ 8 3/4″ 2′ 4 3/4″	1′ 6 1/2″ 2′ 1/2″
16	6′ 11 3/4″ ∞	5′ 8 3/4″ ∞	4′ 10 1/4″ ∞	4′ 2 1/2″ ∞	3′ 7″ 481′ 10 1/2″	3′ 16′	2′ 7 1/2″ 8′ 8″	2′ 2 1/4″ 4′ 11″	1′ 11″ 3′ 7 3/4″	1′ 7 1/2″ 2′ 7 1/2″	1′ 5 1/2″ 2′ 2 1/4″

DEPTH OF FIELD TABLE

Telephoto Lens

MAMIYA-SEKOR F3.5, 100 mm (Circle of Confusion, 1.7/1,000 inch)

Aperture	Focused Distances (in feet)									
	∞	30	15	10	7	5	4.5	4	3.5	3
3.5	217′ 6″ ∞	26′ 5 1/4″ 34′ 8″	14′ 1″ 15′ 11 1/2″	9′ 7″ 10′ 5 1/4″	6′ 9 3/4″ 7′ 2 1/2″	4′ 10 3/4″ 5′ 1 1/4″	4′ 5″ 4′ 7″	3′ 11 1/4″ 4′ 3/4″	3′ 5 1/2″ 3′ 6 1/2″	2′ 11 3/4″ 3′ 1/4″
4	190′ 3 3/4″ ∞	26′ 35′ 5 1/2″	13′ 11 1/2″ 16′ 2 1/2″	9′ 6 1/2″ 10′ 6″	6′ 9 1/4″ 7′ 2 3/4″	4′ 10 3/4″ 5′ 1 1/4″	4′ 5″ 4′ 7″	3′ 11 1/4″ 4′ 3/4″	3′ 5 1/2″ 3′ 6 1/2″	2′ 11 1/2″ 3′ 1/2″
5.6	135′ 11 1/2″ ∞	24′ 8 1/4″ 38′ 2 3/4″	13′ 7″ 16′ 9″	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 1/4″	3′ 5 1/4″ 3′ 6 3/4″	2′ 11 1/2″ 3′ 1/2″
8	95′ 2 1/4″ ∞	22′ 11 1/2″ 43′ 4″	13′ 1/2″ 17′ 7 3/4″	9′ 1 1/2″ 11′ 1″	6′ 6 3/4″ 7′ 6″	4′ 9 1/2″ 5′ 2 3/4″	4′ 4″ 4′ 8 1/4″	3′ 10 1/2″ 4′ 1 3/4″	3′ 4 3/4″ 3′ 7 1/4″	2′ 11 1/4″ 3′ 3/4″
11	69′ 3″ ∞	21′ 1″ 52′	12′ 5 1/4″ 18′ 10 3/4″	8′ 10″ 11′ 6 1/2″	6′ 5″ 7′ 8 1/4″	4′ 8 1/2″ 5′ 4″	4′ 3 1/4″ 4′ 9″	3′ 10″ 4′ 2 1/4″	3′ 4 1/2″ 3′ 7 3/4″	2′ 11″ 3′ 1 1/4″
16	47′ 7 1/2″ ∞	18′ 7″ 78′ 1″	11′ 6 1/2″ 21′ 5″	8′ 4 1/2″ 12′ 5″	6′ 2 1/4″ 8′ 3/4″	4′ 7″ 5′ 5 3/4″	4′ 2″ 4′ 10 1/2″	3′ 9″ 4′ 3 1/2″	3′ 3 3/4″ 3′ 8 1/2″	2′ 10 1/2″ 3′ 1 3/4″
22	34′ 8″ ∞	16′ 3 1/4″ 196′ 5 1/4″	10′ 7 1/2″ 25′ 6 1/2″	7′ 10 3/4″ 13′ 7 3/4″	5′ 11 1/4″ 8′ 6 1/2″	4′ 5 1/2″ 5′ 8 1/4″	4′ 3/4″ 5′ 1/2″	3′ 8″ 4′ 5″	3′ 3″ 3′ 9 1/2″	2′ 9 3/4″ 3′ 2 1/2″
32	23′ 10 1/4″ ∞	13′ 5 3/4″ ∞	9′ 4 3/4″ 37′ 6 3/4″	7′ 2 1/2″ 16′ 4 1/2″	5′ 6 1/2″ 9′ 6″	4′ 3″ 6′ 1″	3′ 10 3/4″ 5′ 4″	3′ 6 1/4″ 4′ 7 1/2″	3′ 1 3/4″ 3′ 11 1/2″	2′ 9″ 3′ 3 3/4″

ADJUSTING DISTANCE FOR INFRA-RED FILM

The lens is first focused in the usual manner so that the distance focused on (i. e. ∞) is opposite the orange triangle on the distance scale. Now, simply rotate the focusing ring so that the selected distance is opposite the red R. Distance is now adjusted for infra-red film.

PHOTOGRAPHING

Hold the camera firmly with both hands, pressing it against your cheek. Focusing can be done with the left hand, the right-hand thumb on the film advance lever and the index finger on the shutter release button. In this position, squeeze the shutter release button ② gently. When using the exposure meter, make sure that the meter window is not obstructed by your fingers.

MAKING TIME EXPOSURES

With the shutter speed ring ⑤ set on "T", pressing of the shutter release button ② opens the shutter which will remain open until the time release button ㉕ is pressed. The aperture can be set for any value in this instance.

USING SELF-TIMER

When the MXV selector ⑩ is set to V, the self-timer is engaged. Pressing of the shutter release button actuates the self-timer and after a ten-second delay, the shutter is automatically released. The self-timer can be engaged before or after film winding.
The threaded hole in the center of the shutter button is used for a cable release.

FLASH PHOTOGRAPHY

Changing of the MXV selector lever ⑩ to M or X, the respective contact is made. If this lever is set on V (self-timer), the contact is X.

Function of M contact :

M class (time lag within 20 milli seconds) flash bulbs can be used most efficiently on this contact ; the exposure synchronizes perfectly up to 1/500 second.

Function of X contact :

This contact is used when photographing with an electronic speedlight or when photographing at 1/30 second or longer, using F class (time lag within 10 milli second) flash bulbs.

When photographing with flash bulbs, the synchronizing exposure time range is determined by the kind of flash bulb and the kind of contact (M or X). The aperture opening is determined by the distance between the object to be photographed and the guide number of the particular flash bulb. For selection of the exposure time and aperture opening refer to the instruction manual for flash bulbs. In this case, the exposure time and aperture opening are determined without reference to the exposure meter.

Besides the synchro socket (German type) ⑨ on the front of the camera, an upper synchro contact ㉑ is located on the accessory shoe. Use whichever is most suited for the type of flash equipment used.

ATTACHING OR DETACHING LENSES

Three kinds of lenses—standard (F-1.9, 48 mm), wide angle (F-3.5, 38 mm) and telephoto (F-3.5, 100 mm)—can be used with this camera.

Detaching the lens:

1. Turn the lens lock lever ⑪ in opposite direction indicated by the LOCK arrow.

2. Hold the camera body in your left hand ; turn the lens counterclockwise holding the depth of field ring until the red dot on the lens cylinder matches the red triangle on the shutter speed ring. Remove the lens.

Attaching the lens :

1. Ascertain that the lens lock lever ⑪ is in the opposite direction to LOCK arrow mark.
2. Hold the camera in your left hand ; match the red triangle on the depth of field scale with the red dot on the lens cylinder. Insert the lens and rotate it clockwise until seated.
3. Lock the lens by sliding the lock lever ⑪ in the direction indicated by the arrow.
4. Turn the aperture ring ④. The spring Ⓓ of the aperture will fit into the slot of the aperture ring ④ to complete the lens attachment.

When lens is detached, never touch the lens; never actuate the shutter by toying with the aperture connector lever Ⓔ.

Never touch the mirror: if it is dusty, use a rubber bulbtype blower to clean.

FILM REWINDING

When every frame of a film cartridge has been exposed, rewind the film before opening the back cover.

1. Depress the rewinding button ⑳.
2. Raise the film rewinding crank ⑬, turn in the direction of the arrow and rewind the exposed film into the cartridge.
3. When the film is in the cartridge, the rewinding button ⑳ stops rotating.
4. Open the back cover and remove film cartridge.
5. By turning the film advance lever ① once, the rewinding button is again positioned.

ACCESSORIES

Interchangeable lenses :

Standard lens	F-1.9, 48 mm, 4 group 6 element lens composition, picture angle 48°40′ ; automatic aperture control
Wide angle lens	F-3.5, 38 mm, 3 group 4 element lens composition, picture angle 59° ; automatic aperture control
Telephoto lens	F-3.5, 100 mm, 4 group 5 element lens composition, picture angle 24°20′ ; automatic aperture control

Lens hood :

For standard lens	Screw-in type	52 mm (P=0.75 mm)
For telephoto lens	Screw-in type	52 mm (P=0.75 mm)

Filter :

All lenses	Screw-in type	52 mm (P=0.75 mm)


MAMIYA
SEKOR 100mm. F3.5

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TOKYO, JAPAN

PRINTED IN JAPAN