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The Mamiya M645 is a newly developed 6×4.5cm SLR which is a result of Mamiya's technology and experience as a leading manufacturer of professional cameras. The M645 is designed to introduce the world of large-negative quality to camera users who are accustomed to the easy handling and compactness of 35mm SLR's.

Every care has been taken to assure that your Mamiya M645 will provide you with years of trouble-free service. However, to avoid possible mishandling, be sure to carefully read this instruction manual before using your new camera.

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Special Features of the Mamiya M645

The Mamiya M645 is a 6×4.5 cm large-negative SLR that is both extremely versatile and compact.

1. Large-Negative Quality

The 6×4.5 cm format offers approximately 3 times more area than the 35mm format. Moreover, unlike the 6×6 cm square negative, there is little waste of the negative area. For beautiful color enlargements everytime, the 6×4.5 cm format is the ideal format.

2. Compact Design

Despite the large-negative it produces, the Mamiya M645 is designed to handle as easily as a 35mm SLR. Its compact size and light weight are perfectly suited for the action photographer. It fits so well into one's hands that it becomes an extension of his reflexes.

3. Mamiya's Moving Coil Electronic Shutter

Mamiya has developed a revolutionary Moving Coil Electronically Controlled Shutter for the Mamiya M645. Electrical consumption of this new shutter is approximately 1/10 that of previous electronic shutters. Furthermore, consumption remains constant regardless of the shutter speed being used. In addition to accuracy, long battery life is assured by this new shutter.

4. Large, Bright Viewfinder

It becomes easy to catch the peak of action when looking through the large, bright viewfinder. Because of the Mamiya M645's automatic diaphragm and quick-return mirror, the viewfinder never grows dim. It is always bright, ready for the next photograph.

5. Interchangeable Finders

• Waist-Level Finder

The Waist-Level Finder is extremely lightweight and compact. You will find it ideal for copying, close-ups, low and high angle pictures, and dim light. One touch opens or closes the finder. The magnifier is interchangeable, too.

- **Prism Finder**

The Prism Finder is well-suited for action photography. Whether the vertical or horizontal format is utilized, focusing and following action is as easy as on a 35mm SLR.

- **PD Prism Finder**

The PD Prism Finder employs silicon cells for full-aperture, center-weighted readings. It is your assurance that every negative will be properly exposed.

6. Flatness of the Film Plane

Developed through Mamiya's long experience as a manufacturer of 120/220 roll-film cameras, the Roll-Film Inserts for the Mamiya M645 keep the film perfectly flat for edge-to-edge sharpness. Inserts are available for 120 or 220 roll-film.

7. Multi-Coated Lenses

Mamiya-Sekor lenses have achieved world-renown as professional lenses of exceptional contrast, high resolution, clear definition, and excellent color balance. All the lenses for the Mamiya M645, from wide-angle to telephoto, have been multi-coated to maintain their high standard of performance even under adverse lighting.

8. Unlimited Scope

A full range of accessories are available for the Mamiya M645 to assist the photographer in capturing virtually any type of image. Accessories include hand grips, interchangeable focusing screens, and auto extension rings complete with meter coupling.

- **Multiple-Exposure Provision**

Merely lowering the multiple-exposure lever allows the photographer to take as many multiple-exposures as he wishes. During multiple-exposures, the exposure counter does not move.

- **Mirror Lock-Up**

The Mamiya M645 is designed to have minimal mirror shock; nevertheless, when it is necessary to completely eliminate vibrations, all you have to do is lock the mirror in the up position. To do so, simply lower the mirror lock-up lever. Mirror lock-up provision makes close-up and telephoto photography possible even at slow shutter speeds.

- **Two Shutter Release Buttons**

The Mamiya M645 is equipped with two ideally located shutter release buttons, so that regardless of how you hold the camera, there is always a release button at your finger tips.

Specifications

● Camera Body

Camera Type:

6 × 4.5cm electronic focal-plane shutter SLR.

Film Type:

120 roll-film for 15 exposures,

220 roll-film for 30 exposures

Standard Lens:

Mamiya-Sekor C (multi-coated)

80mm f/2.8, automatic diaphragm,

with meter coupler, 58mm filter size

Lens Mount:

Mamiya M645 bayonet mount

Shutter:

B, 8—1/500 sec.

Moving Coil Electronic Focal-Plane Shutter,

FP and X (1/60 sec.) synchronization,

shutter release lock provision

Battery Type:

One 6V silver-oxide battery

(Eveready 544, UCAR 544, Mallory PX28)

Focusing Method:

Each Mamiya-Sekor lens is equipped with its own helicoid focusing mount

Focusing Screen:

Microprism center spot (standard focusing screen), surrounding area is matte, with Fresnel lens, focusing screen interchangeable, 94% of the picture area visible

Mirror:

Instant return, with mirror lock-up provision

Film Transport:

Film advance knob equipped with crank, film transported with single turn of film advance crank

Exposure Counter:

Progressive type, automatic reset, automatic changeover with insertion of 120/220 roll-film inserts

Battery Check:

Depressing B.C. button illuminates green L.E.D. if battery condition is satisfactory.

Multiple-Exposure:

Lowering multiple-exposure lever makes multiple-exposures possible; exposure counter does not move during multiple-exposures.

Dimensions and Weight:

(width, height, depth, w/80mm f/2.8 lens)

(with Prism Finder attached)

3-29/32" × 4-27/32" × 6-1/16" 54.9 oz.

99.3 × 122.7 × 154mm 1555 g.

(with PD Prism Finder attached)

3-29/32" × 4-29/32" × 6-1/16" 58.7 oz.

99.3 × 124.7 × 154mm 1665 g.

(with Waist-Level Finder attached)

3-29/32" × 3-15/16" × 6-1/16" 47.1 oz.

99.3 × 100 × 154mm 1335 g.

● Interchangeable Finders

Prism Finder:

The image in the Prism Finder is right-side up, laterally correct, and moves in the correct direction; magnification of 0.7X with the standard lens at infinity; built-on hot-shoe; comes with eyecup.

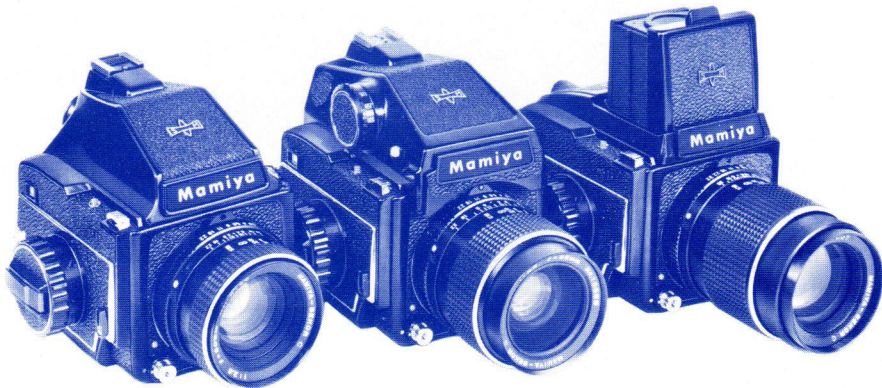
PD Prism Finder:

Prism Finder with built-in silicon cell, through-the-lens, full-aperture, center-weighted metering; 7 LED's visible in the

viewfinder for correct or compensated exposure; at 100 A.S.A. metering range of EV 0 — EV 18 (f/2.8, 8 sec. — f/22, 1/500 sec.); other features same as Prism Finder.

Waist-Level Finder:

Closes and opens with a single touch; magnification of 1.3X with standard lens at infinity; interchangeable magnifiers.



Names and Functions of Parts (1)

Focusing screen

Four different types are available.

Focusing screen lug

Mounting guide pin for finder

Fits into the finder opening.

Alignment dot

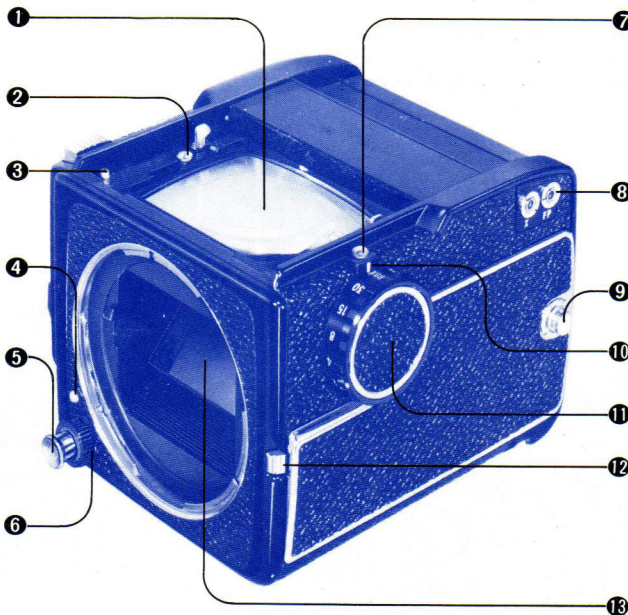
Alignment reference point for mounting lens.

Shutter release button (front)

Built-in safety lock, locks release button if film has not been advanced. Equipped with cable release socket.

Shutter release lock ring

Turn lock ring and align with red dot to simultaneously lock both shutter release buttons. To unlock, align with white dot.



Battery check lamp

Flash sync terminals

X and FP synchronization.

Neck strap lug

Shutter speed alignment mark

Shutter speed dial

Lens release button

Push in and simultaneously turn the lens counterclockwise to remove.

Mirror

Never touch the surface of the mirror.

Back cover latch

While pushing in on the memo clip, simultaneously move the back cover latch in the direction of the arrow to open camera back.

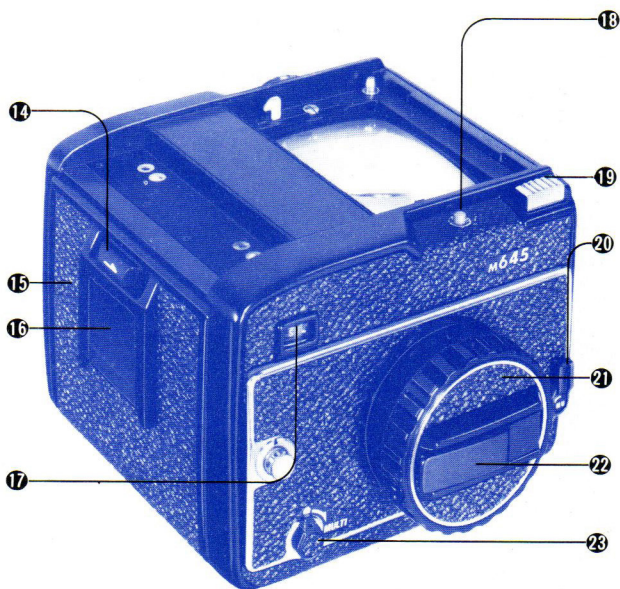
Camera back cover

Memo clip

Holds the film box top as a reminder.

Exposure counter window

Automatic changeover upon insertion of 120 or 220 film insert. Goes up to 15 with 120 film and up to 30 with 220 film.



Battery check button

When depressed, the battery check lamp on the opposite side illuminates. Used to check the condition of the battery.

Shutter release button (upper)

Mirror lock-up lever

Push backward to lock mirror in the up position.

Film advance knob

One complete turn cocks shutter and advances film.

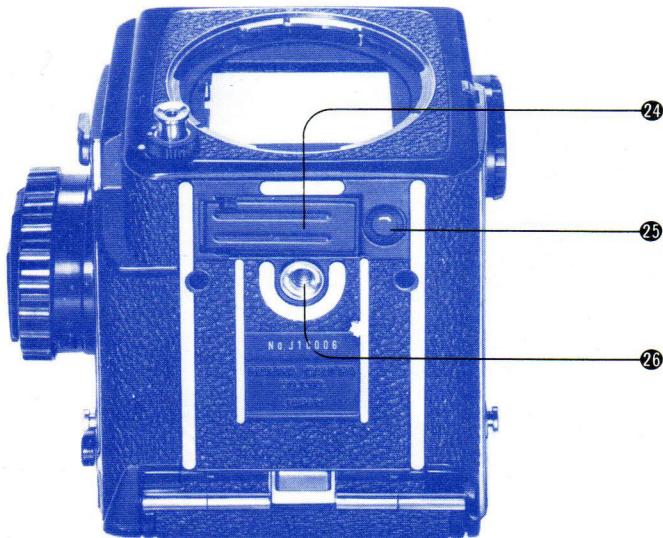
Film advance crank

Pull out to use.

Multiple-exposure lever

Move the multiple-exposure lever to the "multi" position for multiple-exposures or to release the shutter when there is no film in the camera.

Names and Functions of Parts (2)



24 Battery chamber cover

Insert one 6V silver-oxide battery into the battery chamber.

25 Battery chamber opening button

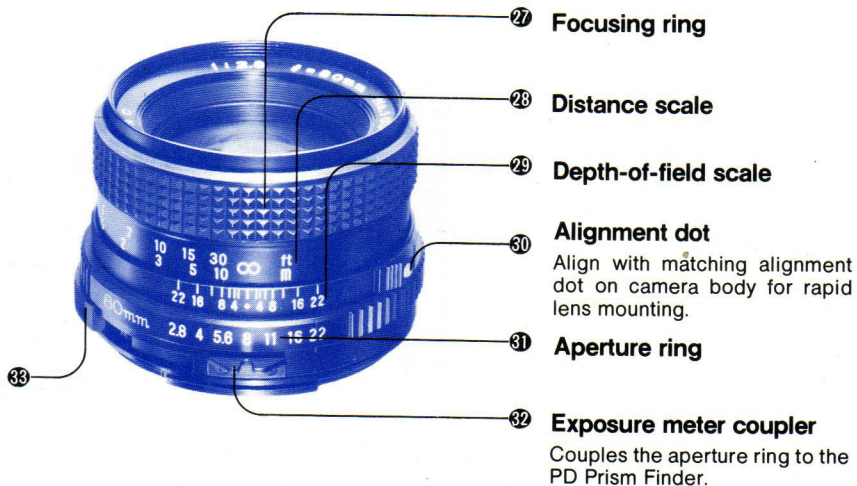
Twist in the direction of the arrow to open battery chamber cover.

26 Tripod socket

1/4 inch tripod socket. To convert to a 3/8 inch socket, first remove the small screw in the base of the socket. Next, remove the inner socket by turning counterclockwise with a coin.

A.M. Lever

Automatic diaphragm operation when "A" appears in the window. Diaphragm stopped down to preselected aperture when "M" appears in window.



Names and Functions of Parts (3)

Roll-Film Insert

(120 and 220 roll-film inserts are available)

Start Mark

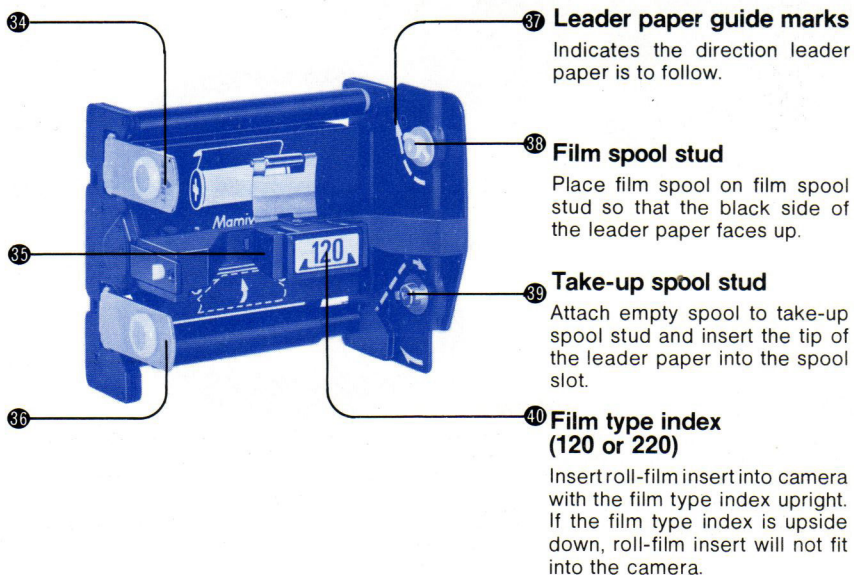
After aligning the start mark on the film's leader paper with this mark, the roll-film insert is ready for insertion into the camera.

Release latch

After squeezing in on both sides of release latch, the roll-film insert can be pulled out of camera.

Spool clip

Pull out and lower spool clip to insert or remove film spools.



Prism Finder

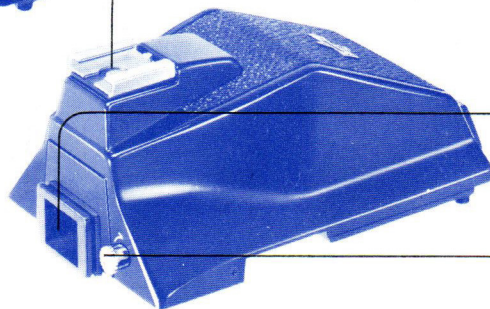


Eyecup

Attach by sliding into the grooves of the eyepiece.

Diopter correction lens retainer ring

Remove by unscrewing in a counterclockwise direction. After inserting correction lens, replace retainer ring.



Hot-shoe

Automatically fires cordless flash units when the shutter release button is depressed.

Eyepiece

Accessories such as eyecup, magnifier, and angle finder can be attached.

Finder release button

Turn clockwise until it stops, push in, and the finder can be lifted off the camera body.

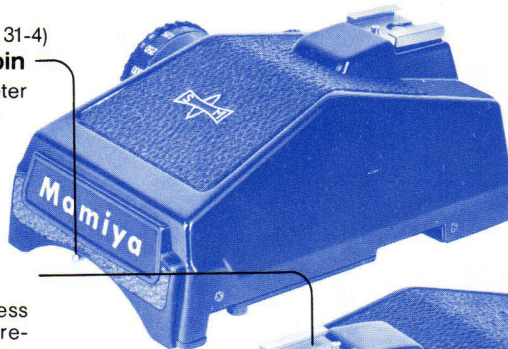
Names and Functions of Parts (4)

PD Prism Finder

(Detailed Instructions on pp.31-4)

Aperture ring coupling pin

Couples to the exposure meter coupler on the aperture ring.



Hot-shoe

Automatically fires cordless flash units when the shutter release button is depressed.

Finder release button

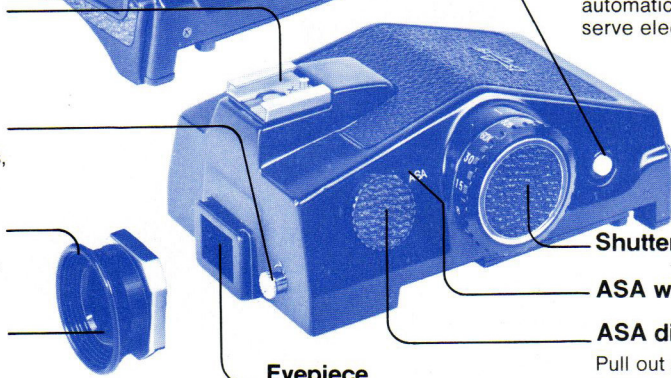
Turn clockwise until it stops, push in, and the finder can be lifted off the camera body.

Eyecup

Attach by sliding into the grooves of the eyepiece.

Diopter correction lens retainer ring

Remove by unscrewing in a counterclockwise direction. After inserting correction lens, replace retainer ring.



Meter switch

Pushing in on this switch when the finder is attached to the camera will turn on the meter and a LED in the finder will light up. Even if you release pressure from the meter switch, the meter will remain on for approximately 15 seconds and then automatically turn off to conserve electricity.

Shutter speed dial

ASA window

ASA dial

Pull out and then turn.

Eyepiece

Accepts accessories such as eyecup, magnifier, and angle finder.

Waist-Level Finder

(For detailed instructions, see pp. 35-6.)

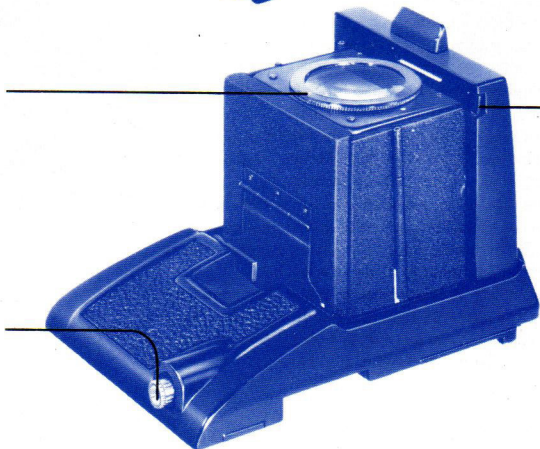


Finder opening tongue

Pull up to open finder.

Alignment dot for changing magnifier

To remove magnifier, twist 90° counterclockwise and lift out. The magnifier is interchangeable with 5 types of magnifiers with diopter corrections.



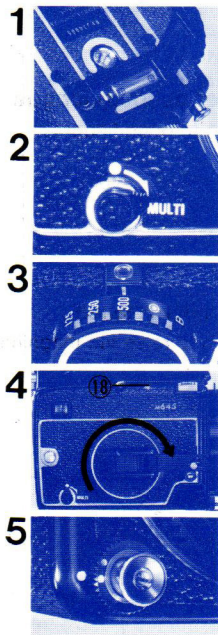
Magnifier release

Push in to raise the magnifier.


Finder release button

Turn clockwise until it stops, push in, and the finder can be lifted off the camera body.

Testing to See if the Camera Functions Properly




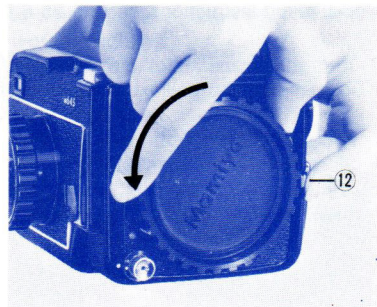
To release the shutter when there is no film in the camera, proceed as follows. (For detailed instructions on particular points, refer to the page number shown in parentheses.)

1. Insert a battery into the camera. (p.19)
2. Set the multiple-exposure lever to "MULTI." (p.40) (If you have just purchased the camera and the vinyl tube is still on the take-up spool, there is no need to move the multiple-exposure lever.)
3. Set the shutter speed dial to any shutter speed other than the  red mark. (p.25)
4. Turn the film advance knob until it stops.
5. Align the shutter release lock ring with the white dot and release the shutter. (p.27)

When ready to load the camera with film, return the multiple-exposure lever to its normal position. If this is not done, the film will not advance.

If the shutter is released without a battery in the camera, the mirror will lock in the up position. To return the mirror to its normal position, depress the battery check button (18) as far as it will go.

If the shutter is released with the shutter speed dial set to the red  position, the mirror will lock in the up position. To lower the mirror, turn the shutter speed dial in either direction (B or 1/500 sec.).

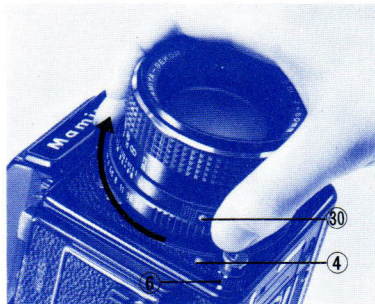


● Removing the body cap

While depressing the lens release button (12), turn body cap counterclockwise until the red dots are aligned and lift out.

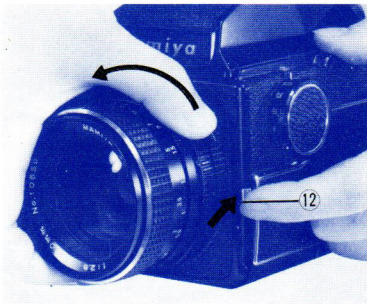
Interchanging Lenses

● Attaching Lenses



While aligning the two alignment dots (30 & 4), insert lens into camera body. Then twist lens clockwise until it clicks and locks into place.

● Removing Lenses



While depressing the lens release button (12), grasp the part of the lens barrel that has the depth-of-field scale (29) and alignment dot (30), and twist the lens counterclockwise until it stops. Then lift out.

★ After removing a lens, be sure to place caps on both the lens and camera body.

★ Never touch the surface of the mirror.

★ After removing a lens, it is recommended to lock the shutter release button by setting the shutter release lock ring (6) in order to avoid accidentally releasing a cocked shutter when placing the camera body face down on a table.

Interchanging Finders

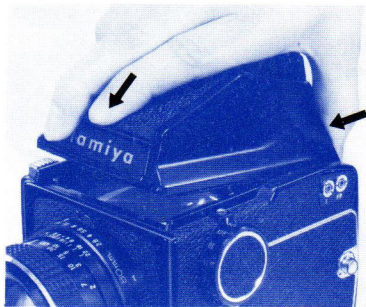
The methods of interchanging the Waist-Level Finder, PD Prism Finder, and Prism Finder are all the same.

Prior to attaching the finder to the camera, confirm that the white dot on the finder release button is pointing upward.

If the white dot on the button is aligned with the white dot on the finder, by depressing the button and removing your finger from it, the white dot on the button will automatically point upward. In this condition, the button cannot be depressed; consequently, the finder will not be accidentally detached from the camera.



● Attaching Finders



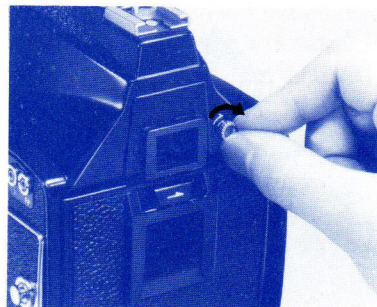
Place the rear part of the finder on the camera body while holding the front part of the finder slightly upward. Slide the rear part forward until it stops and gently lower the front part of the finder on to the camera body. It will then lock into place.

Precaution:

Do not leave both white dots aligned by turning the button while the finder is attached to the camera. The finder may become detached when the button is occasionally depressed, possibly causing damage.

If you depress the button to point the white dot upward while the finder is attached to the camera, be sure to depress the finder against the camera body; otherwise the finder will not be locked into place.

● Removing Finders

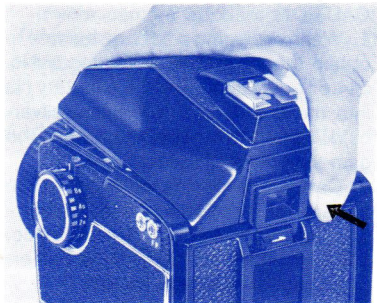


1. Turn the finder release button clockwise until it stops (about 60°). Then you will be able to push in on the release button.

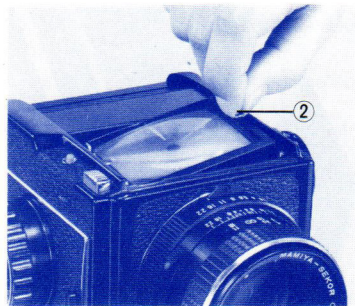
Focusing Screens

● Interchanging Focusing Screens

The focusing screens are readily interchangeable. Four different focusing screens are available to meet various photographic needs.



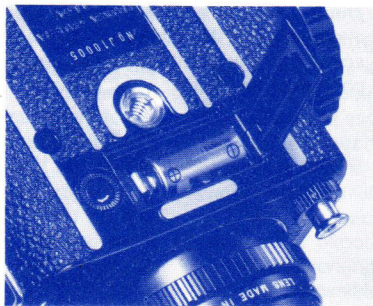
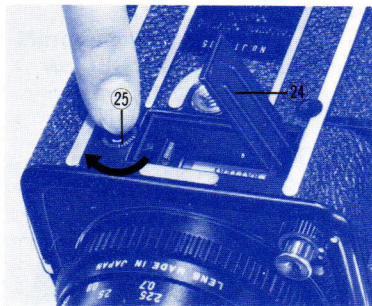
2. While pushing in on the release button with your thumb, lift the finder off the camera body.



Remove the finder, grasp the focusing screen lug (2), pull up, and lift out. To replace screen, gently insert and lightly push it in on both sides until it stops.

★ Since the rear surface of the screen is made of plastic, be careful not to scratch it when interchanging screens.

Inserting a Battery



The Mamiya M645 uses one 6V silver-oxide battery (Eveready No. 544, UCAR 544, Mallory PX28 or equivalent).

1. Twist the battery chamber opening button (25) clockwise with your finger tip and the battery chamber cover (24) will open.

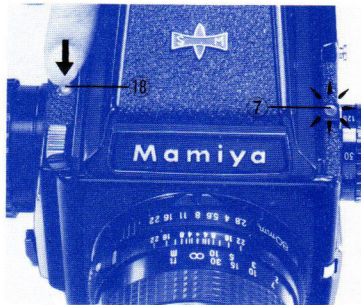
2. Next, align the \oplus \ominus marks of the battery with those indicated in the battery chamber. Then insert the battery and close the cover.

CAUTION:

1. When replacing a battery, be sure to obtain the correct type (Eveready No. 544 or equivalent). Even if a battery fits into the chamber, if it is not a **silver-oxide battery**, proper functioning of the camera cannot be guaranteed.
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 the camera is not used for a long period of time, remove the battery and store it in a cool, dry place.
4. When replacing a battery, properly dispose of the used battery immediately as it is potentially dangerous. Silver-oxide batteries are explosive and should therefore never be thrown into a fire.
5. A battery that is not used for a long period, even if it is properly stored in a dry, cool place, may lose some of its charge. Consequently, check its condition after replacing it in the camera with the battery check button.

Battery Check

6. Under normal circumstances, the shutter can be released 100,000 times or more with a single battery. With the PD Prism Finder attached and the metering system turned on for each exposure, the shutter can be released approximately 5,000 times (the PD Prism Finder uses the battery in the camera body).

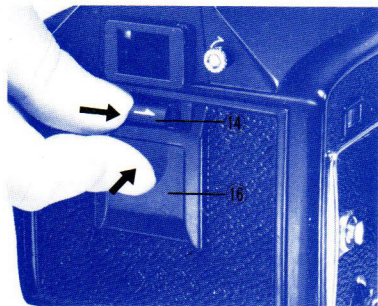


When the battery check button (18, located above the film advance knob) is depressed, the battery check lamp (7, located above the shutter speed dial) illuminates. If the battery check lamp fails to go on, it is time to replace the battery.

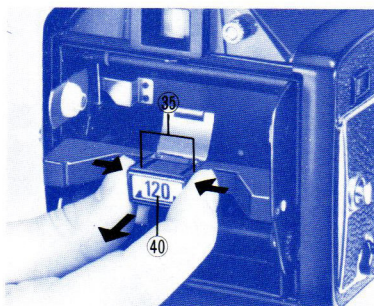
★ When the battery is completely exhausted, the opened shutter will not close. At this time, **if the battery check button is pushed all the way down as far as it will go, the shutter will then close.**

Film Loading

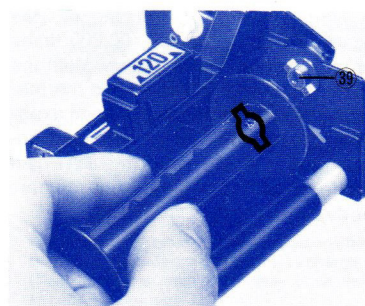
● Loading the Film



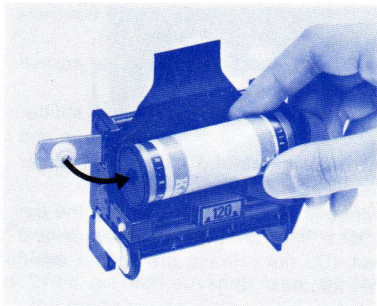
1. While gently pushing in on the memo clip (16), move the back cover latch (14) in the direction of the arrow and the camera back cover will open.



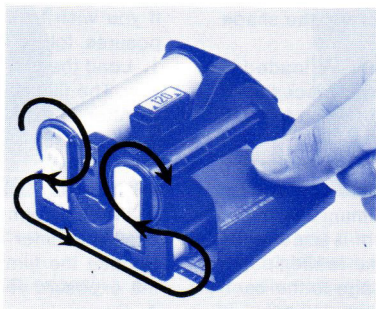
2. While squeezing in on both sides of the release latch (35), pull the roll-film insert out of the camera body. Place the film insert on a table making sure that the film type index (40) is not upside down. Then pull out and lower the spool clips found on the left-hand side.



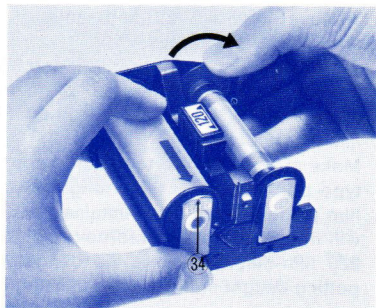
3. Align the right-hand side of an empty spool with the lower spool stud (39). Then return the spool clip (36) to its former position, making sure that the left-hand side of the spool is properly held by the spool clip.



4. In the same manner insert a roll of film in the upper compartment.
 5. Make sure that the black side of the leader paper faces up.

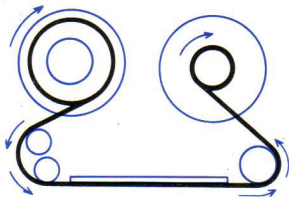


6. Gently pull out some of the leader paper, pulling it over and around the pressure plate. Then insert the tip of the leader paper into the slot of the take-up spool.



7. Gently rotate the take-up spool in the direction of the arrow until the start mark of the film is aligned with the start mark on the spool clip (34).

★ The above step is to be completed before the roll-film insert is placed into the camera.



★ Never load film in direct sunlight. Load it in the shade or in your own shadow.

★ Roll-film inserts for both 120 and 220 film are loaded in the same manner. The exposure counter advances to 15 when the 120 film insert is used, and to 30 when the 220 film insert is used.

Make absolutely sure to match the film insert with the film type being used. If the wrong insert is used, the correct film plane will not be maintained and optimum sharpness will not be achieved. Moreover, if 120 film is used in the 220 film insert, there is the danger of the leader paper getting caught in the shutter causing damage to the camera.

★ Before placing the film insert into the camera, make sure the leader paper on the take-up spool is flat and lies evenly between the two edges of the take-up spool. The take-up spool should be wound sufficiently tight to make it impossible for the leader paper to ride over the edge of the take-up spool.

★ **Always align the start marks of the film and spool clip before placing the film insert into the camera. (If the start marks are aligned within the camera with the aid of the film advance knob, the first frame will not be correctly positioned.)**

● Using Roll-Film Designed for Six Exposures

If you wish to use roll-film designed for six 6×6 cm exposures, follow the procedure outlined below.

1. Load the film in a 120 film insert and use in the normal way. The film will take 7 exposures.

2. After 7 exposures have been taken, set the shutter speed dial to 1/500 sec., wind the film advance knob and release the shutter 4 more times (the exposure counter will indicate "11").

3. Wind the film advance knob once again so that the exposure counter indicates "12", open the back cover, and remove the film insert. (Do not release the shutter when the exposure counter indicates "12".)

4. Completely wind the remaining leader paper around the film take-up spool.

★ If the film in the camera is completely wound onto the take-up spool, there is the danger of the tip of the leader paper getting caught in the shutter curtain and damaging the camera.

● Insertion of the Film Insert



1. Grasp both sides of the release latch (35) of the film insert, making sure that the film type index (40) is not upside down, and place the film insert straight into the camera body. After the film insert has completely entered the camera body, let go of the release latch.

2. Press in on the outer edges of the release latch (indicated by the arrows in the photograph above) and the roll-film insert will lock into place. (If the roll-film insert does not go all the way in on the right-hand side, turn the film advance knob slightly while pushing in on the right side of the film insert.)

3. After insertion has been completed, securely close the camera back cover.

★ If the film advance knob moves slightly from the time the film insert is placed into the camera to the time the back cover is closed, there will be no ill effects. However, if the film advance knob moves too much, the first frame will be fogged.

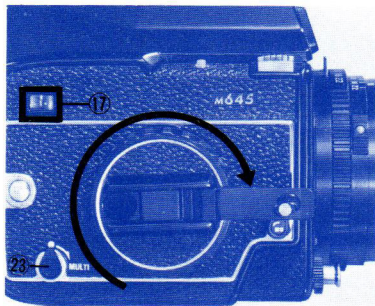
● Memo Clip



The memo clip found on the camera back cover can be used to hold the film box top.

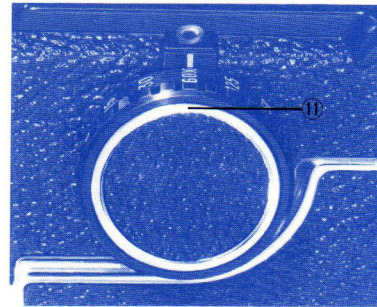
★ The memo clip also doubles as a safety lock to prevent the camera back from accidentally opening. If excessively thick paper is placed in the memo clip, it will no longer simultaneously serve as a safety lock.

Film Advance Knob



1. After the film has been placed into the camera make sure that the multiple-exposure lever (23) is aligned with the white dot and not with the word "MULTI".
2. Wind the film advance knob until it stops and the number 1 will appear in the exposure counter window (17). The shutter is now cocked and the camera is ready for the first exposure.

Shutter Speed Dial



1. Align the desired shutter speed with the shutter speed alignment mark (10) by turning the shutter speed dial (11) in either direction.

2. Color Coding

(a) Green figures represent full seconds, all other figures represent the denominator of a fraction. (Thus, 30 equals 1/30 sec.).

(b) Orange represents caution. The shutter speeds appearing in orange are not suitable for hand-held shooting. Use a tripod.



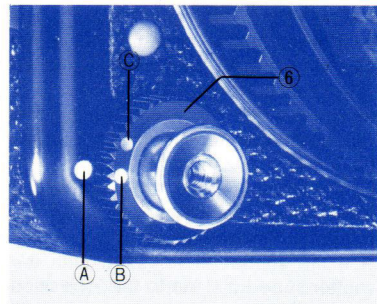
1. While looking through the viewfinder eyepiece, adjust the focusing ring (27) until the most important subject appears sharp and clear.

2. The central microprism grid is useful for rapid and accurate focusing as the slightest focusing adjustment will snap the image in and out of focus.

3. As a further aid, a fine focusing collar surrounds the microprism grid.

Since the Mamiya M645 is an SLR, the photographer always sees in the viewfinder exactly what will appear on the film, regardless of the lens or accessory being used. Moreover, simply moving the AM lever to the M position will allow one to preview the depth-of-field and appearance of out-of-focus images.

★ As an accessory, Mamiya offers diopter correction lenses which can be attached to the prism finders, and diopter lenses for the waist-level finder. Near and farsighted persons will find these accessories useful for obtaining accurate focus.

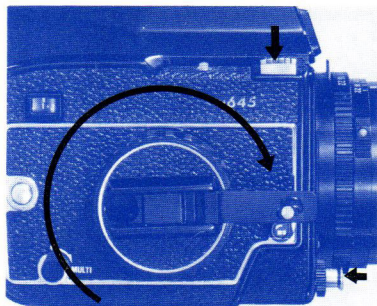


● Shutter Release Lock Ring

The shutter release button is equipped with a lock ring to prevent accidental release of the shutter.

1. When you wish to release the shutter, turn the shutter release lock ring so that the white dot (B) is aligned with the dot (A) on the camera body.

2. Aligning the red dot (C) of the shutter release lock ring with the dot on the camera body will simultaneously lock both shutter release buttons.



1. When releasing the shutter, you may use either the front or upper shutter release button.
2. After releasing the shutter, the film advance knob is automatically unlocked, making it possible to transport the film to the next frame.

Please notice the following points regarding the film transport mechanism:

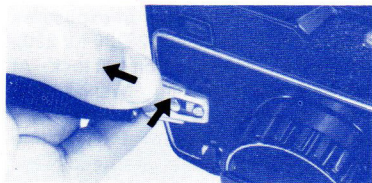
- ★ A built-in safety lock prevents the shutter from being released if the film advance knob is not fully wound or if the exposure counter is between S and 1.
- ★ After the fixed number of exposures has been taken (15 or 30), the shutter release button automatically locks.
- ★ If the film advance knob is wound while simultaneously depressing the shutter release button, the shutter will be released the moment winding is completed.
- ★ If the PD Prism Finder is not attached to the camera body and the shutter is released with the shutter speed dial set to the \odot position, the mirror will lock in the raised position and the shutter will remain open. (Moving the shutter speed dial to B or 1/500 sec. will lower the mirror and close the shutter.)
- ★ Use of the multiple-exposure lever is explained on page 40.
- ★ The front shutter release button is threaded to accept cable releases or self-timers.

1. After the fixed number of exposures have been taken (15 for 120, 30 for 220), the shutter release button will lock. At that time, wind the film advance knob until the leader paper is completely wound onto the take-up spool. (When winding is complete, resistance will no longer be felt on the film advance knob.)
2. Open the back cover, remove the roll-film insert and the exposure counter will reset to S (Start). **The exposure counter will not reset to S if the insert is not removed.**
3. Remove the film from the film insert, exercising care that the film does not loosen, and seal it.

The Neck Strap

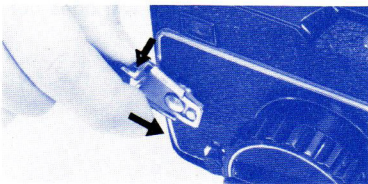
Holding the Camera

● Attaching to Camera



Place the neck strap fastener over the neck strap lug on the camera body and gently pull it away from the camera while pressing it toward the body until it clicks and locks in place.

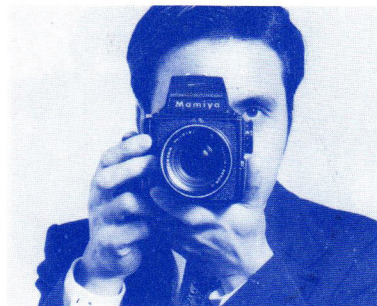
● Removing from Camera



While pushing in on the rear blade of the neck strap fastener with your thumb, slide it forward and remove.

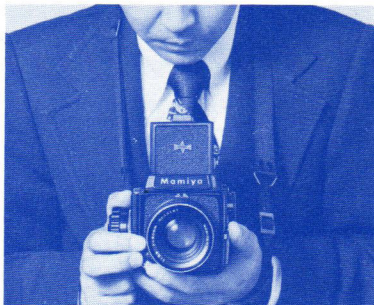
No matter how carefully one focuses the camera, if there is camera movement during the instant the shutter is released, sharp pictures are unlikely. To eliminate camera movement, care must be taken regarding the method of holding the camera and releasing the shutter.

● Eye Level Operation



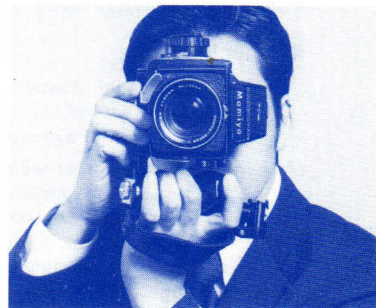
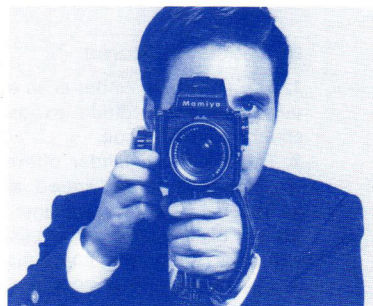
● Waist-Level Operation

1. When using the camera at eye level, support it in the left hand while the right hand grasps the camera in the vicinity of the film advance knob.
2. As much as possible, brace your arms against your body to create a rigid support. The eyepiece, of course, should be resting directly in front of one's eye.
3. Focusing should be carried out by the thumb and forefinger of either hand.
4. Release the shutter with the most convenient shutter release button.



When hand-holding the camera with the waist-level finder attached, adjust the length of the neck strap to take up all slack and support the camera against the body. As accessories, Mamiya offers a selection of hand grips which not only help to eliminate camera-shake, but are also convenient for carrying the camera.

● Hand Grips



Using the PD Prism Finder (1)

● Special Features

1. The PD Prism Finder is an eye-level finder with a built-in silicon photo diode exposure meter and electronic shutter control circuit.
2. The PD Prism Finder offers complete coupling of the lens aperture, shutter speed, and film speed (ASA).
3. Seven LED's are built into the viewfinder system. A green LED indicates correct exposure and red LED's indicate over, under, and compensated exposure.
4. The built-in meter covers a broad range, is highly accurate even in dim light, and has a rapid response because it utilizes silicon photo diodes.

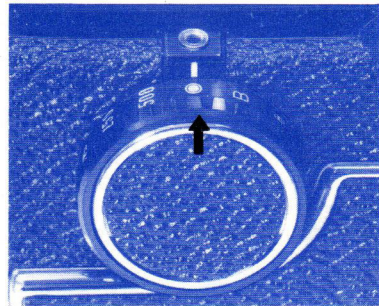
● Specifications

Viewfinder: 0.7 magnification with standard lens at infinity, built-on hot-shoe, comes with eyecup.

Metering System: Center-weighted, through-the-lens, full-aperture metering. One green and six red LED's built into the viewfinder system for correct exposure determination.

Metering Range: EV 0 - EV 18 with 100 ASA
(f/2.8, 8 sec. - f/22, 1/500 sec.)

ASA Range: 25 - 6400



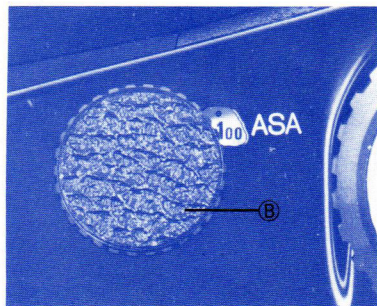
Since the PD Prism Finder utilizes the battery in the camera body, a timer is incorporated into the meter switch of the PD Prism Finder to prevent unnecessary electrical consumption.

1. Set the camera body shutter speed dial to the PD Prism Finder position \odot located between B and 1/500 sec. .

If the shutter speed dial is set to a position other than \odot , the PD Finder and camera body will not be electrically connected. Consequently, the viewfinder LED's will not illuminate.



2. Attach the PD Prism Finder to the camera body.
3. Turn the aperture ring of the lens so that the exposure meter coupler (32) of the lens and the aperture ring coupling pin (A) of the PD Finder engage.



4. Pull out and turn the ASA dial (B) until the appropriate ASA number appears in the window.

★ Always set the A.M. Lever on the lens to "A", otherwise correct exposure cannot be obtained.

ASA	DIN
6400	(39)
(5000)	● (38)
(4000)	● (37)
3200	(36)
(2500)	● (35)
(2000)	● (34)
1600	(33)
(1250)	● (32)
(1000)	● (31)
800	(30)
(650)	● (29)
(500)	● (28)
400	(27)
(320)	● (26)
(250)	● (25)
200	(24)
(160)	● (23)
(125)	● (22)
100	(21)
(80)	● (20)
(64)	● (19)
50	(18)
(40)	● (17)
(32)	● (16)
25	(15)

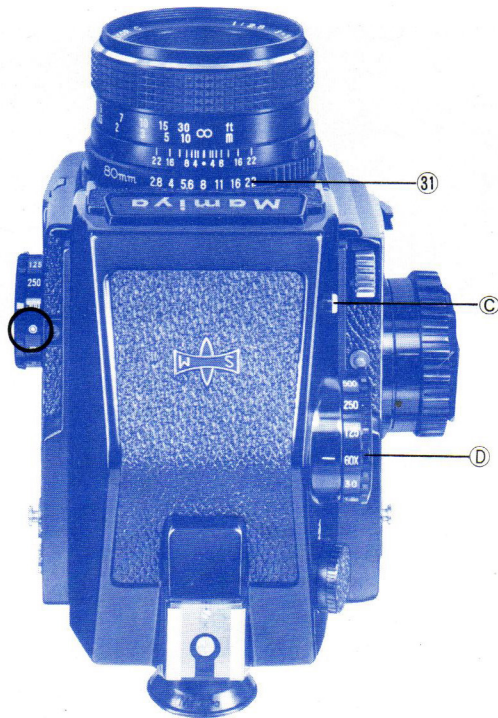
Using the PD Prism Finder (2)

5. Push in and release the meter switch (C) to turn on the meter. With the meter on and while looking through the viewfinder, adjust the aperture ring (31) or shutter speed dial (D) until the central (green) LED in the right-hand side LED panel illuminates, indicating correct exposure. The meter circuit remains on as long as the meter switch is depressed. After releasing your finger from the switch, it will stay on approximately 15 seconds longer, then the meter will automatically turn off to conserve electrical consumption.

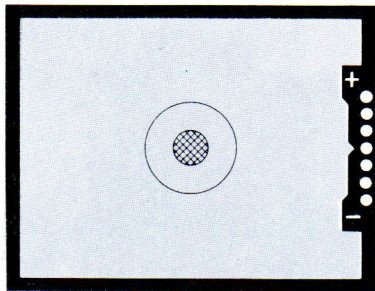
★ If two LED's illuminate simultaneously, make fine adjustments with the aperture ring until the central green LED appears the brightest.

★ With the PD Prism Finder normally attached to the camera body and metering system turned on for each exposure, battery life will be approximately 5,000 exposures.

★ **Remember to adjust the shutter speed with the PD finder shutter speed dial and to keep the camera body shutter speed dial set to ☉ .**



● Exposure Compensation



The LED Panel incorporated into the PD Prism Finder simplifies exposure compensation, assuring perfect exposures everytime. Each LED represents a full stop increment and plus and minus signs are indicated within the viewfinder to assist in compensating. The uppermost LED represents three or more stops overexposure, and the lowermost LED represents three or more stops underexposure.

● Compensation Hints

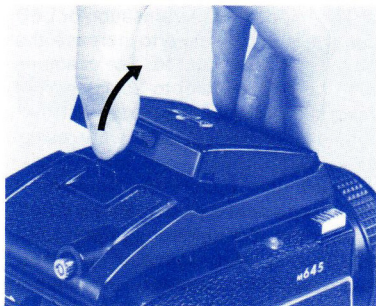
1. For strongly back-lit subjects outdoors, set the exposure to +1 (the red LED directly above the green one).
2. To photograph a person indoors, seated next to a window and strongly back-lit, set exposure to +2.
3. When photographing interiors, to compensate for the bright interior lights, set exposure to +1 or +2.
4. When copying white documents, set exposure to +2. If a standard gray card is used to determine exposure, no correction is necessary.
5. When photographing a brightly lit subject against a dark background, such as a night club performer, set exposure to -1 or -2.
6. Brightly lit night scenes, such as city streets, are usually rendered most naturally with the correct exposure (green LED).
7. When photographing extremely dark subjects (e.g. close-up of a black cat), set exposure to -1.

★ The exposure compensation or LED panel can also be used to increase the ASA range to 3—51200. For example, with the ASA dial set to 25, instead of using the green LED for correct exposure, use the +3 LED when using ASA 3 film.

★ Since the upper and lowermost LED's represent 3 or more stops difference from the central (green) LED, whenever compensating by 3 stops, first adjust the aperture or shutter speed for 2 stops of compensation and then move the aperture ring or shutter speed dial one more click stop for 3 stops of compensation.

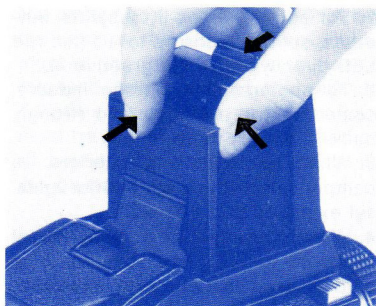
Using the Waist-level Finder

● Opening the Finder



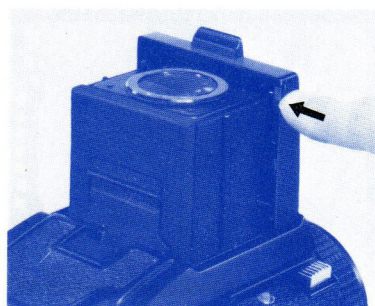
Pull up on the finder opening tongue to open the finder.

● Closing the Finder



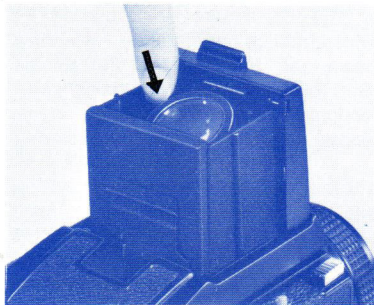
First, push in on the sides; next, push the front cover and back together to fold the finder.

● Raising the Magnifier



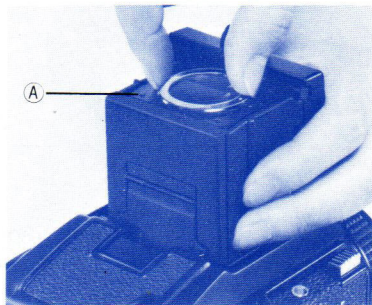
Push in on the magnifier release button to raise the magnifier.

● Lowering the Magnifier



To lower, push down on the edge of the magnifier board until it locks into place.

● Interchanging Magnifiers



Removing the Magnifier

While holding the finder side panels with the left hand so that the magnifier board (A) is not lowered, grasp the edge of the magnifier with the fingers of the right hand and twist counterclockwise to remove.

Attaching a Magnifier

Align the white dots of the magnifier and magnifier board; drop magnifier into magnifier board, and twist clockwise until magnifier clicks and locks into place.

★ In addition to the standard magnifier (−1.5 diopters), magnifiers of +2, +1, 0, −2, and −3 diopters are available for near and farsighted users.

In order to meet every photographic need, the Mamiya M645 is embellished with a host of features. Mastery of these features will not only lead to better pictures, but will open up the doors to new photographic possibilities as well.

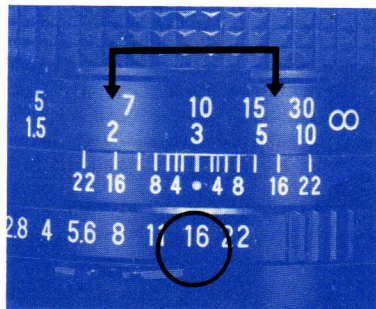
Depth-of-Field



Depth-of-field refers to the total area (foreground and background) which will appear in focus (sharp). The area of sharpness (depth-of-field) depends upon the distance the lens is focused at, the f /stop (or aperture) being used, and the focal length of the lens. The area that will appear sharp can be determined in two ways:

1. Firstly, by setting the AM lever to the M (Manual) position, the depth-of-field for the aperture set on the lens can be inspected (previewed) by looking through the finder. After examination of the depth-of-field, return the AM lever to the A (Automatic) position to return the finder to its original brightness.

2. The depth-of-field can also be determined by referring to the depth-of-field scale engraved on the lens and which lies directly above the aperture ring. The f /stop numbers are engraved on both the right and left-hand sides of the center reference mark. Simply locate the f /stop (aperture) you are using and read the figures which appear above the f /stop number on the distance scale of the lens. The figure on the right-hand side of the center reference mark denotes the area farthest from the camera which will appear sharp and the left-hand figure denotes the area closest to the camera which will appear sharp.



For example, with the 80mm f /2.8 lens focused at 10ft. (3m) and the aperture ring set to f /16, the depth-of-field scale reveals that everything from about 7ft. (2m) to about 20ft. (6m) will appear sharp (see photograph).

Using Flash



1. Flash units can be attached to the camera's tripod socket or to the accessory shoe of the hand grip.

2. The Mamiya M645 has two sync terminals which are used in the following way:

(1) When using an electronic flash, plug the synchronization cord into the X terminal and set the shutter speed dial to 1/60 sec. or longer (1/30 - 8 sec.).

(2) When using FP flashbulbs, plug the cord into the FP socket and set the shutter speed dial to 1/60 sec. or shorter (1/125 - 1/500 sec.).

(3) For MF and M bulbs, use the X terminal and set the shutter speed dial to 1/30 sec. or longer for MF bulbs, and 1/15 sec. or longer for M-type bulbs.

★ The Prism and PD Prism Finder are equipped with a hot-shoe and offer cordless flash operation for flash units that have a hot-shoe contact.

★ If the flash duration of an electronic flash is longer than 1/1000 sec. (e.g. 1/600 sec.) set the shutter speed dial to 1/30 sec. (not 1/60 sec.) or longer.

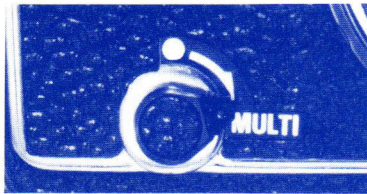
★ When using flash, carefully read the instructions packed with the flashbulbs or flash unit to avoid making errors.

Hot-Shoe Precaution

When an electronic flash unit is connected to the X sync terminal of the camera body, electric current flows in the hot-shoe. Therefore, if the flash unit is not attached to the hot-shoe, keep the plastic hot-shoe cover in the hot-shoe to eliminate the possibility of receiving an electrical shock.

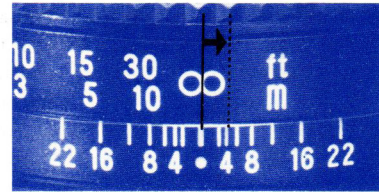
Flash Synchronization Chart

Sync Terminal	Shutter Speeds												
	1/500	1/250	1/125	1/60	1/30	1/15	1/8	1/4	1/2	1	2	4	8
FP	FP Class												
X					Electronic flash								
					MF Class								
					M, FP Classes								



To take multiple-exposures, follow the procedure outlined below:

1. Wind the film advance knob for the first exposure of the multiple-exposure.
2. Set the multiple-exposure lever (23) to the "MULTI" position before releasing the shutter for the first exposure. (If the multiple-exposure lever is moved after the first exposure, there might be some film movement when taking a double exposure.)
3. Release shutter for initial exposure.
4. Wind film advance knob to cock shutter for next exposure (film and exposure counter will not move).
5. Take next exposure.
6. Repeat steps 4 & 5 if you wish, for as many times as you wish.
7. **Remember to return the multiple-exposure lever to its original position upon completion of the multiple-exposure.**
 - ★ To release the shutter when there is no film in the camera, set the multiple-exposure lever to "MULTI".



When using infrared film it is necessary to make a focusing adjustment in order to achieve accurate focus. This focusing adjustment is particularly important when:

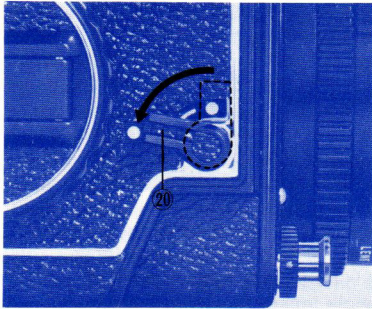
- a) using non-wide-angle lenses
- b) taking close-ups
- c) shooting at wide apertures

Focusing Adjustment Procedure

1. The red dot or line on the right side of the center reference line (also red) is the infrared mark.
2. After focusing in the usual manner, check the distance on the distance scale that is aligned with the center reference mark of the lens, and then make the focusing adjustment by turning the focusing ring slightly in the direction indicated by the arrow in the accompanying photograph so that the distance just observed is aligned with the infrared mark.

★ For information regarding the proper filter and exposure, refer to the data sheet packed with the film.

Mirror Lock-up



When the camera is mounted on a tripod for copy work or telephotography at long (slow) shutter speeds, the small amount of vibrations due to "mirror-bounce", which normally are of no consequence, may cause blurring of the image due to the high magnification encountered in extreme close-ups and telephotography. Mirror shock can be eliminated by locking the mirror in the up position before making the exposure.

1. To lock the mirror up, merely move the mirror lock-up lever (20) backwards, until it is horizontal (the lever may be lowered either before or after cocking the shutter).
 2. With the shutter cocked, release the shutter with a cable release. After releasing the shutter, you may wind the film advance knob with the mirror still in the up position if you wish.
- ★ Return the mirror to its normal position immediately after completing all of your mirror lock-up photography.



As a general rule of thumb for optimum sharpness, we recommend using 1/125 sec. as the minimum shutter speed for hand-held shooting. For longer exposures (1/60 sec. — 8 sec.), attach the camera to a sturdy tripod.

1. For standard tripods with a 1/4" screw, the camera may be directly attached to the tripod as it is.
2. To attach to tripods with the larger 3/8" screw, first unscrew the small screw found in the base of the camera's tripod socket by turning it counterclockwise. Next, remove the 1/4" adapter (A) by inserting a coin in the slot and turning the adapter in a counterclockwise direction. Finally, attach the camera to the 3/8" tripod.

★ If it is necessary to completely eliminate all camera movement, attach camera to a tripod, lock the mirror up, and release the shutter with a cable release.

There are two methods of taking time exposures with the Mamiya M645.

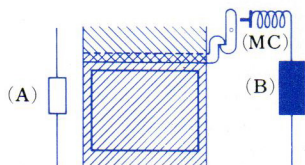
1. By setting the shutter speed dial to B and using a cable release with lock provision.
2. By removing the battery from the battery chamber.
 - (a) Remove battery.
 - (b) Set the shutter speed dial to any position.
 - (c) Release the shutter and it will lock in the open position.
 - (d) Depress battery check button as far as it will go to close shutter.

The Mamiya Moving Coil Electronic Shutter

The electrical consumption of Mamiya's newly developed Moving Coil Electronic Shutter is merely 1/10 that of the electro-magnetic system currently in wide use. Moreover, the consumption remains constant regardless of shutter speed with Mamiya's M. C. Shutter. Therefore, Mamiya has been able to greatly increase battery life. At normal temperatures, as many as 100,000 exposures are possible with a single 6V silver-oxide battery.

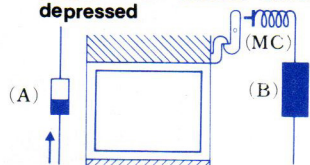
Furthermore, battery performance is maintained at a high level, as indicated in the accompanying diagrams, as the moving coil condenser is normally charged keeping the battery at peak voltage. Thus, the battery is protected from drops in voltage, as when the switch is on.

1. The shutter is closed



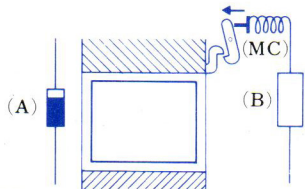
The moving coil energizing condenser (B) is normally charged. (At this time current is not flowing.)

2. First blind moves, opening the shutter when release button is depressed



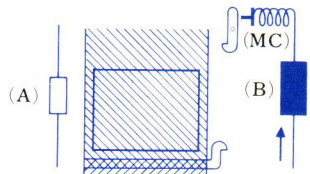
When the first blind moves, the exposure time control condenser (A) begins to charge. (The right-hand latch is holding back the second shutter blind.) The charge-time of condenser (A) is determined by the shutter speed.

3. The instant of exposure



When condenser (A) reaches the determined voltage, condenser (B) discharges, energizing the moving coil which in turn moves the second shutter blind release latch.

4. Second shutter blind moves, closing shutter



Condenser (B) charges. (The charge-time is extremely short and accomplished by very little electric power.)

Trouble-Shooting

If your camera appears to be malfunctioning, check the list below to see whether or not you have forgotten something.

1. The shutter release button will not move.

- A) Did you unlock the shutter release button? (p.27)
- B) Did you wind the film advance knob until it stops? (p.28)

2. The mirror is locked in the up position. (Cannot see anything through the finder.)

A) Did you release the shutter without a battery in the camera? Has the battery been correctly inserted into the camera, or is it backwards? Is the correct battery type inserted into the camera?

Press the battery check button, as far as it will go, to lower mirror. (p.20)

B) Did you lower the mirror lock-up lever? If so, raise it. (p.41)

C) Did you release the shutter with the shutter speed dial set to the ☉ position?

If so, move the shutter speed dial to B or 1/500 sec. (p.26)

3. The developed roll of film has 1 or 2 frames less than it should have.

A) Did you align the start marks with the film advance knob after placing the roll-film insert into the camera?

The film should always be set to the start mark before placing the film insert into the camera. (p.22)

B) Did you properly align the start marks of the film and roll-film insert?

Check the instructions once again. (p.22)

4. The PD Prism Finder's LED's do not illuminate when pressing the meter switch.

Did you set the camera's shutter speed dial to the ☉ position? If not, there will be no electrical connection. (p.31)

Releasing the shutter with no film in the camera


The film transport mechanism has a built-in safety lock which prevents the shutter from being released after the last exposure on a roll of film, or when there is no film in the camera. Thus, when the shutter release button locks under such circumstances, do not force it. To release the shutter, merely set the multiple-exposure lever to "MULTI".


Precautions

Mirror Lock-up

1. When the mirror is locked in the up position and the camera is outdoors there is a small possibility of sunlight entering the lens, focusing on the rubberized-cloth focal-plane shutter, and burning it to a certain degree. Although such a possibility is remote, caution is called for. Therefore, when using mirror lock-up outdoors, always return the mirror to its normal position after completing all your mirror lock-up exposures. If the interval between mirror lock-up exposures is long, lower the mirror while waiting.
2. If the mirror lock-up lever is moved while the shutter is still open during a long (4 or 8 seconds and so on) exposure, the shutter will lock in the open position (even if the mirror lock-up lever is returned to its original position). In such a case, depress the battery check button as far as it will go to close the shutter and return the camera to normal.

The position on the Shutter Speed Dial

If the shutter is released with the shutter speed dial set to the  position, the mirror will lock in the up position and the film advance knob will not move. If the camera is left in this condition, the battery will lose its power within several hours.

The  position is only for use with the PD Prism Finder.

Photographing at Low Temperatures

When photographing at low temperatures, be careful of the following points to maintain camera performance.

1. Be sure to use a fresh battery.
2. Shutter speeds of 1/125 sec. and longer are recommended. (When using an electronic flash, set the shutter speed dial to 1/30 sec. or longer.)
3. Place the camera in the outside air only during the moment of exposure.
 - ★ When working at low temperatures, it sometimes becomes impossible to wind the film advance knob after the shutter has been released. In such a case, after placing the camera in a warm place, it will become possible to wind the film advance knob if the upper shutter release button is strongly depressed as far as it will go.
 - ★ A battery that malfunctions at low temperatures will become usable again when it is returned to normal temperature. However, the battery should not be subjected to rapid and extreme changes of temperature, lest it grow unreliable.

Care of the Camera

When the camera is not used for a long period of time, remove the battery and any film from the camera. Do not store the camera at temperatures exceeding 100°F (40°C), or at temperatures less than 15°F (-10°C). Also avoid storing the camera for prolonged periods of time in a damp or salty atmosphere. (Color film should be stored at the manufacturer's recommended temperatures.)

As cameras are precision instruments, avoid shocks and rough handling.

When the camera is stored for a long time, periodically remove the camera and release the shutter several times to keep the camera in good condition.

Cleaning

Never touch the lens or mirror surfaces. Keeping a Mamiya UV or SL filter (p.52) on the lens will protect it from dust, fingerprints, and so on. If a lens needs cleaning, blow away the dust particles with a blower, and clean the lens surface with lens cleaning tissue and lens cleaner. Merely blowing dust particles off the mirror surface is sufficient — never touch it.

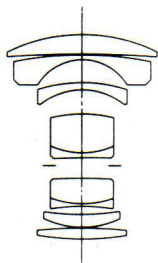
Periodic Check

Periodically check the camera to make sure it is in working order. This is especially so before an important photographic assignment. Check the battery, flash synchronization, mirror and shutter movement, film wind, diaphragm automation and so on. If the camera is malfunctioning, take it to the nearest authorized Mamiya Service Center for repairs.

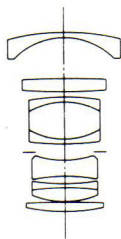
Handled with reasonable care, your Mamiya M645 should provide you with years of pleasure.

Mamiya-Sekor C Lenses

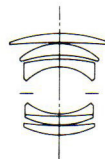
**Mamiya-Sekor C
45mm f/2.8**



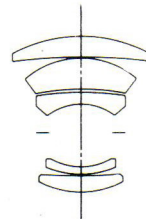
**Mamiya-Sekor C
55mm f/2.8**



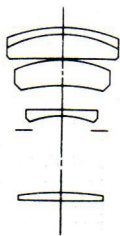
**Mamiya-Sekor C
80mm f/2.8**



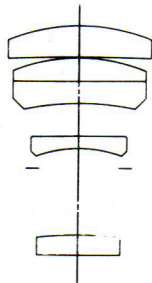
**Mamiya-Sekor C
110mm f/2.8**



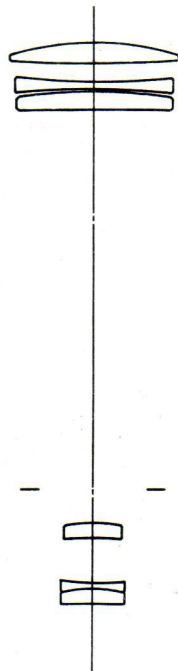
Mamiya-Sekor C
150mm f/4



Mamiya-Sekor C
210mm f/4



Mamiya-Sekor C **500mm f/5.6**



Mamiya-Sekor C Lenses

The chart below gives the basic specifications of the lenses currently available for the Mamiya M645.

Mamiya-Sekor Lenses have long been established as a standard for lenses of professional calibre. Whether you are using a wide, standard, or telephoto lens, the name "Mamiya-Sekor" is your assurance that your camera is using optics foremost in quality. In order to make the most of the intrinsic contrast, high resolution, rich color saturation, and clear definition of Mamiya-Sekor lenses, all the lenses for your camera have been multi-coated. Not only has the quality been enhanced, but flare and ghost images

have been reduced to a minimal level, even when shooting under highly unfavorable lighting.

For shooting in cramped quarters, for extensive depth-of-field, dynamic perspective, and exciting panoramics, you will enjoy the wide-angle lenses.

For flattering portraiture, shallow depth-of-field, sports, and candid photography, the telephoto lenses are ideal.

As each lens alters perspective, a choice of lenses offers you a choice in the manner of expression. Mamiya-Sekor C lenses are your tools for creative photography.

Lens	Optical construction	Angle of view	Minimum aperture	Diaphragm	Minimum focusing distance	Filter size	Lens hood
45mm f/2.8	9 elements, 7 groups	76°	22	Automatic	1.75ft. or 0.5m	77mm	Slip-on
55mm f/2.8	9 elements, 6 groups	65°	22	Automatic	1.75ft. or 0.55m	58mm	Screw-in
80mm f/2.8	6 elements, 5 groups	47°	22	Automatic	2.25ft. or 0.7m	58mm	Screw-in
110mm f/2.8	5 elements, 5 groups	35°	22	Automatic	4ft. or 1.2m	58mm	Screw-in
150mm f/4	5 elements, 4 groups	26°	32	Automatic	5ft. or 1.5m	58mm	Built-on
210mm f/4	5 elements, 4 groups	19°	32	Automatic	8ft. or 2.5m	58mm	Built-on
500mm f/5.6	6 elements, 5 groups	8°	45	Automatic	30ft. or 9m	105mm	Built-on

Depth-of-Field Table

● 80mm f/2.8

Aperture	Distance (feet)									
	∞	30	15	10	7	5	3.5	3	2.5	2.25
2.8	106' ∞	23'6" 41'5"	13'3" 17'4"	9'2½" 10'11"	6'7½" 7'5"	4'9¾" 5'2½"	3'5" 3'7"	2'11¼" 3'¾"	2'5½" 2'6½"	2'2⅝" 2'3⅜"
4	75'3" ∞	21'7" 49'3"	12'7" 18'6"	8'11" 11'5"	6'5½" 7'7½"	4'8¾" 5'3½"	3'4½" 3'7½"	2'11" 3'1"	2'5⅝" 2'6¾"	2'2½" 2'3½"
5.6	53'3" ∞	19'5" 67'2"	11'10" 20'6"	8'6½" 12'1"	6'3" 7'11"	4'7½" 5'5"	3'4" 3'8¼"	2'10½" 3'1½"	2'5⅝" 2'7"	2'2¼" 2'3¼"
8	37'9" ∞	16'11" 139'	10'11" 24'3"	8'½" 13'3"	6' 8'5"	4'6" 5'7½"	3'3¼" 3'9¼"	2'10" 3'2¼"	2'4¾" 2'7½"	2'2" 2'4⅝"
11	26'9" ∞	14'4" ∞	9'9½" 32'8"	7'5½" 15'5"	5'8" 9'2"	4'3¾" 5'11½"	3'2¼" 3'10¾"	2'9¼" 3'3¼"	2'4¼" 2'8"	2'1⅝" 2'4⅝"
16	19' ∞	11'10" ∞	8'7" 64'10"	6'9" 19'11"	5'3½" 10'6"	4'1" 6'5½"	3'¾" 4'1¼"	2'8¼" 3'5"	2'3½" 2'9"	2'1⅝" 2'5¼"
22	13'6" ∞	9'6" ∞	7'3½" ∞	5'11½" 34'4"	4'9½" 13'5"	3'9¾" 7'4½"	2'11" 4'5"	2'7" 3'7¼"	2'2⅝" 2'10½"	2'⅝" 2'6½"

Accessories

For maximum versatility and to meet every photographic requirement a wide range of accessories are also available. In the following pages you will find the accessories listed according to use.



● Filters

Filters are available in 58, 77, and 105mm sizes and come in the following five types: SY48 (Y2), SO56 (O2), SL39 (UV), YG, SL (skylight). The correct filter sizes are indicated on pages 49 and 62.

● Lens Hoods

An important accessory to eliminate the detrimental effects of stray light entering the lens.

The lens hood for the 45mm wide-angle lens is square in shape and the same as the Mamiya RB67 65mm wide-angle lens hood. The same rubber lens hood is used for 55—110mm lenses. When the rubber lens hood is used on the 55mm wide-angle lens, it is folded back to prevent vignetting.

The telephoto lenses have built-on lens hoods.

● Focusing Handle

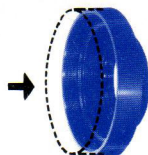
The focusing handle is a grip that attaches to the focusing ring and makes rapid focusing possible. Ideal for sports, news, and action photography.



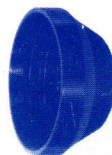
For 45mm Lens



For 55mm Lens



For 80 and 110mm Lenses

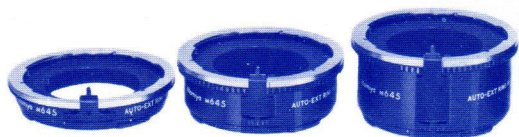


● Auto Extension Rings

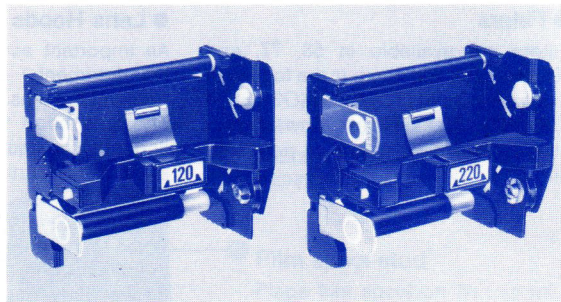
Three auto extension rings (No.1, No.2, No.3) are designed for use with the 80mm f/2.8 for close-up photography. The following chart indicates magnification as well as the size of the subject it is possible to photograph.

Rings	Magnification	Subject size
No.1	0.15 – 0.30	11-1/8"×1'3" – 5-1/2"×7-3/8"
No.2	0.29 – 0.45	5-9/16"×7-1/2" – 3-11/16"×4-15/16"
No.3	0.44 – 0.60	3-11/16"×5" – 2-3/4"×3-11/16"
No.1+No.3	0.59 – 0.74	2-13/16"×3-3/4" – 2-3/16"×2-15/16"
No.2+No.3	0.73 – 0.89	2-3/16"×3" – 1-13/16"×2-7/16"
No.1+No.2+No.3	0.88 – 1.04	1-7/8"×2-1/2" – 1-9/16"×2-1/8"

The auto extension rings also have meter coupling so that full-aperture metering is possible with the PD Prism Finder.



● Roll-Film Inserts



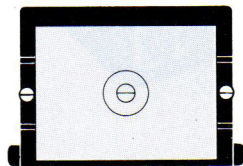
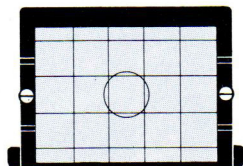
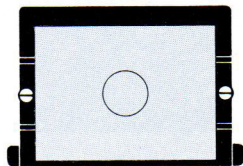
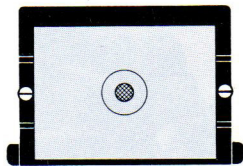
Roll-film inserts for 120 and 220 film are available. The inserts come in cases so that they can be safely stored. With several preloaded film inserts, it will be possible to change film almost instantly and to take a large number of photographs without wasting time loading film.

● 6 × 4.5 Slide Mounts

Sets of 50 to a box are available.

● Focusing Screens

Four interchangeable focusing screens are available to meet various photographic needs.



No.1 Microprism

Entirely matted, with a Fresnel lens and a central microprism spot. It is the standard focusing screen which comes with the camera and is ideal for general purpose photography. The microprism assures rapid and accurate focusing and the matte surface makes the entire screen suitable for focusing.

No.2 Matte

All matte with Fresnel lens. Ideal for close-up photography, checking the depth-of-field, and slow lenses such as the 500mm f/5.6 since there is no microprism or rangefinder central spot.

Focusing aids such as microprisms and rangefinders grow dark when the lens is stopped down and may prove distracting. The No.2 focusing screen is designed to eliminate this problem.

No.3 Checker

All matte with Fresnel lens and engraved lines. The engraved lines are a useful aid in determining composition. The intersections also prove useful as reference points when making multiple-exposures where perfect registration of the images is called for.

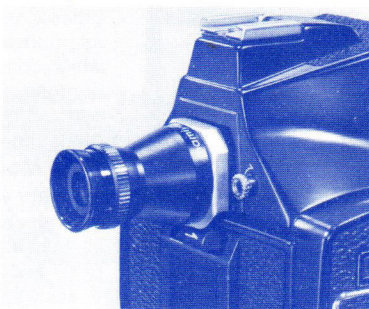
No.4 Rangefinder Spot

All matte, with Fresnel lens and central rangefinder spot. Assures accurate focus even with wide-angle lenses which are usually more difficult to focus because of the extensive depth-of-field. Also suitable for general purpose photography.

Viewfinder Accessories

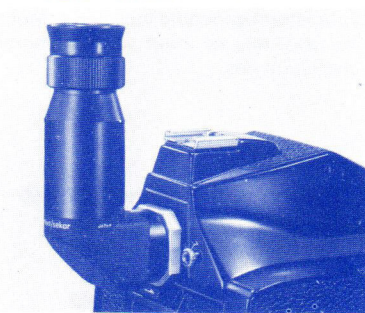
To avoid misunderstanding, viewfinder accessories have been labeled P, PD, and W which respectively stand for Prism Finder accessory, PD Prism Finder accessory, and waist-level finder accessory.

● Magnifier (P, PD)



For precise focusing. Magnifies the central portion of the focusing screen. Magnification of 2X and built-in -5 to $+5$ diopter correction.

● Angle Finder (P, PD)



Useful for low angles and copy work. More versatile than waist-level finder because if the camera is held vertically, the image appears upside down in the waist-level finder, but rightside up in the angle finder. Thus correct composition is faster and easier. Angle finder has click stops and built-in diopter corrections of -2 to $+2$.

● Diopter Correction Lenses

(P, PD)

Diopter Correction Lenses in six strengths are available, -3 , -2 , -1 , $+1$, $+2$, and $+3$ diopters.

Merely unscrew (counterclockwise) the diopter correction lens retainer ring from the eyecup, insert the necessary correction lens, and replace the retainer ring. Then slide the eyecup on the eyepiece of the prism finder for easier focusing.

● Diopter Lenses (W)

(Interchangeable diopter correction magnifiers)



For the waist-level finder. In addition to the standard -1.5 diopter magnifier, there are five more magnifiers available: -3 , -2 , 0 , $+1$, $+2$ diopters. The method of changing magnifiers is explained on page 36.

Hand Grips

Useful for eliminating camera movement and convenient for carrying the camera, these grips make holding the camera vertically or horizontally comfortable.

● Deluxe L-Grip Holder



Deluxe grip which couples to the shutter release button. Optional accessory shoe unit has provision for bounce flash.

● Pistol Grip



Attaches securely to the bottom of the camera and couples to the shutter release button.

● **Grip Holder**



Lightweight, compact unit. Complete with accessory shoe.

● **Chest Pod**



Leg has two sections. Besides its function as a chest pod it is also handy for high-angle shots.

Camera Cases

● Compartment Case

Large case which accepts camera mounted on hand grip, several lenses and accessories.



● Aluminum Custom Case

A rugged, trunk-shaped case ideal for carrying, storing, or shipping your Mamiya M645 set. The sponge lining offers ample protection for your camera equipment.

Dimensions are 18-3/8"×13-7/8"×6-3/4" (47×35×17cm) and weight is 8 lbs. 2-1/2 oz. (3.7 kg).



Mamiya M645 System Chart



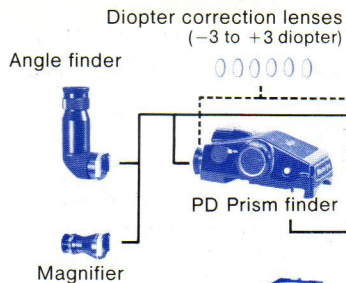
Aluminum custom case



Compartment case



Neck strap



Diopter correction lenses (-3 to +3 diopter)

000000

Angle finder



PD Prism finder



Magnifier



No.1 Microprism

120 Roll-film insert



220 Roll-film insert



Flashgun adapter



Chest pod



Grip holder

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

