AE Prism Finder

for Mamiya M645

Instructions

• Special Features

1. The Mamiya AE Prism Finder employs a pentaprism which provides a correct, upright image and includes a built-in electronic shutter control circuit which makes possible aperture-priority, TTL automatic exposure metering.
2. The electronic shutter control mechanism is of a new type that instantly magnetically records signals coming through the exposure meter to the IC computer.
3. Automatic exposure control is possible by merely attaching the AE Prism Finder to the camera. This means you get correct exposure every time. All you have to do is set the aperture, focus and press the shutter release.
4. Exposure compensation is also easy by using the AE Lock Button. This allows you to obtain correct exposure with backlighting and other difficult conditions.

• Specifications

Viewfinder: Pentaprism type with correct, upright image. The magnification ratio is 0.74X with the standard lens focused at infinity. A hot-shoe, eyecup and hot-shoe/eyepiece cover are provided.

Metering system: Center-weighted, averaged TTL open-aperture metering.

Control system: Aperture-priority, shutter-speed control.

Shutter coupling range: 2 – 1/1000 second.

Light measuring range: (ASA 100)
EV2.85 – EV17 with f/1.9 lens (f/1.9, 1/2 sec. to f/11, 1/1000 sec.).
EV4 – EV18 with f/2.8 lens (f/2.8, 1/2 sec. to f/16, 1/1000 sec.).

Film sensitivity range: ASA25 – ASA6400.

Aperture coupling range: Couples at all apertures of all available lenses.

Displays inside viewfinder: Shutter speeds are indicated by the exposure meter needle. Red under- and overexposure marks are included and a red warning mark appears when the exposure meter is turned off.

Switch dial: The AE Prism Finder is provided with an on/off switch with an AE lock built into its center.

AE lock: Pressing the AE lock button locks in the exposure value. AE control returns when the lock button is released.

Power source: The meter receives power from the camera battery.

Names of Parts (Fig. 1)

1. Aperture ring coupling pin
2. Eyepiece/hot-shoe cover
3. Hot-shoe
4. Eyepiece
5. Eyecup
6. Diopter correction lens retainer ring
7. Finder release button
8. Safety button
9. ASA dial
10. ASA window
11. Power switch dial
12. AE lock button
13. 500—1000 adjustment screw
14. 500—1000 adjustment key

Cautions (Fig. 2)

The AE Prism Finder is adjusted for use with the M645 1000S which has a maximum shutter speed of 1/1000 sec. Adjust as follows to use with the M645, which has a maximum shutter speed of 1/500 sec.

Use the adjustment key to turn the 500—1000 adjustment screw (13) counterclockwise as far as it will go (approx. 60°). This causes the exposure meter needle to stop before the 1/1000 sec. position and display a maximum shutter speed of 1/500 sec.

Using the AE Prism Finder

The AE Prism Finder has an automatic locking device which allows it to be attached to the camera body by merely pressing it into position.

The "double lock" system of the finder prevents accidental removal. The finder will not come off unless both the safety button and finder release button be pressed at the same time.

Before attaching to the camera, first press in the finder release button while pressing in the safety button.

1. To attach the AE Prism Finder to the camera body, lift up the front part of the finder slightly and place the rear part on the camera. Next, press down firmly but gently on the front part of the finder and the locks will automatically engage to hold the finder securely in place (Fig. 3).

The finder release button will then protrude to indicate that the finder is firmly locked in place.

2. The aperture ring and exposure meter coupler (A) will connect automatically when the aperture ring is rotated left and right (Fig. 4).

- Be sure to check the proper coupling. If the coupling pin cannot be connected, use a small stick or other similar object to push the pin toward the coupler.

3. Set the ⊙ mark on the shutter speed dial of the camera to the index mark (B). The AE Prism Finder and camera body will not be electrically connected if this dial is set to any other position; consequently, the exposure

meter will not operate (Fig. 5).

4. Pull the ASA dial of the finder out slightly and rotate until the desired ASA value appears in the window (Fig. 6).

5. Rotate the switch dial to the ON position to turn the AE Prism Finder on. Always rotate until the click sound is heard (Fig. 6).

- When the switch is turned off, the exposure meter needle will remain stationary in the red warning mark on the right side of the finder. A semi-circular red mark also appears in the upper left corner to indicate that the exposure meter is turned off.
- Always set the A/M lever of the lens to "A"; otherwise, correct exposure will not be obtained. For the same reason, do not operate the depth-of-field preview lever on the M645 1000S when making exposures.
- Use the battery check lamp to check battery condition before making an exposure.

6. Rotate the aperture ring and set to a suitable aperture (about f/5.6 to f/11 with ASA100 film outdoors). The shutter speed will be determined automatically by the AE Prism Finder. The shutter speed being used is indicated by the exposure meter needle and is visible at the top of the field of view when looking through the viewfinder. Incorrect exposure is indicated when the exposure meter needle enters the red warning marks. An intermediate shutter speed will be obtained if the needle indicates between two values.

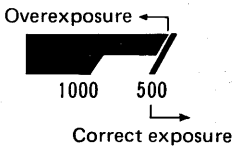
When the exposure meter needle enters the red warning marks

Overexposure is indicated when the exposure meter needle enters the red warning mark on the left side. In this case, set the aperture ring to a smaller aperture (larger f/number).

Underexposure is indicated when the exposure meter needle enters the red warning mark on the right. The aperture must be set to a larger opening (small f/number).

The 500 position is the maximum shutter speed when the AE Prism Finder is used with M645 cameras, which have a maximum shutter speed of 1/500 sec. Overexposure is indicated when the exposure meter needle enters the narrower red warning mark between the 500 and 1000 positions. The aperture must be stopped down further in this case also.

1000 500 • 125 • 30 • 8 • 2 1s 2s
(250) (60) (15) (4)



- Since the AE Prism Finder uses TTL metering, it is not necessary to consider exposure factors when using different lenses, filters, or for close-up photography.
- When making exposures, always keep the eye close to the finder eyepiece to prevent extraneous light entering and influencing the exposure values.
- When making an exposure with the eye away from the eyepiece, such as when using the self-timer or a cable release, remove the hot-shoe cover and place it over the eyepiece to prevent extraneous light entering the viewfinder and affecting the exposure metering.

Cautions

1. Always set the shutter speed dial of the camera to the ⊙ position when using the AE Prism Finder.
2. Turn the AE Prism Finder switch off when it is not to be used for an extended period or when storing in a case, etc. Always rotate the switch until the click sound is heard. If the switch is not turned off completely, the battery will be drained. (The finder can also be turned off by setting the shutter speed dial of the camera to any position other than ⊙).
3. Always set the shutter speed dial to a position other than ⊙ when the AE Prism Finder has been removed. (The shutter will lock in the open position if released with the shutter speed dial set at the ⊙ position. If the camera is left in this condition, the battery will be exhausted within several hours.)
4. As explained in the beginning, set the 500—1000 adjustment screw to the 500 position before using the AE Prism Finder with the M645, which has a maximum shutter speed of 1/500 sec. If this adjustment is not made, the correct shutter speed can not be guaranteed when 1/1000 sec. is indicated by the exposure meter needle.
5. When making "bulb" exposures, rotate the shutter speed dial of the camera to the B position which is next to the ⊙ mark. AE photography is not possible at this time because power will not be supplied to the finder. (The exposure meter needle will remain stationary in the red warning mark on the right side.)
6. Four electrical contacts are provided on the top rear of the camera body and the bottom rear of the AE Prism Finder. Poor contact will result if these contacts become oily or dirty, which would affect the operation of the AE mechanism. Always wipe these contacts gently with a dry cloth when attaching the AE Prism Finder.
7. When using extension rings, first attach the extension rings to the lens and then mount this assembly on the camera body and connect the coupling

pin. (Note that the coupling pin of the extension rings can be rotated a full 360°; therefore, if the ring is rotated when a lens is not attached, the coupler pin of the finder will be pushed fully to the right end. Further pressure may cause damage so use caution.)

8. When using the Auto-Bellows, use stop-down metering as explained in the instruction manual of the Auto-Bellows. When the aperture is stopped down, the shutter will be released at the indicated shutter speed for correct exposure. Especially in the close-up photography, prevent extraneous light entering in the finder by keeping the eye close to the finder eyepiece or by using the eyepiece cover.

Using the AE lock button

The AE lock button is useful when intentional over- or underexposure is desired for special effects, etc., or under difficult lighting conditions (Fig. 7). The shutter speed indicated by the exposure meter needle in the viewfinder is held when the AE lock button is pressed. As long as the AE lock button is pressed, the shutter speed will remain the same even when the camera is pointed at a brighter or darker subject.

Exposure compensation under difficult conditions

When taking pictures under the difficult conditions described below, it is necessary to compensate the exposure in the same way as for normal average-metering exposure meters.

How to compensate exposure

With a bright background

When the background is exceptionally bright, as with strong backlighting, the subject will normally be underexposed and appear excessively dark. In this case, move the camera close to the subject so that the bright background does not appear in the viewfinder and lock the shutter speed by pressing the AE lock button. Move back into position and recompose the image in the viewfinder; then release the shutter to make the exposure. Do not release the pressure on the AE lock button until the exposure has been made.

With a dark background

Conversely, when the background appears much darker than the subject, the subject will be overexposed. To compensate exposure in this case, proceed exactly the same as described above, going close to the subject to eliminate the background from the viewfinder and lock in the shutter speed using the AE lock button.

With strong backlighting

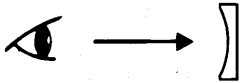
The shutter speed selected by the AE Prism Finder can be used with strong

backlighting if a silhouette effect is desired. If correct exposure of the subject is desired, however, proceed as described for the above lighting conditions. In this case, the background will be overexposed and appear whitish.

Flash photography

Adjust the exposure manually in flash photography. For electronic flash, set the camera shutter speed dial to 1/60 sec. (or slower) and set the aperture in accordance with the guide number of the electronic flash unit and the subject distance. For details refer to the camera or electronic flash instruction manual.

Diopter correction lenses



(When using a – diopter lens)

(When using a + diopter lens)

As an accessory, Mamiya offers diopter correction lenses that can be attached to the finder eyepiece. Nearsighted and farsighted persons will find these useful for obtaining accurate focus.

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

Before actually purchasing a Diopter Correction Lens at your Mamiya dealer, first attach it to the camera and test to make sure that it correctly matches your eyesight.

To attach, merely unscrew (counterclockwise) the diopter correction lens retainer ring (6) from the eyecup, insert the desired correction lens making sure it is positioned as shown in diagram, and replace the retainer ring. Then slide the eyecup onto the eyepiece of the finder for easier, more accurate focusing (Fig. 8).

Removing the AE Prism Finder

Simultaneously press the safety button (8) with the right hand and the finder release button (7) with the left hand. Next, remove the finder by lifting upward (Fig. 9).

When the finder has been removed, the finder release button will remain depressed. After removing the AE Prism Finder, always rotate the shutter speed dial of the camera to a position other than ⊙.

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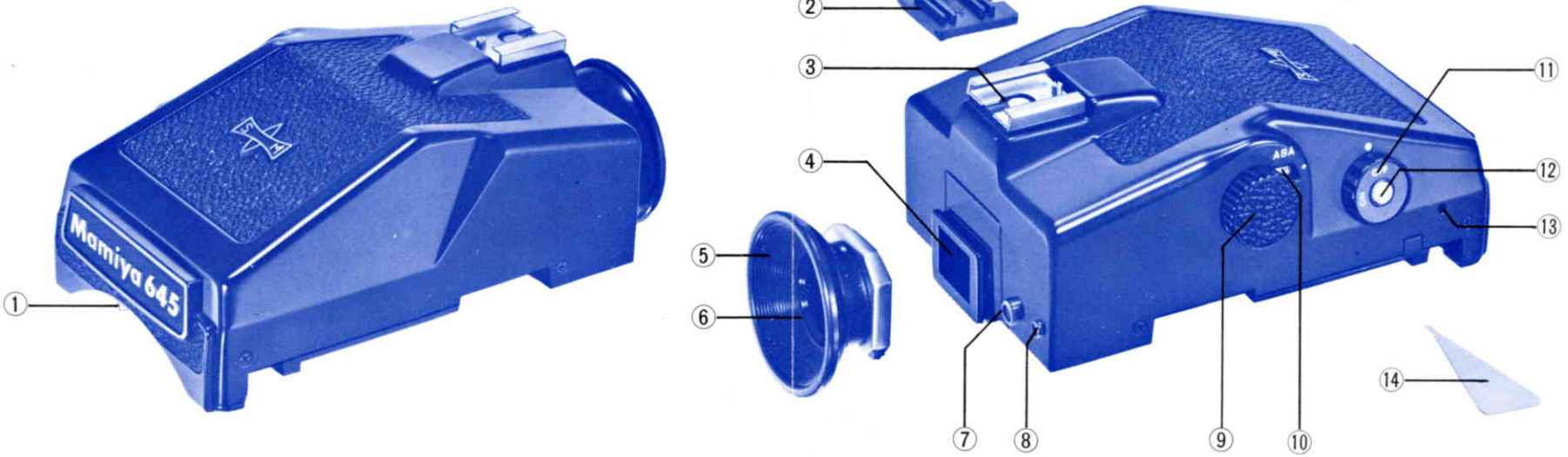

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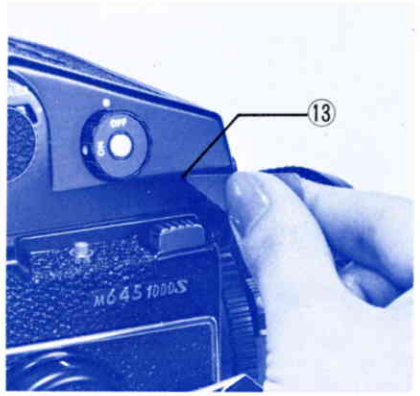

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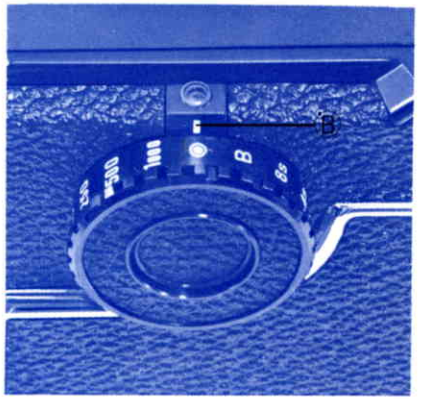

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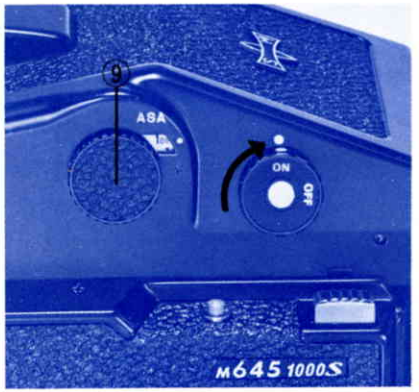

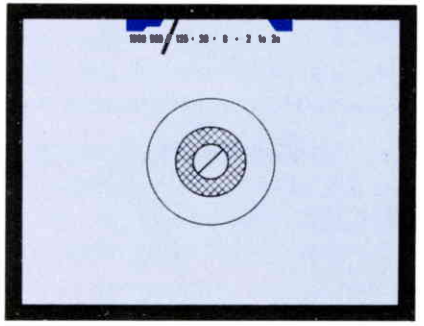

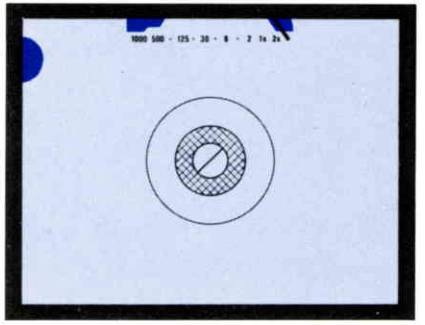

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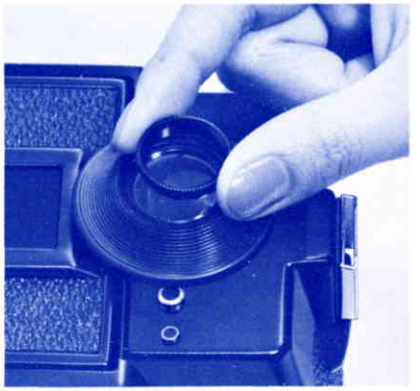

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