



MAMIYA CAMERA CO., LTD.

No. 7, 1-CHOME, HONGO, BUNKYO-KU, TOKYO, JAPAN

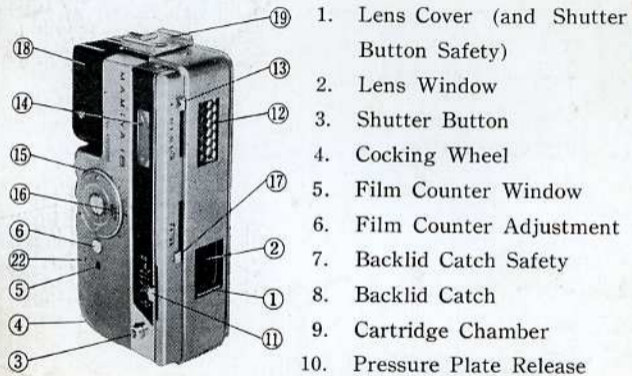
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**USER'S
MANUAL**

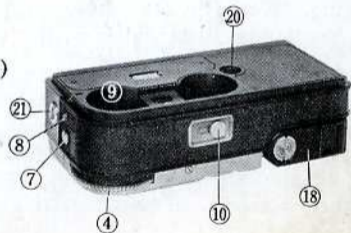
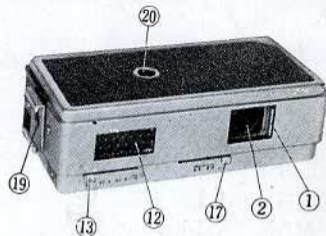


MAMIYA 16 EE de luxe

NOMENCLATURE



11. Focusing Lever
12. Photocell Window
13. EE Lever (Aperture Control)
14. Exposure Indication
15. Shutterspeed Control
16. Filmspeed (ASA) Dial
17. ND Filter Lever
18. Viewfinder (erect for use)
19. Accessory Clip
20. Tripod Socket
21. Synchroflash Socket
22. Focal Plane Mark

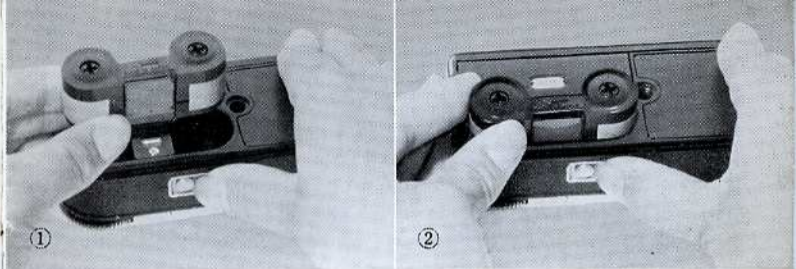


FILM LOADING

Your MAMIYA 16 EE De Luxe uses all types of 16-millimeter film, monochrome or color, perforated or non-perforated, preloaded in the special MAMIYA 16 safety cartridge (single or double) in lengths of about 19 inches to give twenty exposures.

When loading film (preloaded in safety cartridge) in your MAMIYA 16 EE, or when unloading, *always* avoid direct lighting. Work in the shade to prevent fogging of film. If no shade is available when in the open, use your own body to shield your camera and film.

1. To open and remove backlid, push backlid catch safety (7) to "O" (open) position, then press down backlid catch (8).
2. Insert safety cartridge containing unexposed film in cartridge chamber (9). When using double cartridge, match the arrow marks. If single cartridges are used, insert empty (take-



up) cartridge in chamber pointed out by arrow mark. Insertion will be eased if pressure plate release (10) is kept pushed against spring tension (this operation, however, is not absolutely essential). If safety cartridge does not sink snugly into the chamber, turn the take-up spool (pointed out by arrow mark) slightly with your fingertip. Spool will engage spindle with a distinct click, and the cartridge be seated accurately (See Figs. 1 and 2.).

3. Replace backlid, and set backlid catch safety (7) at "L"

(lock) position.

4. Open lens cover (1) which also serve as shutter button safety. With your fingertip turn film counter adjustment (6) so that orange colored "S" (start) appears in film counter window (5). Keeping lens window (2) covered, press shutter button (3), then turn cocking wheel (4) until it comes to a stop. Repeat this operation until numeral 1 appears in film counter window (5).

5. The first frame is now in position for exposure. If you are not ready for picture-taking, close lens cover (1) to lock shutter button.

PREPARATIONS FOR PICTURE-TAKING

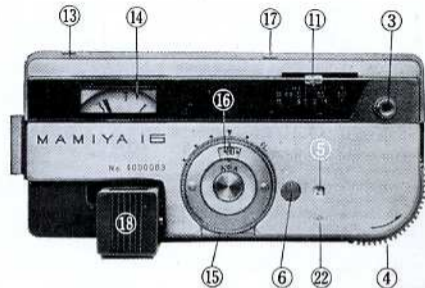
Setting the filmspeed (ASA) Dial

By turning the filmspeed (ASA) dial (16) at top center of the camera the filmspeed (ASA) rating of the film in use is made

to appear in the window in alignment with the index mark. Next, turn the shutterspeed control (15) together with the filmspeed (ASA) dial (16) so that the index mark at the top center of the film-speed dial window

is set against the triangular index mark. When this is done, the appropriate shutterspeed for the film in use has been selected. The relationship between filmspeed (ASA) and shutterspeed is as shown below.

Refer to this scale for selecting shutterspeed when manual



ASA (filmspeed)	(100) •	80	(50) •	32	10	•	•	B
Shutterspeed	1/200	1/200	1/100	1/50	1/25	1/10	1/5	B

aperture control (overriding automatic control by means of the electric eye) is in use.

Set the EE lever at position "A"

Move the EE lever (13) to "A" (automatic), and check the ND filter lever (17) to see that it is at the extreme left (as seen from the front of the camera), with both filter and photocell mask fully retracted.

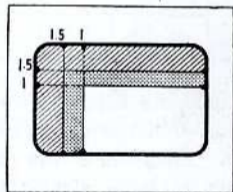
Erect viewfinder (18). Now you are ready for picture-taking by automatic exposure control.

Estimate the distance to your subject, and move the focusing lever (11) along the distance scale, and set at the estimated distance. Sight subject through the viewfinder, compose your

picture, and at the right instant press gently but firmly on the shutter button (3) without jerking your camera. The shutter will operate at the correct aperture size for the brightness (light value) of the subject.

FOCUSING

Because your MAMIYA 16 EE De Luxe is equipped with a fast lens of extremely high resolving power, giving ample depth of field, focusing is not critical; and when shooting subjects more than six feet away some error in judging distance is permissible. Sharpness of register is not badly impaired. However, at distances of less than six feet more care must be given to accuracy in measuring



DEPTH OF FIELD TABLE (circle of confusion 2.5/1,000 cm)

DISTANCE		∞	4	2	1	0.5	0.3 m
LENS OPENING	2.8	9.77 ∞	2.85 6.72	1.67 2.50	0.91 1.11	0.479 0.523	0.293 0.307
	4	6.85 ∞	2.54 9.49	1.56 2.79	0.88 1.16	0.470 0.534	0.290 0.311
	5.6	4.90 ∞	2.22 21.17	1.43 3.33	0.84 1.24	0.459 0.549	0.286 0.315
	8	3.44 ∞	1.86 ∞	1.28 4.66	0.79 1.38	0.444 0.574	0.281 0.323
	11	2.50 ∞	1.56 ∞	1.13 9.38	0.73 1.61	0.426 0.608	0.274 0.332
	16	1.73 ∞	0.95 ∞	0.94 ∞	0.65 2.25	0.399 0.674	0.264 0.349

distance and adjustment of the focusing lever (11). Further, at distances of less than $1\frac{1}{2}$ feet the effect of parallax comes into play. Make use of the parallax correction marks on the bright frame in the viewfinder field. At $1\frac{1}{2}$ feet, the hatched portion

DEPTH OF FIELD TABLE (circle of confusion 1/1,000 inch)

DISTANCE		∞	12'	6'	3'	2'	1.5'	1'
LENS OPENING	2.8	32' $\frac{3}{4}$ " ∞	8' $9\frac{1}{4}$ " 19' $\frac{1}{4}$ "	5' 1" 7' 4"	2' 9" 3' $3\frac{1}{2}$ "	1' $10\frac{3}{4}$ " 2' $1\frac{1}{2}$ "	1' $5\frac{1}{4}$ " 1' $6\frac{1}{4}$ "	1' $11\frac{3}{4}$ " 1' $\frac{1}{4}$ "
	4	22' $5\frac{1}{2}$ " ∞	7' $10\frac{1}{2}$ " 25' $5\frac{1}{4}$ "	4' $9\frac{1}{4}$ " 8' $1\frac{1}{4}$ "	2' 8" 3' $5\frac{1}{4}$ "	1' $10\frac{1}{4}$ " 2' 2"	1' 5" 1' 7"	1' $11\frac{1}{2}$ " 1' $\frac{1}{2}$ "
	5.6	16' $\frac{3}{4}$ " ∞	6' 11" 46' 3"	4' 5" 9' 5"	2' $6\frac{3}{4}$ " 3' $7\frac{3}{4}$ "	1' $9\frac{1}{2}$ " 2' 3"	1' $4\frac{3}{4}$ " 1' $7\frac{1}{2}$ "	1' $11\frac{1}{2}$ " 1' $\frac{3}{4}$ "
	8	11' $3\frac{1}{4}$ " ∞	5' $10\frac{1}{2}$ " ∞	3' $11\frac{1}{2}$ " 12' 6"	2' $4\frac{3}{4}$ " 4'	1' $8\frac{3}{4}$ " 2' $4\frac{1}{2}$ "	1' $4\frac{1}{4}$ " 1' $8\frac{1}{4}$ "	1' $11\frac{1}{4}$ " 1' 1"
	11	8' $2\frac{1}{2}$ " ∞	4' $11\frac{1}{4}$ " ∞	3' $6\frac{1}{4}$ " 21' $2\frac{1}{2}$ "	2' 3" 4' 7"	1' $7\frac{3}{4}$ " 2' $6\frac{3}{4}$ "	1' $3\frac{1}{2}$ " 1' $9\frac{1}{2}$ "	1" $11"$ 1' $1\frac{1}{4}"$
	16	5' 8" ∞	3' $10\frac{3}{4}$ " ∞	2' $11\frac{3}{4}$ " ∞	2' $\frac{1}{4}$ " 6' $\frac{3}{4}$ "	1' $6\frac{1}{4}$ " 2' $11\frac{1}{4}$ "	1' $2\frac{3}{4}$ " 1' $11\frac{1}{2}$ "	1" $10\frac{1}{2}"$ 1' 2"

will not register on your film. Compose your picture so that all essential portions do not protrude into the single hatched area (see illustration). At 1 foot, use the innermost correction marks. In these cases, it can be considered that the whole

area of the frame has shifted diagonally downward toward the right. When measuring distances at these close ranges, use the focal plane mark (22) as the starting point.

The round mark between 6 Ft and ∞ on the distance scale indicates approximately 12 feet (fixed focus setting), at which with aperture at f/8 all objects lying more than 5 feet away from the camera will register sharply without any further adjustment. For details refer to the depth of field table.

PICTURE-TAKING CAUTIONS

With your MAMIYA 16 EE De Luxe, automatic picture-taking with accurate exposure control is accomplished by pre-setting of the shutter speed according to the filmspeed (ASA) rating of the film in use, and by automatic adjustment of aperture size by the brightness (light value) of the subject as

measured by the photocell (electric eye operation). Consequently, when the brightness of the subject is such that the aperture size range is exceeded (too bright at minimum opening, or too dark at maximum) you will not obtain correct exposure without adjustments for compensation. *Therefore, before pressing the shutter for picture-taking, you must make sure that the brightness of your subject-matter is within the range of automatic control.* This is done by noting the position of the red needle of the exposure indication (14).

Automatic control of exposure is available so long as the red needle is between the inner edges of the thin black line at the extreme right of the scale and of the broad black segment at the left (range A in the illustration). When film with a speed rating of ASA 100 is in use, the automatic range is from light value 10.5 to 15.5.

When red needle is on line N



This means that your subject is too bright, and minimum aperture size is not enough to prevent overexposure. In this case,

move the ND filter lever (17) fully in the direction indicated by the arrow mark. The lens will be covered by a neutral density filter with a factor of $\times 4$, while the photocell window area will be reduced to $\frac{1}{4}$ by means of the mask.

When red needle fails to move into range A

This means that your subject is not bright enough, and that exposure will be inadequate even at full aperture. Compensation by means of shutter-



speed adjustment is necessary.

When the red needle is on broad segment 1 (see illustration), turn the shutter speed control (15) counterclockwise, and set dial against 1st dot to the left of the triangular index mark.

When the red needle is on white segment 2 (see illustration), use 2nd black dot to the left of the triangular index mark.

When the red needle is on the black line 3 (see illustration), use 3rd black dot.

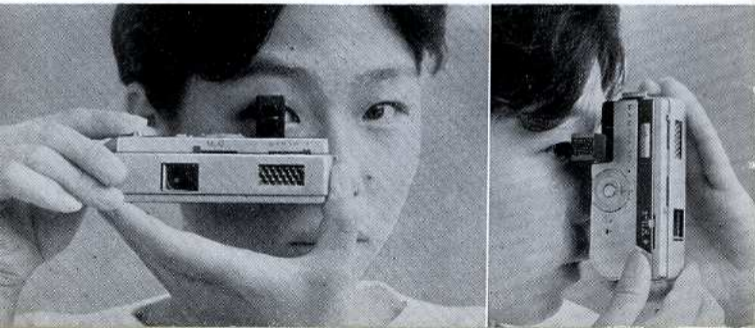
With the camera set in these ways, the light value range, with filmspeed at ASA 100, is extended to cover from LV 7 to LV 17.

ATTENTION *Exposure indication (14) is in operation only after the cocking wheel (4) has been turned to ready the camera for the next shot. Also, when noting red needle position, keep finger*

away from the shutter button (3).

CAMERA GRIP

Your MAMIYA 16 EE De Luxe may be held in any comfortable way. Be sure, however, that your fingers do not obstruct the lens or the photocell. When checking exposure



indication (14) for automatic control range, be sure that the camera is pointed toward the subject as when shooting.

Illustrated are examples of methods of holding your camera. The most important thing is to prevent the slightest jerking when the shutter button is pressed. Apply finger pressure firmly but gently.

The use of film of high speed ratings is recommended for the best results.

SYNCHROFLASH PHOTOGRAPHY

When the brightness of the subject is insufficient for good register, that is to say when the red needle of the exposure indication (14) fails to swing and point to any of the three segments below automatic operation range, the use of synchroflash is recommended.

Mount your flashgun on the accessory clip (19), and plug



regardless of filmspeed. (Actual duration of the flash determines subject stopping ability.) Next, move the EE lever (13) away from position "A" and set at proper aperture value. Aperture value is determined by referring to the instructions

the connector cord into the synchroflash socket (21). Turn the shutter speed control (15) so that the red mark on the dial matches the red "FL" on the scale. Shutter speed will then be $1/25$ second to provide full flash synchronization re-

gardless of filmspeed. (Actual duration of the flash determines subject stopping ability.) Next, move the EE lever (13) away from position "A" and set at proper aperture value. Aperture value is determined by referring to the instructions accompanying your flashbulb to obtain the "guide number" which is used together with the distance from flash to subject to obtain the correct aperture size.

MANUAL OPERATION

As in the case of synchroflash photography, the electric-eye automatic control can be cut out by moving the EE lever (13) away from position "A" to obtain manual setting of aperture size. In this case, intentional over-or underexposures can be made. Shutter speed can be varied by referring to the film-speed (ASA) - shutter speed table; or, by setting the shutter speed control red mark at "FL", the scale mark against which the filmspeed (ASA) dial (16) window is aligned is the $1/25$ second position, and the scale markings to the left (counterclockwise) are respectively $1/10$, $1/5$, and B, while the markings to the right are respectively $1/50$, $1/100$, and $1/200$ second.

MAMIYA 16 EE DE LUXE

USER'S MANUAL CORRECTION

In your "USER'S MANUAL" an error was made in describing operation of your MAMIYA 16 EE De Luxe as a conventional camera by shifting the EE lever (13) from position A to the aperture scale.

The correct version is as follows :

WHEN THE EE LEVER IS SHIFTED FROM POSITION A

The aperture remains coupled to the exposure meter. Consequently, the aperture size varies with the brightness of the subject-matter, and manual setting will not permit over-exposure. For example, even if the EE lever is manually set

at $f/4$ when the light value of the subject calls for $f/5.6$ the aperture will automatically close down to $f/5.6$, giving correct exposure. However, if the EE lever is manually set at $f/8$, the shutter will not open up beyond this size, and under-exposure will result. In other words, it is possible to override automatic control in order to under-expose, but the reverse is not possible.

Nevertheless, because shutter speed can be varied at will, it is possible to obtain over-exposure by shifting the EE lever away from position A, and using a slower shutter speed than you would with the EE lever at A. To do this, merely turn the shutter speed dial counterclockwise. Do not set the EE lever at an aperture setting smaller than what the exposure meter would automatically give under normal circumstances.

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