Mamiya 7

Mamiya

交換レンズ
Interchangeable Lenses

- N43mm F4.5L
- N65mm F4L
- N80mm F4L
- N150mm F4.5L

- N43mm f/4.5L
- N65mm f/4L
- N80mm f/4L
- N150mm f/4.5L

English

Interchangeable Lenses

Instructions

INTRODUCTION

Mamiya is famous for its world-class lens quality and is the only dedicated manufacturer of medium format cameras that maintains its own modern optical engineering and manufacturing facility. Utilizing computer aided design, the latest optical glass and multicoating technolgy and quality assurance controls at every step, Mamiya lives up to its reputation. Mamiya's optical perfection is matched by the extremely precise mechanical tolerances under which all Mamiya camera systems are produced.

Designing lenses for a rangefinder camera like the Mamiya 7, permits Mamiya's talented optical engineers even a greater opportunity to excel. Freed from the lens design limitations that the mirror in single lens reflex cameras imposes and being able to design lenses with very short flange focal distances, they can place the rear element of Mamiya 7 lenses very close to the film plane, a particular advantage for wide angle lenses. This makes an outstanding lens, such as the ultra-wide angle 43mm possible. (Wide angle lenses for SLR cameras require retrofocus designs).

Special Features

Ultra-wide Angle Lens 43mm f/4.5

The ultra-wide angle lens 43mm f/4.5 was developed by Mamiya as the first of its kind for a 6 x 7 Rangefinder camera. This compact design lens has an extreme wide-angle effect with a 92° diagonal of view.

Normally a single lens reflex camera has to make compromises in order to make room for the reflex mirror box and viewfinder system and its lens must be of retro-focus type.

All four new lenses for the Mamiya7 were developed without considering the disadvantages of the SLR camera because the Mamiya 7 is a rangefinder system camera. As a result, the Ultra-Wide angle 43mm f4.5 lens is nearly a symmetrical design. As an advantage of Mamiya's skillful design technique:

1) Lens distortion is reduced virtually to zero at the corners with -0.04%
2) Lateral color aberration is completely eliminated.
3) Light fall-off or vignetting toward the corners of the picture is greatly reduced.

Another feature of this remarkable lens is its extremely crisp and sharp image over the entire focusing range-even at maximum aperture.

Wide-Angle Lens 65mm f/4

This popular focal length wide angle lens offers great depth of field and has a 69° angle of view.

The lens distortion is reduced virtually to zero at the corners with-0.08%.

Mamiya's optical expertise in lens design also results in complete elimination of lateral color aberration. In addition, this lens yields a high contrast even at maximum aperture.

The lens reproduces superbly sharp images even in close-up work and portrays images very naturally and subtlly.

Standard Lens 80mm f/4

This standard lens utilizes the same design concept as the well-known standard lens 75mm f/3.5 for Mamiya 6 MF.

The standard lens is a classic "Orthometic" design exhibiting higher contrast and superb color correction to offer outstanding performance.

Telephoto lens 150mm f/4.5

Through the use of the latest ultra-low dispersion optical glasses, this new telephoto is specially corrected for all color aberrations (including lateral color) or variation in image size with color. As a result, even at maximum aperture, the images are sharp and crisp, with no loss of contrast due to color aberrations. Subject details are accurately repro-duced, free of astigmatism and coma flare. It is actually an apochromatic lens.

Name of Parts

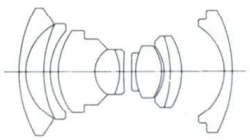
① **Aperture Scale**
② **Focusing Ring**
③ **Depth-of-field Scale**
④ **Lens Alignment Dot**
Mount or release lens by aligning with dot on camera body
⑤ **Aperture Ring**
⑥ **Distance Scale (m.ft)**
To ascertain the camera-to-subject distance
⑦ **Infrared Mark**
When taking infrared photos align with white dot

Lenses

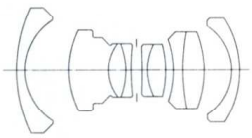
	43mm f/4.5	65mm f/4	80mm f/4	150mm f/4.5
Lens Construction	10 elements in 6 groups	9 elements in 5 groups	6 elements in 4 groups	6 elements in 5 groups
Angle of view	92°	69°	58°	34°
Minimum of aperture	22	22	22	32
35mm conversion	21mm	32mm	39mm	71mm
Minimum focusing distance	1m	1m	1m	1.8m
Magnification at minimum distance	0.049	0.078	0.097	0.096
Area covered	1145x 1421mm	719x 892mm	580x 719mm	581x 721mm
Filter size	67mm	58mm	58mm	67mm
# of filters usable without vignetting	1	1	2	1
Hood All of the above are supplied with the lenses.	Bayonet type	Bayonet type	Bayonet type	Bayonet type
Dimensions (length) x (diameter)	42 x 72mm (81mm)	65 x 67mm(86mm)	56x 67mm(66mm)	96 x 70mm(106mm)
Weight	390g	380g	290g	520g

Lenses

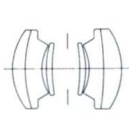
N43mm f/4.5L



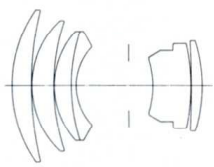
N65mm f/4L



N80mm f/4L



N150mm f/4.5L



Mounting/Removing Lenses

Confirm the following two points:

1. The film advance lever of the camera body is set.
2. The light shield curtain in the camera body is closed.

Mounting Lens

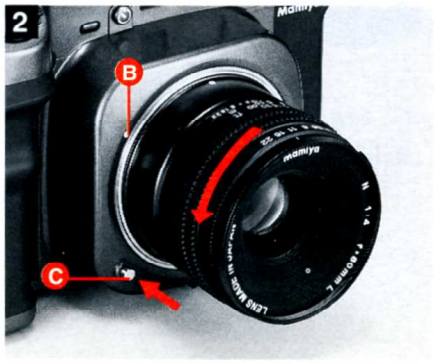
1. Remove the front and rear lens caps.

2. Align Lens Alignment Dot Ⓐ with the Camera Alignment Dot Ⓑ. Insert the lens into the camera body. Then turn the lens in the direction of the arrow until it clicks and locks into place. (Photo. 1)

Removing Lens

Like removing the camera Body Cap, while pressing in the Lens Release Button Ⓒ, rotate the lens in the direction of the arrow until the Lens Alignment Dot is lined up with the White Alignment Dot Ⓑ on the camera body. (Photo. 2)

CAUTION:
Never touch the light shield curtain. If touched, light leakage or a malfunction may result.



Mounting/Removing Lenses

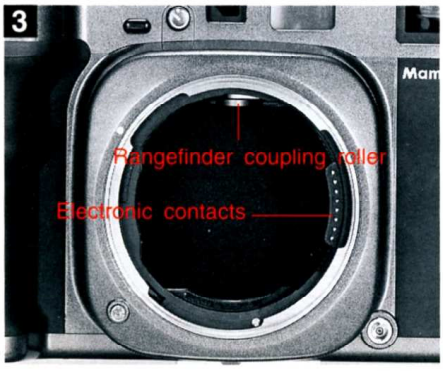
Note:

★ Particularly when mounting 43mm f/4.5 or 65mm f/4 wide-angle lenses, take care to see that the rear rim of the lens does not touch the body's Rangefinder Coupling Roller. (Photo. 3, 4)

★ When the lens has been removed and film remains in the camera body, avoid exposure to direct sunlight as film fogging may result.

CAUTION:
Gold Plated Electronic Contacts are provided inside the Bayonet mount and at the rear of each lens.

If oil, dirt, or other foreign matter collect on the contacts, poor electronic information transfer may result. When soiled, use a clean cloth to wipe them thoroughly before installing the lens. Also, use the utmost care so as not to touch them. (Position the front face of the lens which has been removed as shown in the photo.) (Photo. 5)

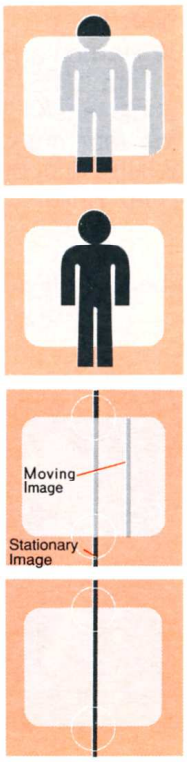


Focusing the Lens

When the lens has been focused, the double-image superimposing rangefinder produces two superimposed images within the central double-image zone ☐ of the viewfinder.

How To Focus:
1. Position the subject within the central double-image zone ☐ of the viewfinder. As on the top right the subject will appear as a double image.
2. Rotate the focusing ring until the two images converge and are superimposed as on the figure on the right. The lens is now focused.

• When focusing with 65mm f/4 wide angle lens at a close distance, such as 1m to 1.8m, the rim of the lens hood will appear in the lower part of the central double-image zone ☐ of the rangefinder. This is only visible in the viewfinder, but will not appear on the film.



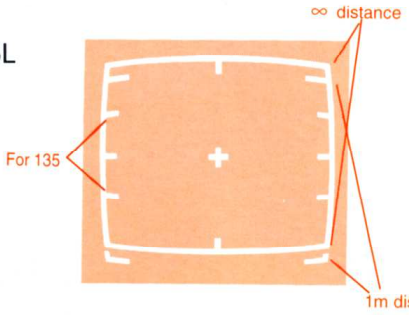
Photographic area covered

Within the viewfinder the photographic area covered is indicated by the visible bright frame. Parallax is automatically compensated according to the subject - to - lens distance. The composition will be in the lines of the bright frame ☐. 83% of the field of view is visible at ∞, and 100% is visible at the minimum focusing distance. The appropriate bright frame area is automatically selected upon lens interchange.

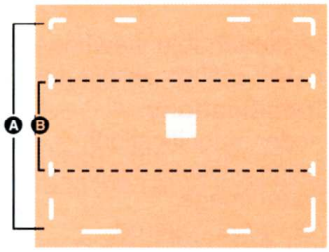
Ⓐ Effective standard picture area
Ⓑ Effective Panoramic size Picture area

When the Ultra-Wide angle lens 43mm f/4.5 is mounted, the bright frame of the detachable viewfinder indicates the photographic area. Rangefinder focusing is maintained, however.

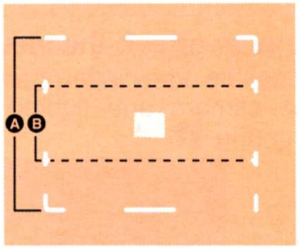
43mm f/4.5L



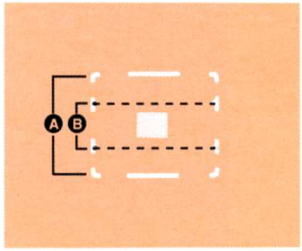
N65mm f/4L



N80mm f/4L



N150mm f/4.5L



How to use the Viewfinder for 43mm f4.5 Lens

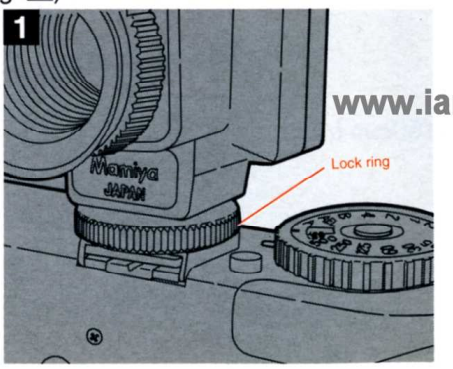
The detachable viewfinder is essential when using the Ultra-Wide Angle Lens 43mm f4.5

Specifications

Finder magnification	: 0.4X
Range of diopter adjustment	: -0.8 ±2
Finder image	: Correctly erected image
View area covered	: 87% at ∞
Weight Approx	: 74 gr.

How to attach the viewfinder to a camera:

Slide the Viewfinder into the hot shoe on top of the camera and tighten it by rotating the lock ring.(Fig 1)



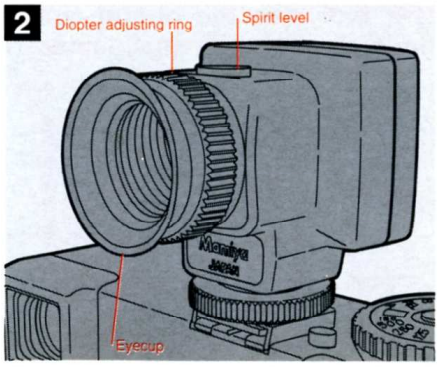
How to adjust diopter to your eyesight:

Rotate the diopter adjusting ring until you can clearly see the subject. If you wear spectacles, fold the rubber eye-cup forward.(Fig 2)

Viewfinder area covered:

1)The view area covered is indicated by the visible bright frame.

2)The composition will be within the inside of the bright frame line.



3)87% of the field of view is visible at ∞ and 100% is visible at the minimum focusing distance 1m.

4) The bright frame for panoramic photography is only for long distance.(Fig 3)

Spirit level:

A spirit level, visible in the viewfinder, is very useful for wide angle photography. The spirit level is also visible on the exterior of the camera. (Fig 4)

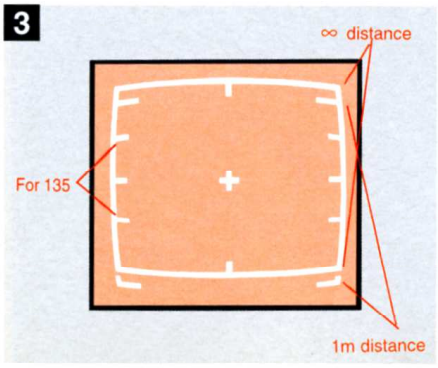
How to focus:

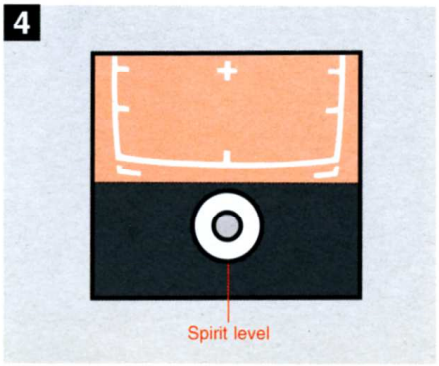
1) First determine your composition through the viewfinder.

2) Adjust the lens focusing ring through the Rangefinder of the camera in the same way as with the other three lenses.

- When 43mm f/4.5 lens is mounted, the bright frame of 65mm f/4 lens is indicated in the finder.

3) After focusing, check the photographic area again through the Viewfinder and then shoot.





Infrared Photography

When using infrared film, it is necessary to make a focusing adjustment in order to achieve accurate focus. This is because the focus position of the image deviates from normal since the infrared ray wavelength is longer. After focusing in the usual manner, check the distance on the Distance Scale that is aligned with the center reference mark of the lens. Make the focusing adjustment by turning the Focusing Ring in the direction of the arrow in the accompanying photograph so that the distance just observed is aligned with the Infrared Mark. (Photo. 6)

When using infrared film, be sure to read the instructions with the film.

Depth-of-field

The Depth-of-field varies according to the aperture. The smaller the aperture the greater the Depth-of-field; the larger the aperture the smaller the Depth-of-field. To take pictures which are sharp from foreground to infinity or when taking snap shots, the focusing range is extended or depth is increased by using a smaller aperture. When the subject is to stand out, with the background out of focus, a larger aperture is appropriate.

The Depth-of-field Scale on the lens indicates Depth-of-field in terms of the distance between subjects on both sides of the scale.

For example, when an 80mm lens is stopped down to f/8 and f/22, respectively, everything photographed within the ranges shown in the photo at the bottom will be sharp. (Photo. 7,8)

*The Depth of Field Table is on the next page.

[f / 8]

[f / 22]

Depth-of-field

N43mm f/4.5L

Aperture	Distance (m)						
	∞	7	3	2	1.5	1.2	1
4.5	∞ 6.14	∞ 3.32	5.64 2.05	2.86 1.54	1.91 1.23	1.44 1.03	1.15 0.88
5.6	∞ 4.96	∞ 2.95	7.19 1.91	3.20 1.46	2.06 1.18	1.51 0.99	1.20 0.85
8	∞ 3.53	∞ 2.39	17.60 1.67	4.29 1.32	2.44 1.09	1.71 0.93	1.31 0.81
11	∞ 2.51	∞ 1.88	∞ 1.41	8.41 1.16	3.34 0.98	2.08 0.85	1.51 0.75
16	∞ 1.80	∞ 1.46	∞ 1.17	∞ 0.99	7.13 0.86	3.06 0.76	1.95 0.68
22	∞ 1.29	∞ 1.11	∞ 0.94	∞ 0.83	∞ 0.74	9.69 0.67	3.36 0.61

N80mm f/4L

Aperture	Distance (m)							
	∞	10	5	3	2	1.5	1.2	1
4	∞ 24.20	16.83 7.12	6.23 4.17	3.38 2.69	2.15 1.86	1.58 1.42	1.24 1.15	1.03 0.96
5.6	∞ 17.13	23.52 6.37	6.94 3.91	3.58 2.58	2.23 1.81	1.62 1.39	1.27 1.13	1.04 0.95
8	∞ 12.14	53.98 5.54	8.29 3.59	3.89 2.44	2.34 1.74	1.67 1.35	1.30 1.11	1.06 0.94
11	∞ 8.60	∞ 4.68	11.45 3.21	4.45 2.27	2.52 1.66	1.76 1.30	1.35 1.07	1.09 0.91
16	∞ 6.11	∞ 3.84	25.00 2.81	5.59 2.06	2.83 1.55	1.90 1.24	1.43 1.03	1.14 0.88
22	∞ 4.34	∞ 3.07	∞ 2.38	8.81 1.83	3.45 1.42	2.14 1.16	1.55 0.98	1.22 0.85

N65mm f/4L

Aperture	Distance (m)						
	∞	7	3	2	1.5	1.2	1
4	∞ 15.70	12.38 4.89	3.64 2.55	2.25 1.79	1.63 1.38	1.27 1.13	1.05 0.95
5.6	∞ 11.13	18.24 4.35	4.00 2.40	2.38 1.72	1.69 1.34	1.31 1.10	1.07 0.93
8	∞ 7.90	55.85 3.77	4.66 2.22	2.58 1.63	1.79 1.29	1.36 1.07	1.10 0.91
11	∞ 5.61	∞ 3.17	6.07 2.01	2.95 1.52	1.94 1.22	1.45 1.02	1.16 0.88
16	∞ 3.99	∞ 2.60	10.76 1.77	3.69 1.38	2.23 1.14	1.59 0.96	1.24 0.84
22	∞ 2.85	∞ 2.07	∞ 1.52	5.80 1.23	2.82 1.04	1.86 0.89	1.39 0.79

N150mm f/4.5L

Aperture	Distance (m)									
	∞	20	10	7	5	4	3	2.5	2	1.8
4.5	∞ 69.04	27.98 15.56	11.62 8.77	7.74 6.38	5.36 4.68	4.22 3.79	3.11 2.88	2.58 2.42	2.04 1.95	1.83 1.76
5.6	∞ 55.65	30.95 14.78	12.10 8.52	7.95 6.25	5.45 4.61	4.28 3.75	3.14 2.86	2.60 2.40	2.06 1.94	1.84 1.75
8	∞ 39.37	40.07 13.34	13.26 8.03	8.42 5.98	5.67 4.47	4.40 3.66	3.21 2.81	2.64 2.37	2.08 1.92	1.86 1.73
11	∞ 27.86	68.73 11.73	15.33 7.42	9.20 5.65	6.00 4.28	4.60 3.53	3.31 2.74	2.70 2.32	2.12 1.88	1.89 1.71
16	∞ 19.72	∞ 10.02	19.71 6.71	10.59 5.23	6.55 4.04	4.91 3.37	3.46 2.64	2.80 2.25	2.18 1.84	1.94 1.67
22	∞ 13.97	∞ 8.31	33.12 5.91	13.48 4.74	7.53 3.75	5.43 3.17	3.70 2.52	2.95 2.16	2.26 1.79	2.00 1.63
32	∞ 9.90	∞ 6.70	∞ 5.06	21.99 4.18	9.54 3.40	6.38 2.92	4.11 2.36	3.20 2.05	2.40 1.71	2.11 1.57

Mounting bayonet type lens hood

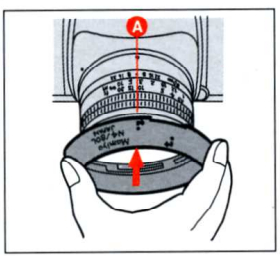
(Mounting 80mm f/4, 65mm f/4 ,43mm f/4.5 bayonet type lens hood)

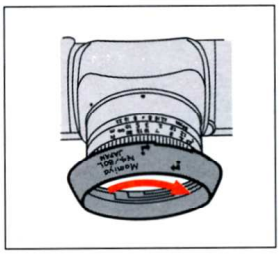
1. Align Mark ⍐ on the hood with the Indicator Line Ⓐ on the lens, and fit the hood to the lens front ring.

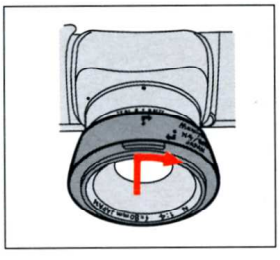
2. Fix the Lens Hood by rotating it in the direction of the arrow. (The Lens Hood can be removed by rotating it in the opposite direction.)

When the Lens Hood is not used
As shown, fit the back side of the Lens Hood to the lens. This will protect the lens.

(The hood illustrated above is for the 80mm lens.)







Care and Cleaning
Do not store the lens in a damp or salty atmosphere.
Never touch the lens surface. If a lens needs cleaning, blow away the dust particles with a blower, and clean the surface with lens cleaning tissue and lens cleaner.
After removing the lens from the camera body, protect the lens by attaching front and rear lens caps.