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Mamiya RZ67

Auto Extension Tubes RZ

Instructrions

Special Features

When desiring to approach the subject closer than the bellows extension of the camera permits, Auto Extension Tubes RZ are used. Because shutter and aperture coupling is fully retained when mounted on Auto Extension Tubes RZ, the lens operates in the normal manner, greatly simplifying close-up photography.

Even remote control close-up photography is possible when using Transmitter MZ, Receiver MZ and Winder RZ.

Auto Extension Tubes RZ are available in two size, both of which operate identically. They may also be used in combination. Extension (length) of the tubes follow:

No. I ... 45mm
No. 2 ... 82mm
No. 1 + No. 2 .. 127mm

No. 1

No. 2

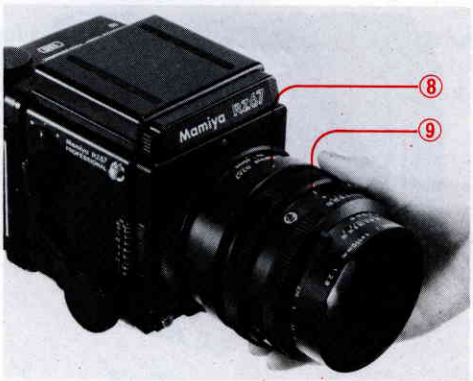
Before Mounting Auto Extension Tube RZ

1. Set the mirror (2) by pushing the Cocking Lever (1) completely down.

2. Rotate the Cocking Pin of the tube (3) until it is aligned with the red dot. When the pin is released, it will return to the green dot (G).

3. Repeat the same procedure with the lens (not necessary if the lens shutter is already cocked).

Mounting Auto Extension Tube RZ



1. Rotate Bayonet Ring of the tube, aligning the white dot on the ring (6) with the red index on top of the tube (7).
2. While aligning the red index of the tube (7) with the red dot on the camera body (5), seat the tube properly on the camera body mount, and lock it in place by firmly rotating the Bayonet Ring clockwise.
3. Rotate the Bayonet Ring of the lens also, aligning its white dot (9) with the central red index of the lens.

4. Align the central red index of the lens with the red dot of the tube (8), mounting the lens and locking it in place by twisting the Bayonet Ring clockwise.

If the lens does not fit into the mount of the tube properly, twist the lens to-and-fro slightly until it does, and then lock it in place by twisting the Bayonet Ring clockwise.

Removing the Tubes

Using Both Tubes Simultaneously

1. Rotate the cocking pin of each tube, aligning it with the red dot.
2. Align the white dot on the Bayonet Ring of each tube with the red index on the tube.
3. Mount one tube onto the other (the order of the tubes does not matter).
4. Mount the combination of tubes on the camera body. Finally, mount the lens on the tube combination.

1. Push the Cocking Lever (1) all the way down.
2. Twist the Bayonet Ring of the lens completely counterclockwise and remove the lens.
3. Twist the Bayonet Ring of the tube counterclockwise and remove the tube from the camera body.

Precautions

Instead of removing them individually, the combination of lens and tube can be removed from the camera body if desired; however, after removing the tube from the lens, make sure the shutter of the lens is cocked before remounting the lens on the camera body.

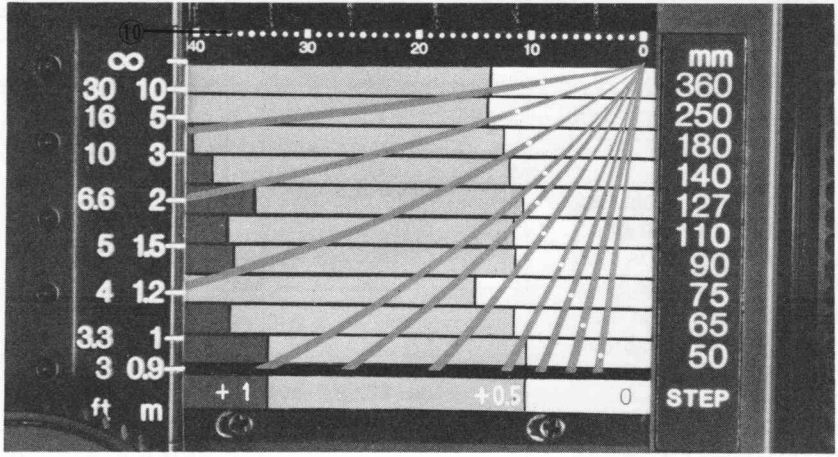
If the electrical contacts on the front and rear of Auto Extension Tube RZ are allowed to get soiled with grease or dirt, the electronic coupling may be disrupted, making the tubes inoperative. Should the contacts get soiled, be sure to carefully wipe them with a clean cloth.

Because the shutter and diaphragm automation of a lens mounted on Auto Extension Tube RZ is fully retained, operation of the lens is the same as when it is mounted on the camera body.

However, because the exposure factors appearing on the Exposure Compensation Scale no longer apply when using extension tubes, refer to the Close-up Tables appearing on pages 7-10 for the correct factors.

1. Mirror-up operation is recommended for optimum results in close-up photography.
2. Use as small an aperture as possible.
3. Avoid using combinations other than No. 1 + No. 2 (e.g. No. 2 + No. 2).
4. Vignetting will occur with Polaroid Land Pack Film Holder RZ if the 180mm or 250mm lens is mounted on the No. 1 + No. 2 tube combination with bellows extended.
5. Do not use the 50mm lens on an extension tube.

Determining the Exposure Factor



1. Determine the bellows extension by checking the Bellows Extension Scale (10) which is found above the Focal Length Scale. In the illustration above, the bellows extension is 40mm.

2. Read the exposure factor for the appropriate lens and extension tube combination in the right-hand column of the Close-up Table (Bellows Extension/Exposure Factor column).

For example, assume that the combination of 110mm lens and Extension Tube No. 2 is used. If the bellows extension were the same as in the above illustration (40mm), the exposure factor would be +2 stops (steps) according to the Close-up Table. With an exposure factor of +2 stops, exposure would be increased by making the shutter speed two stops longer (such as changing 1/60 sec to 1/15 sec) or the aperture two stops larger (such as changing f/22 to f/11).

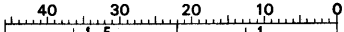
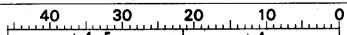
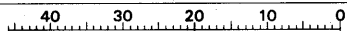
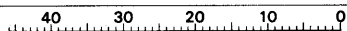
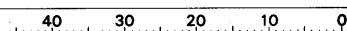
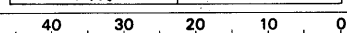
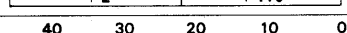
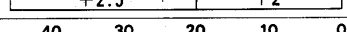
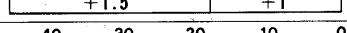
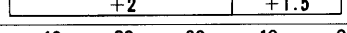
Auto Extension Tubes RZ
Close-up Table

1. "Subject Distance" refers to the distance between subject and front rim of the lens.

2. In columns of the Close-up Table that have two rows of figures, the left-hand row indicates the result when lens and tube combination is set at zero bellows extension, and the right-hand row indicates the result when set at maximum belows extension (46mm).

3. For clarity, the exposure factors in the right-hand column of the table are shown in 1/2 stop increments (+ 1, +1.5, +2, +2.5); however, for precise exposure compensation, the line dividing two zones should be read as 1/4 stop. Thus, the line between the +1 and +1.5 areas represents +1 1/4. Similarly, the line dividing the +1.5 and +2 zones represents +1 3/4.

Lens	Tube	Magnification
65mm F4	No. 1	0.68～1.38
90mm F3.5	No. 1	0.50～1.01
	No. 2	0.91～1.42
	No. 1 + No. 2	1.41～1.92
110mm F2.8	No. 1	0.41～0.82
	No. 2	0.74～1.15
	No. 1 + No. 2	1.15～1.56
127mm F3.8	No. 1	0.35～0.72
	No. 2	0.65～1.01
	No. 1 + No. 2	1.00～1.36

Subject Distance	Area Covered	Bellows Extension (mm) / Exposure Factor (STEP)
9.3～ 4.4	(8.2×10.2)～(4.1×5.0)	
20.1～11.0	(11.2×13.9)～(5.5×6.9)	
12.0～ 8.4	(6.1×7.6)～(3.9×4.9)	
8.5～ 6.8	(4.0×4.9)～(2.9×3.6)	
31.9～18.1	(13.8×17.1)～(6.8×8.5)	
19.6～14.2	(7.6×9.4)～(4.8×6.0)	
14.3～11.7	(4.9×6.1)～(3.6×4.5)	
44.9～26.8	(15.8×19.6)～(7.8×9.7)	
28.7～21.7	(8.7×10.8)～(5.6×6.9)	
21.8～18.4	(5.6×7.0)～(4.1×5.1)	

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Close-up Table

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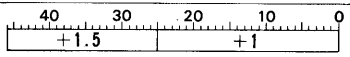
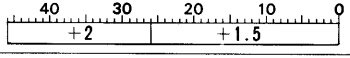
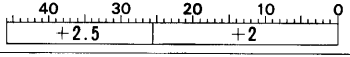
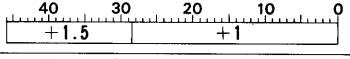
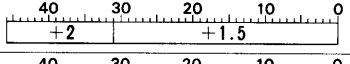
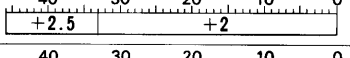
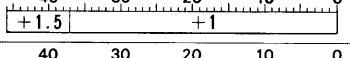
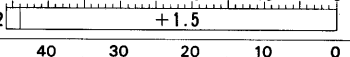
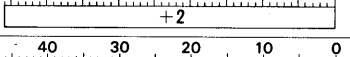
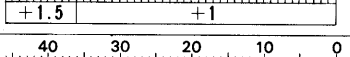
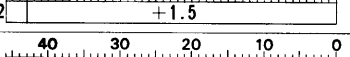
2. In columns of the Close-up Table that have two rows of figures, the left-hand row indicates the result when lens and tube combination is set at zero bellows extension, and the right-hand row indicates the result when set at maximum bellows extension (46mm).

3. For clarity, the exposure factors in the right-hand column of the table are shown in 1/2 stop increments (+1, +1.5, +2, +2.5); however, for precise exposure compensation, the line dividing two zones should be read as 1/4 stop. Thus, the line between the +1 and +1.5 areas represents +1 1/4. Similarly, the line dividing the +1.5 and +2 zones represents +1 3/4.

Lens	Tube	Magnification
Macro 140mm F4.5	No. 1	0.32~0.65
	No. 2	0.59~0.92
	No. 1 +No. 2	0.91~1.24
180mm F4.5	No. 1	0.25~0.51
	No. 2	0.46~0.71
	No. 1 +No. 2	0.71~0.96
250mm F4.5	No. 1	0.18~0.37
	No. 2	0.34~0.52
	No. 1 +No. 2	0.52~0.71
360mm F6	No. 1	0.13~0.26
	No. 2	0.23~0.36
	No. 1 +No. 2	0.36~0.49

Subject Distance	Area Covered	Bellows Extension (mm) / Exposure Factor (STEP)
52.5～ 30.8	(173×215)～(86×106)	
33.1～ 24.7	(95×118)～(61×75)	
24.8～ 20.7	(61×76)～(45×56)	
87.0～ 50.6	(22.4×27.8)～(11.1×13.7)	
54.5～ 40.3	(12.3×15.3)～(7.9×9.8)	
40.5～ 33.7	(7.9×9.8)～(5.8×7.2)	
160.0～ 93.1	(30.4×37.7)～(15.0×18.6)	
100.2～ 74.1	(16.7×20.7)～(10.7×13.3)	
74.5～ 62.0	(10.8×13.4)～(7.9×9.8)	
343.9～202.4	(44.2×54.8)～(21.8×27.1)	
217.6～162.4	(24.2×30.1)～(15.5×19.3)	
163.2～136.8	(15.6×19.4)～(11.5×14.3)