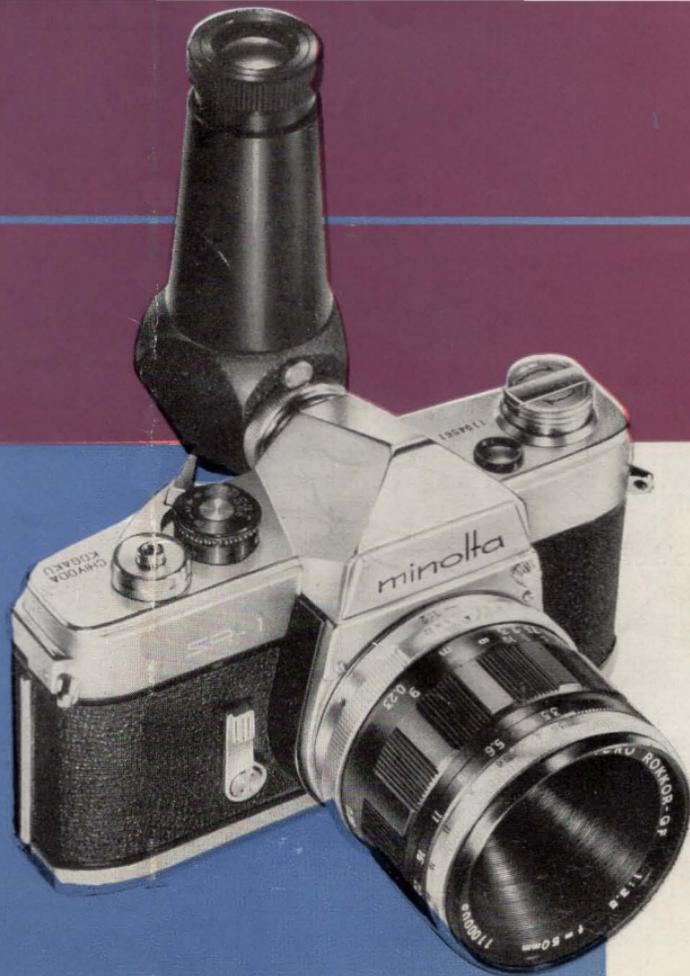


**Minolta  
SR**

**MACRO ROKKOR  
LENS  
MANUAL**



## Minolta Macro Rokkor

This lens is originally designed for copying works and macro-photography having many outstanding features. The focal length is 50mm, and the opening is F3.5 and it is composed of 6 elements in four groups.

The fourth and the fifth elements are of new series of optical glass, for minimum spherical and chromatic aberration and distortion. Other optical errors are, of course, corrected to the maximum degree. Overall needle sharp focusing is available, especially in extreme close ups and macrophotos, and also it is designed for general purpose shots.

Exposure value conversion at all distance is indexed on the lens barrel, and no conversion table is necessary

### Macro Rokkor QF F 3.5 50 mm

6 elements in 4 groups  
f 3.5-22

Focusing distance

Focusing

Mount

Filter Size

Accessories

Exposure value conversion index on the lens barrel.

Hand pre-set diaphragm system

$\infty$ -23cm (magnification  $1/\infty$ -1/2)

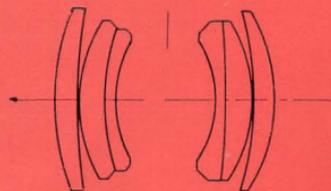
23cm-20cm (with intermediate rings)  
(magnification 1/2-1/1)

Straight forward helicoid focusing

Leica type screw mount-with Adapter for SR mount.

55 mm

SR mount adapter intermediate ring, reverse attaching ring, handle.



Construction of Macro Rokkor QF F3.5 50mm





## Exposure conversion Index

Macro Rokkor Lens has the exposure correction index (effective F Value) scale on the barrel to ensure easy aperture setting for correct exposure. The effective F value of the lens is reduced, as the camera moves very close to the subject and the lens barrel is extruded to a large extent. The exposure correction index shows the effective F value of the lens within the range of infinity ( $\infty$ ) to close up at the magnification of 1 1. Thus, within this range, you need not trouble yourself to find out the exposure correction index, with which to correct F value.

The pictures on the next page will show how F value changes as the distance between the lens and the subject changes. At the magnification of 1 2.5, F value is reduced to one half, and at the magnification of 1 1, F value is reduced to one fourth as compared with the F value at the infinity shot. Therefore, aperture setting must be moved towards the opening by one stop at 1 2.5 magnification and by two stops at 1 1 magnification.

§ For extreme close ups at 23cm--20cm (1/2 actual size) apply the intermediate ring between the lens and camera mount. In this application, lens can be attached with the upside of the barrel down, so that the right index comes on the upside.

(Macro Rokkor has conversion index and you can always read the correct exposure value, by converted F value on the index.)

§ Exposure conversion index includes correct F value for  $\infty$  shots to extreme close ups at 23cm. At the bottom of the lens barrel, there is additional index for further correction when the intermediate ring is used, from 1/2 to actual size reproduction on the negative.

Macro Rokkor is focused at  $\infty$  with Minolta SR camera for general picture taking.



For extreme close up shots as close as 23 cm (Notice exposure value conversion index.)



Macro Rokkor is focused at 23cm of object, with intermediate ring, at magnification 1/2.



For actual size reproduction by means of intermediate ring.

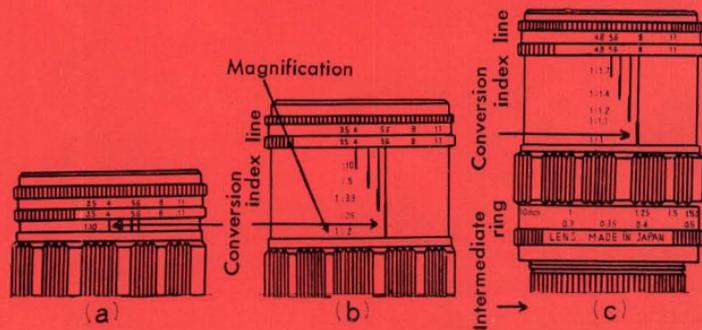


### Exposure value conversion index

Focus the lens on the object and read the index corresponding to the indicate line.

### Examples ;

- At the magnification of  $1/10$ , reading f 4 corresponding to the indicate line.
- At the magnification of  $1/5$ , reading f 5.6 corresponding to the indicate line.
- At the magnification of  $1/1$ , reading f 8 corresponding to the indicate line with intermediate ring.



### For further magnification

For further magnification, use the Minolta Extension Bellow, II applying Macro Rokkor reverse way by means of reverse ring.

The reason of attaching the lens reverse way is to reduce aberration of the lens, and to give more space between the lens and the object, for easier illumination of the object.

When the Extension Bellow II is used with Minolta SR cameras, the magnification, would be between 1.8~4.4. (for 1.8 magnification, attach the lens normally, not reverse way)

When the lens is attached reverse way no helicoid focusing is possible.

In this case, the following table should be used for correct exposure.

Magnification	Distance	Exposure Value Conversion
1	203.2 mm	4.0
1.5	211.5	6.3
2	229.0	9.0
2.5	240.6	12.3
3	271.8	16.0
3.5	295.0	20.3
4	319.3	25.0
4.5	343.6	30.3
5	368.3	36.0

Exposure value Conversion Table

(Distance is between the object and  $\ominus$  mark on the camera body)



For larger than actual size reproduction, by means of reverse ring

### Magnification and Exposure conversion

§ The magnification means the ratio between the size of the object and the reproduced image on the negative.  $\left(\frac{\text{Negative Image}}{\text{Object size}}\right)$  Minolta SR cameras have  $2 \times 36 \text{ mm}$  format, so the following calculation is possible

$$\frac{24 \text{ mm}}{\text{shorter dimension of the object}}$$

§ Exposure value correction and index. At the same iris stop opening, negative image is darkened in proportion to the distance between the lens and the focal plane, especially when the lens is extruded out farther than normal camera alignment. Exposure value correction is, therefore, required for taking extreme close up shots. Exposure value correction index is on the lens barrel, and actual f stop value should be corrected in accordance with the index.

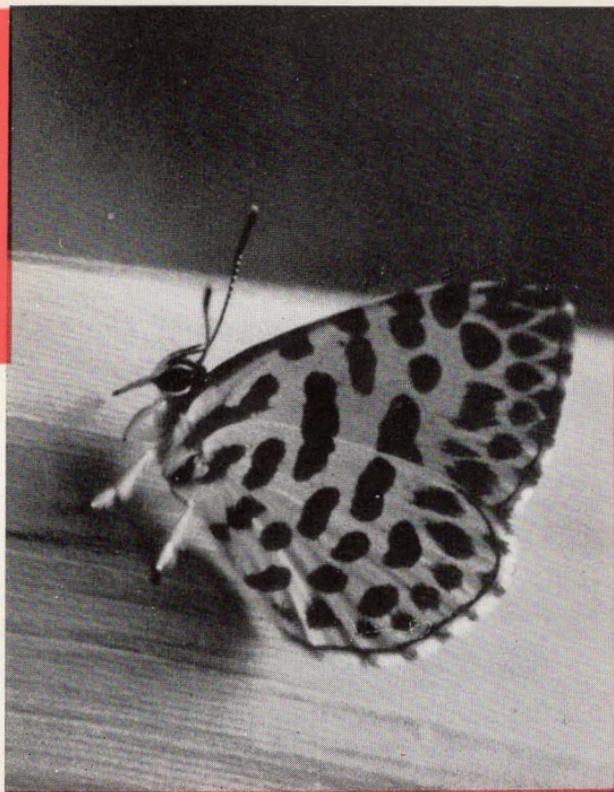


Photo by Macro Rokkor



## Instructions on actual use

§ The particulars of Macro Rokkor have been described in previous pages, and actual application technique will be given here below.

1. Lens + SR mount adapter  
(for  $\infty$  23cm inch distance shots, at magnification of 0 1/2)

In general picture taking, focus the lens and read the correct iris stop opening by means of conversion index.

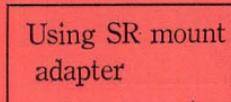
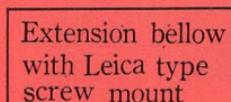
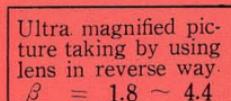
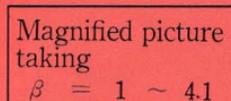
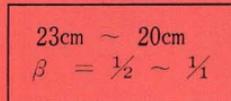
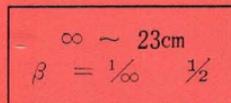
2. Lens + Intermediate ring + SR mount adapter  
(for 23cm 20cm distant object, at magnification of 1/2 1/1)

In the same way as described above, you can get always correct exposure value by means of conversion index.

3. Lens Reverse way + Reverse ring + SR mount adapter + Extension bellow

For larger magnification than 1/1, apply Macro Rokkor reverse way by means of reverse ring, and focusing is made with extension bellow. For correct exposure, use the conversion table.

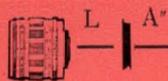
4. Minolta Macro Rokkor is not only attachable to Minolta SR cameras, but also to many different cameras, since it has Leica mount screw on the lens barrel. Please refer to Table 8.



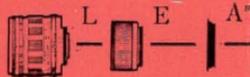
# Minolta SR



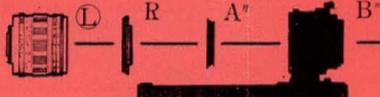
General picture taking



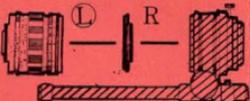
Close-up



Ultra magnified picture taking by using lens in reverse way



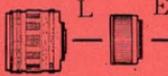
Ultra magnified picture taking by using lens in reverse way with Leica type mount Extension bellow



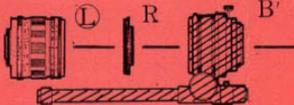
Close-up



Close-up and magnified picture taking



Ultra magnified picture taking by using lens in reverse way



Single lens reflex camera excepting Minolta SR



Due to different back focus distance picture taking in infinitive may not be possible in some camera

Leica



- L Macro Rokkor
- A SR mount adapter
- E Intermediate ring
- R Reverse ring
- B Extension bellow
- L' Other Lenses with Leica mount
- B' other Bellows w/Leica mount
-  Leica type screw mount
-  Other type lens mount
-  Excepting SR and Leica type mount



## HINTS FOR GOOD CLOSE-UP SHOTS

- ★ The depth of the subject field becomes very shallow in close-up shots therefore, it is best to make aperture opening as small as possible. For accurate focusing, it is best to use the magnifier for the SR camera.
- ★ There must be no moving of the subject or camera when taking close-up shots. To prevent vibration or shaking of the camera, use a tripod or a cable release. When taking close-up shots of animals, flowers or insects in the open, use faster shutter speeds to avoid shaking by winds or other elements.
- ★ When using the exposure meter for small subjects, better results can be obtained by using the reflection system than the incident light system.
- ★ A better view of the subject can be obtained by using the SR angle finder
- ★ In some instances, when the extension bellow is extended to its full length, the upper section of the view finder is darkened, so that the entire field cannot be viewed. This occurs very often when smaller aperture openings are used. This is the phenomenon seen in all small-size single lens reflex camera. In this instance, the actual photographic area is the entire field of the view finder including the upper section that cannot be viewed. Therefore, the central circular section appearing on the focusing screen should be used as the center for judging the photographic area.



**Minolta**  
MINOLTA CAMERA CO., LTD.

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