

### Focusing the camera

To focus, hold the camera to your eye and turn the lens-focusing ring clockwise or counter-clockwise until a sharp image appears in the center spot of the viewfinder. This center spot, the microprism, consists of many diagonal lines which will aid in ultra-sharp and rapid focusing.

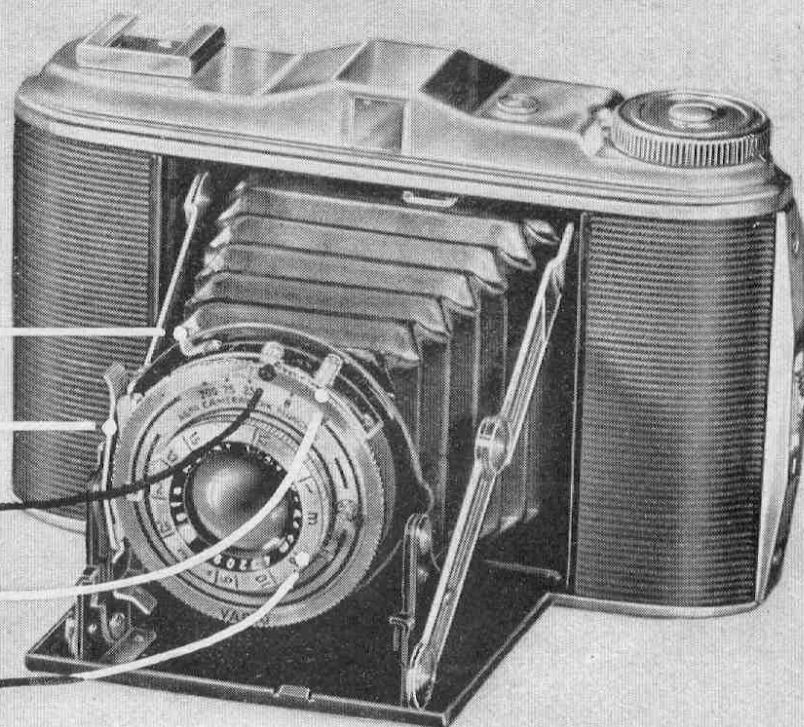
In focus



Out of focus



Diaphragm  
index lever  
Shutter-release  
lever, nipple for  
cable release  
and „T“ lock  
Shutter cocking  
lever  
flash contact  
Focusing ring

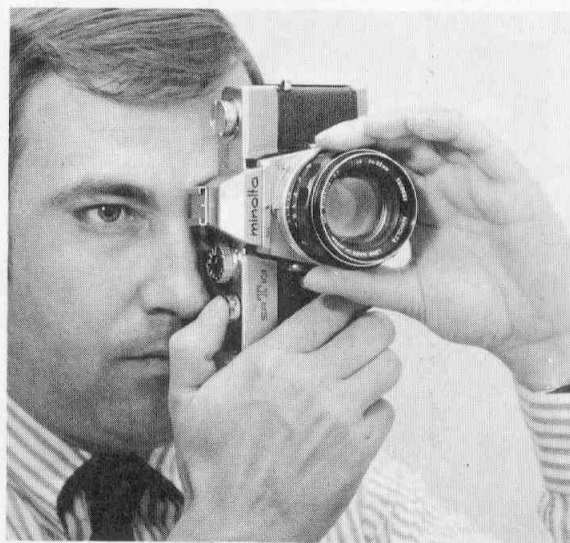


### Holding the camera

The camera may be held horizontally or vertically. In either case, be sure to hold the camera in a comfortable position. This will help to prevent movement of the camera during exposure and avoid blurred pictures.

### NOTE:

- Pressing the camera gently against your face, or supporting the elbow of the hand holding the camera against your body, will aid in steady holding.
- The camera will tend to move more when used in the vertical position.



## TAKING FLASH PICTURES

Flash bulbs and electronic flash units are recommended for indoor and night photography and for shooting in shaded areas.

There are two sync. terminals on the Minolta SR-T 101: one is designated "FP"; the other, "X."

When using an electronic flash unit, set the shutter speed at 1/60th sec. (red figure on dial),

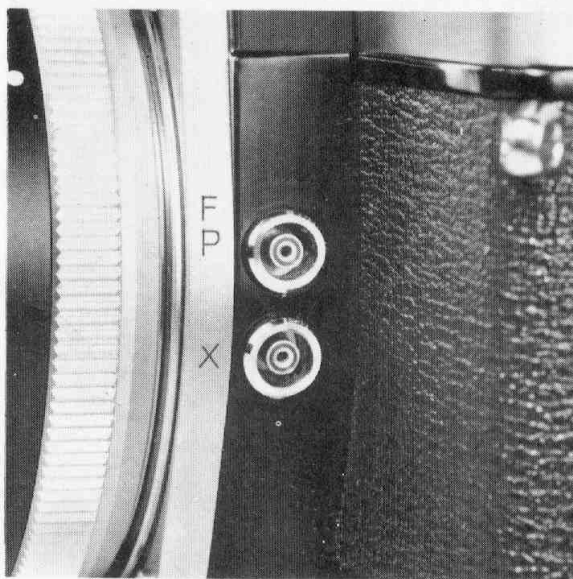
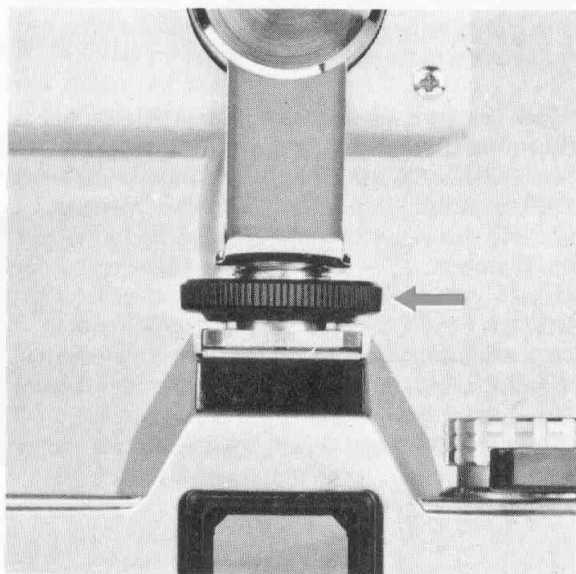
and use the "X" terminal.

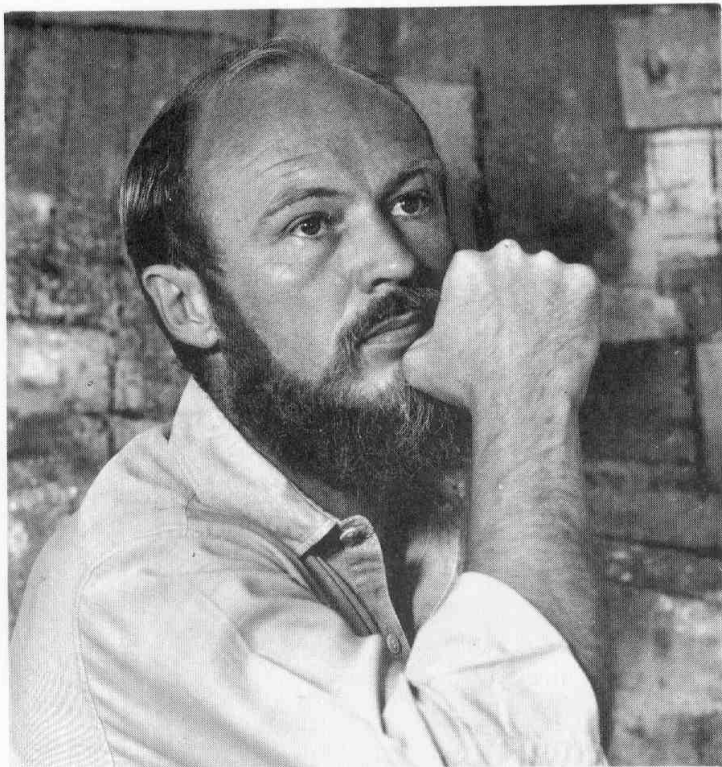
When using "FP" class bulbs, you can use any shutter speed from 1 to 1/1000th sec., as the flash bulbs synchronize with the release of the shutter. A shutter speed above 1/60th sec. should be used in photographing a moving subject with comparatively bright surrounding light.

| <div style="display: inline-block; transform: rotate(-45deg); transform-origin: left top; white-space: nowrap;">Shutter Speed<br/>Flash Bulb</div> |                  | (Seconds) |   |     |     |     |      |      |          |       |       |       |        |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------|---|-----|-----|-----|------|------|----------|-------|-------|-------|--------|--|
|                                                                                                                                                    |                  | B         | 1 | 1/2 | 1/4 | 1/8 | 1/15 | 1/30 | 1/60 (X) | 1/125 | 1/250 | 1/500 | 1/1000 |  |
| FP Terminal                                                                                                                                        | FP Bulb          |           |   |     |     |     |      |      |          |       |       |       |        |  |
| X Terminal                                                                                                                                         | F Bulb           |           |   |     |     |     |      |      |          |       |       |       |        |  |
|                                                                                                                                                    | M Bulb           |           |   |     |     |     |      |      |          |       |       |       |        |  |
|                                                                                                                                                    | Electronic Flash |           |   |     |     |     |      |      |          |       |       |       |        |  |

### Attaching flash unit

Slide the foot of the flash unit into the camera's accessory shoe from the back of the camera, then tighten the screw of the flash unit for secure, wobble-free operation.





### Setting correct exposure

To determine the correct aperture for flash photography, get the "guide number" of the flash bulb you are using. Then make this simple computation:

$$\frac{\text{Guide Number}}{\text{Distance to Subject}} = \text{Aperture Setting (F-stop)}$$

For example, when flash bulb guided number is 80 (in feet) and the distance to the subject is 10 feet (with ASA 100 film, using shutter speed or 1/60th sec.),

$$\text{the F-stop is: } \frac{80}{10} = 8$$

#### NOTE:

- When using M-class flash bulbs, a shutter speed of 1/15th sec. or slower is recommended.
- Use "blue" flash bulbs generally for color photography.

## MORE ADVANCED GUIDES

### Depth of field

#### Lens aperture controls depth of field

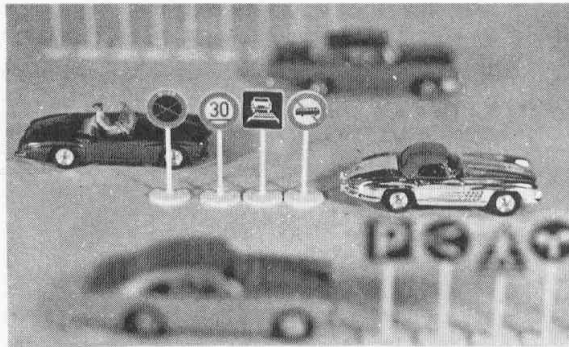
When the lens is accurately focused on a subject, there is a certain depth both in the foreground and the background, which is also considered to be in focus. This area is known as the "depth of field."

The sharp focus area in the foreground is usually shallower than the sharp focus area in the background.

Depth of field has the following characteristics which should be considered when pictures are composed:

1. As the lens aperture decreases, the area of sharp focus increases. As lens aperture increases, the area of sharp focus decreases.
2. As the distance from camera to subject is increased, so is the area of sharp focus.
3. A telephoto lens has a shallower depth of field than a wideangle lens.

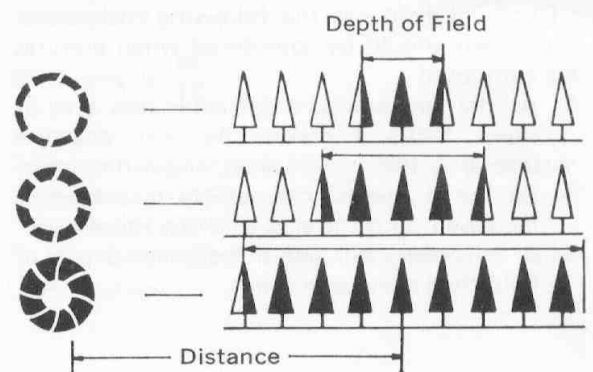
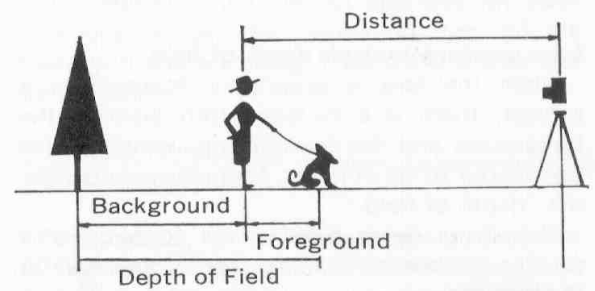
Full aperture opening



Small aperture opening



The depth-of-field scale engraved on lens barrel enables you to determine the depth of field in which focus will be acceptably sharp. For example, if you focus on a subject 15 feet away and use an F8 aperture, read the distance opposite the two figures 8. In this case the picture will be sharp from approximately 11 to 23 feet. (See next page.)



Depth-of-field table of MC Rokkor 58mm F1.2 and F1.4 Lens (in feet)

| F No.<br>Dis (ft) | 1.2                       | 1.4                    | 2                      | 2.8                    | 4                      | 5.6                     | 8                      | 11                      | 16                      |
|-------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|
| $\infty$          | $\infty$<br>282'          | $\infty$<br>244'       | $\infty$<br>171'       | $\infty$<br>121'       | $\infty$<br>85'        | $\infty$<br>61'         | $\infty$<br>43'        | $\infty$<br>30'         | $\infty$<br>22'         |
| 30                | 33' 6"<br>27' 2"          | 34' 2"<br>26' 9"       | 36' 3"<br>25' 7"       | 39' 9"<br>24' 1"       | 45' 11"<br>22' 4"      | 59' 20' 2"              | 98' 17' 9"             | $\infty$<br>15' 2"      | $\infty$<br>12' 8"      |
| 15                | 15' 10"<br>14' 3"         | 15' 11"<br>14' 2"      | 16' 5"<br>13' 10"      | 17' 1"<br>13' 5"       | 18' 1"<br>12' 10"      | 19' 9"<br>12' 1"        | 22' 9"<br>11' 3"       | 29' 10' 2"              | 47' 7"<br>9'            |
| 10                | 10' 4"<br>9' 8 1/16"      | 10' 5"<br>9' 8"        | 10' 7"<br>9' 6"        | 10' 10"<br>9' 3"       | 11' 3"<br>9'           | 11' 10"<br>8' 8"        | 12' 11"<br>8' 2"       | 14' 8"<br>7' 7"         | 18' 2"<br>6' 11"        |
| 7                 | 7' 2 7/16"<br>6' 10 1/16" | 7' 2"<br>6' 10"        | 7' 3"<br>6' 9"         | 7' 5"<br>6' 8"         | 7' 7"<br>6' 6"         | 7' 10"<br>6' 4"         | 8' 3"<br>6' 1"         | 8' 11"<br>5' 9"         | 10' 1"<br>5' 5"         |
| 5                 | 5' 15/16"<br>4' 11"       | 5' 1"<br>4' 11"        | 5' 2"<br>4' 10"        | 5' 2"<br>4' 10"        | 5' 3"<br>4' 9"         | 5' 5"<br>4' 8"          | 5' 7"<br>4' 6"         | 5' 10"<br>4' 4"         | 6' 4"<br>4' 2"          |
| 4                 | 4' 9/16"<br>3' 11 3/8"    | 4' 1"<br>3' 11"        | 4' 1"<br>3' 11"        | 4' 1"<br>3' 11"        | 4' 2"<br>3' 10"        | 4' 3"<br>3' 9"          | 4' 4"<br>3' 8"         | 4' 6"<br>3' 7"          | 4' 9"<br>3' 5"          |
| 3.5               | 3' 6 7/16"<br>3' 5 1/2"   | 3' 6 1/2"<br>3' 5 1/2" | 3' 6 3/4"<br>3' 5 1/4" | 3' 7"<br>3' 5"         | 3' 7 1/2"<br>3' 4 1/2" | 3' 8 1/4"<br>3' 4"      | 3' 9 1/4"<br>3' 3 1/4" | 3' 10 3/4"<br>3' 2 1/4" | 4' 3/4"<br>3' 3/4"      |
| 3                 | 3' 5/16"<br>2' 11 5/8"    | 3' 1/2"<br>2' 11 5/8"  | 3' 1/2"<br>2' 11 1/2"  | 3' 3/4"<br>2' 11 1/4"  | 3' 1"<br>2' 11"        | 3' 1 1/2"<br>2' 10 1/2" | 3' 2 1/4"<br>2' 10"    | 3' 3 1/4"<br>2' 9 1/4"  | 3' 4 3/4"<br>2' 8 1/4"  |
| 2.5               | 2' 6 3/16"<br>2' 5 3/4"   | 2' 6 1/4"<br>2' 5 3/4" | 2' 6 1/2"<br>2' 5 3/4" | 2' 6 1/2"<br>2' 5 1/2" | 2' 6 3/4"<br>2' 5 1/4" | 2' 7"<br>2' 5"          | 2' 7 1/2"<br>2' 4 3/4" | 2' 8 1/4"<br>2' 4 1/4"  | 2' 9"<br>2' 3 1/2"      |
| 2.25              | 2' 3 1/8"<br>2' 2 13/16"  | 2' 3 1/4"<br>2' 2 3/4" | 2' 3 1/4"<br>2' 2 3/4" | 2' 3 1/2"<br>2' 2 3/4" | 2' 3 1/2"<br>2' 2 1/2" | 2' 3 3/4"<br>2' 2 1/4"  | 2' 4 1/4"<br>2' 2"     | 2' 4 3/4"<br>2' 1 1/2"  | 2' 5 1/2"<br>2' 1"      |
| 2                 | 2' 1/8"<br>1' 11 13/16"   | 2' 1/4"<br>1' 11 3/4"  | 2' 1/4"<br>1' 11 3/4"  | 2' 1/4"<br>1' 11 3/4"  | 2' 1/2"<br>1' 11 3/4"  | 2' 3/4"<br>1' 11 1/2"   | 2' 3/4"<br>1' 11 1/4"  | 2' 1 1/4"<br>1' 10 3/4" | 2' 1 3/4"<br>1' 10 1/2" |

Depth-of-field table of MC Rokkor 58mm F1.2 and F1.4 Lens (in meters)

| Dis (m) \ F No. | 1.2              | 1.4              | 2                | 2.8              | 4                | 5.6              | 8                | 11              | 16              |
|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|
| $\infty$        | $\infty$<br>86.0 | $\infty$<br>74.2 | $\infty$<br>53.8 | $\infty$<br>38.0 | $\infty$<br>26.9 | $\infty$<br>19.1 | $\infty$<br>13.5 | $\infty$<br>9.6 | $\infty$<br>6.8 |
| 10              | 11.3<br>9.0      | 11.5<br>8.8      | 12.2<br>8.5      | 13.5<br>8.0      | 15.8<br>7.3      | 20.8<br>6.6      | 37.7<br>5.8      | $\infty$<br>4.9 | $\infty$<br>4.1 |
| 5               | 5.3<br>4.7       | 5.4<br>4.7       | 5.5<br>4.6       | 5.7<br>4.4       | 6.1<br>4.2       | 6.7<br>4.0       | 7.8<br>3.7       | 10.2<br>3.3     | 18.1<br>2.9     |
| 3               | 3.10<br>2.90     | 3.12<br>2.89     | 3.17<br>2.85     | 3.24<br>2.79     | 3.36<br>2.71     | 3.53<br>2.61     | 3.81<br>2.48     | 4.29<br>2.31    | 5.22<br>2.11    |
| 2               | 2.04<br>1.96     | 2.05<br>1.95     | 2.07<br>1.93     | 2.10<br>1.91     | 2.15<br>1.87     | 2.22<br>1.82     | 2.32<br>1.76     | 2.48<br>1.68    | 2.76<br>1.57    |
| 1.5             | 1.52<br>1.48     | 1.53<br>1.47     | 1.54<br>1.46     | 1.56<br>1.45     | 1.58<br>1.43     | 1.61<br>1.40     | 1.67<br>1.37     | 1.75<br>1.32    | 1.88<br>1.25    |
| 1.2             | 1.22<br>1.19     | 1.22<br>1.18     | 1.22<br>1.18     | 1.23<br>1.17     | 1.25<br>1.16     | 1.27<br>1.14     | 1.30<br>1.11     | 1.35<br>1.08    | 1.42<br>1.04    |
| 1               | 1.01<br>0.99     | 1.01<br>0.99     | 1.02<br>0.99     | 1.02<br>0.98     | 1.03<br>0.97     | 1.05<br>0.96     | 1.07<br>0.94     | 1.10<br>0.92    | 1.14<br>0.89    |
| 0.9             | 0.91<br>0.89     | 0.91<br>0.89     | 0.91<br>0.89     | 0.92<br>0.88     | 0.93<br>0.88     | 0.94<br>0.87     | 0.95<br>0.85     | 0.98<br>0.84    | 1.01<br>0.81    |
| 0.8             | 0.81<br>0.79     | 0.81<br>0.79     | 0.81<br>0.79     | 0.81<br>0.79     | 0.82<br>0.78     | 0.83<br>0.77     | 0.84<br>0.76     | 0.86<br>0.75    | 0.89<br>0.73    |
| 0.7             | 0.71<br>0.70     | 0.71<br>0.70     | 0.71<br>0.70     | 0.71<br>0.69     | 0.71<br>0.69     | 0.72<br>0.68     | 0.73<br>0.67     | 0.74<br>0.66    | 0.76<br>0.65    |
| 0.6             | 0.60<br>0.60     | 0.60<br>0.60     | 0.61<br>0.60     | 0.61<br>0.59     | 0.61<br>0.59     | 0.61<br>0.59     | 0.62<br>0.58     | 0.63<br>0.57    | 0.64<br>0.56    |

Depth-of-field table of MC Rokkor 55mm F1.7 Lens (in feet)

| Dis (m) \ F No. | 1.7                                           | 2.8                                           | 4                                             | 5.6                                           | 8                                             | 11                                            | 16                                            |
|-----------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| $\infty$        | $\infty$<br>175'                              | $\infty$<br>107'                              | $\infty$<br>75' 5"                            | $\infty$<br>53' 5"                            | $\infty$<br>37' 9"                            | $\infty$<br>26' 9"                            | $\infty$<br>19'                               |
| 30              | 36' 1"<br>25' 8"                              | 41' 6"<br>23' 6"                              | 49' 5"<br>21' 7"                              | 67' 7"<br>19' 4"                              | 141'<br>16' 10"                               | $\infty$<br>14' 3"                            | $\infty$<br>11' 9"                            |
| 15              | 16' 4"<br>13' 10"                             | 17' 4"<br>13' 2"                              | 18' 7"<br>12' 7"                              | 20' 8"<br>11' 10"                             | 24' 6"<br>10' 10"                             | 33' 2"<br>9' 9"                               | 67' 4"<br>8' 6"                               |
| 10              | 10' 7"<br>9' 5 $\frac{7}{8}$ "                | 10' 12"<br>9' 2 $\frac{1}{4}$ "               | 11' 5"<br>8' 10 $\frac{5}{8}$ "               | 12' 2"<br>8' 5 $\frac{7}{8}$ "                | 13' 5"<br>7' 11 $\frac{7}{8}$ "               | 15' 7"<br>7' 4 $\frac{5}{8}$ "                | 20' 5"<br>6' 8"                               |
| 7               | 7' 3 $\frac{1}{4}$ "<br>6' 8"                 | 7' 5 $\frac{1}{2}$ "<br>6' 7 $\frac{1}{4}$ "  | 7' 7 $\frac{1}{8}$ "<br>6' 5 $\frac{3}{8}$ "  | 7' 11 $\frac{3}{4}$ "<br>6' 2 $\frac{7}{8}$ " | 8' 5 $\frac{5}{8}$ "<br>5' 11 $\frac{3}{4}$ " | 9' 3 $\frac{3}{8}$ "<br>5' 7 $\frac{5}{8}$ "  | 10' 9"<br>5' 2 $\frac{5}{8}$ "                |
| 5               | 5' 1 $\frac{1}{2}$ "<br>4' 10 $\frac{1}{2}$ " | 5' 2 $\frac{5}{8}$ "<br>4' 9 $\frac{5}{8}$ "  | 5' 3 $\frac{3}{4}$ "<br>4' 8 $\frac{5}{8}$ "  | 5' 5 $\frac{1}{2}$ "<br>4' 7 $\frac{3}{8}$ "  | 5' 8 $\frac{1}{8}$ "<br>4' 5 $\frac{5}{8}$ "  | 6' $\frac{1}{4}$ "<br>4' 3 $\frac{3}{8}$ "    | 6' 7"<br>4' $\frac{1}{2}$ "                   |
| 4               | 4' 1"<br>3' 11 $\frac{1}{8}$ "                | 4' 1 $\frac{5}{8}$ "<br>3' 10 $\frac{1}{2}$ " | 4' 2 $\frac{3}{8}$ "<br>3' 9 $\frac{1}{8}$ "  | 4' 3 $\frac{3}{8}$ "<br>3' 9 $\frac{1}{8}$ "  | 4' 4 $\frac{7}{8}$ "<br>3' 8"                 | 4' 7 $\frac{1}{4}$ "<br>3' 6 $\frac{1}{2}$ "  | 4' 11"<br>3' 4 $\frac{1}{2}$ "                |
| 3.5             | 3' 6 $\frac{3}{4}$ "<br>3' 5 $\frac{3}{8}$ "  | 3' 7 $\frac{1}{4}$ "<br>3' 4 $\frac{7}{8}$ "  | 3' 7 $\frac{3}{4}$ "<br>3' 4 $\frac{3}{8}$ "  | 3' 8 $\frac{1}{2}$ "<br>3' 3 $\frac{3}{4}$ "  | 3' 9 $\frac{5}{8}$ "<br>3' 3"                 | 3' 11 $\frac{1}{4}$ "<br>3' 1 $\frac{3}{4}$ " | 4' 2"<br>3' $\frac{1}{4}$ "                   |
| 3               | 3' $\frac{1}{2}$ "<br>2' 11 $\frac{1}{2}$ "   | 3' $\frac{7}{8}$ "<br>2' 11 $\frac{1}{8}$ "   | 3' 1 $\frac{1}{4}$ "<br>2' 10 $\frac{1}{8}$ " | 3' 1 $\frac{3}{4}$ "<br>2' 10 $\frac{3}{8}$ " | 3' 2 $\frac{1}{2}$ "<br>2' 9 $\frac{3}{4}$ "  | 3' 3 $\frac{3}{4}$ "<br>2' 9"                 | 3' 5 $\frac{1}{2}$ "<br>2' 7 $\frac{3}{4}$ "  |
| 2.5             | 2' 6 $\frac{3}{8}$ "<br>2' 5 $\frac{3}{4}$ "  | 2' 6 $\frac{1}{2}$ "<br>2' 5 $\frac{1}{2}$ "  | 2' 6 $\frac{3}{4}$ "<br>2' 5 $\frac{1}{4}$ "  | 2' 7 $\frac{1}{8}$ "<br>2' 5"                 | 2' 7 $\frac{3}{4}$ "<br>2' 4 $\frac{1}{2}$ "  | 2' 8 $\frac{3}{8}$ "<br>2' 4"                 | 2' 9 $\frac{5}{8}$ "<br>2' 3 $\frac{1}{4}$ "  |
| 2.25            | 2' 3 $\frac{1}{4}$ "<br>2' 2 $\frac{3}{4}$ "  | 2' 3 $\frac{3}{8}$ "<br>2' 2 $\frac{5}{8}$ "  | 2' 3 $\frac{5}{8}$ "<br>2' 2 $\frac{3}{8}$ "  | 2' 3 $\frac{7}{8}$ "<br>2' 2 $\frac{1}{4}$ "  | 2' 4 $\frac{1}{4}$ "<br>2' 1 $\frac{3}{4}$ "  | 2' 4 $\frac{7}{8}$ "<br>2' 1 $\frac{3}{8}$ "  | 2' 5 $\frac{3}{4}$ "<br>2' 1 $\frac{1}{4}$ "  |
| 2               | 2' $\frac{1}{8}$ "<br>1' 11 $\frac{7}{8}$ "   | 2' $\frac{1}{4}$ "<br>1' 11 $\frac{3}{4}$ "   | 2' $\frac{1}{2}$ "<br>1' 11 $\frac{5}{8}$ "   | 2' $\frac{3}{4}$ "<br>1' 11 $\frac{3}{8}$ "   | 2' 1"<br>1' 11 $\frac{1}{8}$ "                | 2' 1 $\frac{1}{2}$ "<br>1' 10 $\frac{3}{4}$ " | 2' 2"<br>1' 10 $\frac{1}{4}$ "                |
| 1.75            | 1' 9 $\frac{1}{8}$ "<br>1' 8 $\frac{7}{8}$ "  | 1' 9 $\frac{1}{4}$ "<br>1' 8 $\frac{3}{4}$ "  | 1' 9 $\frac{1}{4}$ "<br>1' 8 $\frac{5}{8}$ "  | 1' 9 $\frac{1}{2}$ "<br>1' 8 $\frac{1}{2}$ "  | 1' 9 $\frac{5}{8}$ "<br>1' 8 $\frac{1}{4}$ "  | 1' 10"<br>1' 8 $\frac{1}{8}$ "                | 1' 10 $\frac{1}{2}$ "<br>1' 7 $\frac{7}{8}$ " |

Depth-of-field table of MC Rokkor 55mm F1.7 Lens (in meters)

| Dis (m) \ F No. | 1.7              | 2.8              | 4                | 5.6              | 8                | 11              | 16              |
|-----------------|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|
| $\infty$        | $\infty$<br>53.4 | $\infty$<br>32.5 | $\infty$<br>23.0 | $\infty$<br>16.3 | $\infty$<br>11.5 | $\infty$<br>8.2 | $\infty$<br>5.8 |
| 10              | 12.3<br>8.4      | 14.4<br>7.7      | 17.6<br>7.0      | 25.6<br>6.2      | 72.6<br>5.4      | $\infty$<br>4.5 | $\infty$<br>3.7 |
| 5               | 5.5<br>4.6       | 5.9<br>4.4       | 6.3<br>4.1       | 7.1<br>3.9       | 8.7<br>3.5       | 12.5<br>3.1     | 33.9<br>2.7     |
| 3               | 3.17<br>2.85     | 3.29<br>2.76     | 3.43<br>2.67     | 3.64<br>2.55     | 4.00<br>2.41     | 4.64<br>2.22    | 6.01<br>2.01    |
| 2               | 2.07<br>1.93     | 2.12<br>1.89     | 2.18<br>1.85     | 2.26<br>1.80     | 2.39<br>1.72     | 2.59<br>1.63    | 2.96<br>1.52    |
| 1.5             | 1.54<br>1.46     | 1.57<br>1.44     | 1.59<br>1.42     | 1.64<br>1.39     | 1.70<br>1.34     | 1.80<br>1.29    | 1.97<br>1.22    |
| 1.2             | 1.22<br>1.18     | 1.24<br>1.16     | 1.26<br>1.15     | 1.28<br>1.13     | 1.32<br>1.10     | 1.38<br>1.06    | 1.47<br>1.02    |
| 1               | 1.02<br>0.98     | 1.03<br>0.98     | 1.04<br>0.96     | 1.06<br>0.95     | 1.08<br>0.93     | 1.12<br>0.91    | 1.18<br>0.87    |
| 0.9             | 0.91<br>0.89     | 0.92<br>0.88     | 0.93<br>0.87     | 0.94<br>0.86     | 0.96<br>0.85     | 0.99<br>0.82    | 1.04<br>0.80    |
| 0.8             | 0.81<br>0.79     | 0.82<br>0.78     | 0.82<br>0.78     | 0.83<br>0.77     | 0.85<br>0.76     | 0.87<br>0.74    | 0.90<br>0.72    |
| 0.7             | 0.71<br>0.69     | 0.71<br>0.69     | 0.72<br>0.68     | 0.73<br>0.68     | 0.74<br>0.67     | 0.75<br>0.66    | 0.77<br>0.64    |
| 0.6             | 0.61<br>0.60     | 0.61<br>0.59     | 0.61<br>0.59     | 0.62<br>0.58     | 0.62<br>0.58     | 0.64<br>0.57    | 0.65<br>0.56    |
| 0.55            | 0.55<br>0.55     | 0.56<br>0.54     | 0.56<br>0.54     | 0.56<br>0.54     | 0.57<br>0.53     | 0.58<br>0.53    | 0.59<br>0.52    |



**To load camera,  
unscrew dummy tripod screw at bottom of  
ever-ready case, take camera out.**

The ever-ready case supplied with the camera, while fully protecting it from dust and shocks, gives instantaneous readiness for picture taking.

The  $2\frac{1}{4} \times 3\frac{1}{4}$  No. 120 (B 2) roll film  
gives twelve exposures  $2\frac{1}{4} \times 2\frac{1}{4}$  in.

**To open camera-back,  
push sliding lock in direction of arrow,  
swing camera-back open.**

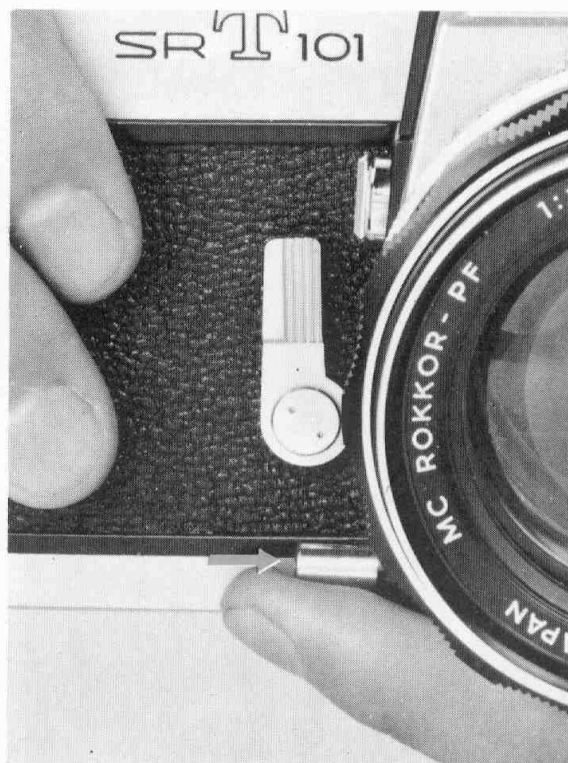


### Checking the effects of depth of field

MC Rokkor Lenses are designed with a meter coupler which permits them to remain wide open during viewing, focusing, and exposure setting. In order to check your depth of field visually when using these lenses push the diaphragm stop-down button on the camera body after the aperture has been set.

When using other Rokkor Lenses designed for the Minolta SR-1, SR-3 or SR-7, use the preview button on the lens barrel or the camera's diaphragm button.

- When the diaphragm stop-down button is pushed, after you advance the film, the diaphragm closes down to the preset aperture and locks. When the button is pressed again, the diaphragm reopens fully.

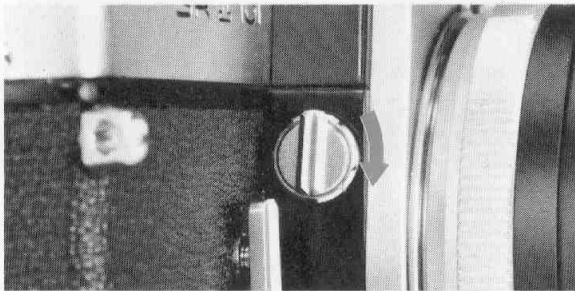


### Mirror lock-up control

The mirror lock-up control is used in conjunction with the Rokkor 21mm ultra wideangle lens. When activated, the mirror is locked in an "up" position to prevent it from coming into contact with the rear element of the lens which projects into the interior of the camera.

To operate, turn the mirror lock button downward (clockwise) until it stops. The distance of movement is approximately  $135^\circ$ .

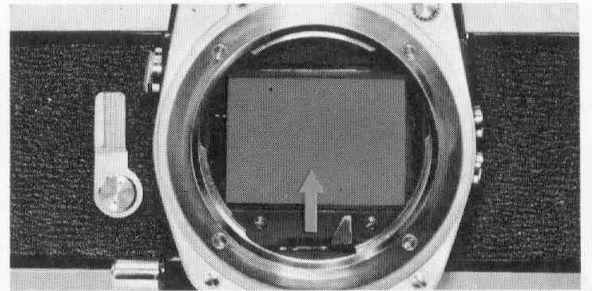
The mirror will return to its usual operation when the lock button is returned to the red mark.



The mirror lock button operates independently of the shutter release and film advance and can, therefore, be activated at any time.

The mirror lock-up system is also helpful for photomicrography, sequence, and close-up photography, as it eliminates the possibility of camera motion caused by the movement of the mirror when the shutter is released.

- When the mirror is locked in an "up" position, the exposure meter of the camera cannot operate, and an independent meter must be used.



### Self-timer

The self-timer delays shutter release about 10 seconds from the time you press the self-timer release button. This allows time for you to get into the picture.

To operate, advance the film (this will automatically cock the shutter). Next, push the self-timer lever down (about 90°) and then press the self-timer release button. The self-timer is now operating, and the shutter will automatically be released after about 10 seconds.

#### NOTE:

- If the film has not been advanced, the self-timer lever will stop after returning about 45° and the shutter will not be released.
- You can override the self-timer mechanism by pushing the shutter release button either before or after the self-timer has been activated.



### Infrared index

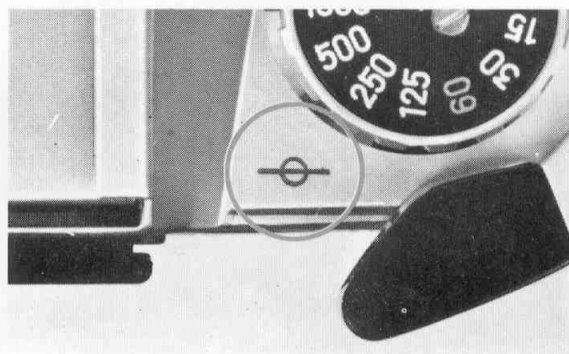
When using infrared film it is necessary to make an "infrared focus adjustment." After you have made your normal focusing adjustment, turn the focusing ring to the right to align the distance on the focusing scale with the red "R" mark on the depth-of-field scale. After this adjustment has been made you are ready to shoot.

- To determine correct exposure for infrared photography, consult the instructions enclosed in the film package.



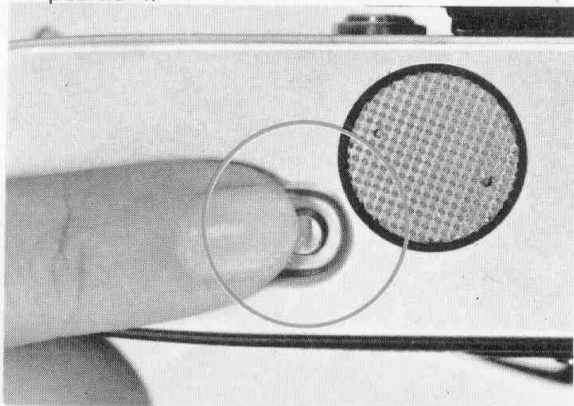
### Film plane index

The  $\oplus$  symbol engraved to the left of the film advance lever shows the exact position of the film in the camera. It is used to precisely measure the distance from subject to film for close-up photography and photomacrography.



## UNLOADING EXPOSED FILM

1. To rewind the film, depress the rewind button on the base of the camera. The button should remain depressed when you remove your finger. (If, however, it returns to its locked position, rewind the film for approximately 2 revolutions while depressing the button. Then actuate the film advance lever one full stroke without depressing the button and depress it again. This should lock button in the depressed position.)



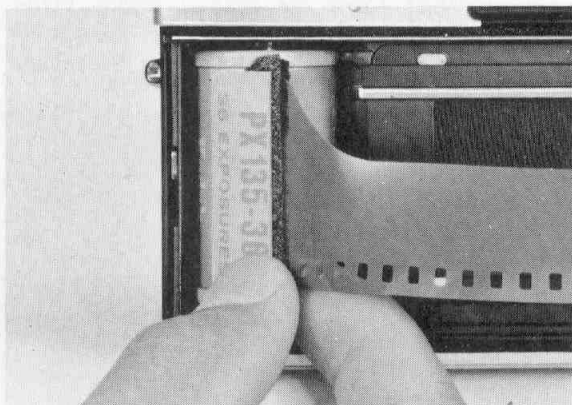
2. Lift the rewind crank and turn it clockwise. This will rewind the film into the magazine. When you feel a slight resistance, you have rewound nearly all the film and it has disengaged from the take-up spool. After one or two more turns you can assume all the film has been rewound into the magazine.



3. Now, pull the back cover release knob out to open the camera back and remove the film magazine.

NOTE:

- The film rewind release button will automatically return to its original position as the film advance lever is activated.

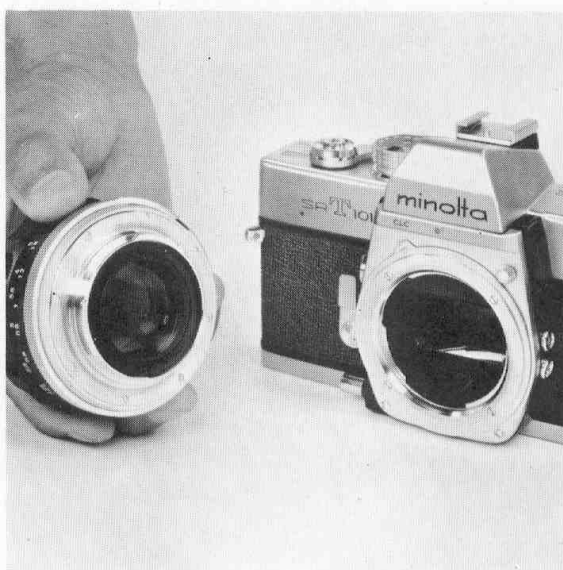


## CHANGING LENSES

Lenses can be changed even when the film has been advanced and the shutter locked. To remove the mounted lens, push the lens release button down and rotate the lens counterclockwise until it stops. It can now be lifted out.

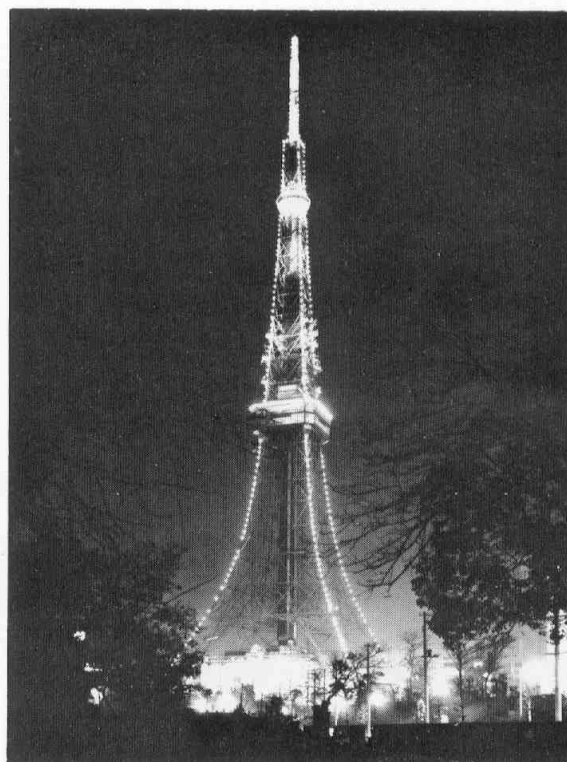


To mount a lens, insert it into the bayonet socket by lining up the red dot on the lens barrel with the red dot on the camera body. Now, turn the lens clockwise until it stops with a "click."



## CAUTION:

- Touch nothing inside the bayonet mount while lens is removed.
- If the lens is left removed, replace it with a body cap to prevent dust from collecting on the mirror and shutter mechanisms.



## USING INTERCHANGEABLE ROKKOR LENSES OTHER THAN MC LENSES

When using Rokkor Lenses designed for the Minolta SR-1, SR-3 or SR-7, which do not have a meter coupling pin, you must use the "stop-down measurement system" to set exposure.

With this system the indicator needle moves when the lens diaphragm is opened or closed and the follow-up (circle-tipped) needle is activated by the shutter-speed dial.

### Auto Rokkor Lenses

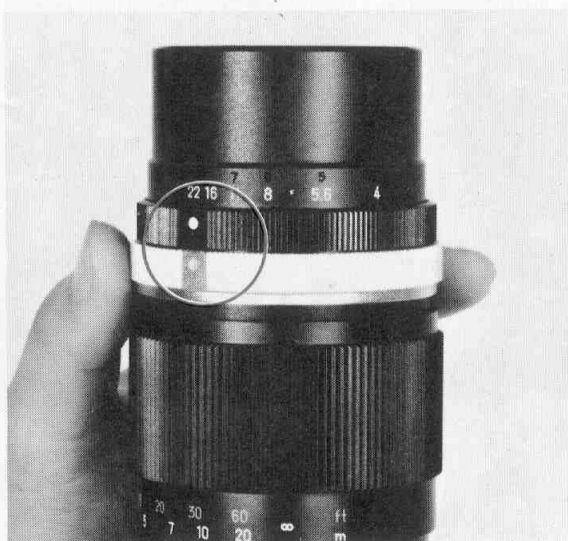
- 1) Advance the film.
- 2) Press the diaphragm stop-down button (it will remain depressed).
- 3) Set the shutter speed.
- 4) Turn the diaphragm ring until the two needles are aligned. (The diaphragm can be set first.)
- 5) Press the diaphragm stop-down button again.
- 6) Focus and shoot.

- The diaphragm stop-down button will not operate if the film advance lever has not been advanced completely.
- When the diaphragm stop-down button is pressed the second time, the diaphragm reopens to maximum aperture.
- When the shutter is released, the diaphragm automatically closes down to the preset aperture and reopens.



### Manual preset Rokkor Lenses

- 1) Set the shutter speed.
- 2) Set the maxim aperture of the lens, then close down until the two needles are aligned.
- 3) Release the shutter.



- It is not necessary to use the diaphragm stop-down button, with manual preset lenses.
- Compose and focus your picture before making your exposure setting.
- If you focus or compose your picture after making your exposure setting, and you do this by opening the lens to maximum aperture, be sure to close it down again to the proper point before you shoot.

#### NOTE:

- The indicator needle moves when the aperture is adjusted.
- The follow-up needle moves when the shutter speed is adjusted.

**Minolta**

MINOLTA MASTERS PHOTOGRAPHY

SRT-005E

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## CARE AND STORAGE OF YOUR MINOLTA SR-T 101

Do not touch the lens. If it becomes dirty, use a rubber ball blower to blow dust off its surface, then gently wipe its surface from the center outward with a lens cleaning cloth or tissue.

- Try to keep the lens clean. Brush it with a soft brush from time to time.
- Do not touch the mirror, but dust it with a soft brush.
- External camera surfaces may be cleaned with a silicon cloth.
- When storing the camera, set the distance scale to  $\infty$ , release the shutter, and put the camera in its leather case.
- Do not drop or jar the camera.
- Do not store the camera in high temperature or humidity.
- When leaving the camera unused for a long time, remove the mercury battery from it.
- When storing the camera for a long period of time, put in original packaging with a small bag of drying agent, such as silica gel.

### CAUTION:

- *Lens cleaning fluid should be used only when fingerprints or scum formation cannot be removed with lens tissue.*

*In this case, use one drop only of lens cleaner on lens cleaning paper or a soft cloth and wipe the lens gently from its center toward the edge. Be sure not to drop the fluid directly on the lens.*

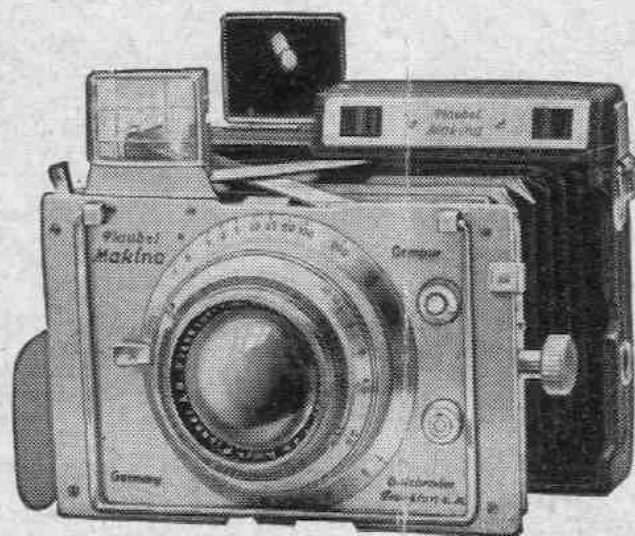
We hope that you'll enjoy your Minolta camera.

If you have any questions, ask your Minolta dealer. He is knowledgeable in all aspects of photography, and he can help you with all of your photographic needs.

Minolta Camera Co., Ltd., 18, 4-chome, Shio-machidori, Minami-ku, Osaka, Japan

Minolta Corporation, 200 Park Avenue South  
New York, N.Y. 10003, U.S.A.

Minolta Camera Handelsgesellschaft m.b.H., 2  
Hamburg 1, Spaldingstrasse 1, West Germany



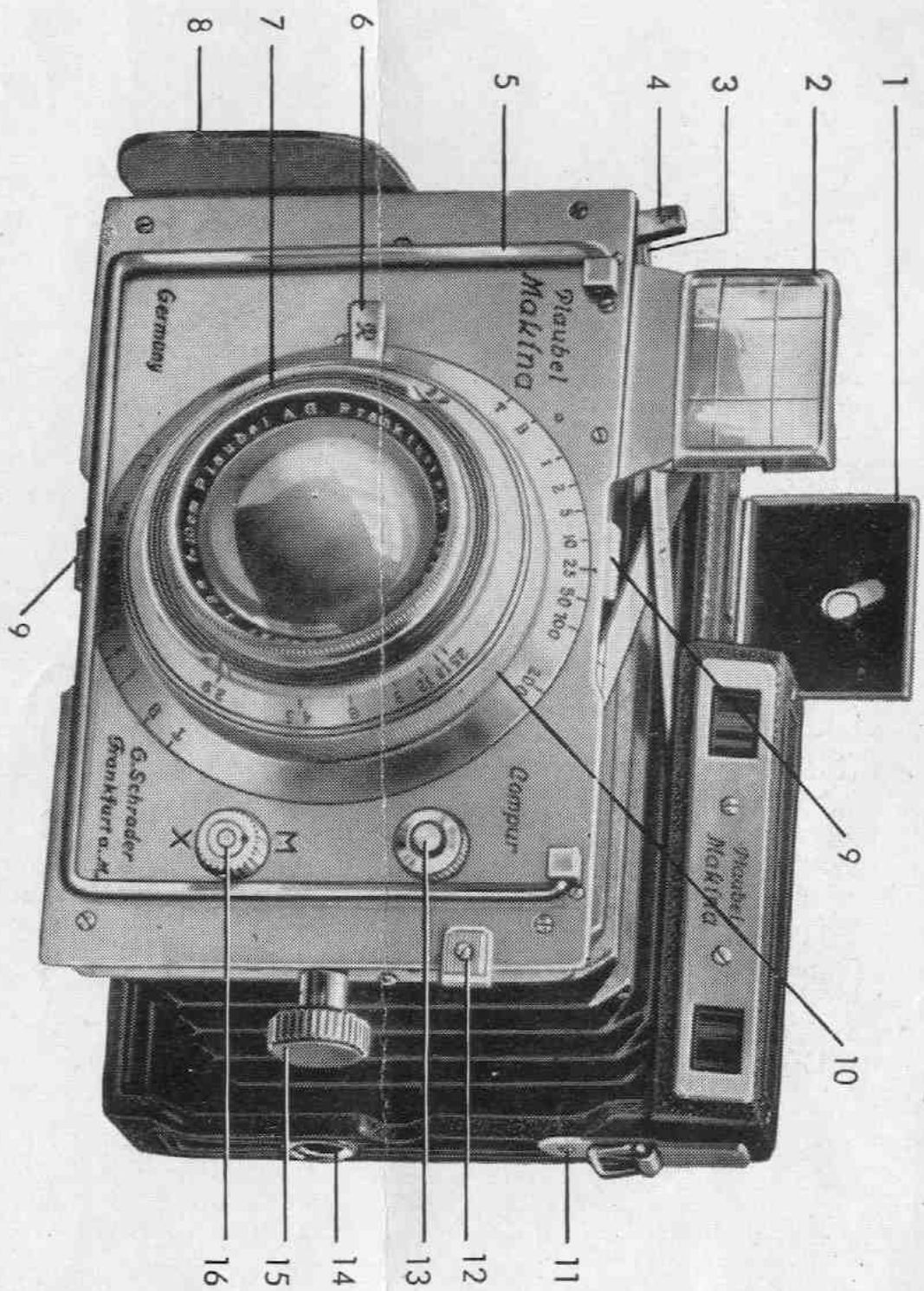
Directions for use of the

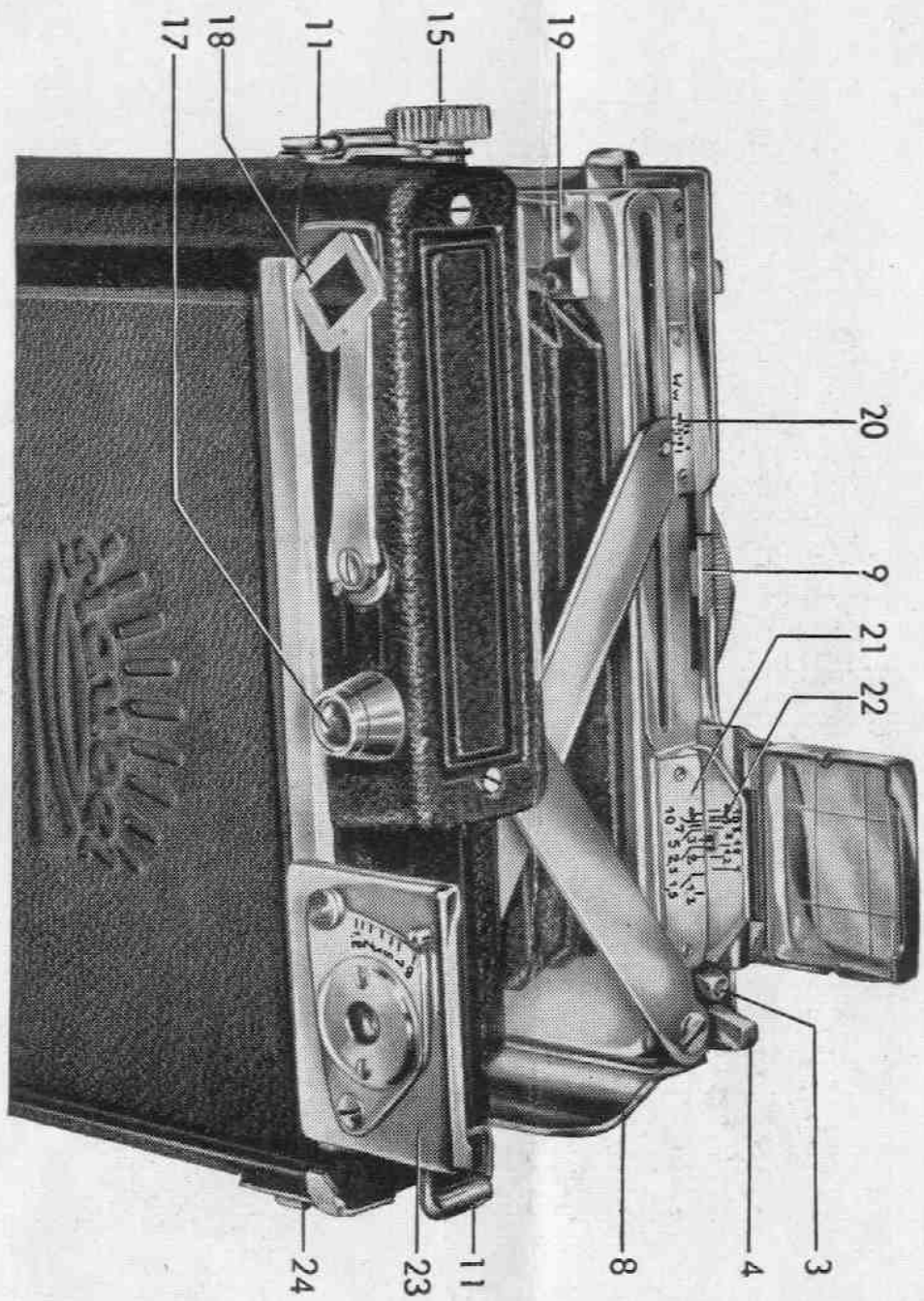
# *Makina*



Feinmechanik und Optik

Frankfurt am Main · Gräfstraße 66





- 1) Optical viewfinder-back
- 2) Optical viewfinder-front
- 3) Thread for cable-release
- 4) Release knob
- 5) Frame-finder
- 6) Ring for setting the exposure times
- 7) Ring for setting the stops (diaphragm)
- 8) Holding support
- 9) Grip to disengage the lazy tongs
- 10) Quick-change lens mount
- 11) Eyelets for shoulder strap
- 12) Lever for tensioning the Compur shutter
- 13) Stopper
- 14) Tripod bush
- 15) Focusing knob
- 16) Knob for setting M and X
- 17) Eyepiece of range-finder
- 18) Sight for frame-finder
- 19) Mounting piece for flash-equipment
- 20) Scale for Wide-angle Orthar 6.8/7.3
- 21) Scale for Anticomars 10 cm
- 22) Scale for Anticomars 10 cm when the focale-plane attachment is used
- 23) Optical viewfinder back with parallax compensation
- 24) Lock for plate holders.

### **To open the Makina**

Hold the camera by its long side with the left hand and draw the front forward with thumb and middle finger of the right hand until the struts snap in audibly. Make sure that both the struts really click in so that the front is parallel to the back.

The Makina has snap-in positions, one for the shorter and the other for the longer extension. The short extension must be used when the Rapid-Wide angle - Orthar is employed, while the longer extension fits the Anticomar and the Tele Makinar. Make sure you have the correct extension for the lens you use. The rangefinder is designed for the longer extension and does not work with the wide-angle lens and the Tele-Makinar.

### **To close the camera**

If camera has been set for near objects, turn indicator back to infinity. With the thumb and middle finger of right hand press the ribbed metal grips (9) on each side and push front back; first close Newton finder on the front and also the protecting cover with the lens on the back.

### **How to hold the Makina**

Span holding grip (8) on camera front with **right** hand (thumb behind, index finger on the release knob, the other fingers in front) while the left hand holds camera with thumb and index finger by the focusing knob. At the same time press camera slightly against forehead. By this means the camera can easily be held quite steady and is always ready for action.

### **Focusing**

On the left hand side of camera front is the focusing screw (15) by which the crossed struts are moved with the distance indicator over the scale (21) on right side of camera front. This scale gives the distance in meters or feet. The focusing knob is on the left side. As the

camera is held with the right hand the focusing knob can be turned even just before the exposure (the right index finger on the release knob) and the distance setting may be changed at the last instant (an important feature when children at play or animals have to be photographed).

Between the „infinity“ mark and the 30 feet mark a special dot indicates the „hyperfocal distance“ (near-distance dot) upon which the lens (at apertures between  $f:5,6$  and  $f:11$ ) should be focused to give the greatest depth-of-field possible. All objects from about half the hyperfocal distance to infinity will be sharp, that is, especially in the middleground which is important for most of the pictures.

### **The coupled range-finder**

The range-finder of the Plaubel Makina is based upon the „coincidence principle“, i. e. it contains 2 mirrors, one rigid and one adjustable, the latter of which is moved by the focusing device of the camera. When looking through the eye-piece of the range-finder you will see a rectangular image of yellowish colour and a small, round picture of white colour. By turning the focusing screw (on left side of the camera front) the lazy tong struts of the camera adjust simultaneously the front plate and the movable mirror, so that the circular white picture moves over the yellowish one; when both pictures coincide the picture is correctly focused and absolutely sharp.

For using the range-finder, first pull out the Makina until both struts snap in position. Now pull out the nickled telescopic eye-piece of the range-finder and look through it. When the camera is set for „infinity“, you will see that both pictures of the range-finder coincide for distant objects, whereas near objects will show 2 different pictures, side by side. By turning the focusing screw until both pictures coincide, you will get the correct distance and definition. Please

always keep in mind that the „sine qua non“ of all range-finders is to look straight through the eye-piece, not obliquely (sideways).

For objects in motion the range-finder may also be used as a direct finder (though the angle of view is only about 1/3 of the whole angle of the picture shown on the plate or film), as in most cases instantaneous photos require only the main object focused. First set the Compur shutter to the exposure.

The range-finder of the Makina is coupled only to the Anticomars 1 : 2,9/10 cm and 1 : 4,2/10 cm, but not to the Tele-Makinar 1 : 4,8 and the Wide-angle Orthar 1 : 6,8. It is possible, however, to use the range-finder for these lenses also by measuring the distance and setting the distance found by using the metre-or foot-scale that is placed at the front of the Makina below the optical viewfinder. See particulars given with the various lenses and supplementary lenses.

**Important!** We wish to emphasize that all coupled range-finders are instruments of the highest precision and therefore sensitive to rough handling. The camera should be carefully handled and any hard knocks should be avoided. The nickel-plated holding screws should under no circumstances be touched, unscrewed or adjusted! If the range-finder or the coupling should be damaged the camera must be returned to the factory.

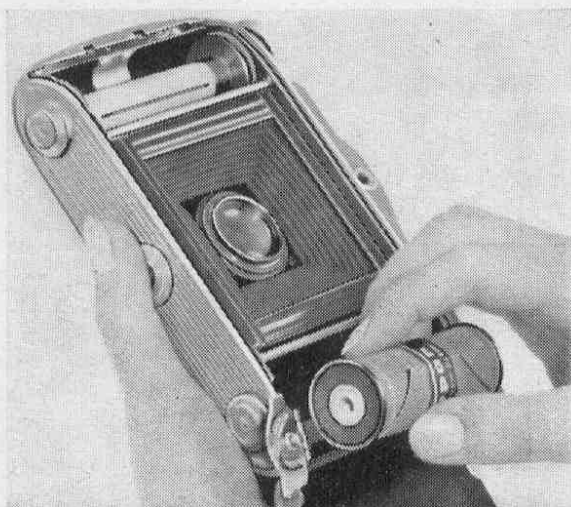
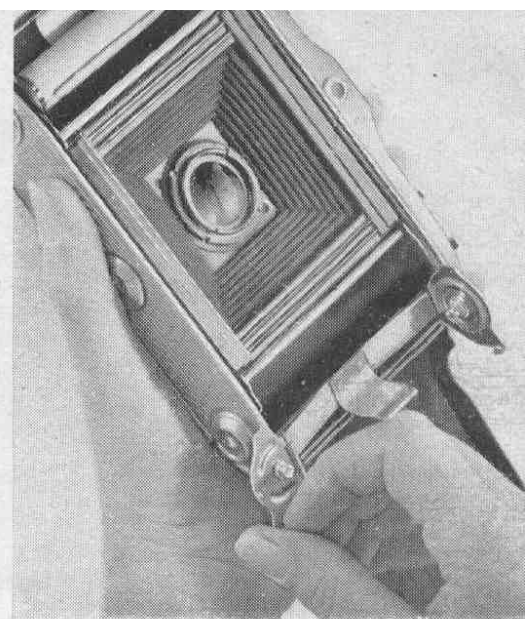
### **The Compur-Shutters of the Makina**

The Makina cameras II, IIS and III are equipped with the **Compur I** - shutter. The Makina IIIR has the new **Rapid Compur I** shutter.

The setting of the exposure time required is done by rotating the wide, bright rotary ring (6) surrounding the lens. To simplify the setting it has a setting mark on top as well as below. The values given are fractions of a second (e. g. 25 = 1/25 second) and the

**To prepare camera for loading, swing out lower spool holder, turn hinged spool carrier to the left.**

Have an empty spool in readiness in the upper spool chamber. — Be sure to load camera in subdued light only.



**To insert new spool, slip slotted spool end over fixed carrier peg, return hinged carrier to engage second peg, swing spool into chamber.**

**Attention —** Be sure to insert the spool with the narrow end of the backing paper pointing to the empty spool.

action release! Otherwise the instructions for use of the Compur Shutter hold true for these cameras too.

**With one important exception concerning only the Makina III R:**

The new Rapid Compur shutter has to be cocked even when set to „T“ and „B“!

**Stop-Adjustment.** – An important feature: The Compur shutter set to 1 – 1/400 second can be opened without rotating the exposure-time setting ring in case you wish to have that famous „last look“ at the focusing screen:

Cock the shutter in the normal way, but hold the cocking lever (12) down thus preventing it from sliding home, press button A and release lever 12. This lever now remains half cocked. Press release lever 4 and the shutter will open and will stay so.

To close the shutter, press lever 12 down again until it snaps in. The button A will then spring back and lever 12 slides back. Prior to the actual exposure the shutter has, of course, to be cocked again.

**The shutter release lever (4)** is placed in the right-hand top corner of the front panel. The shutter is released by a slow, steady pressure with the right index finger. To avoid camera shake it is vitally necessary to **squeeze** the release lever and not to press it with a jerk.

**The cable release** should be screwed into the threaded ferrule (3) at the side of the release lever (4). It is used for time exposures mainly.

**The viewfinder**

The Makina is equipped with a direct vision optical viewfinder, and, furthermore, with a frame-finder (which is always reliable and the most convenient of all). Both viewfinders are eye-level finders which automatically eliminates any lateral parallax.

exposure time indicated is obtained when the locating mark with the figure coincides with the white or black dot on the front-panel. When set to 1/200 or 1/400 a marked resistance will be felt and a little more force has to be used to turn the ring. This is quite in order as an additional spring is tensioned for these speeds.

Prior to exposure Compur shutters have to be cocked by pressing down the lever (12) on the right side of the camera front until it snaps in. After cocking this lever (12) runs home automatically into its original position.

For long time exposures as well as for the examination of the image on the ground glass screen, the shutter must be set to „T“. When the release lever (4) or the cable release is pressed home the shutter opens and stays open until a second squeeze of lever (4) closes it. The setting „B“ for short time exposures is different in that the shutter opens when the release lever (4) is pressed and closes the moment the pressure ceases. When set to „T“ or „B“ **the shutter must not be cocked** or it will be damaged!

### **Delayed action release (selftimer) for Makina II and II S.**

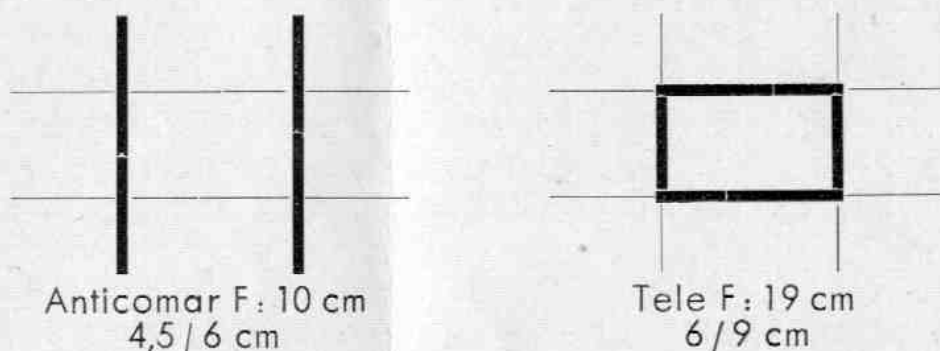
Set shutter to the desired speed from 1 second to 1/100 second. It is important to note that the selftimer cannot be used without damage to the shutter when the latter is set to 1/200, T or B.

Push lever S down, now press with the finger on knob V and then press down with lever S a second time. Then trigger A is pressed down either with the finger or the cable release. After a delay of about 10-12 seconds the shutter will be released automatically. This delay allows the photographer to appear in the picture himself.

### **Makina III and III R**

The shutters of these two models have no delayed

Within the rectangular white lens of the optical viewfinder the size 4,5 x 6 cm (the full size divided into two halves) is clearly marked to simplify operations, as is the image field of the tele-lens also. The bold lines in the drawing below explain the markings. See also page 12.



**Parallax compensation:** The eyepiece of the optical viewfinder is attached to a revolving sector, which when elevated lowers the visor lens. At the end of the second is a distance scale that allows correct focusing of the image field – especially of close-ups. The revolving sector ensures the compensation for the vertical parallax.

**Cassettes:** The filmpack, roll film, and plate-holders must be inserted into the ground-glass screen frame in the usual way (prior to this remove the nickel-plated holding bar (24)!) )

### Plaubel Plate holders

Above the plush lining of the holder is a small lever which operates a vernier inside the holder; turn this lever up to the right then put the plate into the holder taking it by the thumb and middle finger of the left hand and pressing down the upper edge of the plate with the first finger, then turn the lever down to its closed position when the plate will be firmly fixed.

It is necessary, of course, to press home the plate sufficiently. It must be pushed underneath the supporting flange and not against its edges. Otherwise the plate-holder may be damaged or the plate crack.

The plate-holder should be pulled out of the camera by pressing the holder upward with the thumb of the left hand while pulling it out with the right hand.

**Roll film holders** are available for the sizes 6 x 9 cm (2 1/4 x 3 1/4 ins); 6 x 6 cm (2 1/4 x 2 1/4 ins) or 24 x 36 mm. As usual the 120 spool gives eight negatives 2 1/4 x 3 1/4 ins., eleven to twelve negatives 2 1/4 x 2 1/4 ins. and 16 negatives 4,5 x 6 cm (1 3/4 x 2 1/4 ins.) The 24 x 36 mm film holder is used with the normal miniature film cartridge for 36 exposures. Carefully study the instructions for use of rollfilm holders.

**Filmpacks:** The single film sheets in filmpacks are never completely flat like a glass plate. The distance of the various sheets from the front of the pack differs greatly with the various makes, and in some filmpacks the single sheets curve outwards, in others inwards.

To ensure a sufficient definition the lens should be stopped down to at least 1 : 5,6 and smaller.

Filmpacks must be handled with the utmost care, only the **narrow sides** should be touched. Pressure on the back or the safety sheet at the front will cause light to penetrate the pack before it is inserted into its holder. Filmpack holders should never be loaded in sunshine, always in the shadow.

The camera should not be opened when the shutter of the darkslide is pulled out. Although the Makina is fitted with efficient air ducts, suction of the bellows is unavoidable and makes the films curve when the dark-slide is open.

**The tripod plate** should be used when exposures have to be made from a tripod. The camera should be fixed to the plate with both its tripod bushes. The camera can then be screwed to the tripod in horizontal or vertical position by means of the tripod bushes in the tripod plate.

## *The Optical Outfit*

**In the Makina with rapid-change-mount** the laminae of the Compur shutter are behind the lens.

The lens is a complete unit in a precision rapid-change-mount. The insertion or removal of the lens is done by a short rotation to the left or the right by gripping the lens mount at the wide milled edge just above the front plate. Do not use force when screwing in the lens! The rapid-change-mount ensures the lens having always its correct position mechanically as well as optically. It does not matter whether the stop-numbers engraved on the barrel are in a different place from that before the last removal. Each lens has its own iris-diaphragm which can be set to the stop-number by rotating the ring (7) until the notch coincides with the stop required.

**The Anticomar 1 : 2,9/10 cm** is an ideal lens for spontaneous work, especially for pictorial work in landscape and portrait photography. Where a gradation of subtle grey tones, a soft definition and a certain „plasticity“ is required this lens is unsurpassed.

**The Anticomar 1 : 4,2/10 cm** is a lens yielding the highest possible definition and contrast and is the objective for the photographer of every-day task, news, machines, architectural details and reproductions. It is the lens of the press-photographer and the traveller.

**The Tele-Makinar 1 : 4,8, f - 19 cm (7 1/4 ins.)**

To mark the **different image areas** covered by the Tele-lens the white lens of the optical viewfinder shows the engraving mentioned on page 10 under „Viewfinder“. The changing and the removal of the Tele-Makinar S does not differ from that of the Anticomar. On the front-panel of the Makina you will find a red triangle, and another red mark is on the diaphragm-

ring of the Tele-Makinar. In order to enable the photographer to read the stop-numbers from above it is recommended that the two red markings on ring and front-panel should coincide when the Tele-Makinar is inserted. However, should it be screwed in differently, no harm will be done. The Tele-Makinar as well as the Anticomar have their own iris-diaphragm that can be set in the usual way. On top of the lens barrel, stop numbers are engraved, and above them are placed the distances in metres or feet. These two scales together form a convenient depth-of-field-ring giving the correct depth of field for every aperture. The Tele-Makinar S employs the same catch spring as the Anticomar. It is semi - automatically coupled to the range-finder, which means that the distance is measured with the range-finder and then read off from the Anticomar-scale. The focusing device of the camera remains unaltered, but the distance measured is set on the Tele-Makinar, which has its own distance setting in its helical mount. For instance: The subject is 9 feet away from the camera. Measuring with the range-finder results in the Anticomar scale showing a distance of 9 feet. Now the Tele-Makinar 1 : 4,8/19 cm by virtue of its helical mount is also set to 9 feet, **without altering the distance setting of the camera.**

### **The Rapid Wide-angle-Orthar 1 : 6,8, f : 7,3 cm (2 3/4 ins.)**

Owing to its short focal length a special catch spring for the lazy tongs of the camera is necessary (20). The Rapid Wide-angle-Orthar has its own iris-diaphragm and must be interchanged like the other rapid change-lens.

**The correct image area** is found either by focusing on the groundglass screen or by using a small slip-on cap with lens for the optical viewfinder. This cap is slipped on the viewfinder in such a way that the lens of the cap points toward the subject to be photographed. The Rapid Wide-angle Orthar is not coupled

to the range-finder, but the latter can be used by measuring the correct distance between subject and camera. Then the lazy tongs are made to engage the catch spring provided for the wide-angle lens and the distance measured then transferred to the helical mount's distance setting. In this way good, rapid work can be done without using the focusing screen.

### *Supplementary lenses for close-ups*

The supplementary lenses shorten the focal length and, also, the distance between camera and object. This results in a magnification of the image scale, so these lenses are mainly employed for the taking of small objects, for making reproductions of prints and pictures and for photographing small objects in their natural sizes. The focusing is done with the micrometer focusing drive of the Makina after the distance between camera and object has been established. When the Tele-Makinar is employed together with supplementary lenses the focusing mount of this lens can also be used. The stop-numbers of the original lenses (Anticomar, wide-angle lens, Tele Makinar) can be employed without alteration, as the equivalent focal lengths of the various lens-combinations will always be reset to the original focus length when close-ups are made.

When supplementary lenses are used it is advisable to stop down considerably to ensure a good definition at the edges. For the combination 1-7 and 11, about  $f:8$  should be chosen, while for the other combinations the lens should be stopped down to about  $f:11$  or  $f:16$  (see table).

All our supplementary lenses have a thread for screw-in filters so that the combination lens and supplementary lens plus filter is always possible.

With **lens T 1,5** (especially suitable for flowers, still

life, portraits) photographs can be made at a distance of about 65 cm (2 ft 2") when the Anticomar is employed. The distance will be about 115 cm (46 ins.) when the Tele-Makinar is used instead. When taking portraits with Anticomar and T 1,5 it must be borne in mind that the distance is rather short and distortions cannot be avoided. Portraits in profile or semi-profile will be better than frontal pictures.

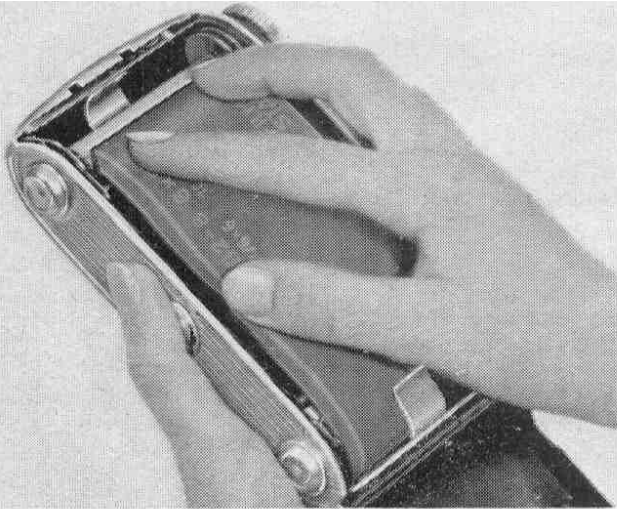
The **lens DIN** can be used for a distance of about 45 cm (16 1/4 ins.)

The **lens R 0,1** is for photographing small objects in their natural sizes. It is not recommended that the Tele-Makinar should be used for this purpose and the lens R 0,1 does not fit the Makinar therefore.

The mounts of the supplementary lenses T 1,5 and Din for the Makina have two threads in order to fit the outer-threads of the Anticomar and the Wide-angle-Orthar as well as the inner thread of the Tele-Makinar 1: 4,8, f - 19 cm. The lens R 0,1 can be screwed only into the inner threads of the Anticomar and the Wide-angle-Orthar.

| Nr. | Lens Combination      | Camera setting:<br>Anticomar catchspring A<br>Wide-angle catchspring W<br>Tele: catch spring A | Position of the pointer on the<br>equivalent feet- or metre-scale | Approximate distance between<br>object and groundglass screen | Greatest possible expansion<br>of object | Approximate image scale in<br>relation to actual size of object |
|-----|-----------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------|
|     |                       |                                                                                                | m                                                                 |                                                               |                                          |                                                                 |
| 1   | T1.5 and Anticomar    | A                                                                                              | $\infty$<br>1.5                                                   | 121<br>76                                                     | 58.0×86.0<br>36.0×54.0                   | 0.10<br>0.16                                                    |
| 2   | T1.5 and Tele-Makinar | A                                                                                              | $\infty$<br>2                                                     | 127<br>92                                                     | 26.5×41.0<br>20.0×29.5                   | 0.21<br>0.29                                                    |
| 3   | T1.5 and Wide angle   | W                                                                                              | $\infty$<br>1                                                     | 119<br>64                                                     | 97.0×14.3<br>34.0×50.0                   | 0.06<br>0.17                                                    |
| 4   | T1.5 and Wide angle   | A                                                                                              | $\infty$<br>1.5                                                   | 36<br>32                                                      | 14.0×21.0<br>10.7×15.9                   | 0.41<br>0.54                                                    |
| 5   | DIN and Anticomar     | A                                                                                              | $\infty$<br>1.5                                                   | 60<br>49                                                      | 26.5×39.0<br>19.3×28.6                   | 0.22<br>0.30                                                    |
| 6   | DIN and Wide angle    | W                                                                                              | $\infty$<br>1                                                     | 59<br>44                                                      | 36.0×54.0<br>23.0×34.5                   | 0.16<br>0.25                                                    |
| 7   | DIN and Wide angle    | A                                                                                              | $\infty$<br>1.5                                                   | 30<br>28                                                      | 10.7×16.0<br>8.6×13.0                    | 0.54<br>0.66                                                    |
| 8   | R 0.1 and Anticomar   | A                                                                                              | $\infty$<br>1.5                                                   | 25<br>24                                                      | 6.8×10.1<br>5.8× 8.6                     | 0.85<br>1.0                                                     |
| 9   | R 0.1 and Wide angle  | W                                                                                              | $\infty$<br>1                                                     | 23.5<br>21.5                                                  | 8.8×13.2<br>7.1×10.3                     | 0.65<br>0.82                                                    |
| 10  | R 0.1 and Wide angle  | A                                                                                              | $\infty$<br>1.5                                                   | 21.2<br>20.5                                                  | 5.6× 7.8<br>4.5× 6.6                     | 1.1<br>1.3                                                      |
| 11  | Wide angle alone      | A                                                                                              | $\infty$<br>1.5                                                   | 41<br>35                                                      | 16.6×24.5<br>13.5×20.0                   | 0.35<br>0.43                                                    |

| Filter         | Subject matter                                                                     | Filter Factor | Type of negative material | Making I and II Order No: | Making II S and III Order No: |
|----------------|------------------------------------------------------------------------------------|---------------|---------------------------|---------------------------|-------------------------------|
| Yellow, light  | scenes with violent motion, portraits, landscapes                                  | 2             | ortho                     | 118                       | 505                           |
| Yellow, medium | landscapes, snow                                                                   | 3             | ortho                     | 118/1                     | 505/1                         |
| Yellow, strong | against the light, colours, still-life, paintings, landscapes and distant views    | 4             | ortho                     | 118/2                     | 505/2                         |
| Orange         | distant views, reproductions                                                       | 5             | ortho                     | 118/3                     | 505/3                         |
| Grreen         | landscapes with distant views, against the light, snow, reproductions of paintings | 3-4           | pan                       | 120                       | 506                           |
| Red            | distant views, night effects, reproductions                                        | 6-8           | pan                       | 120/1                     | 506/1                         |
| Blue           | photographs with artificial light (reducing red), reproductions                    | 1.5           | correct pan               | 120/2                     | 506/2                         |
| Ultra-violet   | high mountains (over 6000 feet) beaches in sunshine                                | 1             | correct pan               | 120/3                     | 506/3                         |

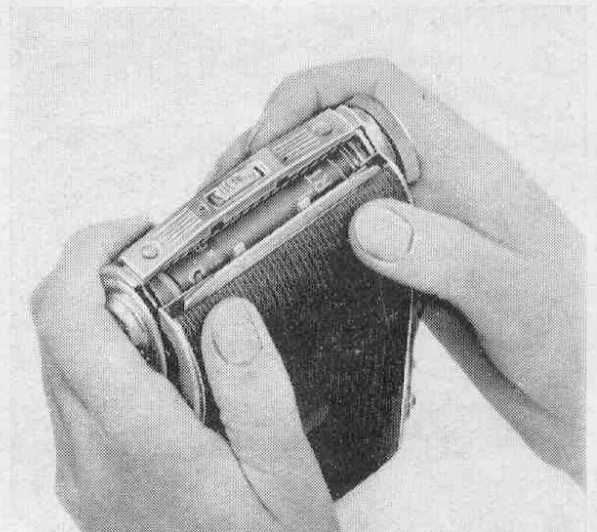


To thread film, tear adhesive tape, carefully remove free ends of tape; then unfold flap of backing paper and thread paper into wide opening of spool slot.

Carefully align backing paper with camera edges and pull paper taut by giving winding knob several turns; be sure to wind paper correctly between spool flanges, thus ensuring protection from stray light.

To close camera back, use both your hands to close camera firmly until it snaps shut.

Upon continued turning of the winding knob at first there will appear the warning marks in the window (dots, hands, arrows). The figure "1" appearing in the window indicates that the camera is ready for the first exposure.



## *Plaubel filters*

In order to obtain a satisfactory representation of colour in terms of grey tones a good filter is indispensable. We recommend the exclusive use of our Plaubel filters for which flatness and parallelism is guaranteed. They are made of Jena special glass stained in the mass and are in threaded mounts. Screwing the filters on the lens mount is the safest way of ensuring a correct optical fitting with the least loss of definition.

With our Plaubel filters (see the table on page 17) instantaneous exposures are often possible on account of the high speed of the Anticomar. With the „stronger“ filters time exposures should be made and it is useful to stop down the lens to  $f:11$  or  $f:16$  to obtain a sufficient depth of field.

**For our Makina with rapid-change-mount** filters in a special mount are available which allow their employment for all our rapid-change-lenses. The inner thread fits the outer-thread of the Anticomar and Wide-angle Orthar, while the outer thread fits the inner thread of the Tele-Makinar  $1:4,8$ ,  $f = 19$  cm.

## *Sun shade (lens hood)*

The all-metal sun shade with its cylindrical tube (dead-black inside) protects the lens from reflections on the glass surfaces. It can be screwed on the lens either by its outer or inner thread. The Plaubel sunshade allows the insertion of Plaubel filters, supplementary lenses and Duto disks without the removal of the shade from the lens. Pressing down the latch on the tube and hinging off the ring exposes an inner thread in the fastening ring of the sunshade into which the filter or supplementary lens can be screwed. The tube is then swung back and the combination is ready for use.

essential to be sure that the Compur shutter of the Makina is set to „T“ and open.

### Flash mechanism

The flash mechanism consists of three different parts:

1. Rotary knob 2 and flashcontacts d on the front plate of the camera (Fig. 2)
- 2) Slide c (Fig. 1) to take the flashgun and
- 3) the flashgun (Fig. 3)

The actual flashgun (Fig. 3) consists of:

- A Reflector
  - B Socket for flash bulb
  - C Sockets for two extension flashes
  - D Battery tube to take 3-U2 cells
  - E Support for clamping device
  - F Press button for shutter release via electro-magnet
  - G Cord with three-point plug
  - H Lock nut at lower end of battery tube.
  - I Strap lug.
- 
- a. Press button for stop adjustment
  - b. M and X adjustment
  - c. Slide for flashgun
  - d. Sockets for flash cord

There are two different kinds of flashlight:

- a) with consumable flashbulbs. — The Makina has a built-in electro-magnet which ensures the synchronous opening of the shutter and firing of the bulbs up to 1/400 second. All flashbulbs with a delay of 16 to 19 milliseconds can be fired when the knob b on the front plate is set to „M“. The electro-magnet works only when the shutter is cocked

## **Instructions for using the detachable focalplane shutter unit with the Plaubel Makina camera.**

The focal-plane shutter unit is slid into the rails on the camera back in place of the usual dark slide. On its own back are provided a second set of rails, into which the dark slide, film-pack adapter, roll-film adapter or ground-glass screen can be fitted in the usual way.

Owing to the thickness of the shutter the extension of the bellows has to be altered to restore the correct distance between the lens and the film plane. A special catch spring can be supplied by the factory to serve this purpose. However, the focal plane shutter and the Wide-angle Orthar cannot be employed together on account of the two catch springs that can, of course, not be used simultaneously.

Focusing is done by the special scale provided when the focal-plane shutter is in use. This is usually placed over the top of the focusing scale for the Anticomar lens. In those cameras that have not been designed for use with the Orthar Wide-angle lens, it will be found at the moving end of the lazy-tongs focusing scale. The distance meter should not be used with the focal-plane shutter unit, though it may be used to read the distance of a subject on the normal Anticomar focusing scale, and the mount then altered to read this same distance on the special scale provided. The lazy-tongs must then be moved into the nearer position before exposure.

The alteration of the shutter speed is easily arranged by the plain knob. The latter is pulled out gently from the camera and turned to indicate the desired speed. The knob is then released, care being taken that the peg on its under side engages correctly in the appropriate hole below it. The shutter is released by a brief pressure on the protruding button.

When using the focal-plane shutter unit, it is naturally

properly! — Flashbulbs to use: G.E. and Mazda No. 5, 11, 22; Sylvania Press 25, 40, 50; Philips Pf 14, 25, 38, 60.

- b) with electronic flash (strobe-or speedlamp).  
Modern speedlamps work **without** delay! The knob b has, therefore, be set to „X“.

Consumable flashbulbs **without** delay can also be fired with setting „X“ and 1/25 sec. Flashbulbs to use: Philips PFS, G. E. Speed Midget.

### **How to attach the flashgun to the camera.**

Push the flashgun directly over the slide c (Fig. 1) hinge down clamping lever E 1 and fasten it thoroughly. Connect plug G (Fig. 3) with sockets d (Fig. 1 and 2). The electrical release of the synchronised shutter is done by pressing button F (Fig. 3).

The flashgun can be used separately from the camera if required in which case only the flash-cord is connected to the camera.

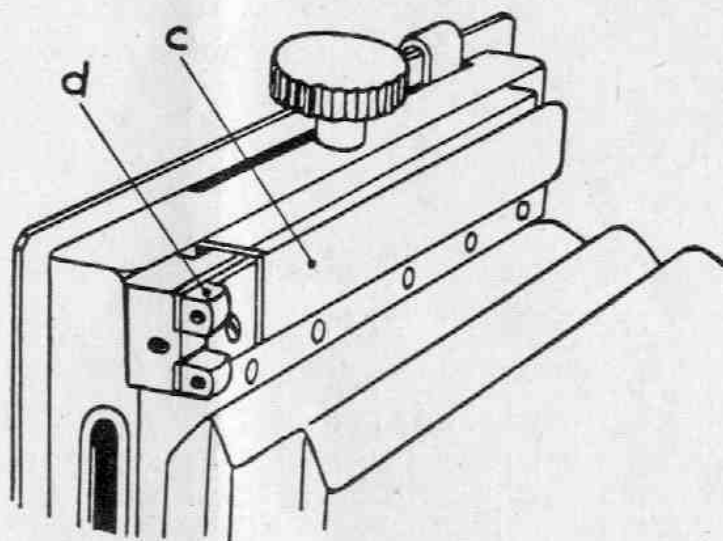


Fig. 1

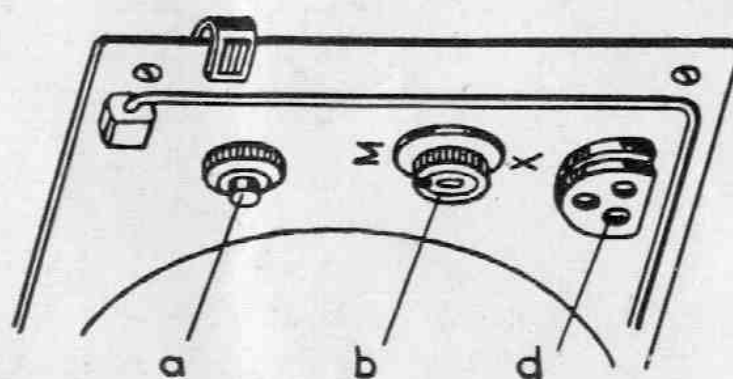


Fig. 2

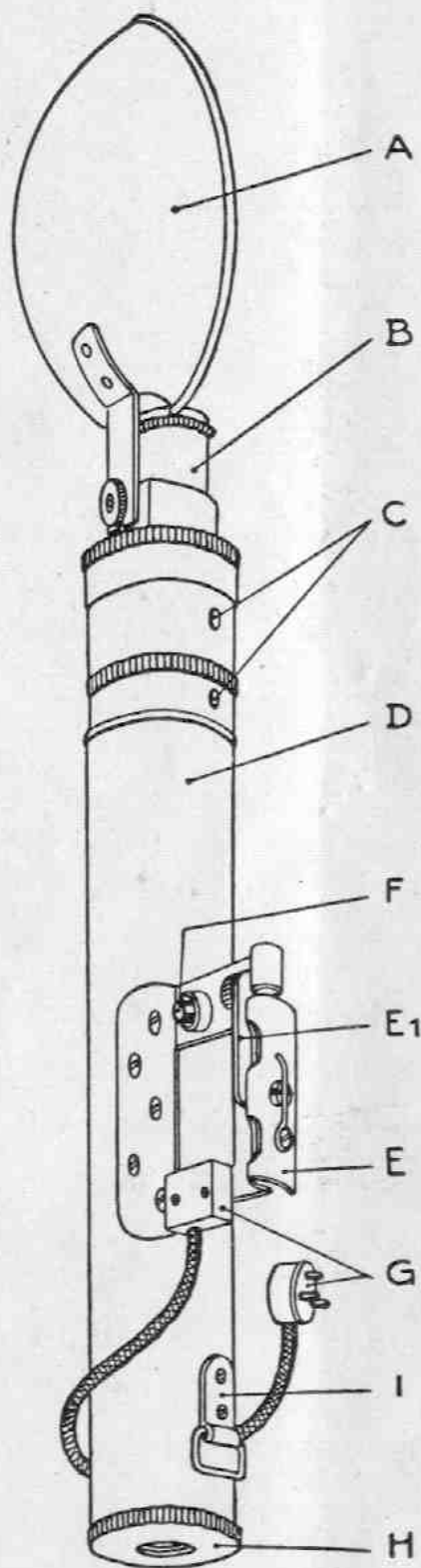
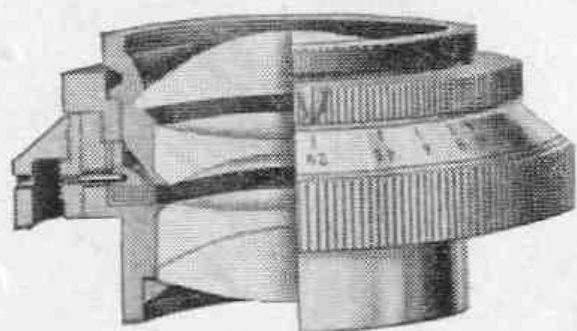


Fig. 3

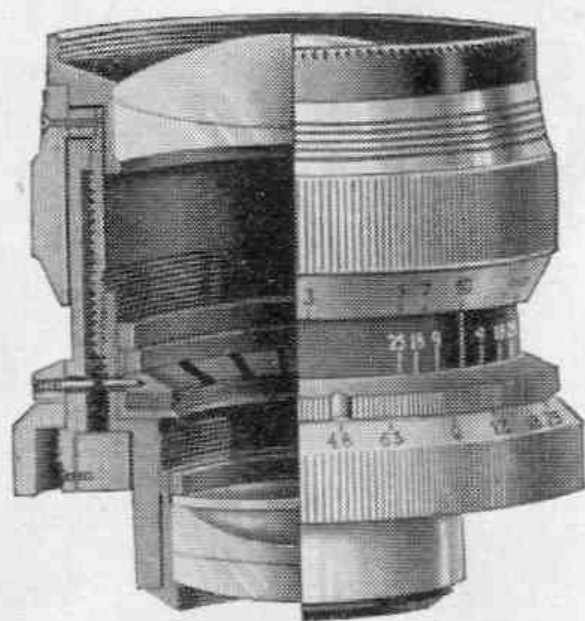
### **Important recommendations:**

- 1) Prior to firing the flash the shutter must be cocked.
- 2) Keep all electrical contacts scrupulously clean and dry.
- 3) Use fresh U2 batteries only, special flash batteries with at least a current of 3 amps are best.
- 4) Test batteries with 1/400 second as this exposure time requires the highest amount of current. If one single pressure on button F suffices to release the shutter the batteries are in working order.
- 5) The flashgun should be clamped firmly to the camera otherwise the electric connections may not be secure. The clamping screw should be firmly tightened.
- 6) Keep the caps of the flashbulbs dry otherwise they will corrode the contacts in the sockets. To ensure a clean metallic surface insert bulb in socket and rotate it a few times to and fro.
- 7) The socket B fits bulbs with ES-caps. When bulbs with A.S.C.C.-caps must be used an adapter (Order No. BE 1/13) should be employed.
- 8) To protect the lazy-tong mechanism from damage the Makina must be held firmly by the front plate when the flashgun is mounted or dismounted!
- 9) When using flashbulbs make sure to adhere to the instructions for use with regard to guide-numbers, delay and general operation.
- 10) For flashbulbs with a high current consumption or for the firing of more than 2 flashbulbs simultaneously employ 4 batteries and use extension-tube (order No. BE 1/20) for battery - container.

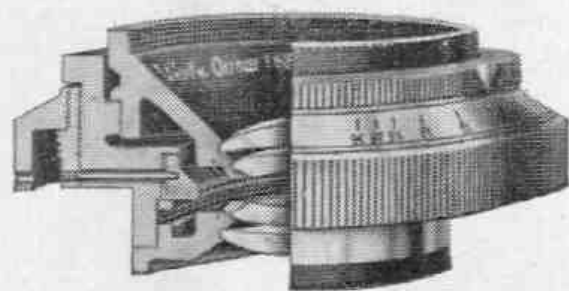
## *Makina-Lenses*



Anticomar 1: 2.9 f: 10 cm.



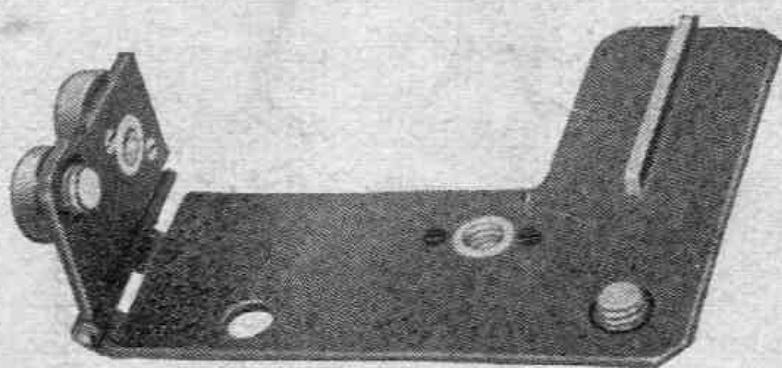
Tele Makinar 1: 4.8 f: 19 cm.



Rapid Wide-angle-Orthar  
1: 6.8 f: 7.3 cm.



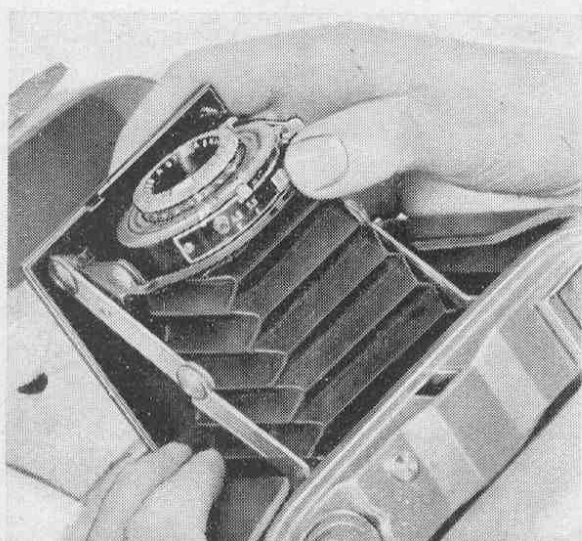
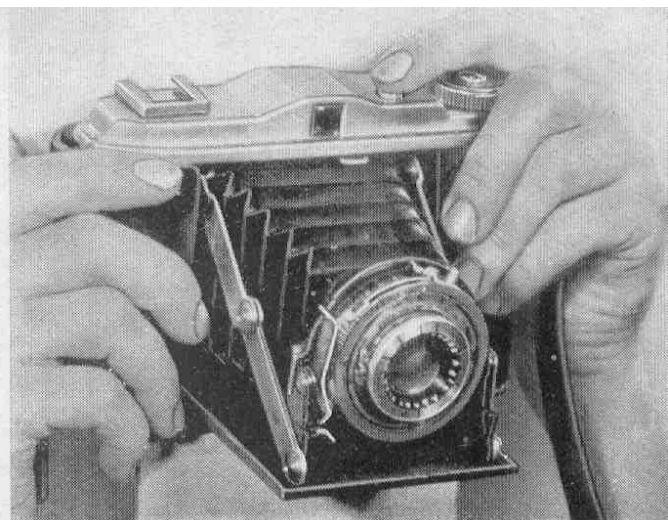
Battery capacitor inset



Tripod plate

To open camera front, press button on top of camera and the lens board will spring forward; if necessary, assist the braces to snap into position.

The ingenious spring-brace mechanism makes for instantaneous readiness for exposure as well as firm support of the lens.



To set the diaphragm, place right thumb on stop lever and set at desired mark (4,5 — 5,6 — 8 — 11 — 16 — 22 — 32).

Small stop number, 4,5, for example:

Large aperture, high speed.

Large stop number, 16, for example:

Small aperture, low speed.



## Automatic Roll Holder

8 Exposures  $2\frac{1}{4} \times 3\frac{1}{4}$  or 16 Exposures  $2\frac{1}{4} \times 1\frac{1}{2}$   
on Rollfilm No. 120 or B 2

Release the spring catch on the end and open the leather covered back to the left.

Pull out the film key and lock it in position by a slight turn to the left. Remove the film cage. (Fig. 1 shows the Rollholder open. Fig. 2 the film cage).

In the left section of the film cage there are two pin bearings, the upper one is hinged. Insert in this the full, unexposed, rollfilm in such a manner that the cover paper pulls from below, black side up. The right compartment has one fixed wing with a pin bearing and a hinged plate with a circular opening. In this compartment place an empty take up spool so that the slotted end faces the open circle.

Pull out the cover paper to the left about 8 inches, turn the paper round the left roller, and pass it over the flat side of the film cage. About 3 inches should then protrude beyond the right roller.

Replace the film cage in the rollholder-casing. This will cause the point of the cover paper to bend upward on the right. Insert the cover-paper point into the long slot of the empty film spool.

It is very important that the paper passes straight into the take-up spool, and does not scrape against the spool ends on either side. Upon the careful and well centered insertion of the cover paper depends the correct functioning of the film in any rollfilm camera and rollholder.

With **rollholders not having a film window** in the cover, turn the film with open cover so far that about

2—3 mm of the beginning film are visible. Then close the cover and put the counting wheel on 0. After this turn the film - key and lock it in position (Nr. 1). Now the film is ready for the first exposure. In order to prevent the film from going off from cover paper, which might be the case with films that are badly glued, it is advisable not to turn the film into position of Nr. 1 until shortly before the first exposure.

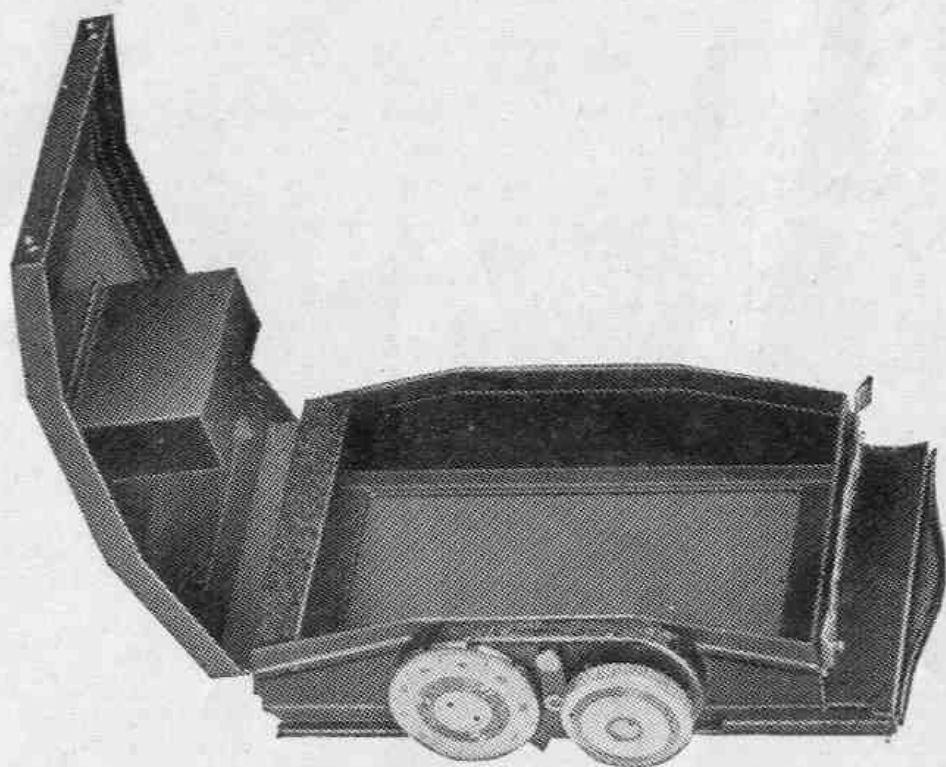


Fig. 1.

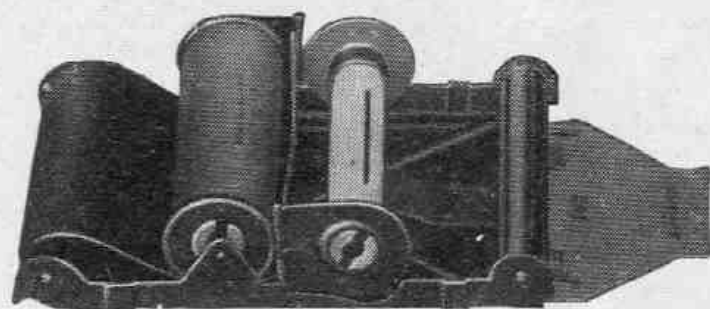


Fig. 2

The counting device of the rollholder is stopped automatically for all 8 exposures by the lever entering in holes of the counting wheel. In this position the film key cannot be moved. You must therefore release the lever by a slight pressure in the direction of the arrow, before you can give the above mentioned 2 or 3 turns to the key.

### **Rollholder with film-window**

On the outside of the rollholder back is a specially shaped protective shield, to guard against fogging of Pancromatic film, while the red window is temporarily open. Do not bend this shield.

After releasing the film key by a slight turn to the right, and having it grip into the slot of the spool, give 2 or 3 turns, to ensure that the cover paper is secured to take up spool.

Close the cover of the holder, open the nicked protective shield of the film window, and turn the key clockwise until the figure „2“ which is printed on the cover paper is centered in the red window. During this manipulation the lever must of course be pulled back, otherwise the counting wheel would stop the movement by its holes as soon as one of the figures 1—8 appears opposite the index.

After you have centred figure 2 of the cover paper in the window, shut the protecting shield, as for the subsequent exposures it is unnecessary to look into the red window.

Now the counting wheel is to be set for exposure 1. This is done by pulling up the counting wheel a little, and turning it until the mark of figure 1 (Red) is exactly opposite the indicator; then set back the counting wheel.

Now the rollholder is ready for the first exposure.

After the first photo is made, release again lever for a moment, and turn the key until exposure 2 is stopped automatically by lever.

In the same manner every one of the exposures is wound forward by first pulling the trigger lever, and then winding clockwise until stopped. The counting wheel always shows which exposure is ready.

Besides the regular sized pictures  $2\frac{1}{4} \times 3\frac{1}{4}$ , the rollholder also allows 16 exposures of about half this size. For this purpose a mask is to put into the holder, which is to be placed under the film cage, in the case of the rollholder in such a way that you see the white dot in the case through the hole in the right upper edge of the mask.

For these halvesized pictures the counting wheel is engraved with additional marks between the figures. For number 1 exposure proceed as usual, and set the indicator against the figure 1. For number 2 exposure it must be turned only until it is opposite the engraved mark between the figures 1 and 2; the third picture will then be No. 2 on the indicator, and so on.

Do not fail to release the lever when it stops at

the numbers as it does not stop at the intermediate marks.

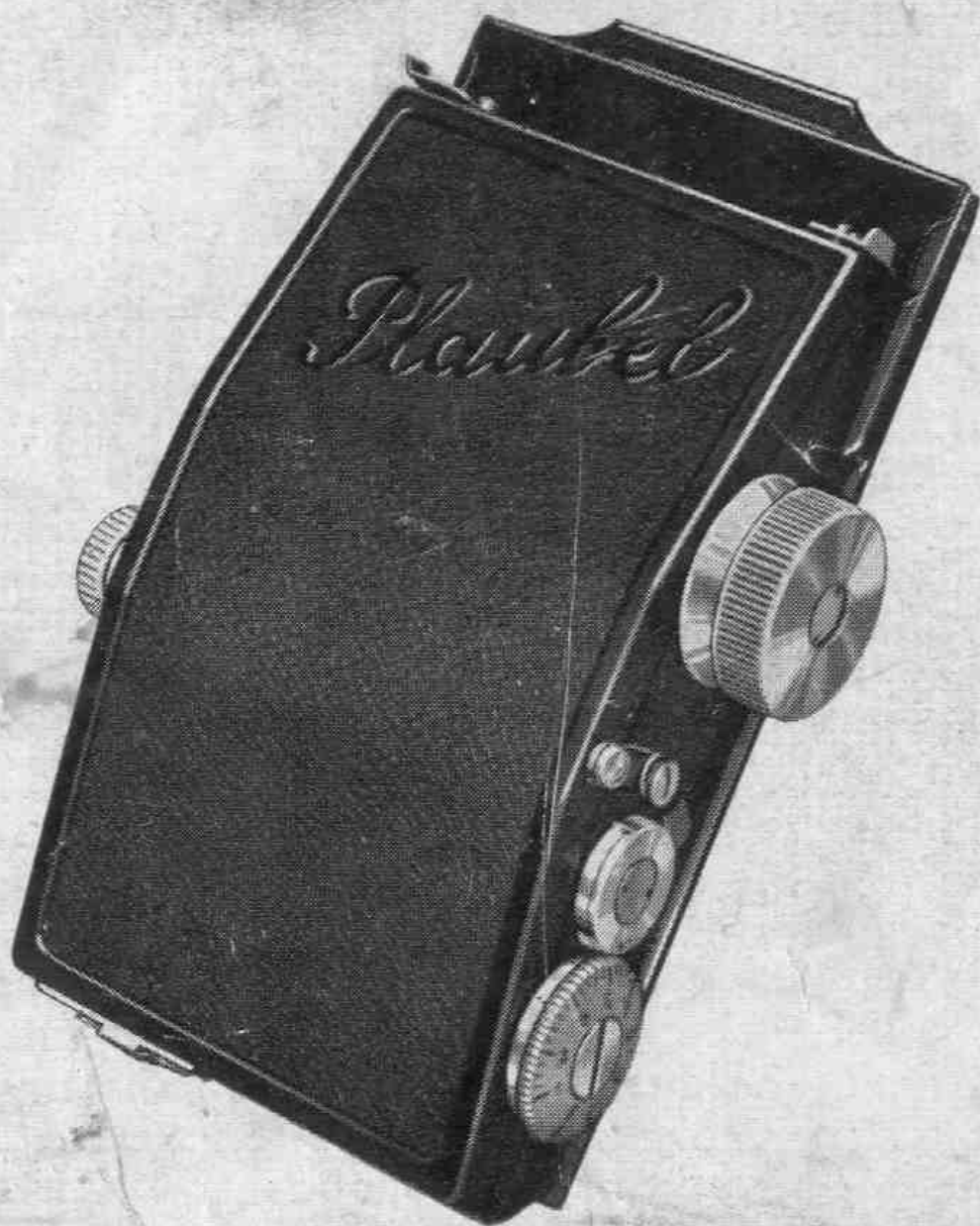
After all exposures are made turn key until the whole of the cover paper is spooled. Open the back, withdraw the film key, fix it by a slight turn to the left, take out the film cage and remove the exposed filmroll.

For viewing the half sized pictures (about  $2\frac{1}{4} \times 1\frac{1}{2}$ ) a mask is furnished for the Newton finder of the Plaubel Makina.

**Plaubel Feinmechanik und Optik**  
**Frankfurt am Main / Gräfstraße 66**

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# Plaubel



## **Instructions for using the Makina miniature film adapter**

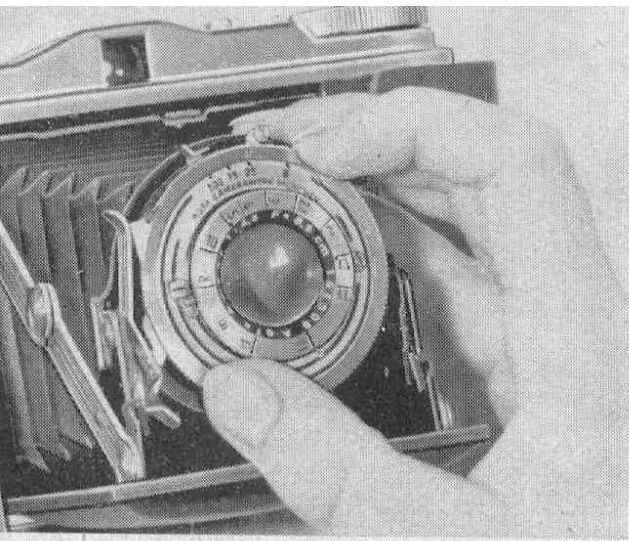
(for negatives  $1\frac{1}{2} \times 1'' = 24 \times 36$  mm).

By using the miniature film adapter, taking the standard  $1\frac{1}{2} \times 1$ " ( $24 \times 36$  mm) negative, the range of use of the Makina camera is considerably widened. Moreover, it will be found that once the working of the adapter is thoroughly understood, its use is surprisingly simple, and that when the small negative size can be used interchangeably a considerable simplification is possible in a good many fields of photographic work.

The miniature adapter is similar in appearance to the Plaubel roll-film adapter and the film-pack adapter, and is opened by the two spring clips beside the grip for the dark-slide shutter. These clips engage on pegs, and after lifting them from the latter the back of the adapter can be swung open on its hinge.

The adapter itself consists of two principal parts: (1) the outer casing with dark-slide shutter, winding knob and picture counter, and rails fitting the camera back, as shown in fig. 1, and (2) the internal and detachable film-holder seen in fig. 2. To load 35-mm film in the adapter, whether monochrome or colour stock, it is necessary to remove the film-holder from the outer casing.

For this purpose, the rewind knob 5 is pulled outwards as far as possible, and then, by holding the film-holder at the metal rib between the full and empty spool-holders, it may be tilted slightly and raised out of the main casing. The holder for the film cartridge 7 is then opened, and the full cartridge of film placed in position. The cartridge must be placed so that the notch in the rewinding knob will engage in the corresponding peg of the core in the cartridge itself, which means that the "hollow" end of the cartridge faces the rewind knob 5. After closing the cartridge holder 7 once more, the end of the film is led over the guide rollers below the film-holder, and brought round to the take-up spool core 8, on which is a spring clip. The clip is used

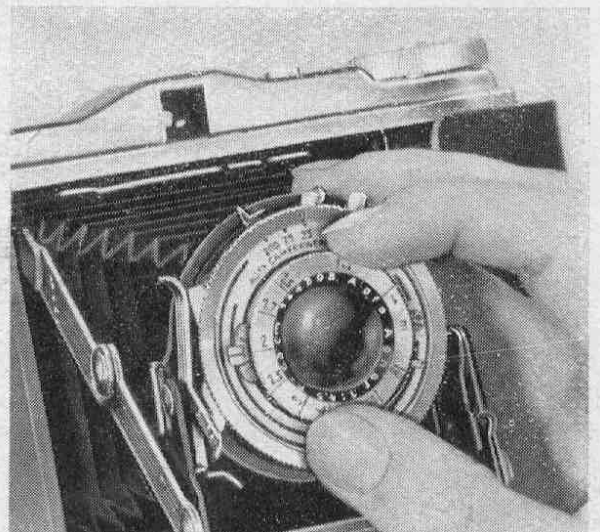


**To set the shutter speed, turn milled shutter ring until "V" mark registers with desired shutter speed (25 — 75 — 200, i. e.,  $\frac{1}{25}$  —  $\frac{1}{75}$  —  $\frac{1}{200}$  second).**

Setting the "V" mark at "B" will cause the shutter to remain open as long as the release lever is depressed. For long-time exposures, the release can be locked by raising sliding lock "T".

**To focus the lens, rotate front lens mount until desired distance registers with horizontal reference mark.**

For close-ups, and when using large apertures, carefully estimate the distance and focus accordingly (Cf. Para. "Depth of Field", p. 14).



to attach the film end to the empty core and the latter turned round once or twice to make sure that the film is firmly held. The film-holder is then replaced in the outer casing of the adapter, by lowering it obliquely first of all, and then pressing it flat against the picture mask of the outer casing itself. The rewind knob 5 is then pressed into its original position, and turned until its notched end engages in the peg of the core in the film cartridge. It is important that the film winding knob 4 also engages correctly with the take-up spool 8, and this is seen to as the film holder is lowered into its outer casing. Finally, the adapter is closed by swinging over the back 9 until the spring clips snap into place on their studs.

The film winding knob 4 is then turned twice until it locks. The picture counter 1 is then turned until the number "1" on it is against the small red dot on the disc 2. (It may be necessary to hold the disc 2 stationary when doing this.) The dark-slide shutter can now be withdrawn when the adapter is on the camera back, and the first exposure made.

After each exposure, the small locking lever 3 is moved over, and the film winding knob turned until the lever snaps back once more and locks the winding gear.

After 34 to 37 exposures have been made, and the film can no longer be turned forward, the upper portion of the film winding knob 4 is pulled slightly outwards to release the connection between it and the take-up spool, and held in the outer position with one hand. The other hand then rotates the rewind knob 5 on the other side of the adapter. The picture counter turns backwards with movement of the rewind knob, and when this counter ceases to move all the film has been rewound back into the film cartridge. The adapter may then be opened as before, and a new film put in the place of the exposed one under the holder 7.

In order that the correct field of the camera is indicated when the adapter is in use, a special mask is delivered for use with the f./2.9 Anticomar lens with focal length 10 cm. This mask is placed on the camera view-finder.

### **Universal view-finder set for miniature negatives.**

This accessory consists of a lens engraved with the fields covered by wide-angle, standard Anticomar, and Telephoto lenses. It is placed over the normal finder lens in such a way that the supplementary glass with the engraved fields lies over the focussing scale on the camera.

**SPECIAL NOTE:** The Makina miniature film adapter taking  $1\frac{1}{2} \times 1$ " ( $24 \times 36$  mm) pictures is primarily intended for use with the new types of colour films. Monochrome negative film can naturally also be used, but necessarily involves some difficulties on account of grain effects, and is thus less satisfactory for general use.

The following point should also be noted: a  $15 \times 10$  inch enlargement from a miniature negative  $1\frac{1}{2} \times 1$  inch in size is equivalent to enlarging the  $3\frac{1}{2} \times 2\frac{1}{2}$ " Makina negative to  $35 \times 25$  inches, but the viewing distance for the latter is naturally considerably greater, and the grain effects will be less liable to be troublesome than in the  $15 \times 10$  inch enlargement from the miniature negative that is seen from a shorter viewing distance. In each case the negative has been enlarged ten diameters, so that the grain effects have been treated identically, but the greater viewing distance required for the print from the larger negative has a marked effect on their appearance.

On these grounds, we strongly recommend that for monochrome negative work the standard negative size of the Makina model available should be used in preference to the miniature negative.

FIG. 1

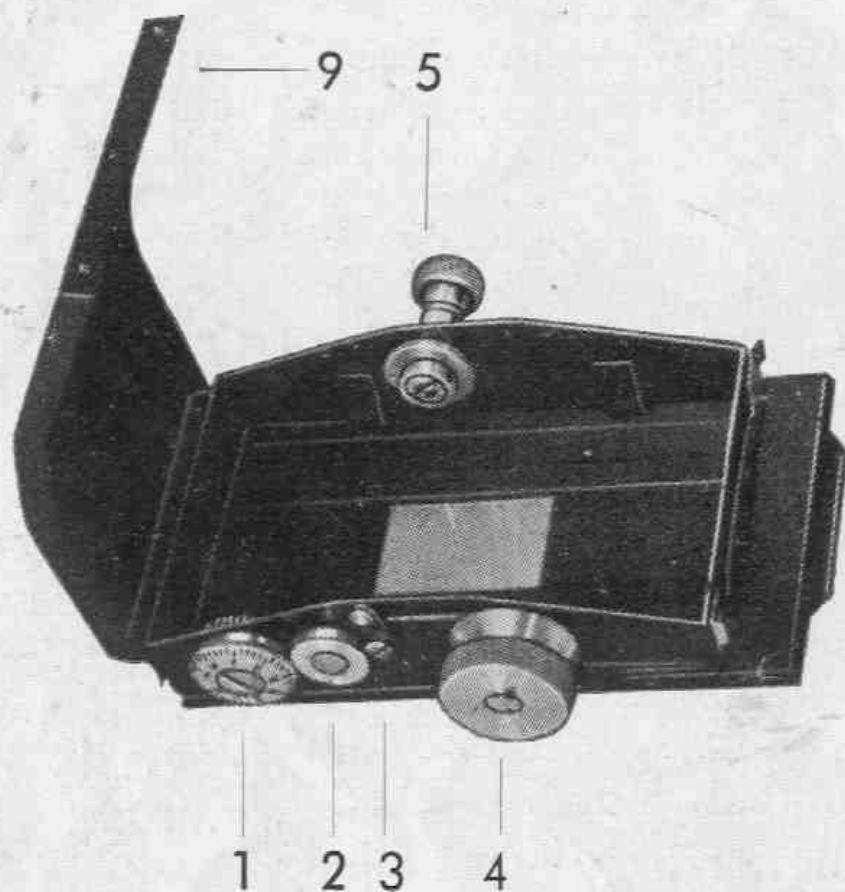
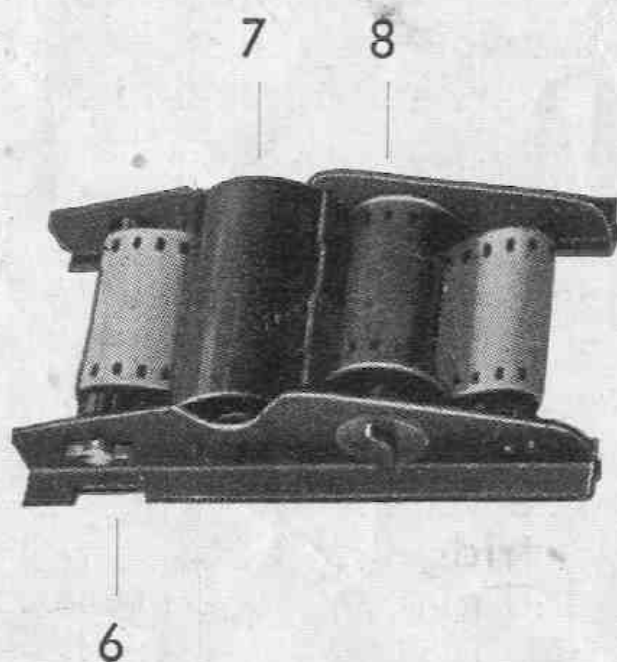


FIG. 2

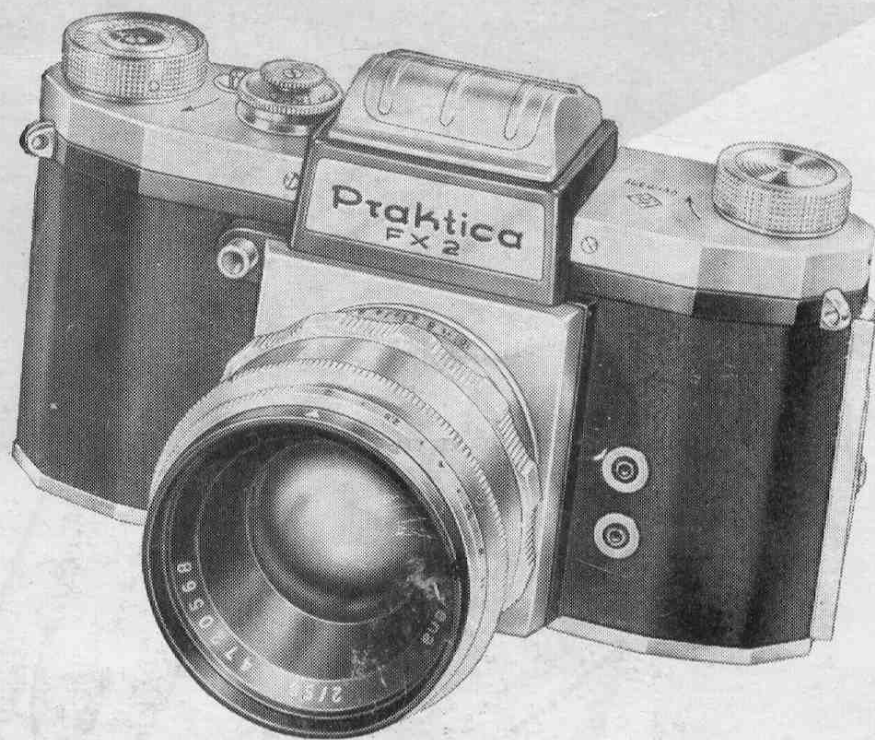


**Plaubel Verkaufs - Gesellschaft**

**Frankfurt am Main-West    Königstraße 66**

1000. 8. 39. R.

*From the  
Tele-photo  
down to the  
Micro picture*



**Praktica FX2**

35 mm Reflex Camera with Interchangeable Lenses

## *Dear Photo Friend!*

The miniature reflex camera "Praktica FX 2", a masterpiece of German craftsmanship, discloses to the amateur and professional photographer the extremely versatile and wondrous territories of photography.

The advantages of the single-lens reflex camera system become particularly obvious in the Praktica FX 2. Already before the exposure, the subject is visible, free from parallax error, in the ground-glass image, making it possible to predetermine depth of field and picture composition with utmost accuracy.

Interchangeable lenses of various focal lengths in the Praktica FX 2, some of them with automatic diaphragm, open up a wide range of applicability for tele-photo and close-up exposures.

To complete the finder system, a supplementary reversing prism can be inserted into the finder hood, revealing an upright, laterally correct image.

Shutter wind and film transport knob with picture-counting disk

Knob for setting exposure speeds and speed groups

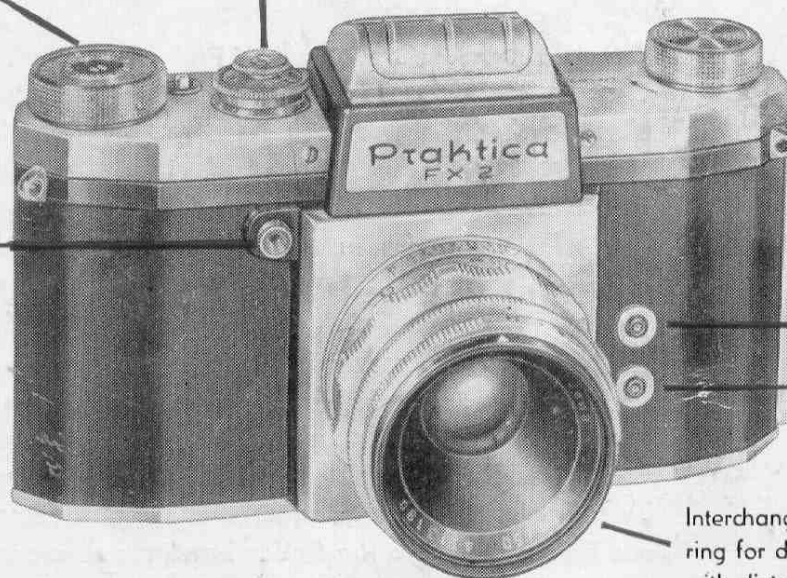
Shutter release knob with cable release connection

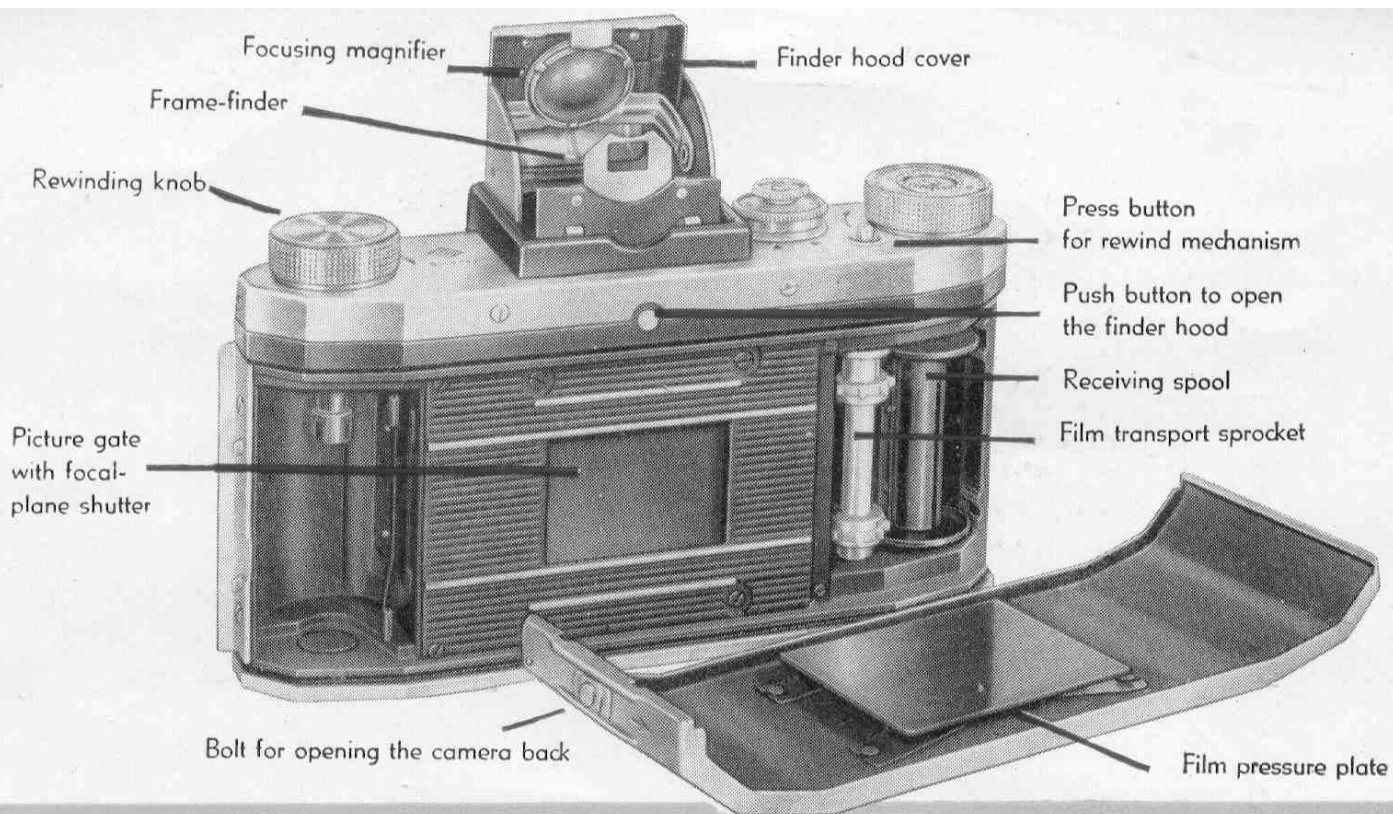
Eyelets for neckstrap

Contact socket X for flash tubes

Contact socket F for flash bulbs

Interchangeable lens with adjusting ring for distance and diaphragm, with distance, diaphragm and depth-of-field scales





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## Technical Data

### Lenses

35 to 500 mm focal length with speeds ranging from f/1.5 to f/8. All lenses are coated

### Shutter

Focal-plane shutter  $\frac{1}{2}$  to  $\frac{1}{500}$  sec. and B, synchronized for electronic and regular flash

### Finder System

Reflex finder with image field lens and magnifier for critical focusing (free from parallax)  
Built-in sports finder  
Insertable reversing prism

### Film Transport

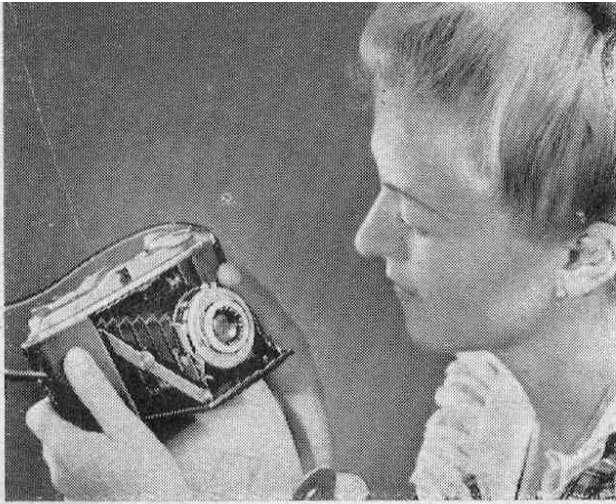
Coupled with shutter wind, no unintentional double exposures or blanks

### Weight

620 grams, without lens

### Dimensions

15 x 8 x 4 cm (6 x  $3\frac{1}{4}$  x  $1\frac{1}{2}$  ins.)

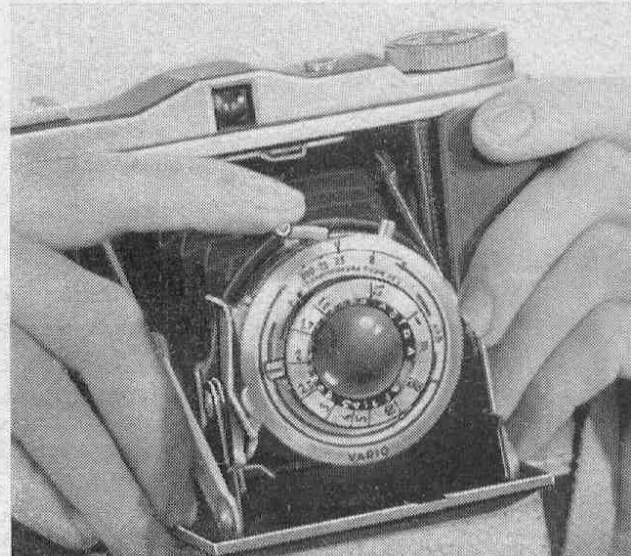


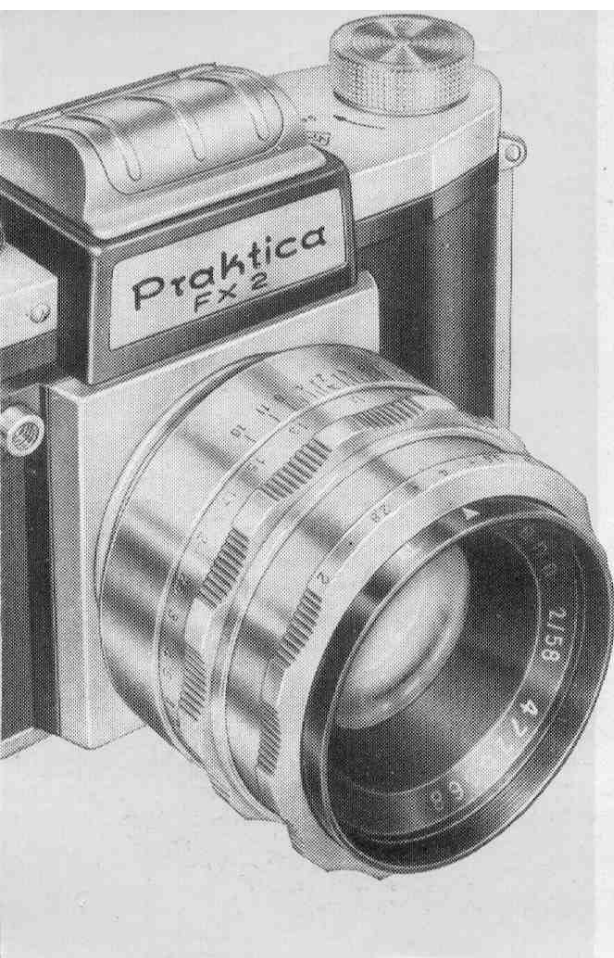
**Before every exposure check settings of diaphragm, shutter speed, distance.**

**To wind the shutter, prior to every exposure, give the winding lever a lateral pull with your index finger until the lever is caught.**

For time exposures, with the "V" mark set at "B", also wind the shutter.

In order to avoid releasing the camera accidentally, and to protect the shutter mechanism, make it a rule to wind the shutter only just before picture-taking.





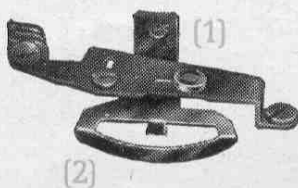
## The Lenses

The *Praktica FX 2* may be used with normal or special-type lenses with focal lengths from 35 mm to 500 mm and with speeds up to  $f/1.5$ , hence making it possible to *penetrate into practically any sphere of photography*.

*All the lenses are easily interchangeable* by means of their threaded mounts. It is advisable, before changing the lens, to release the camera shutter, so that the mirror, a very sensitive element, will be protected from damage. Any unclean spots on the anti-reflex coating should be removed only with a soft, perfectly clean and grease-free brush. In case there is a film in the camera during lens change, take care to protect the opening from glaring light.

## The Pre-setting Diaphragm

When exchanging lenses with the diaphragm pre-setting device, make sure that the pressure lever (2) always rests against the rear stop. If necessary, push it to the rear stop with your finger tip. Should the camera be equipped with an automatic pre-set lens, the arresting knob (1) with the red dot has to be moved to the left (looking at the camera from the front).



*Diaphragm scale*



*Focusing ring*



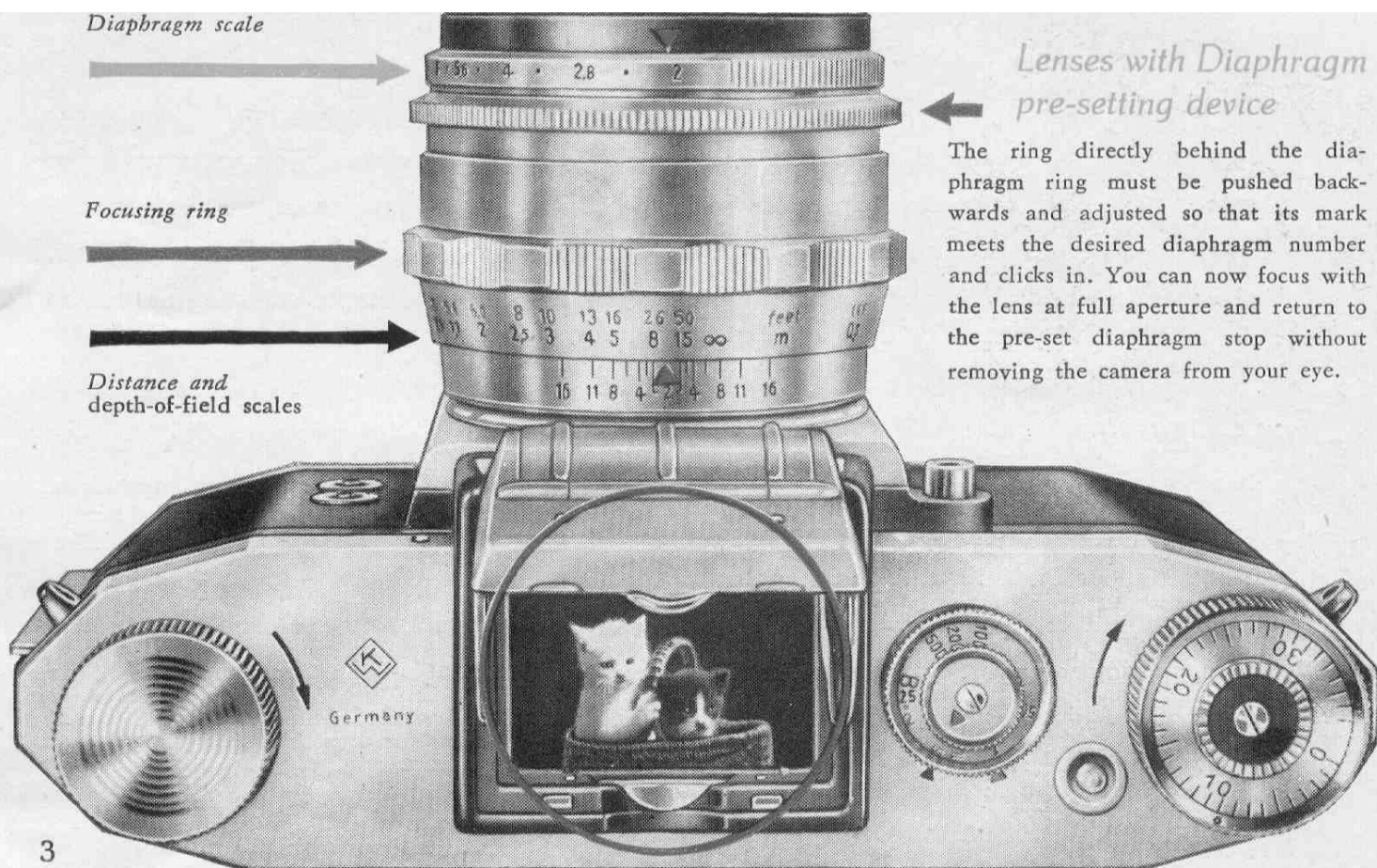
*Distance and  
depth-of-field scales*



*Lenses with Diaphragm  
pre-setting device*



The ring directly behind the diaphragm ring must be pushed backwards and adjusted so that its mark meets the desired diaphragm number and clicks in. You can now focus with the lens at full aperture and return to the pre-set diaphragm stop without removing the camera from your eye.



### *Focusing*

is performed by means of the distance-setting ring on the lens mount. This ring has to be turned to the left, or to the right, until the image on the ground-glass screen appears perfectly sharp. During focusing, the lens should be set at full aperture. When using the sports finder, you may either focus beforehand on the ground-glass, or set the distance adjusting ring to an estimated, or measured range.

### *The Diaphragm*

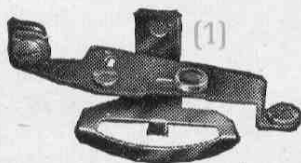
is adjusted by means of the diaphragm ring. The small numbers indicate wide lens apertures, whereas the large diaphragm numbers refer to the smaller apertures. The volume of light entering the camera through the lens can be regulated by the diaphragm. Large diaphragm apertures permit short exposure speeds, small apertures require longer speeds. The next diaphragm number upwards on the scale makes it necessary to double the exposure time.

Besides, the diaphragm is a primary means of regulating the depth of field in relation to the various distance settings, as may be seen from the chart on page 7.

## *The new Automatic Diaphragm*

For lenses with automatic diaphragm, the Praktica FX 2 has been equipped with a special release mechanism. Lenses of this type offer a considerable facility with regard to readiness for action owing to the fact that the diaphragm closes down automatically to the pre-set stop. Remove the lens from the camera, and the release mechanism for the automatic diaphragm becomes visible inside the camera front. This mechanism has to be disconnected if other lenses than those with automatic diaphragm are to be used (1).

For lenses with automatic diaphragm, the mechanism is put into working position by pushing the red-marked knob to the left.



To wind up the automatic diaphragm, turn the front tensioning ring on the lens mount as far as it will go to the right. The aperture selected for the exposure is adjustable on the same ring by means of a locking device either before or after the shutter is wound up. Meyer lenses with automatic diaphragm need not to be wound up. Intermediate tubes to be used with automatic lenses must be marked "2".



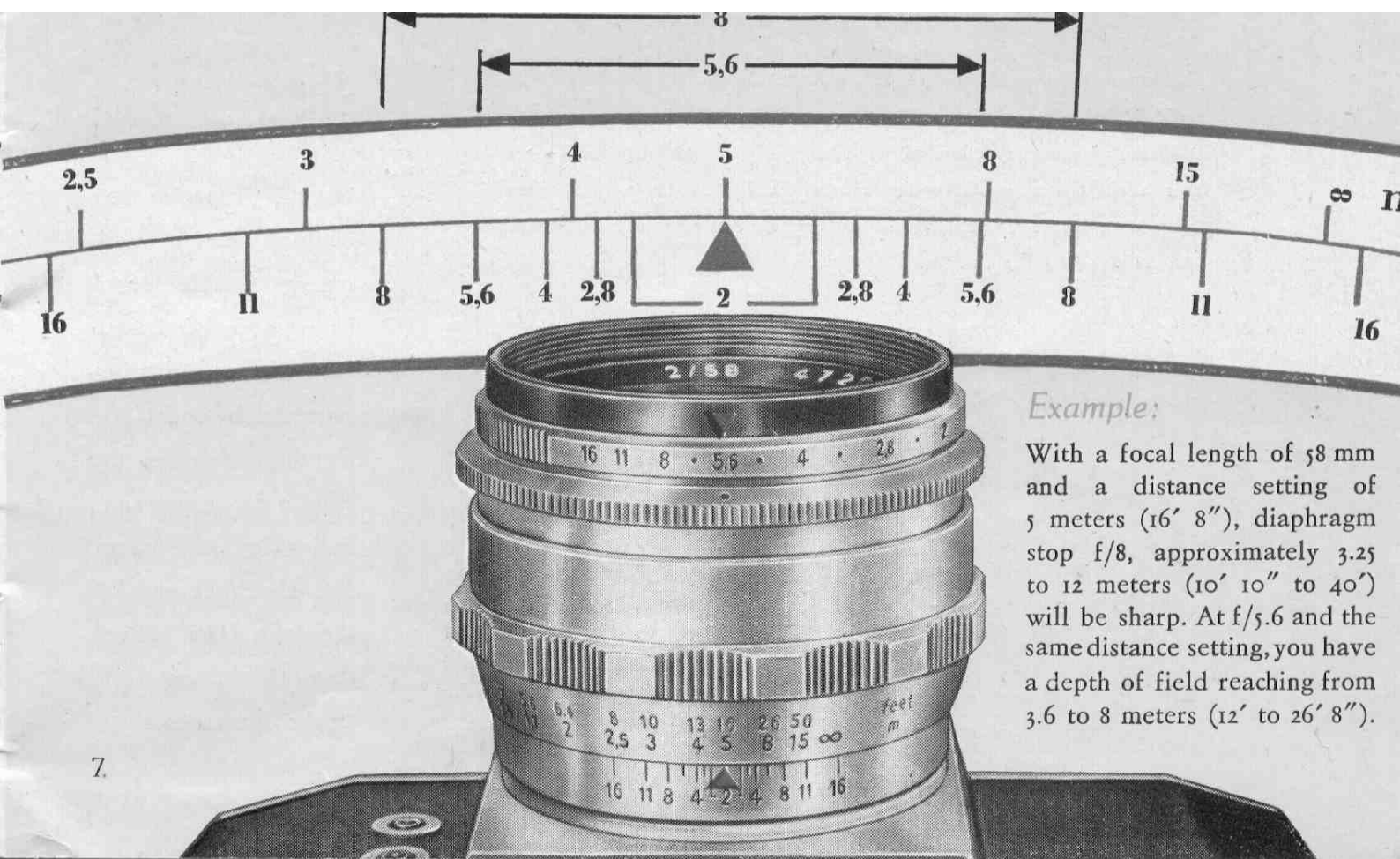
### *The distance scale*

*on the Praktica lenses is not of primary importance, focusing chiefly being performed on the field lens. You may, of course, compare the distance on the scale.*

*This distance scale gains greater value in connection with the parallel-running depth-of-field scale which indicates the range of sharpness pertaining to the various settings.*

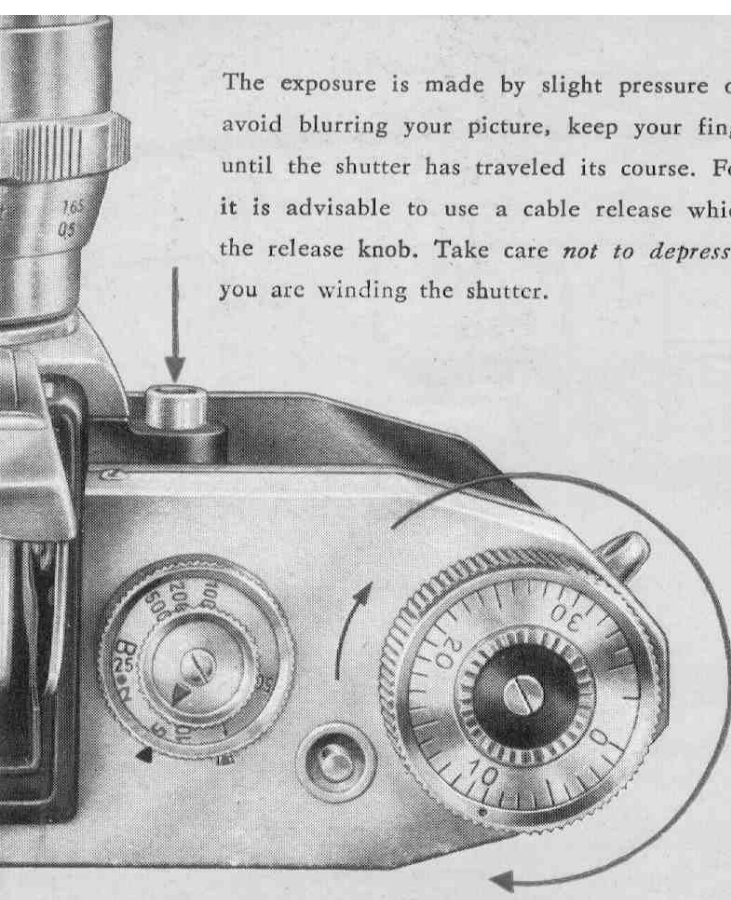
### *Diaphragm and depth of field*

The extent of the depth-of-field is shown, for every diaphragm stop and distance setting, on the depth-of-field scale. The part of the image within the range of the two identical diaphragm numbers indicating the selected lens aperture on the depth-of-field scale will always be sharp. The left-hand numbers signify the depth of field in front, and the right-hand numbers the depth of field at the back of the focal plane.



### Example:

With a focal length of 58 mm and a distance setting of 5 meters (16' 8"), diaphragm stop  $f/8$ , approximately 3.25 to 12 meters (10' 10" to 40') will be sharp. At  $f/5.6$  and the same distance setting, you have a depth of field reaching from 3.6 to 8 meters (12' to 26' 8").



The exposure is made by slight pressure on the release knob. To avoid blurring your picture, keep your finger on the release knob until the shutter has traveled its course. For longer time exposures it is advisable to use a cable release which may be screwed into the release knob. Take care *not to depress* the release knob while you are winding the shutter.

One complete clockwise rotation of the film transport knob as far as it will go, cocks the shutter and advances the film to the next frame.

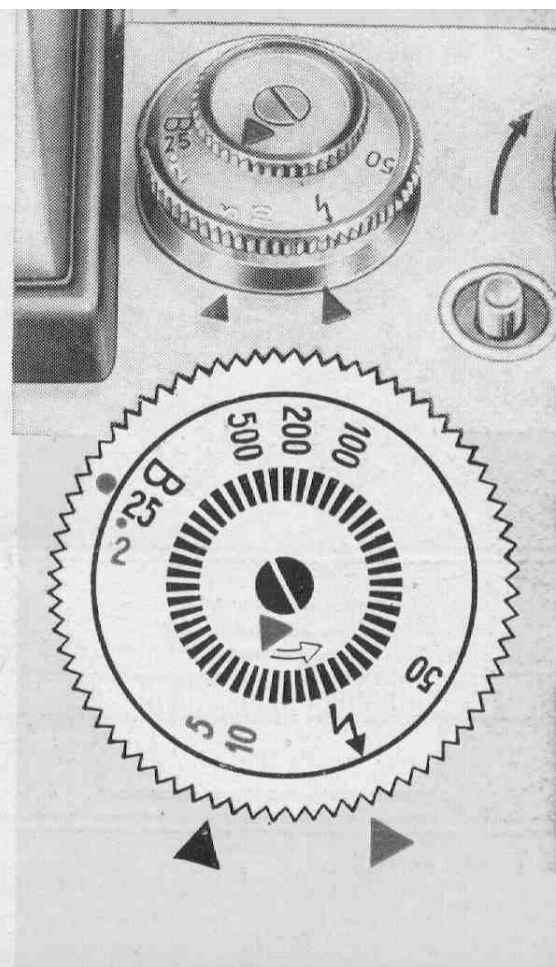
### *Shutter and film transport*

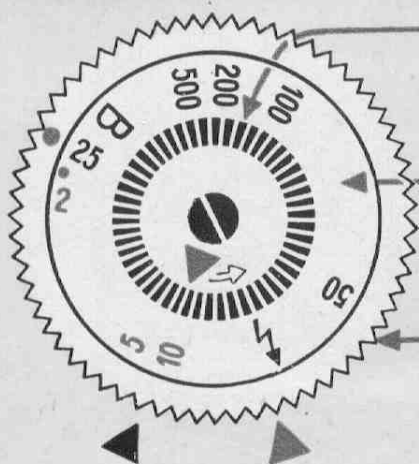
in the Praktica are coupled, hence eliminating double exposures and blanks. A turn of the film transport knob cocks the shutter, advances the film to the next frame, and swings the mirror into the light path of the lens. The picture counter moves one stroke further on.

### *Setting the shutter speeds*

The duration of the exposure is set by means of the speed-setting knob and the milled disk on top of this knob. There are black numerals on the knob marking the short speeds ( $1/500$  to  $1/25$  sec. and  $\frac{1}{2}$  -  $1/40$  sec.) and red numerals marking the longer speeds ( $1/10$  to  $1/2$  sec.), and "B" for any desired length of time.

For short speeds, the red triangle on the milled disk must point towards the black triangle on the camera top, whereas for longer exposures, the red triangle on the disk has to stand opposite the red triangle on the camera top. "B" exposures should be made with the disk set on the short speeds.

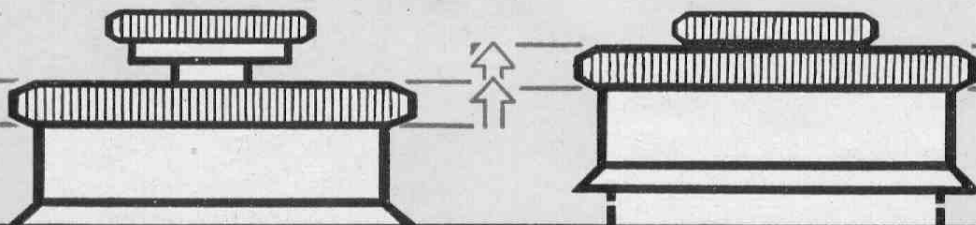


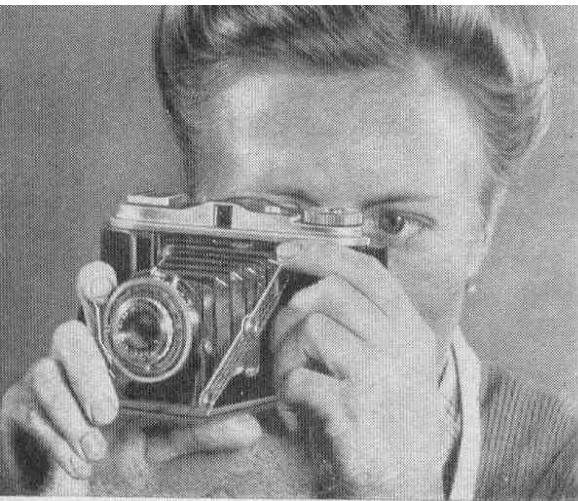


Milled disk with red triangle for setting the shutter to long or short speeds.

Speed-setting knob with engraved numerals for "B",  $\frac{1}{2}$  to  $\frac{1}{10}$  second and  $\frac{1}{25}$  to  $\frac{1}{500}$  second and  $\frac{1}{800}$ .

Outer ring (to be lifted) of the speed-setting knob, with red marking dot.





**To take a picture, bring view-finder close to your eye so that front window will be visible. Use both your hands to hold camera firmly. With your index finger, give release a smooth lateral pull.**

Even at the lowest shutter speed of  $\frac{1}{25}$  second, you may be fairly sure of obtaining an unblurred picture. Be sure, however, to stand firmly and to press your upper arms against your body. Always hold the camera in a horizontal position, never tilt it laterally.



**To be ready for the next picture, turn winding knob until next film number appears in film window.**

If you make it a rule, from the very beginning, to advance the film immediately after exposure, the risk of double exposures will be eliminated.

To set the exposure speed, the outer ring of the speed-setting knob, with the red marking dot, has to be lifted and rotated until the red dot rests next to the desired number.  $\frac{1}{2}$  second and  $\frac{1}{25}$  second click into the same rest hole.

With the shutter set at "B", you are at liberty to expose for any length of time. The shutter remains open as long as you depress the release knob.

The speed may be set either before or after winding the shutter.

### *Setting the shutter speeds in the Praktica FX 2 - brief summary of main points*

#### *Short instant speeds*

Red triangle on milled disk stands opposite black triangle on camera top. Setting for speeds from  $\frac{1}{25}$  to  $\frac{1}{500}$  second, for  $\frac{1}{2}$  and "B".

#### *Long instant exposures*

Red triangle on milled disk stands opposite red triangle on camera top. Setting for  $\frac{1}{2}$ ,  $\frac{1}{5}$  and  $\frac{1}{10}$  second.

#### *Time exposures*

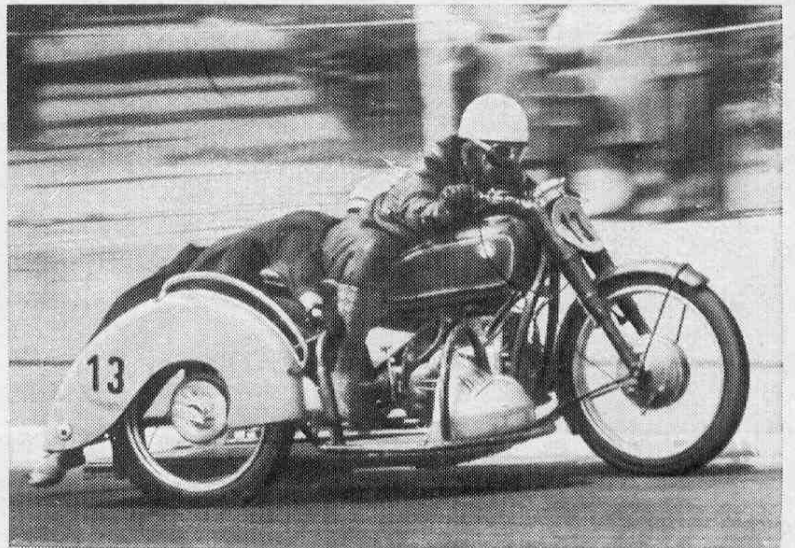
To make exposures at the "B" setting, the red triangle on the milled disk may point either to the black or the red triangle on the camera top.

#### *Long time exposures*

These are made with the "B" setting. The shutter is actuated by means of a special cable release.



*Nocturnal - long time exposure*



*Rapid movement - short instant exposure*



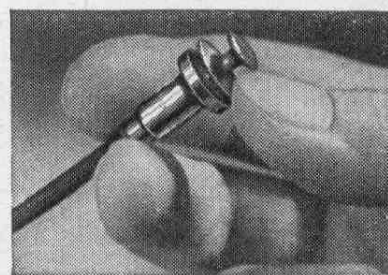
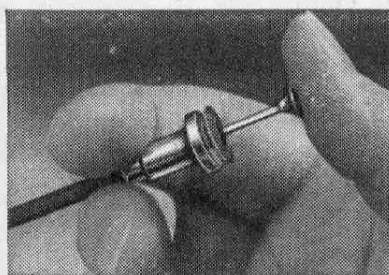
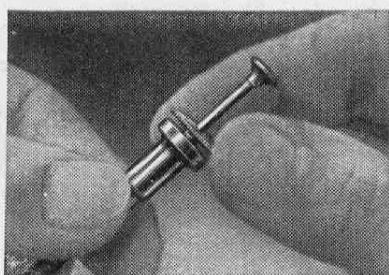
*Almost motionless – long instant exposure*

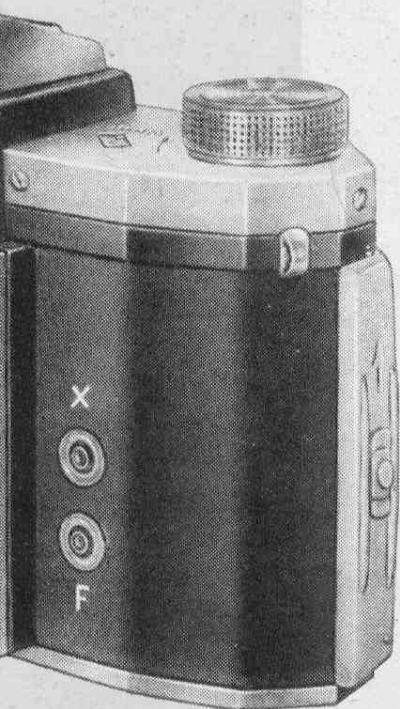
### *The special cable release*

The special cable release permits exposing for any length of time. The shutter having been set at "B", you depress the release plunger, thereby locking the little knurled plate and keeping the shutter open. By slight pressure on the knurled plate it becomes unlocked, followed by closing of the shutter.

If you depress the knurled plate and turn it to the right before pushing in the plunger, the mechanism is not locked and the cable release works in the ordinary manner.

As soon as you remove your thumb from the plunger knob, the shutter closes automatically.





### *Flash synchronization*

On the front of the camera are two bipolar contact sockets, the X contact (above) for electronic flashes and short-burning flash bulbs, and the F contact (below) for long-burning flash bulbs.

#### **X contact (above):**

Shutter speed  $\frac{1}{50}$  sec. with a flash duration of 0.1 to 1 ms ( $\frac{1}{10000}$  to  $\frac{1}{1000}$  sec.). For a flash period of 1 to 5 ms ( $\frac{1}{1000}$  to  $\frac{1}{200}$  sec.) the shutter has to be set to the  $\frac{1}{2}$  mark. This contact is also designed for short-burning flash bulbs, in which case the shutter speed depends on the practical flash period. As a rule, this will be  $\frac{1}{25}$ , or  $\frac{1}{10}$  sec.

#### **F contact (below):**

With this contact it is possible to synchronize the shortest shutter speeds to those flash bulbs whose ignition period is less than 10 ms and whose practical flash duration is greater than 20 ms.

Where longer shutter speeds than  $\frac{1}{500}$  sec. are being used, the value of 20 ms has to be added to the shutter speed in ms. The resulting total represents the practical duration which has to be achieved by the flash.

*Important: Never put the flash bulb into the flash unit before the shutter has been cocked.*



Taken with 50 mm focal length



180 mm focal length

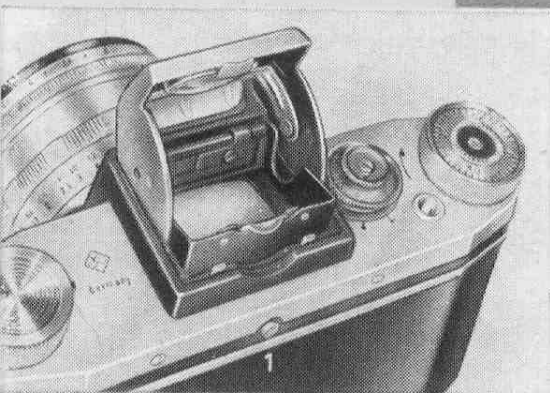


500 mm focal length

*The high-quality interchangeable lenses*

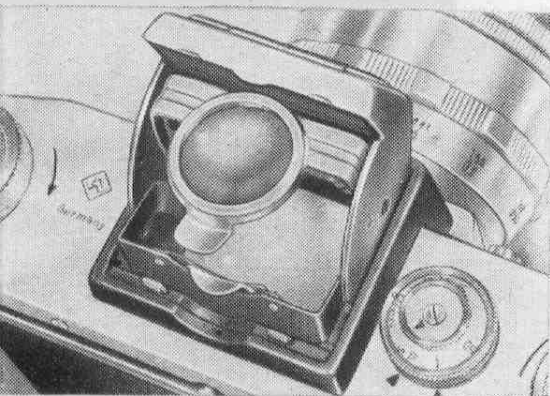
of the Praktica FX 2 permit taking any desired section of the subject from an equidistant viewpoint. Long-focus lenses draw far distant objects close up, whereas short-focus lenses encompass a wide angle of field.

## *The finder systems*



### *The lighthouse*

Depressing a little knob 1 on the back of the camera causes the lighthouse to spring open and the image field lens to become visible. The lighthouse is closed by pressure on the lighthouse cap, whereby all the parts are folded automatically into their original position, except the rear finder eyepiece which has to be pushed in beforehand.



### *The magnifying lens*

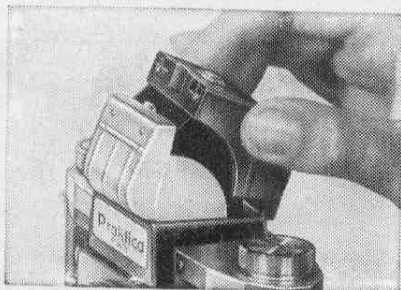
For critical focusing of the finder image a magnifying lens may be swung in, yielding an approximately 4fold magnification of the ground-glass image.

### *The sports finder*

Rapidly moving objects may be taken with the direct-vision frame finder. The flap of lighthood cap 4 has to be swung up, the magnifier brought into operating position and rear eyepiece 5 pulled up. The eyepiece must be pushed in again before the lighthood is closed.

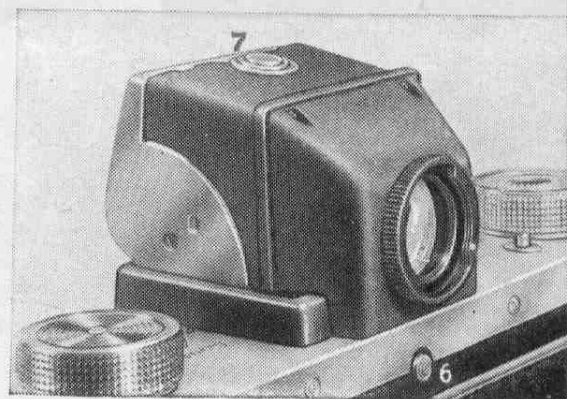
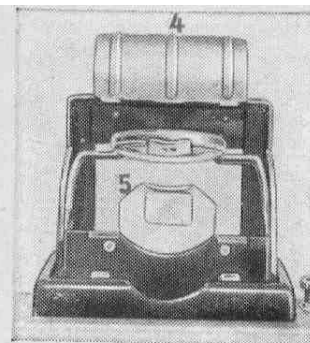
### *The reversible prism*

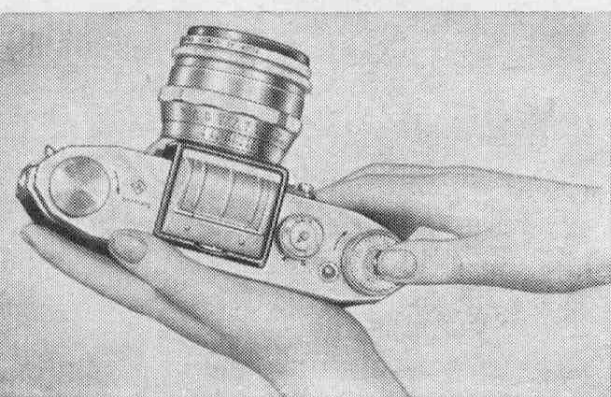
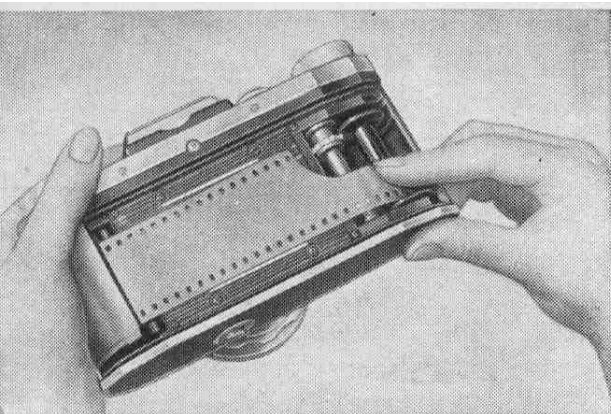
The prism reveals, at eye-level, an upright and laterally correct reflex image. This is of great advantage in sports scenes where you can follow your subject in the direction of its movements.



Magnification of finder image:  
approx: 4 times.

The reversible prism is inserted into the open lighthood from above, while the latch button is being depressed, whereupon it is bolted by means of fastening knob 7.



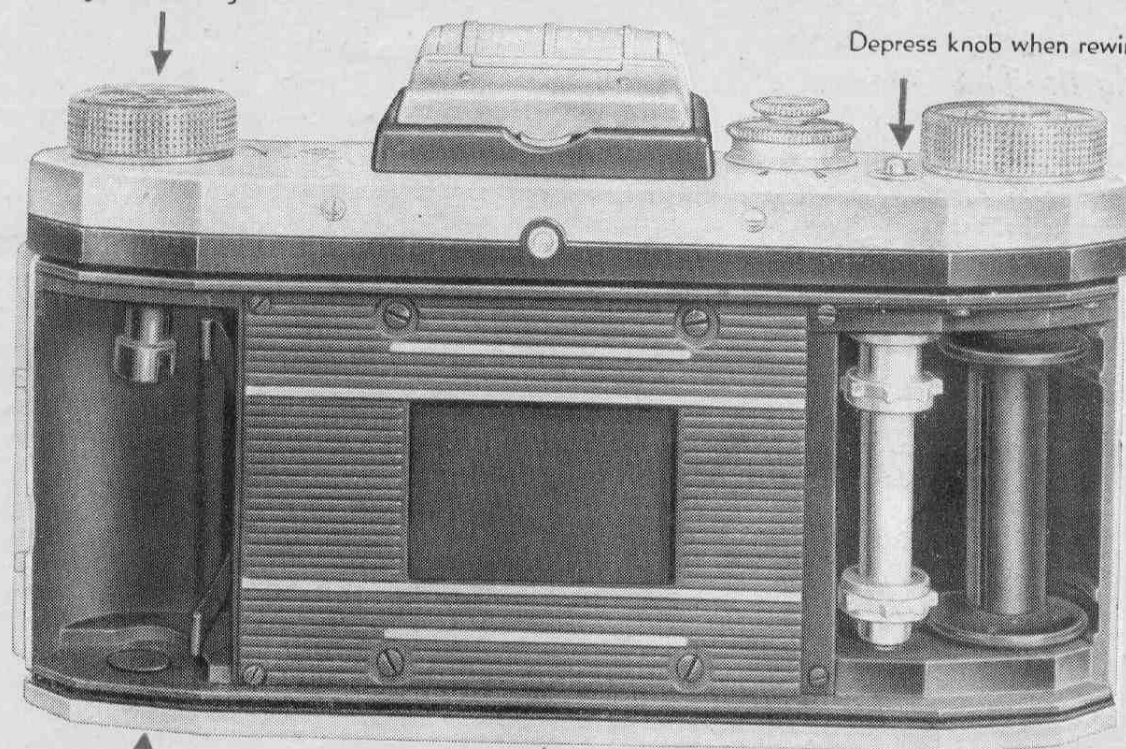


### *The film-feed mechanism*

By pushing of the bolt in the direction of the arrow, the camera back is unlocked and may be taken off. Spool holds, parts of the transport mechanism, and the focal plane shutter are now open to view. Never touch the shutter curtains! Pull out film rewind knob and place the film cartridge into the feeding-spool bearer with the film leader, coating downwards, pointing towards the receiving spool. Draw approximately 10 cm of film out of the cartridge and fix the beginning of the film into the slit in the receiving spool. Make sure that the sprocket teeth catch the film perforation. Advance the film by turning the transport knob. Link the camera back into its groove and close it with slight pressure. The latch must snap in audibly. You now expose two blanks. Check the transport mechanism by paying attention, while winding the shutter, that the rewind knob rotates in the opposite direction of the arrow. After these two blank exposures you set the counting mechanism on stroke 1 – and your Praktica is ready for picture-taking.

Pull out rewind knob before  
inserting film cartridge

Depress knob when rewinding



19

Place film cartridge into  
feeding-spool bearer

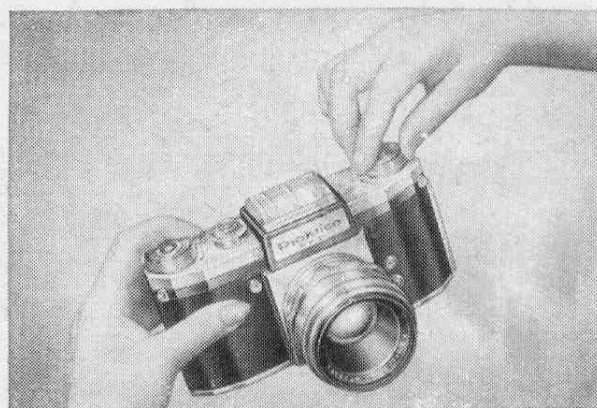
Do not touch  
shutter curtains

Sprocket teeth

Receiving spool

## *Removing the film*

At the end of the film, you will feel a certain resistance when winding the shutter – a sign that the entire film strip has been exposed and must be rewound into the cartridge. This is done by depressing the release knob of the rewind mechanism and rotating the rewind knob evenly in the direction of the arrow. The film leader slips out of the receiving spool noticeably – whereupon the rewind performance is completed. Open the camera back and take out the cartridge with the exposed film. Do not exchange films in bright sunlight but, if possible, in the shade. The cartridge with the exposed film should be wrapped in light-tight paper, or in its original packing material, before being given away for processing. – The camera is now free to accept a new film.

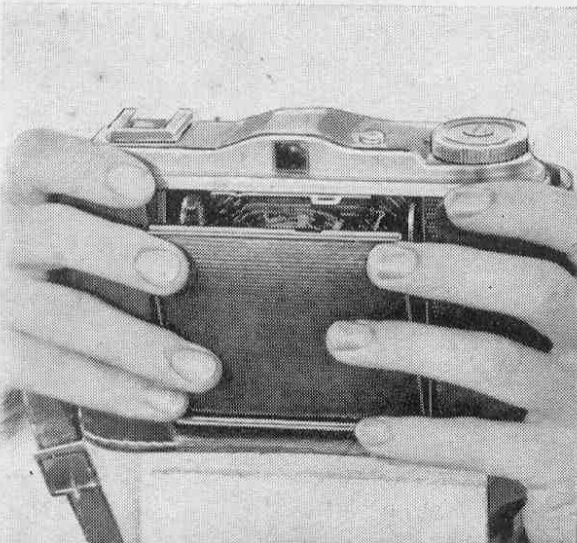
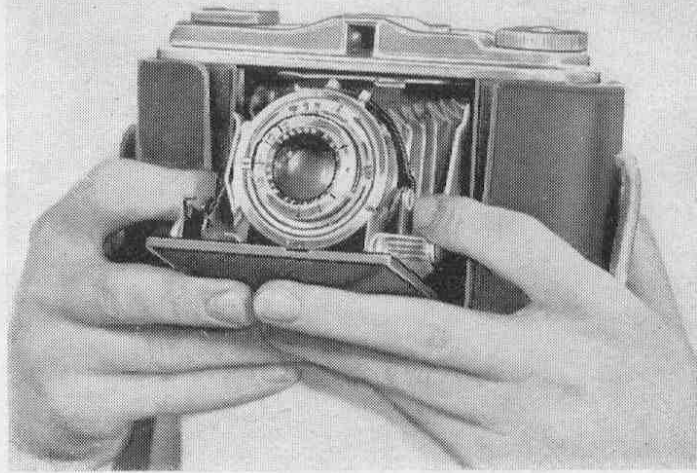


## *Negative material*

The Praktica FX 2 takes perforated 35 mm cine film, available at your photo dealer's either in cartridges or in bulk. The film strip in a cartridge yields 36 exposures. Sometimes, however, half-length cartridges are used. In case you fill your own cartridges or cassettes, you need 1.60 meters (5' 4") of film for 36 exposures. You can, of course, load shorter lengths if you wish to.

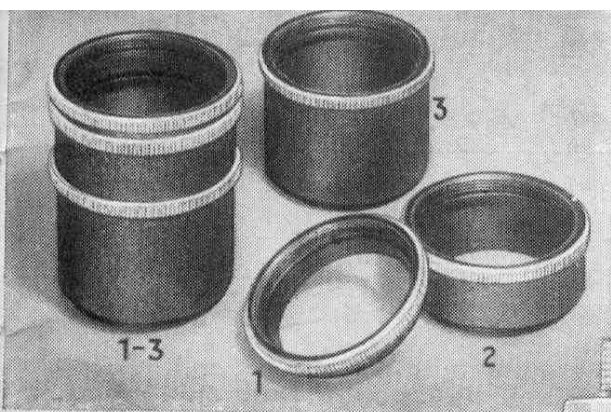
Color films are supplied in the same lengths and packings as black-and-white. It is precisely the color film that goes so well with the Praktica, for you pre-view much of the final effect of the color picture already in the colored ground-glass image. The Praktica lenses are color-corrected, too.

**To close camera,  
gently depress, with both index fingers, the  
brace joints and the camera will close.**



**To lock camera front,  
press front firmly against camera body until  
it locks into the closed position.**

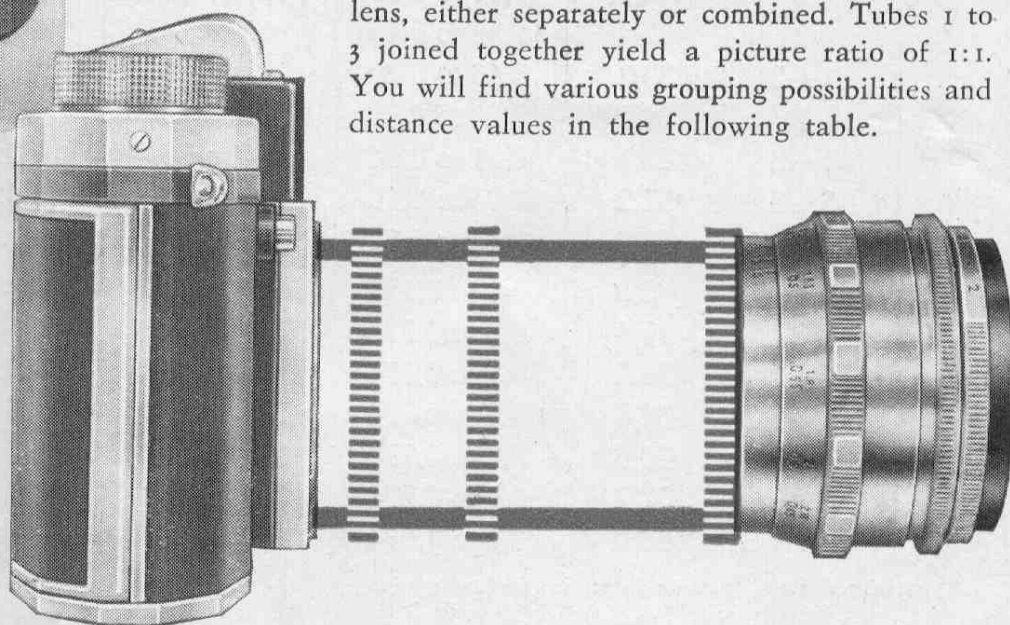
After taking the last (12th) picture, turn the winding knob until the end of the backing paper has passed the window.



### *Close-up exposures*

The helical focusing mount of the normal lens makes it possible to approach your object up to about 50 cm (20 ins.). Exposures at a shorter distance necessitate the use of extension tubes. These tubes are screwed in between camera and lens, either separately or combined. Tubes 1 to 3 joined together yield a picture ratio of 1:1. You will find various grouping possibilities and distance values in the following table.

The image is viewed in the field lens, the same as for any other exposure.



*Table for close-up exposures*

| Focal length | Tube No. | Length of tube (mm) | Picture ratio $\beta$ | Distance *) of object (mm) | Size of object (mm <sup>2</sup> ) | Increase in exposure time |
|--------------|----------|---------------------|-----------------------|----------------------------|-----------------------------------|---------------------------|
| 50 mm        | 1        | 5,8                 | 0,11 to 0,25          | 455 to 224                 | 207×311 to 96×144                 | 1,2                       |
|              | 2        | 17,4                | 0,35 to 0,49          | 167 to 126                 | 69×104 to 49×74                   | 1,7                       |
|              | 1+2      | 23,2                | 0,46 to 0,60          | 131 to 106                 | 52×78 to 40×60                    | 2,0                       |
|              | 3        | 34,8                | 0,69 to 0,83          | 95 to 83                   | 35×52 to 29×43                    | 2,6                       |
|              | 1+3      | 40,6                | 0,81 to 0,94          | 84 to 76                   | 30×45 to 26×38                    | 2,9                       |
|              | 2+3      | 52,2                | 1,05 to 1,19          | 71 to 65                   | 23×34 to 20×30                    | 3,6                       |
|              | 1+2+3    | 58,0                | 1,16 to 1,30          | 66 to 61                   | 21×31 to 19×28                    | 4,0                       |
| 58 mm        | 1        | 5,8                 | 0,1 to 0,174          | 622 to 374                 | 240×360 to 138×207                | 1,2                       |
|              | 2        | 17,4                | 0,3 to 0,374          | 234 to 198                 | 80×120 to 64×96                   | 1,7                       |
|              | 1+2      | 23,2                | 0,4 to 0,474          | 187 to 165                 | 60×90 to 50×76                    | 2,0                       |
|              | 3        | 34,8                | 0,6 to 0,674          | 139 to 128                 | 40×60 to 35×53                    | 2,6                       |
|              | 1+3      | 40,6                | 0,7 to 0,774          | 125 to 117                 | 34×51 to 31×46                    | 2,9                       |
|              | 2+3      | 52,2                | 0,9 to 0,974          | 107 to 103                 | 26×40 to 24×36                    | 3,6                       |
|              | 1+2+3    | 58,0                | 1,0 to 1,074          | 100 to 96                  | 24×36 to 22×33                    | 4,0                       |

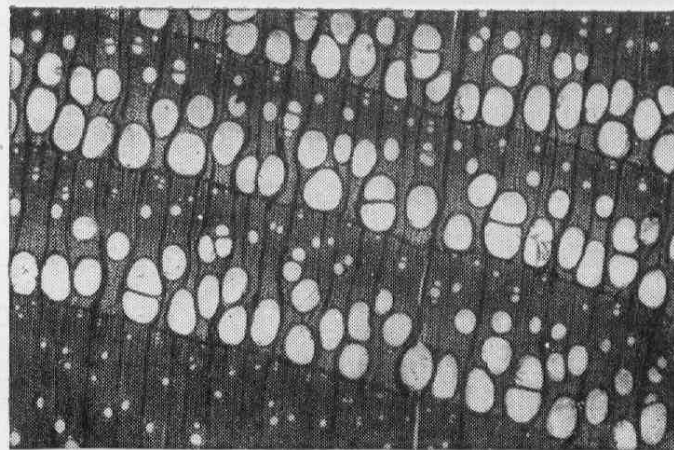
\*) measured from extreme front rim of lens mount

### *Micro exposures*

require an additional adapter for connecting the microscope to the camera. Please note that the image field lens of the Praktica is available also with clear glass spot and hairline cross for extreme enlargements.

### *Color filters*

to be used in the Praktica may have slip-on or screw-in mounts. This holds good also for sunshades.





*The prism finder permits checking sharpness of screen image in direct vision.*

### *Maintenance of the Praktica FX 2*

The camera is protected by the Everready Case. The case holds the camera, also during the exposure, without causing the slightest inconvenience. The camera, with screwed-in lens, should always be kept in its case. It must be spotlessly clean, especially those parts which come into contact with the film. Use only a very soft brush to remove any dust.



Never touch the lens surfaces with your fingers. They may be cleaned with a soft leather cloth. This will do no harm to the bluish anti-reflex coating.

*How to hold the camera when making the exposure*



*When focusing on the image field lens, hold your Praktica in chest level and take it up close to your eye when using the magnifying lens.*



*For frame-finder viewing (especially in sports scenes) the position of the camera will be naturally adapted to the situation.*

*Do not, under any condition, interfere with the camera mechanism. Necessary repairs should be carried out at the factory. Oil or grease applied by other than factory expert hands may cause disturbance in functioning and decrease in picture quality. The manufacturers will be pleased to give information or advice at any time.*



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