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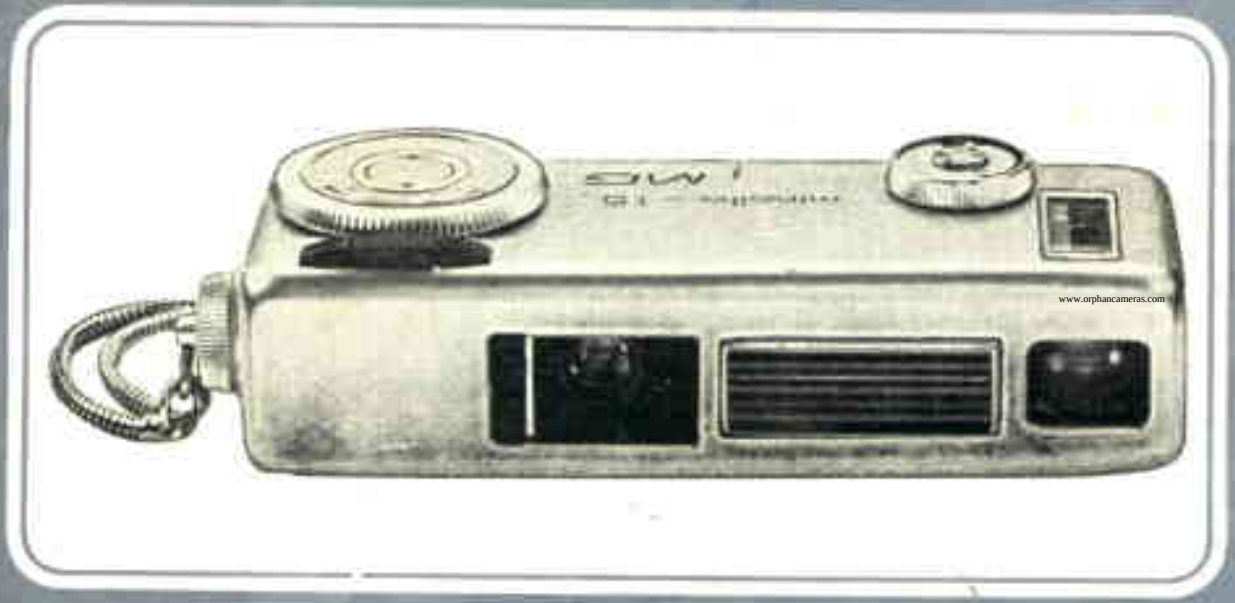
Minolta-16MG

OWNER'S MANUAL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Minolta is recognized as the world's leader in subminiature photography.

The Minolta 16MG is the latest of a long line of Minolta 16mm subminiature cameras.

The 16MG is a very versatile camera with easy operation, slim styling, and compact design.

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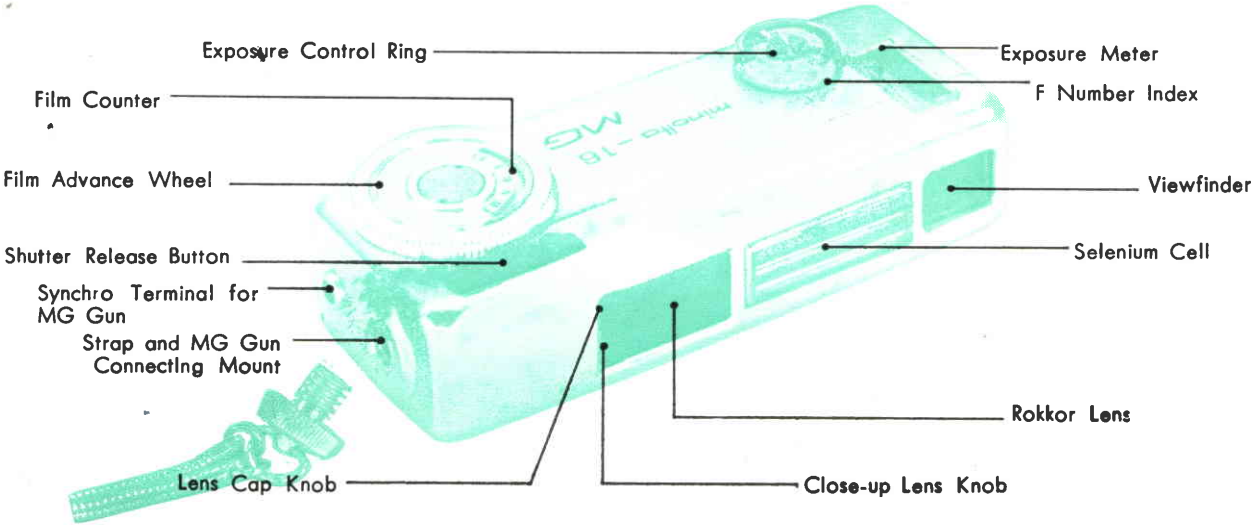
Name of Camera Parts



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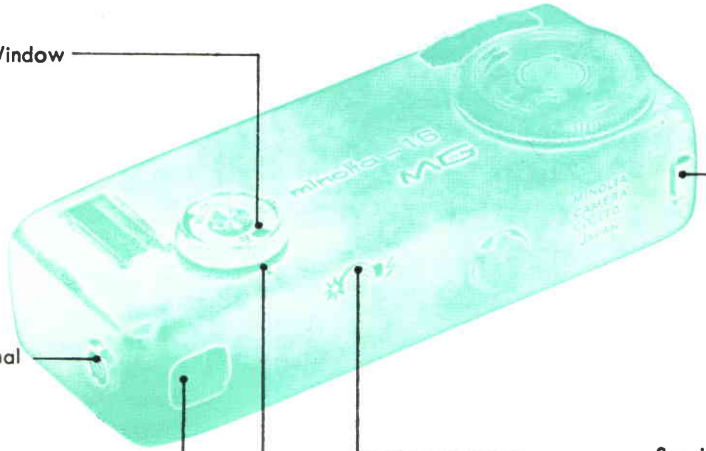

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Major Specifications

Type:	Super-Miniature Camera with a Picture Size of 10×14mm for 16mm film
Lens:	Rokkor TD 20mm-F/2.8, 4 Elements in 3 Groups
Shutter:	Programmed Shutter with Diaphragm Vanes Shutter Speed 1/30-1/250 Operation Range-EV 8-16 (for ASA 100 film)
Synchro Contact:	X Contact at 1/30 second
Exposure Meter:	Selenium Meter of the Follow-up Needle Type
Measuring Range:	EV 8-16 (for ASA 100 film)
Film Speed:	ASA 25-400
Focusing:	Fixed Focusing Close-up Lens (Set for 1.2m, 4 ft) Contained
Viewfinder:	Bright Frame with Parallax Correction Markings
Film Advance:	Wheel Type—120°
Film Counter:	Reverse Counting Type, Automatic Return
Accessories:	MG Flashgun and Filters (UV, Y48), Exclusive for Minolta 16MG
Dimensions:	102.5(L)×24(H)×39.5mm(W) 4″(L)×1″(H)×1½″(W)
Weight:	160g. 5.6oz.

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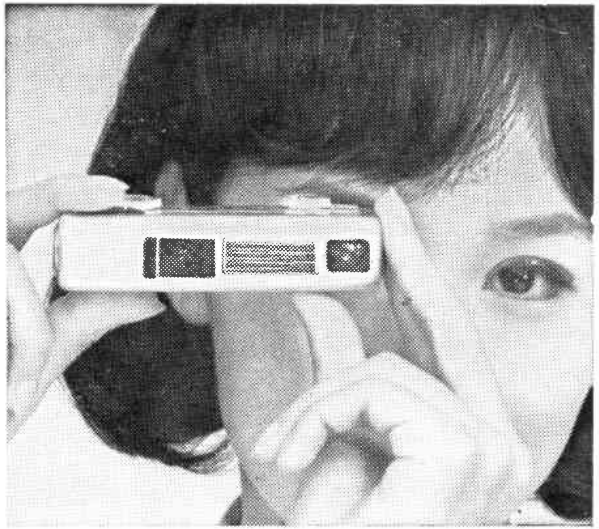
Holding the Camera

The most important step in the proper use of the Minolta 16MG is holding the camera properly. If the camera is not properly held or if it is jerked when being used, you will not obtain sharp negatives.

The camera may be held horizontally or vertically. Press the camera firmly to your face keeping your hand held against your body, then release the shutter gently.

Why not practise these basic steps before loading the camera.



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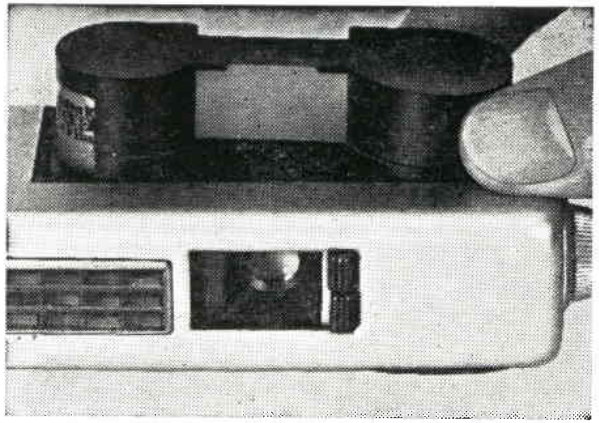
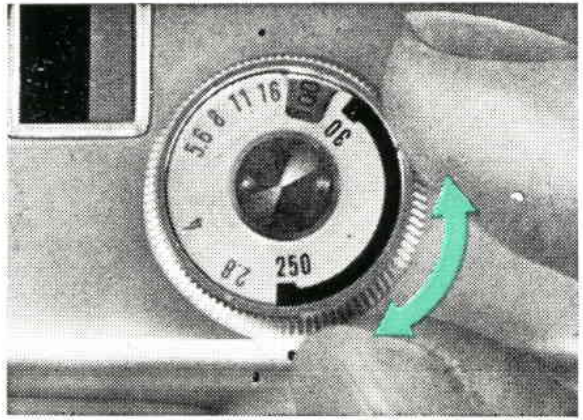
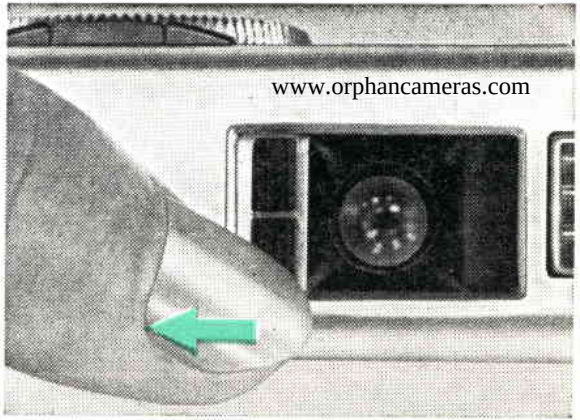


1. Load the camera with Minolta 16mm film.



2. Set the film speed setting to correspond to the film which you are using (see page 12).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3. Open lens cap and close-up lens to the right side.

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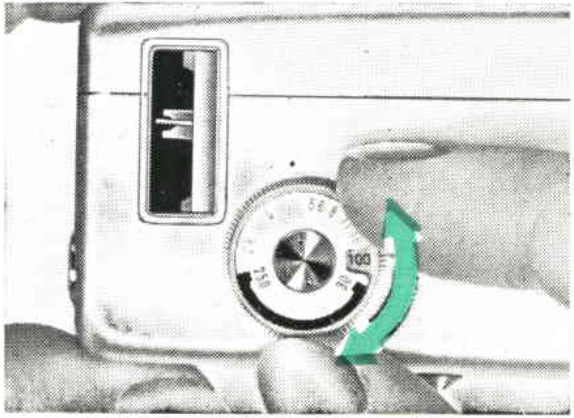
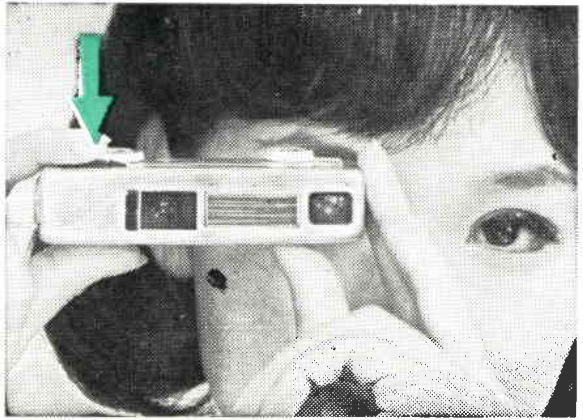


4. Set diaphragm/shutter. Rotate the exposure ring so that the silver indicator in the window is aligned with the red needle. **Be sure the synchro select button is set at the ☼ mark.**



5. Look through the viewfinder compose the picture and shoot. For close-up photographs use the built-in close-up lens (see page 14).

· **Note:** The lens cap is built into the camera body. It is recommended to keep the lens cap closed when the camera is not in use. When the lens cap or close-up lens is covering the lens, there is a red signal on the left side of the viewfinder. The shutter cannot be released if the lens cap is in place or if either the cap or close-up lens are not properly set.

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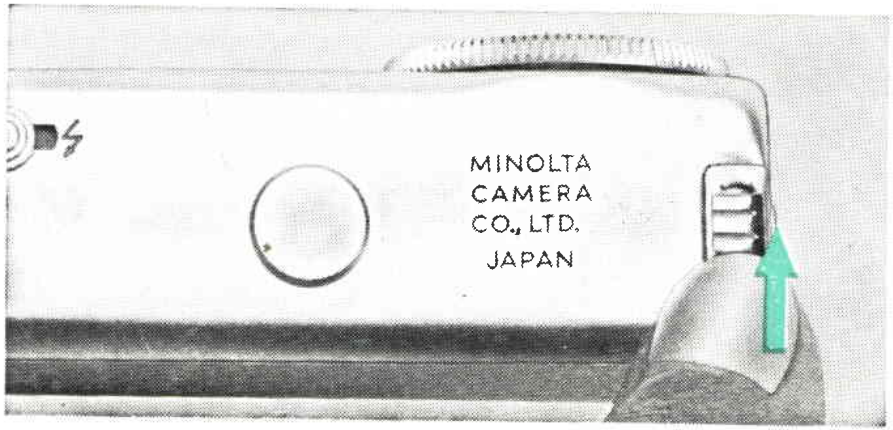
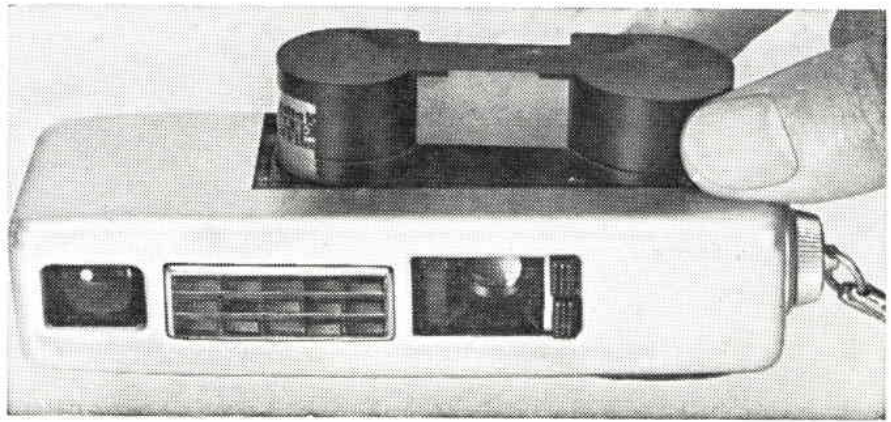


1. Push up the back cover open button. The back cover will come completely free from the camera body so it is advisable to keep the back cover one hand by when pushing the open button.



2. Insert the film magazine into the film chamber. If the magazine will not set properly advance the film advance lever until the magazine sets properly in the chamber. **Note:** Film should be loaded in subdued light.

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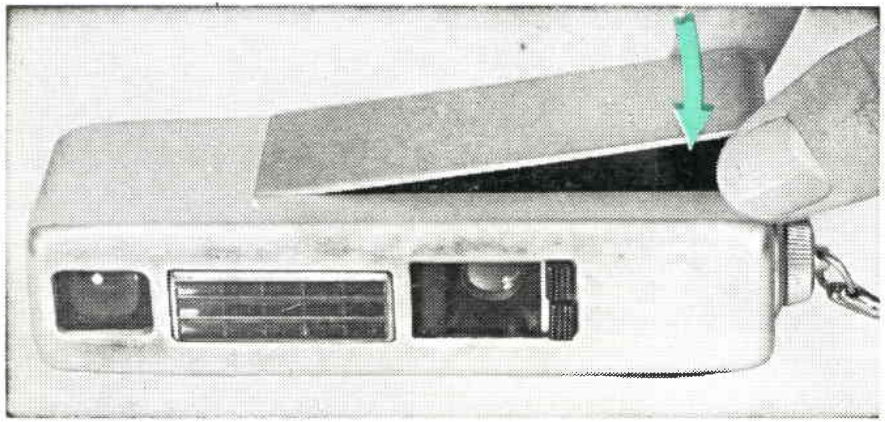

3. After the magazine is properly inserted, replace the back cover as illustrated.

4. Advance the film advance wheel until it stops. Press shutter release button. Repeat this action until the red index is aligned with figure 20 in the film counter. The film advance wheel advances 120° per frame.

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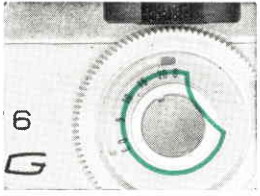
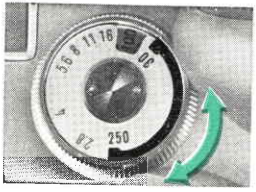
Film Counter



As you advance the film a red indicator appears in the film counter. The film counter is marked as follows: (S, 20, 15, 10, 5, 0, E) The counter always indicates how many pictures remain in the camera. When the counter indicates 0 it means you have no pictures remaining, however, it is necessary to advance the wheel until the red indicator is aligned with the E. Release the shutter, and unload film in subdued light.

Exposure Measuring



1. **Set the Film Speed.** The ASA film speed number should be set on the film speed ring. This number should correspond to the film being used. Turn the film speed ring (exposure control ring) until it stops. By exerting a small amount of pressure on the ring after it stops the ASA number will change on the ASA ring. The number can be changed by turning the ring in either direction. The (ASA) film speed ring is marked as follows: 25 (32) 50 (80) 100 (160) 200 (320) 400. The numbers indicated in the parenthesis are click stops on the ring.

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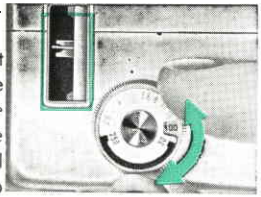
2. Exposure Measurement.



Aim the camera at the subject to be photographed the red needle in the meter window will move according to the amount of light reflected by the subject. Turn the exposure control ring in either birection until the silver indicator is aligned with the red needle. When the needle is set the most suitable shutter speed/aperture combination is obtained.

When aligning the silver indicator with the red needle be sure to look at the windom from above.

The black dot index on the camera body indicates the approximate sutter speed and the red dot index indicates the approximate F number.

Caution: If the red needle moves into the silver colored area on top or bottom in the meter window, it indicates too much or too little light.

If you are using film with a low ASA speed the silver indicator will not move through the entire blackarea **Do not** force the exposure ring. If the ringis forced the ASA setting will be moved in error.

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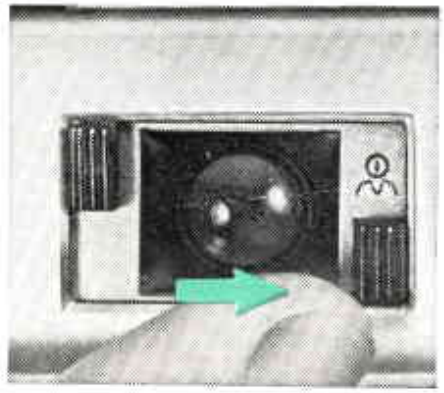
Fixed Focus Lens

The Minolta 16MG has a fixed focus lens and pictures will be sharp from 2′2⅜″ (0.67m) with close-up lens. When taking close-up shots it is necessary to use the built-in close-up lens. Slide the close-up lens as illustrated. A red indicator will appear on the left side of the viewfinder to show that the close-up lens is in place over the lens.



The close-up lens is preset for a distance of 3′11¼″(1.2m). The depth of field chart below indicates area of sharpness when subject is 3′11¼″(1.2m) from camera with close-up lens.

Distance \ F No.	2.8	4	5.6	8	11	16
1.2m	1.39 1.05	1.50 1.00	1.67 0.94	2.00 0.86	2.77 0.77	6.12 0.67
3′11¼″	4′6¾″ 3′5⅜″	4′11″ 3′3⅜″	5′5¾″ 3′ 1″	6′6¾″ 2′9⅞″	9′ 1″ 2′6½″	20′ 1″ 2′2⅜″

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Framing through the Viewfinder

When viewing through the viewfinder you will see a white rectangular frame. For normal shooting everything within the white area is in the actual photographic area.

When using the close-up lens you must compensate for parallax, since the picture area moves slightly to the right. Your guide lines for the left side of the picture are the vertical correction marks at the top and bottom.

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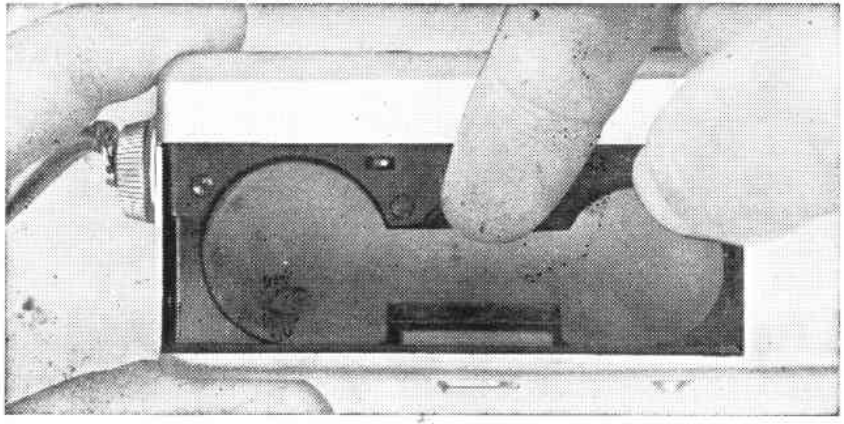
Unloading Film

After taking 20 pictures continue advancing the film advance wheel until the red indicator is aligned with the E on the counter. Open the back cover making sure that one hand is on the back cover, take out magazine and put it in original box or wrap it in paper.

Note: Unload film in subdued light.



Flash Photography

Use of the Minolta Flashgun is recommended for night photography, both indoors and outdoors. It is also recommended for daytime photography when a subject is in a shaded area. A special MG flashgun is available for exclusive use with the Minolta 16MG

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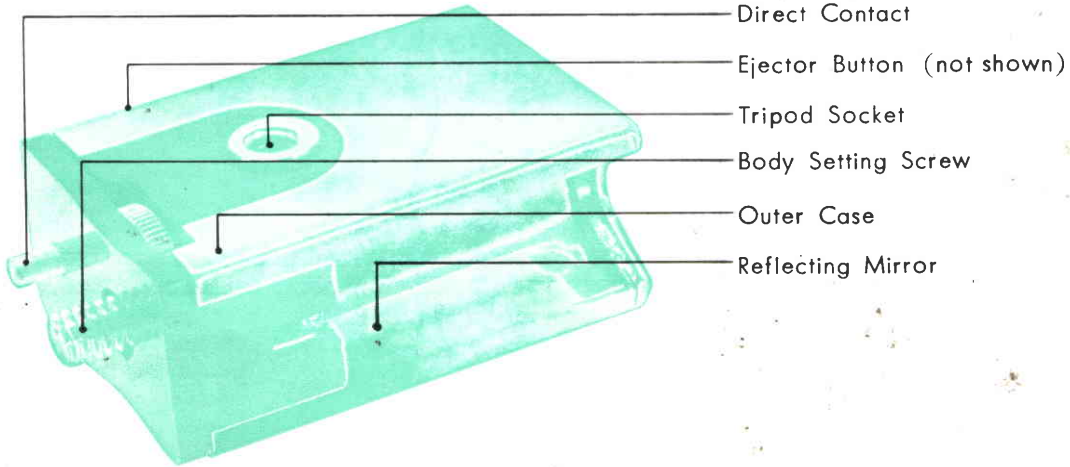
Description of MG Flashgun



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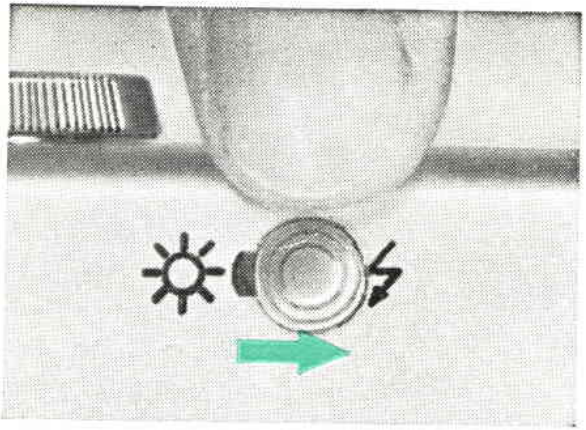

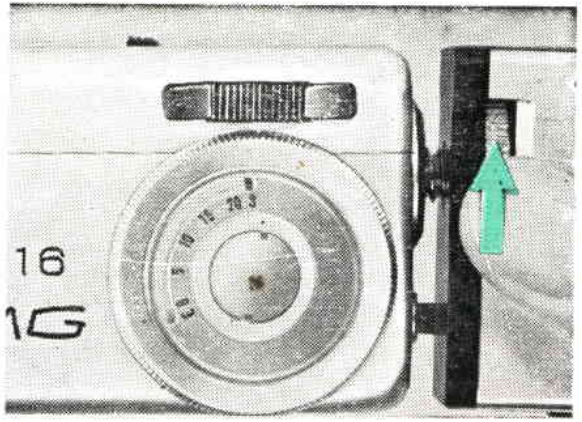

How to use the MG Flashgun

1. Inserting the battery.
   Pull of the outer case and insert the battery (15 volt, Mallory M 504 or its equivalent) into the battery chamber. Place the(+)side of the battery to the (+) mark of the chamber. Release the outer case.
2. **Set the synchro contact select button to the ϟ mark.** The shutter speed is now set at 1/30th second. Remove the wrist strap from the camera.

Attach the flashgun to the camera body by inserting the set screw and the direct contact projection into the tripod socket and direct contact point of the camera body. Tighten the set screw.

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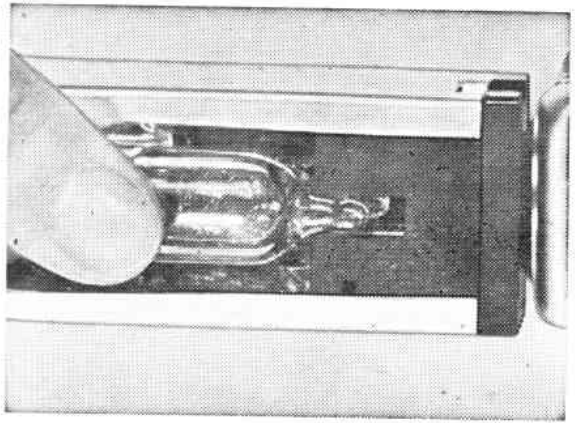

3. Insert AG-1 or AG-1B flash-bulb into socket.

Flash type \ Film Speed (ASA)		32	50	80	100	160	200	320	400
AG - 1	m	14	17	22	25	31	35	43	50
	ft	46	55	75	80	102	110	142	160
AG - 1B	m	10	12	15	17	22	25	31	35
	ft	33	40	50	55	75	80	102	110

4. When taking flash pictures, the automatic feature of the exposure meter does not operate. It is necessary to determine the proper lens opening by using the guide number as listed above. Divide the guide number by distance from the subject to obtain proper F number.

Example: Distance of 5 feet to subject using ASA 50 film and AG-1B bulb. The proper F number would be F/8.

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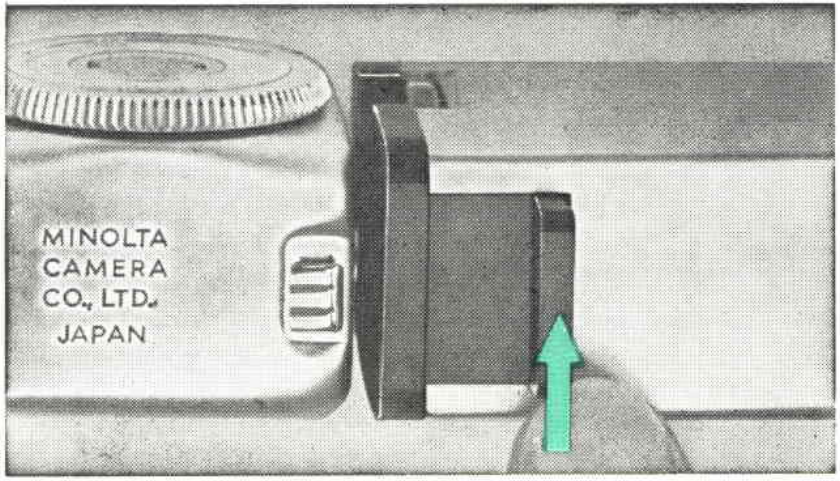
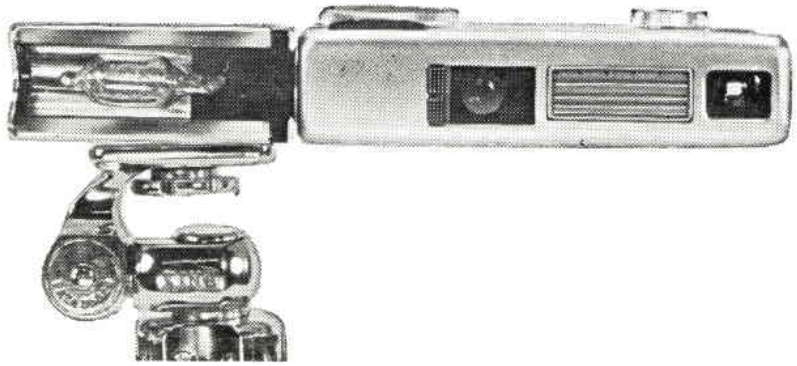


5. Remove bulb by pressing the ejector button.

When using a tripod with the flashgun mounted to the camera, mount the tripod to the tripod socket in the flashgun.



Mounting MG Filters

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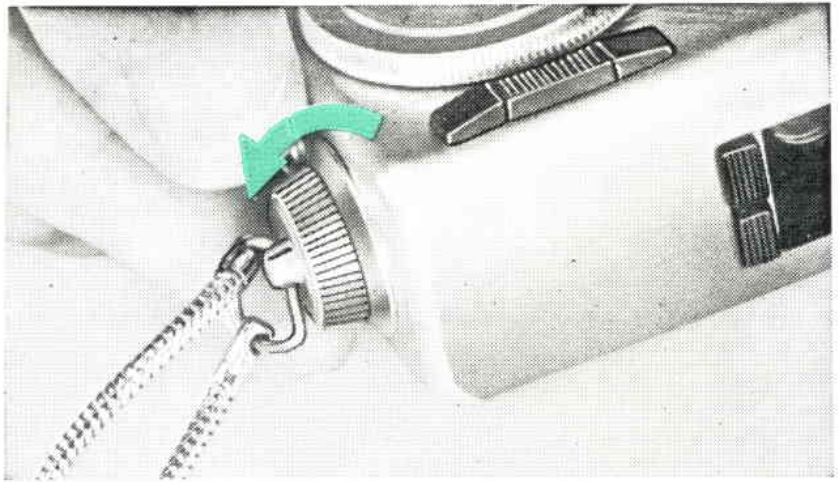
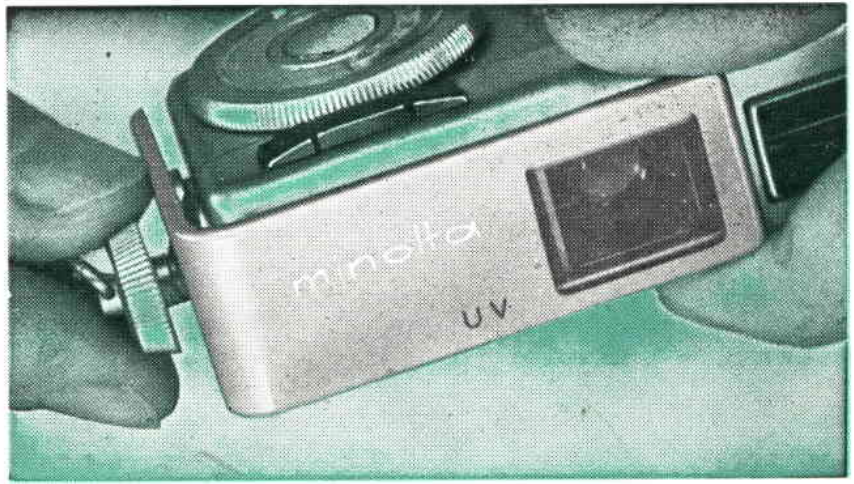


The MG filters for use with the 16MG have been designed exclusively for this camera.

In order to set the filter it is necessary to remove the strap, attach the filter to the camera body as illustrated and put strap back on camera.



When using the Y48 filter it is necessary to halve the ASA number and set the number on the film speed ring to compensate for the 2X filter factor. Example: If using the 100 ASA film set 50 on the film speed ring.

Note: The close-up lens and the lens cap cannot be used when the filter is in place.

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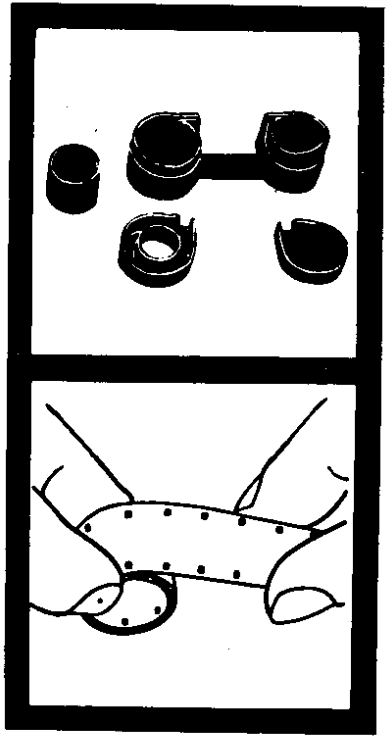
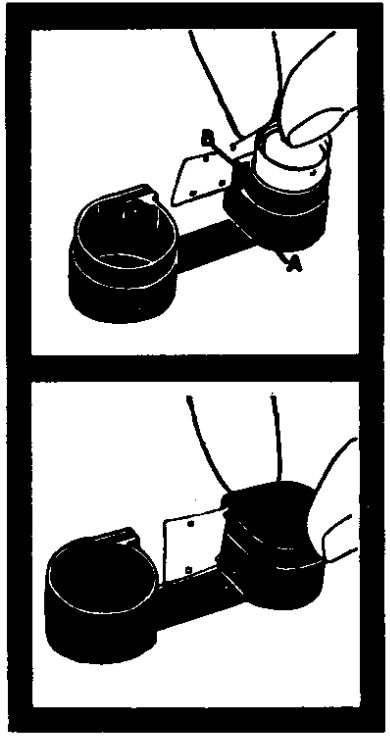
Loading Your Own Magazine



A wider range of film is available when you load your own magazine.

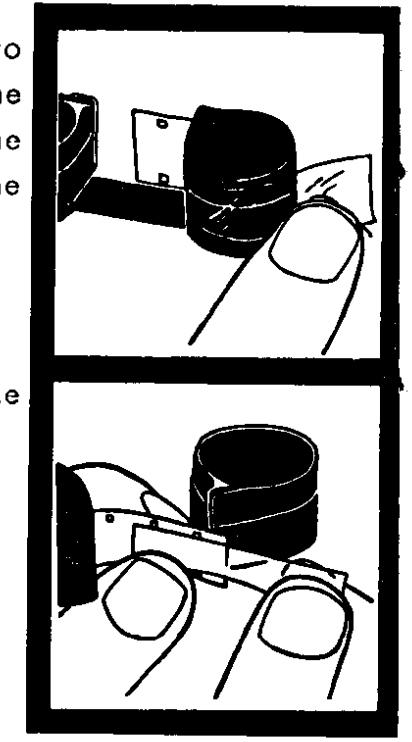
1. Arrange the parts of the magazine as shown in the picture so that you may easily handle them in the dark room. It is recommended to practice the assembling of the parts repeatedly before using film.

2. When using a long roll of film, cut it to about 47 cm (18.5 inches), and roll it tight with the emulsion coated side inward. Be sure not to touch the film surfaces with your fingers.



3. Insert the film roll into the smaller magazine chamber, and take the film leader out of the magazine chamber.

4. Put the cover on the magazine chamber.



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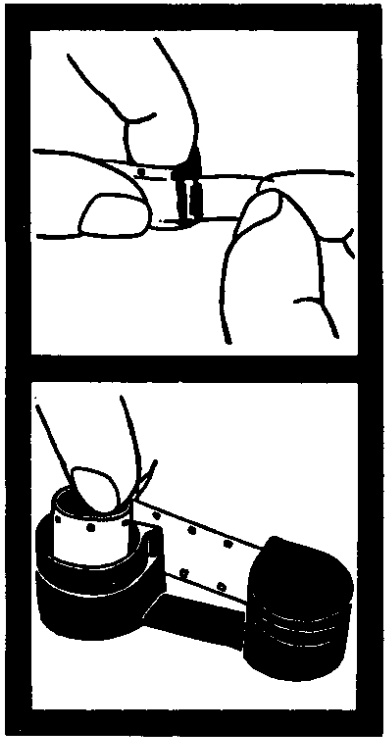
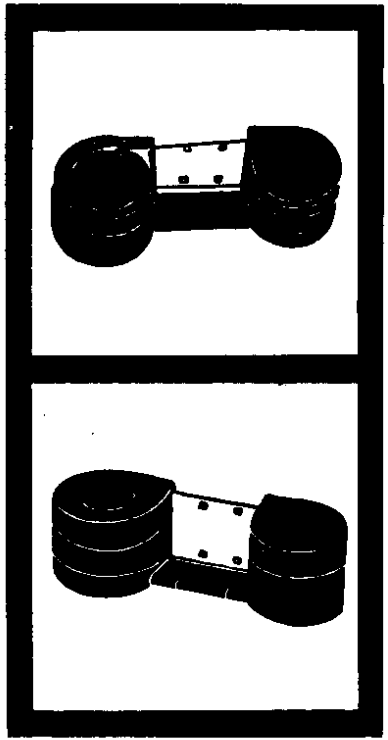
5. Put a cellophane tape piece on the cover to prevent it from dropping off. You may turn on a small dark-room lamp.

6. Attach a small piece of tape to the end of the film which is sticking out of the magazine.



7. Hold the rewind drum as shown in the picture, and put the other end of the above cellophane tape piece around the drum.

8. Wind 1½ times around the drum so that the film becomes parallel to the side of the drum. Place the drum into the magazine.



9. Put the cover on the magazine chamber, and put a cellophane tape piece on it to prevent it from coming off.

10. The magazine should look as illustrated.

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Programmed Shutter

The 16MG is equipped with a programmed shutter. This is a mechanism which sets the best shutter speed / aperture combination according to the brightness of the subject to be photographed.

In operation the alignment of the silver indicator and the red needle sets the programmed shutter.

The diagram indicates the relation between the shutter speed and aperture for each EV number. The EV range of the programmed shutter is 8-16.

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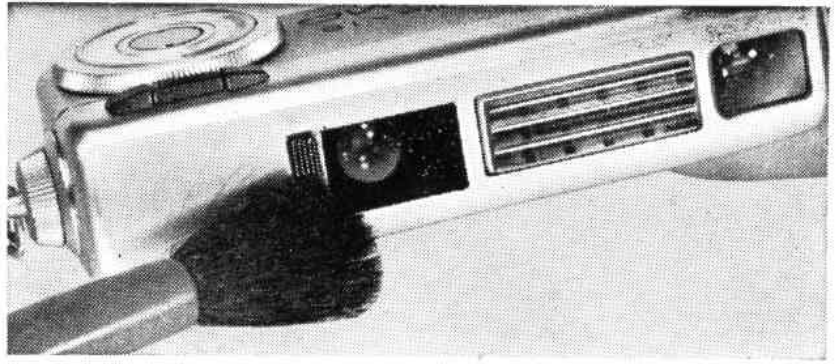
Maintenance and Care of the Camera

If the camera is used at the beach or in a dusty area there is a possibility that salt or dust may adhere to the camera body or lens and cause damage or corrosion. Therefore, it is recommended to take care of your camera so it will give you many years of enjoyment.

Care after Use

When the chrome surface of the camera is stained, wipe it with a cloth damped with Benzine. Be careful that Benzine does not enter into the inside of the camera or lens. Do not wipe the plastic parts.

When dust is on the lens use a camel-hair brush or a lens blower.



Before storing the camera, release the shutter.

Do not store the camera in a place with high temperature, humidity or with chemicals containing salt.

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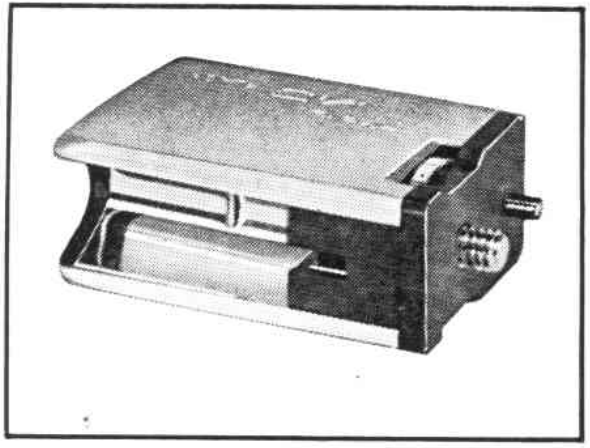

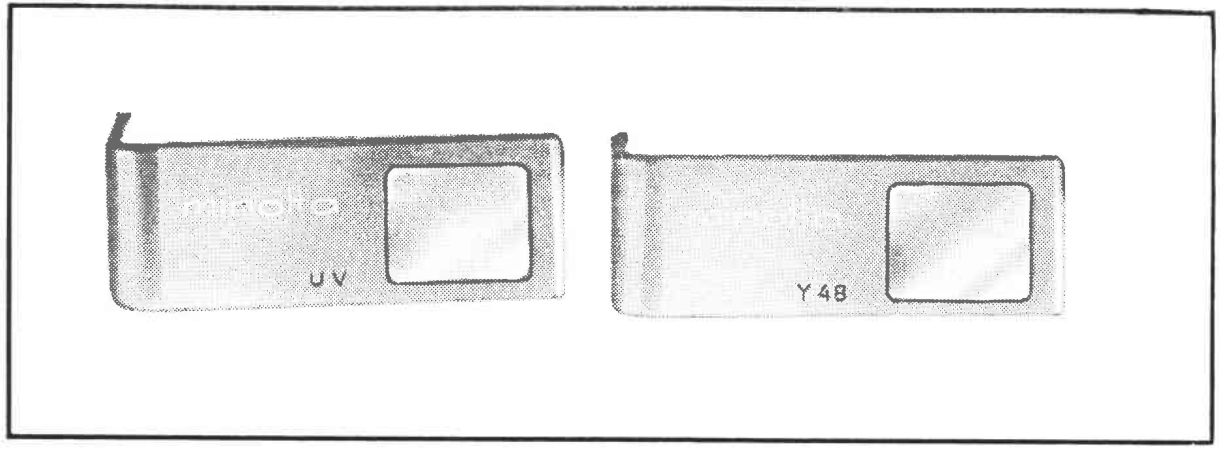

MG Flashgun

This compact, high efficiency flashgun has been designed for exclusive use with the 16MG

Filters (UV)

Filter for use with color or black and white film. To be used when shooting on the beach or in mountain area. The filter absorbs ultraviolet rays. There is no filter factor.

Y48 Filter.

For use with black and white film when shooting at the beach, snow landscape or sunset photography. The filter factor is 2X.

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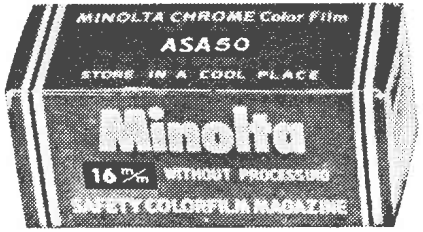

Minolta 16 Film

Black and White Film (ASA 80)

Black and White Film (ASA 320)

Positive Color Film (ASA 50)

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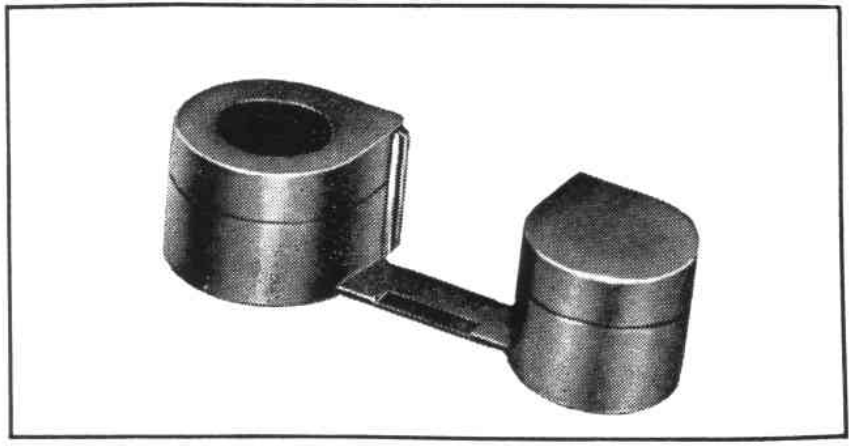
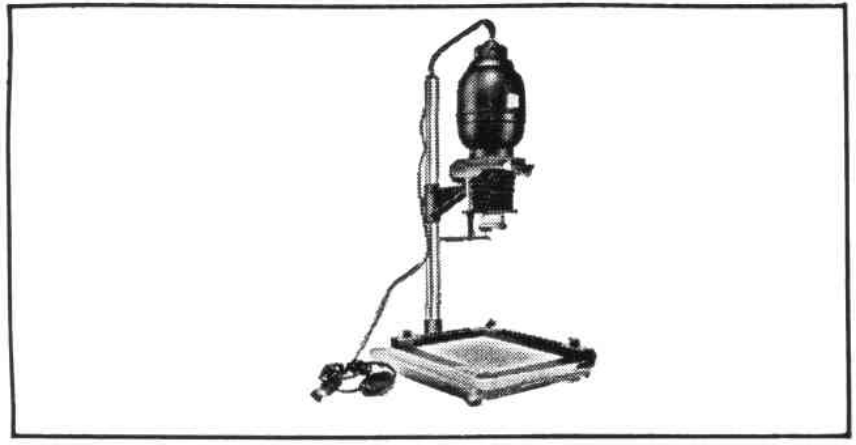


Minolta Film Magazine

Empty magazine are available from your Minolta Dealer if you desire to load your own magazines.



3 in 1 Enlarger

This enlarger is designed primarily for use in enlarging Minolta 16mm negatives. However, accessories are available to enlarge 9.5mm and 35mm negatives.