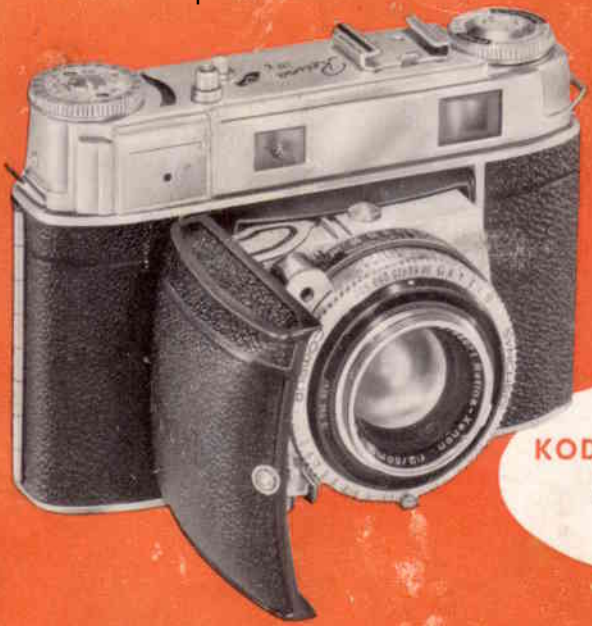


KODAK Retina IIIc Camera

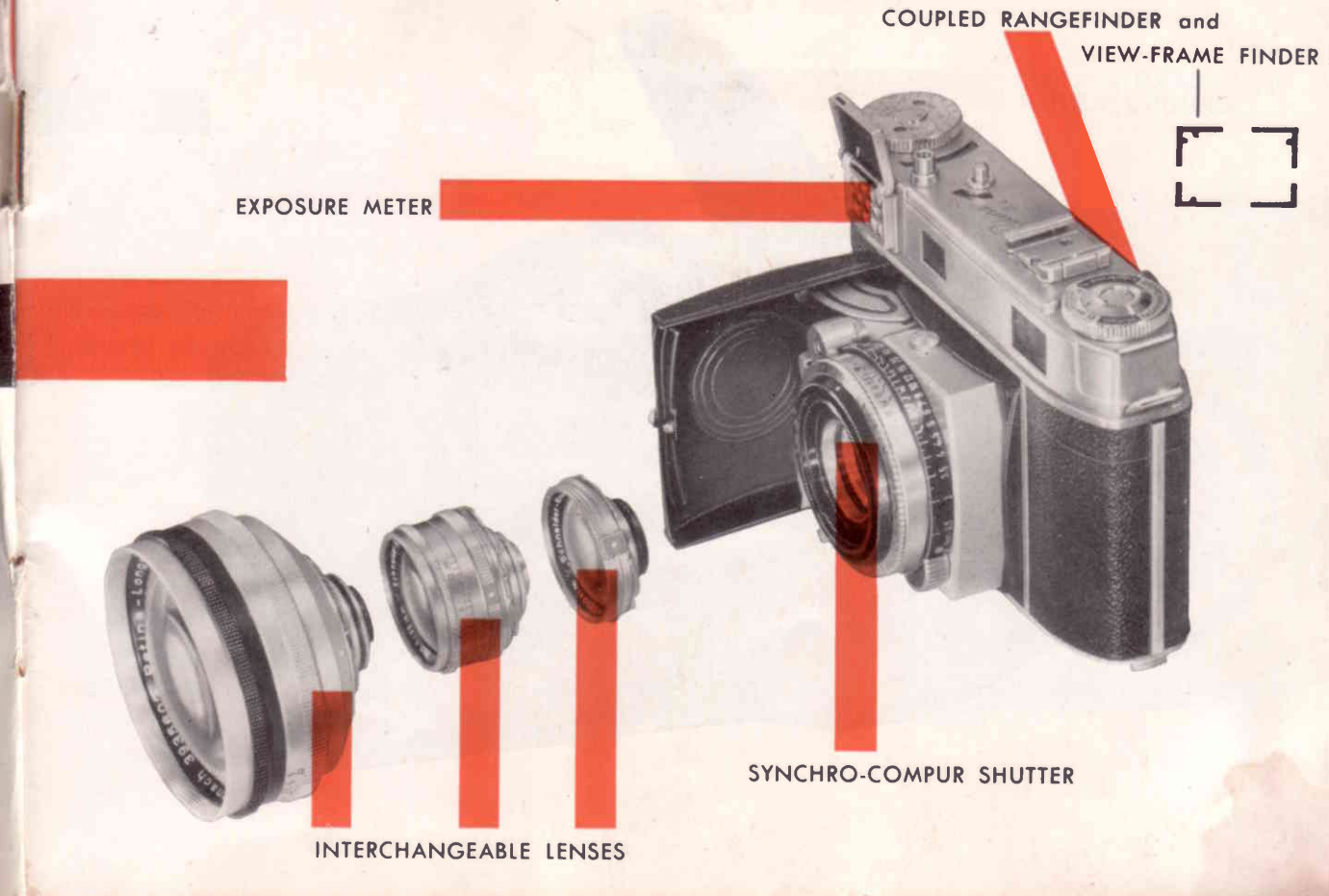
KODAK RETINA IIIc CAMERA

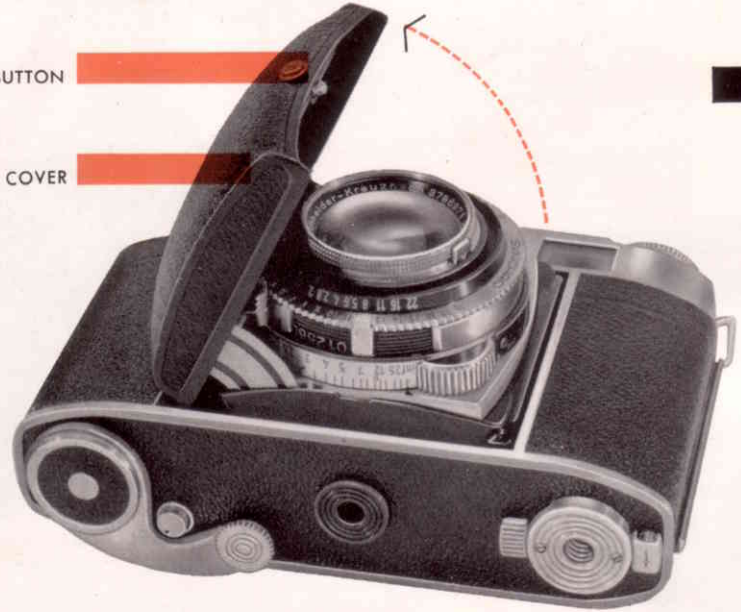
• You have purchased a truly fine camera. Utmost precision is combined with unsurpassed performance; the Retina tradition of quality and versatility is carried to new photographic heights.

The Retina IIIc Camera features — auxiliary interchangeable lenses—a coupled rangefinder combined with luminous "view-frame" finder — a built-in exposure meter—the Synchro-Compur shutter with light value settings—and full flash synchronization—plus many other refinements that set a new standard for photography.

Before an important picture assignment, a trip, or any special event, shoot a roll or two of film and make a few flash pictures. This will give you practice and provide a check on your equipment.

Read the first section of these instructions (pages 3 to 13) carefully and practice the operations described without film in the camera—the controls work equally well with or without film. When you are familiar with this basic operation, then load your camera with film and take your first pictures; the sections which follow will give you further important information for successful pictures.



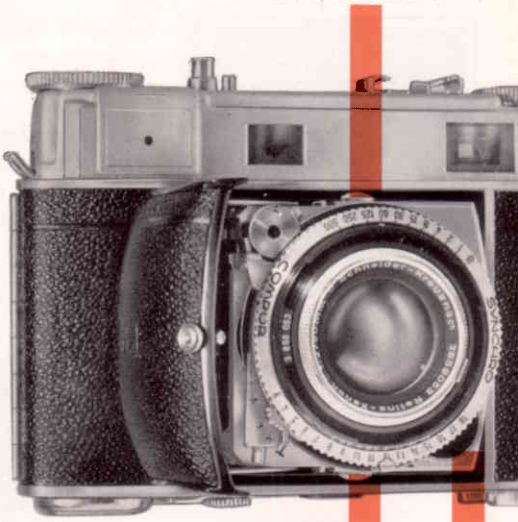


opening

Hold the camera in your hand and press the OPENING BUTTON toward the word "Kodak;" at the same time pull open the protective COVER carefully until the shutter panel locks in position.

closing

Move the FOCUSING KNOB down as far as it will go to set the focusing scale to "inf." The closing buttons cannot be depressed until this is done. Simultaneously press the two CLOSING BUTTONS on each side of the shutter panel; then close the cover.



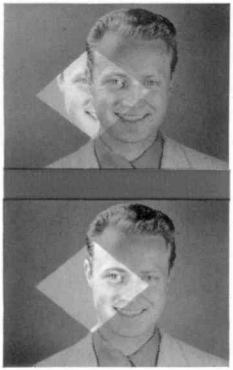
sighting the camera

CLOSE-UPS: Dotted lines show what will appear in final picture relative to what is seen in finder.

Grip the camera with both hands and look through the eyepiece. To sight the pictures properly, hold the camera at that distance from the eye which allows you to frame the subject within the luminous view-frame. When the camera is held either horizontally or vertically, note the two pointers, one on each side near the top of the view-frame. With close-up subjects from 2½ to 6 feet, the subject must be seen within imaginary lines, drawn between each set of pointers, and the opposite sides of the view-frame.

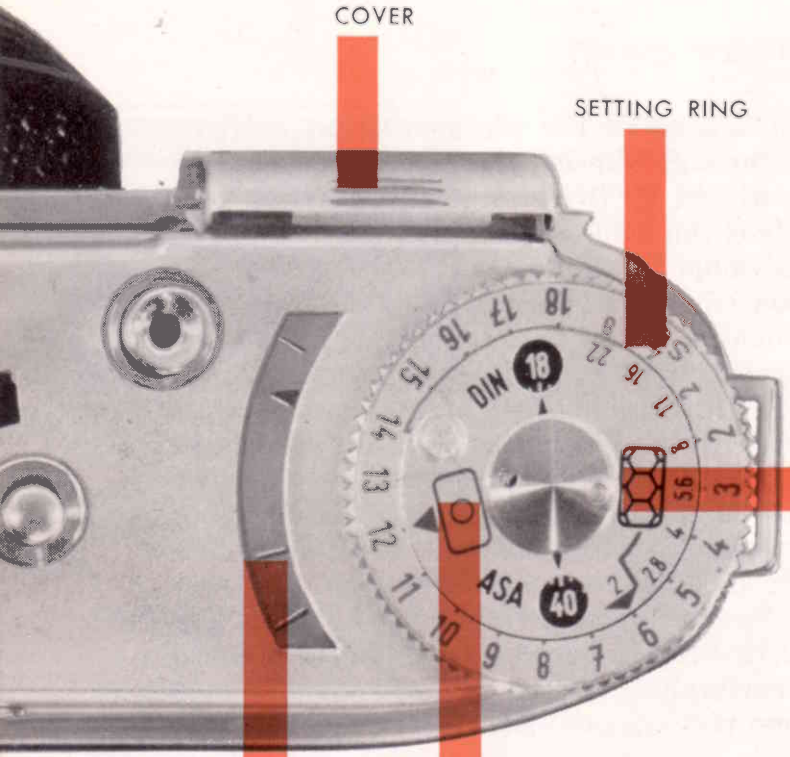
The illustrations at the right, showing the positions for horizontal and vertical pictures, are intended as a guide for holding the camera steady; other positions, of course, are possible. Try a few positions to see which is best.

focusing



Hold the camera in the picture-taking position and look through the eyepiece. You will see the subject outlined by the luminous view-frame. In the center of the field of view you will also notice a diamond-shaped rangefinder field. Until the camera is focused for the correct distance, this field shows a double image of the subject. To set the distance correctly turn the focusing knob (shown on page 3) until the outlines of the double image move together and coincide, so that only one image is visible. The lens is now accurately set for the film plane*-to-subject distance. Practice focusing in this way with various subjects at different distances—close the camera now and then, and pretend that you have just noticed a good subject and want to focus the camera on it. Open the camera and focus quickly. Practice with the camera held in both the vertical and horizontal positions.

*The film plane location corresponds to the rear top edge of the camera.



COVER

SETTING RING

Kodak Retina IIIc

INCIDENT LIGHT MASK

1

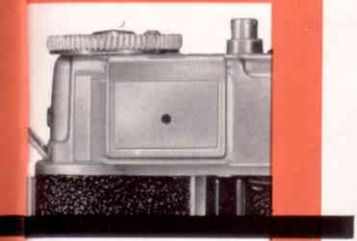
2 OPEN-COVER INDEX

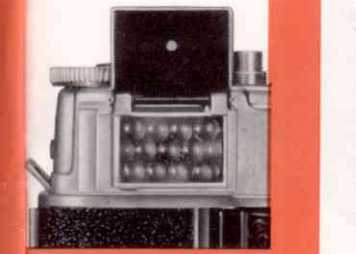
2

◀ Setting Exposure Index in ASA window is described on page 20.

WINDOW

1 CLOSED-COVER INDEX





Generally, the exposure meter COVER will be down in bright light so that the meter is affected only by light entering through the small hole in the cover. In poorer light, the cover will be open, uncovering the honeycomb cells.

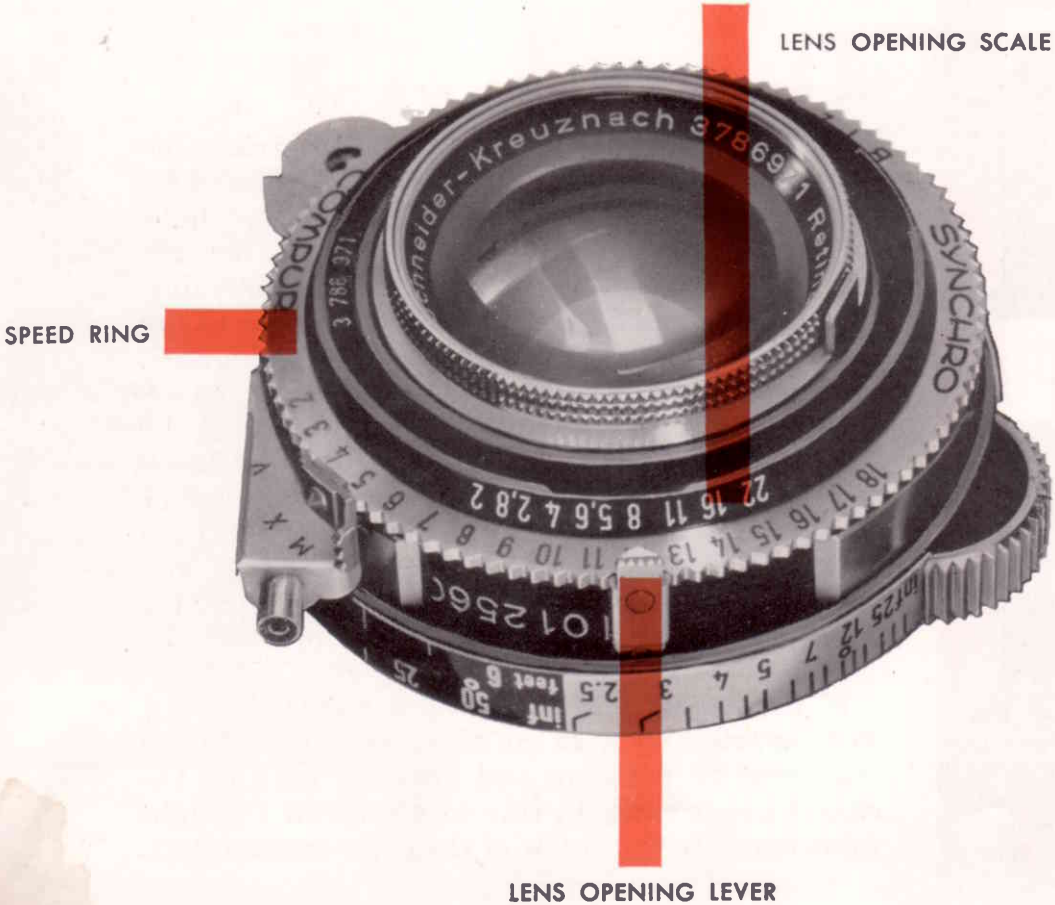
determining exposure

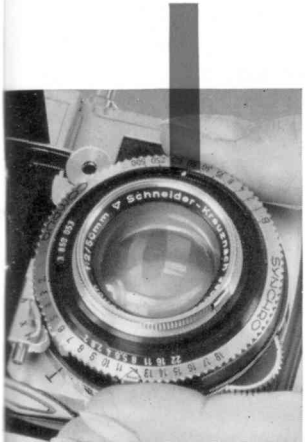
The Retina IIIc has a built-in photoelectric exposure meter which, when the camera is pointed toward the subject, will be used to measure light reflected from the subject. This eliminates difficult calculations and gives the correct light value. The light value is a number corresponding to the amount of light required for correct exposure.

Remove the INCIDENT LIGHT MASK from the exposure meter COVER; then point the camera at the subject, directing it slightly downward. A black needle will move in the WINDOW. Turn the meter SETTING RING, thus moving a red pointer until the pointer is directly over the black needle. If you have taken the reading with the exposure meter cover closed, read off the light value opposite the CLOSED-COVER INDEX on the setting ring.

If the needle of the exposure meter does not move appreciably with the meter cover closed, open the cover by pressing and drawing back on the ribbed upper edge. In this case read off the light value opposite the arrow of the OPEN-COVER INDEX.

NOTE: Use the correct index mark according to whether the cover is open or closed.





On the shutter SPEED RING you will find the same scale of light values, from 2 to 18, that is engraved in red on the exposure meter setting ring. Now transfer the light value read off the setting ring of the exposure meter to the shutter speed ring. To do this, pull the LENS OPENING LEVER slightly outward and move it to the appropriate number on the scale of the ring. If this light value comes outside the limits of the LENS OPENING SCALE, and you cannot move the lever to the desired number, turn the shutter speed ring until the appropriate light value is underneath the lens opening scale. The lens opening lever can only be moved within the limits of the lens opening scale for setting the light value. You can set in-between values on the light value scale if the exposure meter setting ring gives an intermediate reading.

The lens opening scale now shows you the lens opening you have set, while the shutter SPEED INDEX shows the exposure time of the shutter. For example: with a light value of 12 the camera may be set for a combination of lens opening $f/8$ and

1/60 second. Suppose this combination is not suitable for your subject because you need a faster shutter speed such as 1/500 second for a sports shot. In that case turn the speed ring, *pressing the lens opening lever against it* (shown in illustration), from 1/60 to 1/500 second. This automatically adjusts the lens opening to *f*/2.8 and thus compensates for the faster shutter speed time.

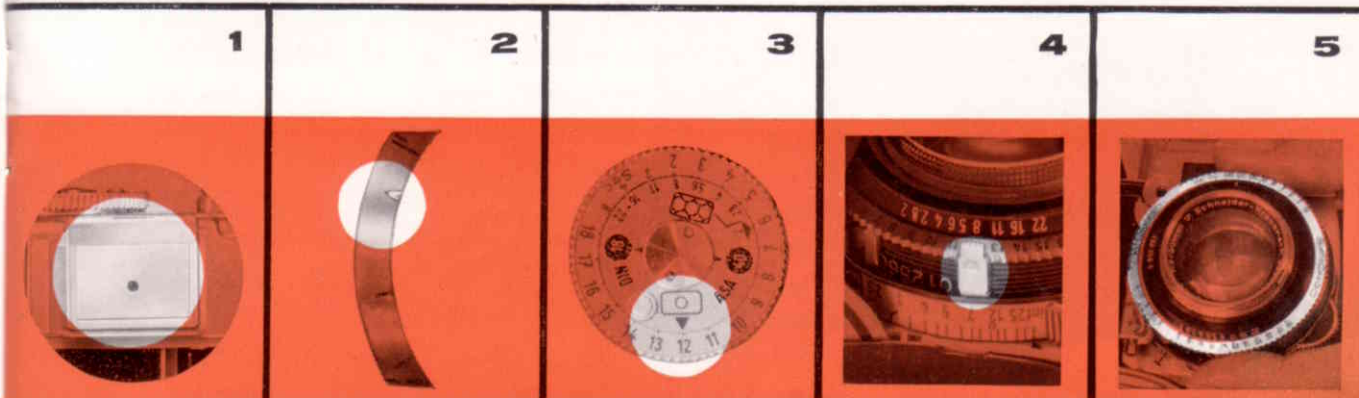
On the other hand, if you intend to take a picture which calls for good depth of field, for example, needing a lens opening such as *f*/16, you must rotate the speed ring in the same manner until the lens opening lever points to the figure 16 on the lens opening scale. This changes the shutter speed to 1/15 second. Such an exposure should, however, only be made from a firm support, for there is risk of camera movement at exposure times of 1/30 second or longer.

You may at first find the operations of determining and transferring the light values slightly unfamiliar. But with a little practice it will be accomplished easily and quickly.

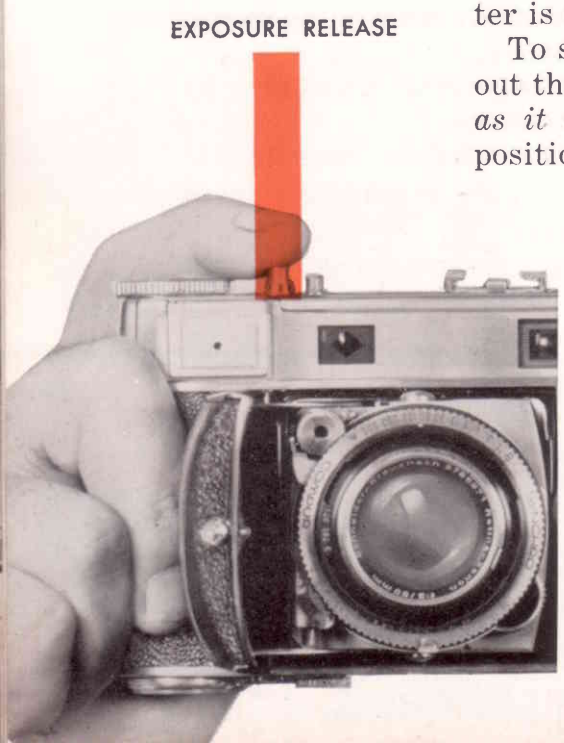
summary of steps

1. Point the exposure meter at the subject.
2. Turn the meter setting ring to make the red pointer coincide with the black needle of the meter.
3. Read off the light value.
4. Set the light value on the shutter speed ring by means of the lens opening lever.
5. If necessary, alter the lens opening-shutter speed combination by simply turning the speed setting ring.

Make sure the lens opening lever is not shifted from the set light value.



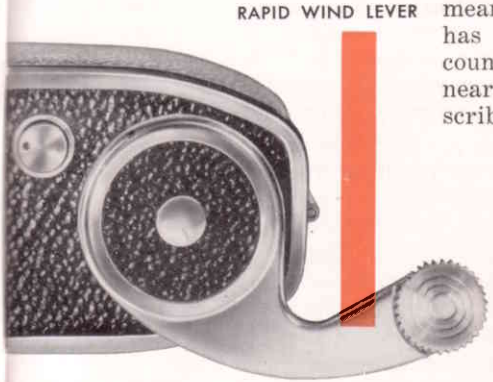
setting and releasing shutter



Look through the finder eyepiece, sight the subject, and press the EXPOSURE RELEASE. If the shutter is not set you cannot press the button.

To set the shutter, with the right thumb swing out the RAPID WIND LEVER in one movement *as far as it will go;* then let it return to its original position. If it does not return, you did not swing it out far enough. Winding this lever, at the same time sets the shutter and—if you have film in the camera—advances the film by one frame and advances the film counter (page 18). Now you can press the exposure release. You will notice how smoothly the release operates; this is important to avoid camera movement.

CAUTION: Make sure that you press the button pointed out in the illustration.



If during this practice operation, the rapid wind lever becomes locked, this means either that the exposure release has not been pressed, or that the film counter is at 1 and must be reset to the nearest diamond-shaped mark as described on page 18.

You are, by now, familiar with the "feel" of your camera and the most important points of camera operation. So, let's select a film from the following pages, load the camera, and take a roll of pictures. If you wish to start off with black-and-white pictures, you might choose a medium-speed film such as Kodak Plus-X; however, inasmuch as your camera is so perfectly suited as a "color camera," you may wish to load immediately with Kodachrome or Kodak Ektachrome Film for pictures in full color.

films

The Kodak Retina IIIc Camera uses Kodak 135 Film

COLOR FILMS

Kodachrome Film – For full-color transparencies which can be projected on a screen or from which prints or enlargements can be made.

Use Kodachrome Film Daylight Type for daylight pictures, and Kodachrome Type A for flash or flood-lighted pictures. 20 or 36 exposures.

Kodak Ektachrome Film—Like Kodachrome, Ektachrome Film produces life-like color transparencies for projection or from which color prints and enlargements can be made. The speed of this film, however, is faster than that of Kodachrome Film. You can process this film yourself or have it processed by your photofinisher.

Use Kodak Ektachrome Film Daylight Type for exposure in daylight, and Kodak Ektachrome Film Type F for pictures with clear flash lamps. 20 exposures.

BLACK-AND-WHITE FILMS

Kodak Plus-X Panchromatic Film—An excellent film for general outdoor and well-lighted interior use. The low graininess and high resolving power permit high-quality enlargements. 20 or 36 exposures.

Kodak Super-XX Panchromatic Film – Combines high speed with complete color sensitivity. Gives fully-exposed negatives under difficult light conditions. 20 or 36 exposures.

Kodak Tri-X Film—An extremely fast panchromatic film of moderate contrast, low graininess, wide exposure and development latitude, and color sensitivity suitable for all types of indoor and outdoor illumination. 20 or 36 exposures.

KODAK FILMS

	EXPOSURE INDEX	
	Daylight	*Tungsten*
Kodachrome (Daylight)	10	2.5*
Kodachrome (Type A)	10**	16
Ektachrome (Daylight)	32	
Ektachrome (Type F)	20††	16†
Plus-X	50	40
Super-XX	100	80
Tri-X	200	160

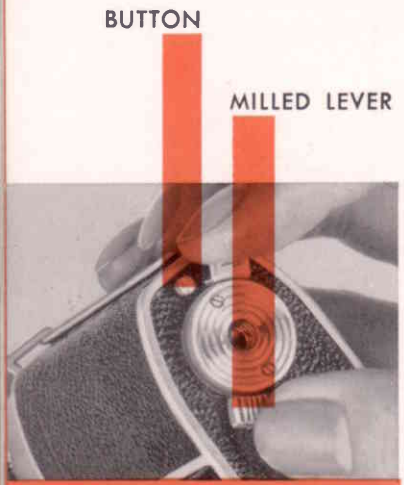
*With Kodak Filter No. 80A

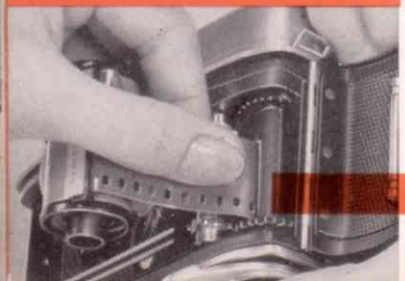
**With Kodak Daylight Filter for Type A Color Films

†With photographic flood lamps and Kodak Filter No. 82A

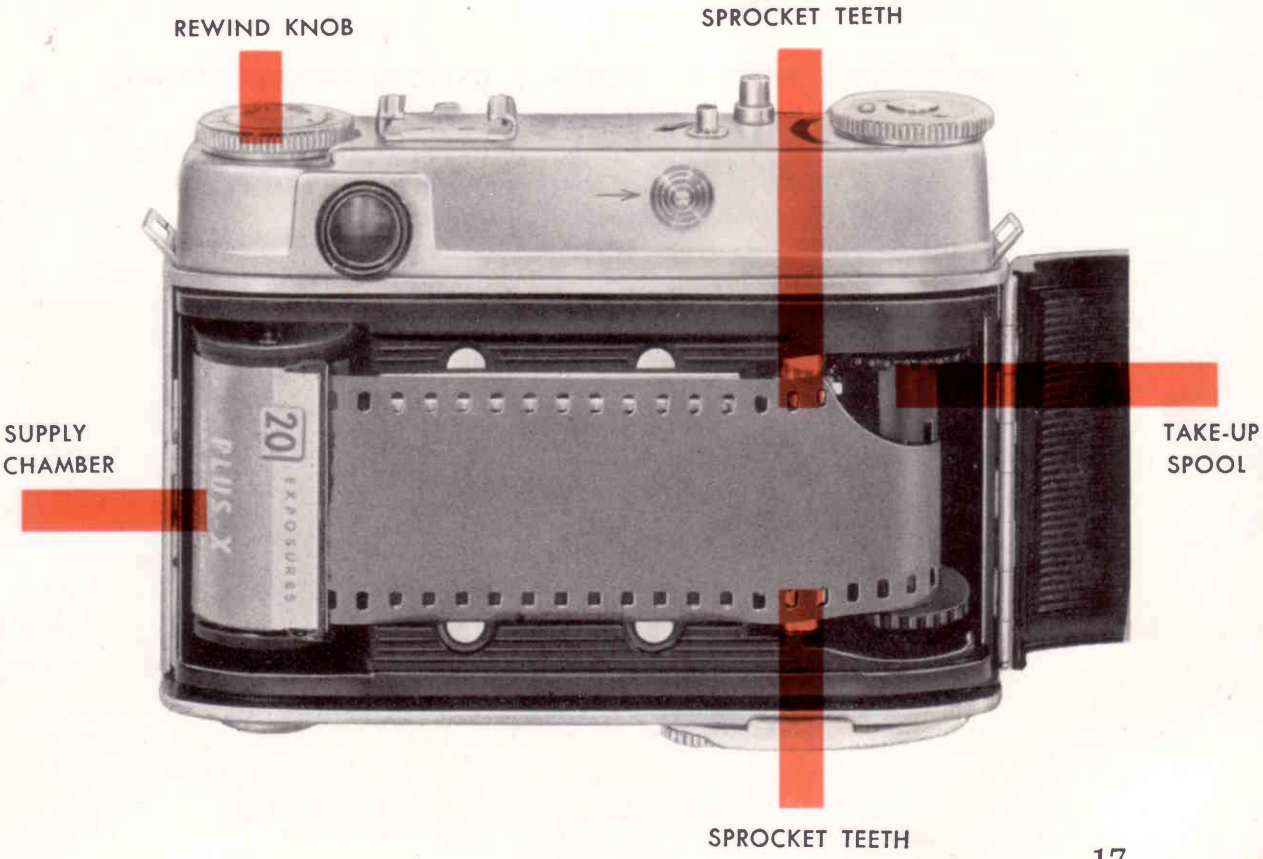
††With Kodak Filter No. 85C

loading





1. To open the back of the camera, press the MILLED LEVER clockwise; the opposite end of the lever then uncovers the opening BUTTON. Press this button and the back springs open.
2. Pull the REWIND KNOB all the way out.
3. Turn the built-in TAKE-UP SPOOL by its flange until a slot points upward.
4. With the lower edge of the film against the take-up spool flange toward the bottom of the camera, push the trimmed end of the film protruding from the magazine far enough into this slot to anchor it.
5. Pull the film over the film track and insert the magazine in the SUPPLY CHAMBER. Then turn the take-up spool by its flange until the SPROCKET TEETH engage the perforations on both sides.



6 When the film and magazine are correctly positioned, push in the rewind knob, turning slightly if necessary. Make sure that the sprocket teeth engage the film perforations on both sides.

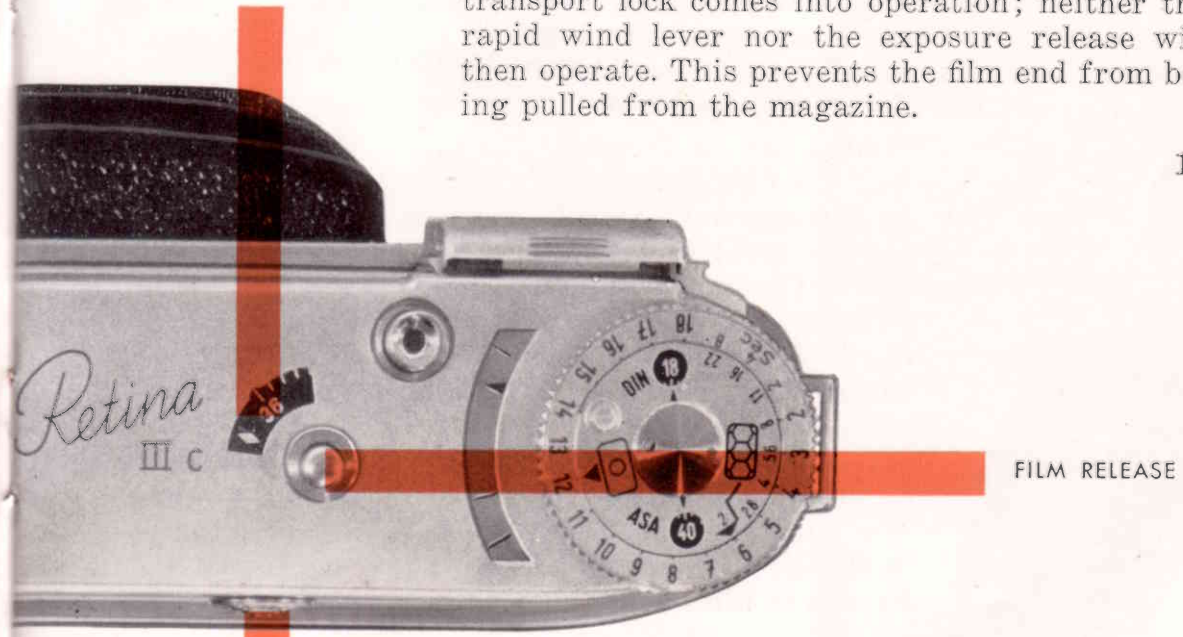
7 Close the back of the camera, by pressing the back against the body until it locks.

setting the film counter

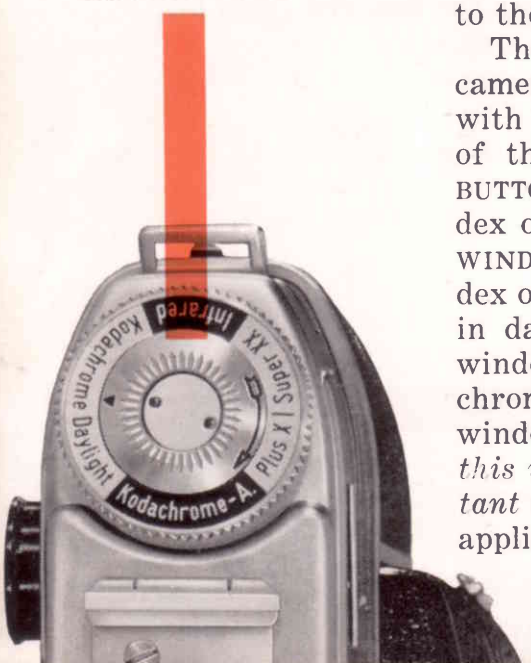
Press and hold down the FILM RELEASE button; then, at the same time, press the film COUNTER ADVANCE in the direction of the arrow as many times as necessary to bring the diamond-shaped mark near 36 on the FILM COUNTER opposite the notch. If you are using a 20-exposure magazine, set to the diamond-shaped mark between 20 and 25. Press and release the film release button; then swing out and release the rapid wind lever. Do this 2 more times to bring the film counter to 36

or 20, depending on the number of exposures in your magazine.

The film counter always indicates the number of exposures still available. When it has reached 1, a transport lock comes into operation; neither the rapid wind lever nor the exposure release will then operate. This prevents the film end from being pulled from the magazine.

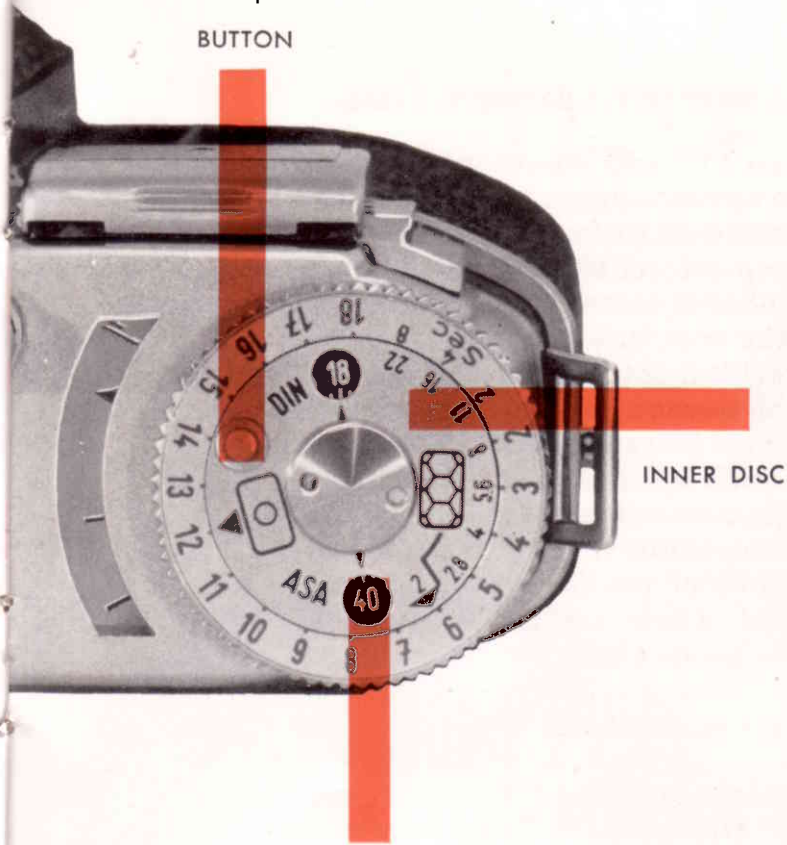


setting the exposure index



Set the type of film loaded in the camera on the FILM INDICATOR. Grip the rewind knob with two fingers and turn the inner ring with the thumb of the other hand until the triangular index points to the type of film loaded in the camera.

The exposure index of the film loaded in the camera can be found in the instructions packed with the film and on page 15. Turn the INNER DISC of the exposure setting ring by means of the BUTTON until the appropriate ASA exposure index of the film in the camera appears in the ASA WINDOW. For example: The daylight exposure index of Kodak Plus-X Film is 50; for this film used in daylight, set 50 (slightly beyond 40) in the window. The daylight exposure index of Kodachrome Film Daylight Type is 10; set 10 in the window for daylight exposure of this film. *Setting this value correctly in the ASA window is important to proper exposure.* The window marked DIN applies to films rated by a different method.



unloading

Always Unload in Subdued Light

To rewind the exposed film, depress the CLUTCH BUTTON in the base of the camera and pull the rewind knob straight out until you feel resistance (about a quarter inch). Then turn the rewind knob in the direction of the arrow until the clutch button ceases to rotate; this is easily observed by the small black dot near the rim of the button. The film is now rewound into the magazine; open the camera back, pull out the rewind knob all the way, and remove the magazine.

CLUTCH BUTTON

setting the focusing scale

In addition to using the coupled rangefinder to determine distance automatically, you can also set the FOCUSING SCALE (for 50mm lens) manually for film plane-to-subject distance. Set the correct film plane-to-subject distance on the focusing scale opposite the FOCUSING INDEX.

The small red dot next to the focusing index is to be used instead of the focusing index when focusing with Infrared Film. Therefore, turn the focusing knob until the figure corresponding to the film plane-to-subject distance is opposite the red dot when using Infrared Film.

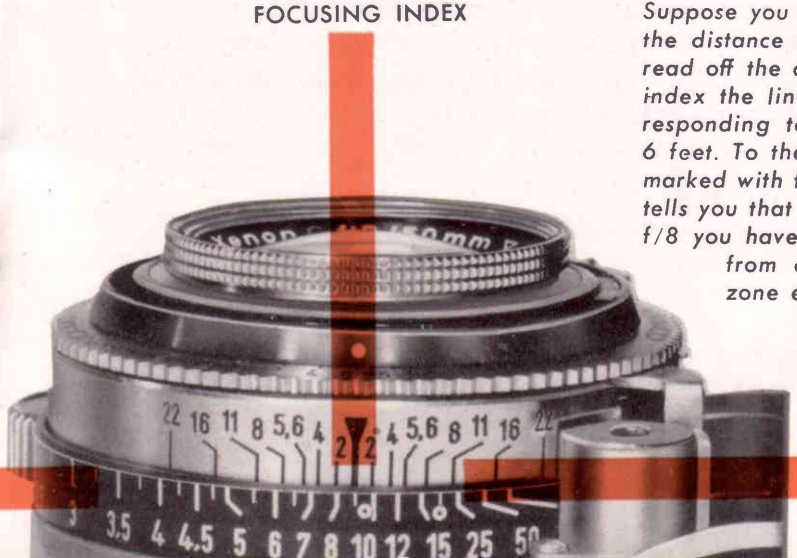
The bottom of the focusing ring carries three other scales. These are for use with the interchangeable lenses which are described on page 32.

depth of field

After you have properly focused on your subject, the subject will be sharp in the picture. However,

other objects in the picture area, both in front of and behind the subject, will also be in focus. This is "range of sharpness" or "depth of field."

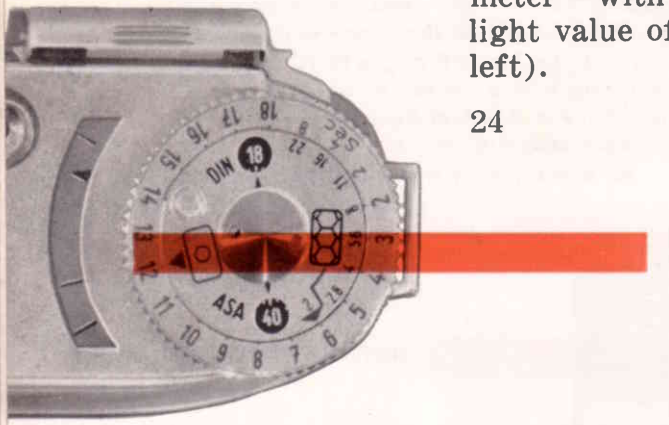
To permit instant reading of the depth of field for any lens opening and distance, a DEPTH-OF-FIELD SCALE composed of numbers corresponding to lens openings is arranged on either side of the focusing index.



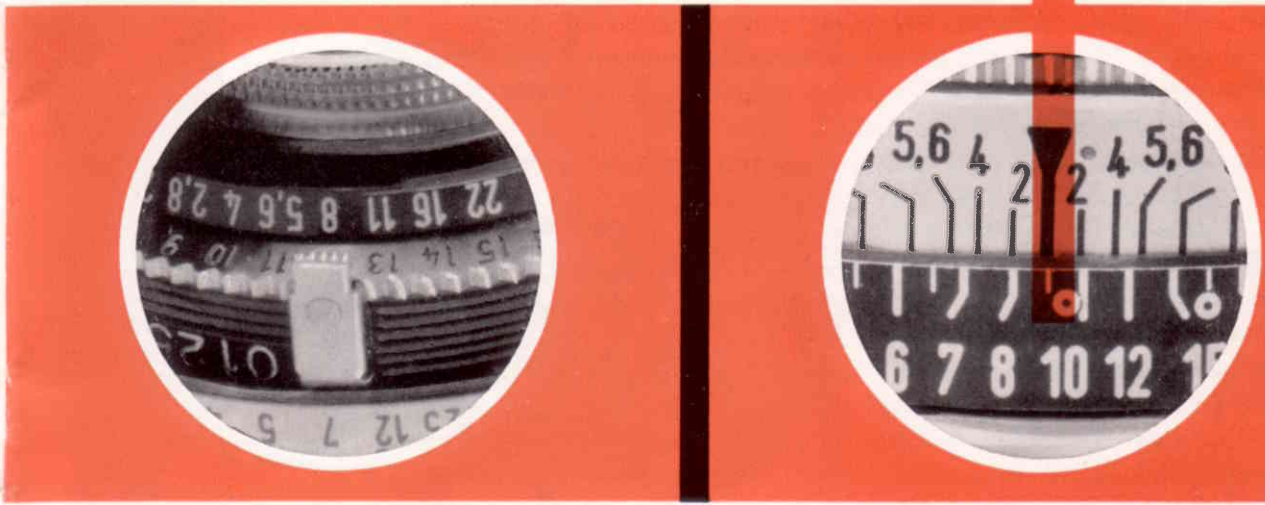
Suppose you have set the aperture to f/8 and the distance to about 9 feet; this is how you read off the depth: To the left of the focusing index the line marked with the figure 8 (corresponding to the lens opening) is opposite 6 feet. To the right of the index another line marked with the figure 8 points to 16 feet. This tells you that with a setting of about 9 feet at f/8 you have a depth-of-field zone extending from about 6 to 16 feet. Within this zone everything will be sharp.

zone focusing

Technically good exposures depend largely on the skilled combination of correct distance, shutter speed, and lens opening settings. However, you may encounter subjects where you just haven't the time to work out the ideal setting or to use the rangefinder, if you don't want to miss the picture. For such occasions your camera carries two zone focus settings: one for near and one for distant subjects. With these settings you must, however, have adequate light; the pointer of the exposure meter – with the cover closed – should indicate a light value of at least 12 (see illustration at the left).



For near subjects *set the distance to the small circle near the 10-foot mark, and the lens opening to f/8. This gives you a depth of field from about 6½ to 20 feet. (See illustration below.)*

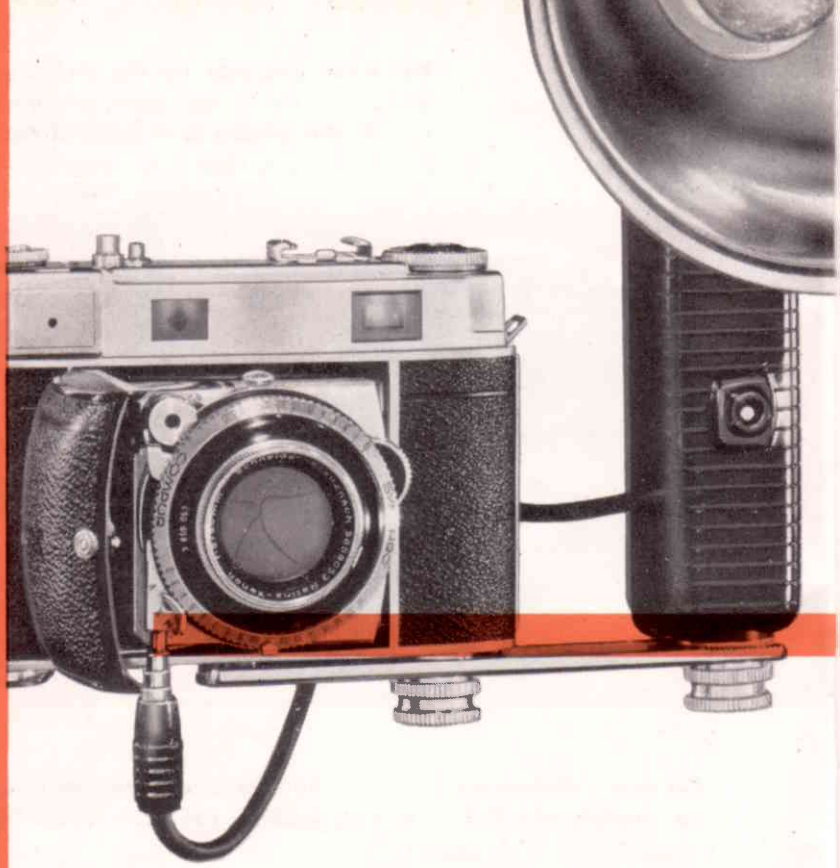


For more distant subjects *use the small circle near the 15-foot mark and an aperture of f/8. This gives a depth of field from about 9½ feet to inf.*

flash pictures

Flash pictures, in black-and-white or color, are easy to make with your camera. The built-in synchronization of your Synchro-Compur shutter permits the use of flash, including electronic flash, at any shutter speed up to the fastest setting of 1/500 second. Flash lamps are fired when the camera shutter is released.

The Kodak Standard Flash-older with Kodak Retina Flash-older Bracket (for Retina IIIc, IIc, Ib, and Retinette f/3.5 Cameras) which is especially designed to accommodate the camera's rapid wind feature, is recommended for use with your Retina IIIc Camera.



attaching the flasholder

Position the flasholder bracket against the bottom of the camera so that the unthreaded locating pin of the bracket engages the hole in the center of the bottom of the camera, and the thumbscrew next to it engages the threads of the camera tripod socket; tighten the thumbscrew. With the flasholder reflector facing in the same direction as the camera lens, tighten the thumbscrew at the end of the bracket into the threaded receptacle in the base of the flasholder battery case. The threaded hole in the base of the thumbscrew that engages the camera tripod socket provides for attaching the camera and flasholder to a tripod.

FLASHPOST

A Kodak Single-Post Flasholder Adapter is attached to the bayonet-connector end of the flasholder cord for use with your Retina IIIc Camera. Slip the open end of the adapter over the FLASHPOST of the camera. When the flasholder is removed from the camera, the adapter should remain with the flasholder cord.

installing the batteries

Batteries are not supplied with the unit but they can be purchased from your Kodak dealer. Get two size "C" batteries (photoflash are best). For extra-strong, long-lasting power, the Kodak B-C Flashpack and one 22½-volt battery are available to power the unit instead of the "C" size batteries.

To install the batteries, loosen the coin-slotted screw on the back of the flasholder, and remove the back. Next, insert the two size "C" batteries between the upper and lower spring contacts of the flasholder with the center contact tips of the batteries up; then replace the back.

IMPORTANT: Successful synchronization requires batteries that will test at least 5 amperes. Batteries that have been stored for long periods, especially under conditions that allow them to dry out, will not be satisfactory. With the B-C Flashpack, current is drawn from a condenser rather than directly from the battery.

There are three letters engraved on the block of the flashpost; M and X are synchronizer settings for flash, V is the self-timer setting. These settings are adjusted by the SELECTOR lever.

Using Class F Lamps, such as SM or SF – Set the synchronizer selector pointer on X (pointer in illustration is set at X), set the shutter speed at any speed from 1 to 1/125 second, and consult the table on page 31 for exposure information.

Using Class M Lamps, such as No. 5, No. 25, or No. 8–Set the synchronizer selector pointer on M for shutter speeds from 1 to 1/500. See the table on page 31 for exposure information.

Using Electronic Flash – Set the synchronizer selector pointer on X. With electronic flash equipment having no lag in the trip circuit, set the shutter at any speed from 1 second to 1/500 second.

SELECTOR

NOTE: Do not use units flashed by means of heavy-duty relays or solenoids. Such units may completely destroy the shutter contacts.

inserting lamps

To insert the lamp, place the two pins on the base of the lamp in the slots in the socket; then push the lamp straight into the socket. *Do not twist the lamp.*

To release the lamp from the socket, push the LAMP RELEASE spring located on the top of the flasholder. The lamp will fall from the socket.

Flash lamps are too hot to handle immediately after they have been fired, therefore, never try to pull a lamp out of the socket—use the lamp release. Also, pulling lamps from the socket by force may damage the socket.

Do not insert a flash lamp in the socket if the end of the cord is plugged into the extension terminal on the front of the flasholder handle. The lamp will flash and a serious burn may result.

CAUTION: Do not flash lamps in an explosive atmosphere. Since lamps may shatter when flashed, the use of the Kodak 2-Way Flashguard over the reflector is recommended.