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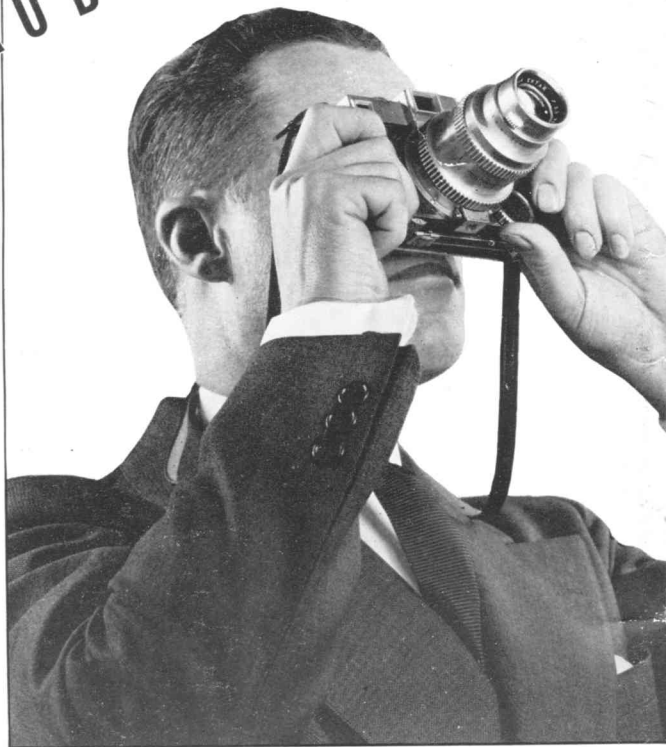
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The large manuals are split only for easy download size.

HOW TO USE THE

**KODAK
EKTRA**

KODAK EXTRA



In the superb Kodak Ektra you will find a combination of features never before available in one 35 mm. camera.

These features include interchangeability of lenses and magazine backs; focal plane shutter with speeds from 1 second to 1/1000 second and bulb; split-field range finder coupled to operate automatically with any one of six available lenses; an optical built-in control to change the field of the view finder to correspond to the field covered by each of the lenses; automatic parallax correction in the view finder for distances as close as 3½ feet; chemically treated lens surfaces to give greater clarity and brilliance to pictures; and arrangement of operating controls so that they are readily visible from the top of the camera.

Six Ektar precision lenses are available, ranging from 35 mm. to 153 mm. in focal length. The 50 mm. lenses can be focused as close

as 18 inches, without a supplementary lens and the wide angle 35 mm. lens as close as 1 foot.

Interchangeable magazine backs, available as accessories, make it possible to change from one type of film to another without waiting to finish the roll and without loss of a single frame.

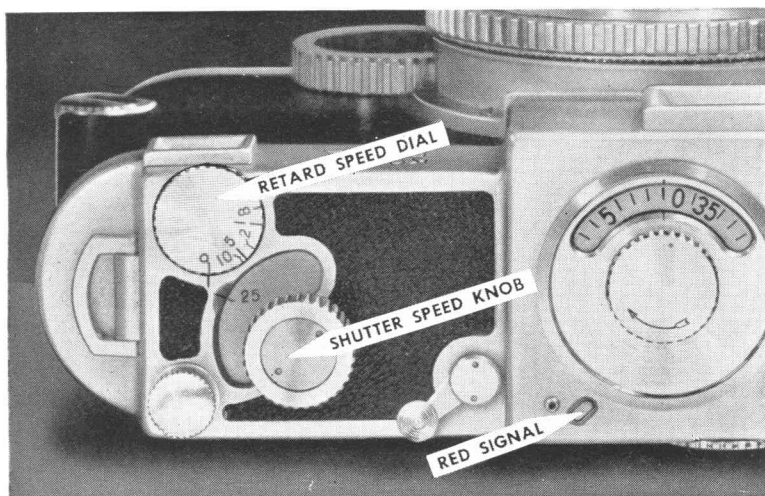
Focal plane shutter is of the pre-set variable slit type, designed for unsurpassed accuracy at all speeds.

Arranging the controls so they are visible from the top of the camera makes it easier for the user to make the exposure quickly, and to be sure each picture is taken at the desired speed. Winding the shutter and advancing the film with the same lever leaves the hands always in the operating position with the camera at eye level.

These features make the Kodak Ektra truly the world's most distinguished camera. Operating instructions and a detailed description of its features will be found on the following pages.

1. WINDING THE SHUTTER

If exposures $1/25$ second or faster are desired, the cipher "0" of the RETARD SPEED DIAL *must* be at the index line as illustrated. Push the WINDING LEVER toward the center of the camera as far as it will



go to wind the shutter. The lever should be pushed twice, or until the RED SIGNAL in the window on the top of the camera disappears.

This RED SIGNAL is a warning that the shutter must be wound before you attempt to change shutter speeds.



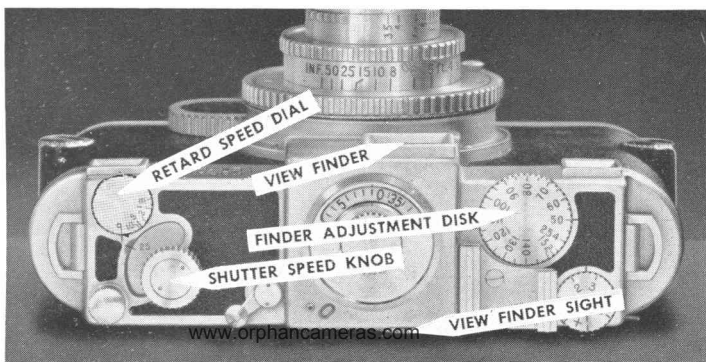
2. SETTING THE SHUTTER SPEED

The shutter must be wound before attempting to set shutter speeds. Lift the SHUTTER SPEED KNOB as far as it will come. A slight click will be heard. Turn the KNOB until the desired speed comes to the index line. If 25 is at the index line, the wheel must be turned counter-clockwise to set the shutter for any of the higher speeds. Exposures of $1/1000$, $1/500$, $1/250$, $1/100$, $1/50$, $1/25$, $1/10$, $1/5$, $1/2$, and 1 second as well as "Bulb" Exposures can be made with the Kodak Ektra.

For exposures slower than $1/25$ second, the shutter must be wound, and 25 brought to the index line; then revolve the RETARD SPEED DIAL until the exposure desired is at the index line. For example: If an exposure of $1/5$ second is wanted, bring 5 to the index line.

3. VIEW FINDER

Before using the VIEW FINDER the number agreeing with the focal length of the lens in millimeters, must be brought to the index line of the FINDER ADJUSTMENT DISK on the right side of the camera. For example, when a 50 mm. lens is used, 50 must



be at the line; if the 135 mm. lens is used, the line between 130 and 140 must be at the index line. This disk controls in the VIEW FINDER the angle of view covered with the lenses of different focal lengths.

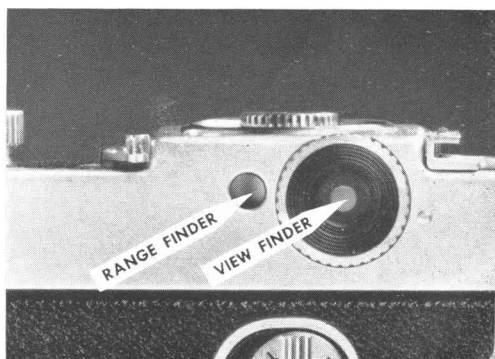
To accommodate the finder to your eye revolve the VIEW FINDER SIGHT by the knurled wheel until the field seen in the finder is sharp; this is necessary for each lens of a different focal length. The finder shows what will appear in the picture but on a much reduced scale. Hold the camera at that distance from the eye which permits seeing the entire front frame of the finder. This will assure the proper aiming of the Kodak. During the exposure, hold the Kodak steady by pressing the hand supporting it against the face. All vertical lines in the subject should appear parallel with the vertical sides of the front frame of the finder, when the Kodak is held in the vertical or horizontal position. Unusual effects can be obtained by tilting the Kodak.

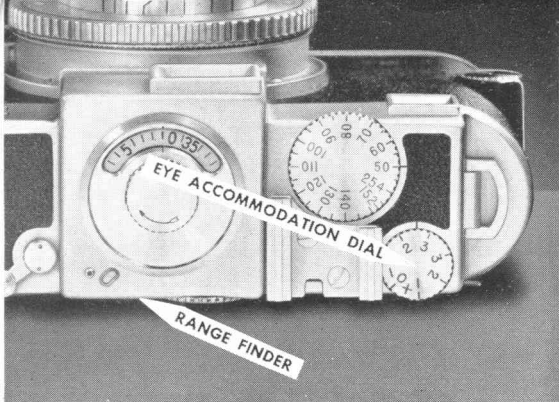
Besides the regular view finder there are available as accessories the High-Low Angle Finder, especially useful when taking pictures over the heads of a crowd, and the Right Angle Finder, which permits photographing a subject while looking at right angles to it.

4. RANGE FINDER

The RANGE FINDER of the Kodak Ektra is

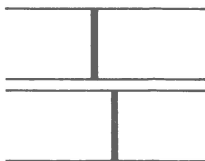
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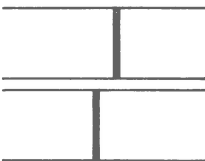


coupled with the lens of the camera. The RANGE FINDER is of the split-field type. Look through the range finder eyepiece. A distinct horizontal line cuts the field of view in

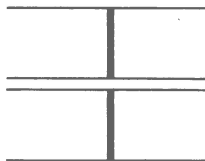
two equal parts. Should the field of view be blurred, turn the range finder EYE ACCOMMODATION DIAL clockwise until the field is sharp and distinct. This dial is marked in diopters and after it has once been set for your eye accommodation it need not be ad-



As image will appear when RANGE FINDER is set for a distance nearer than the correct one.



As image will appear when RANGE FINDER is set for a distance beyond the correct one.



As image will appear when RANGE FINDER is correctly focused.



justed again. Every user of the camera should make this adjustment before using the RANGE FINDER. Move the FOCUSING RING of the lens to the approximate focus and then look through the range finder eyepiece at some vertical line in the subject.

The selected vertical line will appear broken. The part seen in the upper area will be either to the right or left of the vertical line which is seen in the lower area. Fine focusing is done by turning the FOCUSING KNOB with either 50mm. Kodak Ektar Lens $f/1.9$ or $f/3.5$, with the wide-angle Kodak Ektar Lens $f/3.3$ of 35 mm. focal length and Kodak Ektar Lens $f/3.5$ of 90 mm. focal length. (With the Kodak



Telephoto Lenses, focusing is done by revolving the lens barrel.) Turn the FOCUSING KNOB until the vertical line is unbroken.

The RANGE FINDER can be used only on still objects.

The RANGE FINDER can also be used with the camera held vertically. When it is used in this position, focus on some *horizontal line* in the subject. When the line is continuous, the Kodak is in focus.

Another method of using the RANGE FINDER is to set the lens for the distance desired, then while looking through the eyepiece of the range finder, move back or forth until a vertical line in the subject appears continuous in the upper and lower area of the finder.

The Kodak Ektar Lenses $f/1.9$ and $f/3.5$ both of 50 mm. focal length can be focused on subjects as close as $3\frac{1}{2}$ feet with the RANGE FINDER. See detailed instructions for using the lens on your Kodak, pages 20 to 33.

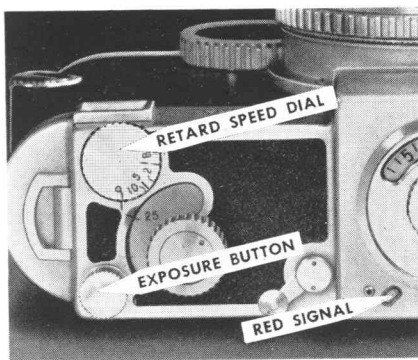
5. STOP OPENINGS

The stop openings regulate the amount of light passing through the lens. The openings are enlarged or reduced by turning the Diaphragm Control Ring near the front of the lens. (With the Wide-Angle Lens turn the Diaphragm Control Ring by the knurled edge which projects from the front of the lens.)

For average subjects outdoors when the sun is shining, turn the Diaphragm Control Ring to $f/8$, and make an exposure of $1/100$ second when using Kodak Plus-X Panchromatic Film. See table on pages 38 and 39 for exposure data for daylight.

6. RELEASING THE SHUTTER

After the shutter is wound and the RED SIGNAL does not appear in the window on the top of the camera, the shutter is released by pushing the EXPOSURE BUTTON all the way down. Re-



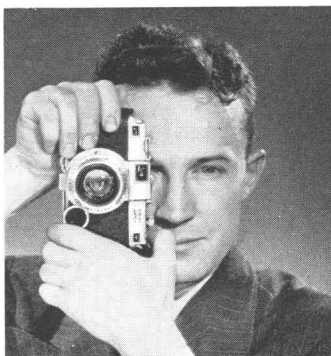
gardless for what speed the shutter had been previously set, the number 25 appears at the index line after the exposure is made. When the shutter is wound again the shutter is automatically

HOLD THE KODAK STEADY

Holding the Kodak for a horizontal picture.

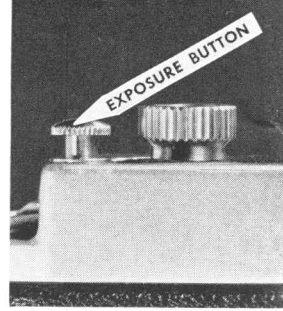


Holding the Kodak for a vertical picture.

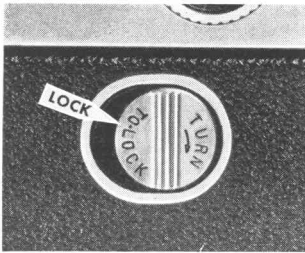


set for the speed of the previous exposure.

When carrying the camera loaded with film, the EXPOSURE BUTTON can be lifted and turned counter-clockwise as far as it will go, where it will drop into the lock position; this prevents the accidental release of the EXPOSURE BUTTON.



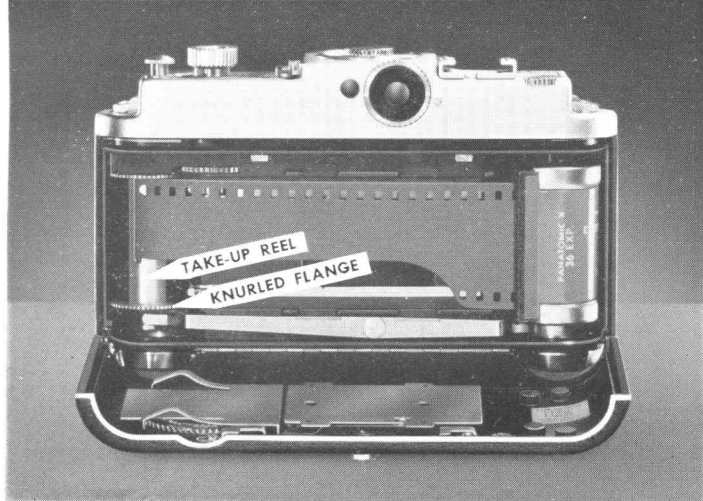
LOADING



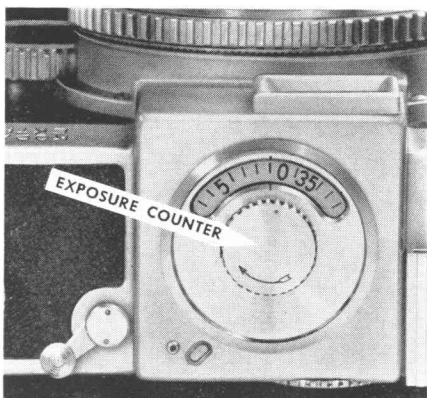
Give the LOCK a half-turn counter-clockwise and slide it to the left; open the back. Insert a magazine of Kodak 135 Film (for the various types of film see pages 34 and 35) in the

recess on the right, first engaging the two prongs in the camera into the opening of the magazine having the crosspiece. Draw the film across the film track and insert the end of the film into the slot of the TAKE-UP REEL and engage the second film perforation with the lug in the slot, see illustration.

Revolve the TAKE-UP REEL by the KNURLED FLANGE to bind the film on the reel, and make certain that the lug is engaged in the perforation. Close the back of the camera, slide the LOCK to the right as far as it will go, and turn it clockwise in the



direction of the arrow. Wind off the equivalent of four frames by pushing the WINDING LEVER from left to right. Two full strokes are sufficient to move the film one frame. The WINDING LEVER winds both the shutter and the film. It will be necessary to release the shutter by pressing the EXPOSURE BUTTON after each time the WINDING LEVER locks, except the fourth time. Enough film will now be wound on the TAKE-UP REEL so that the figure 1, which appears on the margin of the film after it is developed, will be in position for the first exposure. Turn the EXPOSURE COUNTER dial in the direction of the arrow to the first line after "O," see il-



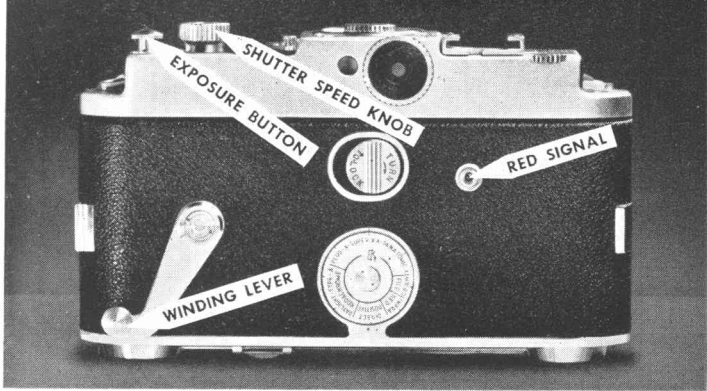


illustration. The Kodak is now ready for the first exposure. While pushing the WINDING LEVER hold the camera steady and watch the RED SIGNAL on the *back* of the camera. If this signal does not vibrate, it is a warning that the film is not properly threaded. If this should be the case, open the camera and rethread film.

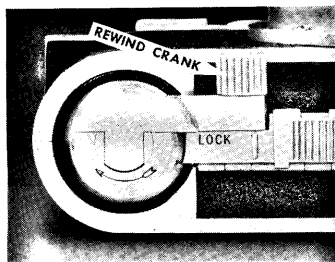
After making the exposure, push the WINDING LEVER until the RED SIGNAL on the *top* of the camera disappears. Every time a new section of film is brought into position the FILM COUNTER automatically moves to the next exposure number.

Either 36 or 18 exposures can be made on the film in the Kodak Magazine, see pages 34 and 35. After each exposure, wind the next section of film into place with the WINDING LEVER. It is impossible to make a double exposure with the Kodak Ektra when the WINDING LEVER is used for winding the shutter and film. Sometimes in trick photography you may wish to make a double exposure. This can be done

IMPORTANT: When the SHUTTER SPEED KNOB is being turned be sure to grip the KNOB firmly so that it does not slip back before the shutter is fully wound. The KNOB must be turned until 25 is at the shutter speed index. If the KNOB does slip back, lift it again and slowly turn it clockwise until 25 is at the index line. Do not press the EXPOSURE BUTTON, before 25 has been brought to the index line. If the KNOB has slipped back accidentally and in attempting to wind it the second time, it is found that the dial will not stop on the 25, it will be necessary to set the shutter with the WINDING LEVER. This procedure, of course, advances the film one frame.

by making the first exposure in the usual way; then, instead of winding the shutter with the WINDING LEVER, lift and turn the SHUTTER SPEED KNOB clockwise one complete turn. This will set the shutter for an exposure of $1/25$ second. If a speed other than $1/25$ is desired, reset the shutter speed in the usual way. Press the EXPOSURE BUTTON to make the double exposure.

REMOVING THE FILM

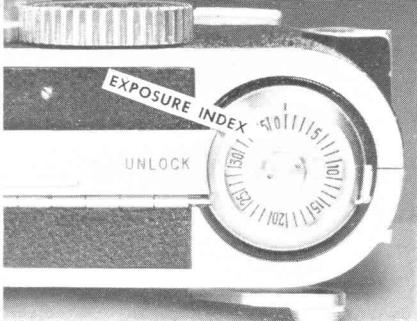


After the last exposure has been made, lift the film REWIND CRANK and rewind the film into its magazine, turning the crank in the direction of the arrow. Watch the RED

SIGNAL on the *back* of the camera and when it ceases to vibrate, reseal the REWIND CRANK, open the back of the Kodak and remove the film.

THE MAGAZINE BACK

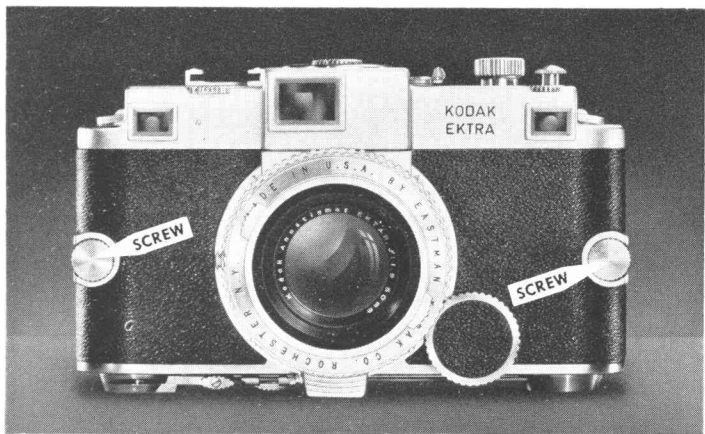
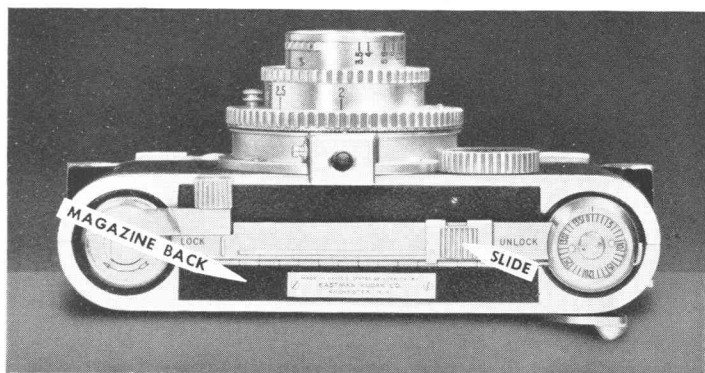
Separate MAGAZINE BACKS can be purchased, permitting black-and-white or Kodachrome photography before finishing all the exposures in any one MAGAZINE BACK. The dial on the cover, listing the various Kodak Films, should be set to indicate the

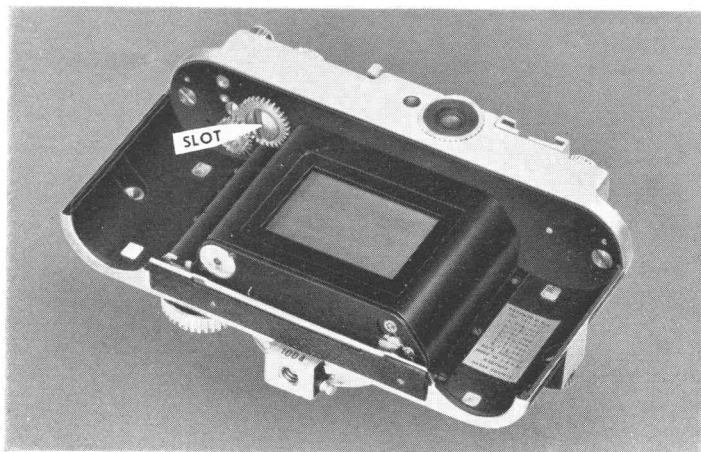
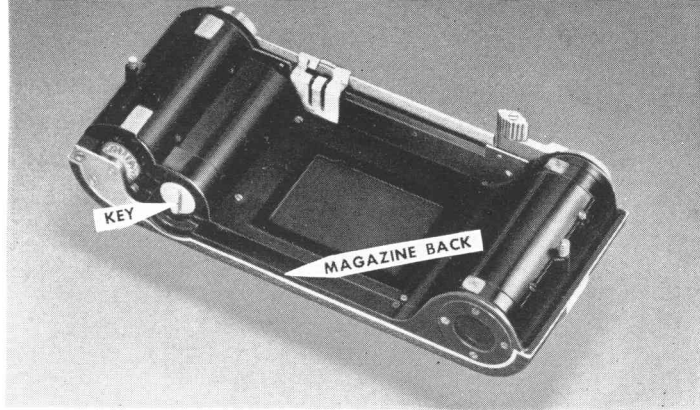


type of film in the MAGAZINE BACK. *Before removing the MAGAZINE BACK wind the shutter and film with the WINDING LEVER; then lock the EXPOSURE BUTTON, see page 10.*

Turn the EXPOSURE INDEX on the bottom of the MAGAZINE BACK to the figure registered by the EXPOSURE COUNTER on the top of the Kodak.

To change the MAGAZINE BACK, move the SLIDE on the bottom of the camera to "Unlock" and





loosen the two SCREWS on each side of the front of the camera; then lift off the MAGAZINE BACK. Place the second MAGAZINE BACK on the camera, engaging the KEY on the upper side of the MAGAZINE BACK, with the SLOT in the upper left side of the camera. Tighten the two SCREWS on the front of the camera and push the SLIDE to “*Lock.*”

THE LENSES

OF THE KODAK EKTRA

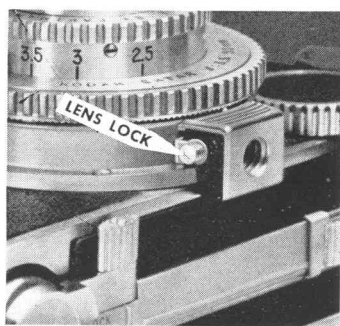
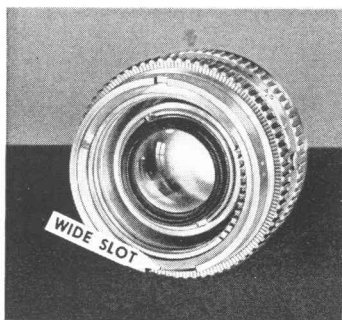
The Kodak Ektra is designed to take interchangeable lenses. Among the lenses that are now available are three Kodak Ektar Lenses, two of 50 mm. focal length (one $f/3.5$, the other $f/1.9$), and one of 90 mm. focal length, $f/3.5$. There are two Kodak Telephoto Ektar Lenses, one of 135 mm. focal length $f/3.8$ and the other of 153 mm. focal length $f/4.5$, and a wide-angle Kodak Ektar Lens of 35 mm. focal length and a maximum aperture of $f/3.3$.

All the lenses of the Kodak Ektra are especially treated by depositing on each inner surface of the lens a transparent, extremely thin film of a depth of less than $1/50,000$ of an inch. Since the deposited layer is easily abraded, only the inner, protected surfaces of a lens are treated.

This process improves the clarity and brilliance of the images formed by the lens, insures superior contrast in black-and-white negatives and greater color purity in Kodachrome transparencies. This is accomplished by greatly reducing the intensity of the reflections from the several glass-air surfaces within the lens.

Glass treated by this process is almost invisible, except when viewed at an acute angle, when it appears to assume a delicate characteristic tint.

The lenses are attached to the Kodak Ektra by fitting the WIDE SLOT in the bottom rim of the lens barrel over the wide KEY in the lens opening of the camera and then screwing the lens in place by means of the lower knurled collar. A red dot is placed on the top of the lens for a further convenience. To remove a lens, first press the LENS LOCK toward the camera body and give the lower knurled collar a half turn, counter-clockwise; then release the LOCK and continue unscrewing the lens.



For general work, lenses of 50 mm. focal length give the most natural perspective, but for close-ups such as portraiture, the 90 mm. lens will give the most pleasing results. Specific instructions for each lens are given on pages 20 to 33. Refer to the section describing the lens you are using.

DEPTH OF FIELD

Depth of field is the range of sharpness or distance from the nearest to the farthest objects that will appear sharp in the negative or print. It depends upon the distance between subject and lens, the focal length of the lens, and the size of the stop opening used; the smaller the stop opening the greater the range of sharpness. *

STOP OPENINGS

Stop openings regulate the amount of light passing through the lens.

A knowledge of the comparative values of the stop openings is necessary for correctly timing exposures.

Take the Kodak Ektar $f/1.9$ Lens for example: The stop openings are marked $f/1.9$, 2.8, 4, 5.6, 8, 11, 16, and 22. The largest stop is $f/1.9$ and allows approximately twice as much light to enter the lens as $f/2.8$; $f/2.8$ twice as much as $f/4$, etc. In other words the lens is so marked that each smaller opening (larger number) admits half the light of the

preceding larger stop opening. Thus, if the correct exposure is $1/100$ second at $f/5.6$; then the exposure for $f/8$ should be $1/50$ second, and for $f/11$, $1/25$ second.

While we have taken the $f/1.9$ lens for an example, the difference in respect to the other lenses is the largest stop opening, the value of which can be estimated by comparison. Comparative exposure required for any $f/$ number may be found by figuring the ratio of the square of the two numbers. Thus in comparing the value of $f/4$ in relation to $f/3.5$, we multiply $4 \times 4 = 16$, while $3.5 \times 3.5 = 12.25$. Dividing 16 by 12.25 gives 1.3 times longer exposure necessary for $f/4$ than for $f/3.5$.

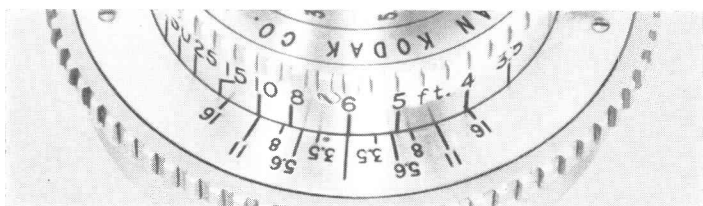
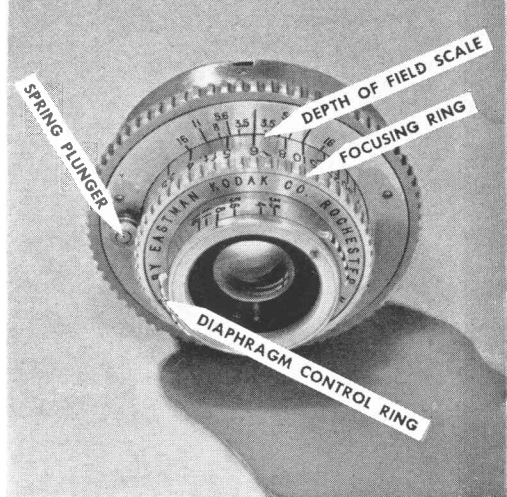
The exposure for the average outdoor subject, when the sun is shining, is $f/8$ and $1/100$ second when using Kodak Plus-X Panchromatic Film. If the day is exceptionally brilliant, use the next smaller stop to $f/8$, that is $f/11$ and $1/100$ second. *The important thing to remember is the average exposure of $f/8$ and $1/100$ second.* When the light conditions differ from the average, change the aperture, keeping in mind the basic exposure $f/8$ and $1/100$ second. See the exposure guide on pages 38 and 39. (For Kodachrome Film follow the guide included with the film.)

The smaller the stop opening the greater is the range of sharpness.

**KODAK
EKTAR LENS
f/3.5, 50 MM.**

The Kodak Ektar Lens $f/3.5$ of 50 mm. focal length is marked $f/3.5$, 4, 5.6, 8, 11, and 16. The openings are enlarged or

reduced by turning the DIAPHRAGM CONTROL RING near the front of the lens. It can be focused with the Range Finder for any distance from $3\frac{1}{2}$ feet to Infinity and the FOCUSING RING is engraved in black for focusing on the following distances: $3\frac{1}{2}$, 4, 5, 6, 8, 10, 15, 25, 50 feet, and Infinity. To focus, turn the FOCUSING RING until the distance required comes under the red focusing line.



Depth of Field Scale on the Kodak Ektar $f/3.5$, 50 mm. Lens

There is a DEPTH OF FIELD SCALE engraved directly above the FOCUSING RING; this will be found very convenient for telling at a glance the depth that will

be obtained with the stop opening and distance selected. When pressed for time, and photographing subjects at 10 feet or farther, consult this scale and estimate the distance instead of using the Range Finder.

The DEPTH OF FIELD SCALE gives the $f/$ numbers on both sides of the focusing line. To determine the Depth of Field for a given distance and stop opening, read the distances on the FOCUSING RING under the $f/$ numbers marked on the DEPTH OF FIELD SCALE. Example: If you are focused for 6 feet and you are using $f/8$ everything from about $4\frac{3}{4}$ feet to a little beyond 8 feet will be sharp. If you are using $f/16$, everything from about 4 feet to about 14 feet will be sharp.

When using Kodak Infra-Red Film, see pages 47 to 49, use the red dot for focusing, instead of the focusing line, since the infra-red rays are brought to a focus slightly behind the focus of visual rays.

The FOCUSING RING is marked in red for focusing on close-up distances. These are $1\frac{1}{2}$, 2, $2\frac{1}{2}$, and 3 feet. To adjust the lens for these close-up distances the SPRING PLUNGER must be drawn out and the FOCUSING RING then turned to the distance required. The Range Finder can not be used for these close-up distances. There is a tiny red spot on top of the camera, near the RED SIGNAL, marking the focal plane. Before photographing a close-up subject, the distance from the subject to this point must be

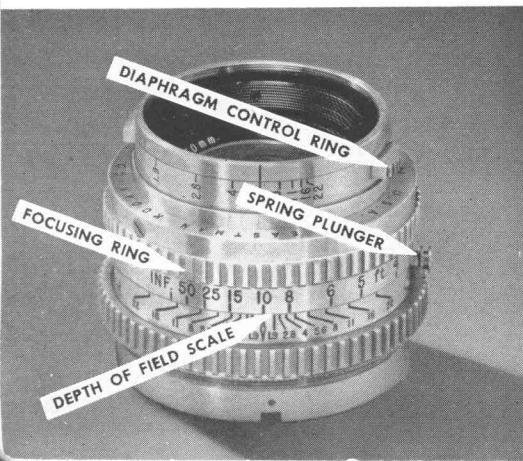
measured and the FOCUSING RING adjusted accordingly. The camera must be on a tripod. To use the camera with a tripod for a vertical picture an Optipod or a Tilt-a-pod must be used. The picture should be composed in the finder, and for a horizontal picture the camera should be raised so that the center of the lens is in line with the center of the subject. For a vertical picture, if the finder is to the right, the camera should be turned to the right after composing the picture in the finder, lining up the center of the lens with the center of the subject.

For close-up work, however, we strongly recommend the use of the Ground Glass Focusing Back, an accessory.

KODAK EKTAR LENS $f/1.9$, 50 MM.

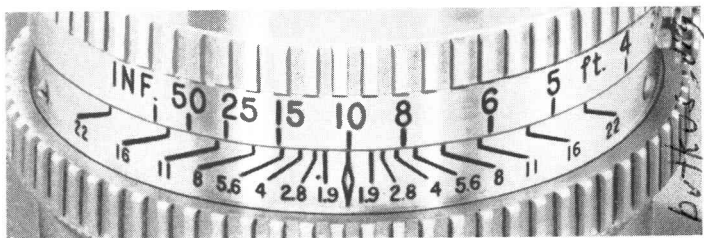
The Kodak Ektar $f/1.9$ Lens of 50 mm. focal length is marked $f/1.9$, 2.8, 4, 5.6, 8, 11, 16, and 22. The openings are enlarged or reduced by turning the DIAPHRAGM CONTROL RING near the front of the lens.

It can be focused with the Range Finder for any distance from $3\frac{1}{2}$ feet to Infinity and the FOCUSING RING is engraved in black for focusing on the fol-



lowing distances: $3\frac{1}{2}$, 4, 5, 6, 8, 10, 15, 25, 50 feet, and Infinity. To focus for any of these distances turn the FOCUSING RING until the distance required coincides with the red focusing line.

There is a DEPTH OF FIELD SCALE engraved on the lens barrel; this will be found very convenient



Depth of Field Scale on the Kodak Ektar $f/1.9$, 50 mm. Lens

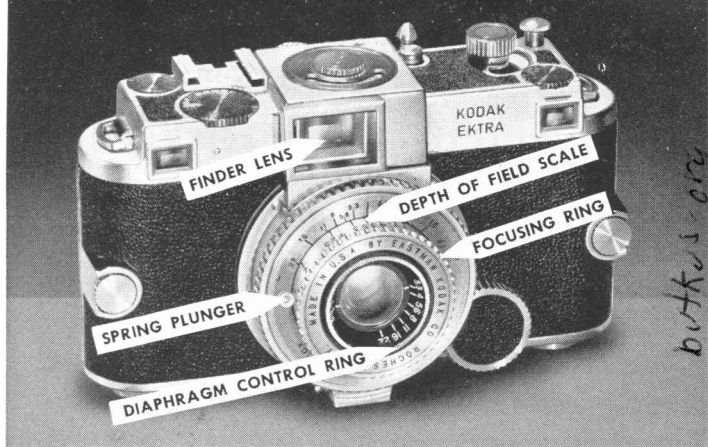
for telling at a glance the depth that will be obtained with the stop opening and distance selected. When pressed for time, and photographing subjects at 10 feet or farther, consult this scale and estimate the distance instead of using the Range Finder.

The DEPTH OF FIELD SCALE gives the $f/$ numbers on both sides of the focusing line. To find the Depth of Field for a given distance and stop opening, read the distances on the FOCUSING RING at the $f/$ numbers marked on the DEPTH OF FIELD SCALE. Example: If the camera is focused for ten feet and $f/5.6$ is used, everything from about $7\frac{3}{4}$ feet to 15 feet will be sharp; with $f/11$ everything from about 6 feet to about 30 feet will be sharp. When using Kodak Infra-Red Film, see pages 47 to

49, use the red dot for focusing instead of the focusing line, since the infra-red rays are brought to a focus slightly behind the focus of visual rays.

The FOCUSING RING is marked in red for focusing on close-up distances. These are $1\frac{1}{2}$, 2, $2\frac{1}{2}$, and 3 feet. To adjust the lens for these close-up distances, the SPRING PLUNGER must be lifted and the FOCUSING RING then turned to the distance required. The Range Finder cannot be used for these close-up distances. There is a tiny red spot on top of the camera, near the RED SIGNAL, marking the focal plane. Before photographing a close-up subject, the distance from the subject to this point must be measured and the FOCUSING RING adjusted accordingly. The camera must be on a tripod. To use the camera with a tripod for a vertical picture an Optipod or a Tilt-a-pod must be used. The picture should be composed in the finder, and for a horizontal picture the camera should be raised so that the center of the lens is in line with the center of the subject. For a vertical picture, if the finder is to the right, the camera should be turned to the right after composing the picture in the finder, lining up the center of the lens with the center of the subject.

For close-up work, however, we strongly recommend the use of the Close Range and View Finder for the Kodak Ektra, with the Kodak Ektar $f/1.9$, 50 mm. Lens, or the Ground Glass Focusing Back.



KODAK EKTAR LENS $f/3.3$, 35 MM.

The Kodak Ektar $f/3.3$ Lens 35 mm. focal length is a wide-angle lens. This lens is recommended for photographing interiors, street scenes, and wherever the widest possible view is desired. The extra FINDER LENS supplied with the wide-angle lens should be slipped over the front of the view finder as shown in the illustration, and the FINDER ADJUSTMENT DISK (page 4) set at 50. The Kodak Ektar $f/3.3$ Lens is marked $f/3.3$, 4, 5.6, 8, 11, 16, and 22. These openings are enlarged or reduced by turning the DIAPHRAGM CONTROL RING by the knurled edge which projects from the front of the lens mount. It can be focused for any distance from $3\frac{1}{2}$ feet to Infinity with the Range Finder, and the FOCUSING RING is engraved in black for focusing on the following distances: $3\frac{1}{2}$, 4, 5, 6, 8, 10, 15, and 35 feet, and Infinity. To focus for any of these dis-