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AT YOUR SERVICE

The Service Department

THOUGH the essential directions for obtaining good pictures with the Kodak 35 are given in this manual, further information on any subject discussed, or any other subject in photography, may be obtained by writing our Service Department. Send your negatives and prints to the department for helpful, constructive criticism of your work. There is no charge—no obligation.

You are also invited to send for a free copy of "At Home With Your Kodak," and "Picture Taking at Night," two booklets containing suggestions and diagrams for taking interesting pictures both indoors and outdoors.

Address all Communications

SERVICE DEPARTMENT
EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

1929
How to Use the
KODAK 35



**WITH RANGE FINDER AND
KODAK ANASTIGMAT
SPECIAL LENS**

f/3.5



THERE ARE ...

Six Easy Steps

TO GOOD PICTURES
WITH THE KODAK 35

WITH the Kodak 35, clear, sharp pictures can be made right from the start, outdoors or indoors, in the daytime or at night.

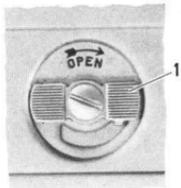
The six easy steps to make good pictures with your Kodak are given on the following pages. They are simple, and very easily memorized.

You will find many illustrations which will give you suggestions for making similar pictures.

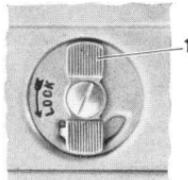
The negatives made with your Kodak 35 can be enlarged many diameters.

I LOADING

LOAD your camera with the Kodak Film Magazine in subdued light, never in direct sunlight or in exceptionally strong artificial light. The magazine should not be allowed to remain unprotected in the light; any slight light-leak through the slot will fog the film.



Position of latch 1 when back is LOCKED.



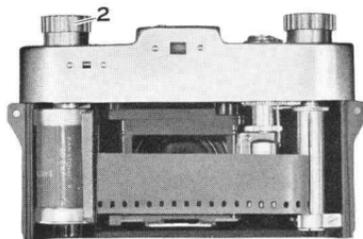
Position of latch 1 when back is UNLOCKED.

Turn the latch 1 in the direction of the arrow to OPEN, see the right-hand illustration. Then exerting a slight pressure with the thumb, slide the



2

Load your Kodak with Kodak Film. See page 16 for the descriptions of the different kinds of Kodak Film. They meet every picture-taking need.



back off the Kodak as illustrated on page 2. Insert the Kodak Magazine in the recess opposite the reel, inserting the crosspiece in the end into the slot of the post of the rewind knob 2.

Insert the end of the film in the slot of the reel, see illustration above. *Do not try to remove the reel from the camera.*

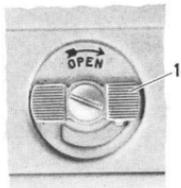
Turn the film winding knob 3, in the



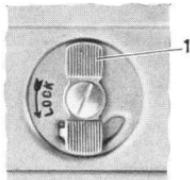
3

I LOADING

LOAD your camera with the Kodak Film Magazine in subdued light, never in direct sunlight or in exceptionally strong artificial light. The magazine should not be allowed to remain unprotected in the light; any slight light-leak through the slot will fog the film.



Position of latch 1 when back is LOCKED.



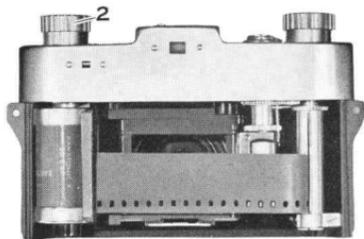
Position of latch 1 when back is UNLOCKED.

Turn the latch 1 in the direction of the arrow to OPEN, see the right-hand illustration. Then exerting a slight pressure with the thumb, slide the

2



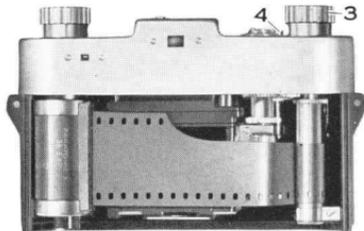
Load your Kodak with Kodak Film. See page 16 for the descriptions of the different kinds of Kodak Film. They meet every picture-taking need.



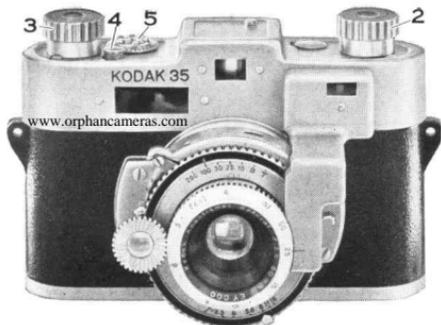
back off the Kodak as illustrated on page 2. Insert the Kodak Magazine in the recess opposite the reel, inserting the crosspiece in the end into the slot of the post of the rewind knob 2.

Insert the end of the film in the slot of the reel, see illustration above. *Do not try to remove the reel from the camera.*

Turn the film winding knob 3, in the



3



direction of the arrow, to bind the film on the reel. After the film has made one complete turn on the reel, be sure the teeth of the sprocket engage the perforations of the film leader. If the film winding knob 3 is locked, push in the button 4; then release it immediately. When the full width of film emerges from the magazine, see illustration (page 3), be sure that the film is riding properly in the path provided for it. Now replace the back of the camera and turn the latch 1 in the direction of the arrow to LOCK, see the left-hand illustration on page 2.

Turn the film winding knob 3 in the direction of the arrow until it locks. Push in the button 4, immediately release it, and again turn the winding

knob until it locks. *Repeat this operation.* 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 counter 5 to the first line after "o"; the Kodak is now ready for the first exposure.

After making the exposure, push in the button 4, release it, and turn the winding knob 3 until it locks; this automatically controls the exposure counter which gives an accurate check on the number of exposures made. The next section of film is now in position.

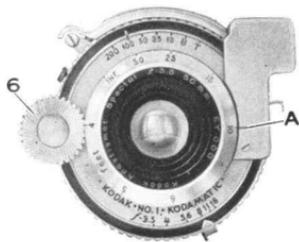
Every time a new section of film is wound into position a red lever is seen in the slot on the top of the shutter, indicating that the shutter is set, see illustration. If the red lever does not show, the winding knob must be turned.



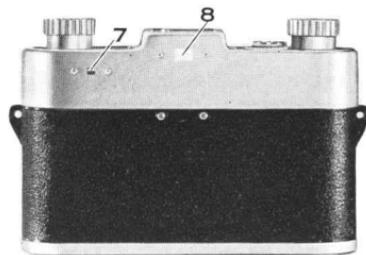
Winding the film automatically sets the shutter. This procedure prevents making double exposures.

Either 36 or 18 exposures can be made on the film in the Kodak Magazine, see page 16. After every exposure, push the button 4, page 4, release it, and then turn the winding knob 3 to bring the next section of film forward. It is impossible to make a double exposure with this Kodak.

2 FOCUSING



THE range finder is coupled with the lens of the camera. Focusing is done by turning the focusing wheel 6, while looking through the range finder window 7, as shown in the illustration. Move the focusing wheel, while looking at some vertical part of the subject. The selected vertical line will appear broken. The part seen in the upper area will be seen to the right or left of the vertical line which is seen in the lower area. Turn the focusing wheel until the se-



lected vertical line is unbroken. Your camera will then be in focus, and ready to take the picture.

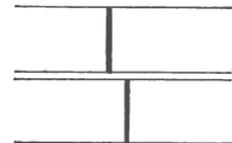


The lens on the Kodak is marked for focusing on the following distances: 4, 5, 6, 8, 10, 15, 25, 50 feet, and INF. (infinity). It is unnecessary to consult this scale when using the range finder, for when the subject is properly focused

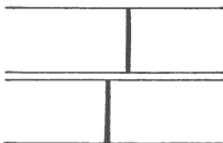
with the range finder, the camera is in focus. Another method of using the range finder, however, is to move the focusing wheel 6 until the distance desired is at the focusing indicator A, page 6; then while looking through the range finder window 7 move back and forth until the selected vertical line is unbroken.

The range finder can only be used 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.



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

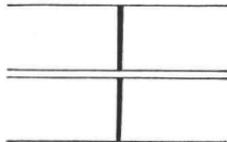


As image will appear when Range Finder is set for a distance beyond the correct one.

Before making the exposure, check the composition of the picture in the view finder 8, page 7, but since the Kodak is focused do not approach nearer or step back from the subject.

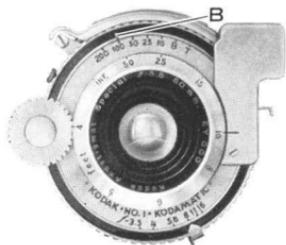
For ordinary street pictures, including moving objects, turn the focusing wheel 6, page 6, until the figure 15 is at the focusing indicator A; if the *principal object* is nearer or farther than 15 feet, change the focus accordingly. For *distant* views turn the focusing wheel until INF. (infinity) is at the focusing indicator A. See the table on page 26.

The examples at the left illustrate the appearance of the subject in the range finder. The focusing wheel 6, page 6, should be turned one way or the other until the vertical lines in the subject are continuous; this indicates that the Kodak is correctly focused.



As image will appear when Range Finder is correctly focused.

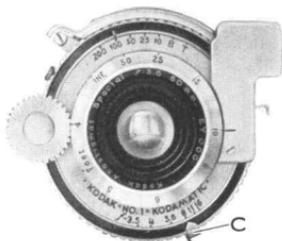
3 SHUTTER SPEEDS



THE Kodamatic Shutter on your camera has five snapshot speeds, $1/10$, $1/25$, $1/50$, $1/100$, and $1/200$ second. For average subjects revolve the

knurled collar of the shutter until the line B is at $1/100$ second. For time or "bulb" exposures the line B must be at "T" or "B" (see page 24).

4 STOP OPENINGS



THE stop openings regulate the amount of light passing through the lens. The openings are enlarged or reduced by mov-

ing the lever C at the bottom of shutter.

For average subjects outdoors when the sun is shining, move lever C to $f/8$, and make an exposure of $1/100$ second, when using Kodak Plus-X Panchromatic Film. See table on pages 22 and 23 for complete exposure data for daylight under various light conditions.

5 VIEW FINDER

THE view finder 8, page 7, shows what will appear in the picture, but on a much reduced scale. When viewing, hold the Kodak at a distance from the eye which permits seeing the entire front frame of the finder. This will assure proper aiming of the Kodak. When making 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 holding the Kodak either in the vertical or horizontal position. Unusual effects can be obtained by tilting the Kodak.

6 SNAP THE PICTURE

HOLD the Kodak in either the vertical or horizontal position as shown on page 13; then press the exposure lever D.



When pressing the lever, hold the breath for the instant. If the Kodak is moved during the exposure, the picture will be blurred. *Hold the Kodak steady.*

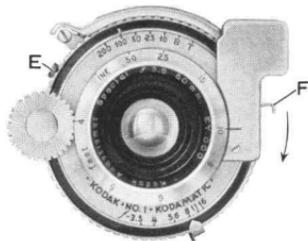
A cable release (No. 2) can be used if it is desired. To attach the cable release, remove the screw E, and replace it with the cable release.

THE SELF-TIMER

THERE is a self-acting release built into the shutter; by using this self-timer you can include yourself in the picture.

To use the self-timer, place the Kodak

on a tripod or other firm support. Use proper speed and stop opening. Push the lever F as far as it will go in the direction of the arrow. Press the exposure lever D, page 12. Get into the picture. After about ten seconds the exposure will be made.



Do not use the self-timer for either time or “bulb” exposures.

REMOVING THE FILM

After the last exposure has been made, lift the winding knob 3, page 4, so that

HOLD THE KODAK STEADY

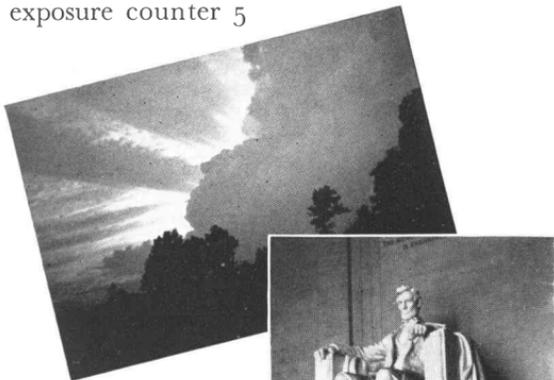
Holding the Kodak for a vertical picture.

Holding the Kodak for a horizontal picture.



the take-up reel will be free to turn backwards. The film should now be rewound into the magazine by turning the film rewind knob 2, page 4, in the direction of the arrow. Rewinding the film after the last exposure will prevent any possibility of the film winding too far and tearing loose from the supply spool.

When rewinding the film with rewind knob 2, page 4, the exposure counter 5 will turn. When the exposure counter 5



Above—A subject that should be photographed with the Kodak in the *horizontal* position.

Right—A subject that should be photographed with the Kodak in the *vertical* position.

stops turning, give a few more turns to the rewind knob 2. The magazine should be replaced in the aluminum tube, immediately after removal from the Kodak, to avoid light leaking into the slot.

IMPORTANT: Film should be developed as soon as possible after exposure.

Reload the camera as soon as an exposed film has been removed, to be ready for the next pictures.



The Standard Film for Miniature Photography

**KODAK PLUS-X
PANCHROMATIC FILM**

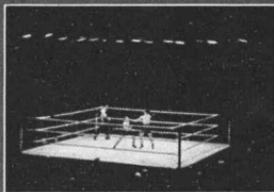
The combined high speed and fine grain of Kodak Plus-X Panchromatic Film make it the ideal film for general outdoor work. It gives correct color values in a black-and-white print. Its speed is twice that of Kodak Panatomic-X Film. PX135; obtainable in 18 or 36 exposure magazines.



For Difficult Shots at Night

**KODAK SUPER-XX
PANCHROMATIC FILM**

This extremely fast film is recommended for poor light conditions; stage shots, boxing and wrestling bouts, etc. On account of its great speed (twice that of Kodak Plus-X Film) it's the film to use for indoor candid shots. XX135; obtainable in 18 or 36 exposure magazines.



The Film that Makes the Finest Enlargements

KODAK PANATOMIC-X FILM

Because of its ultra fine grain, this film is especially recommended when big enlargements are to be made. It is the film to use when making black-and-white negatives from your Kodachrome transparencies. Its speed is half of Kodak Plus-X Film. FX135; obtainable in 18 or 36 exposure magazines.



For Pictures in Full Color

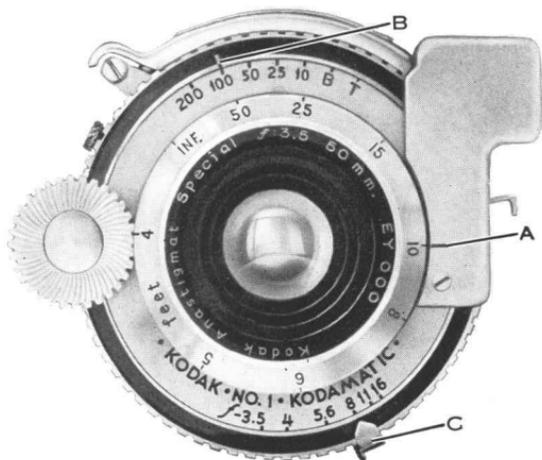
**KODACHROME FILM
K135 or K135A**

For color film transparencies, use the K135 for daylight, and the K135A for Photoflood or Photoflash light. Both in 18-exposure lengths only. It must be processed at an Eastman Kodak Laboratory. K135 or K135A.



THE EYE OF YOUR KODAK

Like the human eye, the lens and shutter is the mechanism that records the image. But the adjustments your eye makes naturally, you must make manually.



Good Pictures Depend on:

A. CORRECT FOCUSING

The lens must be focused properly so that the image of the subject will be sharp and distinct on the film.

B. PROPER SPEED

The shutter must open and close quickly enough to prevent a blurred image of a moving object.

C. RIGHT AMOUNT OF LIGHT

Just as the iris of the eye contracts and expands when there is more or less light—the diaphragm of the shutter must be closed or opened to permit the right amount of light to enter the camera.

INSTANTANEOUS EXPOSURES

WHEN the sun is shining, it should be behind your back or over the shoulder; if it shines directly into the lens, it will blur and fog the picture. However, beautiful effects can be obtained by back- or side-lighting. When pointing the Kodak towards the sun, the lens must be shaded so that the direct sunlight will not strike the lens; for the best results, use the Kodak Lens Hood of the Kodak Combination Lens Attachments, see pages 30 to 34, or a Kodak Adjustable Lens Hood No. 2.

Instantaneous exposures can be made indoors with either Kodak Plus-X Panchromatic Film or Kodak Super-XX Panchromatic Film, provided the subject is receiving the direct illumination from a window. Pictures similar to that at the bottom of the opposite page can be made with an exposure of $f/5.6$ and $1/25$ second with Kodak Plus-X Panchromatic Film, and $f/5.6$ and $1/50$



For a moving object use $1/100$ or $1/200$ second, with the proper stop opening.

For an average subject use $f/8$ and $1/100$ second with Kodak Plus-X Pan Film.

For portraits indoors and daylight illumination use $f/5.6$ and $1/25$ second.



Daylight Exposure Table

FOR KODAK PANATOMIC-X; KODAK PLUS-X, AND SUPER-XX PANCHROMATIC FILMS

These exposures apply when the film is processed in

DEVELOPER D-76

Kind of Film	Brilliant ¹ Subjects	Bright ² Subjects	Average ³ Subjects	Shaded ⁴ Subjects	Light Condition	
Panatomic-X..... Plus-X..... Super-XX.....	f/11 and 1/100 f/16 " " f/16 " 1/200	f/8 and 1/100 f/11 " " f/16 " "	f/5.6 and 1/100 f/8 " " f/11 " "	f/4 and 1/100 f/5.6 " " f/8 " "	Bright Sun	
Panatomic-X..... Plus-X..... Super-XX.....	f/8 and 1/100 f/11 " " f/16 " "	f/5.6 and 1/100 f/8 " " f/11 " "	f/4 and 1/100 f/5.6 " " f/8 " "	f/4 and 1/50 f/4 " 1/100 f/5.6 " "		Hazy Sun
Panatomic-X..... Plus-X..... Super-XX.....	f/5.6 and 1/100 f/8 " " f/11 " "	f/4 and 1/100 f/5.6 " " f/8 " "	f/4 and 1/50 f/4 " 1/100 f/5.6 " "	f/4 and 1/25 f/4 " 1/50 f/4 " 1/100		
Panatomic-X..... Plus-X..... Super-XX.....	f/4 and 1/100 f/5.6 " " f/8 " "	f/4 and 1/50 f/4 " 1/100 f/5.6 " "	f/4 and 1/25 f/4 " 1/50 f/4 " 1/100	f/4 and 1/10 f/4 " 1/25 f/4 " 1/50	Cloudy-Dull	

¹**Brilliant Subjects:** Beach, marine and snow scenes, distant landscapes and mountains without prominent dark objects in the foreground.

²**Bright Subjects:** Near-by people in marine, beach or snow scenes; scenics with foreground objects.

³**Average Subjects:** Near-by people, gardens, houses and scenes, *not in the shade*. Use this classification if in doubt.

⁴**Shaded Subjects:** People, gardens, and other subjects in the *open shade* (lighted by open sky—not under trees, porch roof, etc.).

second with Kodak Super-XX Panchromatic Film.

Snapshots should be made during the hours from one hour after sunrise until one hour before sunset. If earlier or later, the exposures must be longer.

TIME AND "BULB" EXPOSURES

For all time or "bulb" exposures the Kodak must be placed on a tripod or some other steady, firm support—*do not hold it in the hands* or the picture will be blurred.

An Optipod or a Tilt-a-pod will be necessary for using the camera on a tripod, with the camera in the vertical position.

For short time exposures from one-half second to ten seconds, "bulb" exposures are recommended.

To make a time exposure, revolve the knurled collar of the shutter until the line B, see page 18, is at the letter "T," press the exposure lever D (page 12), once to open the shutter and again to close it. For a "bulb" exposure, the line B must be at the letter "B," then press exposure lever D; the shutter will remain open as long as lever D is held down.



Made on Kodak Panatomic-X Film, which is ideal for big enlargements because of its exceptionally fine grain.

Depth of Field Table for the Kodak 35

FITTED WITH THE KODAK ANASTIGMAT SPECIAL LENS f/3.5

By "depth of field" is meant the range of sharpness in front of and behind the subject focused on, within which details in the picture will be sharp and distinct.

Distance Focused Upon	f/3.5	f/4	f/5.6	f/8	f/11	f/16
4 ft.	3' 8" to 4' 5"	3' 7 $\frac{3}{4}$ " to 4' 5 $\frac{1}{2}$ "	3' 6" to 4' 8"	3' 4" to 5'	3' 2" to 5' 7"	2' 11" to 6' 9"
5 ft.	4' 6" to 5' 7"	4' 5 $\frac{1}{2}$ " to 5' 9"	4' 3" to 4' 8"	4' to 6' 8"	3' 9" to 5' 7"	3' 4" to 7' 8"
6 ft.	5' 4" to 6' 11"	5' 3" to 7'	4' 3" to 5'	4' 7" to 8' 7"	4' 3" to 6' 8"	3' 9" to 10' 2"
8 ft.	6' 10" to 9' 8"	to 10'	5' 5" to 7' 7"	4' 7" to 8' 7"	4' 3" to 6' 8"	3' 9" to 10' 2"
10 ft.	8' 2" to 12' 9"	8' to 13' 3"	6' 3" to 11'	5' 0" to 13' 3"	5' 2" to 17' 6"	4' 5" to 38' 6"
15 ft.	11' 4" to 22'	10' 11" to 24'	7' 5" to 15' 2"	6' 8" to 19' 0"	5' 11" to 31' 3"	to Inf.
25 ft.	16' 2" to 34'	to 68'	9' 11" to 30' 8"	8' 7" to 58' 2"	7' 5" to Inf.	6' to Inf.
50 ft.	24' to Inf.	to Inf.	13' 6" to Inf.	11' 2" to Inf.	9' 3" to Inf.	7' 2" to Inf.
INF.	42' to Inf.	to Inf.	18' 4" to Inf.	14' 4" to Inf.	11' 4" to Inf.	8' 4" to Inf.
			27' 9" to Inf.	19' 5" to Inf.	14' 3" to Inf.	9' 10" to Inf.

"Inf." is the abbreviation for Infinity—meaning an unlimited distance from the lens.

STOP OPENINGS

STOP OPENINGS regulate the amount of light passing through the lens. These openings are enlarged or reduced by moving the lever C, see page 18.

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

The stop openings are marked f/3.5, 4, 5.6, 8, 11, and 16.

The largest stop opening is f/3.5. This opening allows approximately thirty per cent more light to enter than f/4. From f/4 to f/16 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/4 should be 1/200 second, for f/8, 1/50 second, and for f/11, 1/25 second.

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 22 and 23. (For Kodachrome Film follow the guide included with the film.)

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

EXPOSURES FOR INTERIORS BY DAYLIGHT

It is easy to make pictures of interiors by daylight where the windows get direct light from the sky.

To make a picture of a room interior by daylight, adjust the shutter for a "bulb" or time exposure by revolving the knurled collar until the line B is at the letter "B" or "T." Set the stop opening lever C at $f/11$; this opening gives the best average results, see Depth of Field Table on page 26.

When the Kodak is on a table, do not place it more than two or three inches from the edge, or the table will show in the picture.

Compose your subject in the finder, including more of the floor of the room



than of the ceiling. Leave the furniture in the room in its usual place, as far as possible, but be sure there are no pieces close to the camera lens.

Focus the Kodak by means of the range finder (see pages 6 to 9) or turn the focusing wheel 6 until the required figure corresponding with the average distance between the objects in the room and the lens is at the focusing indicator A, page 6.

For an interior with medium-colored walls and furnishings and two windows, with the sun shining—make an exposure of about *2 seconds*, with stop $f/11$ and Kodak Plus-X Panchromatic Film. With one window, double the exposure and if there are more than two windows, halve the exposure.

If the day is cloudy, make an exposure of 4 seconds to 8 seconds.

No definite rule can be given for all interiors because of the great variety of light conditions. It is suggested that a series of exposures be made from about 1 second to 8 seconds, using stop $f/11$, making each exposure double the previous one.

With Kodak Panatomic-X Film, double the exposures recommended above, with Kodak Super-XX Panchromatic Film give one-half the exposure.

Interiors by daylight should be made from three hours after sunrise until three hours before sunset; if earlier or later the exposures must be longer.

If no more time exposures are to be made, adjust the shutter for an instantaneous exposure, bringing the line B to 100, see page 10.

KODAK COMBINATION LENS ATTACHMENTS

THE Kodak Combination Lens Attachments permit using in combination unmounted Wratten Filters, one of the Kodak Supplementary Lenses such as the Portra Lenses and Kodak Diffusion

Portrait Attachments for close-ups, the Kodak Pola-Screen and the Kodak Lens Hood.

The basis of the combination is the Kodak Adapter Ring with its Adapter Ring Insert. The Adapter Ring must be of the proper Series and size to fit your lens.

These Combination Lens Attachments are available in four Series, to fit lens diameters from $\frac{3}{4}$ -inch to $2\frac{1}{2}$ -inches, and are designated as follows:

Series V for lenses from $\frac{3}{4}$ to $1\frac{3}{16}$ -inches

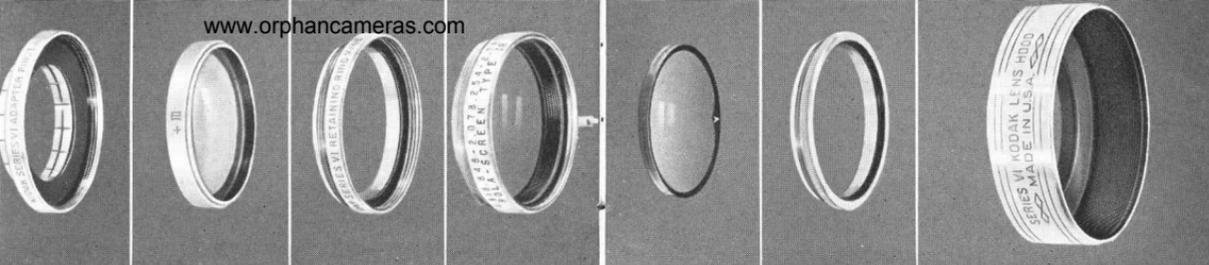
Series VI for lenses from $1\frac{1}{4}$ to $1\frac{3}{8}$ -inches

Series VII for lenses from $1\frac{11}{16}$ to 2-inches

Series VIII for lenses from $2\frac{1}{16}$ to $2\frac{1}{2}$ -inches

After determining the proper Series to be used with your camera lens, an Adapter Ring of the proper diameter must be obtained to fit the lens. The filters, supplementary lenses, Pola-Screen, and Lens Hood must be of the same Series.

The Series VI Lens Attachments are used with the Kodak 35 with Range Finder and Kodak Anastigmat Special Lens $f/3.5$. The Kodak Adapter Ring must be $1\frac{1}{4}$ -inches in diameter. All



Adapter Ring

Portra Lens

Retaining Ring

Kodak
Pola-Screen

Wratten Filter

Adapter Ring
Insert

Kodak Lens Hood

KODAK COMBINATION LENS ATTACHMENTS

Wratten Filters, supplementary lenses, Pola-Screen and Lens Hood must be Series VI.

The Adapter Ring Insert, which is a retaining collar, is first unscrewed from the Adapter Ring. The Adapter Ring is then slipped over the lens mount, and an unmounted Wratten Filter Series VI or Portra Lens Series VI (convex side up) inserted in the Adapter Ring and held in place by screwing in the Adapter Ring Insert.

If it is desired to use a Kodak Pola-Screen with a supplementary lens or a filter, the Pola-Screen is first screwed into the Adapter Ring and the filter or supplementary lens is placed in front

of the Pola-Screen, which then is held in place by the Adapter Ring Insert. If you wish to use a Kodak Lens Hood in this combination, the Adapter Ring Insert is omitted and the Lens Hood is used to hold the filter or supplementary lens in front of the Pola-Screen.

To use a Portra Lens with a filter it will be necessary to obtain a double threaded Kodak Retaining Ring, Series VI. The Portra Lens (convex side up) is placed in the Adapter Ring and then the double threaded Retaining Ring is screwed into the Adapter Ring. The filter is inserted into the Retaining Ring and held in place either with the Adapter Ring Insert or Kodak Lens Hood.

If a Kodak Pola-Screen is used in this combination, the Portra Lens (convex side up) is put into the Adapter Ring. Then the double threaded Retaining Ring is screwed into the Adapter Ring, which in turn takes the Pola-Screen. The Wratten Filter is placed in front of the Pola-Screen and held in place either with the Adapter Ring Insert or Kodak Lens Hood.

**KODAK PORTRA LENSES
1+, 2+, AND 3+**

WHILE the Kodak 35 can be focused for subjects as close as 4 feet (close enough for head and shoulder portraits), it can be focused for even closer distances with one of the Kodak Portra Lenses.

By using a Kodak Portra Lens, large images of flowers and similar "still life" subjects can be obtained.

Use the Kodak Portra Lenses with the Kodak Combination Lens Attachments, see pages 30 to 33.

Compose the picture in the finder. When making vertical pictures and you are holding your camera with the finder to the right, turn the Kodak just a *little* to the right, and for horizontal pictures

tilt it up a trifle, as the short distances at which the subject must be from the lens make it necessary to center the subject by eye.

The subject must be at one of the distances from the lens, given in the table below or one of the tables on page 36. Measure the distance carefully from the lens to the subject, and revolve the lens mount by turning the focusing wheel 6 until the correct figure is at the focusing indicator A, see page 6.

The same exposure is required as without the Kodak Portra Lens.

Kodak Portra Lens 1+		
With the Focus Set at	Distance Subject to Lens	Size of Subject Should not Exceed
4 ft.	21 ⁵ / ₈ in.	10 x 15 in.
5 ft.	23 ³ / ₄ in.	11 x 16 ⁵ / ₈ in.
6 ft.	25 ³ / ₈ in.	11 ⁷ / ₈ x 17 ⁷ / ₈ in.
8 ft.	27 ⁷ / ₈ in.	13 ¹ / ₈ x 19 ³ / ₄ in.
10 ft.	29 ⁵ / ₈ in.	14 x 21 in.
15 ft.	33 ¹ / ₂ in.	16 x 23 ⁷ / ₈ in.
25 ft.	34 ³ / ₄ in.	16 ⁵ / ₈ x 25 in.
50 ft.	37 in.	17 ³ / ₄ x 26 ⁵ / ₈ in.
Inf.	38 ³ / ₄ in.	18 ⁵ / ₈ x 28 in.

Kodak Portra Lens 2+

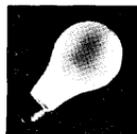
With the Focus Set at	Distance Subject to Lens	Size of Subject Should not Exceed
4 ft.	14 in.	$6\frac{3}{8}$ x $9\frac{5}{8}$ in.
5 ft.	$14\frac{7}{8}$ in.	$6\frac{7}{8}$ x $10\frac{1}{4}$ in.
6 ft.	$15\frac{1}{2}$ in.	$7\frac{1}{4}$ x $10\frac{7}{8}$ in.
8 ft.	$16\frac{3}{8}$ in.	$7\frac{5}{8}$ x $11\frac{1}{2}$ in.
10 ft.	17 in.	8 x 12 in.
15 ft.	$17\frac{3}{4}$ in.	$8\frac{3}{8}$ x $12\frac{5}{8}$ in.
25 ft.	$18\frac{3}{8}$ in.	$8\frac{7}{8}$ x $13\frac{1}{4}$ in.
50 ft.	$19\frac{1}{8}$ in.	$9\frac{1}{4}$ x $13\frac{3}{4}$ in.
Inf.	$19\frac{3}{4}$ in.	$9\frac{1}{2}$ x $14\frac{1}{4}$ in.

Kodak Portra Lens 3+

With the Focus Set at	Distance Subject to Lens	Size of Subject Should not Exceed
4 ft.	$10\frac{1}{2}$ in.	$4\frac{7}{8}$ x $7\frac{1}{4}$ in.
5 ft.	11 in.	$5\frac{1}{8}$ x $7\frac{5}{8}$ in.
6 ft.	$11\frac{3}{8}$ in.	$5\frac{3}{8}$ x 8 in.
8 ft.	$11\frac{7}{8}$ in.	$5\frac{5}{8}$ x $8\frac{3}{8}$ in.
10 ft.	$12\frac{1}{4}$ in.	$5\frac{3}{4}$ x $8\frac{3}{4}$ in.
15 ft.	$12\frac{5}{8}$ in.	6 x 9 in.
25 ft.	13 in.	$6\frac{1}{4}$ x $9\frac{3}{8}$ in.
50 ft.	$13\frac{1}{4}$ in.	$6\frac{3}{8}$ x $9\frac{1}{2}$ in.
Inf.	$13\frac{5}{8}$ in.	$6\frac{1}{2}$ x $9\frac{7}{8}$ in.

INDOOR PICTURES AT NIGHT

To take snapshots or other indoor pictures at night, you need only a roll of Kodak Film, a few Kodak Handy Reflectors, and a few Photoflood or Photoflash bulbs. The bulbs can be screwed into all regular lamp sockets.



PhotoFLOOD gives a steady light of great brilliance. Comes in two sizes for the amateur, No. 1 and No. 2. The No. 2 bulb gives twice the light, lasts three times as long.

SNAPSHOTS with PHOTOFLOODS

TO TAKE snapshots at night with the Kodak 35 load the camera with Kodak Plus-X Panchromatic, Super-XX Panchromatic or Panatomic-X Film. Place two bridge lamps fitted with the Kodak Handy Reflectors, and two No. 2 Mazda Photoflood Lamps, at any of the distances from the subject given in the table on page 39.

Focus the camera with the range finder, see pages 6 to 9.

CAUTION: Photoflood Lamps, especially the No. 2 size, become quite hot and should not be kept burning any longer



SNAPSHOTS

It is easy to make snapshots at night with your Kodak, using No. 1 or No. 2 Photofloods and Kodak Handy Reflectors, see page 37.

PHOTOFLOOD

When the subject is likely to move, make the exposure with a Photoflash Lamp, see page 41.



PHOTOFLOOD EXPOSURE TABLE

Lens apertures to use with 1/25 second—two No. 2 Photoflood Lamps in Kodak Handy Reflectors, for average subject in room with light-colored walls.

Lamp Distance	3 1/2 ft.	5 ft.	6 ft.	7 ft.	8 ft.	10 ft.
Panatomic-X	f/8	f/5.6-8	f/5.6	f/4-5.6	f/4	f/3.5
Plus-X	11	8-11	8	5.6-8	5.6	4-5.6
Super-XX	16	11-16	11	8-11	8	5.6-8

For two No. 1 Photoflood Lamps double the above exposures. For example, if the table calls for an exposure of f/8 and 1/25 second, give an exposure of 1/25 second and f/5.6. See page 27 for a comparison of stop openings.

PHOTOFLASH EXPOSURE TABLE

Lens apertures with No. 7 or No. 11A Photoflash Lamps in Kodak Handy Reflectors for average subject in average room with light-colored walls. For outdoor subjects at night double the exposure.

Lamp Distance	7 ft.	8 ft.	10 ft.	12 ft.	14 ft.	17 ft.	20 ft.	25 ft.
Panatomic-X	<i>f</i> /16	11-16	11	8-11	8	5.6-8	5.6	4-5.6
Plus-X	16*	16*	16	11-16	11	8-11	8	5.6-8
Super-XX	16*	16*	16*	16*	16	11-16	11	8-11

*Less exposure is sufficient, but most miniature cameras do not have apertures smaller than *f*/16.

than necessary. Do not permit bulbs to come in contact with Kodak Handy Reflectors or the fabric of lamp shades.

PHOTOFLASH PICTURES



PhotoFLASH gives an instantaneous flash; it is good for one picture. No smoke, no noise. The No. 7 size and the No. 11A size are equally efficient.

WHEN making a *Photoflash* picture, adjust the shutter for a time exposure, with speed indicator line B at "T," see page 10.

Focus the camera with the range finder, see pages 6 to 9, or measure the distance between subject and lens and use the focusing indicator A.

Use the proper stop opening, depending upon distance between lamp and subject, and kind of film, see page 40.

Use a *Photoflash* bulb in any home lamp or a portable reflector unit having flashlight batteries.

To make the exposure, turn out all lights (except a small light behind the camera), direct the *Photoflash* at the subject, open the shutter, flash the bulb, and close the shutter.

EXPOSURES UNDER EXISTING ARTIFICIAL LIGHT FOR SUPER-XX FILM

For Plus-X—give double the exposure

For Panatomic-X—give 4 times the exposure

Stage	White Spotlights on Principal Subject Average White General Illumination	(Colored lights require more exposure)	f/Value	Shutter Speeds
Boxing Wrestling-Ring	Bright Floodlight		3.5	1/100—1/25 sec.
				1/25 —1/10
Public Events	Bright Overhead Lighting: Hockey Games, Track Meets, etc. Public Places, Buildings, etc.		3.5	1/100—1/25
				1/25—1/10
Downtown Street Scenes	To show electric signs		3.5	1/100—1/25
	To show detail in darker objects: Store Windows, Floodlit Buildings, etc.		3.5	1/10 —Short "Bulb" Exposure
In the Home	Average bright: Overhead lighting. General illumination. Open lamps.		3.5	1/25 —1/10
	Subdued Lighting: Light from Shaded Lamps.		3.5	Short "Bulb" Exposure

KODAK INFRA-RED FILM I-R135

This film reaches into that portion of the spectrum beyond the visible red. The most common use for the Kodak Infra-Red Film is distant landscape photography, though it is also very useful for scientific, medical and criminological photography.

When a distant landscape is photographed on an ordinary film, the distance often lacks detail on account of the haze. This is because violet and blue light, to which an ordinary film is sensitive, is scattered by atmospheric haze. The longer wave lengths of the visible light and particularly the invisible infra-red, however, are freely transmitted by the haze. A photograph made on infra-red film with a deep yellow or red filter over the lens, to absorb the violet and blue light, will often (depending on atmospheric conditions) show distant objects very clearly even if the haze makes them invisible to the eye.

Landscape photographs taken on infra-red film, outdoors in sunlight, fre-

quently have the appearance of pictures taken by moonlight.

While several Wratten Filters can be used, we recommend the Wratten Filter No. 25 (A) (red) and an average exposure with bright sunlight of about $f/5.6$ and $1/25$ second. Use a Wratten Filter No. 25 (A) Series VI with the Kodak Combination Lens Attachments, see pages 30 to 34.

Instructions for developing the film are enclosed with each magazine of Kodak Infra-Red Film I-R135.

For more detailed information, refer to the Kodak data book: "Infrared Photography with Kodak Materials," sold by Kodak dealers.

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.



Landscape made on Kodak Infra-Red material with No. 25 (A) Wratten Filter. Exposure: $t/5.6$ and $1/25$ second.



Landscape made on panchromatic film without a filter.