

This manual is for reference and historical purposes, all rights reserved.

This page is copyright© by M. Butkus, NJ.

This page may not be sold or distributed without the expressed permission of the producer

I have no connection with any camera company

On-line camera manual library

This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

If you find this manual useful, how about a donation of \$3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your e-mail address so I can thank you. Most other places would charge you \$7.50 for a electronic copy or \$18.00 for a hard to read Xerox copy.

This will allow me to continue to buy new manuals and pay their shipping costs.

It'll make you feel better, won't it?

**If you use Pay Pal or wish to use your credit card,
click on the secure site on my main page.**

HOW TO USE THE
KODAK

WITH
RANGE FINDER and
DOUBLE EXPOSURE
PREVENTION
DEVICE

Duo Six-20

SERIES II

KODAK
ANASTIGMAT LENS
f/3.5
COMPUR-RAPID
SHUTTER





THERE ARE . . .

7 Easy Steps

**TO GOOD PICTURES WITH
THE KODAK DUO SIX-20**

WITH the Kodak Duo Six-20 Series II, clear, sharp pictures can be made right from the start, outdoors or indoors, in the daytime or at night.

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

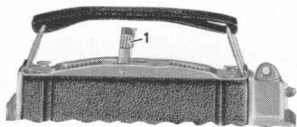
You will find many illustrations which will give you suggestions for making similar pictures.

The negatives made with your Kodak Duo Six-20 can be enlarged to many diameters.

1

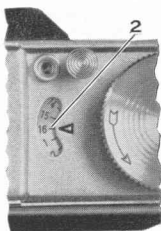
LOADING

LOAD your camera in subdued light, never in direct sunlight or in exceptionally strong artificial light.



Lift the latch 1 and open the back of the Kodak. There is an empty spool in the winding end of the camera; this is to be used as the reel.

Before loading the camera with film be sure the figure 16 of the exposure counter 2 is at the pointer. If any other number is at this pointer, the front of the Kodak must be opened as explained on page 5. The roller next to the empty spool must be turned towards the hinge of the back until the next number comes to the pointer; then push the shutter setting lever A to the top of the shutter, see pages 5 and 6, and push down



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.

on the shutter release 3, page 4. This procedure must be followed for as many times as it may be necessary to bring the figure 16 to the pointer.

Place the roll of film in the end opposite the reel, so that when the paper is drawn off the spool, the colored side of the paper will be up, and the black side will be towards the lens. Engage the hole in the spool, with the spool pin on the side of the camera with the tripod socket. Push the spool against this pin, which will then spring out, and permit the other pin to engage with the opposite hole in the spool.

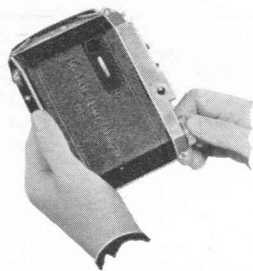
Remove the band that holds the end of the protective paper and pass the paper *over* the rollers.

Thread the paper through the longer opening of the slit in the reel as far as it will go. Draw the paper taut, giving a few turns to the winding knob. The paper must draw straight.

Close the back and push down the latch, to lock the back.

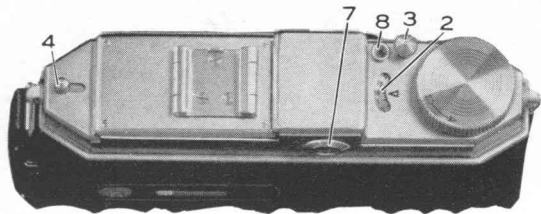
Push the knob of the slide covering the red window towards the center of the camera.

Turn the winding knob in the direction of the arrow and watch the red window.



After a few turns a warning hand will appear; then turn slowly until the *figure 1* is exactly in the center of this window. Push back the slide over the red window. The window is used only for center-

ing the first exposure, and the window should not be uncovered again until the sixteenth exposure has been made.

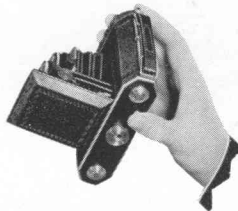


Now push the exposure counter setting slide 4 to the opposite end of the slot and let it spring back. This brings the figure 1 to the pointer. The film is now in position for the first exposure.

Sixteen exposures can be made on a roll of 620 film with the Kodak Duo Six-20, Series II.

2

OPENING FRONT

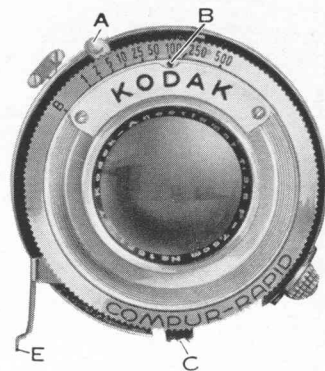


PRESS the button to open the front of the Kodak; then draw down the bed carefully until it locks. This will bring the lens and the shutter into position.

3

SHUTTER SPEEDS

THE Compur-Rapid Shutter on your camera is designed for making automatic exposures of 1, 1/2, 1/5, 1/10, 1/25, 1/50, 1/100, 1/250 and 1/500 second. For average subjects revolve the knurled collar of the shutter until 1/100 second is at the black pointer B, see illustration. For "bulb" exposures the letter "B" must be brought to the black pointer B.



Exposures of intermediate speeds can be made from 1 second to 1/100 (except between 1/10 and 1/25) by turning the collar so that the pointer B comes between the speed numbers; thus an exposure of 1/75 second is made by turning the knurled collar so that the black pointer B is midway between 1/50 and 1/100. Intermediate exposures cannot be made between speeds faster than 1/100 second.

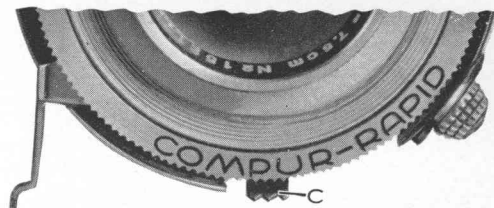
After the proper speed is brought to the pointer B, it is necessary to set the shutter by pushing the lever A, page 5, to the opposite end of the slot. It is not advisable to change the speed of the shutter from 1/250 to 1/500 or vice versa *when the shutter is set*.

Automatic exposures of 1 second, 1/2, 1/5, or 1/10 second must not be made with the camera held in the hands; a tripod or other firm support must be used for exposures slower than 1/25 second.

Important: *Never oil the shutter.*

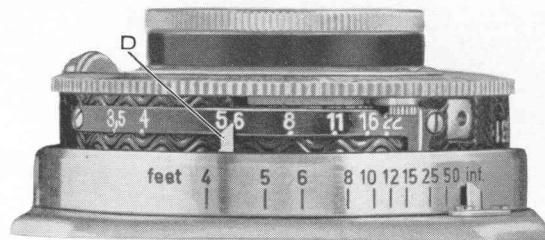
4 STOP OPENINGS

THE stop openings regulate the amount of light passing through the lens. The openings are enlarged or reduced by moving lever C on the bottom of the shutter. Lever C moves pointer D.



For average subjects outdoors when the sun is shining, move pointer D to $f/5.6$, and make an exposure of 1/100 second, when using Kodak Verichrome Film.

See table on back cover for exposure data for daylight.



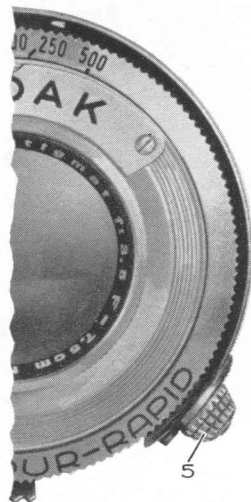
5 FOCUSING

THE range finder of the Kodak Duo Six-20 Series II is coupled with the lens of the camera. Focusing is done by moving knob 5, page 8. This knob controls the focus of the lens and the range finder.

Look through the eyepiece 7, page 4, holding the camera as shown on page 9.

Two images of the subject will appear (one in a clear disk, the other—pink); move the focusing knob 5 until these two images coincide, and only one image is visible. The distance between the camera and subject focused on can be read on the focusing scale at the indicator 6.

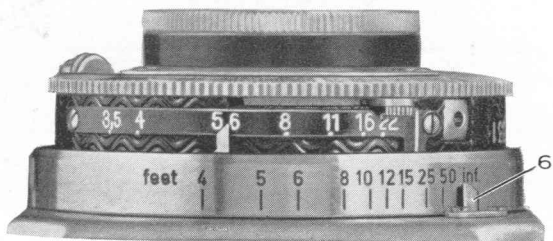
Another method of using the range finder is to move the focusing knob until the distance desired is at the focusing indicator 6; then, while looking through the eyepiece of the range finder, move back or forth until the two images appear as one.



The range finder can be used only on subjects that are motionless.

The range finder and view finder have the same eyepiece; before making the exposure, check the composition of the picture in the view finder, but since the Kodak is focused, do not approach nearer to or step back from the subject.

The camera has a focusing collar engraved for the following distances: 4, 5, 6, 8, 10, 12, 15, 25, 50 feet, and 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.

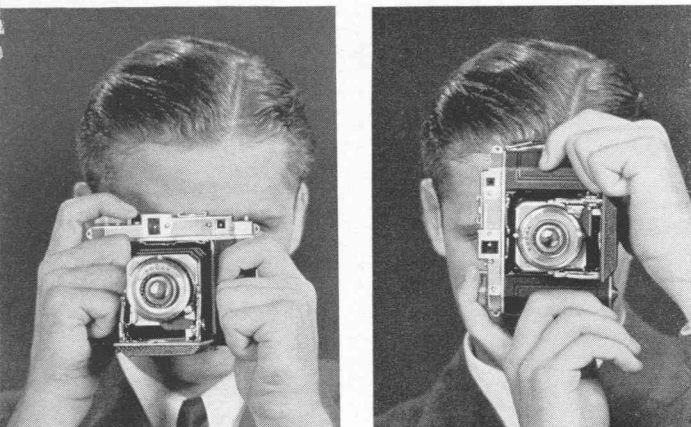


6 THE VIEW FINDER

THE view finder 7, page 15, shows what will appear in the picture, but on a much reduced scale. In viewing, the rear of the finder is brought as close to the eye as possible with the camera pressed firmly against the face, as in the illustrations below. For horizontal pictures the camera is simply turned end up. All vertical lines in the subject should appear parallel with the vertical lines of the front frame of the finder, when holding the camera either in the vertical or horizontal position.

Unusual effects can be obtained by tilting the Kodak. *Hold the Kodak steady.*

HOLD THE KODAK STEADY



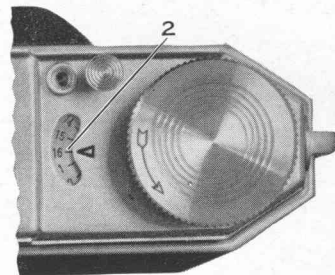
7 SNAP THE PICTURE

HOLD the Kodak in either the vertical or horizontal position; then press the shutter release as shown on page 10. When pressing the shutter release, hold the breath for the instant. If the Kodak is moved during exposure, the picture will be blurred. *Hold the Kodak steady.*

The exposure lever E, page 5, can be used in trick photography, when a double exposure may be wanted.

A T.B.I. Cable Release No. 2 can be used with the Kodak Duo Six-20 Series II. The release is screwed into the opening 8, page 15, next to the shutter release.

After making the exposure, turn the film winding knob until it locks; this automatically controls the exposure counter 2 which gives an accurate check on the number of exposures made. The next section of film is now in position. It is impossible to make a double exposure with the Kodak Duo Six-20 Series



If the body shutter release or cable release is used, because the shutter can not be operated with either release until a new section of film is wound into position.

“BULB” EXPOSURES

For all “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 a horizontal picture.

To make a “bulb” exposure, the letter “B” must be at the black pointer B, page 5; then press the shutter release; the shutter will remain open as long as the shutter release is held down.

TIME EXPOSURES



TIME exposures can be made with your Kodak when it is fitted with a T.B.I. Cable Release.

To make a time exposure, the circular piece should be turned so that the notch on the edge is directly under the small button, see the illustration. Set the shutter for a “bulb” exposure. Press the pushpin of the cable release; time the exposure by

a watch; and then press the small button to release the pushpin to complete the exposure.

For making “bulb” and instantaneous exposures, turn the circular piece so that it slides under the small button. Press the pushpin of the cable release which will spring back to its original position when the finger is removed.



CLOSING THE KODAK

BEFORE closing the Kodak, *first make sure it is focused for infinity*. To close the Kodak, press the plate release 9, page 15, raise the bed 10 and snap it shut.

REMOVING THE FILM

AFTER the sixteenth exposure has been made, uncover the red window and turn the winding knob, until the end of the paper passes the red window.

Give a few more turns to the winding knob and then, in a subdued light, open the back of the Kodak as described on page 2.

The film is removed by pushing down on one of the flanges of the spool and disengaging the pin on the winding knob from the hole in the end of the spool. Fold under the end of the protective paper and fasten it with the sticker.

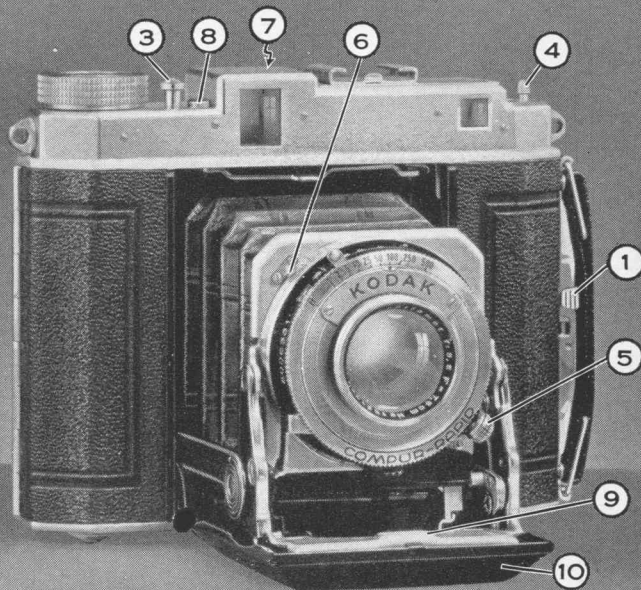
Working Parts on the Kodak

“Cinch” Marks: After removing the film from the camera, do not wind it tightly with a twisting motion, or the film might be scratched.

Important: Film should be developed as soon as possible after exposure. The quality of the image on all sensitized products is retained by prompt development after exposure.

Remove the empty spool and place it in the chamber on the winding side of the camera. Engage the hole in the spool, with the spool pin on the side of the camera with the tripod socket; push the spool against this pin, which will then spring out and permit the web on the winding knob to engage the slot in the other end of the spool.

It is a good plan to reload the camera as soon as an exposed film has been removed, to be ready for the next pictures.



1. Lock for Back
2. Shutter Release
3. Exposure Counter Setting Slide
4. Focusing Knob
5. Focusing Indicator
6. Combination Range and View Finder
7. Opening for T.B.I. Cable Release
8. Plate Release
9. Bed

THE FILMS THAT MEET EVERY PICTURE-TAKING NEED

The All-Purpose Film . . .



KODAK VERICHROME FILM

Has great speed and is well balanced for recording tone values in a black-and-white print. Its double coating guards against over- and underexposure. 8 exposures. V620, 30 cents.

For Pictures at Night and Difficult Daytime Shots . . .



KODAK SUPER-XX PAN FILM

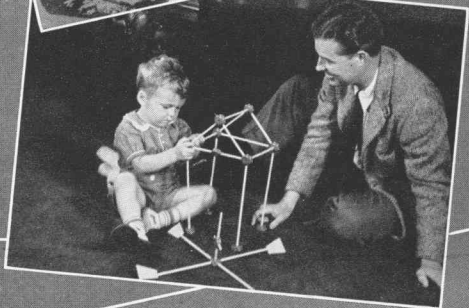
Gives correct color values in a black-and-white print. Its speed makes it ideal for taking pictures at night by artificial light, and outdoor snapshots in the shade. 8 exposures. XX620, 35 cents.

The Film that Makes the Finest Enlargements . . .



KODAK PANATOMIC-X FILM

It records color values correctly in a black-and-white print. It has an exceptionally fine grain enabling the making of enlargements of great size. 8 exposures. FX620, 35 cents.



SUGGESTIONS ON EXPOSURE

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 Lens Hood of the Kodak Combination Lens Attachments, see pages 34 and 35 for a full description of the various attachments that are available; or use a Kodak Adjustable Lens Hood No. 2.

Instantaneous exposures can be made indoors with Kodak Super-XX Panchromatic Film, providing 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 $1/50$ 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.



For a moving object use $1/250$ or $1/500$ second.

For an average subject use $f/5.6$ and $1/100$ second with Kodak Verichrome Film.

For portraits indoors and daylight illumination use $f/5.6$ and $1/50$ second with Kodak Super-XX Pan Film.



STOP OPENINGS

STOP openings regulate the amount of light passing through the lens. These openings are enlarged or reduced by moving the lever C. Lever C moves pointer D, see page 7.

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, 16, and 22.

The largest stop opening is $f/3.5$. This opening allows approximately thirty per cent more light to enter than $f/4$, and about two and a half times more than $f/5.6$. From $f/4$ to $f/22$ 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 $f/3.5$ should be $1/250$ second; for $f/8$, $1/50$ second; for $f/11$, $1/25$ second; for $f/16$, $1/10$ second; and for $f/22$, $1/5$ second.

The exposure for the average outdoor subject, when the sun is shining, is $f/5.6$ and $1/100$ second when using Kodak Verichrome Film. If the day is exceptionally brilliant, use the next smaller stop to $f/5.6$, that is, $f/8$ and $1/100$ second. *The important thing to remember is the average exposure of $f/5.6$ and $1/100$ second.* When the light conditions differ from the average, change the aperture,

keeping in mind the basic exposure $f/5.6$ and $1/100$ second. See the exposure guide on back cover.

DEPTH OF FIELD

DEPTH of field is the 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.

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" exposure by revolving the knurled collar until the letter "B" is at the black pointer B, page 5. Move the stop opening pointer D to $f/11$, page 7; this opening gives the best average results.

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 the picture in the finder, including more of the floor of the room than of

Depth of Field Table for the Kodak Duo Six-20 Series II

FITTED WITH THE KODAK ANASTIGMAT 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	$f/3.5$	$f/5.6$	$f/8$	$f/11$	$f/16$	$f/22$
4 ft.	3' 10" to 4' 1"	3' 9" to 4' 3"	3' 8" to 4' 4"	3' 7" to 4' 6"	3' 5" to 4' 9"	3' 3" to 5' 2"
5 ft.	4' 9" to 5' 3"	4' 8" to 5' 5"	4' 6" to 5' 7"	4' 4" to 5' 10"	4' 2" to 6' 4"	3' 10" to 7' 9"
6 ft.	5' 8" to 6' 4"	5' 6" to 6' 7"	5' 4" to 6' 10"	5' 1" to 7' 3"	4' 9" to 8' 4"	4' 5" to 9' 2"
8 ft.	7' 5" to 8' 8"	7' 2" to 9'	6' 10" to 9' 8"	6' 6" to 10' 5"	6' 4" to 12'	5' 5" to 15'
10 ft.	9' 1" to 11'	8' 8" to 11' 10"	8' 1" to 12' 10"	7' 8" to 14' 4"	7' 7" to 18'	6' 3" to 25'
12 ft.	10' 9" to 13' 7"	10' 2" to 14' 9"	9' 6" to 16' 4"	8' 9" to 19' 6"	7' 10" to 25'	7' 10" to 44'
15 ft.	13' 1" to 17' 6"	12' 2" to 19' 6"	11' 3" to 22' 6"	10' 3" to 27' 6"	9' 9" to 44'	7' 10" to 44'
25 ft.	20' 2" to 33'	18' to 40' 8"	16' 1" to 56'	14' 2" to 103'	12' to 103'	10' to 103'
50 ft.	34' to 97'	28' to 103'	24' to Inf.	20' to Inf.	15' 6" to Inf.	12' to Inf.
Inf.	68' to Inf.	49' to Inf.	37' to Inf.	28' to Inf.	20' to Inf.	15' to Inf.

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

The depth of field is not given for $f/4$. This depth can be estimated by comparison.



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 moving the focusing knob 5, page 8, until the figure corresponding with the average distance between the objects in the room and the lens is at the focusing indicator 6.

For an interior with medium-colored walls and furnishings and two windows, with the sun shining—make an exposure of about 4 *seconds*, with stop $f/11$. 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 8 seconds to 16 seconds.

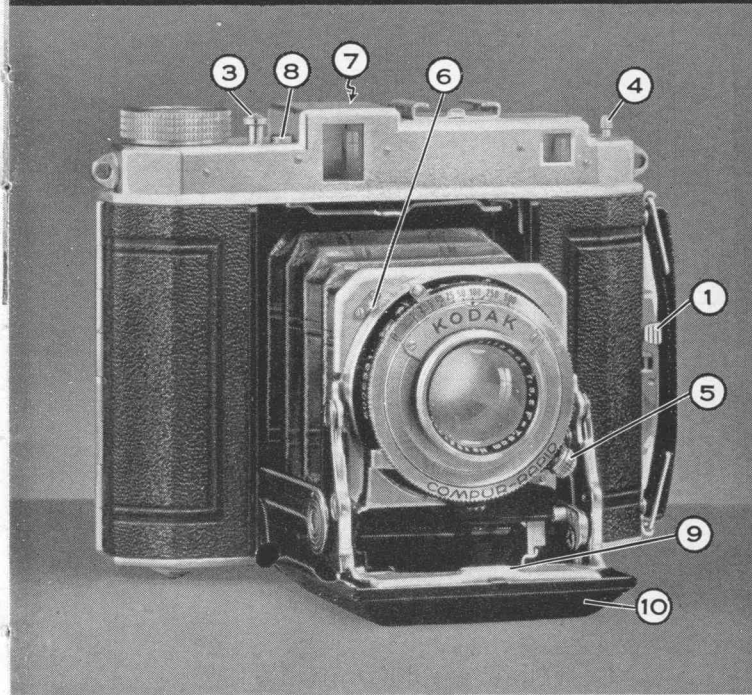
No definite rule can be given for all interiors because of the great variety of light conditions. It is suggested that a series of

“Cinch” Marks: After removing the film from the camera, do not wind it tightly with a twisting motion, or the film might be scratched.

Important: Film should be developed as soon as possible after exposure. The quality of the image on all sensitized products is retained by prompt development after exposure.

Remove the empty spool and place it in the chamber on the winding side of the camera. Engage the hole in the spool, with the spool pin on the side of the camera with the tripod socket; push the spool against this pin, which will then spring out and permit the web on the winding knob to engage the slot in the other end of the spool.

It is a good plan to reload the camera as soon as an exposed film has been removed, to be ready for the next pictures.



1. Lock for Back
2. Shutter Release
3. Exposure Counter Setting Slide
4. Focusing Knob
5. Focusing Indicator
6. Combination Range and View Finder
7. Opening for T.B.I. Cable Release
8. Plate Release
9. Bed

The All-Purpose Film . . .

KODAK VERICHROME FILM



Has great speed and is well balanced for recording tone values in a black-and-white print. Its double coating guards against over- and underexposure. 8 exposures. V620, 30 cents.

For Pictures at Night and Difficult Daytime Shots . . .

KODAK SUPER-XX PAN FILM



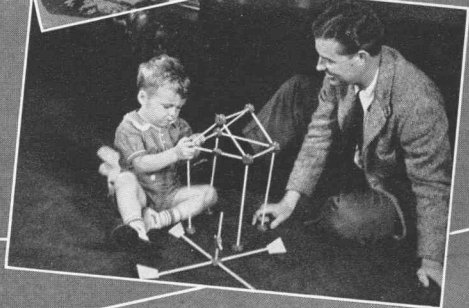
Gives correct color values in a black-and-white print. Its speed makes it ideal for taking pictures at night by artificial light, and outdoor snapshots in the shade. 8 exposures. XX620, 35 cents.

The Film that Makes the Finest Enlargements . . .

KODAK PANATOMIC-X FILM



It records color values correctly in a black-and-white print. It has an exceptionally fine grain enabling the making of enlargements of great size. 8 exposures. FX620, 35 cents.



SUGGESTIONS ON EXPOSURE

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 Lens Hood of the Kodak Combination Lens Attachments, see pages 34 and 35 for a full description of the various attachments that are available; or use a Kodak Adjustable Lens Hood No. 2.

Instantaneous exposures can be made indoors with Kodak Super-XXX Panchromatic Film, providing 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 $1/50$ 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.



For a moving object use $1/250$ or $1/500$ second.

For an average subject use $f/5.6$ and $1/100$ second with Kodak Verichrome Film.

For portraits indoors and daylight illumination use $f/5.6$ and $1/50$ second with Kodak Super-XX Pan Film.



STOP OPENINGS

STOP openings regulate the amount of light passing through the lens. These openings are enlarged or reduced by moving the lever C. Lever C moves pointer D, see page 7.

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, 16, and 22.

The largest stop opening is $f/3.5$. This opening allows approximately thirty per cent more light to enter than $f/4$, and about two and a half times more than $f/5.6$. From $f/4$ to $f/22$ 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 $f/3.5$ should be $1/250$ second; for $f/8$, $1/50$ second; for $f/11$, $1/25$ second; for $f/16$, $1/10$ second; and for $f/22$, $1/5$ second.

The exposure for the average outdoor subject, when the sun is shining, is $f/5.6$ and $1/100$ second when using Kodak Verichrome Film. If the day is exceptionally brilliant, use the next smaller stop to $f/5.6$, that is, $f/8$ and $1/100$ second. *The important thing to remember is the average exposure of $f/5.6$ and $1/100$ second.* When the light conditions differ from the average, change the aperture,

keeping in mind the basic exposure $f/5.6$ and $1/100$ second. See the exposure guide on back cover.

DEPTH OF FIELD

DEPTH of field is the 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.

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" exposure by revolving the knurled collar until the letter "B" is at the black pointer B, page 5. Move the stop opening pointer D to $f/11$, page 7; this opening gives the best average results.

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 the picture in the finder, including more of the floor of the room than of

Depth of Field Table for the Kodak Duo Six-20 Series II

FITTED WITH THE KODAK ANASTIGMAT 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	$f/3.5$	$f/5.6$	$f/8$	$f/11$	$f/16$	$f/22$
4 ft.	3' 10" to 4' 1"	3' 9" to 4' 3"	3' 8" to 4' 4"	3' 7" to 4' 6"	3' 5" to 4' 9"	3' 3" to 5' 2"
5 ft.	4' 9" to 5' 3"	4' 8" to 5' 5"	4' 6" to 5' 7"	4' 4" to 5' 10"	4' 2" to 6' 4"	3' 10" to 7'
6 ft.	5' 8" to 6' 4"	5' 6" to 6' 7"	5' 4" to 6' 10"	5' 1" to 7' 3"	4' 9" to 8'	4' 5" to 9' 2"
8 ft.	7' 5" to 8' 8"	7' 2" to 9'	6' 10" to 9' 8"	6' 6" to 10' 5"	6' 4" to 12'	5' 5" to 15'
10 ft.	9' 1" to 11'	8' 8" to 11' 10"	8' 1" to 12' 10"	7' 8" to 14' 4"	7' 10" to 25'	6' 3" to 25'
12 ft.	10' 9" to 13' 7"	10' 2" to 14' 9"	9' 6" to 16' 4"	8' 9" to 19' 6"	7' 10" to 44'	7' 10" to Inf.
15 ft.	13' 1" to 17' 6"	12' 2" to 19' 6"	11' 3" to 22' 6"	10' 3" to 27' 6"	9' to Inf.	10' to Inf.
25 ft.	20' 2" to 33'	18' to 40' 8"	16' 1" to 56'	14' 2" to 103'	12' to Inf.	13' to Inf.
50 ft.	34' to Inf.	28' to Inf.	24' to Inf.	20' to Inf.	15' 6" to Inf.	19' to Inf.
Inf.	68' to Inf.	49' to Inf.	37' to Inf.	28' to Inf.	20' to Inf.	15' to Inf.

"Inf." is the abbreviation for Infinity—meaning an unlimited distance from the lens. The depth of field is not given for $f/4$. This depth can be estimated by comparison.



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 moving the focusing knob 5, page 8, until the figure corresponding with the average distance between the objects in the room and the lens is at the focusing indicator 6.

For an interior with medium-colored walls and furnishings and two windows, with the sun shining—make an exposure of about 4 *seconds*, with stop $f/11$. 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 8 seconds to 16 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 2 seconds to 16 seconds, using stop $f/11$, making each exposure double the previous one.

The exposures recommended above are for Kodak Verichrome and Panatomic-X Films; with Kodak Super-XX Panchromatic Film give one-fourth 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.

Stop $f/11$ gives the best average results. Double the exposures with each *smaller* stop, and halve the exposures with each *larger* stop opening.

If no more "bulb" exposures are to be made, adjust the shutter by bringing 100 to the black pointer B, see page 5.

KODAK PORTRAIT ATTACHMENT

WHILE the Kodak can be focused for subjects as close as 4 feet, permitting the obtaining of head and shoulder portraits, it can be focused for even closer distances when a Kodak Portrait Attachment is used.

By using the Kodak Portrait Attachment, large images of flowers and similar "still life" subjects can be obtained.

Place the Attachment over the lens and compose the picture in the finder. For vertical pictures 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. Measure the distance carefully from the lens to the subject, and move the focusing knob 5, page 8, until the correct figure is at the focusing indicator 6, see table.

<i>Distance Between Subject and Lens must be</i>	<i>The Focusing Indicator must be at</i>
2 feet 1 inch	4 feet
2 " 4 inches	5 "
2 " 6 "	6 "
2 " 10 "	8 "
3 "	10 "
3 " 5 "	15 "
3 " 9 "	25 "

The same exposure is required as without the Attachment.

Use KODAK PORTRAIT ATTACHMENT No. 17 with the Kodak Duo Six-20 Series II.

To produce a true, soft focus effect, use the KODAK DIFFUSION PORTRAIT ATTACHMENT No. 17.

KODAK SKY AND COLOR FILTERS

THE Kodak Sky Filter should be used for obtaining more detail in clouds, when photographing landscapes. The same exposure



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 27.

PHOTOFLASH

When the subject is likely to move, make the exposure with a Photoflash Lamp, see page 29.



should be made when using a Sky Filter as would be required without it.

The Kodak Color Filter is valuable when recording the correct color *values* in a black-and-white print of clothing, flowers, fruits and other colored objects. When using the Color Filter and Kodak Verichrome Film double the exposure; with Kodak Super-XX Panchromatic Film and Kodak Panatomic-X Film the exposure should be increased about fifty per cent.

Use Kodak Sky Filter, Color Filter, and Pictorial Diffusion Disk No. 17.

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 Duo Six-20 Series II, load the camera with Kodak Verichrome, Panatomic-X or Super-XX Panchromatic Film. Place two bridge

PHOTOFLOOD EXPOSURE TABLE

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

Lamp Distance	3½ ft.	5 ft.	6 ft.	7 ft.	8 ft.	10 ft.
Verichrome or Panatomic-X... Super-XX.....	f/8 f/16	f/5.6-8 f/11-16	f/5.6 f/11	f/4-5.6 f/8-11	f/4 f/8	f/3.5 f/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 20 for a comparison of stop openings.

lamps fitted with the Kodak Handy Reflectors, Model C, and two No. 2 Mazda Photoflood Lamps, at any of the distances from the subject given on page 28.

Focus on the subject and then make the exposure following the table on page 28.
CAUTION: Photoflood Lamps become quite hot and should not be kept burning any longer than necessary. Do not permit bulbs to touch Reflectors or lamp shades.

PHOTOFLASH PICTURES



PhotoFLASH gives an instantaneous flash; it is good for one picture. No smoke, no noise. The No. 7 size (intended for use with a synchronizer) or the No. 11 size are equally efficient.

WHEN making a Photoflash picture, adjust the shutter for a "bulb" exposure, with "B" at the pointer B, see page 5.

Use the proper stop opening, depending upon distance between lamp and subject, and kind of film, see exposure table, page 30; then focus on the subject.

Use a Photoflash bulb in a home lamp or a portable reflector with 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.

PHOTOFLASH EXPOSURE TABLE

Lens apertures with No. 7 or No. 11 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.
Verichrome or Panatomic-X Super-XX....	$f/16$ $f/22^*$	$f/11-16$ $f/22^*$	$f/11$ $f/22$	$f/8-11$ $f/16-22$	$f/8$ $f/16$	$f/5.6-8$ $f/11-16$	$f/5.6$ $f/11$	$f/4-5.6$ $f/8-11$

*Less exposure is sufficient, but like most miniature cameras the Kodak Duo Six-20 Series II does not have smaller apertures.

EXPOSURES UNDER EXISTING ARTIFICIAL LIGHT FOR KODAK SUPER-XX PANCHROMATIC FILM

For Kodak Verichrome or Panatomic-X Film—give 4 times the exposure

Stage	White Spotlights on Principal Subject		(Colored lights require more exposure)	<i>f/v</i> value	Shutter Speeds
	Average White General Illumination	Bright Floodlight			
Boxing Wrestling-Ring	Bright Floodlight			3.5	1/100—1/25 sec.
Public Events	Bright Overhead Lighting: Hockey Games, Track Meets, etc. Public Places, Buildings, etc.			3.5	1/25—1/5
Downtown Street Scenes	To show electric signs To show detail in darker objects: Store Windows, Floodlit Buildings, etc.			3.5	1/100—1/25
In the Home	Average bright: Overhead lighting. General illumination. Open lamps. Subdued Lighting: Light from Shaded Lamps.			3.5	1/25—1/5
				3.5	1/5—1 sec.

ACCESSORIES

That Add to the Pleasure of Picture Taking

Kodak Sky Filter—A special disk that fits over the camera lens, half yellow, half clear. Beautifies scenic pictures by causing clouds to show more clearly against a blue sky. Colored part of disk must be turned to cover the upper half of the lens. Size No. 17 for the Kodak Duo Six-20 Series II, Kodak Anastigmat Lens f/3.5, \$1.75.

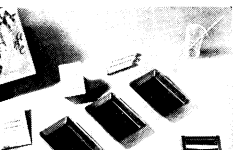
Kodak Color Filter—Slipped over the lens in photographing landscapes, flowers, etc., it renders all colors in black-and-white in approximately the same tone values as seen by the eye. Size No. 17 for the Kodak Duo Six-20 Series II, \$1.75.

Kodak Portrait Attachment—For making sharp pictures at short range. See directions on pages 24 and 25. Size No. 17 for the Kodak Duo Six-20 Series II, \$1.00.

Kodak Diffusion Portrait Attachment — Works like the above attachment. Adds a charm to pictures by giving them a pleasing softness. Size No. 17 for the Kodak Duo Six-20 Series II, \$1.75.

Kodak Pictorial Diffusion Disk — For softening scenic pictures. Size No. 17 for the Kodak Duo Six-20 Series II, \$3.00.

Darkroom Outfits—All the necessary supplies for developing and printing at home. Kodak ABC Darkroom Outfit (illustrated), \$2.25. Other outfits at higher prices.



Kodak Adjustable Lens Hood No. 2—For preventing lens flare in back- or side-lighted pictures, \$1.00.

Kodak Metal Tripod—Gives your Kodak rigid support for time exposures. No. 0, \$2.75. No. 1, \$4.50. No. 2, \$5.00.

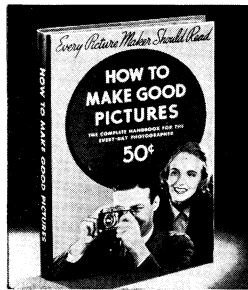
Optipod, for attaching camera to the edge of a table, chair, fence, etc., \$1.25.

Kodapod, for attaching camera to a tree, fence or similar rough surface, \$1.75.

TBI Cable Release, No. 2 \$1.00

Eastman Albums—Keep your prints in an album—safe from loss and damage. Eastman albums are good looking and make your prints appear at their best. Many styles to choose from—in a broad range of prices.

“HOW TO MAKE GOOD PICTURES”

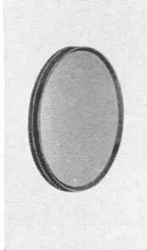


Explains every phase of photography in which the amateur is likely to be interested, including methods of making pictures, developing, printing, enlarging, coloring, interior photography, home portraiture, etc. Profusely illustrated, 50 cts. at your dealer's.

All prices are subject to change without notice.



Adapter Ring



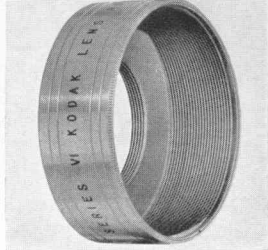
Wratten Filter



Filter Retaining
Ring



Kodak Pola-Screen,
Type IA



Kodak Lens Hood

KODAK COMBINATION

Series V

THE design of the KODAK COMBINATION LENS ATTACHMENTS permits using any desired combination of Pola-Screens, Wratten Filters, and Lens Hood, such as Pola-Screen and Wratten Filter, Lens Hood alone, two Pola-Screens with Lens Hood, Wratten Filter with Lens Hood, etc.

With the Kodak Duo Six-20 Series II, Kodak Anastigmat Lens $f/3.5$, use a $1 \frac{1}{16}$ -inch Adapter Ring, Wratten Filter in "B" glass unmounted, Filter Retaining Ring, Kodak Pola-Screen, Lens Hood. All these lens attachments must be Series V.

The Adapter Ring is first slipped onto the lens mount. A $1 \frac{3}{16}$ -inch Wratten Filter is inserted into a Filter Retaining Ring Series V, which screws into the Adapter Ring. The filter can be used alone in this way or a Kodak Lens Hood can be screwed into the Filter Retaining

LENS ATTACHMENTS

Ring, or if desired, a Kodak Pola-Screen Type IA can be threaded into a Filter Retaining Ring and then the Kodak Lens Hood into the Pola-Screen.

It should be understood that any combination or sequence of these attachments is possible. Two filters and a Lens Hood, a Lens Hood only, or a Pola-Screen and Lens Hood are examples of everyday applications of the Kodak Combination Lens Attachments.

For a free copy of the booklet "Color Filters and Kodak Films" write to the Service Dept., Eastman Kodak Company, Rochester, N. Y.

The KODAK POLA-SCREEN VIEWER fits the handle of the Kodak Pola-Screen, permitting the viewing of the effects obtained with a Pola-Screen.

For details and prices see your Kodak dealer.

Eastman Kodak Company, Rochester, N. Y.

AT YOUR SERVICE

The Service Department

THOUGH the essential directions for obtaining good pictures with the Kodak Duo Six-20 Series II 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.

OUTDOOR EXPOSURE GUIDE

SUBJECT	STOP OPENING	SHUTTER SPEED
Average Subjects: Near-by People, Gardens, Houses, Scenes <i>not in shade.</i>	f/5.6	1/100
Bright Subjects: Near - by People in Marine, Beach, and Snow Scenes. Scenics with foreground objects.	f/8	1/100
Brilliant Subjects: Beach, Marine, and Snow Scenes, Distant Landscapes and Mountains without prominent dark objects in the foreground.	f/11	1/100
Shaded Subjects: People, Gardens, and other subjects in Open Shade (lighted by open sky, not under trees, porch roof, etc.).	f/3.5	1/100
Moving Objects: When photographing a moving object such as a runner, train or an automobile, the subject should be moving towards or away from the camera at an angle of about 45 degrees.	f/3.5	1/250 or 1/500

Exposures are for the hours from one hour after sunrise until one hour before sunset on days when the sun is shining. If pictures are made earlier or later, or if it is a *slightly* cloudy or hazy day, use a larger stop opening. This table is for Kodak Verichrome and Panatomic-X Films.

With Kodak Super-XX Panchromatic Film use the second smaller stop opening than that given in the table.

The largest stop opening is f/3.5. The *higher* the number the *smaller* the opening.