

## SELECTED KODAK PUBLICATIONS

### **Kodak Reference Handbook**

Nearly 400 pages of authoritative technical information on photographic materials, processes, and techniques, uniquely planned for convenience as a reference source. This book can be kept up-to-date by replacing sections with new printings of Kodak Data Books. Illustrated in color.

### **Kodak Data Books**

**Kodak Lenses, Range Finders and Shutters**—Their characteristics and use, with specifications, depth of field and field-size tables, and useful optical formulas.

**Filters and Pola-Screens**—Discusses theory and use, with Data Sheets for the more popular Wratten Filters. Illustrated in color.

**Kodak Films**—Treating the physical and photographic properties of black-and-white films, and including Data Sheets for Kodak roll films, film packs, and sheet films.

**Kodak Papers**—Giving the characteristics of contact and enlarging papers, and methods of selection and use of papers for high quality prints. Data Sheets and formulas included.

**Formulas and Processing**—Presents a comprehensive list of Kodak formulas. Discusses principles and procedures for processing films, plates, and papers.

**Kodachrome and Kodacolor Film**—Discusses lighting, exposure, and many special subjects for still photography and home movies in color. Illustrated in color.

See your Kodak dealer for these as well as other Kodak Data Books and Kodak publications.

EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.



**PICTURE  
TAKING  
WITH**

# THE KODAK MEDALIST II CAMERA





# KODAK MEDALIST II CAMERA



This precision-built, sturdy, and dependable camera has features which give you unequalled performance:

- ... the fast, highly corrected  $f/3.5$  Ektar Lens
- ... the new Flash Supermatic Shutter
- ... an automatic parallax-correcting view finder
- ... a brilliant, lens-coupled range finder
- ... finger-tip controls entirely visible from above.

Your Kodak Medalist has the speed and ease of use of a fine miniature—with a new freedom in the choice of all negative materials in the  $2\frac{1}{4}'' \times 3\frac{1}{4}''$  size. To realize its full picture-making possibilities, read this manual and keep it for reference.

Since the Kodak Medalist's film-advance mechanism operates only with film in the camera, a dummy roll is included for practice loading and operation.

Ektar Lens  $f/3.5$  No. EI 282<sup>(L)</sup>  
Kodak Med II No. 43993

## CONTENTS

	Page
Loading .....	2
Picture Taking Position .....	6
Focusing The Range Finder .....	7
Shutter Speeds .....	8
Lens Openings .....	10
Focusing Scale .....	11
Taking The Picture .....	12
Removing The Film .....	14
Kodak Films .....	16
Kodak Combination Lens Attachments ...	22
Filters .....	23
Photoflash and Photoflood Pictures .....	24
The Accessory Back .....	26
Extension Units .....	28
Kodak Photographic Papers.....	30
Field Case .....	31
Reference Tables .....	32

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# LOADING

- 1** Look to see if "0" appears in the EXPOSURE COUNTER window. If any figure but zero is visible, depress and turn the COUNTER KNOB in either direction until "0" appears.



1

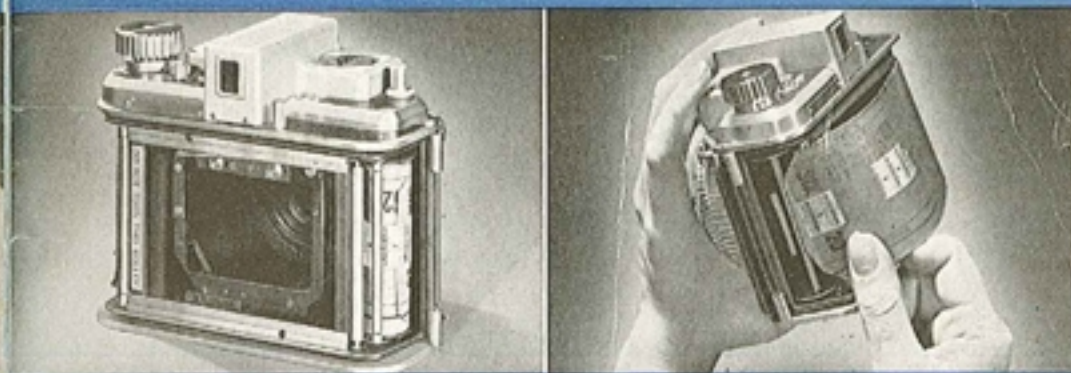
2

- 2** Open the back. The back of the camera is hinged at both ends and it can be opened at either end or removed entirely. To open the back, press the two pins toward one another, and swing the back outward.

2

# USE KODAK 620 FILM

- 3** Insert the dummy roll or the roll of film in the recess which has a spring bracket. Insert the spool so that when the paper is drawn off, the side with printing on it will be up.



3

4

- 4** Break the seal and pass the protective paper *over the rollers* and thread the end of the paper into the longer slit in the empty spool as far as it will go. Handle the roll carefully; the film will be fogged if allowed to unwind.


3



## LOAD CAMERA IN SUBDUED LIGHT—

- 5 Turn the WINDING KNOB once or twice to bind the paper on the spool. *Be sure the paper is started straight on the spool and across the back.*
- 6 Close the back with a firm pressure until the latches snap into place.



- 7 Hold back the slide which covers the red window. Turn the winding knob clockwise until a small hand  appears in the window. Continue turning the winding knob *slowly* until the

## NEVER IN STRONG, DIRECT LIGHT

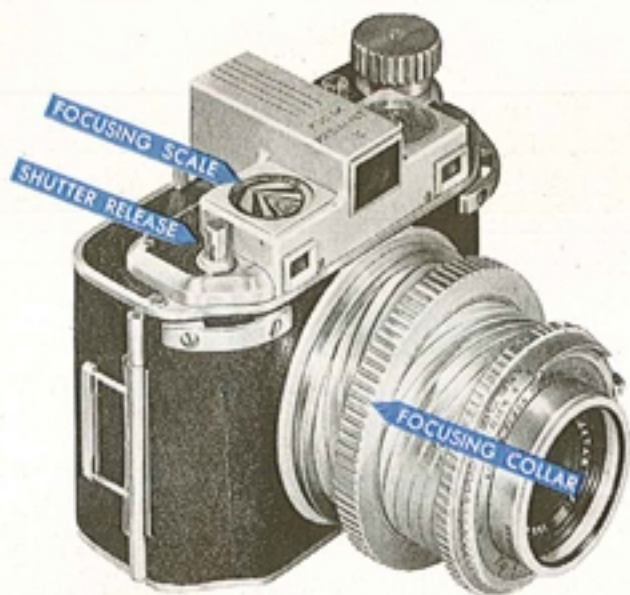
- figure "1" just begins to appear at the edge of the red window.\*
- 8 Depress and turn the counter knob in either direction until the figure "1" appears in the exposure counter window. Then turn the winding knob slightly until it locks.
  - 8 Set the dial on the top of the camera to show the kind of film with which the Medalist is loaded.

Now that your Medalist is loaded with the dummy roll, practice focusing and operation as described on the following pages—for better pictures from the start, get acquainted with your camera *before* you load it with film to take pictures.

\*If the Medalist is loaded with the exposure counter at some figure other than "0," the winding mechanism will lock before the figure "1" appears in the red window. To unlock, depress and turn the counter knob until "0" appears in the exposure counter window. Bring the lens to picture taking position, as described on the next page, and press the shutter release all the way down.



## PICTURE-TAKING POSITION

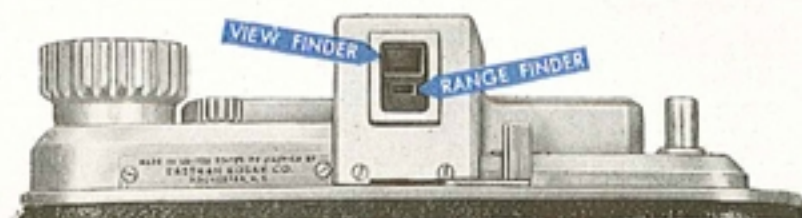


Turn the large **FOCUSING COLLAR** on the lens barrel to bring the lens to a picture-taking position. As the lens is brought forward, the **FOCUSING SCALE** on the top of the camera automatically revolves to indicate the distance for which the camera is focused.

**NOTE:** To prevent accidental exposures, the **SHUTTER RELEASE** is locked until the lens is brought forward almost to the  $\infty$  (infinity) position (as indicated by the focusing scale). Do not force the shutter release; the camera can be damaged by depressing it before the lens is extended.

## THE RANGE FINDER

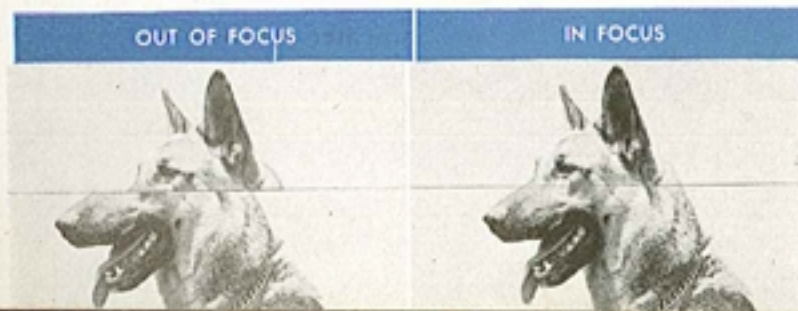
## FOCUSING



Adjusting the split-field **RANGE FINDER** automatically focuses the camera. The range finder shows an enlarged image of the center portion of the **VIEW FINDER** image. A distinct horizontal line cuts the range finder field of view into two equal parts.

To focus, look through the eyepiece at a vertical line in that portion of the subject that you wish to have the sharpest in your picture. The selected line will appear broken. The part seen in the upper area will be either to the right or left of the vertical line seen in the lower area. Revolve the focusing collar until the vertical line is unbroken. The range finder can also be used with the camera held vertically. In this position, focus on some *horizontal line* in the subject.

Uses of the focusing scale will be found on page 11.





# SHUTTER SPEEDS



The Flash Supermatic Shutter on the Kodak Medalist II is designed to make exposures from 1 to 1/400 second as well as bulb exposures. The *black* index on the knurled shutter SPEED RING is used for exposures from 1/25 to 1/400 second. For slower shutter speeds, turn the speed ring until the *red* index is at the speed desired.

The shutter should be set only at the speeds indicated on the camera—in-between settings will not give intermediate speeds. The shutter speed may be set with the shutter either cocked or released. The camera may be left with the shutter either cocked or uncocked.

8



## SEE EXPOSURE TABLES ON PAGE 32

### Time and "Bulb" exposures

Place the camera on a tripod (such as the Kodak Eye-Level Tripod) or other firm support—*do not hold it in the hands or the picture will be blurred.*

**"Bulb" exposures** are recommended for short time exposures of ten seconds or less. Bring the red index to the letter "B." *The shutter will remain open as long as the shutter release is held down.*

**Time exposures** can be made with the Kodak T. B. I. Cable Release No. 2 which is packed with the camera. Screw the cable release into the CABLE RELEASE SOCKET on the camera. Turn the circular piece on the T. B. I. Cable Release so that the notch on the edge is directly under the small button; see illustration. Set the shutter for a bulb exposure. Press the plunger of the cable release to open the shutter. Close the shutter by pressing the small button directly above the circular piece.\*

The Kodak T. B. I. Cable Release No. 2 may also be used to make bulb or instantaneous exposures. Turn the circular piece of the cable release so that it slides under the small button as shown in the illustration. Operate the T. B. I. Cable Release as an ordinary cable release.

\*With roll film, after each exposure, push the shutter release down as far as it will go and then release it to unlock the film winding mechanism.



9



## LENS OPENINGS

The lens openings regulate the amount of light passing through the lens. These openings are enlarged or reduced by moving the lever A of the diaphragm control ring;  $f$ -numbers can be read on the front or top of the shutter.

The lens opening is smallest when the lever is at  $f/32$ . In a given exposure time, each succeeding number admits twice as much light as the one before— $f/22$  lets through twice the light of  $f/32$ ,  $f/16$  twice that of  $f/22$ , and so on down to  $f/3.5$ , the largest opening. This opening admits a third more light than  $f/4$ . Thus, if the correct exposure is  $1/50$  second at  $f/11$ , then the lens opening for  $1/100$  second is  $f/8$ ; for  $1/200$  second,  $f/5.6$ ; for  $1/400$  second,  $f/4$ ; and for  $1/25$  second,  $f/16$ .



Remember the exposure  $1/50$  second at  $f/11$ . This is the exposure that should be used for average outdoor subjects in bright sun with Kodak Verichrome or Kodak Plus-X Panchromatic Film.

## FOCUSING SCALE

The focusing scale will be found convenient for photographing subjects ten feet or farther from the lens. Instead of using the range finder, estimate the distance to the subject and set the focusing scale at the black index.

With Kodak Infrared Film, focus the Medalist on the subject with the range finder or focusing scale. Then, revolve the focusing collar until the distance indicated appears at the *red dot* on the focusing scale.

A depth of field scale has been combined with the focusing scale. This tells at a glance the nearest and farthest objects that will appear sharp at any selected lens opening for the particular distance focused on.

To find the depth of field for a given distance and lens opening, set the distance at the center index. Read the nearest and farthest distances that will be in focus at the two index marks opposite the chosen  $f$ -number.

If the camera is focused at 15 feet, with  $f/5.6$  everything from about 11 to 20 feet will be sharp, and with  $f/11$  everything from about  $9\frac{1}{2}$  to 35 feet will be in focus.





# TAKING THE PICTURE

Normally the shutter is cocked when the film is wound; however, after the first section of film is brought into position, it is advisable to push the SHUTTER COCKING LEVER back and toward the center of the camera as far as it will go; then release it.

1. Bring the lens to the picture-taking position.
2. Set the lens opening and the shutter for the correct exposure.
3. Focus the Medalist. For rapid focusing, center the object on which you wish to focus in the view finder. Then, without changing the position of your head or of the camera, shift your eye to the range finder window; focus the camera as described on page 7.
4. Shift your eye back to the view finder to compose the picture. Hold the camera so that you can just see the edges of the front opening in the finder.
5. Make the exposure. To minimize camera motion, hold the Medalist as shown, with the thumb on the bottom of the camera and the middle finger on the shutter release. To make the exposure, depress the shutter release by squeezing the hand together.

The shutter release is automatically locked and the winding knob unlocked when the exposure is made. Turn the winding knob until it locks; this advances the film, cocks the shutter, unlocks the shutter release and changes the exposure number in the exposure counter. Be sure that the shutter release is not depressed while the film is being advanced.

When the shutter release is used, the RED SIGNAL, located directly behind the focusing scale, is a warning that a new section of film must be brought into position. The red signal disappears as the winding knob is turned. It reappears after the exposure has been made.

**Intentional double exposures** may be desired for special effects. Make the first exposure; push the shutter cocking lever back and to the center of the camera as far as it will go; then release the lever. Make the second exposure by pressing the shutter release.





## REMOVING THE FILM



To unload the camera after the last picture has been made, turn the winding knob until the end of the paper on the roll passes the red window.\*

In subdued light, open the back of the camera. Take hold of the end of the protective paper with the right hand and pull out and up to remove the lower end of the roll from the camera. Grasp the roll in the left hand as it is removed to prevent the film from unrolling.

*\*If film is to be removed before all the exposures have been made or if the camera has been loaded with a six-exposure roll of Kodacolor Film, after shutter release has been depressed to make the last exposure, depress and turn the counter knob until "0" appears in the exposure counter window. The winding knob can then be turned until the end of the paper on the roll passes the red window.*

## REMOVE IN SUBDUED LIGHT ONLY

**Important:** Do not wind the film with a twisting motion, as this may scratch the film.

Place the empty spool in the winding end of the camera; insert the spool flange next to the winding knob first. Turn the winding knob until the key slips into the slot in the spool flange. Reload with Kodak Film No. 620.

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All glass-air surfaces of your Medalists' Kodak Ektar  $f/3.5$  100-mm Lens are Lumenized. This reduces internal reflections and increases light transmission to assure greater clarity and brilliance in black-and-white negatives as well as color purity in full-color pictures. *The tinted appearance of the lens is due to this surface-coating.* Clean the lens with care; dust off any grit or dust with Kodak Lens Cleaning Paper or a clean, soft, lintless cloth. If moisture is necessary, breathe on the lens or use a drop of Kodak Lens Cleaner.

Give your Kodak Medalist II the care it deserves. Keep it clean; dust will ruin the best negative. The lens, shutter, and range finder should only be disassembled by a competent factory-trained camera repairman. Don't disassemble your Medalist or its lens.

No type of lubricant should be applied to the helical gear focusing tube or to other parts of your Medalist.



## KODAK ROLL FILMS



### **VERICHROME** *Everyday Favorite*

Kodak Verichrome Film has high speed and is well balanced for recording tone values. Its great exposure latitude assures clear, satisfying results.



### **PLUS-X** *Fine Grain—High Speed*

Kodak Plus-X Panchromatic Film combines high speed, fine grain and color sensitivity to make it the ideal film for outdoor work when filters are used.



### **SUPER-XX** *Pictures at Night*

Kodak Super-XX Panchromatic Film is an extremely high speed film giving correct color values. Ideal for pictures at night by artificial light and for outdoor action shots.

## KODACOLOR PRINTS



### **KODACOLOR PRINTS**

Kodacolor Film provides an economical and simple means of obtaining pictures in full color. Take the pictures, using the exposure information packed with the film or from the Snapshot Kodaguide packed with your camera. Your Kodak dealer sends the exposed film to the Eastman Kodak Company for processing without charge—you pay only for the pictures that are printed.





## KODACHROME AND KODAK EKTACHROME FILMS

Kodak supplies two films for transparencies in full color—Kodachrome Professional Film, which is returned to the Eastman Kodak Company for processing without additional charge, and Kodak Ektachrome Film, which is processed by the photographer with the special chemicals supplied in convenient processing kits. Both Kodachrome and Kodak Ektachrome are available in two types—Daylight Type for outdoor use and Type B for use indoors with correct color temperature tungsten lamps. The resulting full-color transparencies can be viewed by transmitted light, projected, used to make Kodak Dye Transfer Prints, or returned to your dealer for Kodachrome Professional Prints.

The Accessory Back described on page 26 and proper size film holders are required. Exposure instructions are packed with the film. **Full-Color Prints** from either Kodachrome Professional or Kodak Ektachrome transparencies can be made.

With the Kodak Dye Transfer Process, prints are made from film matrices on Kodak Dye Transfer Paper. Complete instructions and chemicals are obtainable from your Kodak dealer.

Your Medalist with its Accessory Back takes either Kodak Ektachrome or Kodachrome Professional Films Daylight Type and Type B, either 2¼ x 3¼ in. or 6.5 x 9 cm.





## FILM PACKS • SHEET FILMS • PLATES

With its Accessory Back and the proper holder or adapter, the Medalist may be used with any of the Kodak film packs, sheet films, and plates.



*Kodak Film Packs No. 520*—Four film packs are available—Verichrome, Plus-X, and Super-XX, as well as Super Ortho Press, the high speed ortho film for press photography.



*Kodak Sheet Films 2 1/4 x 3 1/4-inch and 6.5 x 9-cm* are made in a variety of emulsions—make your selection for the emulsion best suited for your work. Super Panchro-Press Type B for high speed and rapid developing; Super Panchro-Press Sports Type for about double the speed of Type B; Tri-X for high speed and moderate contrast—these are but a few of the Kodak sheet films available; the Kodak Reference Handbook and the Data Book, "Kodak Films," give many details concerning the characteristics and uses of various Kodak Films.



*Kodak Plates* are made for uses ranging from general photography to special fields.

## A FILM FOR EVERY PICTURE TAKING NEED

### INFRARED

Kodak Infrared Film cuts haze in landscapes and can be used to obtain moonlight effects. It is useful in scientific, medical, evidential, and criminal photography. Use with Wratten A Filter (No. 25). Set the camera-to-subject distance opposite the red dot on the focusing scale. Infrared is supplied in roll film, sheet film, and plates.



*These pictures were made on Infrared Film with Wratten A Filter (No. 25). The "night" shot was made in late afternoon—the wintery looking landscape at the right was made in the summer. Note the clear recording of distant detail.*

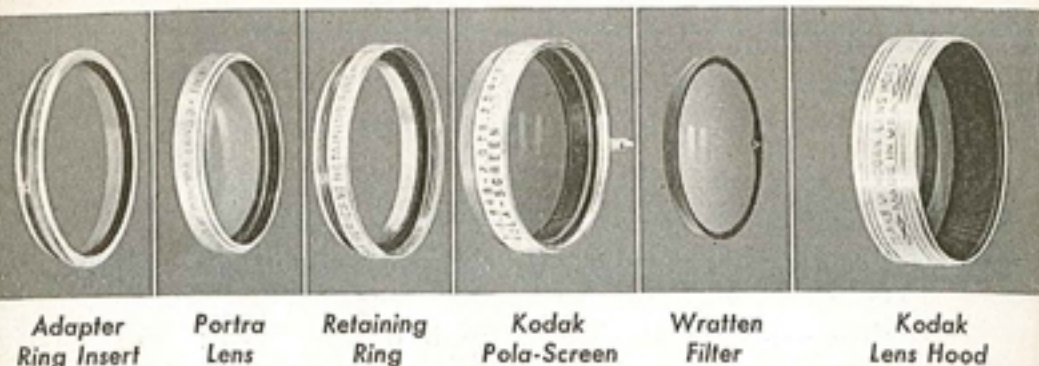
### KODAK EKTACHROME FILM (NO. 620 ROLLS)

For full-color transparencies on roll film, Kodak Ektachrome Film Daylight Type is supplied in six-exposure No. 620 rolls for your Kodak Medalist II Camera.



# ACCESSORIES

## Kodak Combination Lens Attachments



The Kodak Combination Lens Attachments permit the use of a supplementary lens, a Wratten Filter, a Kodak Pola-Screen, or a Kodak Lens Hood—either singly or in any combination. The Lens Attachments are made in different sizes—be sure those obtained for the Kodak Medalist II Camera are Series VI.

A Kodak Adapter Ring Insert is supplied with your Kodak Medalist II. A Wratten Filter or Portra Lens may be used with the camera with no further attachments. Unscrew the Insert, place the filter in front of the lens, and hold in place by replacing the Insert. A Kodak Lens Hood may be used in place of the Insert if desired. Your Kodak dealer will give you full information.

## Kodak Portra Lenses 1+, 2+ and 3+

Any of the Kodak Portra Lenses may be used to focus the Kodak Medalist II at distances closer than  $3\frac{1}{2}$  feet.

Unscrew the Insert on the front of the camera lens mount and place the Portra Lens, *convex* side forward, in front of the camera lens. Replace the Insert to hold the Portra Lens in place. When a filter is used, place the supplementary lens next to the camera lens.

The view finder automatically corrects for parallax for distances between  $3\frac{1}{2}$  feet and infinity. When a Portra Lens is used at shorter distances, tilt the camera up slightly to correct for parallax in the finder.

## Filters

While filters have many uses in photography, their most general use in pictorial photography is to darken the sky to record clouds. The three filters most useful for this work are the Wratten Filters K2, G, and A.

**K2** The K2 filter records clouds and is useful for a better tone rendition of colored objects.

**G** The G filter gives greater cloud-sky contrast and penetrates haze better than the K2.

**A** The A filter is especially useful when dark, dramatic skies are desired.



# PHOTOFLASH AND PHOTOFLOOD

## PHOTOFLASH PICTURES

The Kodak Medalist II may be used to make Photoflash pictures—without a synchronizer. Its Kodak Flash Supermatic Shutter assures that, for any exposure time, the shutter will be open when the flash of the lamp is brightest. A Kodak Flashholder—the accessory battery case and reflector—and the flashlamp are all that are needed.

To adjust for the type of lamp, pull up on the SYNCHRONIZER SCALE KNOB and move it to the end of the slot marked "F" (for Class F bulbs such as the SM Photoflash Lamp) or to the end marked "M" (for Class M bulbs such as the No. 5 Photoflash Lamp). Be sure the synchronizer scale knob is firmly seated at the end of the slot.

With roll film, advance the film—with the Accessory Back, cock the shutter—then push down the SYNCHRONIZER LEVER on the shutter as far as it will go. Make the exposure by depressing the shutter release as far as it will go and then releasing it.

Do not force the synchronizer lever; it cannot be depressed before the shutter is cocked.

24



## SEE EXPOSURE TABLES ON PAGE 33

Under certain conditions, the flashlamps may crack or shatter when flashed. It is recommended that a protecting transparent screen be used in front of the reflector. Do not flash the lamps in an explosive atmosphere.

**Speedlamp Photography.** The Kodak Medalist II can be used with Kodatron Speedlamps (or similar equipment with no lag in the trip circuit). Do not use electronic flash equipment fired by a relay as it will not synchronize properly and can cause damage to the shutter contacts. With a suitable connector, attach the lamp to the bayonet receptacle on the camera. With roll film, advance the film—with the Accessory Back, cock the shutter—then make the exposure by pressing the shutter release. The normal blade action of the shutter actuates and synchronizes the flash discharge of the speedlamp. The synchronizer scale knob does not have to be adjusted; *do not use the synchronizer lever with the Kodatron Speedlamp.*

## PHOTOFLOOD PICTURES

Indoor pictures are easily made with the Kodak Medalist II and Photoflood Lamps. Dependable, even illumination is obtained if the lamps are used in a Kodaflector Senior.

25



## THE ACCESSORY BACK

The Accessory Back increases the versatility of the Kodak Medalist II by adapting it for use with film packs, sheet films, or plates. Both the range finder and view finder of the camera are fully operative when the Accessory Back is used.

The folding hood and magnifying glass aid in composition and critical focusing.

Focusing on the ground glass greatly simplifies close-up photography with Kodak Portra Lenses as the distance from camera to subject need not be measured and the field of view can be seen on the ground glass.

To attach the Accessory Back, remove the regular camera back, and, *with the lens fully retracted*, attach the Accessory Back as shown below. The small LUG engages in the hole directly below the shutter cocking lever to make the range finder function properly. Complete instructions for adjusting the back to your Medalist and for using it are included with each Accessory Back.

26



## FOR FILM PACKS, SHEET FILMS, AND PLATES

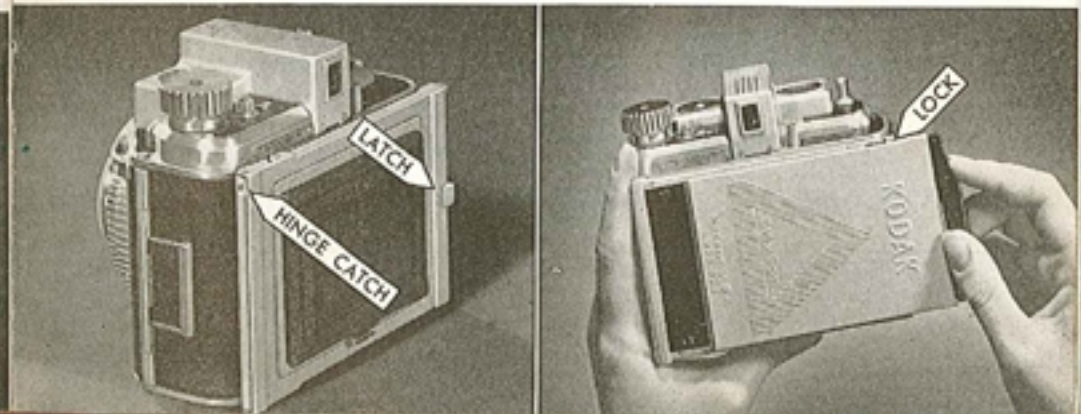
Remove the ground glass panel by lifting the LATCH, drawing down on the small HINGE CATCH, and lifting off the ground glass panel. To replace, position the panel on the *bottom* hinge pin before depressing the small hinge catch to position the upper hinge pin.

Slide a  $2\frac{1}{4} \times 3\frac{1}{4}$  Kodak Film Pack Adapter or either a 6.5 x 9-cm. or  $2\frac{1}{4} \times 3\frac{1}{4}$ -inch Kodak Combination Film and Plate Holder into position. To remove, swing the LOCK to the side and withdraw the adapter or holder.

Cock the shutter with the shutter cocking lever. Make the exposure either with the camera shutter release or with the Kodak T.B.I. Cable Release No. 2.

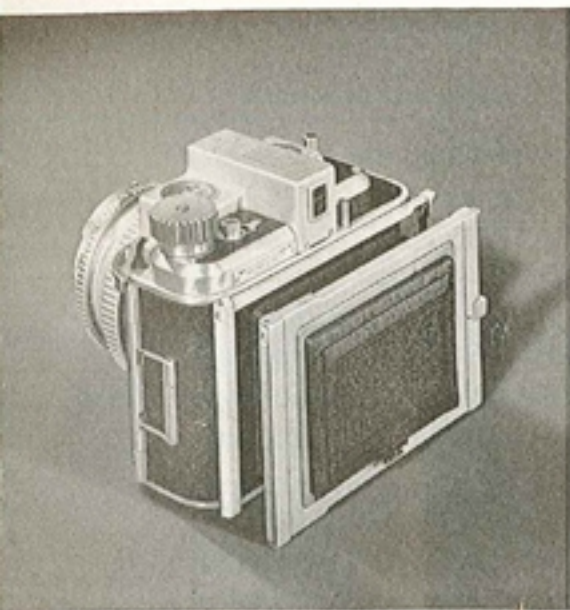
A Kodak Portra Lens 1+ and the Accessory Back may be used for wide angle effects. Set the camera on a tripod or other firm support; open the shutter with the cable release and focus on the ground glass. Whenever the lens is retracted from a normal picture-taking position, make the exposure with the cable release.

27





## EXTENSION UNITS



The Extension Units used in conjunction with the Accessory Back permit copying and close-up photography of small objects without the use of a supplementary lens.

Remove the ground glass focusing panel from the Accessory Back and slide the Extension Unit into the grooves of the Accessory Back, in the same manner as a film pack adapter. The focusing panel is then attached to the Extension Unit.

Focus and compose the picture on the ground glass panel. As the lens is not extended to its normal picture-taking position when extension units are used, operate the shutter with the Kodak T.B.I. Cable Release No. 2 which is supplied with the camera. Be sure to place the Medalist on a tripod or other firm, solid support.

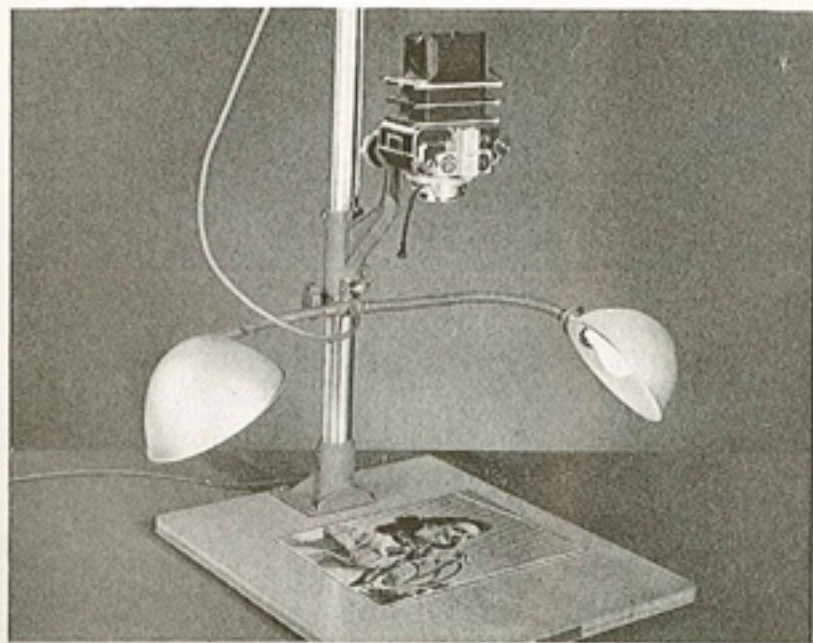
Small objects may be copied up to full size when four extension units are used. Copying data for the Medalist

## SMALL OBJECT PHOTOGRAPHY AND COPYING

with the Accessory Back and Extension Units is tabulated on page 36.

With Extension Units and the Accessory Back, telephoto effects can be obtained with a Kodak Telek Lens. Place the camera on a tripod or other firm support.

For precision copying use the Kodak Medalist II with its Accessory Back and Extension Units on the Kodak Precision Enlarger Stand Assembly and Copying Lights.





## KODAK PHOTOGRAPHIC PAPERS

Kodak Photographic Papers have long been known for their high quality and consistent uniformity. Their wide variety of color and surface combinations and degrees of contrast enable the amateur photographer to select the paper most suitable for each subject. Described below are two Kodak Contact Papers and two Enlarging Papers especially recommended for printing from Kodak Medalist negatives.

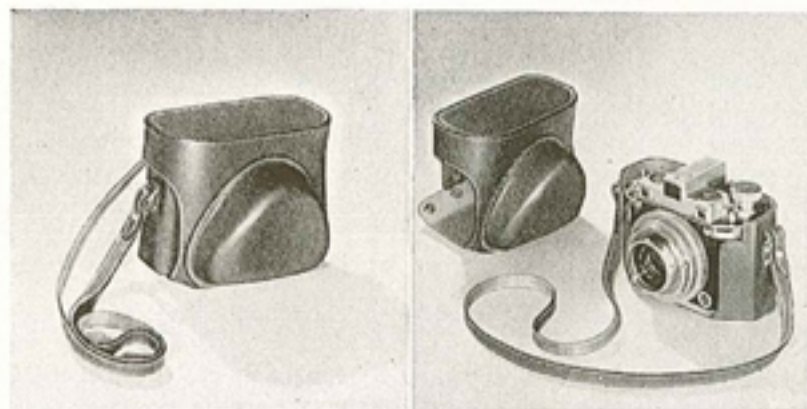
AZO Papers have a slightly warm, black tone and are furnished in six degrees of contrast to suit negatives of widely different contrast ranges.

VELOX has a blue-black tone and wide latitude. It is somewhat faster than Azo and is available in six degrees of contrast.

KODABROMIDE is a fast enlarging paper with a full scale emulsion that yields rich, brilliant, black-tone prints. It is available in five degrees of contrast and a wide variety of color and surface combinations.

PLATINO is a new warm-tone, fast enlarging paper of superb quality. It is supplied in two degrees of contrast and four surfaces. Platino tones beautifully in Kodak Brown Toner.

## FIELD CASE



The Kodak Field Case for the Kodak Medalist provides the maximum protection for your camera. This case is of the instant-opening type and may be used with or without its cover. An occasional light application of saddle soap will help preserve the fine leather of the case.

This manual was prepared to help you make good pictures right from the start, and consequently get more enjoyment from photography. There are many Kodak publications on various phases of photography available at your Kodak dealer—some free and some at a nominal price. Ask for them.

Sales Service Division

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## DAYLIGHT EXPOSURE FOR PLUS-X OR VERICHROME FILM

With Super-XX Film, give one-half the recommended exposure

32

Type of Subject	Bright Sun	Hazy Sun	Cloudy Bright	Cloudy Dull
Brilliant Subjects	f/22 and 1/50	f/16 and 1/50	f/11 and 1/50	f/8 and 1/50
Bright Subjects	f/16 and 1/50	f/11 and 1/50	f/8 and 1/50	f/5.6 and 1/50
Average Subjects	f/11 and 1/50	f/8 and 1/50	f/5.6 and 1/50	f/4 and 1/50
Shaded Subjects	f/8 and 1/50	f/5.6 and 1/50	f/4 and 1/50	f/4 and 1/25

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

**Bright Subjects:** People in marine, beach, or snow scenes; scenics with foreground objects.

**Average Subjects:** Nearby people, gardens, houses, and scenes not in the shade.

**Shaded Subjects:** Subjects in open shade (not under trees, porch roof, etc.)

**Note:** This table applies between the hours of one hour after sunrise to one hour before sunset. This tabulated exposure data is given in convenient dial form on the Snapshot Kodaguide packed with the camera.

## REFERENCE TABLES

### PHOTOFLASH EXPOSURE GUIDE NUMBERS

Shutter Speed	Super-XX Film		Plus-X Film		Verichrome Film	
	Photoflash Lamp		Photoflash Lamp		Photoflash Lamp	
	SM	No. 5	SM	No. 5	SM	No. 5
OPEN*	140	270	85	165	80	155
1/100	140	225	85	140	80	130
1/200	115	190	70	115	65	110

\*Shutter set on Bulb, 1/25 or 1/50 second. This table applies for average-sized, light-colored rooms with flashlamp at camera. With dark-colored objects in dark-colored surroundings, use one full lens opening larger.

To calculate the lens opening, divide the Exposure Guide Number by the distance in feet from the lamp to the subject.

Example: With Kodak Super-XX Film, using a No. 5 Photoflash Lamp at 1/100 second shutter speed, the correct lens opening for 20 feet is:  
Exposure Guide No.  $\frac{225}{20} = 11\frac{1}{4}$  or f/11

33

### PHOTOFLOOD EXPOSURE SUPER-XX FILM

One No. 1 and One No. 2 Photoflood in Kodaflector Senior (matte side). With Plus-X or Verichrome Film, give twice the recommended exposure.

Exposure time in seconds	Distance in feet from lamps to subject							
	f/3.5	f/4	f/5.6	f/8	f/11	f/16	f/22	
1/200	4 1/4	3 1/2						
1/100	6 1/2	5 1/2	3 1/2					
1/50	9	8	5 1/2	3 1/2				
1/25	13	11	8	5 1/2	3 1/2			
1/10			13	9	6 1/4	4		
1/5				13	9	6 1/4	4	

The No. 1 Photoflood is at the camera and the No. 2 Photoflood at 45° to the axis of the lens. This table applies to average-sized light-colored rooms, in public halls, or in dark-colored rooms, double the recommended exposure.

Exposure data for Photoflood Lamps is also given in convenient dial form on the Snapshot Kodaguide packed with the camera.



## FILTER FACTORS FOR DAYLIGHT

Multiply the normal exposure by the filter factor to obtain the correct exposure when a filter is used.

Filter	Kodak Verichrome Roll or Film Pack	Kodak Super-XX Panchromatic Roll or Film Pack	Kodak Plus-X Panchromatic Roll or Film Pack
K-2	2½	2	2
G	5	3	3
A	—	8	8

Most Sheet Films have filter factors included with the instructions packed with the films.

## APPROXIMATE COMBINED FOCAL LENGTH OF CAMERA LENS AND SUPPLEMENTARY LENS\*

Portra Lens	Effective Focal Length	Telek Lens	Effective Focal Length	Number of Extension Units Required
1+	91-mm	1-	111-mm	1
2+	83-mm	2-	125-mm	2
3+	77-mm	3-	143-mm	2
		4-	167-mm	3

\*The Accessory Back and Extension Units must be used with Telek Lenses. The Accessory Back will greatly aid composition and focusing with the Portra Lenses.

## FIELD SIZES AND SUBJECT DISTANCES WITH PORTRA LENSES

Focusing Scale Set oh	Kodak Portra Lens 1 +		Kodak Portra Lens 2 +		Kodak Portra Lens 3 +	
	Distance Subject To Lens*	Size of Subject should not exceed*	Distance Subject To Lens*	Size of Subject should not exceed*	Distance Subject To Lens*	Size of Subject should not exceed*
3½	20%	10½ x 15¼	13%	6¾ x 10	10	5¼ x 7½
4	21%	11¾ x 16%	14	7¼ x 10½	10%	5¾ x 7¾
5	23%	12¾ x 18%	14½	7¾ x 11%	10%	5¾ x 8¼
6	25½	13¾ x 19%	15½	8¾ x 12	11%	6 x 8½
8	27%	15¼ x 22½	16%	8¾ x 12¾	11½	6¾ x 9%
10	29%	16¾ x 23%	16½	9¾ x 14	11%	6½ x 9½
15	32%	18¾ x 27%	17%	9¾ x 14¾	12¼	6¾ x 9¾
25	34%	19¾ x 28%	18½	10¾ x 15	12½	7¾ x 10¼
50	37	21 x 30¼	19%	10¾ x 15½	12¾	7¼ x 10½
INF	38%	22¾ x 32	19½	11¾ x 16½	13	7½ x 10¾

\*Measurements are in inches. Subject-to-lens distance is measured to front of the Portra Lens.



# DATA FOR COPYING WITH ACCESSORY BACK AND EXTENSION UNITS

36

Number of Extension Units	Focus Scale Adjusted to	Distance between Object and Shutter, Spread Ring	Approximate Field Size	Approximate Ratio of Image Size to Object Size	Approximate Exposure Factor*
1	3½ ft ft	15 1/16 in. 20% in.	6% x 9% in. 9% x 14 in.	1 to 3 1 to 4	1 1/2
2	3½ ft ft	10% in. 12 7/8 in.	4 x 5% in. 4% x 7 in.	1 to 2	2 1/2
3	3½ ft ft	6% in. 9% in.	2 1/2 x 4 in. 3 1/4 x 4 3/4 in.	1 to 1 1/2	3
4	3½ ft ft	7 1/2 in. 8 1/2 in.	2 1/4 x 3 1/4 in. 2 3/4 x 3 3/4 in.	1 to 1	4

\*As the lens-to-film distance is much greater than normal, the *f*-number of which the diaphragm is set is no longer effective; an increase in exposure may be made. Multiply the exposure time by the "Approximate Exposure Factor."

## DEPTH OF FIELD

Distance Focused On*	Approximate Field Size with 2 1/4 x 3 1/2" Neg	DEPTH OF FIELD—IN FEET. Circle of Confusion, 1/200 in.				
		f/3.5	f/4	f/5.6	f/8	
50 feet	32" x 43"	74 to inf	65 to inf	46 to inf	32 to inf	
15 feet	28" x 41"	50 to 155	28 1/2 to inf	24 to inf	19 1/2 to inf	
10 feet	18" x 20"	19 to 38	18 1/2 to 40	16 to 55	14 to 81 1/2	
8 feet	8 1/2" x 12 1/2"	12 1/2 to 19	12 1/2 to 19 1/2	11 to 22	10 to 28	
6 feet	5 1/2" x 8 1/2"	8 1/2 to 11 1/2	8 1/2 to 11 1/2	8 1/2 to 13 1/2	7 1/2 to 14 1/2	
5 feet	4 1/2" x 6 1/2"	7 1/2 to 9	7 1/2 to 9 1/2	6 1/2 to 9 1/2	5 1/2 to 10 1/2	
4 feet	3 1/2" x 4 1/2"	6 1/2 to 8 1/2	6 1/2 to 8 1/2	5 1/2 to 7 1/2	5 1/2 to 7 1/2	
3 1/2 feet	2 3/4" x 3 1/2"	4 1/2 to 6 1/2	4 1/2 to 6 1/2	3 1/2 to 4 1/2	3 1/2 to 4 1/2	
	1 3/4" x 2 1/4"	3 1/2 to 4 1/2	3 1/2 to 4 1/2	2 1/2 to 3 1/2	2 1/2 to 4	
	Approximate Field Size with 6 1/2 x 9 cm Neg	f/11	f/16	f/22	f/32	
50 feet	36" x 49"	23 to inf	16 to inf	11 1/2 to inf	8 to inf	
15 feet	32" x 45"	16 to 42	12 to 42	9 1/2 to 42	7 to 42	
10 feet	16" x 22"	12 to 16	10 to 16	8 to 16	6 to 16	
8 feet	9 1/2" x 13 1/2"	9 to 12	7 1/2 to 12	6 1/2 to 12	5 1/2 to 12	
6 feet	6 1/2" x 9 1/2"	7 to 10	6 1/2 to 10	5 1/2 to 10	4 1/2 to 10	
5 feet	5" x 7"	6 to 10	5 1/2 to 10	4 1/2 to 10	4 to 10	
4 feet	3 3/4" x 5 1/2"	4 1/2 to 6 1/2	4 1/2 to 6 1/2	3 1/2 to 6 1/2	3 1/2 to 6 1/2	
3 1/2 feet	2 3/4" x 3 3/4"	3 1/2 to 4 1/2	3 1/2 to 4 1/2	2 1/2 to 3 1/2	2 1/2 to 3 1/2	

\*Distance is measured from subject to front of shutter.