

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.**

“ If it isn't an Eastman  
It isn't a Kodak.”

PICTURE TAKING

WITH THE

No. 1A

Autographic

KODAK

JUNIOR

www.orphancameras.com

*Published by the*  
EASTMAN KODAK COMPANY,  
ROCHESTER, N. Y.

**KODAK**  
*Trade Mark, 1888.*

**EASTMAN KODAK COMPANY,**  
**ROCHESTER, N. Y.**

**MANUFACTURERS OF**

**Kodaks,  
Brownie Cameras,  
Kodiotronics,  
Kodak Film Tanks,  
Kodak Dry Mounting Tissue,  
Velox Paper,  
Angelo Platinum Paper,  
Eastman Solio Paper,  
Eastman Ferro-Prussiate Paper,  
Eastman Velvet Bromide Paper,  
Eastman Brilliant Velvet Bromide Paper,  
Eastman Royal Bromide Paper,  
Eastman Standard Bromide Paper,  
Eastman Enameled Bromide Paper,  
Eastman Matte-Enamel Bromide Paper,  
Eastman Platino Bromide Paper,  
Eastman Non-Curling Film,  
Eastman Tested Chemicals,  
Tripods and  
Other Specialties.**

**TRADE MARKS REG. U. S. PAT. OFF.**

*May, 1915.*

**PICTURE TAKING WITH THE**

**No. 1A**  
**AUTOGRAPHIC**  
**KODAK JUNIOR**

**(R. R. and MENISCUS LENS)**

**PRICE, 10 CENTS.**

*Published by the*  
**EASTMAN KODAK COMPANY,**  
**ROCHESTER, N. Y.**

## ORDER FILM BY NUMBER

All Kodak Films may be distinguished by the numbers on the ends of cartons:

**A-116**

is the number for film for this Camera (No. 1A Autographic Kodak Junior). The number appears both on the carton and on the cartridge.

---

### NOTICE.

Autographic film can be used in old style Kodaks, old style film can be used in Autographic Kodaks, but to get *autographic results* Autographic film must be used in an Autographic Kodak.

## BEFORE LOADING.

---

Before taking any pictures with the 1A Autographic Kodak Junior, read the following instructions carefully and make yourself perfectly familiar with the instrument, taking especial care to learn how to operate the shutter. Work it for both time and instantaneous exposures several times before threading up the film.

The first and most important thing for the amateur to bear in mind is that the light which serves to impress the image upon the sensitive film in a small fraction of a second when it comes through the lens, can destroy the film as quickly as it makes the picture. After the film has been developed and all *developer thoroughly washed out*, it may be quickly transferred in subdued white light to the fixing bath without injury. Throughout all the operations of loading and unloading be extremely careful to keep the red paper wound tightly around the film to prevent the admission of light.

EASTMAN KODAK COMPANY,  
Rochester, N. Y.

## CONTENTS.

---

### PART I.

Loading.

### PART II.

Making the Exposures.

- Section 1. Operating the Shutter.
- Section 2. Instantaneous Exposures.
- Section 3. Time Exposures.
- Section 4. Flash Light Exposures.

### PART III.

Removing the Film.

### PART IV.

Developing.

### PART V.

Printing on Velox Paper.

### PART VI.

Mounting.

## PART I.

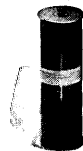
---

### SECTION I.

### LOADING WITH FILM.

---

The film for the No. 1A Auto-graphic Kodak Junior is furnished in light proof cartridges and the instrument can, therefore, be loaded in daylight. The operation should, however, be performed in a subdued light, not in the glare of bright sunlight. It should also be borne in mind that after the seal is broken care must be taken to keep the red paper taut on the spool; otherwise it may slip and loosen sufficiently to fog the film.



THE FILM  
A-116

I. To load the Kodak, take a position at a table where the daylight is somewhat subdued, and grasping the instrument with the left hand, remove the back by pressing in simultaneously with the thumb and second



FIG. I.  
*Pressing in Catches.*

finger of the right hand, as indicated in Fig. I. Then lift the back outwards and upwards in order to remove it, as shown in Fig. II.

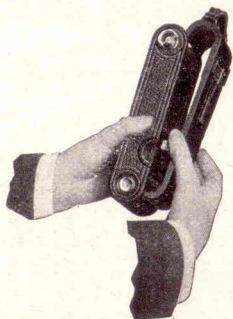


FIG. II.  
*Removing the Back.*

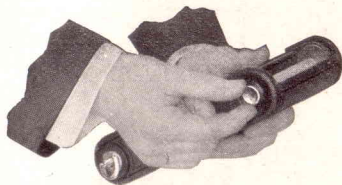


FIG. III.  
*Springing Out a Spool Pin.*

II. The Kodak having been opened, an empty spool having a slit in it will be seen in the winding end of the camera. This forms the reel on which the film is wound after exposure. The full spool is to be placed in the recess at the opposite end of the Kodak. To accomplish this, pull out spool pins as shown in Fig. III.

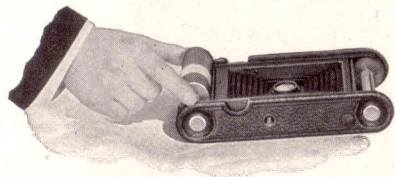


FIG. IV.  
*Inserting the Cartridge.*

III. Drop the film cartridge into this recess, as shown in Fig. IV. Another and most convenient method of placing the cartridge in the recess is shown in Fig. IV-A.

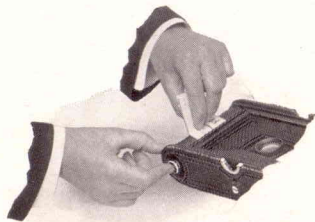


FIG. IV-A.  
*Inserting the Cartridge.*

After the spool pins have been pulled out (Fig. III), wrap the instruction sheet (found

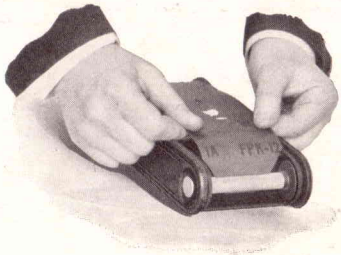


FIG. V.  
*Threading up the Red Paper.*

with the film) around the spool. This will enable one to raise or lower the spool slightly, so that the spool pins may be readily pressed into place. Be careful to *get the top of the spool at the top of the camera*. The top is the winding side of the camera. Each cartridge is marked on the end or the word "Top" will be found printed on the red paper near the top of the spool.

NOTE: If the cartridge is inserted wrong side up, the red paper instead of the film will be brought next the lens, resulting, of course, in the absolute loss of the pictures.

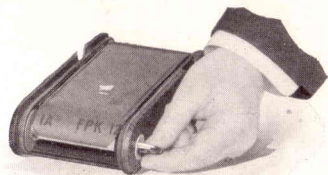


FIG. VI.  
*Turning the Key to Bind Paper on Reel.*

IV. Push spool pins into place so that spool revolves upon them.

V. Remove the gummed slip that holds the end of the red paper; pass the paper over the two aluminum rollers and thread into the slit in reel, as shown in Fig. V. Be careful in so doing that the paper draws straight and true.

III. Drop the film cartridge into this recess, as shown in Fig. IV. Another and most convenient method of placing the cartridge in the recess is shown in Fig. IV-A.

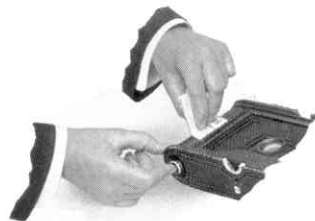


FIG. IV-A.  
*Inserting the Cartridge.*

After the spool pins have been pulled out (Fig. III), wrap the instruction sheet (found



FIG. V.  
*Threading up the Red Paper.*

with the film) around the spool. This will enable one to raise or lower the spool slightly, so that the spool pins may be readily pressed into place. Be careful to *get the top of the spool at the top of the camera*. The top is the winding side of the camera. Each cartridge is marked on the end or the word "Top" will be found printed on the red paper near the top of the spool.

NOTE: If the cartridge is inserted wrong side up, the red paper instead of the film will be brought next the lens, resulting, of course, in the absolute loss of the pictures.



FIG. VI.  
*Turning the Key to Bind Paper on Reel.*

IV. Push spool pins into place so that spool revolves upon them.

V. Remove the gummed slip that holds the end of the red paper; pass the paper over the two aluminum rollers and thread into the slit in reel, as shown in Fig. V. Be careful in so doing that the paper draws straight and true.



VI. Give the key one or two slight turns—just enough to bind the paper on the reel—and no more. See Fig. VI.

The paper should now be in position indicated in Fig. VII.



FIG. VII.

*Showing position of paper.*

VII. Replace the back on Kodak, reversing the operation as shown in figures I and II. Care should always be taken to handle the back of Kodak carefully, especially when it is detached from camera, as even a slight bend would make it fit badly, resulting very probably in a leakage of light, and consequently loss of film.

*Throughout the foregoing operation, from the time the gummed slip is cut on the fresh roll of film until the back is once more in place, keep the red paper wound tightly on the roll. If it is allowed to loosen, light will be admitted and the film fogged.*

VIII. The roll of film in the camera is covered with red paper, and this must be reeled off before a picture can be taken. Turn the key slowly to the left and watch the little

red window at the back of the camera. When 15 to 18 turns have been given, a hand pointing



FIG. VIII.

toward the first number will appear; then turn slowly until the figure 1 is in front of the red window. Fig. VIII.

The film is now in position for taking the first picture.

## PART II.

The general instructions in this No. 1A Autographic Kodak Junior manual apply equally well to the camera, whether fitted with *Single* or *Double Lens*.

The only difference lies in the timing of the exposures and the use of the diaphragm, inasmuch as the *Double Lens* will work at a larger stop or opening than the *Single Lens*.

### MAKING THE EXPOSURES.

Before making an exposure with the No. 1A Autographic Kodak Junior, either time or instantaneous, be sure of four things:

FIRST—That the shutter is set properly.

SECOND—That the diaphragm stop is set at the proper opening.

THIRD—That the camera is focused.

FOURTH—That an unexposed section of the film is turned into position.

NOTE: Exposures are made by pressing push-pin at end of cable release D or pushing down on release C.

Avoid making too sharp a bend in the cable release, as by doing so it will be liable to kink.

### OPERATING THE SHUTTER.

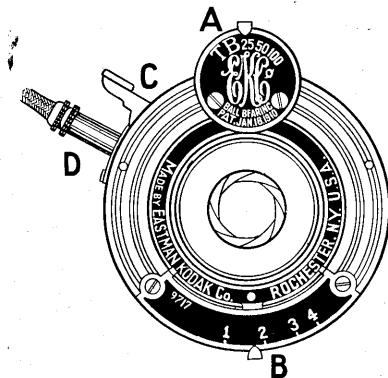
Perfect familiarity with the shutter is essential to successful picture-taking with any camera. The following directions should, there-

fore be carefully read and the shutter operated several times before threading the film up for use.

### SECTION I.

Instructions when your Camera is fitted with *Single Lens (Achromatic)*.

(If fitted with *Double Lens* disregard and follow instructions on page 16.)



### Instantaneous Exposures.

FIRST—Set the lever at 50 or 25 (representing 1-50 and 1-25 of a second), according to the time of instantaneous exposure desired.

NOTE: The lever A should be used at 100, only when taking moving objects in bright sunshine, and lever B must always be placed at No. 1, when taking this kind of a picture.

**SECOND**—Set the lever B at No. 1. Lever B controls the iris diaphragm and No. 1 is the proper opening for ordinary instantaneous exposures.

**NOTE:** For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows, such as in views on the seashore or on the water, use the diaphragm No. 2. With *light clouds, slightly smoky atmosphere* use No. 1 at 25. With *heavy clouds do not attempt instantaneous exposures.*

**THIRD**—Press push-pin or push down on release C. This makes the exposure.

**NOTE:** Press push-pin with a firm quick movement, at the same time be sure to hold the Kodak rigid, as a slight jarring will cause a blurred negative.

### Time Exposures.

**FIRST**—Set the lever A at the point T (time). This adjusts the shutter for time exposures.

**SECOND**—Set the lever B at No. 2, 3 or 4. See instructions for use of stops, page 40.

**THIRD**—Press the push-pin. *This opens the shutter.* Time exposure by a watch. Again press the push-pin. *This closes the shutter.* Shutter may be opened by pressing release C and closed by a second pressure if desired.

### Bulb Exposure.

When it is desirable to make a very short time exposure this is best accomplished by making a "bulb exposure."

**FIRST**—Set the lever A at the point "B" (bulb). This adjusts the shutter for bulb exposures.

**SECOND**—Set the lever B controlling the stops at No. 2, 3 or 4 as desired. See page 40.

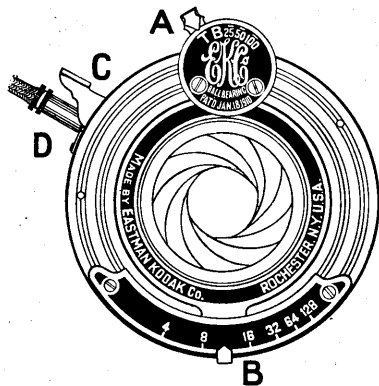
**THIRD**—Press push-pin to open the shutter, and release it to close the shutter. *This makes the exposure.* The shutter will remain open as long as the push pin is under pressure.

### IMPORTANT.

Do not oil any part of the shutter.

In case of accident return shutter to your dealer or to us for repairs. As a general rule, make exposures with the cable release instead of with the release C, as the cable release is less likely to jar the camera.

Instructions for the use of the No. 1A Auto-graphic Kodak Junior, when equipped with *Double Lens* (Rapid Rectilinear).



### Instantaneous Exposures.

FIRST—Set the lever A at 25, 50 or 100, according to the time of instantaneous exposure desired.

NOTE: In bright light, set the lever at 100, the highest speed. In more subdued lights, set at 50 or 25, but do not attempt to make any instantaneous exposures in very dull light.

SECOND—Set the lever B at No. 8. Lever B controls the iris diaphragm and No. 8 is the proper opening for ordinary instantaneous exposures.

NOTE: For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows, such as in views on the seashore or on the water, use the diaphragm No. 16. With *light* clouds or *slightly smoky* atmosphere use No. 4 at 50 or No. 8 at 25. With *heavy* clouds do not attempt instantaneous exposures.

THIRD—Press push-pin or push down on release C. This makes the exposure.

NOTE: Press push-pin with a firm quick movement, at the same time be sure to hold the Kodak rigid, as a slight jarring will cause a blurred negative.

### Time Exposures.

FIRST—Set the lever A at the point T (time). This adjusts the shutter for time exposures.

SECOND—Set the lever B at No. 16, 32, 64 or 128 (which is indicated by a dot). See instructions for use of stops, page 40.

THIRD—Press the push-pin. *This opens the shutter.* Time exposure by a watch. Again press the push-pin. *This closes the shutter.* Shutter may be opened by pressing release C and closed by a second pressure if desired.

### Bulb Exposure.

When it is desirable to make a very short time exposure this is best accomplished by making a "bulb exposure."

FIRST—Set the lever A at the point "B" (bulb). This adjusts the shutter for bulb exposures.

SECOND—Set the lever B controlling the stops at No. 16, 32, 64 or 128 (which is indicated by a dot), as desired. See page 40.

THIRD—Press push-pin to open the shutter, and release it to close the shutter. *This makes the exposure.* The shutter will remain open as long as the push pin is under pressure.

#### IMPORTANT.

Do not oil any part of the shutter.

In case of accident return shutter to your dealer or to us for repairs. As a general rule, make exposures with the cable release instead of with the release C, as the cable release is less likely to jar the camera.

## SECTION II. INSTANTANEOUS EXPOSURES.

### "Snap Shots."

To take instantaneous pictures the objects must be in the broad, open sunlight, but the camera should not. The sun should be behind the back or over the shoulder of the operator.

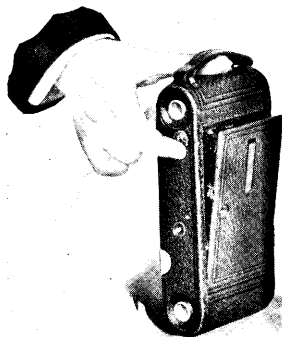


FIG. I.  
*Opening the Front.*

#### 1.—Focus on the Subject.

I. Press the concealed button, as shown in Fig. I, and push down the bed of camera to the limit of motion.

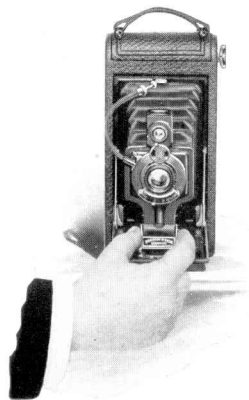


FIG. II.

*Extending the Bellows and Focusing.*

II. Grasp the springs at bottom of front board, and pull out front to the point nearest the estimated distance of *principal object* to be photographed in feet. Fig. II.

**NOTE:** The index plate is scaled both by feet and by metres and care should be taken not to confound them.

Except when working at distances of 15 feet or less, it is not necessary to estimate the distance with any more than approximate accuracy; for instance, if the focus is set at 25

feet (the usual distance for ordinary street work), the sharpest part of the picture will be the objects at that distance from the camera, but everything from 15 to 35 feet will be in good focus. For general street work, the focus may be kept at 25 feet, but where the *principal object* is nearer or farther away, the focus should be changed accordingly. The index plate is divided for 6, 8, 10, 15, 25 and 100 feet. Everything beyond 100 feet is in the 100-foot focus. Nothing nearer than 6 feet can be focused without using a portrait attachment. See page 37.

#### **Automatic Locking Device.**

The automatic locking device which is on the left side of the springs at bottom of front board, will be found a great convenience in focusing.

By means of this device, the front locks automatically at 6, 8, 10, 15, 25 or 100 feet focus.

To set the focus, press the lever on left side of the bottom of front board, then pull out front of camera to the slot marked for the distance desired, 6, 8, 10, 15, 25 or 100 feet (the scale is also marked in metres), and the camera will be in focus for the distance at which you have set the catch.

## 2.—HOW TO USE THE No. 1A AUTOGRAPHIC KODAK JUNIOR AS A FIXED FOCUS CAMERA.

Set focus at 25 feet.

Use speed of 1-25 of a second.

Set diaphragm midway between 1 and 2 or 8 and 16.

By following the above suggestions this camera can be used as a fixed focus instrument with the additional advantage of being instantly convertible to a focusing camera when conditions call for it. It must be remembered, however, that when using this Kodak as a fixed focus type it is necessary that the subject be in brilliant sunlight, in order to obtain a fully timed exposure.

### Explanation.

A lens is often spoken of erroneously as having a fixed focus.

There is no such thing as a universal or fixed focus lens, but in certain cameras,  $3\frac{1}{4} \times 4\frac{1}{4}$  and smaller (equipped with short focus lenses) the lens is immovable, i. e., set at a distance that is a compromise, as to its focus, between far and near points. A camera with a lens so focused, used in combination with a relatively small stop, is designated a universal or fixed focus instrument.

## 3.—USE STOP No. 1 or No. 8.

For all ordinary outdoor work, when the sun is very bright, use stop No. 1 when camera is equipped with the *single lens* and use No. 8 when it has the *double lens*. If a smaller stop is used, the light will be so much reduced that it will not sufficiently impress the image on the film, and failure will result.

In views on the water, when the sunlight is *unusually strong* and there are no heavy shadows, diaphragm No. 2 or No. 16 may be used.

If a smaller stop opening than No. 2 or No. 16 be used for ordinary snap shots, *absolute failure will result*.

## 4.—LOCATE THE IMAGE.

Aim the camera at the object to be photographed and locate the image in the finder. For a horizontal picture hold the camera as shown in Fig. III, reversing the finder as

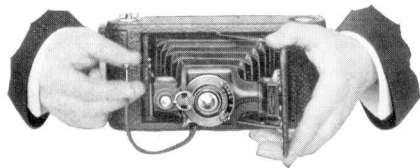


FIG. III.

indicated. Always look into the finder from directly over it, *not at an angle*.

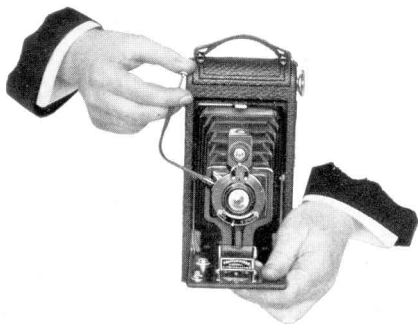


FIG. IV.

For a vertical exposure the camera must be held as shown in Fig. IV. The finders give the scope of view and show a facsimile of the picture as it will appear, but on a reduced scale.

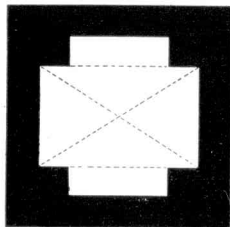
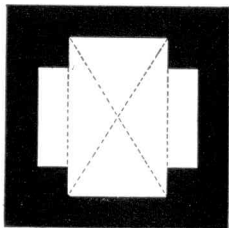
VIEW INCLUDED WHEN MAKING  
A HORIZONTAL PICTURE.VIEW INCLUDED WHEN MAKING  
A VERTICAL PICTURE.

FIG. V.

Any object that does not show in the finder will not show in the picture.

It will be noticed that the top of the finder is notched, as shown in Fig. V. This is done so that the one finder will correctly show the view included when the Kodak is held in either horizontal or vertical position. As the picture taken with the No. 1A Autographic Kodak Junior is oblong, it will readily be seen that unless the finder was made in this manner it could not correctly show the exact view intended when held in either position.

Remember that only the view indicated within the dotted lines will show in the picture.

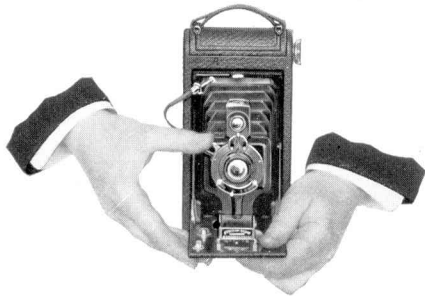


FIG. VI.

Fig. VI shows how to hold the camera when making an exposure without the use of the cable release. Grasp the bed of Kodak



firmly with the left hand, steady it with the right and with the thumb of the right hand lightly touch the exposure lever.

### 5.—Hold It Level.

The Kodak must be held level.

If the operator attempts to photograph a tall building while standing near it by pointing the camera upwards (thinking thereby to center it), the result will be similar to Fig. VII.

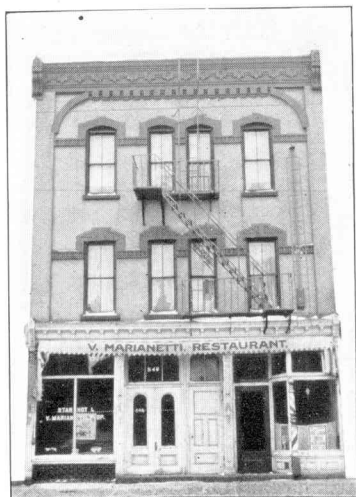


FIG. VII.

This was pointed too high. This building should have been taken from the middle story window of the building opposite.

The operator should hold the camera level, after withdrawing to a proper distance, as indicated by the image shown in the finder on the top of the camera.

If the object be down low, like a small child, or a dog, the Kodak should be held down level with the center of the object.

### 6.—Press Push-Pin on Cable Release.

HOLD THE CAMERA STEADY,  
HOLD IT LEVEL AND  
PRESS PUSH-PIN.

*This makes the exposure.*



FIG. VIII.

### 7.—The Autographic Feature.

The Autographic Kodak has a spring door on the back, covering a narrow slot through which the writing is done upon the red paper. The slot is provided with an automatic safety

Mary Elizabeth's first doll

Mary E. learns to walk 7/6/15

Westminster Abbey  
Stop f11, 1/50 sec. 10 a.m. 5/12/14

Hauqing Bridge, Royal George  
From moving train 1/50 sec.

Lock #47 5/6/14  
Pileus completed 3/8/14

Culvert Job 5/7/14  
Cement work completed

*An Autographic Negative.*

spring border which operates when the door is open to press the papers into contact with

back of the film, thus securing the sharp printing of the image of the writing and preventing the diffusion of light around the edges of the slot. This slot is located so that normally the writing comes between the exposures.

### THE OPERATION.

After the picture is taken, push back the sliding lock with thumb (Fig. VIII), in the direction indicated by the arrow. Open the

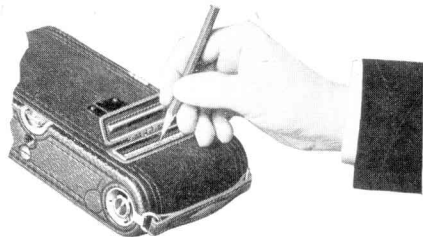


FIG. IX.

*Position of pencil (or stylus) when writing record data on Autographic Film Cartridge used in Autographic Kodak.*

door. Use the stylus, or a smooth pointed pencil, held in as upright a position as is convenient, and write on the strip of exposed red paper any memorandum desired, such as the title of the picture, the date, or details in regard to the exposure, light, stops, etc., (Fig. IX).

**To get a clear impression, press firmly on both up and down strokes.** *While writing or afterwards the sun should not be allowed to shine upon the paper.* The action of the pencil or stylus so affects the tissue as to permit the light to record the writing upon the film. After finishing the writing the door should be left open for the printing, in accordance with the following table:

*(Expose to the sky, but not to the sun.)*

	OUT OF DOORS	INDOORS CLOSE TO WINDOW
BRILLIANT LIGHT	2 to 5 Seconds	5 to 7 Seconds
DULL LIGHT	5 to 10 Seconds	10 to 15 Seconds

INCANDESCENT LIGHT, distance 2 inches, 30 to 60 seconds.

WELSBACH LIGHT, distance 6 inches, 30 to 60 seconds.

1. Lock the door before winding a new film into place.

2. **Caution.** In order to locate the writing accurately in the space between the negatives it is important that the film should be turned so that the exposure number centers perfectly in the red window of the Kodak.

If a pencil be used, the point must be dry and it must not be of the "indelible" variety.

TURN A NEW SECTION OF FILM INTO POSITION : Turn the key in top of camera slowly to the left, until the next number appears before the red window. Three or four turns will be sufficient to accomplish this. The warning hand appears only before No. 1. See Fig. X.

Repeat the foregoing operations for each picture.

**Important**—When you have used the last exposure (No. 6, 10 or 12) on your roll of film and have made the autographic record of it in accordance with the foregoing directions, turn the winding key of the Kodak until a letter (A) appears in the center of the window in the back of the Kodak. Raise the spring door and write your name on the red paper, expose it to the sky the same as was done when making the exposure records, then close the spring-door and finish winding film and red paper for removal from the Kodak. Your film is now ready to send to your finisher, and when developed will be readily identified by the autographic copy of your name which you wrote on the red paper.

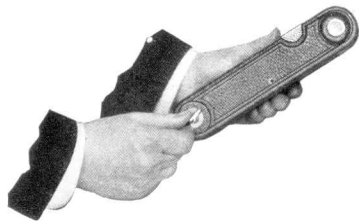


FIG. X.

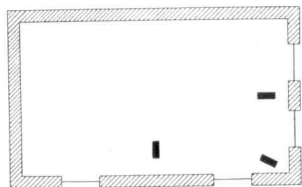
## SECTION III.

## TIME EXPOSURES.—INTERIORS.

Place the Kodak in position.

Set camera in such a position that the finder will embrace the view desired.

The diagram shows the proper positions for the Kodak. It should not be pointed directly at a window, as the glare of light will blur the picture. If all the windows cannot be avoided, pull down the shades of such as come within range of the Kodak.



*Diagram showing positions of Kodak.*

To make a time exposure, place the Kodak on some firm support like a table, and focus as before described.

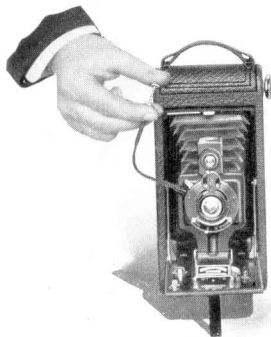


FIG. I.

Fig. I shows the Kodak in position for a vertical exposure. The Kodak is also provided with tripod sockets and may be used on a tripod.

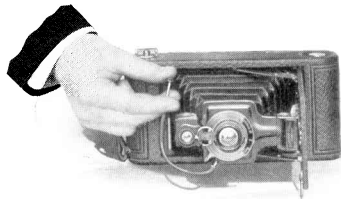


FIG. II.

When it is desired to make a horizontal time exposure without the use of a tripod, pull down the lever on bed of Kodak, as shown in Fig. II.

Adjust the shutter for a time exposure, as described on pages 14 and 17.

All being in readiness, press the push pin or touch the lever, once to open and again to close the shutter. Time the exposure by a watch.

#### TURN THE KEY.

After making the autographic record, turn a new film into position, as described before (see page 31).

#### THE KODAK IS NOW READY FOR THE NEXT INTERIOR EXPOSURE.

Follow the directions given heretofore for each successive exposure.

When the last Interior Exposure is made, adjust the shutter for instantaneous exposures as before directed.

#### Time Needed for Interior Exposures.

The following table gives the time of the exposure required under varying conditions of light for the Kodak equipped either with the *single lens* or *double lens*. When using the model equipped with the *single lens* the time given in the table is with the stop No. 2 in

the lens. If the stop No. 1 is used give only one-half the time; if the stop No. 3 give twice the time and if stop No. 4 is used give four times the time of the table. When using the model equipped with the *double lens*, the time given in the table is with the stop No. 16 in the lens. If the stop No. 8 is used give only one-half the time; if the stop No. 128 is used, give 8 times the time of the table. The smaller the stop the sharper the picture. The No. 2 or the No. 16 give the best results for interiors.

#### White walls and more than one window:

bright sun outside, 4 seconds;  
hazy sun, 10 seconds;  
cloudy bright, 20 seconds;  
cloudy dull, 40 seconds.

#### White walls and only one window:

bright sun outside, 6 seconds;  
hazy sun, 15 seconds;  
cloudy bright, 30 seconds;  
cloudy dull, 60 seconds.

#### Medium colored walls and hangings and more than one window:

bright sun outside, 8 seconds;  
hazy sun, 20 seconds;  
cloudy bright, 40 seconds;  
cloudy dull, 80 seconds.

#### Medium colored walls and hangings and only one window:

bright sun outside, 12 seconds;  
hazy sun, 30 seconds;  
cloudy bright, 60 seconds;  
cloudy dull, 120 seconds.

Dark colored walls and hangings and more than one window:

bright sun outside, 20 seconds;  
hazy sun, 40 seconds;  
cloudy bright, 80 seconds;  
cloudy dull, 2 minutes, 40 seconds.

Dark colored walls and hangings and only one window:

bright sun outside, 40 seconds;  
hazy sun, 80 seconds;  
cloudy bright, 2 minutes, 40 seconds;  
cloudy dull, 5 minutes, 20 seconds.

The foregoing is calculated for rooms whose windows get the direct light from the sky, and for hours from three hours after sunrise until three hours before sunset.

If earlier or later the time required will be longer.

#### To Make a Portrait.

Place the sitter in a chair partly facing the Kodak (which should be located slightly higher than an ordinary table) and turn the face slightly towards the instrument, having the eyes centered on an object at the same level with the lens. Center the image in the finder. For a three-quarter figure the Kodak should be from 6 to 8 feet from the figure; and for a full figure from 8 to 10 feet. The background should form a contrast with the sitter.

#### Kodak Portrait Attachment.

The attachment is simply an extra lens slipped on over the regular lens, and in no way affects its operation except to change the focus.

By means of the Portrait Attachment large head and shoulder portraits of various sizes may be obtained. With the Attachment in position and the focus set at 6 feet, the subject should be placed exactly 2 feet, 8 inches from the lens.

At 8 feet focus, place the subject 3 feet from the lens.

At 15 feet focus, place the subject  $3\frac{1}{2}$  feet from the lens.

At 25 feet focus, place the subject 4 feet from the lens.

At 100 feet focus, place subject  $4\frac{1}{2}$  feet from the lens.

#### TIME EXPOSURES IN THE OPEN AIR.

When the smallest stop is in the lens the light admitted is so much reduced that time exposures out of doors may be made the same as interiors, but the exposures must be much shorter.

WITH SUNSHINE— $\frac{1}{5}$  second.

WITH LIGHT CLOUDS—From  $\frac{1}{2}$  to 1 second will be sufficient.

WITH HEAVY CLOUDS—From 2 seconds to 5 seconds will be required.

The above is calculated for the same hours as mentioned above and for objects in the open air. For other hours or for objects in the shadow, under porches or under trees, no accurate directions can be given; experience only can teach the proper exposure to give.

**Time exposures cannot be made while the Kodak is held in the hand. Always place it upon some firm support, such as a tripod, chair or table.**

For exceedingly short time exposures as above described, use the "bulb exposure." See pages 15 and 18.

#### "F." and "U. S." Systems.

A lens is said to work at a certain "speed;" this means that the lens will cut sharp to the corners, with an opening a certain proportion of its focal length. It should be borne clearly in mind that this speed depends *not* upon the size of the opening, but upon the size of the opening *in proportion to the focal length of the lens* (distance from the lens to plate when focused on infinity). The lens that will

cut sharp with the largest opening is said to possess the greatest speed.

Such openings are termed stop or diaphragm openings, and for convenience in estimating exposures, are arranged according to two systems, the *f* system and the Uniform System, or U. S. system, as commonly abbreviated.

In the *f* system the proportional size or "value" of the stop opening is designated by "*f*," and is the quotient obtained by dividing the focal length of the lens by the diameter of the stop.

Taking, for instance, a lens of 8-inch focus with a stop 1 inch in diameter, and we find that  $8 \div 1 = 8$ ; hence 8 is the *f*. value of the stop and would be designated *f*.8. Suppose the stop is  $\frac{1}{4}$  inch in diameter, we would then have  $8 \div \frac{1}{4} = f.32$ .

For convenience, the uniform system of marking stop openings has been adopted by nearly all manufacturers of iris diaphragms. Such convenience is at once apparent when we understand that each higher number stands for an opening having *half* the *area* of the preceding opening, each smaller stop (or higher number) requiring double the time of the one next larger.

With the *f*. system, each stop is a certain proportion of the focal length and not ar-

ranged with reference to the other openings, so that estimating exposure is much more complicated by this system.

As a number of exposure meters and similar devices for determining the proper exposure are based upon the *f*. system, we append the following table showing the "*f*. value" for each of the uniform system openings:

U. S. 4= <i>f</i> .8	U. S. 32= <i>f</i> .22.6
U. S. 8= <i>f</i> .11.3	U. S. 64= <i>f</i> .32
U. S. 16= <i>f</i> .16	U. S. 128= <i>f</i> .45.2

### Diaphragms.

When using the model equipped with the SINGLE LENS, the stops should be used as follows:

No. 1. THE LARGEST—For all ordinary instantaneous exposures.

No. 2. For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows; such as in views on the seashore, or on the water; also for interior time exposures.

Nos. 3 and 4. For time exposures outdoors in cloudy weather. Not for instantaneous exposures. The time required for time exposures on cloudy days with smallest stop will range from one-half second to five seconds according to the light. The smaller the stop the sharper the picture.

If you use the smallest stop for instantaneous exposures absolute failure will result.

If using the model fitted with the DOUBLE LENS, the stops should be used as follows:

No. 4—For instantaneous exposures on *slightly* cloudy days.

No. 8—For *all ordinary instantaneous exposures* when the sun shines.

No. 16—For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows; such as in views on the seashore or on the water, also for interior time exposures.

Nos. 32 and 64—For interiors. *Never for instantaneous exposures.*

No. 128 (which is indicated by a dot)—May also be used for time exposures outdoors in cloudy weather. *Never for instantaneous exposures.* The time required for time exposures on cloudy days with stop 128 will range from 1-5 second to 5 seconds, according to the light. The smaller the stop the sharper the picture.

Absolute failure will be the result if you use the smallest stop for instantaneous exposures.

### SECTION IV.

#### FLASH LIGHT PICTURES.

By the introduction of Eastman Flash Sheets, picture taking at night has been wonderfully simplified. A package of flash sheets, a piece of cardboard, a pin and a match complete the list of essential extras, although a Kodak Flash Sheet Holder is a great convenience.

With flash sheets, no lamp is necessary, there is a minimum of smoke and they are far safer than any other self-burning flash medium, besides giving a softer light that is less trying to the eyes.

Many interiors can be taken with the flash sheets that are impracticable by daylight, either by reason of a lack of illumination or there are windows in a direct line of view which



cannot be darkened sufficiently to prevent the blurring of the picture.

Evening parties, groups around a dinner or card table or single portraits may be readily made by the use of our flash sheets, thus enabling the amateur to obtain souvenirs of many occasions which, but for the flash light, would be quite beyond the range of the art.

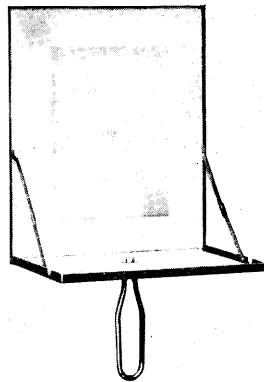
**PREPARATION FOR THE FLASH**—The camera should be prepared for time exposure, as directed on pages 14 and 17 of this manual (except that stop No. 1 in the model with *single lens*, or No. 8 if with the *double lens*, must be used), and placed on some level support where it will take in the view desired.

Pin a flash sheet by one corner to a piece of cardboard which has previously been fixed in a perpendicular position. If the cardboard is white it will act as a reflector and increase the strength of the flash.

The flash sheet should *always* be placed two feet behind and two or three feet to one side of the camera. If placed in front, or on a line with front of Kodak, the flash would strike the lens and blur the picture. It should be placed at one side as well as behind, so as to throw a shadow and give a little relief in the lighting. The flash should be at the same height or a little higher than the camera. The

support upon which the flash is to be made should not project far enough in front of it to cast a shadow in front of the Kodak. An extra piece of cardboard a foot square placed under the flash sheet will prevent any sparks from the flash doing damage. However, by using the Kodak Flash Sheet Holder, all these contingencies are taken care of, and we strongly advise its use.

### THE KODAK FLASH SHEET HOLDER.



This holder may be held in the hand *always between you and the flash sheet*. Or it may be used on any Kodak tripod, being provided with a socket for this purpose. The sheet is placed in position in the center of the larger pan over the round opening which has a raised saw-tooth

edge extending half way around it. Press with the thumb on the sheet, so slight break

is made and a portion of the sheet projects partially through the opening. Then to insure the sheet being more securely fastened, press around the notched edge, forcing this portion of flash sheet firmly into position on the pan.

Then to set off the flash, merely insert a lighted match, from behind, through the round opening.

Having the Kodak and the flash sheets both in position and all being in readiness, open the camera shutter, stand at arm's length and touch a match from behind through the round opening in the center.

**NOTE:** If you are not using the Kodak Flash Sheet Holder, place the match in a split stick at least two feet long.

There will be a bright flash which will impress the picture on the sensitive film. Then close the shutter, make the autographic record and turn a fresh film into place with the key, ready for another picture.

### THE FLASH SHEET.

The size of the sheet required to light a room varies with the distance of the object farthest from the camera, and the color of the walls and hangings.

For 10 ft. distance, and light walls and hangings, use 1 No. 1 sheet  
 " 10 ft. " " dark " " " " 1 No. 2 sheet  
 " 15 ft. " " light " " " " 1 No. 2 sheet  
 " 15 ft. " " dark " " " " 1 No. 3 sheet

**NOTE:** Never use more than one sheet at a time in the Kodak Flash Sheet Holder.

**TO MAKE A PORTRAIT**—Place the sitter in a chair partly facing the Kodak (which should be located slightly higher than an ordinary table) and turn the face slightly towards the instrument, having the eyes centered on an object at the same level with the lens. The proper distance from the camera to the subject can be ascertained by looking at the image in the finder. For a three quarter picture this will be from 6 to 8 feet, and for a full figure, from 8 to 10 feet. The flash should be on the side of the Kodak away from the face, that is, the sitter should not face it. The flash should not be higher than the head of the sitter.

For using Portrait Attachment see page 37.

**TO MAKE A GROUP**—Arrange the chairs in the form of an arc, facing the Kodak, so that each chair will be exactly the same distance from the camera. Half the persons composing the group should be seated and the rest should stand behind the chairs. If the group is large, any number of chairs may be used, but none of the subjects should be seated on the floor, as is sometimes seen in large pictures, because the perspective would be too violent.

**BACKGROUNDS**—In making single portraits or groups, care should be taken to have a suitable background against which the figures will

show in relief; a light background is better than a dark one, and often a single figure or two will show up well against a lace curtain. For larger groups a medium light background will be suitable.

The *finder* on the camera will aid the operator in composing the groups so as to get the best effect. In order to make the image visible in the finder the room will have to be well lighted with ordinary lamplight, which may be left on while the picture is being made, provided none of the lights are placed so that they show in the finder.

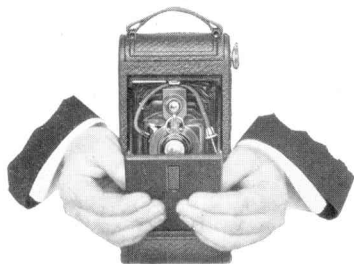
Eastman Flash Sheets burn more slowly than flash powders, producing a much softer light and are, therefore far preferable in portrait work; the subject, however, should be warned not to move, as the picture is not taken *instantaneously*, about one second being required to burn one sheet.

### EASTMAN FLASH CARTRIDGES.

Eastman Flash Cartridges may be substituted for the sheets if desired. We recommend the sheets, however, as more convenient, cheaper and capable of producing the best results. The cartridges are only superior when absolutely *instantaneous* work is essential.

### CLOSING THE KODAK.

When through using the Kodak, fold the bellows by reversing the operation shown in Fig. II, page 20, and press down on arm locks on each side of bed as shown below. The bed will now close readily.



### CAUTION.

Before closing the bed of the camera be careful to note that the finder is in the upright position and that the front board has been pushed back to the limit of motion.

If it is in proper position it will not interfere with the bed in closing.