

KODAK INSTAMATIC® www.butkus.us CAMERA





Read this entire instruction manual carefully. Although your camera is amazingly easy to use, small details of camera operation are important for good pictures. Keep the manual handy for future reference.

YOUR KODAK INSTAMATIC 414 Camera provides a fine array of automatic features—automatic film advance, automatic flash-cube rotation, and automatic daylight exposure control with its battery-powered cadmium sulphide cell. Provides daylight and flash close-ups *down to 2 feet.*

After inserting batteries, simply do this . . .

- Drop in film cartridge—camera is loaded
- Wind Spring-power Motor . . . first exposure is ready
- Aim through Eye-level Finder—you see a bright, clear image of your subject
- Press the Shutter Release—you've snapped the picture. Film will advance automatically to next frame

. . . read on for the important details

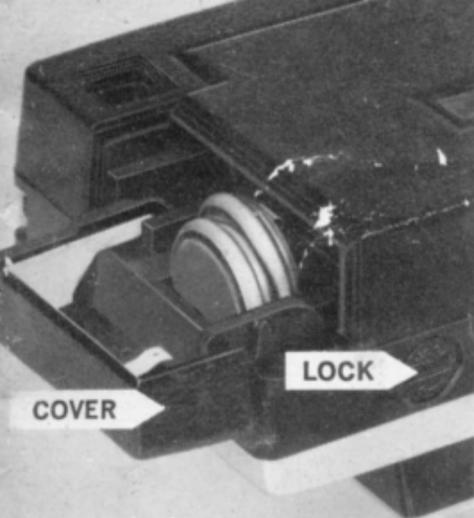
INSTALL BATTERIES

Batteries must be installed before you take any pictures. Install two fresh, PX825-size batteries (like those supplied with outfits) to power the daylight exposure control and to fire flashbulbs.

Before installing, clean battery surfaces with a rough cloth. Using the illustrations as a guide, open the battery compartment by first turning the coin-slotted LOCK counterclockwise, then

swinging open the hinged COVER. As illustrated, insert both batteries in the compartment slots, with their positive (+) sides toward the inside of the camera. Close the cover and hold it closed while turning the coin-slotted LOCK clockwise (in direction of arrow on lock) as far as it will go to lock the cover. If the cover does not close easily, *do not force it*—check batteries for proper positioning.

Important: Flash failure usually results from tarnish (often invisible) on battery surfaces and battery compartment contacts. Clean battery surfaces and the two battery compartment metal contacts periodically with a rough cloth. If flash failure persists, install fresh batteries.



FILM Your camera accepts Kodak film in the 126 film cartridge for instant loading and unloading. Choose, from the table below, the film that produces the type of pictures you want. *Do not use film with a speed higher than ASA 160.*

Type of Picture	Film	Produces	No. of Exposures	Processing	
				KODAK Mailer	
Black-and-White Prints	KODAK VERICHROME Pan	3½ x 3½-inch black-and-white prints or enlargements.	12	KODAK Mailer	Order from dealer
				None	
Color Prints	KODACOLOR-X	3½ x 3½-inch color prints or enlargements.*	12	DP12	Order from dealer or Purchase Prepaid Processing Mailer from dealer. Proper Kodak Mailers shown at left.‡
			or 20	DP20-3S	
Color Slides	KODACHROME-X	Color slides, mounted in 2 x 2-inch cardboard mounts for projection or viewing.†	20	PK20	
	EKTACHROME-X		20		
	High Speed EKTACHROME§		20		

*Color slides are also available from your KODACOLOR-X negatives.

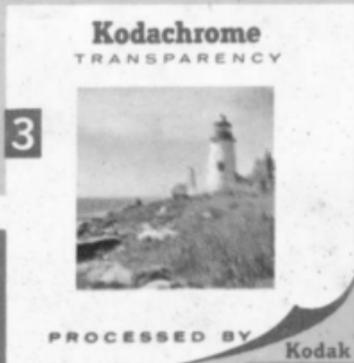
†Duplicate slides or enlarged color prints can be made from your original slides.

§Extremely fast film. Ideal for daylight pictures of dimly lighted subjects.

‡Color films will be processed and mailed to the address you specify.

◀ Your camera takes all three—

- 1 Black-and-white prints
- 2 Color prints
- 3 Color slides



Before you take any especially important pictures, try a test cartridge of film to check the camera and your operation of it. Expose pictures outdoors and also indoors with flash. If time is pressing, a cartridge of black-and-white film can be processed very quickly.



(Pictures shown in reduced size)



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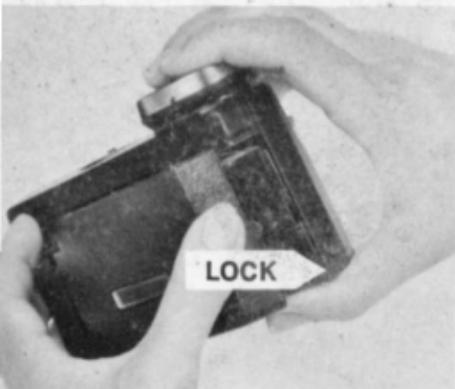
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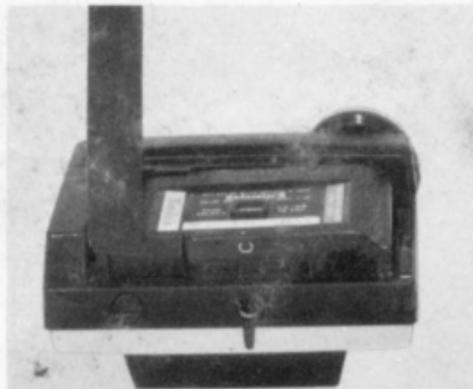
LOADING

1



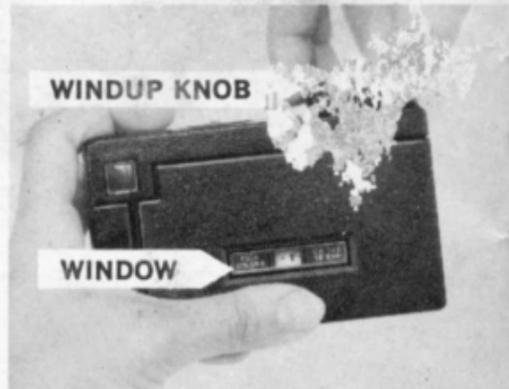
Open the back of the camera by pressing up the **LOCK** button and swinging out the hinged cover.

2



Place a film cartridge in the camera, with the larger cylindrical end **down** and toward the lock button, as illustrated.

3



Close the back of the camera by pressing it against the camera body until it locks. The film name and number of exposures per cartridge appear in the **WINDOW** on the back of the camera. (When motor is wound, first exposure positions itself immediately.)

4

Turn the WINDUP KNOB **counterclockwise** (or back and forth like a watch) until the spring motor is fully wound. This windup position provides the first exposure and provides power to advance the film automatically. The appearance of an arrow in the window indicates that the first exposure has not been reached, thus indicating insufficient windup.

The number that appears in the window on the back of the camera (the same number may appear in duplicate) serves as your exposure counter.

1 After the last picture, the yellow paper will automatically move past the window, provided sufficient power remains in the motor. If an "X" shows in the center of the window, **before opening the back of the camera**, turn the windup knob a few turns counterclockwise to restore power for advancing the yellow paper beyond the window.

2 Slide up the lock button and open the camera.

3 Remove the cartridge by turning the camera over to allow the cartridge to fall into your hand. For processing, send **entire** cartridge.

NOTE: Do not remove the cartridge from the camera until all the yellow paper, with the "X's," has been moved past the window; otherwise several exposures will be "light-fogged." Removing and replacing partially exposed cartridges, even under darkroom conditions, may result in loss of one or more exposures due to possible loss of tension on the cartridge take-up spool.

SHUTTER
RELEASE

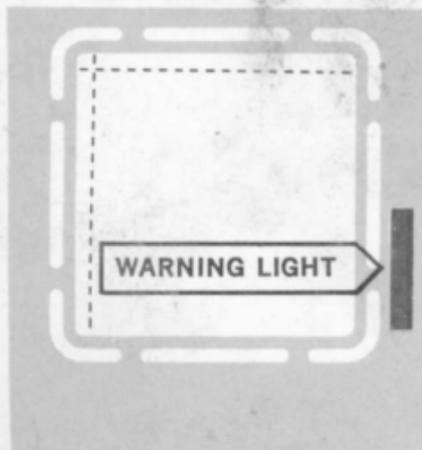
BUTTON



OUTDOOR PICTURES

- The size of the lens opening is automatically controlled by the amount of light reflected to the electric eye by the subject. *Make sure that the ELECTRIC EYE is not obstructed, during picture-taking, by the fingers or any other object, and that the camera is not pointed toward the sun or other bright light-source.*
- **Set the 2-position focus.** For normal subject distances (beyond 6 feet) allow the ribbed **BUTTON** of the focus slide to remain

NOTE: Look through the viewfinder window. If there is not sufficient light to take a properly exposed picture, a red **WARNING LIGHT** will appear in the right side of the viewfinder as the **SHUTTER RELEASE** is almost fully depressed. Also, see note, page 12.



in its normal position; that is, toward the shutter release.

For close-up pictures (2 to 6 feet), move the ribbed button as far as it will go *away from* the shutter release. After each exposure with the slide in this close-up position, the slide button automatically returns to the normal (beyond 6 feet) position. *It must be reset for another close-up picture.* The focus slide setting is indicated on the slide.

- View the subject by bringing the rear opening of the viewfinder close enough to your eye to see the four sides of the luminous frame in the viewfinder; retain this position and move head and camera as a unit to outline the subject in the luminous



Color prints and enlargements, like the one shown reduced size above, can be produced from KODACOLOR-X and other color films. Actual standard size is $3\frac{1}{2}$ x $3\frac{1}{2}$ inches.

frame. For better centering of the picture at close subject distances (2 to 4 feet), frame the subject so that imaginary lines, shown by the two dotted lines in the illustration on page 8, indicate the top and left-hand boundary of the picture.

- Hold the camera steady and take the picture by *slowly* pressing down the SHUTTER RELEASE *all the way*. Make sure that the lens is clean and unobstructed by fingers, case, or strap.
- With the motor wound, film advances automatically to the next frame when pressure is removed from the shutter release.

FLASH PICTURES

Your camera features easy, rapid, flash picture-taking with flashcubes. Each flashcube incorporates 4 blue bulbs, reflectors and flashguards. As pressure is removed from the shutter release, after taking a flash shot, the flashcube rotates one quarter turn clockwise to bring another flashbulb into firing position. Do not take daylight pictures with a used flashcube in place.

Distance: For properly focused and exposed flash pictures, follow the table below.

KODAK Films	Focus Setting	Camera-To-Subject Distance Range
VERICHROME Pan } KODACOLOR-X }	beyond 6 feet 2 to 6 feet	Between 6 and 18 feet Between 2 and 6 feet
KODACHROME-X } or } EKTACHROME-X }	beyond 6 feet 2 to 6 feet	Between 6 and 13 feet Between 2 and 6 feet
High Speed EKTACHROME	beyond 6 feet 2 to 6 feet	Between 9 and 24 feet 6 feet



Important: Do not obstruct rotation of flashcube.

TAKING FLASH PICTURES

1. Insert the Flashcube—Insert the base of the FLASHCUBE into the socket on the top of the camera; then press down the flashcube until it snap-locks in place with one of its four sides facing forward. Flash exposure is not controlled by the electric eye, but depends on camera-to-subject distance. Disregard the appearance of the warning light.

NOTE: If in outdoor picture-taking, the red warning light (in viewfinder window) indicates insufficient light for proper exposure, or if you just wish to lighten shadows on the subject, take a flash picture. Acceptable exposures of subjects in the 2- to 13-foot range can be made with all films except High Speed EKTACHROME, which extends the range to 6 to 24 feet.

The cube revolves one quarter turn as pressure is removed from the shutter release after making an exposure, thus providing flash for 4 successive exposures *if a fresh cube is in place*. To use a partially used cube, advance the film; then insert a cube with a fresh bulb forward. The cube can also be rotated by hand to position a bulb for firing. To remove a flashcube, lift it off the camera.

2. Check Camera-to-Subject Distance—The distance from the flashcube to the subject is important for proper exposure. Therefore, *make sure* that the subject is within the distance range shown in the table on page 11, and that the *focus slide is set* to include the subject distance.

3. Flash the Picture—View the subject by bringing the rear opening of the viewfinder just close enough to your eye to see the four sides of the luminous frame in the viewfinder; move head and camera as a unit to outline the subject in the luminous frame—then, slowly press the shutter release to flash the bulb and take the picture.

When pressure is removed from the shutter release, the cube revolves one quarter turn to position another bulb for the next exposure.

PHOTO AIDS You can extend your picture-taking scope and enjoyment with the photo aids described below. See your Kodak dealer for these and others.

KODAK INSTAMATIC Field Case, Model L—This attractively lined, molded field case will provide maximum protection for your camera. Its special design permits instant picture-taking, loading, and unloading, without removing the camera from its case. Fasten the camera in the case by tightening the screw in the base of the case into the case-retainer socket in the base of the camera.

KODAK Flashcube Extender—Increases the distance between the lens and the flashcube to produce more pleasing modeling and shadow effects in close-ups.

KODAK Projectors—A Kodak projector will show your color slides big, bright and sharp on the screen. Ask your dealer to see the popular KODAK CAROUSEL Projectors.

KODAK Publications—The way to snapshot fun and success is to be found in "How to Make Good Pictures"—perhaps the most popular picture-taking book of all time. Your Kodak dealer will be glad to show you this and other inexpensive books on photography.

SERVICE FACILITIES

If your KODAK camera should require attention, complete service facilities are provided at Rochester and in Kodak Regional Sales Divisions at the addresses opposite. Also, service, covered under the warranty, is available through independent service shops in many cities. For such local, warranty-covered service, please see your Kodak dealer or refer to the yellow pages of your telephone directory under Photographic Equipment and Supplies—Factory Approved Warranty Service.

Eastman Kodak Company, Central Equipment Services Center
800 Lee Road, Rochester, New York 14650

Eastman Kodak Company, Regional Equipment Services Center
1901 West 22nd Street, Oak Brook, Illinois 60523

Eastman Kodak Company, Regional Equipment Services Center
1400 Hi Line Drive, Dallas, Texas 75207

Eastman Kodak Company, Regional Equipment Services Center
5315 Peachtree, Industrial Blvd., Chamblee, Georgia 30005

Eastman Kodak Company, Regional Equipment Services Center
3250 Van Ness Avenue, San Francisco, California 94119

Eastman Kodak Company, Regional Equipment Services Center
1334 York Avenue, New York, New York 10021

Eastman Kodak Company, Regional Equipment Services Center
12100 Rivera Road, Whittier, California 90606

Eastman Kodak Company, Regional Equipment Services Center
1065 Kapiolani Blvd., Honolulu, Hawaii 96807