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Kodak

Motormatic

35R4

CAMERA

YOUR NEW KODAK MOTORMATIC 35R4 CAMERA

- with Automatic Flashbulb Advance -

..... is the most automatic of the automatics. It winds its own film, sets its own lens opening for both daylight and flash, and advances a fresh flashbulb into firing position—all automatically.

Before making any important pictures—a trip or some special event—it is well to shoot a magazine of film outdoors, and indoors with flash. This will give you practice in camera operation and provide a check on your equipment.

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FILM

Film Size—Kodak No. 135, 20 or 36exposure magazines.

Negative Size - 24 x 36mm.

LENS

44mm f/2.8 Kodak Ektanar.

Lens Openings—f/2.8 through f/32. **Focusing** from 3 ft to infinity. Marks and "click stops" for Close-ups, Groups, and Scenes with reminder in viewfinder.

Combination Lens Attachments—Use Series 5. Insert ring supplied.

SHUTTER

Kodak Automatic Flash Shutter. Automatically set as film advances.

Speeds—1/40, 1/80, 1/125, and 1/250 second.

AUTOMATIC DAYLIGHT EXPOSURE CONTROL

Fhotoelectric exposure meter controls lens openings with available light; ASA 10 to 800.

ROTATING FLASH SOCKET

Accepts 4-shot flashcube for automatic flashbulb advance.

AUTOMATIC FLASH EXPOSURE CONTROL

Guide Nos. 20 to 200. Setting flash arrow at any guide number sets shutter speed internally at 1/40 second. Uses 2 N-size manganese alkaline batteries. Alternate flash outlet for European-type connector.

POWER FILM ADVANCE

Spring motor advances film—10 exposures per windup—10 exposures in 10 seconds.

VIEWING

Viewfinder—Optical, projected viewframe-type with parallax mark at 4 ft. Signals indicating flash setting, low-light level, and Zone-minder.

EASY LOADING

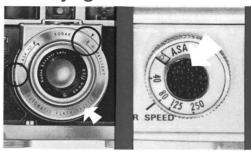
Automatic film leader windoff and automatic counter return.

For those whose previous photographic experience has included use of basically similar 35mm cameras, *brief* operating instructions for daylight pictures, provided on this and the following page, will help you to use your camera quickly.

However, in order to take advantage of all the many features of the camera, all Motormatic owners, including those with previous photographic experience, will want to read on for the important detailed instructions which start on page 6.

Loading instructions—page 8.

Daylight and Available



Set Selector Ring at DAYLIGHT

The DAYLIGHT arrow on the front of the SE-LECTOR RING (arrow, above) must be snaplocked at the INDEX line on the shutter housing. If it is not, press the ring LOCK and revolve the ring clockwise to make this setting.

Set Film Speed

Press down the Lock button (arrow, above) and turn the knurled SPEED RING until the proper film speed number (found on exposure card or in film instructions) locks into place in the small window marked ASA. If film speed cannot be set, see Note, page 11.

Light Pictures









Set Shutter Speed

Turn the knurled speed RING (without pressing center lock button) until the desired shutter speed (80 recommended) is opposite the shutter speed index MARK on the top of the camera. If desired shutter speed cannot be set, see Note, page 11.

Focus

Rotate the lens mount until the diamond near 4 (for Closeups), the diamond between 8 and 10 (for Groups), or the diamond between 25 and 50 (for Scenes) is opposite the FOCUS INDEX. Each of these settings will be visible in the viewfinder.

Aim

Sight through the round eyepiece on the back of the camera and frame the subject within the luminous frame of the viewfinder. A low-light indicator is located in lower left corner. If flash symbol is visible, as above, the camera is *not* set for daylight.

Release

Hold the camera steady; then press the shutter release all the way down with a slow, squeezing action to take the picture.

Kodak Color Films

Use Film Size No. 135 Magazines

Kodachrome II Film For color slides for projection or from which color prints or enlargements can be made. Expose by daylight or *blue* flash. 20 or 36 exposures.

Kodachrome-X Film A higher-speed film than Kodachrome II, this film also yields color slides for projection or from which color prints and enlargements can be made. Expose by daylight or *blue* flash. 20 or 36 exposures.

Kodak Ektachrome-X Film For color slides for projection or from which color prints and enlargements can be made. You can process this film yourself or have it processed as described below. Expose by daylight or *blue* flash. 20 or 36 exposures.

Kodak High Speed Ektachrome Film This extremely fast film permits excellent color pictures in low illumination. Yields color slides for projection or from which color prints and enlargements can be made. Available in Daylight Type (for exposure in daylight or by *blue* flash) or Type B (for photoflood or existing tungsten light). 20 exposures.

Kodacolor-X Film A negative color film for color prints, enlargements, or slides (at extra cost). Expose by daylight or *blue* flash. 20 exposures.

KODAK COLOR FILMS

FILM SPEED

	1	
	Daylight	Photoflood
Kodachrome-X	64	25*
Kodachrome II	25	12*
Kodak Ektachrome-X	64	25*
High Speed Ektachrome (Daylight)	160	_
High Speed Ektachrome (Type B)	80††	100**
Kodacolor-X	64	40†

*With Kodak Photoflood Filter No. 80B (for Kodak Daylight Type Color Films) **With Kodak No. 81A Filter, Film speed 125 in existing

artificial tungsten light

tWith flood lamps and Kodak Wratten Filter No. 82A ttKodak Davlight Filter for Type B Color Films, No. 85B

Your dealer can arrange to have your color films processed by Kodak or any other laboratory offering such service. Some laboratories, including Kodak, also provide direct mail service whereby you can mail exposed color film to the laboratory and have it returned directly to you. See your dealer for the special mailing devices required.

KODAK BLACK-AND-WHITE FILMS

	FILM SPEED*
Panatomic-X	40
Plus-X Pan	125
Tri-X Pan	400

*These numbers apply to either daylight or artificial light.

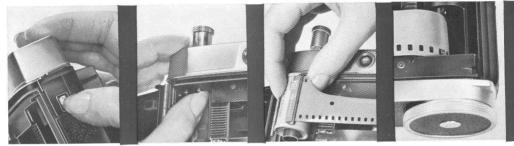
Kodak Black-and-White Films

Kodak Panatomic-X Film The film to use for big enlargements when high film speed is not a factor. It combines exceptionally fine grain and the ability to record fine detail, 20 or 36 exposures.

Kodak Plus-X Pan Film An excellent high-speed film for general outdoor and interior use. The low graininess and high resolving power permit high-quality enlargements. 20 or 36 exposures.

Kodak Tri-X Pan Film An extremely fast panchromatic film of moderate contrast, wide exposure and development latitude, and color sensitivity suitable for flash pictures, 20 or 36 exposures.

LOADING Always in Subdued Light



- 1 Open the back of the camera by pushing the LATCH BUTTON upward.
- **2** Push up the REWIND KNOB. If you prefer, the rewind knob may be pulled out.
- 3 Insert the film magazine in the recess next to the rewind knob. Push the rewind knob all the way in, turning it slightly if necessary.

4 Turn the large, knurled WINDUP KNOB on the bottom of the camera until the opening in the take-up drum is facing upward. Insert the end of the film into the drum opening and hook a perforation over the pin at the edge of the opening.

Use Film Size No. 135 Magazines





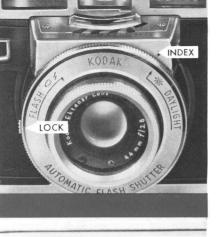
IMPORTANT: In some magazines, film is attached by means of a gummed tape which may separate from the magazine spool under the continued tension of the spring motor. Therefore, always rewind the film immediately after taking the last exposure on the roll.

Continued winding after last exposure may produce audible slippage (whirring sound) which prevents overwinding.

5 Turn the windup knob until the second pin also engages film perforations and the film is wound halfway around the drum. Close the camera back; be sure it is latched.

6 Turn the large knurled windup knob as many times as necessary until the mechanism locks. One full windup provides power for advancing approximately 10 frames of film. During the windup, the first two full turns bring the first frame of film into position and the EXPOSURE COUNTER (arrow, above) to "1," at which point a resistance is felt. Continue to turn the windup knob to a stop (approximately 5½ full turns) to wind the spring motor. After each 10 exposures, wind the spring motor to restore power for film advance.

Film advances automatically and the counter moves a mark each time the shutter is released. The counter shows the number of exposures made.





Daylight and Available Light Pictures

Set Selector Ring at "Daylight."

Press the ring LOCK and revolve the ring clockwise to snap-lock the Daylight arrow at the INDEX line.

Set Film Speed in ASA Window.

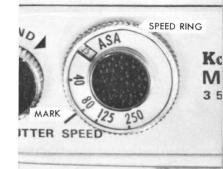
The small window marked ASA must show the daylight speed number of the film in the camera to obtain properly exposed pictures. Set selected ASA speed number by depressing the LOCK BUTTON and rotating the knurled SPEED RING until, upon releasing the button, the film speed number clicks into position in the ASA window.

The film speeds for No. 135 Kodak Films can be found on the two-sided card inserted in the opening of the frame on the back of the camera or in the instructions packed with the films. For

10 www.orphancameras.com example: the speed of Kodachrome II Film for Daylight is 25. Turn the speed ring until this number clicks into position in the ASA window.

Select Shutter Speed.

Your camera has four shutter speeds-40 (1/40 sec), 80, 125, and 250. All four speeds can be used for daylight pictures with ASA settings up to 160. The faster shutter speeds are recommended for daylight pictures to minimize the effect of possible camera or subject movement. The slowest shutter speed of 40 may be useful occasionally for daylight pictures under unfavorable lighting conditions. A shutter speed of 1/80 (80) is recommended for general picturetaking. To select a shutter speed, rotate the knurled SPEED RING (without pressing the center lock button) until the desired shutter speed is opposite the shutter speed index MARK on the top of the camera. Do not make intermediate shutter speed settings.



NOTE: If it is impossible to reach a desired ASA number or shutter speed setting, it is because of the interlocking of these two dials. A proper change in the setting of one dial will permit the other dial to be turned to the desired setting. For example, an ASA setting of 400 can only be made at shutter speed settings of 125 and 250.

Handy Zone Focus—The focusing range of your camera is divided into three subject zones—each represented by a diamond-shaped symbol on the lens mount. The diamond near 4 ft is the setting for CLOSE subjects, the diamond between 8 and 10 ft is the GROUP setting, the diamond between 25 and 50 ft is the SCENE setting. A "Zone Minder," built into the viewfinder, shows at a glance which of the three zones is set on the focusing scale. Set the zone focus by rotating the lens mount until the proper diamond "click-stops" opposite the focus INDEX. For example, the illustration shows the diamond mark for the GROUP zone set at the index mark.

The range of sharpness, which permits these zone settings, depends on the lens opening (f/number, shown by red NEEDLE) in use. Range of sharpness data for

w orphancameras com

three f/numbers and the three zone settings are shown on the opposite page. The higher the f/number, the greater the range of sharpness. Zone settings will give acceptably sharp pictures at all three zones with f/numbers greater than f/5.6. At f/numbers less than f/5.6, careful scale focusing, as below, is recommended.

Careful Scale Focus—(1) When lighting conditions are such that an f/number less than

\$ 6 8 10 15 2550 BF INDEX

12

f/5.6 (f/4 or f/2.8) is indicated in the curved window, setting the actual camerato-subject distance on the focusing scale will give sharper pictures. (2) With all flash pictures, setting the actual camera-to-subject distance on the focusing scale is necessary for proper focus and exposure.

In both these cases, estimate the camera-to-subject distance carefully and rotate the lens mount until the figure representing the camera-to-subject distance is opposite the focus index.

RANGE OF SHARPNESS DATA FOR ZONE SETTINGS AT REPRESENTATIVE LENS OPENINGS

Lens	· · · · · · · · · · · · · · · · · · ·		
Opening	Close	Group	Scene
f/2.8	4 to 4½	7½ to 11¼	21 to Inf
<i>f</i> /5.6	3¾ to 5½	6½ to 15	15 to Inf
f/11	3¼ to 6½	5 to 40	9 to Inf



Low-Light Indicator

for automatic exposure control

When the red exposure meter NEEDLE in the curved window moves into the red LOW-LIGHT area at the extreme left of the window, this indicates insufficient available light to take a properly exposed picture at the selected shutter speed. When the needle is in this red area, it is also visible in the lower left corner of the viewfinder. If the shutter is

set at one of the faster speeds, changing the shutter speed to a slower setting may move the needle out of the low-light area. If the needle is still in the low-light area at shutter speed 40, the available light is not sufficient to expose the picture properly and use of "flash" may be advisable.



Using the Viewfinder

When taking pictures, hold the camera close to your eye so that you can see the complete luminous view-frame. The image seen within this frame will be in the picture. Note the parallax pointer on the right side, near the

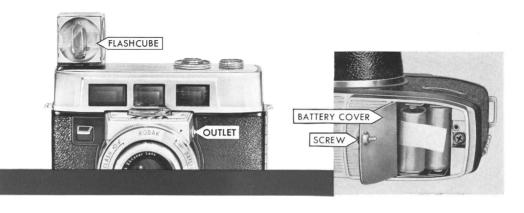
top of the view-frame. When the camera is held horizontally, this pointer indicates the upper edge of the picture when the subject is 4 feet from the camera. An equivalent area eliminated at the top of the frame is added to the bottom of the frame.

Also seen in the viewfinder are two built-in signals—the flash symbol and either CLOSE, GROUP, or SCENE. The flash symbol indicates that the camera is set for "FLASH," not "DAYLIGHT." The CLOSE, GROUP, or SCENE signal is the "Zone Minder," reminding you of the zone focus setting of the lens.

Holding the Camera

The illustration shows a recommended way of holding the camera. The camera can also be held in the vertical position if that format is better suited to the subject. Select a position that is convenient for you and assures steady camera holding while you press the EXPOSURE RELEASE. It is important that the exposure meter window and the lens are not obstructed, for example, by your finger or the neck strap. Do not aim the camera toward a principal light source, such as the sun.





FLASH PICTURES

Your camera features easy, rapid flash picturetaking with the new 4-bulb flash-cube—at distances of 5 to 25 feet. Merely insert the base of the FLASHCUBE in the flash socket on the top of the camera—after each exposure, the flashcube rotates one quarter turn clockwise to bring another flashbulb into firing position.

Batteries—Batteries are supplied with the camera. Loosen the coin-slotted SCREW, raise the BATTERY COVER and insert the two N-size, manganese alkaline batteries,* with their bases in opposite directions. The pull-tab should be under the batteries

^{*}To insure most dependable service, clean battery contacts periodically with a rough cloth. For maximum protection of camera contacts, batteries, may be semayed if camera is stored.

with its end out. Replace the cover. Weak batteries cause flash failures.

Flashbulbs—Four blue bulbs, reflectors, and flashguards are incorporated in the flashcube. To insert the flashcube in the socket on the top of the camera (see the illustration on page 16), fit the hollow stem on the base of the cube over the center hub of the socket, with the four wings of the flashcube stem aligned with the cross around the socket hub; then press down the flashcube until it snaplocks in place with one of its 4 sides facing forward. The cube revolves one quarter turn each time film advances to the next exposure, thus providing flash for 4 exposures if a fresh cube is in place.

If a partially used cube is in place, a fresh bulb must face forward; if a second fresh bulb is facing toward the Speed Ring, it will rotate into firing position as film is advanced. A partially used cube can always be rotated by hand to bring any fresh bulb to its frontal firing position. Remove a flashcube by pulling it straight up out of the socket. Do not obstruct rotation of flashcube.

Alternate Flash—An alternate flash outlet is provided for flasholders or electronic flash having a European-type flash connector. This alternate flash unit, however, *should not* be used simultaneously with the built-in camera flash because bulbs may fire on insertion. Guide numbers supplied with film instructions.

Flash Exposures—The flash exposure information provided in the Exposure Data Card applies to most flash situations. This information is based on exposures in an average-sized room with medium-light-colored walls.



TAKING FLASH PICTURES

—with The New4-Bulb Flashcube

- Insert a flashcube in the flash socket on the top of the camera, as described on page 16. If one face of the cube does not face directly forward, turn the cube until it clicks into the firing position.
- 2 Set the Film Speed—Set the film speed of the film loaded in the camera in the ASA window. (See page 10.)
- 3 Set Flash Guide Number—Depress the selector ring LOCK and revolve the SELECTOR RING counterclockwise until the flash arrow is in line with proper flash guide number on the lens mount (if impossible to set, change focus setting). Flash guide numbers for popular Kodak films are on the two-sided exposure data card in the frame on the back of the camera. Setting the flash arrow at any guide number, automati-

cally adjusts the shutter speed for flash (1/40 sec.), regardless of the speed setting on the top of the camera.

Note: At 4 feet, use the next lower guide number; at 3.5 feet, use the second lower guide number; at 3 feet, use the third lower guide number.

- 4 Focus the Camera—Rotate the lens mount-selector ring combination until the figure representing the camera-to-subject distance in feet (5 to 25) is opposite the focus index. Be careful not to depress the selector ring lock while focusing.
- 5 Aim the Camera—Look through the eyepiece and compose the picture within the luminous view-frame of the viewfinder. The flash symbol should appear in the base of the viewfinder—if not, check the selector ring.
- 6 Release the Shutter—Hold the camera steady and press the shutter release down with a slow, squeezing action. This flashes the bulb and takes the picture. The cube then rotates one quarter turn to bring another bulb to firing position, as film automatically advances to the next exposure.

Note: Disregard the possible appearance of the low light signal with flash pictures.



Unloading Always in Subdued Light

After the 20th or 36th exposure and before the back is opened, rewind film promptly.

Pull the rewind KNOB (between right thumb and finger, above) until you feel resistance (about $\frac{3}{8}$ inch).* Draw the rewind RELEASE (by left thumb, above) in its slot as far as it will go

in the direction of the arrow; this releases remaining spring tension in the motor. Hold the release while turning the rewind knob in the direction of the arrow to rewind the film into the magazine. Film is completely rewound when the exposure counter dial ceases to advance or vibrate as the rewind knob is turned.

Manual Film Advance

If extra-quiet film advance is desirable, advance the film one frame at a time, as follows: If the spring motor is wound for a series of pictures, first push the rewind RELEASE to the other end of its slot to release the spring tension; the shutter is now set and ready for one exposure. After this exposure, slowly and carefully, turn the windup knob (about ½ turn) until a "click" is heard and a slight resistance is felt. One frame of film has been advanced, the shutter set, and one more exposure can be made. Repeat for succeeding extra-quiet exposures.

*Film will not rewind if the knob is pulled out too far. Push in knob *completely*, turning if needed. Pull out about 3/8 inch.

More About the Exposure Control

With the selector ring at DAYLIGHT,* the photoelectric meter of the exposure control measures the *over-all* brightness of the light reflected by the subject.

Scenes lacking great subject contrast: that is, when the differences in brightness between the dark and the bright areas are moderate, or when very bright and dark areas are of about the same size, but of equal picture interest, use the automatic exposure control without modification—as described previously. Most pictures fall into this grouping.

Scenes with considerable subject contrast: for example, a person with light-colored clothing against a dark background. A better exposed picture of the person may be obtained by making a "close-up" reading. Move close to the subject so that the person fills the finder. Press down the shutter release until a slight resistance is felt—about 3/4 of the way (not far enough to release shutter); continue to hold the release in this position to maintain the exposure setting, then step back and press the release down fully to take the picture.

Modifying the ASA setting: You may wish to slightly modify the recommended film speed to achieve a result which is more suitable for *you*. Using a higher speed results in denser transparencies, which some people prefer when using high-wattage projectors and a small screen. A lower film speed gives lighter transparencies, for a low-wattage projector and large screen.

To modify the film speed setting when using filters with black-and-white films, divide the film speed by the filter factor; use nearest film speed number.

* With the selector ring set for flash, better flash pictures are obtained in a small room with very light walls by using the next higher guide number than that recommended. In larger rooms or outdoors, use the second lower guide number.

Care of the Camera

Your Kodak Motormatic 35R4 is a fine, ruggedly built camera, but yet a precision instrument. Protect it from dust and dirt and avoid rough handling. Use a rubber syringe to blow out any dust that may accumulate inside the camera. If the lens needs cleaning, first brush or blow away any grit or dust, then wipe the surface gently with Kodak Lens Cleaning Paper. If necessary, use Kodak Lens Cleaner.

Do not attempt to make any repairs or remove any parts from the shutter, lens, or camera. Never oil the shutter or any other parts of the camera.

GUARANTEE

Within a year after purchase, any repairs necessary to this KODAK MOTORMATIC Camera due to a defect in materials or workmanship will be made or, at our option, the camera will be replaced without charge. No other warranty or guarantee, express or implied, shall be applicable to this equipment. Nor are we responsible for loss of film, for other expenses or inconveniences, or for any consequential damages occasioned by the equipment.

In case of a defect, the camera can be sent directly or through a Kodak dealer to Eastman Kodak Company or a repair firm authorized by us to make such repairs.* It should be accompanied by a description of the trouble encountered and other available information regarding the camera, including the date and place of purchase.

*Kodak service facilities, with addresses, are described on the last page.

PHOTO AIDS

See your Kodak dealer for these and additional aids:

Kodak Motormatic 35F Field Case. This deluxe, top-grain leather case fits your camera and combines practical protection with drop-away front convenience.

Kodak Filters. The retaining ring on the lens mount of the camera unscrews to accept Series 5 Kodak Filters and other lens attachments. Use a Kodak Skylight Filter (No. 1A) to add warmth to color pictures taken in the open shade or on overcast days. A Kodak Daylight Filter for Kodak Type B Color Films (No. 85B) converts Type B color films for outdoor use. There are also Kodak Filters for black-and-white films.

Other Lens Attachments. Kodak Portra Lenses, 1+, 2+, and 3+, Series 5, extend the camera's picturetaking range down to 9¾ inches, lens-to-subject distance, with an approximate field size of 47% x 71¼ inches. A Kodak Lens Hood, Series 5, which excludes undesirable side-light from the lens, is available.

Kodaslide Compartment File. It's easy to find your color slides with this sturdy, allmetal filing system. Has twelve swing-out compartments that hold as many as 240 cardboard or 96 glass-mounted slides.

Kodak Slide Projectors. The Kodak Readymatic 500 Projector, Model 1, and the Kodak Carousel Projector are compact, portable, ruggedly built projectors that show color slides big, bright, and sharp. The slide changer of the Readymatic accepts up to 36 slides at one time. One model of the Carousel is completely automatic. Just turn it on, it does the rest—changes slides automatically. Circular 80-slide tray. Remote controls.

Service Facilities . . .

Eastman Kodak Company Apparatus Service 800 Lee Road Rochester, New York 14606

Eastman Kodak Company Apparatus Service 1901 West 22nd Street Oak Brook, Illinois 60523

Eastman Kodak Company Apparatus Service 6300 Cedar Springs Road Dallas, Texas 75235

EASTMAN KODAK COMPANY Rochester, New York 14650

If your KODAK camera should require attention, complete service facilities are provided at Rochester and in KODAK Regional Sales Divisions at the addresses, below. Also, service, covered under the guarantee, is available through independent service shops in many cities. For such local, guarantee-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 Apparatus Service 5315 Peachtree Industrial Blvd. Chamblee, Georgia 30005

Eastman Kodak Company Apparatus Service 3250 Van Ness Avenue San Francisco, California 94119 Eastman Kodak Company Apparatus Service 1334 York Avenue New York, New York 10021

Eastman Kodak Company Apparatus Service 808 Rivera Road Whittier, California 90606

Eastman Kodak Company Apparatus Service 1065 Kapiolani Blvd. Honolulu, Hawaii 96807