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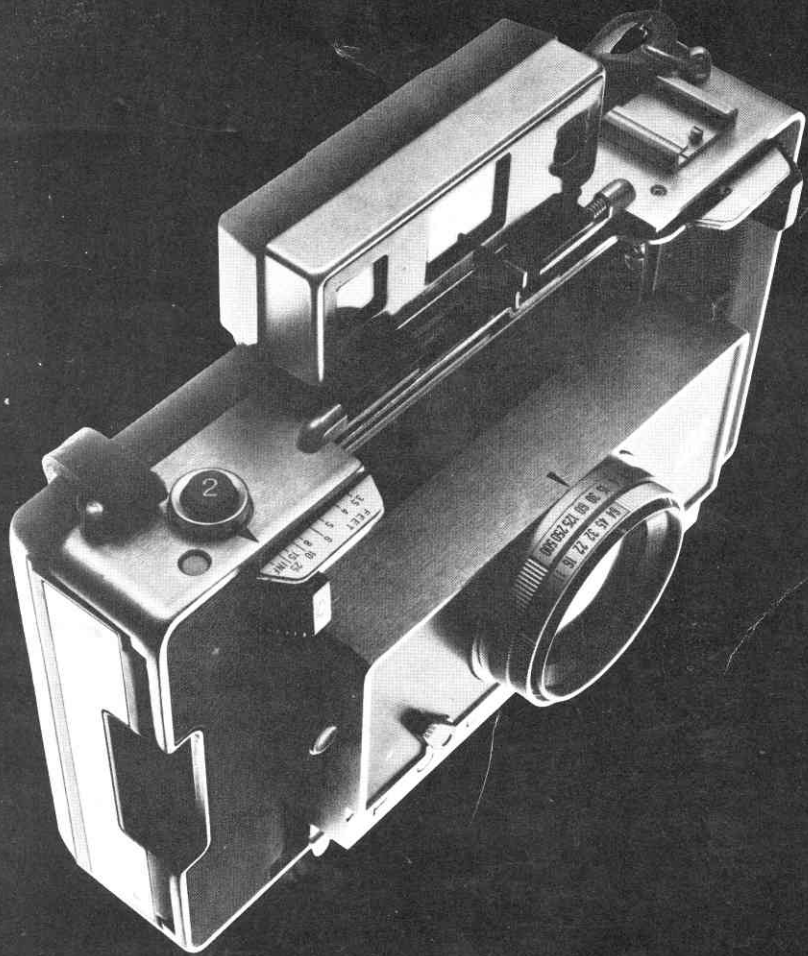
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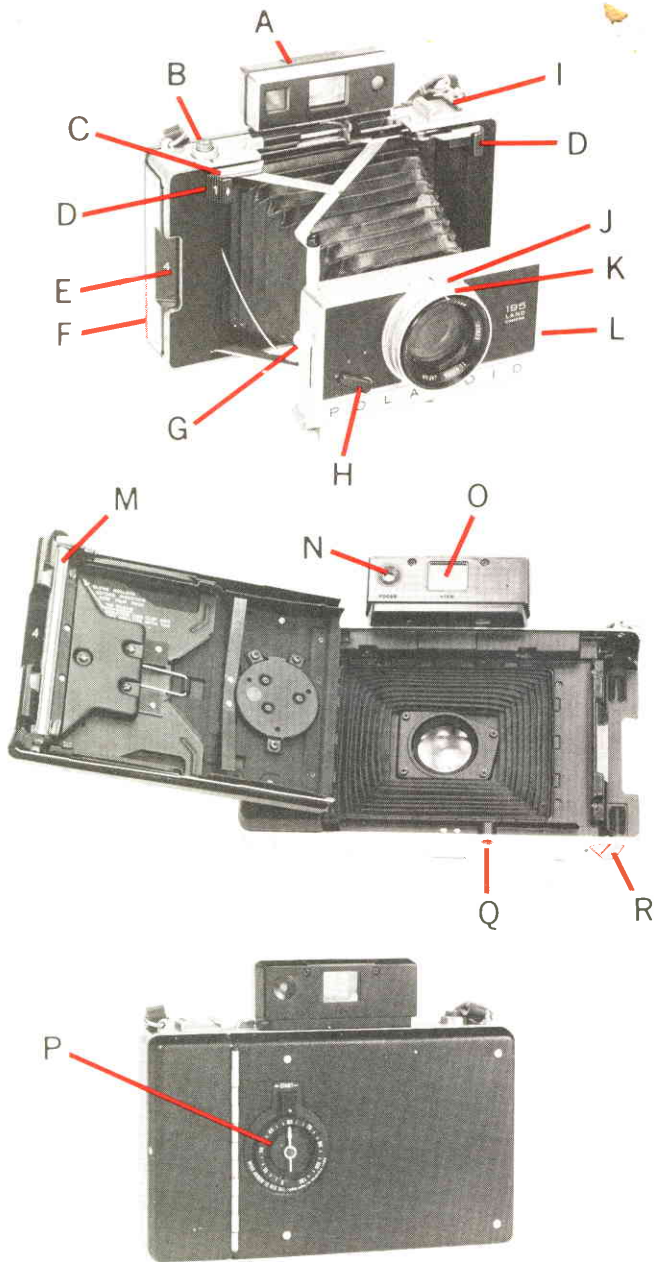
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**Polaroid Land Camera
Model 195**





KNOW YOUR CAMERA

- A. folding view/rangefinder
 - B. shutter release
 - C. distance scale
 - D. rangefinder pushbutton
 - E. small white tab slot
 - F. large yellow tab slot door
 - G. shutter cocking lever
 - H. flash sync and self-timer lever
 - I. accessory (flash) shoe
 - J. shutter speed ring
 - K. aperture control ring
 - L. flash socket
 - M. steel rollers (important: keep them clean as described on page 26)
 - N. FOCUS window
 - O. VIEW window
 - P. development timer
 - Q. tripod socket
 - R. back door latch
-

INTRODUCTION

The Model 195 is an extremely versatile camera that meets the highest standards of professional quality and picture taking ability.

Its 114mm, f/3.8 Tominon lens has four elements and is of the Tessar type. The lens is highly color corrected and all air-to-glass surfaces are coated to reduce internal reflections and improve image quality.

The camera is equipped with a Seiko SLV between-the-lens shutter, and the shutter/lens combination gives the

camera wide exposure capabilities. The shutter is described on page 8.

The picture development system is similar to that used in other Polaroid pack film cameras. Pictures are developed outside the camera, producing color prints in a minute and black and whites within seconds.

The camera has a mechanical timer on the back, which you set for the correct development time.

The neutral density filter provided is for use with 3000 speed black and white film in extremely bright light.

THE FILM

Three kinds of Polaroid Land pack film are presently available for use with the Model 195 camera: 3000 speed black and white, Type 107, 75 speed color, Type 108 and 75 speed black and white, Type 105, Positive/Negative. Each pack produces eight 3½x4¼ in. (8.3x10.8 cm) prints.

Type 105 produces a useable negative with each positive print. There may be additional types of pack film in the future.

Complete instructions for loading and using film packs are given elsewhere in this booklet and in the instruction sheet packed with the film.

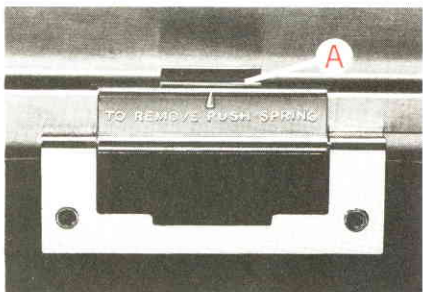
HOW TO OPEN THE CAMERA

A magnet holds the top of the cover down. Lift the back edge.

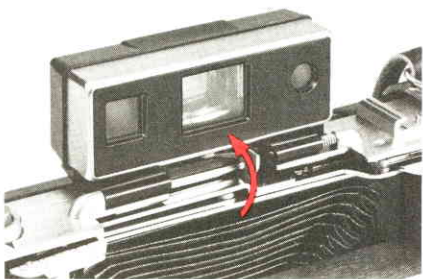
You can let the cover hang down while using the camera.



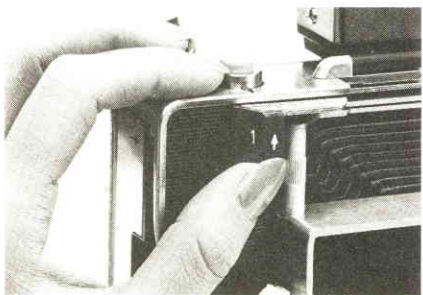
Or, to remove the cover, push in on the spring (A) and lift.



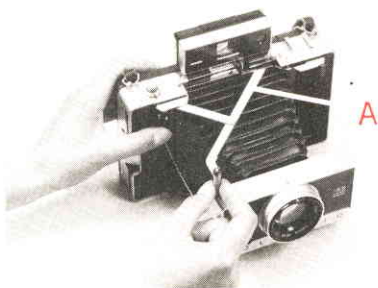
Lift the finder up and back; a magnet holds it in place.



Raise button No. 1; this unlocks the front of the camera.

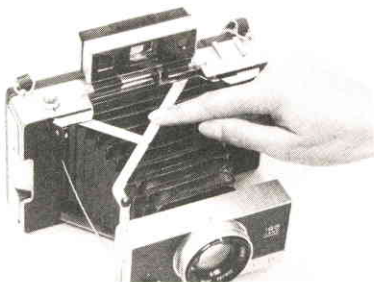


Pull the camera front out as far as it will go, until there is a definite click and the locking bar (A) snaps into place. If the front isn't fully out and locked, your pictures will be blurred.

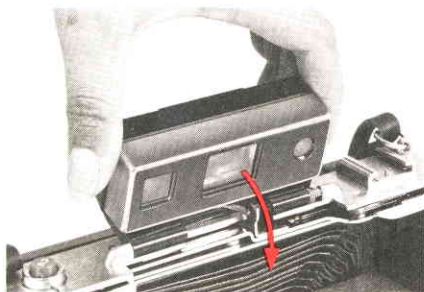


HOW TO CLOSE THE CAMERA

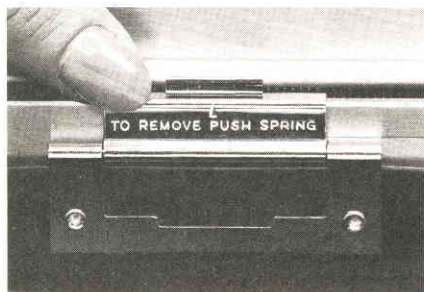
Press down on the locking bar. This releases the front of the camera. Push the front in all the way until it locks.



Fold the finder down gently. Try not to bang it on the camera.



To replace the cover, slide the hinge down over the lock spring until it snaps into place. Swing the cover up; the magnet on top of the camera will hold it in place.



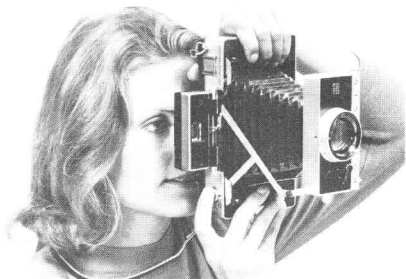
HOW TO HOLD THE CAMERA

Horizontal: Grip the two ends. Place your forefingers on the No. 1 buttons; you can easily shift the right forefinger to the No. 2 button to take the picture.

To steady the camera, press your elbows into your sides; rest the camera against your face.



Vertical: Grip the camera as you would for a horizontal picture, then turn it so your right hand is below. Brace the camera against your forehead and face.

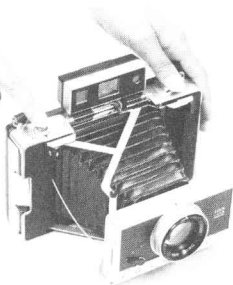


IN DIM LIGHT

When you're shooting at shutter speeds slower than 1/30 sec., the camera must be steady or your pictures will be blurred. A tripod is the best support.

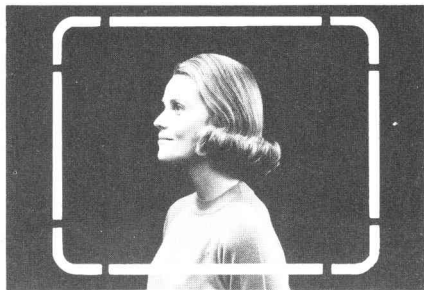
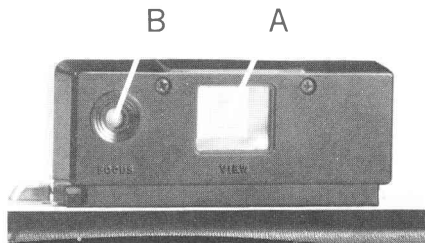


If you don't have a tripod, rest your elbows on something. Or, set the camera on a flat, solid surface and press the back down firmly to prevent movement.



HOW TO VIEW AND FOCUS

Viewing: Looking through the VIEW window (A) you'll see a bright, white frame. Compose your subject within this frame. Always try to look through the center of the window and concentrate on your subject, not on the white frame. If your subject is very close — 3½ ft. (1.2m), for example — allow a little extra space between your subject and the top frame line, as shown at right. If not, you may accidentally cut off the top of your subject in the picture.



Focusing: Holding the camera in a horizontal position, place your forefingers on both No. 1 buttons as shown and push them all the way to your left. Look through the focus window (B) and aim the bright spot in the center at a nearby subject (about 4 ft. or 1.5m. away, for example). You should see two images of your target in the bright spot; this means that the camera is not focused for that distance. Push the No. 1 buttons back and forth until the two images become one — sharp and clear. Now the camera is focused for that distance. Focus in the same manner for all distances. For vertical pictures, focus with the camera horizontal, then turn it to aim and shoot.

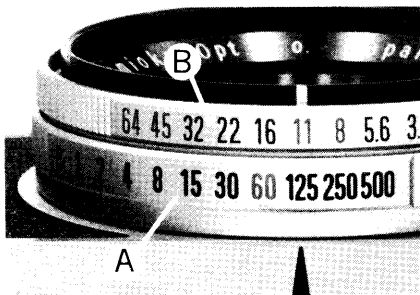


OUT OF FOCUS



IN FOCUS





THE EXPOSURE CONTROLS

Shutter speeds: The shutter has 10 speeds, ranging from 1 sec. to 1/500 sec., plus a B setting for time exposures. These are set by turning the shutter speed ring (A). The normal setting for flash (1/60) is marked in yellow.

When setting shutter speeds, be sure that the arrow points directly at the speed number, not between two numbers.

Lens openings: They can be varied from wide open (f/3.8) to the smallest aperture (f/64) by turning the aperture control ring (B). There are click stops at every f-number and halfway between the f-numbers.

CHOOSING SHUTTER SPEED AND LENS OPENING

Once you have determined the correct exposure, you will have a choice of several combinations of shutter speed and lens opening, each giving this same effective exposure. If you grip both the shutter speed ring and the aperture control ring, you can turn them together to any one of the combinations. Thus, f/5.6 at 1/500 sec. is equal to f/8 at 1/250 sec. is equal to f/11 at 1/125 sec., etc. Which is the best one to use?

In general, you should use as small a lens aperture as possible, while at the same time keeping the shutter speed fast enough to avoid blurring due to camera or subject movement.

For most people, 1/125 sec. is a safe hand-held speed; some can use 1/60 sec. without shaking the camera. At 1/30 sec., most people will shake the camera unless they brace themselves carefully. At speeds slower than 1/30 sec., the camera should be resting on a solid support, such as a tripod.

To stop very fast action, 1/500 sec. is ideal. You may have to open the lens to f/5.6, or even wide open to f/3.8. (You'll have to focus very carefully with such a

wide aperture; see the table on page 9.) Or, to get both far and near objects into sharp focus at the same time, f/45 to f/64 would be an ideal aperture. The exposure time may then be as long as 1/8 sec. or longer, for which you'll need a tripod or firm support.

THE NEUTRAL DENSITY FILTER

The neutral density filter (5 f-stops) supplied with the camera is intended for use with 3000 speed black and white film in very bright sunlight. Its use enables you to avoid having to stop the lens down to the smallest apertures (f/45 or f/64), at which picture resolution is inherently not at its best. You should use those f/number settings only when you are aiming for an extreme depth of field in your pictures.

To use, simply screw the filter onto the lens. Determine exposure in the normal way, and then increase that exposure by the equivalent of five f-stops. For example, if an exposure meter indicated an exposure of 1/250 sec. at f/64, set the camera to 1/250 sec. at f/11 or to 1/125 sec. at f/16, or to any other equivalent combination of settings.

THE ZONE OF SHARP FOCUS, OR DEPTH OF FIELD

When you focus on the most important part of your subject, some other parts in the foreground and background of the scene will also be in sharp focus in the picture. The distance between the nearest and farthest points in sharp focus is called the zone of sharp focus, or the depth of field.

In any given situation the smaller the

aperture the greater the zone of sharp focus. At very small apertures (such as $f/64$) with the distance scale preset to 6 ft. (2.0m.), practically everything, from about 3 feet (.9m.) on, will be in sharp focus.

However, when the lens is set to a relatively wide aperture, such as $f/5.6$, the zone of sharp focus is quite shallow, so it's important to focus carefully.

The tables below show the depth of field at various apertures and distances.*

Depth of Field

Focused Distance	$f/3.8$	$f/8$	$f/16$	$f/32$	$f/64$
3.5 ft.	3'4"-3'8"	3'3"-3'10"	3'-4'2"	2'8"-5'3"	2'1"-10'2"
4 ft.	3'10"-4'2"	3'8"-4'5"	3'4"-4'11"	2'11"-6'5"	2'3"-16'
5 ft.	4'9"-5'4"	4'6"-5'8"	4'1"-6'6"	3'5"-9'5"	2'7"-80'10"
6 ft.	5'7"-6'5"	5'3"-7'	4'8"-8'4"	3'10"-13'9"	2'10"-Inf.
8 ft.	7'4"-8'9"	6'9"-9'10"	5'10"-12'10"	4'7"-32'1"	3'2"-Inf.
10 ft.	9'-11'3"	8'1"-13'1"	6'10"-18'10"	5'2"-161'8"	3'6"-Inf.
15 ft.	12'10"-18'	11'1"-23'2"	8'10"-50'7"	6'3"-Inf.	3'11"-Inf.
25 ft.	19'7"-34'8"	15'9"-60'5"	11'6"-Inf.	7'6"-Inf.	4'5"-Inf.
Inf.	89'8"-Inf.	42'7"-Inf.	21'4"-Inf.	10'8"-Inf.	5'4"-Inf.
1.20m	1.15-1.26m	1.10-1.32m	1.01-1.47m	0.88-1.90m	0.69-4.59m
1.50m	1.42-1.59m	1.34-1.70m	1.22-1.95m	1.03-2.79m	0.78-19.57m
2.00m	1.86-2.16m	1.73-2.36m	1.53-2.89m	1.24-5.20m	0.90-Inf.
3.00m	2.70-3.37m	2.44-3.90m	2.05-5.57m	1.56-39.14m	1.05-Inf.
5.00m	4.23-6.12m	3.61-8.13m	2.83-21.69m	1.97-Inf.	1.23-Inf.
8.00m	6.19-11.31m	4.95-20.81m	3.59-Inf.	2.31-Inf.	1.35-Inf.
15.00m	9.69-33.20m	6.96-Inf.	4.53-Inf.	2.67-Inf.	1.47-Inf.
Inf.	27.35-Inf.	12.99-Inf.	6.50-Inf.	3.25-Inf.	1.62-Inf.

*The depth of field indicated in the table above is intended for standard ($3\frac{1}{4} \times 4\frac{1}{4}$ in. 8.3x10.8 cm.) prints. As the image is enlarged, this depth will decrease accordingly.

HOW TO COCK THE SHUTTER

Push the No. 3 button down as far as it will go and let it come up. This cocks the shutter mechanism so it will operate when you press the No. 2 button. If you forget to depress the No. 3 button, nothing will happen the next time you try to take a picture.

HOW TO RELEASE THE SHUTTER

The No. 2 button is the shutter release. Press it slowly with your forefinger until you hear a definite click. Don't jab at it — you may shake the camera.

TIME EXPOSURES

To make a time exposure, set the shutter speed ring to B. The shutter must be cocked just as for any other exposure.

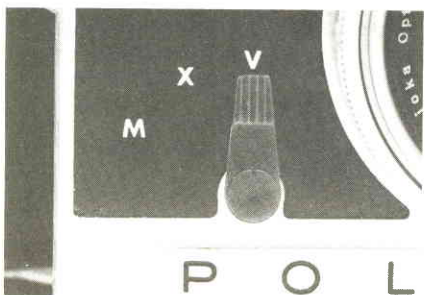
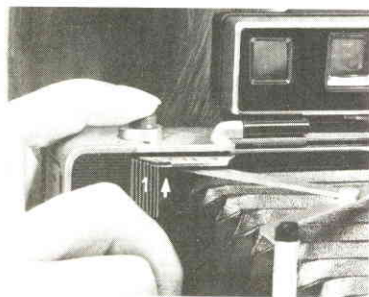
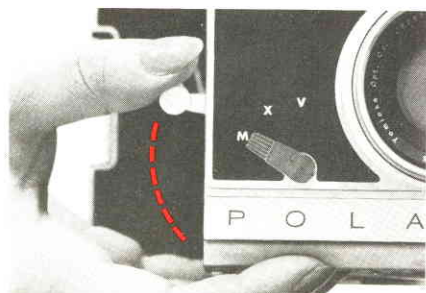
Press the No. 2 button to open the shutter, which will stay open as long as you hold down the button. To close the shutter, let the button come up.

Use of a cable release and a tripod is recommended for all time exposures. The Cable Release # 191 has a plastic adapter to hold it in place over the No. 2 button.

THE SELF-TIMER

The shutter has a built-in self-timer. Move the lever to V, as shown. When you press the No. 2 button a timing mechanism will give you about 10 seconds before the shutter clicks.

The self-timer may be used for flash pictures. Setting the self-timer automatically sets X flash synchronization. Use 1/30 sec. shutter speed for pictures made with the self-timer and flashbulbs. With electronic flash, you can use any shutter speed (1/125 sec. is recommended). For more about flash, see page 24.



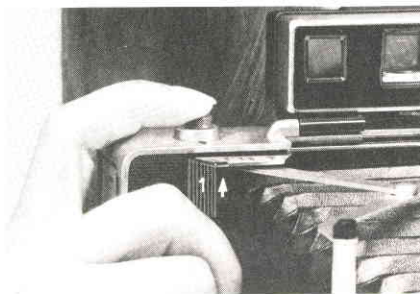
THE BASIC 1, 2, 3 SYSTEM

ONE is for focusing. Look through the focus window and aim the bright spot at the most important part of your subject. Push the No. 1 buttons back and forth to bring your subject into sharp focus. Then look through the view window and compose your subject in the white frame.

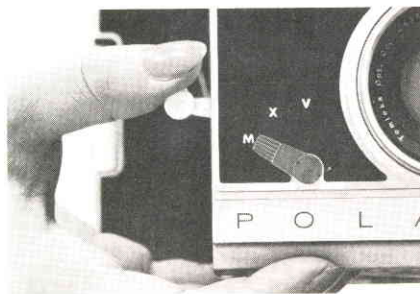


TWO is for shooting. Press the No. 2 button slowly, being careful not to move the camera. With slow shutter speeds, hold the button down and keep the camera still until you hear the second click as the shutter closes.

If nothing happens when you press the button, perhaps you forgot to reset the No. 3 button.



THREE is for resetting. After taking a picture, always push down the No. 3 button firmly; then let it come up again. This resets the shutter for the next picture. If you don't reset the No. 3 button, nothing will happen when you press the No. 2 button for your next picture.



PROTECT FILM AND CAMERA FROM HEAT

Extreme heat and high humidity can damage your films, especially after the film pack has been placed in the camera. Don't leave a loaded camera or packages of film lying in direct sun or in the glove compartment or trunk of a car. If you store film or a loaded camera in a closet, keep it near the floor where the air is cooler. Don't remove a film pack from its sealed foil wrapping until you are ready to use it.

HOW TO LOAD FILM

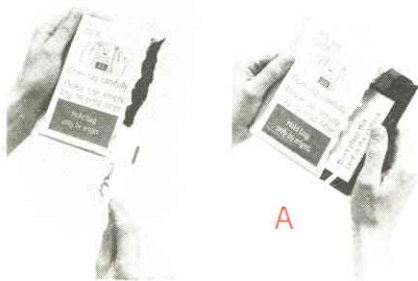
Open the top of the box. In addition to the instruction sheet (please read it) there's a coater in a tube with black and white film.

Remove the film package. Handle it gently, holding it near the edges. Don't press on the middle of the package or you may damage the film.

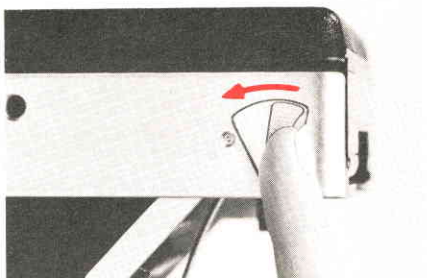
Tear open the entire side of the package along the dotted line; then rip apart the front and back and lift out the pack. Handle it only by the edges. Dispose of the moisture absorbing card (A) packed with some film.

Special exposure instructions: On some color film packs you may find printed instructions (B) to set the Lighten/Darken control of electric eye cameras one mark toward Lighten for all pictures made with that pack. This is done to increase the exposure for all pictures made with that pack.

With the Model 195 camera, simply increase your exposure by $\frac{1}{2}$ an f-stop for all pictures with that pack. For example, if your meter indicated an exposure of $1/60$ sec. at $f/11$, alter it to $1/60$ sec. at $f/8-11$.

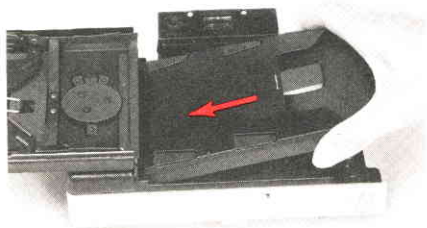


Push the back door latch; the door will pop up a short distance.

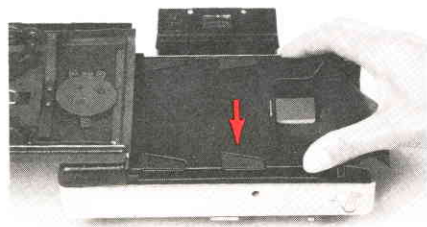


Open the back all the way. Note the steel rollers. They must be kept clean as shown on page 26.

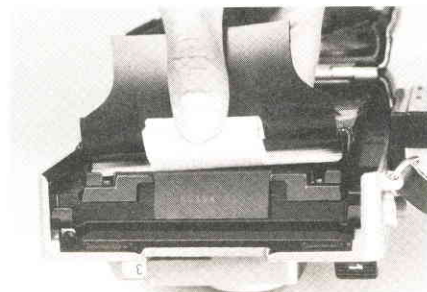
Hold the pack by the edges so the printing on the safety cover faces the lens. Push the closed end of the pack under the door hinge, as shown, against a light spring tension.



Push the pack down into the camera. You'll feel it snap into place.



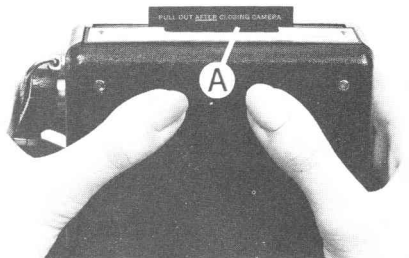
Be sure the white tabs are free and are not folded under the pack.



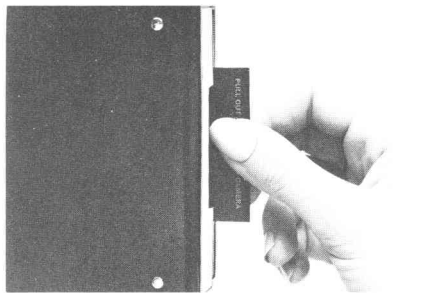
LOADING (cont.)

Close the back door. Press both sides firmly to be sure they latch.

The black tab of the safety cover (A) must stick out of the small slot (No. 4). If not, reopen the back and lead the tab out into the slot.



Grip the black tab with your thumb and forefinger.

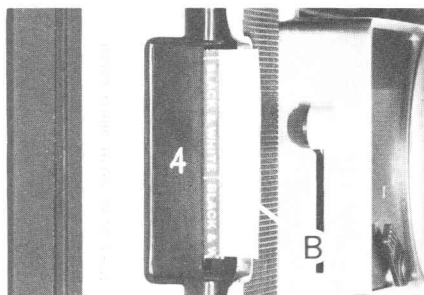


Pull the safety cover all the way out of the camera without stopping. Pull straight so you won't rip it. Discard the safety cover.



With the safety cover out, a white tab (B) should stick out of the small slot (No. 4). Don't pull the white tab at this time.

You're now ready to make your first picture.

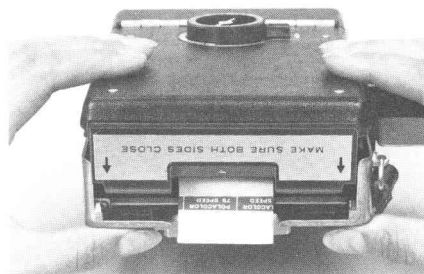
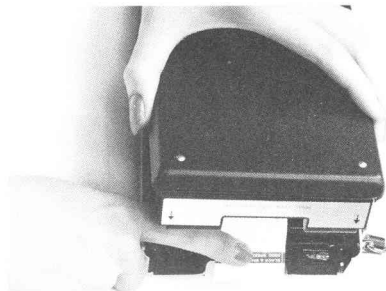
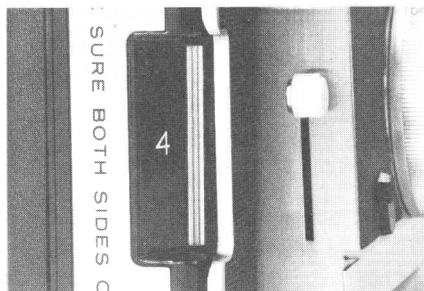


IF THERE'S NO WHITE TAB

If, after you remove the safety cover, there's no white tab to pull, do the following in the shade or indoors, not in bright sunlight.

Open the back of the camera part way and, without disturbing or moving the film pack, push the end of the white tab out into the open.

Close the back of the camera, making sure that both sides are locked securely and the white tab is out in the slot.



HOW TO GET CORRECT EXPOSURE

The best way to get correctly exposed pictures is to use an exposure meter.

An important point to remember is that the meter measures the brightness of the light reflected from the entire scene. Therefore, when using the meter with a nearby subject, bring the meter close enough so that it "sees" only the subject, as shown, but be careful not to cast a shadow on the subject.

For other methods of using an exposure meter, follow the manufacturer's instructions for the meter.

For Types 108 and 105 film, set the meter's film speed dial to the closest number to 75. For Type 107 film, set the dial to 3000.

Even without an exposure meter, you can still get well exposed pictures of average subjects in bright sunlight or bright open shade with the settings shown in the table below.

Bright open shade is what you have when the subject's face is just out of direct sun, with nothing overhead except the bright, open sky.

To assure correct exposure with 3000 speed black and white film in extremely bright light, you may need to use the neutral density filter over the lens. (See page 8.)

To set the exposure, first turn the shutter speed ring to the desired speed; then turn the aperture control ring to the proper f-number.

When setting shutter speeds, be sure that the arrow points directly at the speed number, not between two numbers.



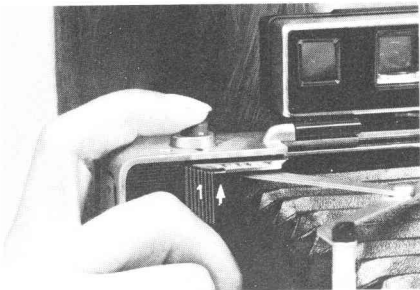
Film Type	108 & 105	107
subject in bright sun	1/125, f/11	1/250, f/64
subject in bright open shade	1/60, f/8	1/125, f/45

HOW TO TAKE A PICTURE

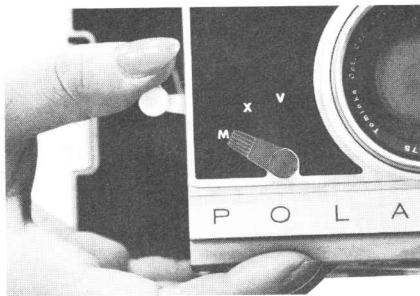
After setting the proper shutter speed and f-number for correct exposure, do the following:

1. FOCUS: Look at your subject through the FOCUS window. Push the No. 1 buttons until the bright spot shows a single clear image of the most important part of your subject. Then move your eye to the VIEW window. Compose your subject in the bright frame.

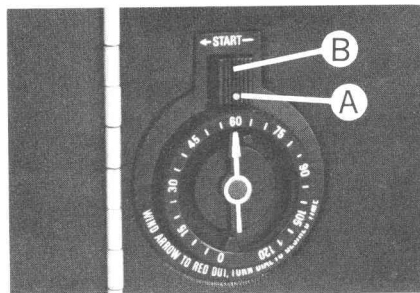
2. SHOOT: Firmly but smoothly press the No. 2 button, the shutter release, until you hear a distinct click. Don't jab at the button — you may shake the camera.



3. RESET: Immediately after taking a picture, press the No. 3 button down firmly all the way; then let it up again. This resets the shutter so you'll be ready for the next picture.



4. SET THE DEVELOPMENT TIMER: Wind the arrow clockwise as far as it will go, so the point stays at the dot (A). Turn the number dial to place the desired time next to the point of the arrow. To start the timer, move the START lever (B) to the left. Don't start the timer now.

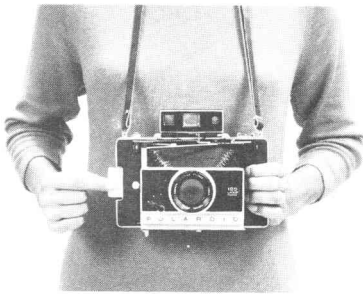


Now you are ready to develop the picture as shown on the next page.

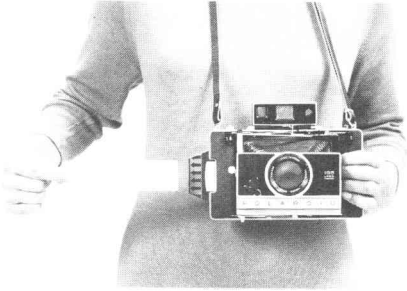
HOW TO DEVELOP THE PICTURE

Hold the camera in your left hand, as shown, with the lens pointing straight ahead of you. Don't hold it any other way.

Grip the small white tab with your thumb and forefinger.



Pull the white tab straight out of the camera, all the way, without stopping.



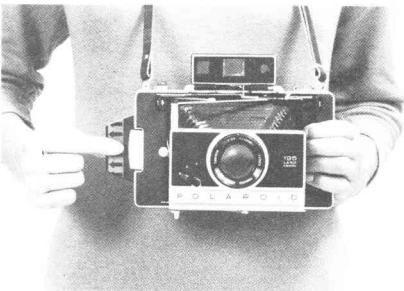
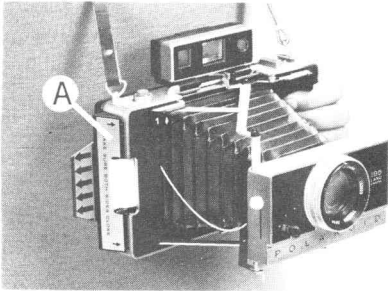
When you pull the white tab out, a concealed door (A) opens and a yellow tab pops out. Don't block this door while pulling the tabs.

If no yellow tab pops out when you pull the white tab, stop. Don't pull another white tab. Page 20 shows you what to do in this situation.

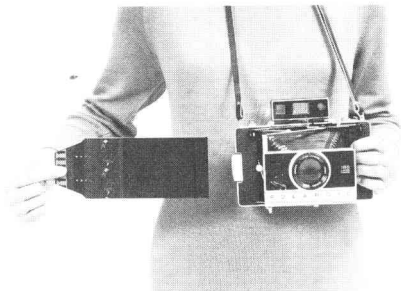
Never pull a white tab when you can see a yellow tab.

Pulling the small white tab does not start development; it only prepares the film for the next step, which is pulling the yellow tab (below).

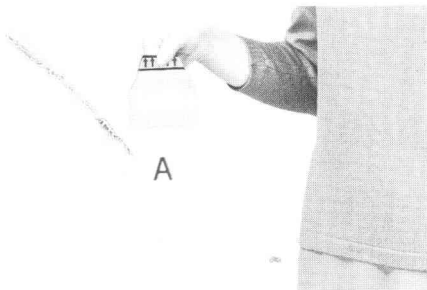
Grip the yellow tab in the center so it will come out straight when you pull.



Pull the yellow tab straight out of the camera all the way, with moderate speed, without hesitating. **This starts development of your picture so start the timer now.**



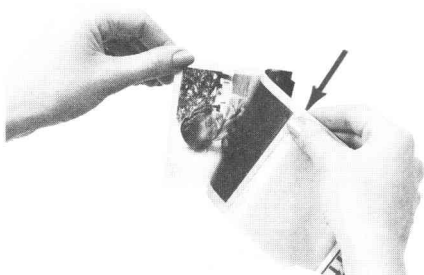
The picture develops outside the camera. While it's developing, hold the tab by the yellow tip, or lay the picture assembly down flat; don't touch or bend the picture assembly or lift off the white paper (A). Outdoors, don't let the picture assembly flap in the breeze. Develop the picture for the full time recommended in the instruction sheet packed with the film.



After the recommended development time, quickly strip the white paper (the print) from the brown paper, starting at the end nearest to the yellow tab.

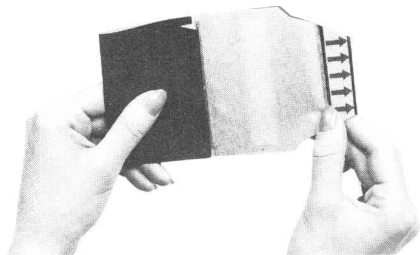
A color print will be slightly moist at first, so don't touch the face for a few minutes. It will harden to a tough glossy finish.

Don't touch the face of black and white prints. You must coat them to prevent fading and other damage (see CARE OF YOUR PICTURES, page 25).



Avoid contact with chemicals left on the negative after the print is removed. (Be sure to read the CAUTION notice, on page 31.) Negatives from Type 108 color and Type 107 black and white films are of no further use, so fold them up, moist side in, and discard them. Please don't litter.

Negatives from Type 105 film are designed for high-quality enlargements. Retain these. See the instructions packed with the film for full details.



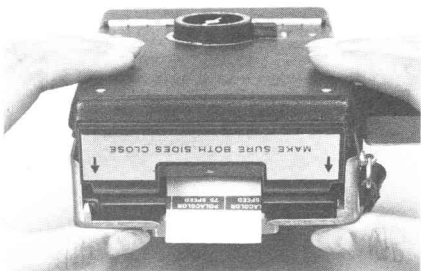
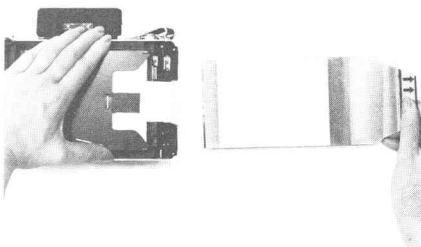
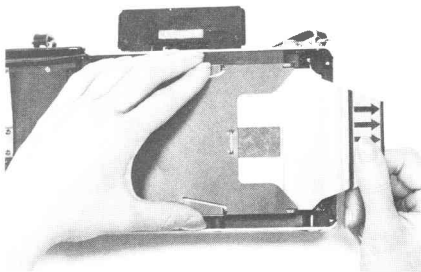
IF NO YELLOW TAB POPS OUT AS YOU PULL THE WHITE TAB

Stop! Don't pull another white tab. Instead, gently open the camera back just enough to get one finger under it to hold the film pack in place. Do this indoors or in the shade, not in bright sun.

While holding the pack down lightly with a fingertip, slowly open the back all the way. Steady the pack with your left hand and take hold of the topmost yellow tab, as shown.

Gently pull the entire topmost picture assembly all the way out of the pack and discard it. Don't try to save it. While the back door is open, check that the rollers are clean. If you find dirt or bits of developer on them, clean them as described on page 26.

Close the back of the camera, making sure that the next white tab sticks out of the No. 4 slot. Check that both sides of the back latch securely.



TEMPERATURE IS IMPORTANT

Cold and heat have a great effect on the way your picture develops and on the print quality. Even moderate cold can ruin your pictures unless you take precautions.

The important factor is the temperature of the camera and film at the time you're developing the picture.

A loaded camera, carried outdoors in cold weather for half an hour, gets thoroughly chilled. If you then enter a warm house and a few minutes later shoot a flash color picture, the results are likely to be bad. It takes a long time for a cold camera and film to warm up.

In cool weather, development times may have to be adjusted according to the temperature. The instruction sheet with each film pack contains detailed information about development times and temperatures. Be sure to read these recommendations; they may change from time to time.

In very hot weather there is a greater tendency for chemicals to be squeezed out of the edges of the picture assembly as you pull the yellow tab to begin development. If these chemicals collect on the steel rollers they can cause defects in your prints. So, when it's hot, be extra careful to keep the rollers clean (page 26).

How temperature affects color film: The normal developing times for color film are

set for temperatures of 75°F (24°C) and warmer. When it's a bit cooler the action of the developer chemicals slows down and you must develop for a longer time. See the film instruction sheet for more details.

When the temperature gets below 65°F (18°C) the chemical action is so sluggish that the picture won't develop properly without the Cold-Clip (page 22). Prints developed in cold weather without the Cold-Clip will be dark, with muddy colors.

Prints developed in extremely hot weather may show weak colors. For details see the film instruction sheet.

How temperature affects black and white film: The development times recommended in the film instructions are for the film's normal temperature. When it's cooler, you must develop film for a longer time; when warmer, for a shorter time. For details see the film instruction sheet.

Never use the Cold-Clip with black and white film.

Extreme heat or cold during development affects the speed of Type 105 negatives. To get a good negative, it may be necessary to adjust exposure as well as development time. The speed of the positive print is not noticeably affected by temperature changes.

THE COLD-CLIP

The Cold-Clip (left) makes it possible to get good color pictures when the temperature is 65°F (18°C) or below.

If you are unsure of the temperature, use the Cold-Clip anyway. It may make a noticeable improvement in the color of your pictures and it can do no harm even if the temperature is somewhat higher than 65°F (18°C). To use the Cold-Clip, preheat it in a warm inside pocket, or between your body and arm, for about five minutes before starting to take pictures.

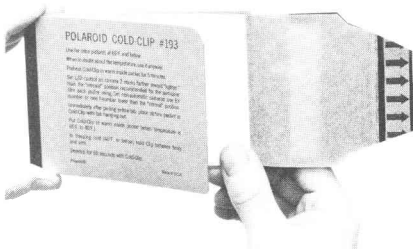
When it's cold enough to use the Cold-Clip, you should give 2X the normal exposure for your color pictures. That is, set the exposure controls one f-number lower than is indicated by your exposure meter or the chart.

Immediately after pulling the yellow tab to start development of your picture, place the picture assembly in the Cold-Clip with the yellow tab hanging out. This must be done within 10 seconds.

Place the Cold-Clip, with the picture assembly inside, between your body and arm. Develop the picture for 60 seconds inside the Cold-Clip next to body heat, then remove the picture assembly and separate the print from the negative.

Occasionally, developer may leak from the picture assembly and stick to the Cold-Clip. Avoid contact with this material. (Please read the CAUTION notice on page 31.) Before using the Cold-Clip, wipe it clean with a damp cloth. Store it under the retainer in the camera cover.

Never use the Cold-Clip for black and white pictures. Instead, follow the cold weather directions on the instruction sheet packed with the film.



POINTERS FOR GOOD NATURAL LIGHT PICTURES

FOR COLOR PICTURES

Use bright sun: You'll get strongest colors if your subject is in bright sun (but you can also get very pleasing results on an overcast but bright day).

Have plenty of color: Look for subjects and backgrounds with strong, bright colors in big, solid masses.

If your subject isn't wearing colorful clothes, add color with a bright scarf or jacket. Or, find a colorful background — anything that will fill at least one-third of the picture area with strong, solid color.

People dressed in dark clothes, or wearing delicate colors or white will not give the best color pictures.

Plain, drab backgrounds won't add color to your prints.

FOR BLACK AND WHITES

For portraits: Use even lighting. You'll get best results when a cloud blocks the direct sun, or on an overcast but bright day, or in bright open shade.

For scenic pictures: Avoid shooting when the sun is right overhead; shoot

when the light casts shadows to the side.

Indoor snapshots without flash: Try to have the room lighting even so as to avoid deep shadow areas.

In extremely bright light: You may need to use the neutral density filter over the lens to avoid overexposure with Type 107 film.

FOR ALL PICTURES

Move in close and focus accurately: The bigger your subject is in the print, the more color and details you'll be able to see.

For scenic pictures: Try to get something big and solid looking (and colorful, if possible) into the foreground to help fill the print.

Time development carefully: Follow the recommendations in the film instruction sheet. These may change from time to time. A few seconds overdevelopment is not harmful. However, if you develop for less than the recommended time, color pictures will have poor colors and black and whites will look gray and washed out.

Keep an eye on the temperature: Cold weather or excessive heat can affect your pictures. See page 21.

HOW TO LIGHTEN OR DARKEN PICTURES

For the next picture of the same subject, in the same location and lighting conditions, follow this rule:

For a **lighter** picture, use the next **lower** f-number. Or, use the next **slower** shutter speed.

For a **darker** picture, use the next **higher** f-number. Or, use the next **faster** shutter speed.

For a small change in exposure turn the aperture control ring halfway (one click) toward the next higher or lower f-number.

f/3.8	f/4.5	f/5.6	f/8	f/11	f/16	f/22	f/32	f/45	f/64
LIGHTEN ←————→ DARKEN									
1 sec.	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500

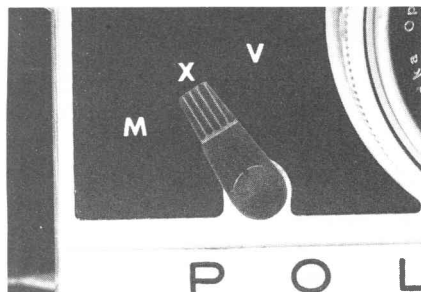
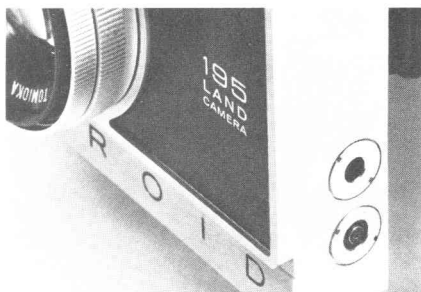
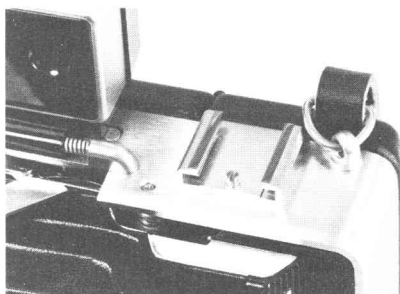
FLASH — ELECTRONIC AND BULB

There is an accessory shoe on top of the camera (shown left) to which you can attach many types of flashguns. The flashgun socket is on the left side of the shutter housing. It will accept standard PC connectors used on many makes of flashguns and on electronic flash units.

Suitable electronic flash units can give excellent results with both black and white and color films. Follow the exposure guide numbers recommended by the manufacturer of the particular electronic flash unit that you are using.

Settings for electronic flash. Set the lever to X as shown. For self-timed pictures with electronic flash, set the lever to V. Suggested shutter speed at both positions is 1/125 sec.

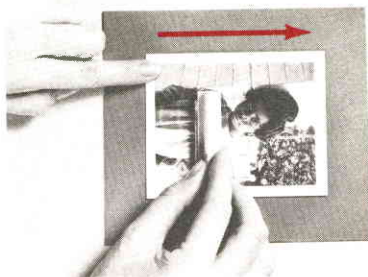
Settings for flash with flashbulbs. Set the flash synchronization lever to M, and the shutter speed ring to 1/60 sec. For self-timed pictures made with flashbulbs, set the lever to V and use a 1/30 sec. shutter speed.



CARE OF YOUR PICTURES

BLACK AND WHITE PRINTS

Coat prints: Black and white prints must be coated to protect them against scratching and fading. Type 105 prints must be coated immediately; Type 107 prints may be left uncoated for up to an hour. Use the coater supplied with each film. Use 6 to 8 overlapping strokes, and cover the entire print, including the borders. Keep freshly coated prints separate from each other until they are thoroughly dry. Keep the coater fluid away from furniture, clothing, etc.



COLOR PRINTS

A newly separated color print will look nearly dry, but don't touch it for a few minutes until the surface dries hard and glossy. Prints made with some color film should be mounted on the cards provided.

Do not coat color prints.

The dyes used to form colors in the prints are long lasting. However, like all dyes, they will fade if exposed to bright light for long periods of time.

TYPE 105 NEGATIVES

Type 105 negatives **must** be immersed in a sodium sulfite solution within three minutes after separation from the positive print. See the instructions packed with the film for full details.

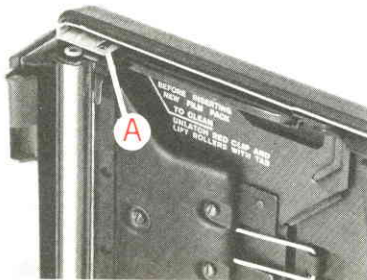
STORAGE OF PRINTS

Don't use corner mounts, paste, glue, or rubber cement to mount pictures. Many adhesives contain impurities that discolor pictures. Never put your pictures in albums with black paper leaves; use Polaroid Picture Albums.

STORAGE OF TYPE 105 NEGATIVES

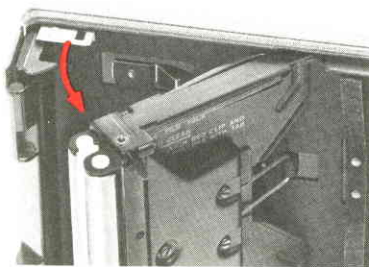
These should be completely dry before they are stored. Keep them in a cool, dry place, in the transparent sleeves sold for this purpose.

CARE OF THE CAMERA



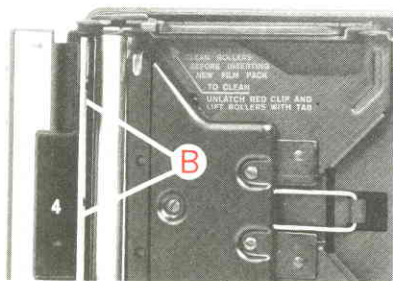
Keep the rollers clean: Dirt on the rollers can cause repeated spots on the print. It may also cause poor colors, and even prevent the yellow tab from popping out. Bits of developer can collect on the rollers and in the back of the camera. It's a good idea to inspect the rollers before loading each new film pack. You can also check them when the camera is loaded with film, provided that you don't disturb the film pack, or lift it out.

To check the rollers, lift up the red latch (A) and swing out the roller assembly. Turn and inspect the rollers.



Clean the rollers with a damp cloth and dry them. Never scrape them with anything metallic nor with your fingernail.

Open the tab slot door; clean out any dirt around the tab slot (B). Blow out lint or dust in the back of the camera. Push the roller assembly back into place.

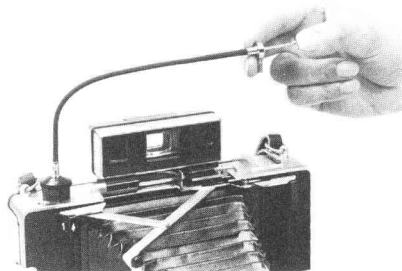


Clean the lens gently: Never use silicone coated eyeglass tissues on it. Blow dust off or brush it off lightly. Breathe gently on the lens to moisten it, wipe lightly with clean, dry absorbent cotton. Clean the view/rangefinder windows in the same way.



ACCESSORIES

Cable Release #191. A plastic adapter holds it in place over the No. 2 button. Useful for time exposures.



Filter Kit #595. It contains three items in a neat carrying case.

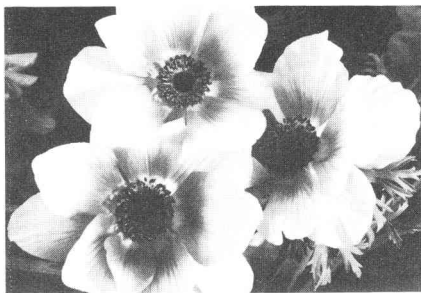
The #596 Cloud Filter for black and white pictures darkens the blue sky, so that white clouds stand out better.

The #597 UV Filter, for use only with color film, prevents excessive blue in pictures made in the shade or on overcast days.

The #598 Lens Shade helps to keep stray light rays from hitting the lens when you aim the camera at subjects near a strong light source, such as the sun or a powerful lamp.



Portrait Kit #1952 and Close-up Kit #1951. They let you focus on subjects much nearer than the normal closest focusing distance, 3½ ft. (1.2m.). With the Portrait Kit you can come as close as 19 in. (0.5m.) to take head and shoulder portraits (above, right). With the Close-up Kit you can photograph small objects like flowers and coins from as close as 9 in. (0.2m.) below, right.



POSSIBLE PICTURE PROBLEMS

White, faint image or none: Film was greatly overexposed or light struck. This will happen if you pull the safety cover before putting the film pack in the camera, or if you remove a film pack from the camera after pulling out the black safety cover.

One possible cause is that you exposed for 75 speed film when the camera was loaded with 3000 speed film.

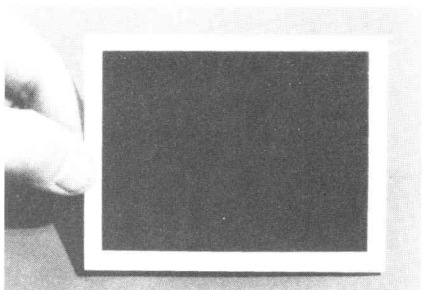
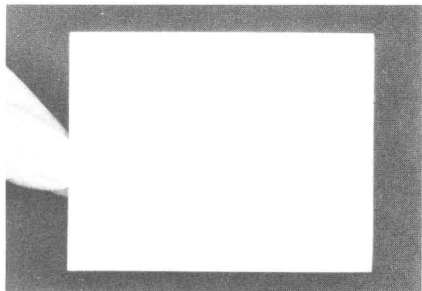
Black, faint image or none: If no details at all are visible, the shutter didn't open. Perhaps you didn't reset the No. 3 button.

If a print shows a few faint details, you may have mistakenly used an exposure suitable for 3000 speed film with 75 speed film in the camera.

Many white specks: They are a sign that you pulled the yellow tab too swiftly; slow down a bit.

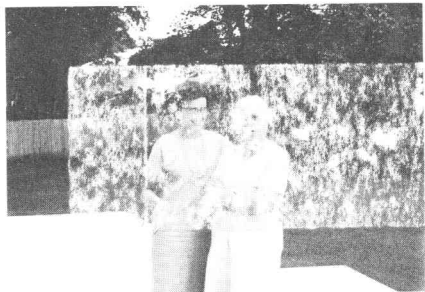
Color prints may have a pink mottle, in addition to white specks, as a result of pulling the yellow tab too fast.

U-shaped white area, any size: Several possible causes: One or more white tabs were folded under when you loaded the film pack (correct this as shown on page 15). Or, you pulled the yellow tab too slowly. Or, there may be dirt on the ends of the rollers; keep them clean (page 26). Or, in some way you squeezed the tab slot end of the camera back while pulling the yellow tab (see page 18 for the correct way to hold the camera).

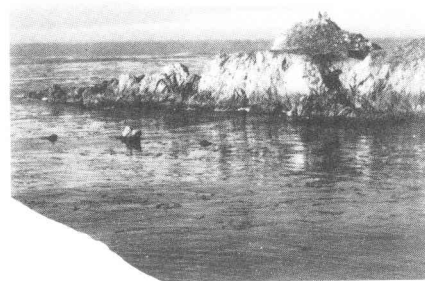


Oblong in print: The oblong is pink or red in a color picture. You didn't pull the white tab all the way out of the camera. As a result, when you pulled the yellow tab, the white tab was drawn back into the camera and spoiled the picture.

Always pull the white tab all the way out of the camera (page 18).



Undeveloped edges or corners: Such picture flaws are usually caused by pulling the white or yellow tab out at an angle. In this example the tab was pulled down, instead of straight. When this happens the developer is not spread evenly over the picture and edges and corners may not develop. Pull both tabs out straight, all the way (pages 18, 19).



Dried developer chemicals at the ends of the steel rollers also may cause this. Keep the rollers clean.

Repeated white spots: Marks like these show that the steel rollers are dirty. Inspect them regularly and clean when necessary (page 26).



Orange-red marks along edge: Marks like this (A) along the edge and/or in the corners of the print generally indicate that the yellow tab was pulled out of the camera at an angle. Pull the yellow tab out straight, all the way (pages 18, 19).



Muddy looking print: It wasn't developed long enough. Develop both black and white and color prints for the full time recommended in the film instruction sheet. See page 22 for details of how to use the Cold-Clip with color prints. If you don't develop long enough, color prints will be brownish pink over-all; black and whites will be muddy gray.

A pink mottle on color prints is usually caused by pulling the yellow tab too fast, rather than by underdevelopment.

Subject fuzzy, rest sharp: If the subject didn't move but is unsharp you didn't focus carefully. Check page 7 to be sure you are focusing in the proper manner.

