

Polaroid

A Guide to Using Polaroid Instant Pack Films

For people who want fast results

*Tips, techniques and inside information designed to help you get
consistently good results with Polaroid instant pack films*

Instant Pack Films

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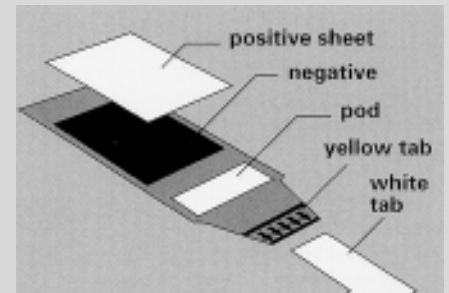
***Please keep this booklet
near your camera system.***

The information in this booklet is designed to help experienced and occasional users of Polaroid pack films get good pictures...solve some common picture-taking errors...perform a few simple, routine, preventive maintenance checks...and get expert assistance when needed.

This booklet covers — in quick reference form — much of the material contained in the instructions originally packed with your Polaroid equipment. Please consult those instructions when first learning to use the camera system.

Users also should regularly review the film tip sheet packed with Polaroid films, since ongoing improvements may change technical characteristics, especially time and temperature processing guidelines.

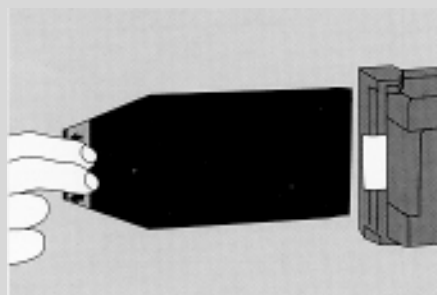
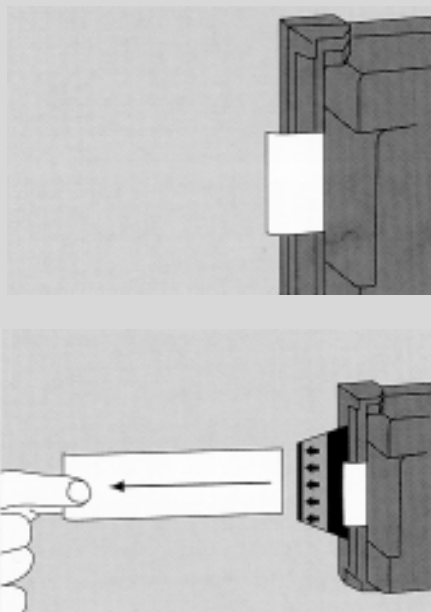
A similar booklet is available to users of Polaroid Model 545 film holders and 4x5 sheet films. To obtain a copy, call Polaroid Technical Assistance at the toll-free number given on page 2.



Each pack of Polaroid instant film contains all the elements needed to produce instant pictures. Inside, for each picture, there is a film assembly consisting of a light-sensitive negative, a positive sheet, a “pod” containing the developer, and tabs, which are pulled to activate the developing process.

The rollers inside the camera or film holder are used to break the pod and spread the developer between the exposed negative and positive sheet. Clean rollers are important in achieving a smooth, consistent “spread”; they should be inspected and cleaned regularly to assure high quality results. (See page 3.)

After an exposure is made, pulling the white tab all the way out moves the exposed negative from the focal plane behind the lens to a position facing the positive sheet. Simultaneously, the larger tab of the film assembly is positioned between the rollers, and sticks out of the camera or film holder where it can be grasped.



Pulling the large tab drags the film assembly — negative, pod, and positive sheet — through the rollers. The pod bursts open and the developer is spread between the positive and negative. It is important to pull the tabs straight and at a steady, moderate speed to ensure the developer is spread evenly. (See page 3.)

Development begins immediately, outside the camera or film holder. After the proper development time, the finished picture is peeled away from the negative. (See page 7 for important tips about handling developing pictures.)

Film Data Sheets & Technical Assistance

For further information about Polaroid pack films, or for information about other Polaroid films, products, and applications, call toll free from within the U.S.A. at **800-225-1618**, Monday through Friday, 8 a.m. to 8 p.m., Eastern time. Or, write to:

Technical Assistance
Polaroid Corporation
201 Burlington Rd.
Bedford, MA 01730

For assistance outside the U.S.A., consult your nearest Polaroid office.

Film Data Sheets covering most Polaroid films used for business, technical, medical and professional applications are available at no charge on the Web at www.polaroid.com.



There are three Polaroid Pack Film formats:

3 1/4 x 4 1/4

Image area: 2 7/8 x 3 3/4 in.
(7.3 x 9.5cm)
10 pictures per pack

These films are used in many different Polaroid handheld cameras, such as ProPack and 600SE. They are also used with Polaroid Miniportrait cameras for making instant passport and other document photos; the Polaroid MP 4, CU-5 and DS-34 Photographic Systems; the Polaroid Palette System; and Polaroid ID Systems. They also are used in cameras and instruments manufactured or modified by OEM's to accept the Polaroid Model 405 film holder or other 3 1/4 x 4 1/4 camera backs.

4 x 5

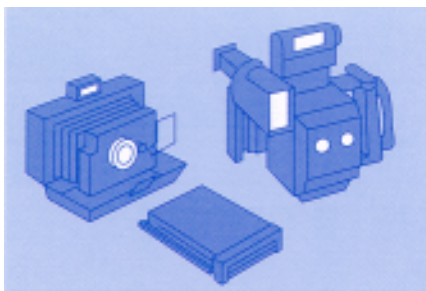
Image area: 3 1/2 x 4 5/8 in.
(8.9 x 11.7 cm)
10 pictures per pack

These films are used in cameras and instruments that accept the Polaroid Model 550 film holder, including most professional view cameras, scanning electron microscopes, the Polaroid MP 4 and CU-5 Photographic Systems, and Polaroid Miniportrait cameras, and many other OEM systems.

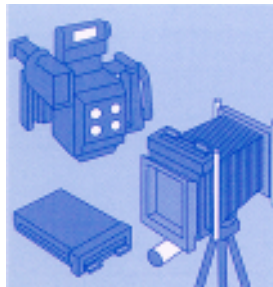
Square-format

(3 1/4 x 3 3/8 in.)
Image area: 2 3/4 x 2 7/8 in.
(7 x 7.3 cm)
10 pictures per pack

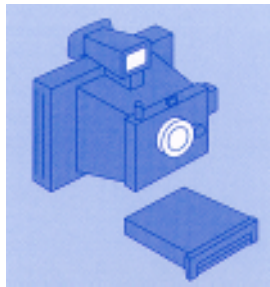
These films are used in Polaroid square format pack film cameras and OEM photographic systems designed to accept a square-format camera back.



3 1/4 x 4 1/4



4 x 5



Square-format

1

Keep the processing rollers in the camera or film holder clean.

Inspect and clean the roller surfaces regularly. It is recommended that you check the rollers each time you load a pack of film, and before each picture-taking session.

Cleaning the rollers is easy. Use a soft, non-abrasive cloth, moistened with water if necessary.

Dry the rollers thoroughly before use. Do not use alcohol or other cleaning fluids, and never scrape the rollers with a hard object or with your fingernails.

Also clean the tab slot on the camera or film holder. Use a damp cloth or cotton swab to clean the area.

Your instruction book contains details on locating and cleaning the rollers in your Polaroid equipment. If you need further information, please call us toll-free at **800-225-1618**.

2

Note the temperature... and time development accurately.

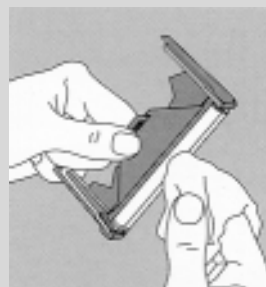
You can take Polaroid pictures at any temperature. But, processing time and the temperature of the film at the time of processing affect picture quality. Ideally, Polaroid films should be processed at about 70-75°F (21-24°C). If the temperature is much higher or lower, you may need to adjust processing times and/or exposure settings for best results. Make it a habit to check the tip sheet packed with Polaroid films for the latest time/temperature processing information.

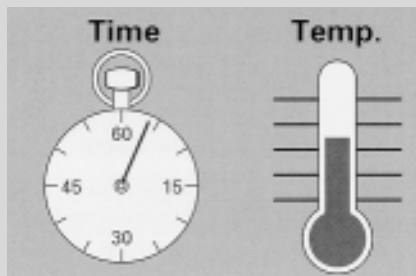
3

Pull the film tabs straight

Always pull both film tabs straight out of the camera or film holder. Since the film should be pulled parallel to the camera back, avoid camera positions that make tab pulling awkward. If you are using a removable film holder, insert the dark slide, then remove the holder and place it on a flat surface for tab pulling, whenever possible.

Pull at a steady, moderate speed. Saying the word "Polaroid" is a good way to time the speed of the pull.





Here's a brief list of reminders to help you avoid frustrating moments and unsatisfactory results.

- ♦ Don't pull the black safety cover out of a film pack before loading the pack into the camera or film holder. If you do, at least one exposure will be lost.

But if you do...

...load the film anyway and pull the film tabs for the first picture. It will be a totally white image, but the rest of the pack should be fine.

- ♦ If you are using a removable film holder, remember to pull the holder's dark side before making an exposure...

...and push it back after making the exposure before removing the holder for off-camera processing.

- ♦ If your camera has a lens cap, don't forget to remove it!
- ♦ If your system has an electronic shutter powered by batteries, be sure the batteries are fresh and installed correctly. Dead batteries mean the shutter won't work, no exposure will be made, and you'll end up with a totally black picture (see page 10).

- ♦ Check the camera exposure settings.

If you set the camera for color film (ISO 80/20°), but are using high speed black and white film (ISO3000/36°), your pictures will be overexposed (too light).

If you set the camera for high speed black and white film (ISO3000/36°), but are using color film (ISO 80/20°), your pictures will be underexposed (too dark).

- ♦ Pull the film tabs straight and in the proper sequence.

Pull the white tab after making the exposure, then the other tab. Never pull a white tab before taking the picture.

- ♦ If you pull a white tab and no other tab appears, don't pull another white tab. (See page 9.)

- ♦ Never wave developing film back and forth in an attempt to keep it warm or cool; this could adversely affect image quality. Be careful not to bend or squeeze developing film.

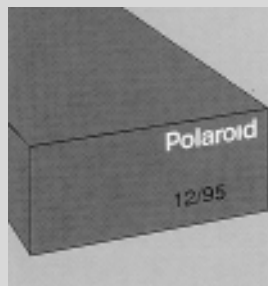
Questions? Problems?
Call us, toll-free:
800-225-1618

Many common picture-taking problems are discussed on pages 8 - 10. But...if you can't find a solution to a problem you are experiencing, or if you have a question, or need information, please call us. Chances are we can help.

The call is toll-free, and we can be reached Monday through Friday, 8 a.m. to 8 p.m., Eastern time.

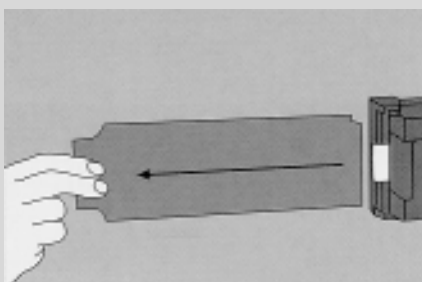
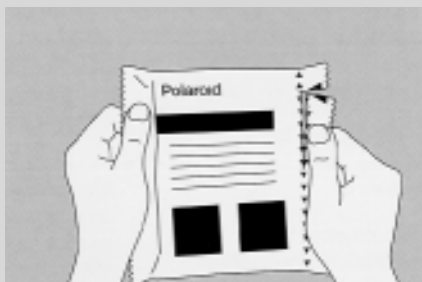
Note the film expiration date

Always use Polaroid film before the expiration date stamped on the package. Outdated film may not produce satisfactory results, and it is not covered by the Polaroid film warranty.



Storage recommenda- tions & cautions

- ◆ Store Polaroid film in a cool, dry place. Unopened film may be refrigerated in its sealed wrapper. Do not freeze film.
- ◆ Before opening film that has been refrigerated, allow it to reach room temperature. This will take about 2 hours.
- ◆ Avoid leaving film or a loaded camera in direct sunlight, or in a hot, humid place, such as the trunk or glove compartment of a car. High temperatures and humidity can affect picture quality.



Read the "Caution" notice

- ◆ Please note the "Caution Notice" printed on Polaroid film packages. Here's what it says:

"This process uses a caustic paste. Avoid contact with skin, eyes and mouth and keep away from children and animals. *If you get some paste on your skin, wipe it off immediately and wash with water to avoid an alkali burn.* If eye or mouth contact occurs, quickly wash the area with plenty of water and see a doctor. Keep discarded materials away from children, animals, clothing and furniture."
- ◆ Please dispose of used negatives and packaging properly.

When loading film...

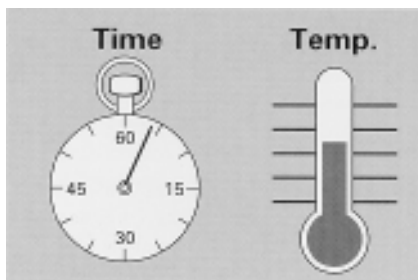
- ◆ Handle film packs by their edges to avoid damaging film surfaces or the pod of developer inside.
- ◆ Keep the film in its wrapper until you are ready to use it. Tear open the film wrapper along the printed arrow.
- ◆ Place the film pack in the camera or film holder so it fits into place. Check to be sure that the white tabs are not tucked under the pack.
- ◆ After securely closing the back of the camera, or after attaching the film holder securely to the camera with the film holder dark slide closed, pull the black tab of the "safety cover" all the way out, as shown. Now you are ready to take pictures.

You can *take* Polaroid pictures at any temperature, but when *processing* Polaroid films, you should be aware of the temperature since it can affect picture quality.

The developer in each sheet of film is designed to work best at about 70-75°F (21-24°C). By minimizing temperature variations when processing pictures you will get more consistent results.

At temperatures higher or lower than 70-75°F, it may be necessary to adjust processing times and/or exposure settings to achieve optimum results.

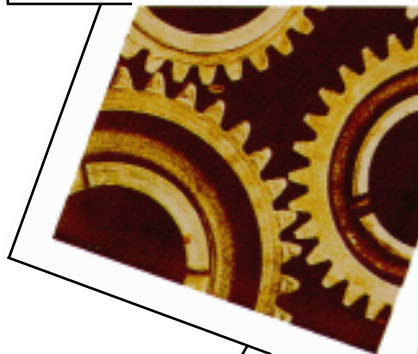
- ◆ At low temperatures, keep the film warm, under your coat or in a heated car or room. Place developing film in a warm place, such as a heated car or under your coat, being careful not to bend or crush it. Or, wait until you are in a warm place before developing each picture. (Allow film exposed to cold to warm up to room temperature before processing.)
- ◆ At high temperatures, keep your film in the shade, or in an air-conditioned car or room, or in a picnic cooler, before exposure. Wait until you have reached a cool place before developing each picture.
- ◆ Never wave developing film back and forth in an attempt to keep it warm or cool; this could adversely affect image quality.



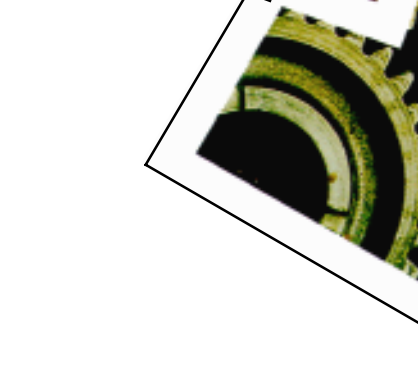
Normal development



Underdeveloped



Overdeveloped



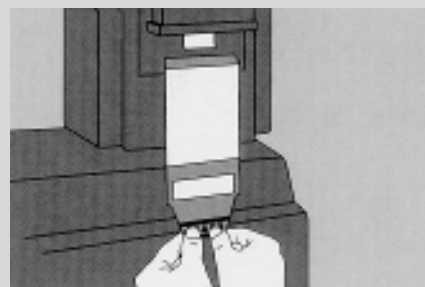
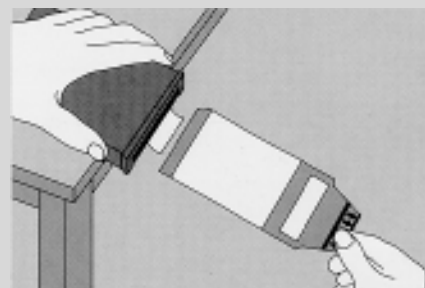
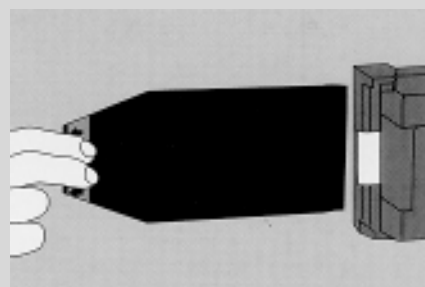
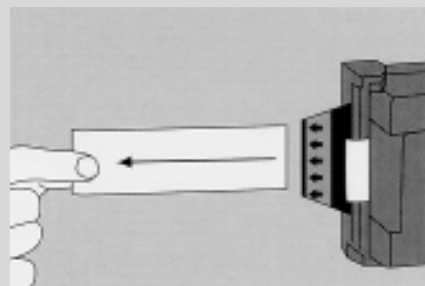
To assure consistently well-processed images:

Always pull the film straight out of the camera or film holder. The film should be pulled parallel to the camera back or holder. Pulling at an angle can cause missing corners and/or marks and streaks on pictures. (See page 8.)

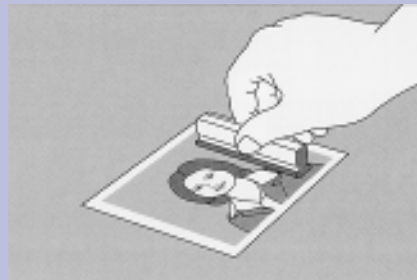
If you are using a removable film holder, and the camera is positioned so that it is difficult to reach the tabs comfortably, or if tab pulling would disturb the camera set-up, remove the film holder, if possible, for tab pulling. (Don't forget to reinsert the dark slide first!)

The speed at which you pull is very important.

Pull at a steady, moderate speed. Saying the word "Polaroid" is a good way to time the speed of the pull. Pulling too rapidly can cause white specks in images and/or angle pull. Pulling too slowly, or stopping or hesitating, can cause streaks on pictures. (See page 8.)



- ◆ Always use your film before the expiration date stamped on the package.
- ◆ Avoid leaving a partially-used film pack in the camera or film holder for a long period of time.
- ◆ Process exposed film promptly. Be aware that development time and the temperature of the film affect picture quality. Ideally, Polaroid films should be developed at about 70-75°F (21-24°C).



- ◆ Handle developing pictures with care. Hold them only at the tab end or lay them flat on a table. Never wave or bend the film while it is developing, and never touch the image area, otherwise image quality may be affected.
- ◆ At the end of the specified development time, peel the negative away from the print, as shown. Do this rapidly and smoothly to avoid causing streaks on the image area.
- ◆ Allow color pictures to dry thoroughly before stacking them or touching the image area.

- ◆ Black & white pictures that require coating should be print-coated immediately to protect them from scratching and fading. Use six to eight overlapping strokes to fully coat each image.
- ◆ When using Polaroid Type 665 Positive/Negative film, prepare an 18% sodium sulfite clearing bath before exposing the film. See the instructions packed with the film for mixing information. Treat Type 665 negatives immediately after development.
- ◆ Avoid writing directly on prints. If necessary, write only in the border area, using a soft pencil, china marker, or a felt-tip pen designed for use with photographic materials.
- ◆ To preserve prints, protect them from exposure to direct sunlight, high heat and humidity, chemicals and chemical vapors, and rough or excessive handling.

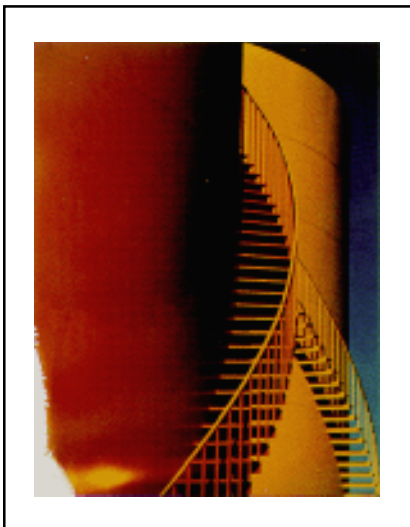
- ◆ Don't store prints face to face or with conventionally-processed prints.
- ◆ For long term storage, use seamless envelopes or sleeves made of acid-free paper, cellulose acetate, polyethylene or polyester. Avoid using glassine envelopes, PVC plastic, ordinary black album paper, brown Kraft paper and cardboard.

Please read the Polaroid film "Caution Notice"

Please note the "Caution Notice" printed on Polaroid film packages. (See page 5.)

Prevention

Picture problems & problem prevention



Problem: Missing corner

Pictures with “missing” corners, and/or streaks and marks, are usually the result of pulling the film crookedly, at an angle, from the camera or film holder.

Always pull both film tabs straight out of the camera. Pull at a moderate speed. Saying the word “Polaroid” is a good way to time the speed of pulling.

Since it is important to pull the tabs parallel to the camera back, users of imaging systems with removable film holders may find it convenient to remove the holder and place it flat on a table for film processing.



Problem: White specks

Pictures with small white specks in the image area are often caused by pulling the film out of the camera or film holder too rapidly. Pulling too fast may also cause a “mottled” appearance in color photographs.

Always pull both film tabs at a moderate speed. Saying the word “Polaroid” is a good way to time the speed of pulling.



Problem: Rectangular area in print

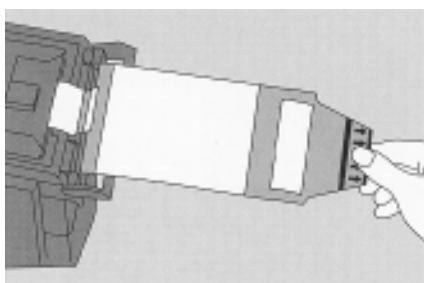
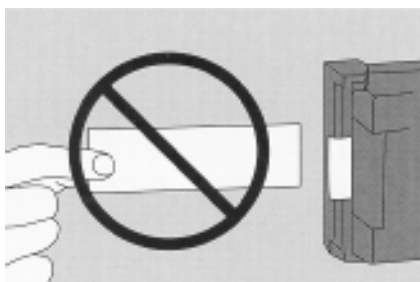
A picture that looks like this is caused by NOT pulling the white tab all the way out of the camera. The long, rectangular area is an impression made by the white tab on the developing picture.

Always pull the white tab straight and all the way out of the camera or film holder before pulling the other film tab.

Problem: Film jam

If the film jammed inside the camera or film holder, and you were unable to get any pictures, dirt on the processing rollers and/or tab slot may have blocked the film tabs from coming out.

For example, if you pull a white tab and no other tab appears, then pull another white tab, the problem will only get worse, and more film will jam. If you try another pack of film, the same problem may occur, if you have not cleaned the rollers inside the camera or film holder.



Inspect and clean the roller surfaces regularly. It is recommended that you check the rollers each time you load a pack of film.

Here's how to avoid losing an entire pack of film if you pull a white tab and another tab fails to appear:

1
Do not pull another white tab.

2
Carefully open the back of the camera or film holder just enough so that you can place a finger on the edge of the film pack inside. Hold the pack in position and open the back all the way.
(You can open the camera or film holder without spoiling additional film, provided you do so away from bright light, and do not move the film pack.)

3
Gently remove any crumpled film tabs and discard them.

4
Inspect and clean the rollers thoroughly. Clean the tab slot, too.

5
Unfold the top white tab so it sticks out, as shown. Close the camera back securely. Resume picture taking.



Problem: Evenly spaced marks on picture

Pictures with evenly spaced spots or streaks are usually caused by dirty rollers inside the camera back or film holder. Typically, the pattern is repeated across the picture surface because dirt or other particles are stuck to one or both rollers. The rollers should be cleaned regularly to prevent this problem.

Important notice for high volume film users

If your camera or film holder is several years old, it may be advisable to replace the rollers. Polaroid recommends that the rollers be cleaned every 3-5 packs of film. If the user experiences non-uniform coverage, separation of positive or negative, contact Polaroid Technical Assistance.

Problem: Black picture (no picture)

A picture that is totally black usually indicates that no exposure was made — no light reached the film.

There are several possible causes:

Equipment problem

- ♦ The camera shutter may not be working. If the camera is powered by batteries, dead batteries may prevent the shutter from opening. Check that the batteries are fresh. Batteries should be changed at least once a year.
- ♦ The flash may have failed to fire, resulting in a severely underexposed picture (which may appear all black). Check your flash unit batteries; allow sufficient recycle time between flash exposures.

Operator mistake

- ♦ With some photographic systems occasional, common, oversights will result in a black picture:
- ♦ Not removing the dark slide or the lens cap during the exposure.
- ♦ Wrong exposure setting: lens aperture too small; shutter speed too fast; incorrect flash exposure guide number; incorrect film speed setting (for example, using ISO 80/20° color film in a camera system set for ISO 3000/36° black & white film).

Problem: White picture (fogged)

A picture that is totally white usually indicates that the film was severely overexposed, or light-struck or “fogged” — exposed to light outside of the camera or film holder.

There are several possible causes:

Handling errors

- ♦ Removing the black safety cover before loading the film into the camera or film holder. Doing this exposes the first picture’s negative to light (“fogging it”), and the first picture processed will be white. (Subsequent pictures should be fine.)
- ♦ Reloading a partially-used film pack. If the film pack has been exposed to light, the first picture processed will be white.
- ♦ Removing the dark slide of the film holder while it is off the camera system. Doing this exposes a negative to light. Reinsert the dark slide, then process the picture (which will be white). Subsequent pictures should be fine.

Operator mistake

An occasional, common, oversight may result in white pictures. For example, a wrong exposure setting: lens aperture too large; shutter speed too slow; incorrect flash exposure guide number; incorrect film speed setting (using ISO 3000/36° black & white film in a camera system set for ISO 80/20° color film).

Equipment problem

- ♦ The camera shutter may not be working properly.
- ♦ The camera system has developed a light leak, or the film holder was not mounted correctly.

Problem: Overexposed pictures (too light)

Pictures with faint, washed out images usually indicate that the film was overexposed — too much light reached the negative.

There are several possible causes:

Wrong exposure setting

- ♦ Lens aperture too large; shutter speed too slow; incorrect flash exposure guide number; incorrect film speed setting (for example, using ISO 3000/36° black & white film in a camera system set for ISO 80/20° color film).
- ♦ A background that is much darker than the main subject may cause inaccurate exposure readings, and the main subject to be overexposed, or too light. Exposure settings must be adjusted to compensate for this. See your camera system instruction.
- ♦ If the background is too light or washed out, exposure settings must be adjusted to compensate for this, or background lighting may have to be adjusted, if possible.

Equipment problem

- ♦ The camera shutter may not be working properly.
- ♦ The camera system has developed a light leak, or the film holder was not mounted correctly.

Underexposed pictures (too dark)

Pictures that are too dark overall, or in which the main subject appears as a silhouette with little or no detail, usually indicate that the film was underexposed — too little light reached the negative.

There are several possible causes:

Wrong exposure setting

- ♦ Lens aperture too small; shutter speed too fast; incorrect flash exposure guide number; incorrect film speed setting (for example, camera system set for ISO 3000/36° black & white film when using ISO 80/20° color film).
- ♦ A background that is much lighter — or brighter — than the main subject may cause inaccurate exposure readings, and the main subject to be underexposed, or too dark. Exposure settings must be adjusted to compensate for this. See your camera system instructions.
- ♦ If the background is too dark, exposure settings must be adjusted to compensate for this, or additional background lighting may be required.

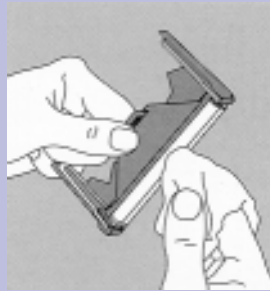
Equipment problem

- ♦ The camera shutter may not be working properly.

Stop Film

How to get consistently good results with Polaroid instant pack films

3 things you need to know...

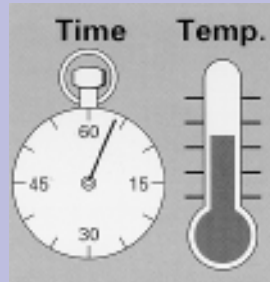


1

Keep processing rollers clean.

Clean rollers regularly — before loading film... before each picture-taking session.

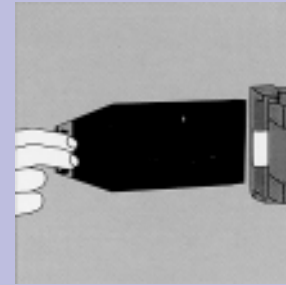
Use soft, non-abrasive cloth, moistened with water. Also, clean tab slot on camera or film holder.



2

Note temperature. Time accurately.

Take Polaroid pictures at any temperature. But... temperature of film at time of processing affects picture quality. Polaroid films should be processed at about 70-75°F (21-24°C). See the Film Data Sheets on the Web at www.polaroid.com for latest time/temperature processing information.



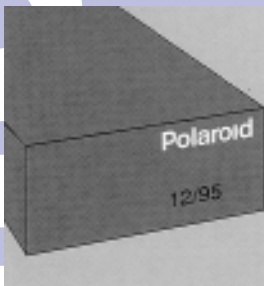
3

Pull film tabs straight, at moderate speed.

Pull both film tabs straight out of camera or film holder. Avoid camera positions that make tab pulling awkward. Place removable film holder on flat surface for tab pulling if possible.

Always pull at steady, moderate speed.

About storing film...



- ♦ Use film before expiration date on package
- ♦ Do not freeze Polaroid film. Store film in cool, dry place. Keep film in sealed wrapper until use.

Allow refrigerated film to reach room temperature before opening (about 2 hours).

Keep film and camera out of direct sunlight and hot, humid places.

When loading film...



- ♦ Handle film packs by edges only. Tear open film wrapper along printed arrow.
- ♦ After loading, check that white tabs are not tucked under pack.
- ♦ After closing camera back, or attaching film holder to camera, pull safety cover all the way out.

Before taking pictures...

- ♦ Check camera exposure settings.
- Set camera for correct film speed or film type. (See Film Data Sheets at www.polaroid.com Customer Service for details.)

After taking each picture...

1

Pull white tab.

2

Pull other tab. Pull both tabs straight, at moderate speed.

- ♦ If no other tab appears when you pull white tab, don't pull another white tab. (See next page.)
- ♦ Hold developing film by tab or lay it down. Never wave film pack back and forth. Do not bend or squeeze.

3

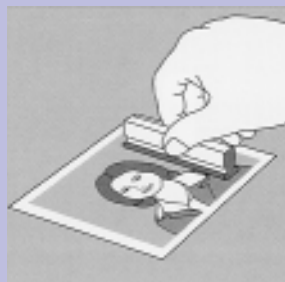
Time development accurately according to information in Film Data Sheets. Temperature of film affects picture quality.

4

After specified development time, peel negative away from print, as shown. Peel rapidly and smoothly.

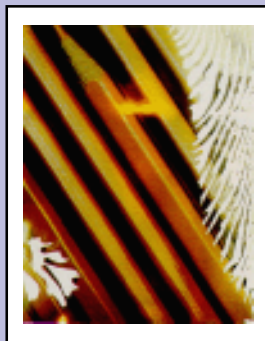


After developing pictures...



- Let color pictures dry thoroughly before stacking or touching.
- Black & white pictures requiring coating should be print-coated immediately.
- When using Polaroid type 665 Positive/Negative film, prepare 18% sodium sulfite cleaning bath before exposing film. (See film tip sheet.)

Picture problems & problem prevention



"Missing" corner, and/or streaks and marks, indicates film tabs were pulled crookedly, at angle, from camera or film holder. Always pull both film tabs straight.



Evenly spaced spots or streaks indicate rollers inside camera back or film holder are dirty. Clean rollers regularly.



Small white specks are often caused by pulling film out of camera or film holder too rapidly. Always pull both film tabs at moderate speed.

Other problems & remedies

Film jam

After pulling white tab, no other tab appears. DO NOT pull another white tab (otherwise more film will jam inside camera or film holder.)

Here's what to do:

- 1 Open back of camera or film holder and place finger on edge of film pack inside to hold it in position. Open back all the way.
- 2 Gently remove crumpled film tab(s) and discard.
- 3 Clean rollers thoroughly. Clean tab slot, too.
- 4 Unfold top white tab so it sticks out. Close camera back. Resume picture taking.

Black picture

Black picture indicates no exposure was made — no light reached film.

Possible causes:

- Camera shutter not working; flash failed to fire. (Check for dead batteries.)
- Wrong exposure setting.

White picture

White picture indicates film was severely over-exposed, or light-struck or "fogged" — exposed to light outside of camera or film holder.

Possible causes:

- Black safety cover removed before loading film.

- Partially-used film pack removed from camera or film holder.
- Film holder dark slide removed while holder was off camera, or before securely mounting holder.
- Wrong exposure setting.
- Camera light leak.

Toll-free Technical Assistance

For help or information, call Polaroid Technical Assistance toll free from within U.S.A.:

800-225-1618

Monday through Friday, 8 a.m. to 8 p.m., Eastern time.

Toll-free help and technical assistance

Information about — and assistance with using — Polaroid products is available to all Polaroid customers. And it's as close as your telephone.

Call us toll-free: **800-225-1618**.

Monday through Friday,
8 a.m. to 8 p.m., Eastern time

We recommend that you call us if you encounter any difficulties with film or your photographic system. You may also contact Polaroid through the Web at www.polaroid.com.

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