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How to use the Polaroid 4 x 5 Land Film Holder #545



For cameras with 4 x 5 backs

The Polaroid Land film holder allows you to use the Polaroid Land photographic process in most standard 4 x 5 press or view cameras, without making any alteration of the camera or focusing system. The holder will fit press and view cameras equipped with Graflok, Graphic, and similar backs. It will also fit instruments, and aerial and microscope cameras equipped with similar 4 x 5 backs.

Important: When the holder is not in use, leave the control arm at P (see page 7, top photo).

Polaroid 4 x 5 Land films

As of December 1, 1968, five types of Polaroid 4 x 5 Land films are available for use with the #545 holder. They are:

- Type 51 high contrast film for line reproduction and for making halftone positive prints.
- Type 52 panchromatic black and white film for general purpose photography.
- Type 55P/N panchromatic black and white film that produces both a positive and a recoverable negative.
- Type 57 high speed panchromatic black and white film.
- Type 58 color film.

For more information on Polaroid 4 x 5 films, see your industrial photographic dealer or write to Industrial Marketing Department, Polaroid Corporation, 549 Technology Square, Cambridge, Massachusetts 02139.

The actual image area of the films used with the #545 holder measures about $3\frac{1}{2}$ x $4\frac{1}{2}$ in. and is off center about $\frac{1}{8}$ in. toward the thick end of the film holder. For extreme accuracy in composition, it is desirable to make test shots and mark the exact area on the ground glass.

Caution: The Polaroid Land photographic process uses a caustic jelly which is safely packed inside sealed containers within the film packet. If accidentally you should get some of this jelly on your skin, wipe it off immediately. To avoid an alkali burn, wash the area with plenty of water as soon as possible. **It is particularly important to keep the jelly away from eyes and mouth.** Keep discarded materials out of the reach of children and animals, and out of contact with clothing and furniture, as discarded materials still contain some jelly.

Note: Two kinds of Polaroid 4 x 5 film packets are currently on the market. The handling of both kinds of packets is essentially the same. The most significant difference is the method of removing the print from the packet. Only one kind of packet is shown in this book, except in the section HOW TO REMOVE THE PICTURE where both removal methods are described. Be sure to follow the correct method for the kind of packets you are using.

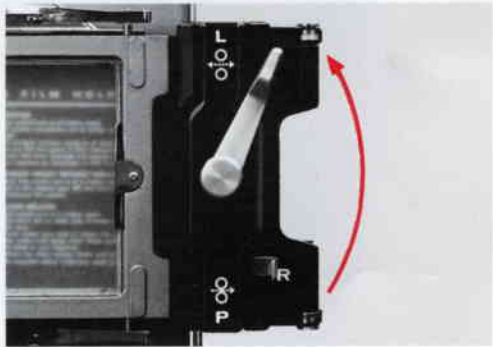
How to load film

1. Insert holder: Slide the holder into the back of the camera just as you would a standard film holder.

2. Engage slide locks: If your camera has slide locks, use them in addition to the spring back to prevent light leaks and dropping of the holder. The locks move into slots on the sides of the holder as shown.

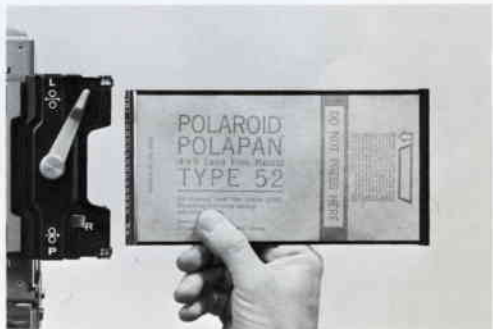


3. Move control arm to L: This is the loading position. The rollers are apart and the film packet may be inserted easily.

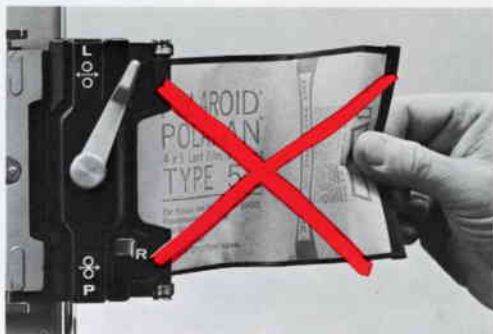


4. Insert film packet: Hold the packet as shown and insert the cap end into the holder. Do not press on the area marked DO NOT PRESS HERE, where the pod of developer chemicals is located.

Important: The film packet must always be inserted so that the side marked THIS SIDE TOWARD LENS faces the lens.



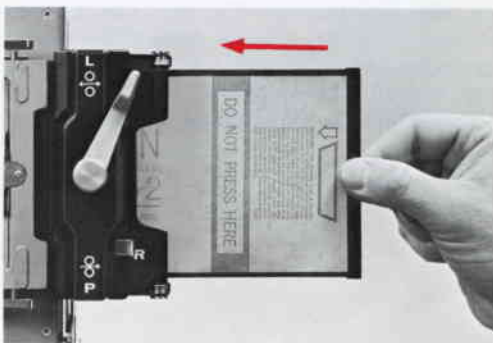
Do not hold the packet by the end while first inserting it into the holder. If you do this, you will buckle the packet and your picture will not develop properly.



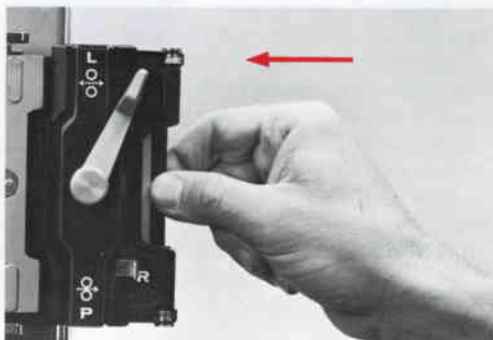
5. Push packet in halfway: Without bending the packet, gently push it past the rubber light seal roller, and feed it in about halfway.



6. Shift your grip: Now hold the packet by the extreme right-hand edge and push it in the rest of the way, until it stops. Do not bend or crease the packet.



When completely inserted, the right edge of the packet will be just visible in the holder recess.



How to take the picture

1. Withdraw envelope: The envelope acts as a protective cover (dark slide) for the film. Just before you take the picture, gently withdraw the envelope from the holder until it comes to a firm stop. Don't worry about pulling too far. It will come out almost 6 inches, then stop automatically. The negative will remain inside the holder, uncovered and ready for exposure.

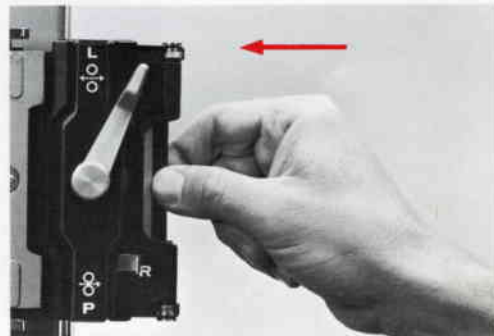
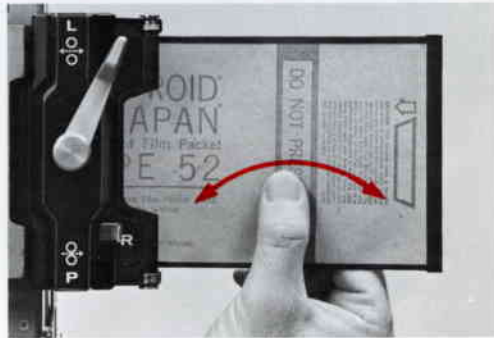
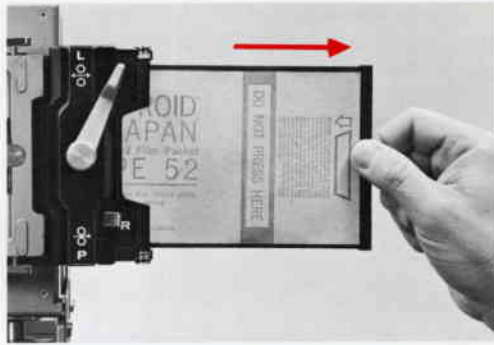
To avoid the danger of a light leak, the protective envelope should not be removed for longer than absolutely necessary. Also guard the envelope against bending and whipping in the wind.

2. Check for pod: Before making the exposure, lightly run your thumb and forefinger over the pod area, marked DO NOT PRESS HERE. It should be perfectly flat and smooth. If you can feel the pod, the negative was withdrawn accidentally with the envelope; push the envelope in again, withdraw it, and check for the pod.

3. Make exposure: Do this just as you would with wet process films. The recommended exposure meter setting is printed on the film packet, and there are more instructions in the film box.

4. Reinsert envelope: After exposure, reinsert the envelope all the way, until it is once more just visible in the holder recess. Use moderate pressure, but don't force it; otherwise you may crease the paper. If the envelope will not slide in all the way, withdraw it slightly and try again.

The picture you have just taken is now ready to be developed. If you would like to remove it from the holder without developing it, see the section on LATER DEVELOPMENT, page 9.



How to develop the picture

1. Move control arm to P: The two steel rollers inside the film holder are now together. When the packet is pulled out of the holder, these rollers will crush the pod and spread the developer chemicals over the picture area.



2. Pull packet out of holder: Pull it all the way out in one smooth, fairly rapid motion. You will feel a slight resistance toward the end as the cap reaches the rollers, but keep right on pulling without hesitating. The rollers will separate automatically to allow the cap to pass through.



3. Wait recommended development time: The instructions packed with the film give complete information on how to develop pictures. Temperature affects development time. In cool weather, the action of the developer chemicals slows down, and development time must be extended. Special instructions on how to develop 4 x 5 prints in cool weather are included in the film instruction sheet.

How to remove the picture

Important: There are currently two kinds of Polaroid 4 x 5 film packets on the market.

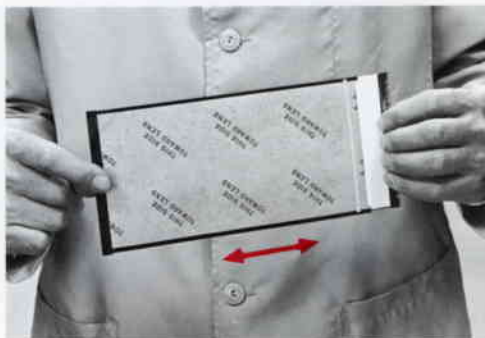
If your packets are completely rectangular and tightly sealed at both ends, remove the print according to **Method A**. If your packets have cut-outs and flaps at one end, remove the print according to **Method B**.

Avoid contact with the chemicals that remain on the negative. Be sure to read the CAUTION notice on page 3 and in the film instruction sheet.

Method A

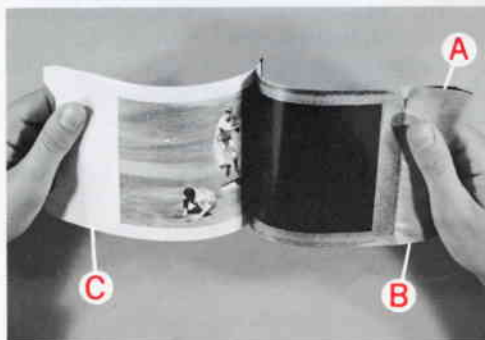
1. Remove protective envelope: Grasp the film packet at the two extreme ends, hooking your fingernails under the edge of the cap; then give the envelope a moderate tug. The cap will remain attached to the inside sheets, and the envelope will slip off.

Do not bend, squeeze, or pry the cap; you will only have more difficulty in removing the envelope.



2. Separate inside sheets: Take the negative tab (A) and thin paper mask (B) in one hand, the positive print sheet (C) in the other; then quickly peel off the finished print without letting it fall back on the negative.

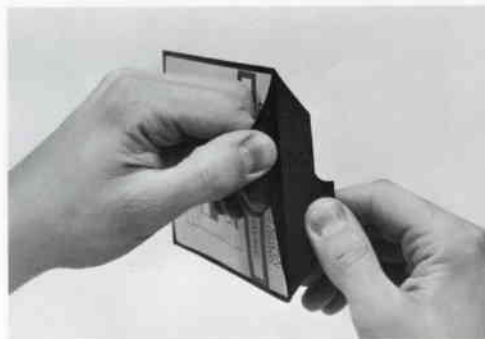
With Type 55 P/N, the thin paper mask should be removed with the positive sheet. For details, see the instruction sheet packed with the film.



Method B

Do not try to pull off the cap.

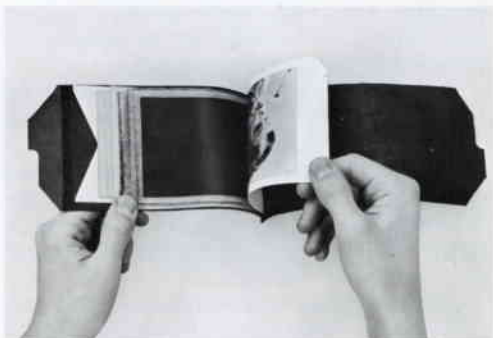
1. Grip both flaps: Hold the packet as shown and roll both flaps back slightly.



2. Open the envelope: Using moderate pressure, tear the envelope open all the way.



3. Remove the print: With your left thumb hold down the negative and thin paper mask, and with your right hand quickly lift off the print. It will come right out of the envelope.



How to remove a packet for later development

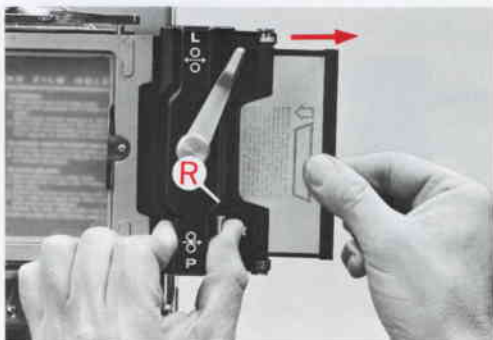
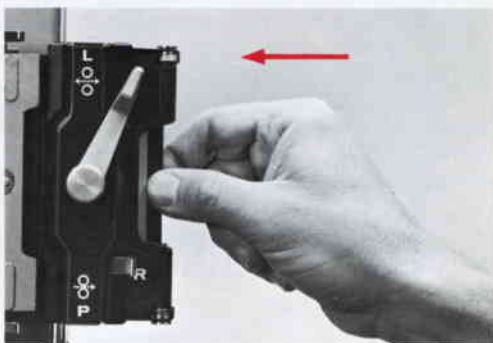
Occasionally you may wish to take several pictures in succession without developing each one right away. To remove a packet for later development, follow these steps.

1. Expose negative and reinsert envelope: Do this as you usually would. After reinserting the protective envelope, do not move the control arm to P. Leave it at L.

2. Depress film release lever (R): Using your left thumb, push it in as far as it will go and hold it there. Now carefully withdraw the entire packet from the holder. Do not remove your thumb from the release lever until the packet is completely out of the holder.

3. Identify exposed but unprocessed packet: You can do this by crimping a corner of the envelope, or by marking the edge lightly with a pencil or pen.

To develop the picture, reinsert the exposed packet into the film holder as when first loading. Then process the packet in the usual manner.



Care of prints

Coat black and white prints: Black and white prints must be coated as soon as possible (within two hours) to protect them from scratches, fingerprints, and fading, and to prevent changes in tone. Lay the print face up on a clean, smooth surface, such as the film box or sheets of paper mounted on a clipboard.

Hold the coater by the plastic handle and run the liquid-soaked side down the length of the picture, away from you. Use 6 to 8 overlapping strokes and moderate pressure. Cover the entire print, including the borders. Be careful not to scratch the print with the edge of the coater.

One coater contains sufficient liquid for four 4 x 5 prints. To get more liquid from a partly used coater, press it down on the tab end of the print, then spread the squeezed-out liquid across the picture. When the coater is not being used, keep it tightly sealed in the plastic vial to prevent evaporation of the fluid.

After coating, allow the print to dry thoroughly. This normally takes only a minute or two, but in conditions of high humidity, it may take longer. Keep freshly coated prints away from each other, or they will stick together.

Never write on the back of the picture area; you may damage the print surface; write only on the borders of the print, either on the back or on the front.



Mount color prints: All Polacolor prints should be mounted to protect them from curling or from being bent and cracked due to rough handling. The print mounts are packed in the film box, under the tray containing the film packets. Be sure the print is thoroughly dry before mounting it. Detailed instructions appear on the print mounts. **Never coat color prints.**

Storage: Do not use corner mounts, paste, glue or rubber cement to mount prints. Many adhesives contain impurities that discolor pictures. Never put pictures in albums with black paper leaves. The safest way to handle and store Polaroid 4 x 5 prints is in the thin, transparent acetate sleeves that are sold for protecting 4 x 5 negatives and color transparencies.

Picture problems

No exposure: A completely black picture indicates that no light reached the negative. This can be caused by (a) failure to insert the film packet all the way into the holder when first loading; (b) failure to withdraw the protective envelope before exposing; or (c) failure of the cap to catch properly when the film packet was inserted. Check for proper insertion of the film packet by gently running your thumb and forefinger over the part of the withdrawn envelope marked **DO NOT PRESS HERE**. If you can feel the pod, the negative was withdrawn accidentally with the envelope; reinsert the envelope all the way, withdraw it again, and check for the pod. If this trouble occurs frequently, check the holder for possible malfunction.

Missing corners: With black and white film, this problem is caused by pulling too fast; with color film it is caused by pulling too slow. Pull moderately fast, without hesitation.

Spots: Deposits of dirt or foreign matter on the steel rollers will cause evenly spaced spots or marks across the length of the picture. Inspect and clean the rollers regularly. (See instructions on page 13.)

Streaks: If your pulling motion is uneven or jerky when removing the film packet, the rollers will leave impressions across the picture in the form of vertical streaks. Always pull smoothly, without hesitation.



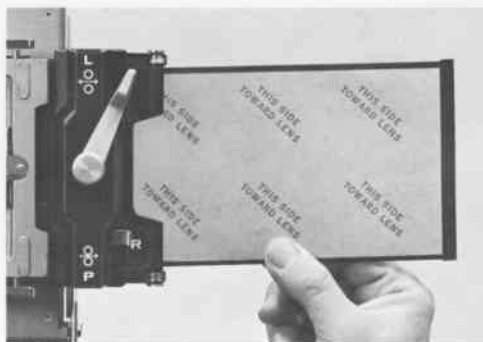
Black edge: Failure to reinsert the protective envelope all the way into the holder after exposure will produce an uneven black strip along the picture edge. Always push the envelope in until it is just visible in the holder recess.

If film packets are subjected to long periods of high humidity before use, the protective envelope may soften and bend, preventing full re-entry into the holder after the exposure is made. Detailed information on protecting the film against humidity is included in the instructions packed with the film.



Mechanical problems

Detached envelope: If the packet is loaded backwards (see illustration), the protective envelope will detach completely when withdrawn for exposure. To gain access to the negative (which remains inside the holder), open the hinged cover and disengage the rollers just as you would for cleaning. Move the control arm to P and withdraw the negative by pulling the negative tab.



Detached cap: The cap may occasionally loosen and remain trapped in the holder when the packet is removed. To dislodge it, load an empty envelope, then depress the film release lever (R) and carefully withdraw the envelope and cap, as if removing an exposed packet for later development (see page 9, photo 4).



How to clean the rollers

The two steel processing rollers are vital parts of the instant picture system. Dirt on the rollers can cause repeated spots on the print and poor colors. Check regularly to see that the rollers are clean and free of foreign matter.

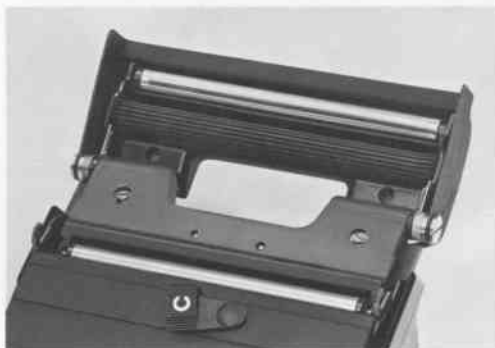
1. Move control arm to L:

2. Open cover: Slide the cover latch (C) down and raise the hinged roller cover.

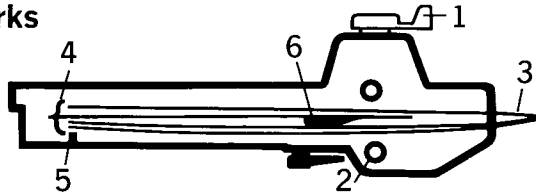
3. Release roller assembly: Disengage the hooks (A) at the ends of the rollers. The top roller will now swing out to permit easy cleaning of the entire assembly.

4. Clean rollers: Turn and inspect the rollers, especially at the ends. Rub off any deposits with a damp cloth. Also clean the rubber light seal roller. Never scrape the rollers with anything metallic, nor with your fingernail.

5. Replace roller assembly: Replace the top roller, engage the hooks, then close and latch the cover.

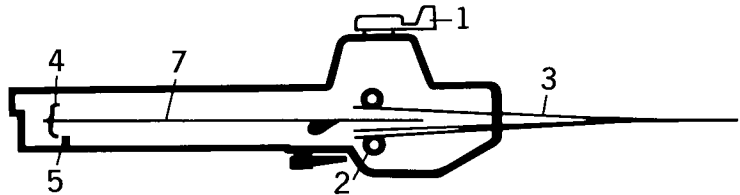


How the holder works



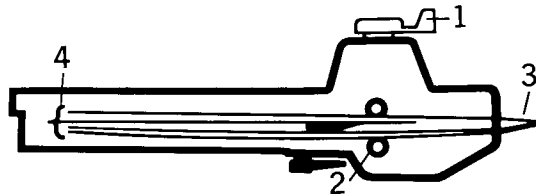
1. Loading film: With control arm (1) at L, rollers (2) are apart so film packet (3) can pass through freely. Cap (4) is held by spring loaded retainer (5). Layers of film packet are, from bottom to top: protec-

tive envelope, non-light sensitive positive print sheet, light sensitive negative secured to cap (4), protective envelope. Pod of developer (6) is attached to negative, and lies between it and positive sheet.



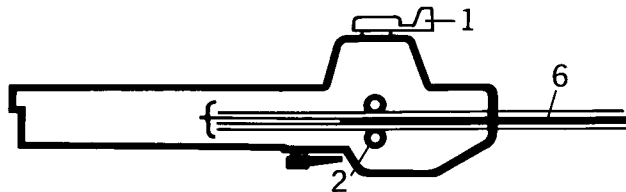
2. Making exposure: Control arm (1) is still at L and rollers (2) are apart. Envelope (3) which is only lightly held by cap (4) is withdrawn along with positive print sheet.

Cap (4), held in place by retainer (5), is tightly crimped to negative (7) which stays in holder for exposure.



3. After exposure: Envelope (3) is pushed back into holder; again it is held by cap (4). Control arm (1) is moved to P. This brings rollers (2) together and presses them tightly

against film packet (3). Moving arm to P also retracts retainer (5 in drawings above) so cap (4) and negative attached to it are withdrawn with rest of film packet.



4. To develop: With control arm (1) at P, packet is drawn through steel rollers (2) which crush pod and spread developer (6)

evenly between positive and negative. This starts development of picture.