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Polaroid  
SX-70  
SONAR  
OneStep  
Land  
Camera

# Polaroid

## **Polaroid introduces sonar focusing — the ultimate in one-step photography**

That unexpected moment, that perfect smile, will never again be lost while you pause to set the lens.

The instant you see your picture, just aim and shoot. With sonar focusing, the camera sets the lens instantly, automatically.

Now, nothing interferes with seeing the shot and taking it.



**(See "How sonar focusing works" inside this foldout.)**

## How sonar focusing works

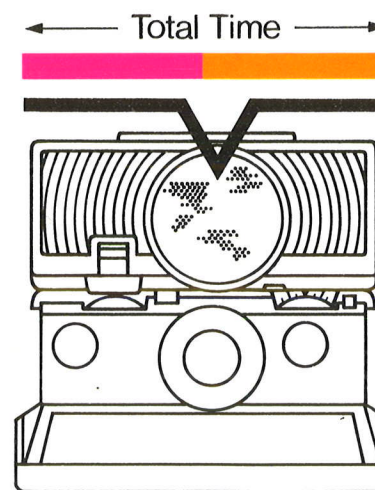
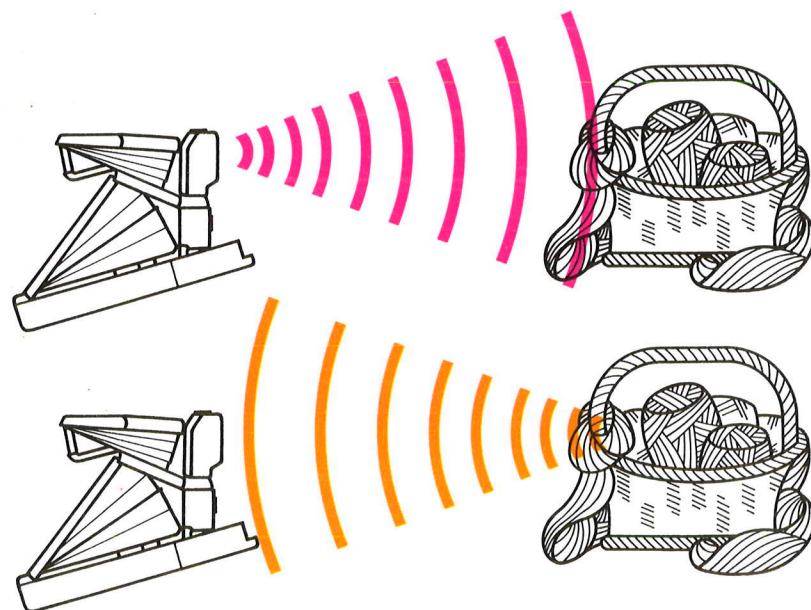
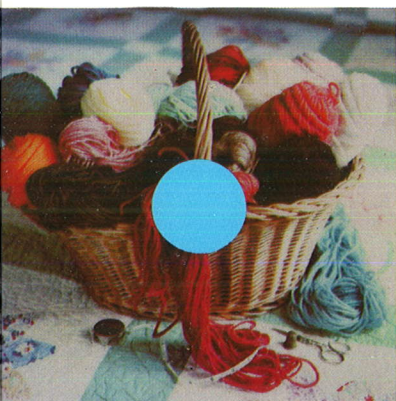
As you begin to press the shutter button, your camera releases sound waves to the central part of the scene (approximate area marked in blue).

The frequencies are far beyond our range of hearing and travel at the speed of sound (1,100 feet per second).

The split second it takes for the sound to reach your subject and the echo to return is fed into a tiny electronic computer inside the camera.

The computer uses this time measurement to calculate the distance between the camera lens and your subject, then signals a motor to turn the lens until your subject is in sharp focus.

This extraordinary chain of events takes place in less than  $\frac{1}{3}$  of a second.



## Contents

Please spend a few minutes reading this booklet. It could mean the difference between taking consistently good pictures or disappointing ones.

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## Call us, free

If you ever have a question about your camera or your pictures, call us toll free . . .

**800-225-1384**

from anywhere in the continental U.S.A. except Massachusetts and Alaska. From those states, call collect—(617) 864-4568. In Canada, call toll free—800-261-6970. Our Customer Service representatives can be reached every weekday from 8 a.m. to 5 p.m., your local time.



## Film and flash

Your camera uses Polaroid SX-70 Land film and FlashBars. Each film pack provides ten color pictures and contains a battery that powers the camera. Each FlashBar has ten bulbs.

You'll never waste a flash or film with this camera. It will not let a bulb fire when a film pack is empty and will not make an exposure when all the bulbs on one side of the FlashBar have been fired. Your camera also finds the next good bulb in a partly used FlashBar.

Please read the important electronic flash statement on page 39.



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## Features

### New with sonar focusing:

- Automatic and precise focusing in any light, even total darkness.
- Can "preview" before you shoot to see what you'll get in the finished picture.
- Built-in "use flash or tripod" indicator.

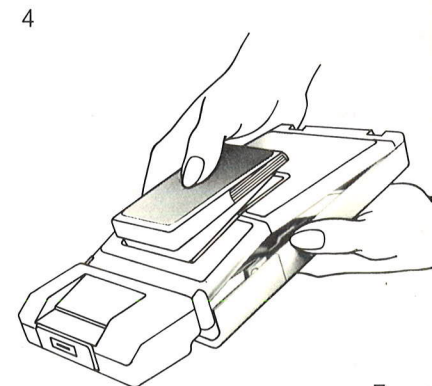
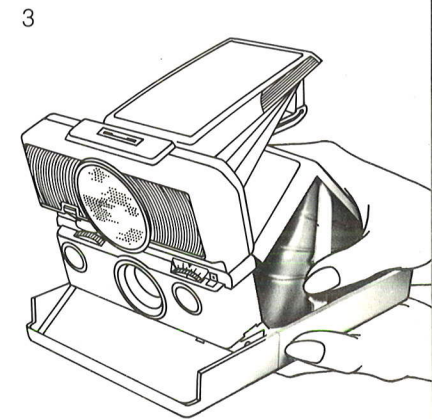
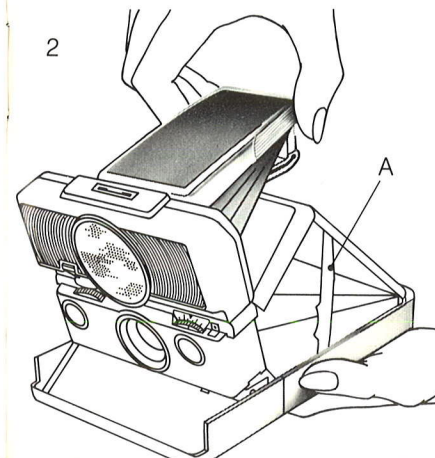
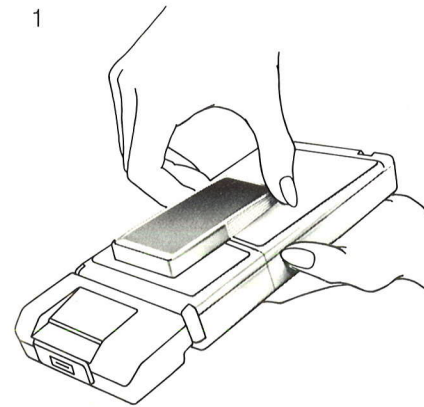
### Standard with SX-70:

- Through-the-lens viewing
- Automatic exposure control for daylight and flash pictures.
- Pictures from 10.4 inches to infinity (flash to 20 feet).
- Can shoot as fast as every 1.5 seconds.
- 4-element, 116mm, precision glass lens.
- Variable aperture from f8 to f74.
- Variable shutter speed from 1/180 of a second to 14 seconds.
- Flash in daylight to eliminate shadows.
- Automatic time exposures to 14 seconds.

## To open and close the camera

**Opening:** Hold the camera in the palm of your left hand. Lift the thin end of the viewfinder cap and pull it straight up until the cover support (A) locks.

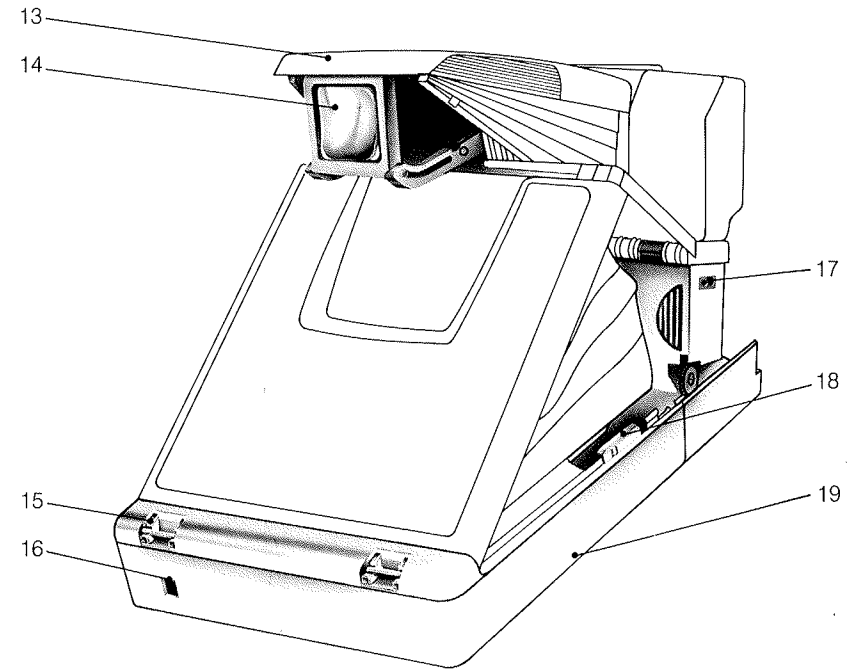
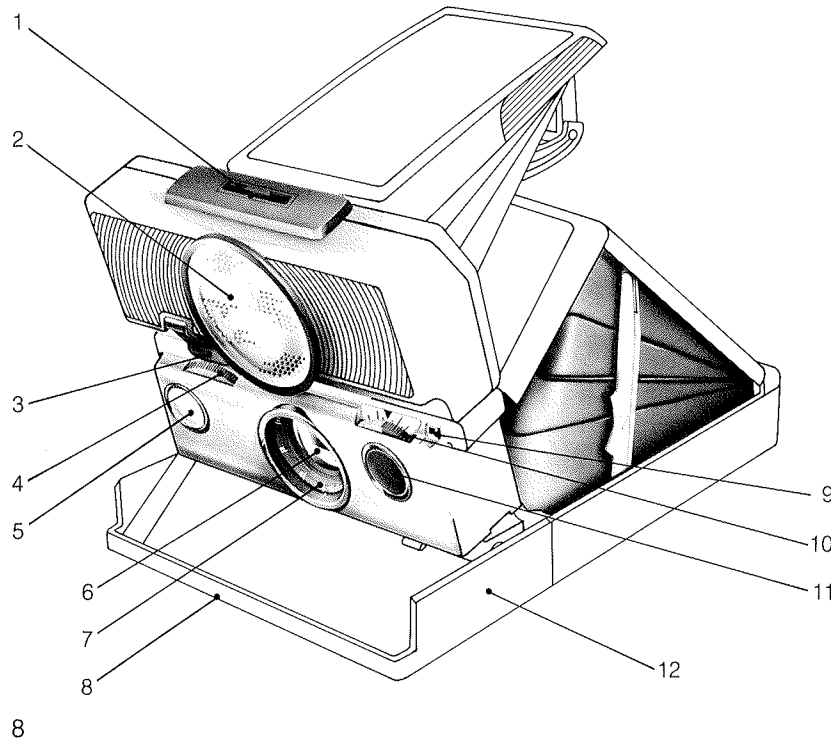
**Closing:** Push the cover support toward the rear of the camera. Press down on the viewfinder cap until **both** sides of the camera latch.



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## Camera parts

- |   |   |   |   |
|---|---|---|---|
| 1 FlashBar socket   | 8 Picture exit slot   | 13 Viewfinder cap   | 17 Remote shutter button connector  |
| 2 Transducer<br>(sends the sound waves and receives the echo) | 9 Sensor<br>(for the "use flash or tripod" indicator inside the viewfinder)         | 14 Viewfinder eyepiece  | 18 Yellow bar<br>(opens film door)  |
| 3 Manual focus switch   | 10 Lighten/Darken control<br>(use only in special lighting situations; see page 26) | 15 Neckstrap connectors (follow the instructions on the neckstrap sleeve)   | 19 Tripod socket<br>(is on the bottom of the camera; accepts a standard tripod screw) |
| 4 Manual focus wheel  |   | 16 Picture counter<br>(goes to 10 when you load a new or partly used film pack into the camera; counts down to show how many pictures are left) |   |
| 5 Shutter button  | 11 Electric eye   |   |   |
| 6 Lens<br>(4 element, 116mm, f/8)                             | 12 Film door  |   |   |
| 7 Distance scale  |   |   |   |



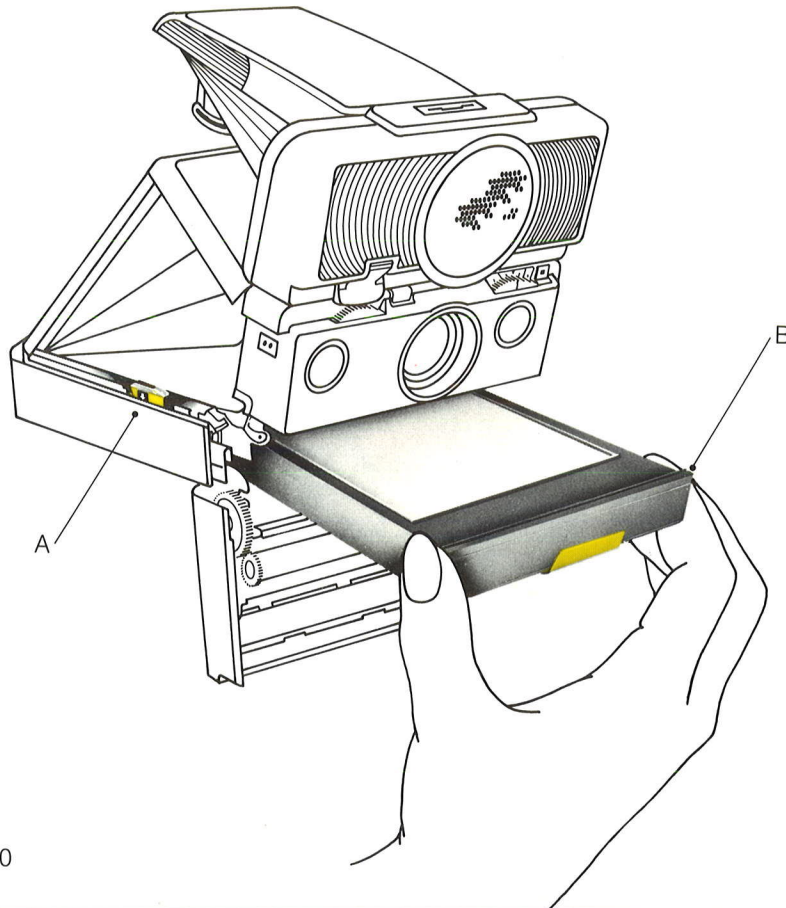
### To load the film

Push down on the yellow bar (A).  
The film door will drop open.

Hold the film pack by its edges  
only. (Gripping the pack above and  
below the yellow tab may damage  
the film.)

Push the film pack into the camera  
until the narrow strip (B) snaps  
open. Close the film door. The  
camera will eject the film cover.

To remove an empty pack, pull  
the yellow tab.

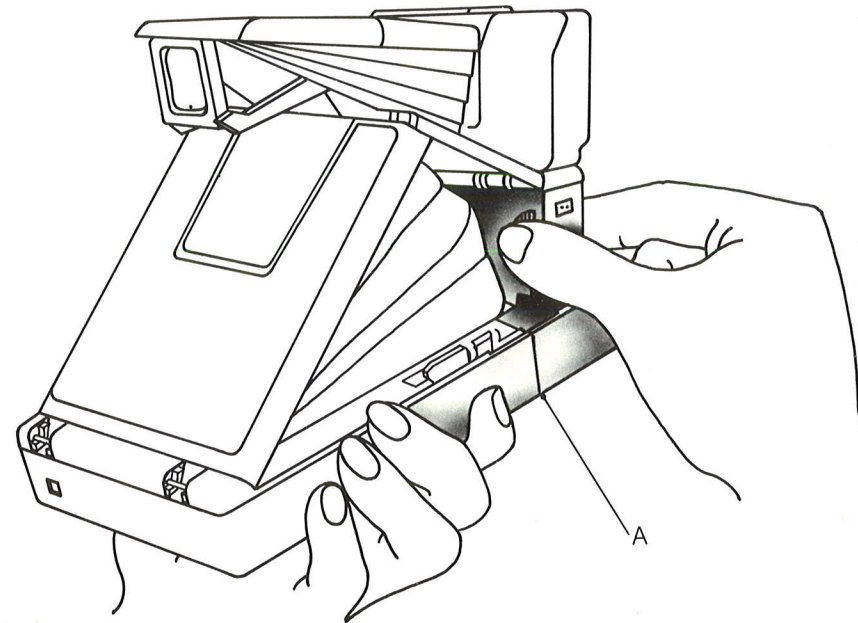


### To hold the camera

Grip it firmly in the palm of your  
left hand, thumb and fingers behind  
the hinge (A)

Place your right thumb on the semi-  
circle, index finger on the shutter  
button, and curl the other fingers  
into your palm.

It's important to hold the camera  
as shown. Then, when you squeeze  
the shutter button, your fingers will  
not press against the bellows or  
block the picture exit slot in front.





## How sonar focusing lets you "preview" the picture

To familiarize yourself with sonar focusing and "previewing," stand a few feet from your subject. Then look through the viewfinder. Notice that the scene appears unsharp.

*Lightly* press the shutter button part-way and hold it there. You'll hear a brief whirring sound as the lens brings your subject into sharp view. (If film is ejected, you pressed too hard and accidentally took a picture.)



What you now see in the viewfinder is a "preview" of what the finished picture will look like. If it isn't exactly what you want, you can release the button, change position or camera angle, then *lightly* press again for another "preview." When you're ready to shoot, squeeze the button all the way.

"Previewing" helps you to plan a picture carefully. For quick snapshots, however, there's no need to hesitate. Just aim and shoot as described on the opposite page.

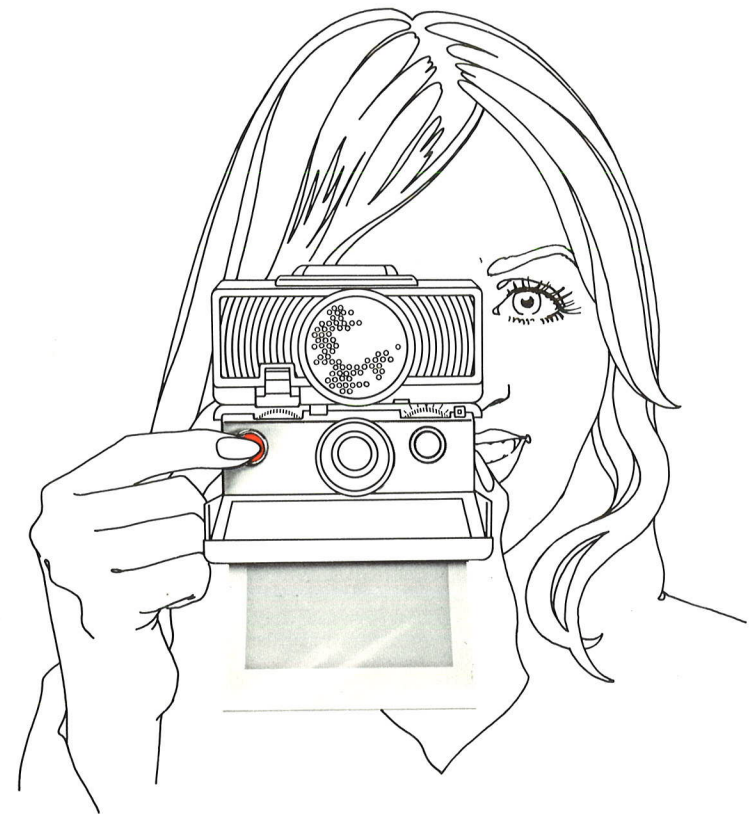
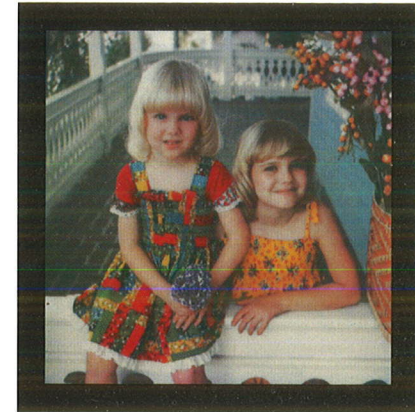


## To aim and shoot

Bring your eye close to the viewfinder eyepiece so you can see all four corners of the black frame inside.

Squeeze the shutter button all the way. **Hold the camera steady until the film is ejected.**

Remove and handle the developing picture by its wide white border.



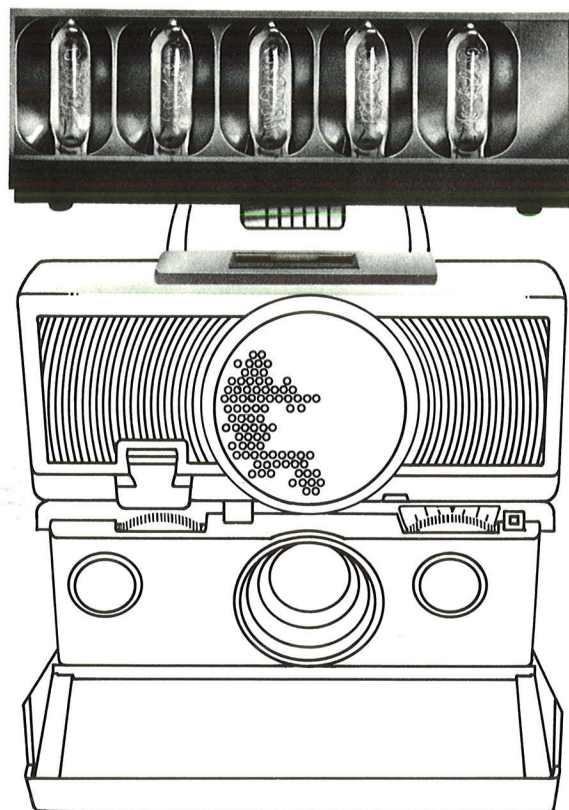
## Use flash for most indoor pictures

Insert a FlashBar into the FlashBar socket. Always do this with the camera pointing away from you.

Indoors, you can take flash pictures of subjects **10.4 inches to 20 feet from the camera.**

You'll get particularly good flash pictures of people when they are 4 to 6 feet away and near a colorful background.

**Flash pictures should not be taken where the atmosphere contains gases or dust that may be ignited by a spark.**



## Watch for your camera's "use flash or tripod" indicator

As you start to press the shutter button, you may see a red light in the right side of the viewfinder.

It warns that the lighting on the scene is not bright enough for hand-held picture taking. Outdoors, the red light will most likely appear when it is heavily overcast, at dusk or when you're shooting in a shaded area. It will also appear indoors in most room lighting.

If you see the red light, release the shutter button. Then use flash or place the camera on a tripod for a time exposure. Otherwise, your picture may appear dark and fuzzy.





## You can use flash in daylight

This exciting feature, called "fill-flash," can correct lighting situations that might otherwise have produced disappointing results.

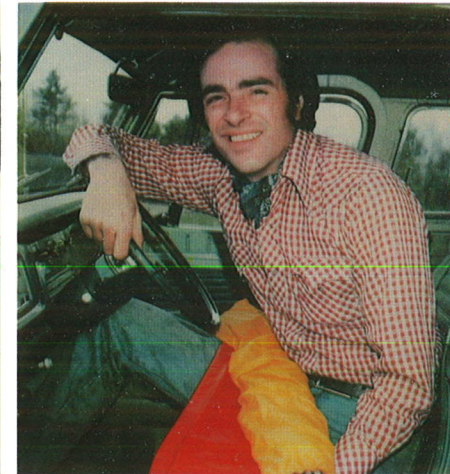
Although you can use "fill-flash" when your subjects are **4 to 12 feet from the camera**, you'll get particularly good results when they are 4 to 6 feet away.

Here are the typical ways "fill-flash" can help in daylight:

Strong sunlight can create harsh facial shadows. Flash can fill in the shadowed areas with even, flattering light.

Your subject may be forced to squint when facing bright sunlight. To get the natural expression you want, take your subject out of direct sunlight and use "fill-flash."

When the sun is behind your subject (but not shining directly into the lens), your subject usually will be too dark in the picture. "Fill-flash" can provide the added light your subject needs.



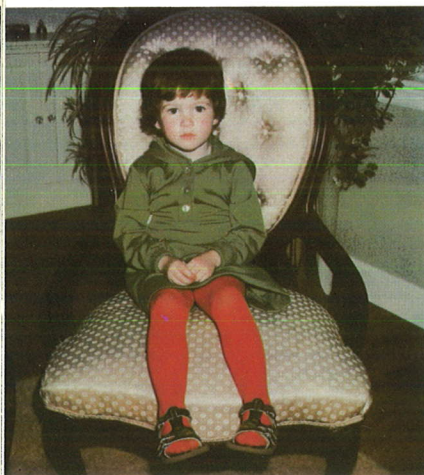


## Indoor flash hints

### Watch the background

To assure that it will be well lit by the flash, the background should be colorful and near your subject.

When the background is dark, or far behind your subject, or beyond the flash range, it will be too dark in the picture.



### Arrange groups carefully

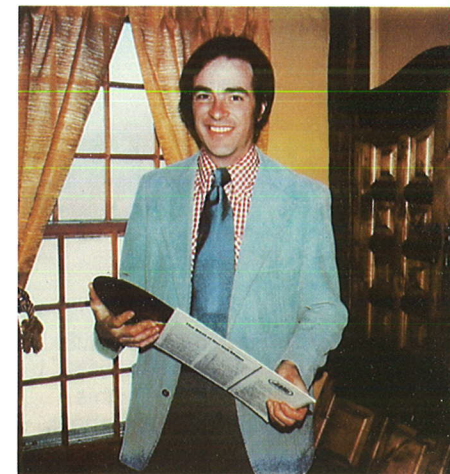
All the people in a group should be about the same distance from the camera. Then everyone will be lit evenly by the flash.



### To avoid a flash reflection

When shooting toward a reflective object or background (mirror, window, eyeglasses, etc.), stand to one side of your subject and shoot from an angle to avoid a flash reflection in the picture (see below).

However, when the reflective surface is smooth and flat and is the central part of your main subject (glass enclosed art, wall hanging, etc.), shooting at an angle may cause the sound waves to reflect away from the camera. If this happens, the lens will be set incorrectly and your picture will be unsharp. To avoid this, you can set the lens manually (see page 28).



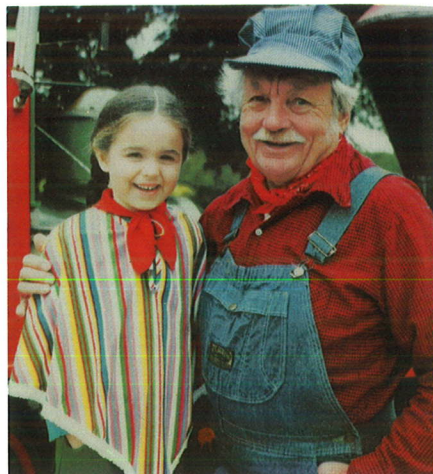


## Daylight picture hints

It's easy to take beautiful daylight pictures. Just keep these points in mind:

- In bright sunlight, stand so the sun is behind you or to the side.

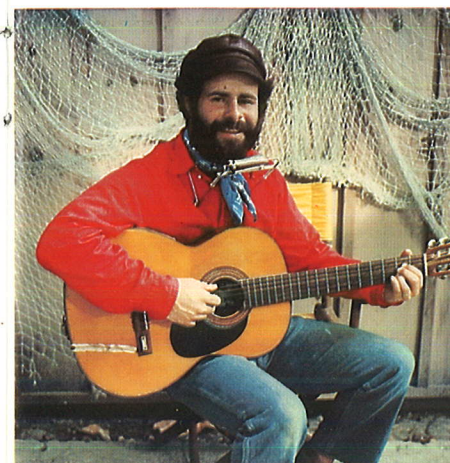
- Move in close. You'll get particularly good results when your subject is about 4 to 5 feet from the camera. Then important details fill the picture and backgrounds are less distracting.



- Don't just wait for a special occasion. Photograph your subjects when they least expect it. Your camera is perfect for this type of shot—just aim and shoot.



- Save action pictures for bright, sunlit days. Then your camera's shutter will work at top speed, stopping all but extremely fast action.



- Give your subjects something to do. Then they'll feel relaxed, not stiff or posed.