# WILSONWERKS ARCHIVES

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# Polaroid Spectra System Onyx Camera



Stone John

Boston WA

### Welcome to the Polaroid Spectra System of photography

All of us at Polaroid are very proud of the accomplishments that have culminated in the Spectra System. More than fifty innovations in photographic science, engineering, electronics, chemistry, and camera design have created the finest instant picture system in our history.

We believe you will find taking pictures with your Spectra System an enjoyable experience—one that will add to your special occasions and daily life. We are confident your Spectra pictures will be among your favorite photographs.

Our new system includes an elegant camera, a new color-rich film, many versatile accessories to make your picture taking even more rewarding, as well as new high-quality laser prints and enlargements for gallery display.

Thank you for selecting the Spectra System camera. We look forward to hearing your reaction to our new system.

William J. McCune, Jr. Chairman

I.M. Booth President

Chief Executive Officer

Contents	Features The camera (front and back views) The camera's advanced computer circuitry The system control panel Spectra System film The autofocus system	6 8 9 10 12	The Quintic lens system The viewfinder displays The programmed flash The self-timer Photographing a distant scene through glass The exposure control	13 14 16 18 19 20
	Taking your first picture Open the camera Check the control panel switches Load the film	24 25 26	Position your subject Take the picture To remove an empty film pack To close the camera	27 28 30 31
	<ul> <li>A guide to better pictures         Color         Distance         Background         Composition     </li> </ul>	34 35 36 37	The Polaroid Photography Club Laser prints and enlargements Spectra System accessories	38 39 40
	<ul> <li>Consumer Resource Center: 800-225-1384 Troubleshooting Lens care Picture care</li> </ul>	44 48 48	Film care Camera repair Warranty Index	48 48 49 50

**Features** 

Taking your first picture

A guide to better pictures

This product is listed by Underwriters' Laboratories, Inc. (UL). As a condition of listing, UL requires that basic safety information be provided.

# **IMPORTANT SAFEGUARDS**

AS WITH ANY BATTERY-OPERATED EQUIPMENT, OBSERVE THESE BASIC SAFETY PRECAUTIONS:

- 1. FOLLOW ALL OF THESE INSTRUCTIONS.
- DO NOT USE THE CAMERA IF IT HAS BEEN DAMAGED, UNTIL IT HAS BEEN EXAMINED AT AN AUTHORIZED POLAROID SERVICE CENTER.
- 3. DO NOT DISASSEMBLE THE CAMERA. TO REDUCE THE RISK OF AN ELECTRICAL SHOCK, SERVICE OR REPAIR WORK MUST BE DONE ONLY BY AN AUTHORIZED POLAROID SERVICE CENTER. INCORRECT REASSEMBLY CAN CAUSE AN ELECTRICAL SHOCK WHEN THE CAMERA IS USED AGAIN. DO NOT IMMERSE THE CAMERA IN WATER OR OTHER FLUIDS.

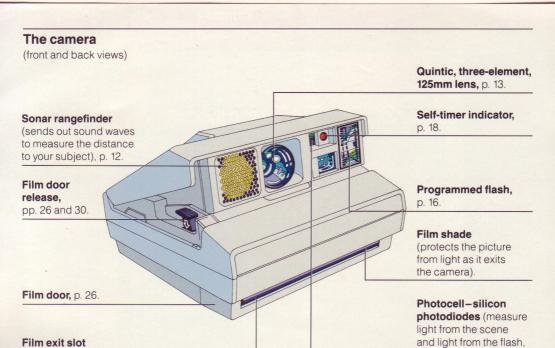
# PLEASE KEEP THESE INSTRUCTIONS



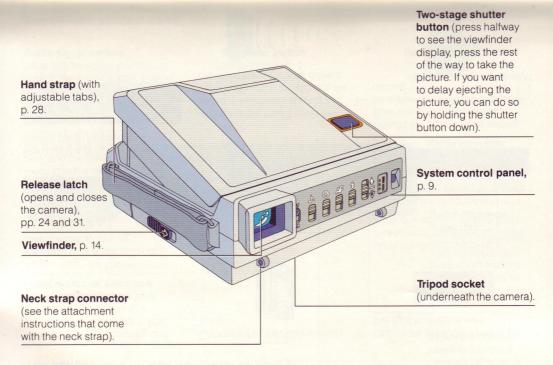
### **Features**

Taking your first picture

A guide to better pictures



indoors and outdoors).

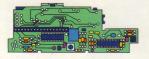


7

# The camera's advanced computer circuitry

Over 30 complex focusing and exposure decisions are made, within 50 thousandths of a second, to give you the best possible picture, every time.

As you touch the shutter button, your camera's advanced computer circuitry:



Monitors the position of the control panel switches.



Confirms that the flash is ready to fire.



Directs the sonar rangefinder to send sound waves to your subject.



Measures the time it takes the sound to reach your subject and the echo to return to calculate the precise distance to your subject.



Directs the photocell to measure the light from the scene.



Uses the distance and light measurements to blend light from the scene with just enough flash.

Transmits the distance and light readings to the viewfinder display.



Selects the optimal lens setting. aperture, and shutter speed for a sharp, beautifully exposed picture.



The system control panel

Audio signal switch

(slide it down when you want to turn off the warning tone, beeps, or chimes), pp. 15, 18, and 30.

Feet or meters selector (slide it down, using the tip of a ball-point pen, and the distance reading in the view-

finder will be in meters).

Sonar autofocus override (slide the switch down to turn off the autofocus system),

**Programmed flash** override (slide the switch down to turn off the flash), p. 19.

Self-timer switch

(slide it down to get into your picture),

Remote control access

(for the Spectra System Remote Control accessory), p. 40.

Picture counter

(counts down to show how many pictures are left in the film pack).

Rapid-recharge indicators:

Red light (means the flash is charging). Green light (means the flash is ready to fire and you can take a picture).

**Exposure control** 

(use it to lighten or darken a picture), p. 20.

Taking your first picture

A guide to better pictures

# Spectra System film

**Polaroid Spectra System film** produces the most brilliant colors in instant photography. This film was developed just for Spectra System cameras and is the only film that can be used in your camera.

Each film pack provides ten pictures and contains a **fresh battery that powers all camera functions**.



A new dye molecule makes colors noticeably brighter . . .



... and more detail can be seen in the shadowed areas.





The larger rectangular format allows you to include more in the picture, both vertically . . .



... and horizontally.

A film expiration date appears on the side of every film box. This date is your assurance that you are buying fresh film.

To load film into the camera, see page 26.

# The autofocus system

As you press the shutter button, your camera sends sound waves—within 10 thousandths of a second—to the central part of the scene (approximate area circled in white).



The sound waves are used to measure the distance to the person or object (in the central part of the scene) that is **closest to the camera.** 

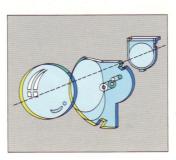
A built-in computer then uses this measurement to provide the correct lens setting, so **be sure that:** 

- The sound waves have a clear path to your subject. If an object (candlestick, centerpiece, etc.) prevents the sound waves from reaching your subject, the lens will focus on that object, and your subject will be unsharp.
- When photographing more than one person, everyone is at the same distance from the camera.
- When taking a picture through glass, you turn off the autofocus system.
   See page 19.

#### The Quintic lens system

Three patented, computer-designed lens elements combine to form an extremely compact yet powerful 125mm lens with these special features:

- Uniquely curved lens surfaces produce sharp pictures from 2 feet (.6m) to infinity.
- There is virtually no optical distortion, improving picture quality.
- The lens transmits light more evenly to the film.
- A longer focal length makes your subject fill more of the picture area.



13

When you have a film pack in the camera and press the shutter button **halfway**, a display appears in the viewfinder to help you take the best possible picture.

When you see **a number in the viewfinder**, it tells you the distance to your subject (in feet or meters). This number will help you follow the distance recommendations throughout this book.

When you see a green "good picture" symbol:



The conditions are right for taking a good picture. Press the shutter button **the rest of the way.** 

Service Control

14

When you see a flashing yellow "caution" symbol and hear a warning tone, you should correct a problem before taking the picture. The distance reading will help you identify the problem. When you see:

# The number 1



Your subject is too close. Release the shutter button and stand at least 2 feet (.6m) from your subject.

#### A number from 16 to 20



Your subject is beyond the flash range. Release the shutter button and move closer to your subject to keep within the 2 to 15 foot (.6m to 4.6m) flash range.

#### A number from 2 to 15



**The flash is off.** Slide the flash switch **up** to turn the flash back on.



Distance readings do not appear when your subject is beyond 20 feet (6.2m).

15

Taking your first picture

A guide to better pictures

# The programmed flash

Every time you take a picture, **indoors or outdoors**, your camera blends light from the scene with just enough flash to provide the right lighting for the best possible picture.

Here is an example of what this fill-flash system can do:





In this outdoor scene, photographed without flash, bright sunlight has created harsh facial shadows. Your camera blends sunlight with just the right amount of flash to soften shadows and reveal facial details.

# The rapid-recharge system

Not all of the energy needed to fully charge your camera's flash is used every time you take a picture. For example, when your subject is close, less flash is needed so less energy is used than when your subject is farther away. Polaroid's new Spectra System thyristor flash allows this energy to be saved, resulting in faster recharge times—usually less than a second.

#### Recharge indicators

The red light on the control panel will come on and the flash will automatically begin to charge every time you:

- · Load film into the camera
- Take a picture
- Press the shutter button halfway
- · Open the camera





When the green light comes on, the flash is ready to fire. The light will stay on for 20 to 30 seconds.

If you want to take a picture after the green light has gone off, lightly press and release the shutter button to turn the green light back on.

#### Flash range

#### Indoors

Your subject should be 2 to 15 feet (.6m to 4.6m) from the camera.

#### Outdoors

Your subject should be at least 2 feet (.6m) away.

17

Taking your first picture

A guide to better pictures

### The self-timer

The self-timer lets you get into your picture.

To use this feature, place the camera on a tripod or other steady support. If you attach the camera to a **table** tripod, be sure the camera is positioned over one of the tripod's legs for proper support.

Frame your picture in the viewfinder and press the shutter button **halfway** to be sure you get the green "good picture" symbol. Then **release** the shutter button.

Slide the self-timer switch all the way **down (a).** You now have **12 seconds** to get into your picture.

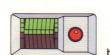
During the first **10 seconds**, the camera will beep and you will see a flashing red light **(b)** on the front of the camera.

**Two seconds** before the camera takes the picture, the red light will stay on and the beeps will become a steady signal to remind you to hold still and smile.

After the camera has taken the picture, it will not eject the film until you slide the self-timer switch **up (c). Do not close the camera** before you slide the switch **up.** 

If you want to stop the 12-second countdown, slide the switch **up (c)** to turn off the timer.







18

# Photographing a distant scene through glass

To avoid focusing on the glass and getting a flash reflection, turn off the autofocus and flash systems by sliding **both** switches **down**, as shown.





When you turn off the autofocus system, the lens sets for distant scenes (15 feet to infinity), requiring the picture to be taken in a special way:

- Be sure the scene is **at least 15 feet** (4.6m) from the camera and in **daylight.**
- Frame the picture in the viewfinder and press the shutter button halfway (you will not see a distance reading because the autofocus system is off).
- When you see the green "good picture" symbol, take the picture.

If you see the flashing yellow "caution" symbol and hear a warning tone, there is not enough light to take a good picture.

**Important:** When you have finished taking the picture, turn on the auto-focus and flash systems by sliding **both** switches **up.** 





19

Taking your first picture

A guide to better pictures

# The exposure control

Use the exposure control when you want to **retake** a picture to make it lighter or darker.

When retaking a picture to make it **lighter:** Slide the control **all the way up (a).** 

When retaking a picture to make it **darker:** Slide the control **all the way down (b).** 

After you have finished taking the picture, do not forget to return the control to the **center position (c)**.



a Lighten



b Darken



c Center

# Special situations

Pictures taken of people in highly reflective beach or snow scenes often turn out **too dark.** You may want to set the control **all the way up** to the **Lighten** setting **(a)** before taking this type of picture.





#### Important

If the background of a **flash** picture is too dark but your subject is well illuminated **(a)**, the background is too far away. Moving the control to the **Lighten** setting will **not** correct this problem, so be sure:

The exposure control is in the **center position.** Then retake the picture, placing your subject **near a background** and keeping both within the **2 to 15 foot** (.6m to 4.6m) flash range **(b).** 



a The background is too far from the subject.



**b** The background is close to the subject and both are within the flash range.

21

Taking your first picture

A guide to better pictures



Steve II Spel-

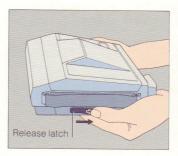
New Canan, Conn.

Taking your first picture

A guide to better pictures

# Open the camera

Place both hands under the camera as shown. Slide the release latch **back.** The camera will open automatically.





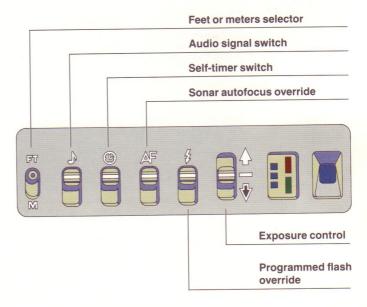
24

2

# Check the control panel switches

When you want the camera to be **fully automatic**, be sure all the switches are in a row, as shown.

For an explanation of what each switch does, see page 9.

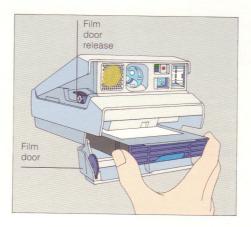


# Load the film

**Use only Polaroid Spectra System color film.** Other Polaroid films cannot be used with this camera.

Push the film door release down. The film door will open.

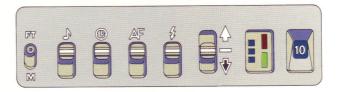
Hold the film pack by its edges only and slide it all the way into the camera.



26

As soon as you close the film door, the battery in the film pack will power the camera and you will see:

- The film cover eject.
- The picture counter set to 10.
- · A green light indicating the flash is ready to fire.



4

# Position your subject

You can take the most pleasing pictures of people, **both indoors and outdoors**, when they are **3 to 5 feet** (.9m to 1.5m) away. The distance reading in the viewfinder will help you stay within this range.

**Indoors:** Your subject should be within the **2 to 15 foot** (.6m to 4.6m) flash range. For best results, your subject should also be near a light-colored background.

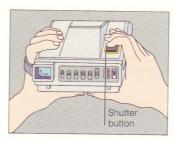
Outdoors: Your subject should be at least 2 feet (.6m) from the camera.

# Take the picture

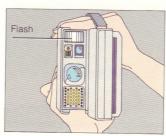
Slide your left hand through the hand strap and hold the camera as you would a pair of binoculars.

For horizontal pictures, hold the camera as shown in illustration (a). For vertical pictures, position the camera with the **flash on top** as shown in illustration (b) to get the best result.

a



b



28

Frame your subject in the viewfinder and press the shutter button **halfway**. You should see the following viewfinder display:



A green "good picture" symbol telling you to press the shutter button **the rest of the way** to take the picture. When you **release** the button, the camera will eject the picture.

The distance to your subject, for example, 5 feet.\*



If you see a flashing yellow "caution" symbol and hear a warning tone when you press the shutter button **halfway**, see page 15.

If you have pressed the shutter button **halfway** and want to change your position, **release** the shutter button and then make the change.





After you have taken the picture, the red light on the control panel will come on while the flash automatically recharges. The recharge time is usually **less than a second**. When the green light comes on, you can take another picture.

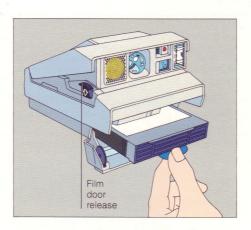
Handle the picture gently during the **first 60 seconds** of development. Fanning or bending the picture will disturb the development process. Wind can also affect development as the picture exits the camera; see "Picture care" page 48.

\*Distance readings do not appear when your subject is beyond 20 feet (6.2m).

# To remove an empty film pack

After you take the **tenth picture**, the picture counter sets to zero and **three chimes** sound to remind you to remove the empty film pack.





Push the film door release **down** to open the film door. Pull the blue tab to remove the film pack.

When the camera contains an empty film pack:

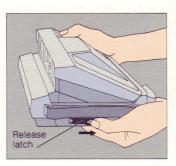
- You will hear three chimes when you open the camera.
- You will hear three chimes and then see a flashing zero in the viewfinder when you press and hold the shutter button halfway.

30

# To close the camera

When you have finished using the camera, close it to protect the lens.

Hold the camera as shown. Slide the release latch **back**. Push **both** sides of the cover down until it locks.







Rung Hat

New York

### Color

Since vibrant, bold colors are vividly reproduced on Spectra System film, look for color when framing the scene in the viewfinder. Or, use colorful props (a).

An awareness of contrasting colors in the world around you can improve the visual impact of your photographs. The brightly colored plane against the dark background is an example of a striking combination of color (b).





a

b

### **Distance**

34

You can take the most pleasing pictures of people when they are **3 to 5 feet** (.9m to 1.5m) from the camera. Then backgrounds become less distracting and attention focuses on your subjects.

The distance reading in the viewfinder will help you stay within this range.



The subject was **4 feet** (1.2 m) from the camera.



The subject was **8 feet** (2.4m) from the camera.

# **Background**

Indoors: Try to have a light-colored background (wall, curtain, etc.) a few feet behind your subject. Then both will be well lit by the flash.

**Outdoors:** Keep the background as simple as possible, so it will not compete with your main subject.





36

# Composition

When photographing landscapes, include something in the foreground to establish a feeling of depth or dimension (a).

Try framing your subject off center to create a sense of balance (b). To do this, center your subject in the viewfinder. Press and **hold** the shutter button **halfway** to lock in the correct lens setting. Then reframe your subject off center and press the shutter button **the rest of the way.** 





a

b

# The Polaroid Photography Club

You are cordially invited to join the Polaroid Photography Club – exclusively for Polaroid camera owners.

Every three months you will receive INSTANTS magazine—36 colorful pages with feature articles and photographs, tips, techniques, contests, and interviews with famous photographers—designed to make your Polaroid picture taking more rewarding and more fun.

Members of the Polaroid Photography Club receive value coupons on Polaroid film purchases, prints and enlargements, and photo accessories. Polaroid photo experts are available on a members-only, toll-free, "hot-line."

To receive a complimentary issue of INSTANTS, return your camera registration card.

For more information on the Polaroid Photography Club, call us toll free: 800-225-1384 from anywhere in the U.S.A.



38

# Laser prints and enlargements

Polaroid now offers laser prints and enlargements of your Spectra System photographs.

Using advanced laser technology, Polaroid Laser Print Service will produce borderless prints and enlargements, with superior color and detail, in these sizes:  $2 \times 2 \frac{1}{2}$ ,  $3\frac{1}{2} \times 4\frac{1}{4}$ ,  $4 \times 5$ ,  $5 \times 7$ ,  $8 \times 10$ , and  $11 \times 14$ .

See your local participating dealer. Or, for your convenience, there is a mailer in every box of Spectra System film and an order form on the back of the film cover, which is ejected when you load your camera.

If you have any questions or special requests, call us toll free: 800-421-1030. In California, call collect: 213-643-8093.





# Spectra System accessories

#### Remote Control

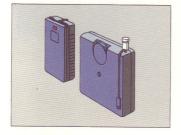
The remote control allows you to take pictures while standing up to 40 feet (12.2m) from the camera. This means you can stand with your family and quickly take several portraits, or photograph animals in their natural habitats.

#### **Photo Cassette**

This sleek  $4.38 \times 4.38$  inch (11 x 11cm) cassette is designed to store up to 15 Spectra System photographs and attractively display the first photograph.

#### **Table Gallery**

This handsome plexiglass stand displays up to 50 Spectra System photographs. Snap-on mounts provide for easy, flip-through viewing. Perfect for table, desk, or shelf display.



Remote Control



Photo Cassette

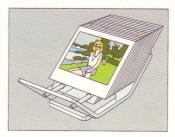


Table Gallery

40

# **Special Effects Filters**

This kit contains a filter holder, which slides over the camera lens, and five filters that provide these special effects:



Motion



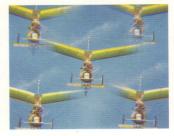
Red Center Spot



Starburst



Multi-Image 3



Multi-Image 5

For information on these and other Spectra System accessories, see your local dealer or call us toll free. See page 42.

### Consumer Resource Center

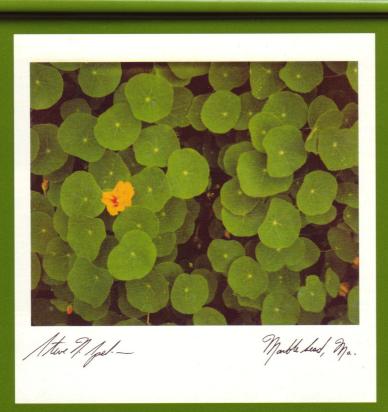
This section should help make your picture taking trouble-free. However, if you have any questions about your camera or pictures, or need additional information, call us toll free:

#### 800-225-1384

from anywhere in the U.S.A. (For hearing impaired TDD users, call: 800-448-6708; in Massachusetts, call: 800-848-7100.) Our representatives can be reached every weekday from 8 a.m. to 5 p.m., Eastern Time. In Canada, call toll free: 800-268-6970.

Or, if you prefer to write to us, the address is: Polaroid Consumer Resource Center, 784 Memorial Drive, Cambridge, Massachusetts 02139-4688. Please include a sample picture of the problem you are having with your camera.

Spectra System film, by that name, is sold in the U.S.A. and Canada. Before traveling to countries outside the U.S.A. and Canada, call us toll free to learn where film for your camera is being sold.



# **Troubleshooting**

If you are having a picturetaking problem, check to be sure your camera is fully automatic To make your camera **fully automatic**, be sure all the switches on the control panel are in a row, as shown. Then retake the picture. If this does not correct the problem, review this section

or call us toll free: 800-225-1384. In Canada, call toll free: 800-268-6970.



#### **Unsharp picture**



#### Cause

An object in the foreground prevented the sound waves from measuring the distance to the subject. The lens focused on the object, causing the subject to be unsharp and at times too dark.

#### Solution

The sound waves travel to the central part of the scene. Be sure there are no objects in front of your subject. See page 12.



When the subject is not centered in the picture, the sound waves pass by the subject and measure the distance to the background.

This causes the subject to be unsharp because the lens focuses on the background.

Center your subject in the picture.

Or, if you want to keep your subject off center, frame your subject in the middle of the viewfinder. Press and **hold** the shutter button **halfway** to lock in the correct lens setting. Then reframe your subject off center and press the shutter button **the rest of the way.** 

44

#### **Unsharp picture**



When the shutter button is pressed halfway, the correct lens setting locks into place. If the photographer or the subject moves after the shutter button is pressed halfway, it causes the picture to unsharp.

If you press the shutter button halfway and then decide to reposition yourself or your subject, release the shutter button and make the change.



When a picture is taken in low light (at dusk, in the shade, etc.), the shutter can stay open for as long as 2.8 seconds; and camera movement can cause the picture to be unsharp.

Hold the camera steady as you take the picture, or place the camera on a tripod or other firm support.

#### Background too dark



The background was either too far from the subject or beyond the flash range.

Be sure the exposure control is in the center position.

Place your subject **near** a background and keep both within the **2 to 15 foot** (.6m to 4.6m) flash range. See page 21.

#### Subject too dark



#### Cause

The camera's photocell measured the bright window light, causing the subject to be too dark.

#### Solution

Reposition your subject away from the bright background.



When a bright source of light (lamplight, candlelight, etc.) is in the central part of the scene and in front of the subject, the camera's photocell will measure the bright light, causing the subject to be too dark.

Move the source of light to one side of your subject so it is not in the central part of the scene.

#### Hazy picture



There are fingerprints on the lens.

Breathe on the lens. Then wipe it gently with a clean, soft facial tissue. **Do not use silicone-treated eyeglass tissues.** 

46

#### Repeated spots or bar pattern



The developer rollers inside the film door need to be cleaned.



Open the film door (it is all right to do this when there is film in the camera as long as it is not in direct sunlight). Clean the developer rollers with a lint-free cloth dampened with water, if necessary.

#### Picture too blue or too red/yellow



Pictures taken at temperatures below 55°F (13°C) can have a **blue** tint.

Try to keep the camera and film as warm as possible. Being careful not to bend the developing picture, immediately place it in a warm pocket for at least a minute.

Or, if you are near a warm place, hold the shutter button down to delay ejecting the picture.



Pictures taken at temperatures above 95°F (35°C) can have a **red** or yellow tint.

Keep the camera and film as cool as possible. Avoid storing the camera or film in hot places such as the glove or luggage compartment of a car. Keep the developing picture away from hot surfaces like the hood of a car.

#### Lens care

It is important to avoid touching the lens. Should you need to remove dust or fingerprints, breathe on the lens and wipe it gently with a clean, soft facial tissue. **Do not use silicone-treated eyeglass tissues.** 

#### Picture care

As the picture develops, its image area is dry because the development process takes place inside the film. This allows you to stack developing pictures.

During the **first 60 seconds** of development, handle the picture gently. Fanning or bending the picture will disturb the development process. Wind can also affect development as the picture exits the camera. You can delay ejecting the picture by holding the shutter button down until you can protect the picture from the wind. Hold the developing picture by its wide white border.

At temperatures below 55°F (13°C), immediately place the developing picture (being careful not to bend it) in a warm pocket for at least a minute. Or, if you are near a warm place, hold the shutter button down to delay ejecting the picture.

Also keep the developing picture away from hot surfaces like the hood of a car.

#### Film care

For best results, use Spectra System film when the temperature is between 55°F (13°C) and 95°F (35°C). At temperatures below 55°F (13°C), keep the camera and film as warm as possible. Above 95°F (35°C), keep the camera and film as cool as possible. Store the film below 75°F (24°C), if possible. In its sealed foil pouch, the film can be refrigerated (not frozen). Let the film reach room temperature before using it; this will take at least an hour.

# Camera repair

48

If you think your camera needs repair, please call us toll free: 800-225-1384. In Canada, call toll free: 800-268-6970.

# Full one-year warranty

If your camera proves to be defective within the warranty period, we will, without charge, either repair it or at our option, replace it with a fully reconditioned camera.

The warranty period is **one** year from the original date of purchase. **To verify the warranty period, you should keep the sales slip or other proof of the purchase date.** Without this information, the warranty will be determined by the manufacturing date on the camera.

The repair or replacement of your camera is guaranteed for the remaining warranty period on your original camera. If, within the warranty period, your camera is mailed to us for service from inside the U.S.A., it will be returned with a postal refund.

The warranty does not cover damage caused by accident, misuse, or tampering with the camera, and a charge will be made for such repairs.

**For warranty service**, the camera must be returned to and repaired by a Polaroid Service Center or Authorized Service Center in the U.S.A. or Canada. You can return the camera through your Polaroid camera dealer. If that is not convenient, call us toll free: 800-225-1384. In Canada, call toll free: 800-268-6970.

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

This warranty excludes all consequential damages. Some states do not allow the exclusion of consequential damages, so the foregoing exclusion may not apply to you.

### Index

Accessories, 40–41 Aperture, 8, back cover Audio signal switch, 9, 25 Autofocus system, 9, 12, 19, back cover

Background, 21, 27, 36, 45 Bar pattern, 47 Battery, 10, 27, back cover Beach scenes, 20 Beeps, 9, 18 Blue picture, 47

Camera care, 47
Camera size, back cover
Camera weight, back cover
Charge, Rapid-recharge
system, 17
Chimes, 9, 30
Circuitry, 8
Closing the camera, 31
Color, 10, 34
Composition, 37
Computer circuitry, 8
Consumer Resource Center, 42
Control panel, System control
panel, 7, 8, 9, 17, 25, 29, 44
Counter, picture, 9, 27, 30

Dark background, 21, 45
Dark subject, 46
Darken control, Exposure control, 20
Developer rollers, 47
Distance reading, 8, 9, 15, 19, 27, 29, 35
Distance recommendations, 14, 19, 27, 35
Distant scene, through glass, 19

Enlargements, 39 Expiration date, film, 11 Exposure control, 9, 20–21, 25, 45

Feet selector, 9, 25 Fill flash, Programmed flash, 16 Film, 10-11, 26, 42 Film advance, back cover Film care, 26, 47, 48 Film cover, 27, 39 Film door, 6, 26, 30, 47 Film door release, 6, 26, 30 Film exit slot, 6 Film expiration date, 11 Film loading, 17, 26-27 Film pack, removing, 30 Film shade, 6 Film size, back cover Film speed, back cover Film type, 26, back cover

Flash, Programmed flash, 6, 16–17, back cover
Flash range, 15, 17, 21, 27, 45
Flash reflection, 19
Flash switch, Programmed flash override, 9, 15, 19, 25
Focusing, 12, back cover

Glass, photographing through, 12, 19 Green "good picture" symbol, 14, 18, 19, 29 Green light, 9, 17, 27, 29

**H**and strap, 7, 28 Hazy picture, 46 Horizontal pictures, 11, 28

Information, 38, 39, 41, 42

Laser Print Service, 39
Lens, Quintic lens, 6, 13, back
cover
Lens care, 46, 48
Lens setting, 8, 12, 37, 44, 45
Light reading, 8
Lighten control, Exposure control, 20

Manual camera settings, 9 Meters selector, 9, 25

50

Neck strap, 7 Numbers, 14, 15

Opening the camera, 7, 17, 24, 30

Photo Cassette, 40
Photocell—silicon photodiodes, 6, 8, 46, back cover
Picture care, 29, 47, 48
Picture counter, 9, 27, 30
Picture format, 11
Picture taking, 28—29
Pictures, horizontal and vertical, 11, 28
Polaroid Photography Club, 38
Power source, battery, 10, 27, back cover

Prints, 39
Problems, Troubleshooting, 44–47
Programmed flash, 6, 16–17,

back cover Programmed flash override, 9, 15, 19, 25

Quintic lens, 6, 13, back cover

Rapid-recharge indicators, 9, 17 Rapid-recharge system, 17 Red light, 9, 17, 18, 29 Red picture, 47 Reflection, 19 Release latch, 7, 24, 31 Remote Control, 9, 40 Remote Control access, 9 Repair, 48 Retaking a picture, 20, 21, 44

Filter kit, 41

Self-timer, 18, back cover Self-timer indicator, 6, 18 Self-timer switch, 9, 18, 25 Service, 42 Shade, Film shade, 6 Shutter button, 7, 8, 12, 14, 15, 17, 18, 19, 29, 30, 37, 44, 45, 47, 48 Shutter speed, 8, back cover Snow scenes, 20 Sonar autofocus override, 9, 19, Sonar autofocus system, 9, 12, 19, back cover Sonar rangefinder, 6, 8 Sound waves, 6, 8, 12, 44 Special Effects Filters, 41 Spots, 47

Subject, distance to, 6, 8, 12, 14,

Straps, 7

29, 44

Switches. See System control panel System control panel, 7, 8, 9, 17, 25, 29, 44

Table Gallery, 40
Temperature range, film, 47, 48
Tripod, 18, 45
Tripod socket, 7
Troubleshooting, 44–47

Unsharp picture, 12, 44-45

Vertical pictures, 11, 28 Viewfinder, 7, back cover Viewfinder displays, 8, 14–15, 29, back cover

**W**arning tone, 15, 19, 29 Warranty, 49 Window, photographing through, 12, 19

Yellow "caution" symbol, 15, 19, 29
Yellow picture, 47

**Z**ero, flashing, 30 Zero, picture counter, 30

# **System specifications**

#### Aperture/shutter system:

Apertures: from f/10 to f/45. Shutter speeds: from 1/245 to 2.8 seconds.

#### Camera size:

Length: 6.34 inches (16cm). Width: 5.63 inches (14.2cm). Height: 2.96 inches (7.6cm) closed; 3.81 inches (9.6cm) opened.

#### Camera weight:

1 lb., 12  $\frac{1}{2}$  oz. (.8kg), without a film pack.

#### Film advance:

Automatic film advance; motorized picture ejection.

#### Film size:

Outer border: 4 x 4.06 inches (10.1 x 10.3cm). Image area: 3.60 x 2.90 inches (9.1 x 7.2cm).

#### Film speed:

ISO 600/29° (approx.).

#### Film type:

Polaroid Spectra System color film only. Starts developing in seconds. Ten pictures per pack.

#### Lens:

Patented Quintic, three-element, 125mm lens system. Ten-zone focusing from 2 feet (.6m) to infinity.

#### Photocell:

Dual-filter, silicon photodiodes. Green filtered cell measures visible light; black filtered cell measures infrared light for better indoor flash exposures.

#### Power source:

A fresh, 6-volt battery in each film pack powers all camera functions.

#### Programmed flash:

Built-in fill flash designed to be used indoors and outdoors. Recharge time: from 1 to 2.8 seconds. Flash duration: from 1/3000 to 1/20,000 of a second. Indoor flash range: from 2 to 15 feet (.6m to 4.6m).

#### Self-timer:

Built-in self-timer; blinking red LED and audio signal time the 12-second countdown.

### Sonar autofocus system:

Computerized autofocus system uses sound waves to accurately measure the distance to your subject and set the lens. Sonar ranging time: from 10 to 50 thousandths of a second.

#### Viewfinder:

100% viewing (no parallax) at 6 feet (1.8m) – a popular picture-taking distance. Six lenses, two prisms, and four mirrors provide sharp, clear viewing. Viewfinder magnification: .5x (subjects appear half lifesize).

#### Viewfinder display:

Display includes a digital readout in feet or meters and a yellow "caution" or green "good picture" symbol.