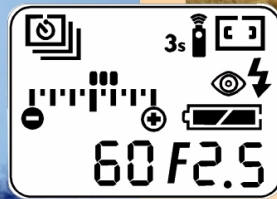


HP 912 Digital Camera

HP Imaging Technology



User's Guide

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Note: For more detailed information about the camera's features, see "Camera Specifications" on page 112.

Note: Capture, Playback, and Review modes have menus and related soft keys you can use to change your camera's settings and to edit and organize images. (PC Connect mode does not have menus or soft keys.)

Welcome to the *HP 912 Digital Camera User's Guide*. This guide will help you take high-quality pictures quickly and easily with your HP 912 digital camera.




Product Overview

The HP 912 is an SLR-type digital camera that offers control and creativity during the picture-taking process. It provides these key features:

- ◆ HP Imaging Technology
- ◆ 3x optical /2x digital zoom
- ◆ Three image type settings – One Shot, Continuous, and Timelapse
- ◆ Ten exposure modes – Auto, Portrait, Landscape, Close-up, Action, Night, Program, Shutter Priority, Aperture Priority, and Manual
- ◆ Manual focus mode and two auto focus mode settings – Normal and Macro
- ◆ Four timer mode settings – Off, 10-Second Timer, Remote, and 3-Second Remote
- ◆ Built-in, pop-up flash with four flash mode settings – Auto, Auto with Red-Eye Reduction, Forced On, and Forced On with Red-Eye Reduction
- ◆ A hot shoe for attaching an external flash

Your HP 912 camera comes equipped with four operating modes (see Table 1). To set the mode, turn the camera mode dial on the back of the camera to the mode you want to use.

Table 1: Camera Modes

Mode	Use this Mode to...
 Capture	Take pictures (or "capture images").
 Playback	View the captured images in a variety of ways. You can view images full screen, play back timelapse and grouped image sequences, and create slideshows of images.
 Review	Sort and edit the captured images in a variety of ways. For example, you can group, categorize, delete, and search for captured images.
PC PC Connect	Transfer images from the camera to a computer.

What's in this Guide

This *User's Guide* provides all the “how to” and reference information you need to use your camera successfully.

Part of Manual	What is Covered
“Chapter 2: Preparing to Take Pictures”	How to adjust settings in the status LCD, image LCD, and Capture mode menus to prepare your camera to take pictures.
“Chapter 3: Taking Pictures”	How to take simple point-and-shoot pictures, as well as more advanced pictures. Also how to use the zoom, Instant Review, and the sound recording features.
“Chapter 4: Viewing and Reviewing Images”	How to view images full screen, play back timelapse and grouped image sequences, and create slideshows of images in Playback mode. Also how to edit, organize, delete, and search for images in Review mode.
“Chapter 5: Sharing Images”	How to share images by transferring them to your computer, JetSending them to a printer, transmitting them to other cameras and printers, and viewing them on a television.
“Chapter 6: Menu and Soft Key Reference”	What each of your camera's menus and related soft keys do.
“Chapter 7: Troubleshooting”	How to fix common problems when using the camera, and how to contact HP Customer Care for help, if needed.
“Appendix A: Using the Preferences Menu”	How to use the Preferences menu to change a variety of your camera's general settings.
“Appendix B: Camera and Accessories Information”	Specifications for the camera, as well as information about some of the accessories that the camera supports.
“Appendix C: Product Warranties”	Limited product warranty and the HP Year 2000 warranty for the camera.
“Appendix D: Product Safety and Regulatory Information”	Safety information and regulatory notices regarding the camera and some of its accessories.
“Glossary”	Definitions of the terms related to your camera that are used throughout this guide and in the camera's <i>Quick Start Guide</i> .
“Index”	Where to find particular topics about your camera throughout this guide.

Note: If you choose to print this guide, be aware that printing it in color may take a long time. Therefore, you may want to print this guide in black and white, instead.

Note: It is assumed that you have already used the *HP 912 Digital Camera Quick Start Guide* to install the batteries and the memory card in your camera.

How to Use this Guide

You can use this guide online, or you can print it out. The main advantage of using it online is that you can use its built-in searching and linking capabilities on your computer to quickly find the information you need. Of course, an advantage of having a print-out is that you can take it anywhere you want to use your camera. You may also prefer to read information about your camera from a printed version, rather than on a computer screen.

This online guide is provided in Adobe® Acrobat® version 4.0 (.pdf) format. To learn how to use Acrobat's searching and linking features, see the online Help for the Acrobat software.

To print this guide, select **Print** from Acrobat's File menu. In the Print dialog box, either click the **OK** button to print the entire guide, or specify the **Print Range** of pages you want and then click **OK**.

Related Information

For a complete listing and description of your camera's features, including diagrams showing the locations of all the buttons, dials, displays, and so on, see the printed *HP 912 Digital Camera Quick Start Guide* that was included in your camera's box. Along with helping you use your camera for the first time to capture and view images, the *Quick Start Guide* also explains how to transfer images from the camera to your computer.

To learn how to use the software that came with your camera, see the software's online Help. All the documentation for the software is provided in the form of online Help within the software itself.

Finally, you can get project ideas, troubleshooting assistance, and up-to-date information about your camera and the HP Photo Imaging Software from the HP website at: www.hp.com/photosmart. Updates for your camera's firmware are also posted to this website from time-to-time. You can install these updates on your camera so that you can always have the most current functionality running on it.

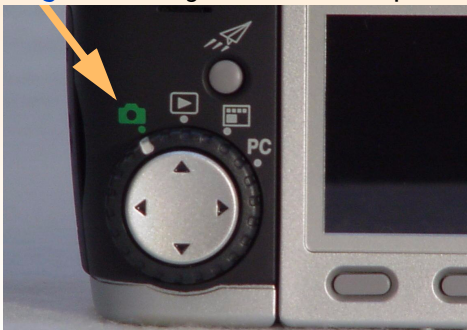
Overview

You can use your camera's default settings to take pictures in a point-and-shoot fashion, or you can use more advanced features that you set via the camera's status LCD and image LCD. This chapter explains how to prepare your camera to take pictures by adjusting various settings on it.

This chapter covers the following topics:

- ◆ “Accessing the Capture Mode and Powering on the Camera” on page 8
- ◆ “Setting the Exposure Mode” on page 9
- ◆ “Using the Status LCD” on page 12
 - ◆ “Using the Status LCD Buttons” on page 13
 - ◆ “Understanding the Exposure Bar Graph” on page 16
- ◆ “Using the Auto Exposure Lock (AE-L) Button” on page 16
- ◆ “Using the Sub-Dial” on page 17
- ◆ “Using Flash” on page 18
- ◆ “Using the Image LCD” on page 19
 - ◆ “Understanding the Text Message Area” on page 19
 - ◆ “Viewing the Camera Status” on page 21
 - ◆ “Using the Overlay Soft Key” on page 20
 - ◆ “Setting Auto/Manual Focus” on page 20
 - ◆ “Using the Capture Mode Menus” on page 22
 - ◆ “Using the 4-Way Controller” on page 22

Figure 1: Setting the Camera to Capture Mode



Accessing the Capture Mode and Powering on the Camera

To prepare your camera to take pictures, you must first set your camera to Capture mode and power on the camera:


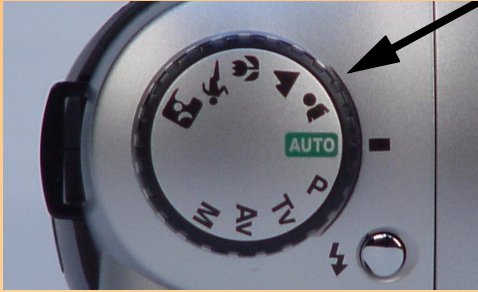
- 1 Turn the camera mode dial to  (see Figure 1).
- 2 Power on the camera by sliding the ON/OFF power switch on the top of the camera to the right and releasing it. The status LCD on the top of the camera turns on and displays the status of the camera.

Figure 2: Exposure Mode Dial



Note: An external flash is *only* supported with the Manual exposure mode setting.

Note: Most of the camera settings described for each exposure mode are set in the Photo Assist menu of Capture mode. For more information about these menus, see “Photo Assist Menu” starting on page 63.

Note: In the Auto exposure mode, the image type is set to One Shot, and the timer mode is set to Off. However, you can change the image type and timer mode. (See “Setting the Image Type” on page 13 and “Setting the Timer Mode” on page 14.) Also, the auto focus area is forced to the Wide setting in Auto exposure mode. (See “Setting the Auto Focus Area” on page 14.)

Setting the Exposure Mode

Turn the exposure mode dial on the top of the camera (see Figure 2) to set the exposure mode for the camera. There are ten exposure modes:

- ◆ Auto **AUTO**
- ◆ Portrait
- ◆ Landscape
- ◆ Close-up
- ◆ Action
- ◆ Night
- ◆ Program **P**
- ◆ Shutter Priority **TV**
- ◆ Aperture Priority **Av**
- ◆ Manual **M**

For the first six exposure modes listed above (Auto through Night), the camera automatically selects the appropriate settings for the specified scene. In addition to selecting the optimal aperture and shutter speed, the camera will change the settings in the Photo Assist menu. (See “Photo Assist Menu” on page 63.)

The next three exposure modes (Program, Shutter Priority, and Aperture Priority) allow you to set certain settings, but the camera automatically selects the shutter speed and/or aperture value. Finally, the Manual exposure mode gives you complete control over all the settings on your camera.

The following subsections explain each of the ten exposure modes.

Auto **AUTO**

This is an “auto everything” mode where all settings are at their defaults and cannot be changed. The following are forced to specific settings and are grayed-out in the Photo Assist menu:

- ◆ Auto Focus Range – Normal
- ◆ White Balance – Auto
- ◆ AE (Auto Exposure) Metering – Average
- ◆ Focus Lock – Lock
- ◆ ISO Speed – Auto
- ◆ EV Bracket – Off
- ◆ Exposure compensation – Off

Portrait

In this exposure mode, the camera automatically optimizes settings for portrait photography. In addition to biasing toward larger aperture openings, the following are forced to specific settings and are grayed-out in the Photo Assist menu:

- ◆ Auto Focus Range – Normal
- ◆ White Balance – Auto
- ◆ AE (Auto Exposure) Metering – Average
- ◆ Focus Lock – Lock
- ◆ ISO Speed – Auto
- ◆ EV Bracket – Off
- ◆ Exposure compensation – Off

Landscape

In this exposure mode, the camera automatically optimizes settings for taking pictures of distant subjects, such as landscape scenes. In addition to biasing toward smaller aperture sizes, the following are forced to specific settings and are grayed-out in the Photo Assist menu:

- ◆ Auto Focus Range – Normal
- ◆ White Balance – Auto
- ◆ AE (Auto Exposure) Metering – Average
- ◆ Focus Lock – Lock
- ◆ ISO Speed – Auto, with bias toward slower ISO speeds
- ◆ EV Bracket – Off
- ◆ Exposure compensation – Off

Close-up

In this exposure mode, the camera automatically optimizes settings for taking pictures of subjects close up. In addition to biasing toward smaller aperture sizes, the following are forced to specific settings and are grayed-out in the Photo Assist menu:

- ◆ Auto Focus Range – Macro
- ◆ White Balance – Auto
- ◆ AE (Auto Exposure) Metering – Average
- ◆ Focus Lock – Lock
- ◆ ISO Speed – Auto
- ◆ EV Bracket – Off
- ◆ Exposure compensation – Off

Note: When using Night exposure mode, you may want to use a tripod, since exposures in this mode are typically long.

Note: The Auto and the Auto with Red-Eye Reduction flash modes are *not* available in the Program exposure mode.

Note: The Auto and the Auto with Red-Eye Reduction flash modes are *not* available in the Shutter Priority (Tv) exposure mode.

Action

In this exposure mode, the camera automatically optimizes settings for taking pictures of subjects in action, such as people playing sports. In addition to biasing toward faster shutter speeds, the following are forced to specific settings and are grayed-out in the Photo Assist menu:

- ◆ Auto Focus Range – Normal
- ◆ White Balance – Auto
- ◆ AE (Auto Exposure) Metering – Average
- ◆ Focus Lock – Continuous
- ◆ ISO Speed – Auto, with bias toward faster ISO speeds
- ◆ EV Bracket – Off
- ◆ Exposure compensation – Off

Night

In this exposure mode, the camera automatically optimizes for dark scenes taken at night. The camera opens the shutter to collect ambient light. Then, if the flash is turned on, the camera fires the flash at the end of the exposure to illuminate objects in the foreground. The following are forced to specific settings and are grayed-out in the Photo Assist menu:

- ◆ Auto Focus Range – Normal
- ◆ White Balance – Auto
- ◆ AE (Auto Exposure) Metering – Average
- ◆ Focus Lock – Lock
- ◆ ISO Speed – Auto
- ◆ EV Bracket – Off
- ◆ Exposure compensation – Off

Program Mode **P**

This is an auto exposure mode where the camera selects an appropriate aperture and shutter speed. However, you can adjust all settings in the Photo Assist menu in this mode. The settings remain when you switch modes (that is, move from Capture mode to another mode) and when you cycle the power on the camera (power it off and then on again).

Shutter Priority **Tv**

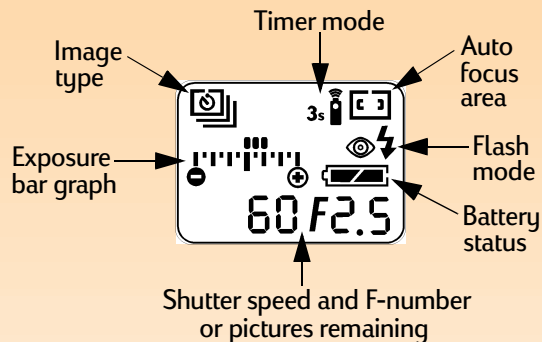
In this exposure mode, you select a shutter speed, and the camera automatically selects the aperture setting. However, you can adjust all settings in the Photo Assist menu in this mode. The settings remain when you switch modes (that is, move from Capture mode to another mode) and when you cycle the power on the camera (power it off and then on again).

Note: The Auto and the Auto with Red-Eye Reduction flash modes are *not* available in the Aperture Priority (Av) exposure mode.

Note: The Auto and the Auto with Red-Eye Reduction flash modes are *not* available in the Manual exposure mode.

Also, an external flash is *only* supported with the Manual exposure mode setting.

Figure 3: Status LCD Indicators



Note: If you see 000 flashing in the status LCD, this means that either there is no memory card in the camera, or the memory card is full.

Note: For information on the exposure bar graph and the AE-L button, see “Understanding the Exposure Bar Graph” and “Using the Auto Exposure Lock (AE-L) Button” on page 16.

Aperture Priority Av

In this exposure mode, you select an aperture, and the camera automatically selects the shutter speed. However, you can adjust all settings in the Photo Assist menu in this mode. The settings remain when you switch modes (that is, move from Capture mode to another mode) and when you cycle the power on the camera (power it off and then on again).

Manual M

In this exposure mode, you have complete control over the shutter speed, aperture, and all other camera settings. (A fixed tone curve is used to adjust exposure.) You can adjust all settings in the Photo Assist menu in this mode. The settings remain when you switch modes (that is, move from Capture mode to another mode) and when you cycle the power on the camera (power it off and then on again).

Using the Status LCD

The status LCD on the top of the camera conveys important information about the camera’s status. As shown in Figure 3, the indicators on the status LCD show you:

- ◆ Settings for the following:
 - ◆ Image type
 - ◆ Timer mode
 - ◆ Auto focus area
 - ◆ Flash mode for the pop-up flash
- ◆ Status of the camera’s batteries
- ◆ Shutter speed and f-number, which are displayed when you either first set the camera to the Program, Shutter Priority (Tv), Aperture Priority (Av), or Manual exposure mode, or press the shutter release button halfway down in all exposure modes, or lock the exposure bar graph by using the auto exposure lock (AE-L) button. Otherwise, the number of pictures remaining on the memory card is displayed.
- ◆ Exposure bar graph, which is displayed when you set the camera to the Manual exposure mode, or when you turn on exposure compensation in the Program, Shutter Priority (Tv), or Aperture Priority (Av) exposure mode.

The status LCD turns on every time you power on the camera. You can use the status LCD to assess the current status of the camera, and to change the image type, timer mode, auto focus area, and flash mode settings when preparing to take pictures (see the next subsection).

Figure 4: Status LCD Buttons



Note: The status LCD buttons are inactive when the camera is in a menu, in Instant Review (see page 33), or in any other mode besides Capture mode.

Note: For the Timelapse image type, you can set the number of images that will be captured and the interval between them in the Timelapse Settings submenu of the Capture Settings menu. (See “Timelapse Settings Submenu” on page 62.)

Also note that if the interval you set for Timelapse image capture is long, the camera may go into sleep mode (shutting off the image LCD) between taking pictures to conserve battery power.

Using the Status LCD Buttons

There are four buttons to the side of the status LCD (see Figure 4):

- ◆ Image type button
- ◆ Timer mode button
- ◆ Auto focus area button
- ◆ Flash mode button

These buttons toggle through the associated camera settings within the status LCD. To change one of these settings, press the associated button until you see the desired icon or set of icons displayed in the status LCD for the setting you want.

The next four subsections explain the possible settings for the image type, timer mode, auto focus area, and flash mode, respectively.

Setting the Image Type

Your camera can take three types of pictures (that is, three “image types”). The default image type is One Shot. Each image type is displayed on the status LCD with the icon shown in Table 2. To set the image type, press the image type button next to the status LCD to toggle through the icons on the status LCD until you see the image type setting you want (see Table 2).

Table 2: Image Type Settings

Image Type	When to Use	How to Use
One Shot (default) 	When capturing a single image.	Press and release the shutter release button to capture a single image.
Continuous 	When capturing a series of images in rapid succession. Recommended for action shots.	Hold the shutter release button down. Continuous images are captured until you release the button or until the memory card is full.
Timelapse 	When capturing a slow process with a series of images.	Press and release the shutter release button, and the camera captures the first image. Then it displays a countdown to the next picture on the top overlay bar. To cancel, press the Stop soft key.

Note: The 10-Second Timer mode is disabled for the Timelapse image type. (See “Setting the Image Type” on page 13.)

Note: After each timed exposure in 10-Second Timer mode, the camera will default to the Off timer mode setting. You must reset the timer to take another timed picture. In contrast, the Remote and the 3-Second Remote timer mode settings remain set shot-to-shot.

Also, when the camera is set to the Continuous image type, you can only take one picture with the 10-Second Timer or 3-Second Remote timer modes. Therefore, to capture a Continuous sequence of images, either use no timer mode (that is, leave the timer mode set to its default Off setting), or use the Remote timer mode.

Note: The lines in the viewfinder show the regions used for the Wide and the Spot auto focus areas.

Also note that, when the exposure mode is set to Auto, the auto focus area is forced to the Wide setting.

Setting the Timer Mode





Your camera has four timer modes. The default timer mode is Off. Each mode is displayed on the status LCD with the icon shown in Table 3. To set the timer mode, press the timer mode button  next to the status LCD to toggle through the icons on the status LCD until you see the timer setting you want (see Table 3).

Table 3: Timer Mode Settings

Timer Mode	Icon Displayed	When to Use
Off (default)	No Icon	To take pictures without using the timer.
10-Second Timer		To take a picture 10 seconds after pressing the shutter release button.
Remote		To use the remote infrared trigger on the HP Remote Control (included with the camera) with no delay.
3-Second Remote		To use the remote infrared trigger on the HP Remote Control (included with the camera) with a 3-second delay.

Setting the Auto Focus Area


You can choose from two auto focus areas that are available via the status LCD. (The auto focus area is the area of the scene that the camera will use to determine auto focus settings.) The default is Wide auto focus area. To set the auto focus mode, press the auto focus area button  next to the status LCD to toggle through the icons on the status LCD until you see the setting you want (see Table 4).

Table 4: Auto Focus Area Settings



Auto Focus Area	Icon Displayed	When to Use
Wide (default)		Use for most situations.
Spot		Use when the objects in the scene are at different distances, and you want to be sure that a small portion of the scene is in focus.


Figure 5: Pop-up Flash Button



Note: The Auto and the Auto with Red-Eye Reduction flash modes are not available in the Program, Shutter Priority (Tv), Aperture Priority (Av), or Manual exposure modes.

Setting the Flash Mode

Your camera has four flash modes for the pop-up flash. Each mode is displayed on the status LCD with the icon(s) shown in Table 5. The default flash mode depends on the current exposure mode that is set on the camera (see Table 5).

To set the flash mode, you must first press the pop-up flash button (see Figure 5) to pop up the flash unit. (The flash does *not* pop up automatically.) Then press the flash mode button  next to the status LCD to toggle through the icons on the status LCD until you see the flash mode setting you want (see Table 5). To turn the flash off, you must press the pop-up flash unit down until it locks shut in the camera body.

For more information about using either the pop-up flash, or an external flash that you attach to the hot shoe on top of the camera, see “Using Flash” on page 18.

Table 5: Flash Mode Settings





Flash Mode	Icon Displayed	When to Use
Auto (default for Auto, Portrait, Landscape, Close-up, Action, and Night exposure modes)		To allow the camera to determine the need for flash based on the lighting conditions.
Auto with Red-Eye Reduction		To allow the camera to determine the need for flash based on the lighting conditions. When flash is used, red-eye reduction minimizes the occurrence of red-eye in pictures of people or animals by flashing twice.
Forced On (default for Program, Shutter Priority (Tv), Aperture Priority (Av), and Manual exposure modes)		To use the flash, regardless of the lighting conditions.
Forced On with Red-Eye Reduction		To use the flash, regardless of the lighting conditions. Red-eye reduction minimizes the occurrence of red-eye in pictures of people or animals by flashing twice.

Figure 6: Exposure Bar Graph in Manual Exposure Mode



Figure 7: Exposure Bar Graph with Exposure Compensation



Figure 8: AE-L Button



Note: The AE-L button is disabled in the Auto and Manual exposure modes. In these exposure modes, auto exposure will always lock along with AF Lock when you press the shutter release button halfway down.

Understanding the Exposure Bar Graph

The exposure bar graph is only displayed in the status LCD when the camera is set to the Program, Shutter Priority (Tv), Aperture Priority (Av), or Manual exposure mode. This bar graph displays the number of stops that the camera is under- or over-exposing in +/- 3 stops. In the bar graph, each small tick mark is a half stop, and each large tick mark is a full stop.

- ◆ **Normal Operation** – In all exposure modes except Manual, the exposure bar graph is off when the picture you are taking will be properly exposed.
- ◆ **Manual Exposure Mode** – When the camera is in Manual exposure mode, the exposure bar graph displays a series of dots from the center of the bar graph to indicate the amount of under- or over-exposure (see Figure 6). If exposure is more than 3 stops under or over, the – or + sign will blink respectively.
- ◆ **Exposure Compensation** – When exposure compensation is turned on, a single dot appears on the bar graph indicating the amount of exposure compensation (see Figure 7). For information about setting exposure compensation, see “Using the Sub-Dial” on page 17.

Using the Auto Exposure Lock (AE-L) Button

When you press the auto exposure lock (AE-L) button on the back of the camera (see Figure 8), the exposure bar graph (see the previous subsection) is locked. The exposure bar graph stays locked for 20 seconds or until you press the AE-L button again to toggle it off. Thus, the 20-second time-out continues after you take a picture, and all of the pictures you take within the 20 seconds will have the same exposure reading.

If the auto focus is locked on the camera, then auto exposure must also be locked. That is, if you set the Focus Lock submenu (located in the Photo Assist menu of Capture mode, see page 67) to AF (Auto Focus) Lock and press the shutter release button halfway down to lock focus, the exposure will also lock at this point even if you do not press or have not pressed the AE-L button. In this case, the 20 second time-out does not apply; the camera keeps the setting in the Focus Lock submenu until you change it. The camera then returns to continuous exposure (AE) after you release the shutter release button.

Using the Sub-Dial

Figure 9: Sub-Dial



Figure 10: +/- /Av Button



The sub-dial is located on the front of the camera (see Figure 9). Its functionality changes depending on the exposure mode you set.

- ◆ **Program P** – Rotating the sub-dial adjusts up one shutter speed and down one aperture, and vice versa when rotated in the opposite direction. It also performs exposure compensation when you press and hold down the +/- /Av button on the back of the camera (see Figure 10).
- ◆ **Shutter Priority Tv** – Rotating the sub-dial changes the shutter speed by one stop. When you press and hold down the +/- /Av button, the exposure compensation changes.
- ◆ **Aperture Priority Av** – Rotating the sub-dial changes the aperture setting by one stop.
- ◆ **Manual M** – Rotating the sub-dial changes the shutter speed. When you press and hold down the +/- /Av button, the sub-dial changes the aperture setting.
- ◆ **All other exposure modes** – The sub-dial is inactive for these exposure settings.

You can also use the sub-dial to scroll left and right in the Capture, Playback, and Review mode menus, as well as through images in the Playback and Review modes.

Note: When you first power on your camera, the pop-up flash is down, and the status LCD shows no flash mode icons. The flash is turned off and the flash will not fire until you manually pop it up by pressing the pop-up flash button on the top of the camera.

Figure 11: Pop-up Flash Button



Note: The maximum flash-shutter sync speed is 1/500 sec.

Note: The camera does *not* support Smart Strobe functionality in an external flash.

Note: The external flash is only supported in the Manual exposure mode; it is *not* supported in any of the other exposure modes.

Also note that there are no LCD icons to indicate that the external flash is enabled, and there are no flash modes associated with the external flash.

Using Flash

The camera has an built-in pop-up flash. It also supports an external flash that you can attach to the hot shoe on top of the camera.

Using the Pop-up Flash

To use the built-in pop-up flash:

- 1 Manually pop up the flash by pressing the pop-up flash button (see Figure 11).
The flash will begin charging, and the flash mode icon will display in the status LCD.

- 2 Press the flash mode button to toggle through and choose the appropriate flash mode setting (see “Setting the Flash Mode” on page 15).

To turn the pop-up flash off, press the pop-up flash unit down until it locks shut in the camera body.

Using an External Flash

To use an external flash with your camera, the flash must have these two characteristics:

- ◆ It must be able to use auto flash operation (external flash sensor) – that is, it must have and use its own light sensor.
- ◆ Its lens coverage must be at least 33mm.

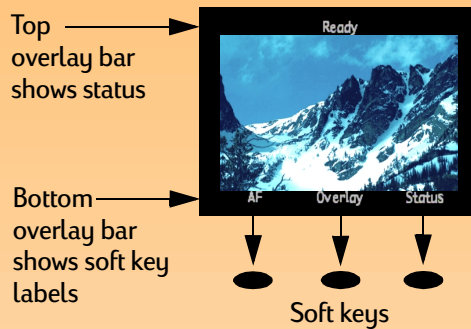
To use the external flash, refer to the documentation that came with it. As a general rule, you will need to dial-in the ISO speed and aperture settings of the camera on the external flash. You can find the ISO speed setting in the Status screen of Capture mode (see “Viewing the Camera Status” on page 21) and the aperture value on the status LCD in Capture mode (see “Using the Status LCD” on page 12).

To use an external flash:

- 1 Make sure the pop-up flash is down.
- 2 Set the exposure mode dial on the camera to Manual **M** to enable the external flash feature.
The external flash is automatically enabled and cannot be disabled unless you change exposure modes or pop up the built-in flash.
- 3 Attach the external flash unit to the hot shoe on top of the camera. Refer to the documentation that came with the external flash to use it with the camera.

Using the Image LCD

Figure 12: Image LCD Screen in Live View



Note: By default, the image LCD is turned off when you power on the camera in Capture mode. If you want the image LCD to always turn on instead, you can change the setting in the Display submenu of the Preferences menu. (See “Display Submenu” on page 75 and “Setting the Display” on page 104.)

However, note that the image LCD uses a lot of battery power. If you are running your camera on batteries rather than with the HP-approved AC power adapter, you may want to limit your use of the image LCD.

Note: Be sure that the viewfinder cap is in place anytime you use the image LCD to take pictures. Without it, light from the viewfinder may leak into the image you capture and cause a flare on the image.

Turn the image LCD on by pressing the DISPLAY button on the back of the camera. You now see the live view of Capture mode on the image LCD. Live view lets you preview the pictures you can take with the camera, as well as view and change some of the camera’s settings.

The image LCD screen in the live view of Capture mode includes two opaque overlay bars and an image area in the center for viewing your picture subjects (see Figure 12). The top overlay bar displays status information about the camera while you are taking pictures. The bottom overlay bar contains labels that describe the function of the soft keys immediately below them. For example, if you press the right (Status) soft key in Capture mode, the Status screen displays. To turn the overlay bars off or on, press the middle (Overlay) soft key.


You can also use the image LCD to access the menus to change camera settings in the Capture, Playback, and Review modes, and to play back and review captured images in the Playback and Review modes, respectively. The image LCD is disabled in PC Connect mode.

The following subsections provide more information about the overlay bars and the soft keys in the live view of Capture mode.


Understanding the Text Message Area

The text message area is a one-line text area in the middle of the top overlay bar. An example text message is: “Battery Low.” The following indicators will also appear in the text message area.

Macro Indicator

When you set either the exposure mode to Close-up, or the Auto Focus Range submenu in the Photo Assist menu to Macro, the Macro icon  is displayed on the right side of the text message area. For information on the Auto Focus Range submenu, see page 64.

Digital Zoom Indicator

When the camera is in digital zoom, the digital zoom icon  is displayed on the right side of the text message area. For information on digital zooming, see “Using the Zoom Ring” on page 29.

Manual Focus Distance

When you set the Focus mode to Manual (MF), the focus distance, bracketed by left and right arrows, appears on the left side of the text message area. For more information, see the next subsection.

Note: The Auto Focus Range (selected in the Photo Assist menu) does not apply to Manual Focus (MF) mode; in MF mode, the full focus range is enabled.

Setting Auto/Manual Focus

Press the left (AF/MF) soft key in the live view of Capture mode to toggle between Auto Focus (AF) and Manual Focus (MF) modes.

Auto Focus (AF)

Auto Focus (AF) is the default focus setting. In AF mode, the camera automatically focuses the lens on a picture subject. AF mode enables the camera's auto focus system over a range determined by the settings in the Auto Focus Range submenu of the Photo Assist menu. (See "Auto Focus Range Submenu" on page 64.) Pressing the shutter release button halfway down in AF mode will initiate auto focus.

Manual Focus (MF)

This setting disables the auto focus system and allows you to select the focus distance manually. When using Manual Focus (MF), the camera will display the focus distance, bracketed by left and right arrows, on the left side of the top overlay bar.

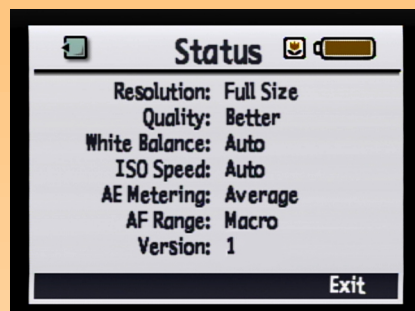
Once you have selected MF mode, you can use the left and right arrows of the 4-way controller to increase or decrease the focus distance (see "Using the 4-Way Controller" on page 22). Pressing the right arrow on the 4-way controller lengthens the focus distance. Pressing the left arrow on the 4-way controller shortens the focus distance. The available focus distances are: 0.1m (telephoto only), 0.2m, 0.3m, 0.5m, 0.7m, 1.m, 1.5m, 3m, 10m, and Infinity (INF).

The start point for Manual Focus (MF) is the focus distance at which auto focus stopped. Note that this start point may fall between two of the Manual Focus end-points. In this case, the intermediate distance will be displayed. However, once you press the 4-way controller to change the focus distance, you cannot return to the intermediate distance again.

Using the Overlay Soft Key




Press the middle (Overlay) soft key to turn both overlay bars off in the live view of Capture mode. To turn the overlay bars on again, press *any* of the three soft keys. When the overlay bars are off, the soft keys are disabled for their normal functions and are, instead, enabled only to turn the overlay bars on again.

Figure 13: Camera Status Screen



Viewing the Camera Status

You can press the right (Status) soft key while in the live view of Capture mode to display the Status screen (see Figure 13). This screen allows you to check the current camera status, such as the current resolution, quality level, and white balance settings. (To change these settings, use the Capture mode menus. See page 22.) One or more icons may also appear on the Status screen:

- ◆  means that a memory card is inserted in the camera.
- ◆  means that either the exposure mode is set to Close-up, or the Auto Focus Range submenu in the Photo Assist menu is set to Macro.
- ◆  shows the battery status.

The following status information is provided:

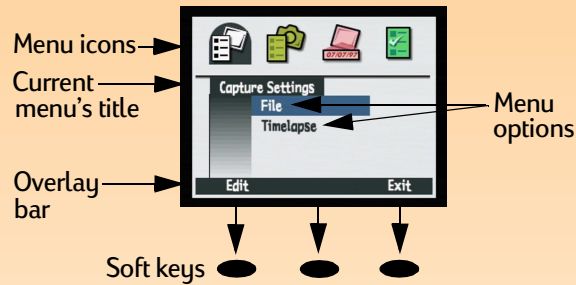
Resolution	Resolution setting for capturing images (Full Size or 1/4)
Quality	Quality setting for capturing images (Good, Better, or Best for the JPEG file type, or TIFF for the TIFF file type)
White Balance	Color correction setting to make white areas appear white with no color cast
ISO Speed	ISO Speed setting
AE Metering	Auto Exposure Metering setting
AF Range	Auto Focus Range setting
Version	The version number of your camera's firmware

To exit the Status screen and return to the live view of Capture mode, press the right (Exit) soft key.

Note: For more information about all of the Capture mode menus and related soft keys, see “Chapter 6: Menu and Soft Key Reference” starting on page 60.

For more information about the Preferences menu, see “Appendix A: Using the Preferences Menu” starting on page 103.

Figure 14: Parts of a Menu



Using the Capture Mode Menus

Your camera has four Capture mode menus:

- ◆ Capture Settings
- ◆ Photo Assist
- ◆ Image Stamp
- ◆ Preferences

The Capture Settings, Photo Assist, and Image Stamp menus have settings you can change which affect the images you capture. The Preferences menu allows you to change a variety of your camera's general settings.

To access the Capture mode menus:


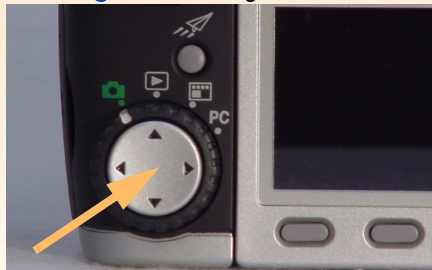
- 1 Set the camera mode dial to Capture mode .
- 2 Power on the camera if you haven't already.
- 3 Press the MENU button on the back of the camera. The Capture mode menus are displayed on the image LCD (see Figure 14).
- 4 Press the right or left arrow on the 4-way controller to move across the menu icon bar to access a particular menu. (See the next subsection, “Using the 4-Way Controller.”)
- 5 Press the down or up arrow on the 4-way controller to move the highlight to the menu option you want to select.
- 6 Press the left soft key to select the highlighted menu option.

Figure 15: 4-Way Controller



Using the 4-Way Controller

The 4-way controller is the large button located on the back of your camera (see Figure 15). Press an arrow on the 4-way controller to move in the direction of that arrow (up, down, right, or left) in the image LCD, such as within the menu structures of the Capture, Review, or Playback modes.

Overview


Once you have set your camera to Capture mode and you have a basic understanding of how to use your camera's status LCD and image LCD (see "Chapter 2: Preparing to Take Pictures" starting on page 8), you are ready to take pictures. To optimize your camera's capabilities, it is important to understand how to use the zoom ring, what the indicators in the viewfinder LCD mean, what the various LEDs mean when they light solid or blink, how to use Instant Review, and how to use the sound recording features when taking pictures.

This chapter covers the following topics:

- ◆ "Taking Simple Point-and-Shoot Pictures" on page 23
- ◆ "Taking More Advanced Pictures" on page 24
 - ◆ "Using Focus Lock" on page 25
 - ◆ "Shooting a One Shot Image" on page 26
 - ◆ "Shooting Continuous Images" on page 27
 - ◆ "Shooting Timelapse Images" on page 28
- ◆ "Using the Zoom Ring" on page 29
- ◆ "Using the Diopter Control" on page 29
- ◆ "Understanding the Viewfinder LCD" on page 30
- ◆ "Understanding the LEDs on the Camera" on page 32
- ◆ "Using Instant Review" on page 33
- ◆ "Recording Sound" on page 34

Taking Simple Point-and-Shoot Pictures

Here is the simplest method for taking pictures with your camera:

- 1 Set the camera mode dial to the Capture mode .
- 2 Power on the camera if you haven't already.
- 3 Remove the lens cap and the viewfinder cap.
- 4 Set the exposure mode dial to Auto **AUTO**.

Note: These instructions for taking simple point-and-shoot pictures assume that your camera is set to the default image type (One Shot), and that Instant Review is on, as well. (See "Setting the Image Type" on page 13 and "Using Instant Review" on page 33 for more information.)


Note: When you remove the viewfinder cap, you can place it inside one of the snapped compartments on your camera's neck strap for safekeeping.

- 5 Look through the viewfinder to select and frame a subject for your picture.
- 6 Press the shutter release button. Wait for the shutter sound, indicating the camera has captured the image. Then release the button.

The captured image appears for a 3-second Instant Review period on the image LCD. If you are happy with it, do nothing, and the image will be saved on the memory card. If not, you can delete the image while it is still displayed in Instant Review by pressing the middle (Delete) soft key.

Taking More Advanced Pictures

As explained in Chapter 2: “Preparing to Take Pictures,” your camera has more advanced features that you can set via your camera’s status LCD and image LCD. Here is the general procedure for taking more advanced pictures:

- 1 Set the camera mode dial to the Capture mode .
- 2 Power on the camera if you haven’t already.
- 3 Remove the lens cap and, if you will use the viewfinder, remove the viewfinder cap.
- 4 Set the exposure mode dial to the exposure mode you want to use. (For information on the exposure modes, see “Setting the Exposure Mode” on page 9.)
- 5 Set the image type, timer mode, auto focus area, and/or flash mode via the status LCD buttons on the top of the camera, as desired. (For information on these settings, see “Using the Status LCD Buttons” on page 13.) The settings you choose are displayed in the status LCD.
- 6 Press the DISPLAY button on the back of the camera to turn the image LCD on.
- 7 Press the left soft key to set Manual Focus (MF), if desired. (For more information, see “Setting Auto/Manual Focus” on page 20.)
- 8 Press the MENU button on the back of the camera to display the Capture mode menus on the image LCD, if you wish to change any of the default camera settings in the menus.

Note: Anytime you use either the image LCD, the 10-Second Timer mode, or the HP Remote Control to take pictures, be sure that the viewfinder cap is in place. Without it, light from the viewfinder may leak into the image you capture and cause a flare on the image.

Note: If you have set the exposure mode to either Auto, Portrait, Landscape, Close-up, Action, or Night, the Photo Assist menu will be “grayed-out,” such that you won’t be able to change any of the Photo Assist menu settings. (See “Setting the Exposure Mode” on page 9.)

Note: The image LCD uses a lot of battery power. If you are running your camera on batteries rather than with the HP-approved AC power adapter, you may want to limit your use of the image LCD and use the viewfinder instead. To turn the image LCD off, press the DISPLAY button on the back of the camera.

- 9 Select the menu options you wish to change in the Capture Settings, Photo Assist, and/or Image Stamp menus, and then make the changes to the camera settings within those menus, as desired. (For information about changing settings in these Capture mode menus, see “Capture Mode Menus and Soft Keys” on page 60.)

For example, if you have set the camera to the Timelapse image type, then you might want to change the default settings in the Timelapse menu option of the Capture Settings menu. In this case, you could change the number of images and/or the interval between them for the timelapse sequence that you want to shoot.

- 10 Press the right (Exit) soft key to exit the Capture mode menus.

- 11 Use the image LCD or the viewfinder to select and frame the subject for your picture. If needed, use the zoom ring (see page 29) to adjust the focal length of the camera lens to focus on the picture subject. (For information about the viewfinder LCD, see page 30.) You can also use the diopter control (see page 29) when looking through the viewfinder to adjust the focus of the picture subject in the viewfinder. Note that the diopter control has no effect on the image you capture, however.

If you cannot obtain focus on your picture subject, see the next subsection, “Using Focus Lock.” Otherwise, go on to the “What’s Next?” subsection.

Using Focus Lock

If you cannot obtain focus on your picture subject, use Focus Lock as follows to get the proper focus:




- 1 If the main subject of your picture is:
 - ◆ Not within the center of the viewfinder frame or image LCD screen, center the main subject of your picture in the center of the viewfinder frame or image LCD screen. Go on to step 2.
 - ◆ Near a very bright or dark area, or is behind another object (such as a screen or fence) which overlaps the subject, focus the camera on another object the same distance from you as the subject. Go on to step 2.
- 2 Press the shutter release button halfway down *and continue to hold it halfway down*. This locks the focus.
- 3 Without releasing the shutter release button, recompose the picture as you originally wanted it, and then press the shutter button all the way down to take the picture. (Also see the following subsections for how to take pictures for each image type.)

What’s Next?

What you need to do next to actually take a picture depends on the image type you have selected, and whether or not you have set a timer mode. The following subsections describe how to capture the image(s), as well as what occurs once you do, for each image type setting.

Shooting a One Shot Image

If you are using the:

- ◆ **Shutter release button with no timer mode set**, press the shutter release button. Wait for the shutter sound, indicating the camera has captured the image. Then release the button.
- ◆ **10-Second Timer  mode**, press and release the shutter release button. The timer LED on the front of the camera (see page 32) lights solid for 7 seconds. It then blinks for the final 3 seconds before the camera captures the image.
- ◆ **Remote  or 3-Second Remote  timer mode**, point the HP Remote Control at the camera, and press and release the Remote Control's trigger button. If you set the Remote timer mode, the camera immediately captures the image. If you set the 3-Second Remote timer mode, the timer LED on the front of the camera (see page 32) blinks faster for 3 seconds. Then the camera captures the image.

If Instant Review is on (see “Using Instant Review” on page 33), you can do any of the following while the image you just captured is displayed in Instant Review on the image LCD:

- ◆ Record sound that will be attached to this image. For information on how to do this, see “Recording Sound” on page 34.
- ◆ Delete the image by pressing the middle (Delete) soft key.
- ◆ Save the image to the memory card and return to the Capture mode *immediately* by pressing the right (Exit) soft key.
- ◆ Do nothing and, when Instant Review times out (the default time-out is 3 seconds), the image is then saved to the memory card automatically.

Note: When the camera is set to the Continuous image type, you can only take one picture with the 10-Second Timer or 3-Second Remote timer modes. Therefore, to capture a Continuous sequence of images, either use no timer mode (that is, leave the timer mode set to its default Off setting), or use the Remote timer mode.


Note: If Instant Review is on, each image in a Continuous sequence *except for the final one* is automatically saved to the memory card before the camera captures the next image in the sequence. If Instant Review is off, each image is automatically saved before the next one is captured, and then the final one is saved automatically, as well.

Also note that, unlike Timelapse images, Continuous images are not grouped together but are individual images. Thus, they are saved as individual images on the memory card.

Note: If you are unhappy with any other images within a Continuous sequence (rather than just the final image, which you can only delete during Instant Review), you can delete those images in the Review mode. To do this, see “Deleting Images” on page 40.

Shooting Continuous Images

If you are using the:

- ◆ **Shutter release button with no timer mode set**, press the shutter release button and *continue to hold the button down*. The camera then begins to capture the images in the Continuous sequence.
- ◆ **Remote  timer mode**, point the HP Remote Control at the camera, and press and release the Remote Control’s trigger button for each image you want to capture in the Continuous sequence.

Continuous images are captured until either you release the shutter release button (with no timer mode set), or you stop pressing the Remote Control’s trigger button (with the Remote timer mode set), or the memory card becomes full, whichever comes first.

The camera will capture images as fast as it can. The time between pictures will vary depending on the processing required (for such things as the resolution and image quality settings) before each image is saved to the memory card (see the second Note on the left). The capture rate also depends on whether or not the flash is being charged between shots. If you wish to increase the capture rate of Continuous images, you can turn the live view of Capture mode off by pressing the DISPLAY button on the back of the camera, turn Instant Review off through the Display menu option in the Preferences menu of Capture mode (see “Display Submenu” on page 75), and not use the flash.

If Instant Review is on (see “Using Instant Review” on page 33), at the end of taking a Continuous sequence of images, the *final* image of the sequence is displayed in the Instant Review on the image LCD. You can do any of the following during the Instant Review period:

- ◆ Record sound that will be attached to the *final* image of the sequence. For information on how to do this, see “Recording Sound” on page 34.
- ◆ Delete the *final* image of the sequence by pressing the middle (Delete) soft key. (All of the other images in the sequence were already saved to the memory card.)
- ◆ Save the *final* image of the sequence to the memory card and return to the Capture mode *immediately* by pressing the right (Exit) soft key. (All of the other images in the sequence were already saved to the memory card.)
- ◆ Do nothing and, when Instant Review times out (the default time-out is 3 seconds), the *final* image of the sequence is then saved to the memory card automatically.



Note: The 10-Second Timer mode is disabled for the Timelapse image type.

Note: If you are unhappy with one or more images within a Timelapse sequence, you can delete only those images in the Review mode (rather than deleting *all* of the images in the sequence during Instant Review). To do this, see “Deleting Images” on page 40.

Note: All images in a Timelapse sequence are saved as one group on the memory card.

Shooting Timelapse Images

If you are using the:

- ◆ **Shutter release button with no timer mode set**, press and release the shutter release button *one time*. Then the camera captures the first image of the Timelapse sequence.
- ◆ **Remote  or 3-Second Remote  timer mode**, point the HP Remote Control at the camera, and press and release the Remote Control’s trigger button *one time*. If you set the Remote timer mode, the camera immediately captures the first image of the Timelapse sequence. If you set the 3-Second Remote timer mode, the timer LED on the front of the camera (see page 32) blinks faster for 3 seconds. Then the camera captures the first image of the Timelapse sequence.

The settings in the Timelapse menu option of the Capture Settings menu determine the number of pictures that are taken and the interval between pictures in the Timelapse sequence of images that are captured. (To change the Timelapse settings, see “Timelapse Settings Submenu” on page 62.)

The image LCD displays the previously captured image while counting down to the next image capture. The only option you have is to stop the Timelapse sequence by pressing the right (Stop) soft key.

If Instant Review is on (see “Using Instant Review” on page 33), at the end of taking a Timelapse sequence of images, the *first* image in the sequence is displayed in the Instant Review on the image LCD. You can do any of the following during the Instant Review period:

- ◆ Record sound that will be attached to the *first* image of the sequence. For information on how to do this, see “Recording Sound” on page 34.
- ◆ Delete *all* of the images in the sequence by pressing the middle (Delete) soft key.
- ◆ Save *all* of the images in the sequence to the memory card and return to the Capture mode *immediately* by pressing the right (Exit) soft key.
- ◆ Do nothing and, when Instant Review times out (the default time-out is 3 seconds), *all* of the images in the sequence are then saved to the memory card automatically.

What’s Next?

The following sections provide more information about various features of your camera that you can use when taking pictures (such as the zoom), or that provide you with important feedback on the status of your camera while you are taking pictures (such as the viewfinder LCD and the camera’s LEDs). Once you have read through the following sections, continue on to Chapter 4 to learn how to view and review the images you have captured via the camera’s Playback and Review modes.

Figure 16: Zoom Ring

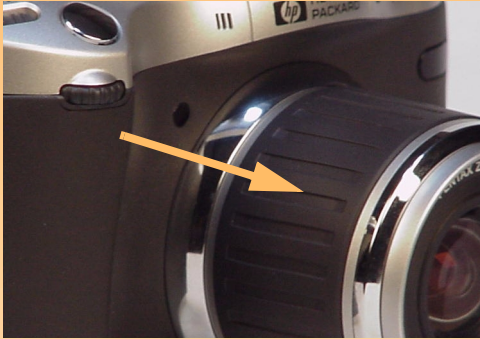
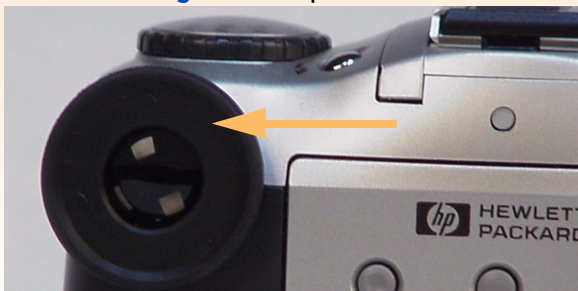


Figure 17: Directions to Rotate the Zoom Ring for Wide Angle (W) and Telephoto (T) Focal Lengths



Figure 18: Diopter Control




Using the Zoom Ring

While you are framing the subject for a picture, you will likely find that you need to zoom in or out on the subject. This section explains the camera's zoom ring, which you can use for this purpose (see Figure 16).

Rotating the zoom ring around the lens barrel moves the lens continuously between wide angle and telephoto focal lengths for optical zooming. As shown in Figure 17, you rotate the zoom ring in one direction for wide angle (W), and in the other direction for telephoto (T). Note that the zoom ring will bounce back after you release it.

The zoom ring also controls digital zooming. Digital zooming refers to digital cropping of the image, giving the appearance of greater zoom. After the optical zoom is at its maximum setting, you can digitally zoom in three steps (see below). Note, however, that you must have the image LCD on for the digital zoom to operate. In digital zoom mode, enlargement is accomplished without changes in the lens configuration. Since the lens is not involved in digital zoom, the changes appear only in the image LCD; they are *not* evident through the viewfinder.

If the image LCD is turned on, at the end of the telephoto range, releasing and pressing the zoom ring will initiate digital zooming. A digital zoom icon  will appear in the text message area of the image LCD's top overlay bar. Digital zoom occurs in three steps:

- ◆ 1.2x
- ◆ 1.5x
- ◆ 2x

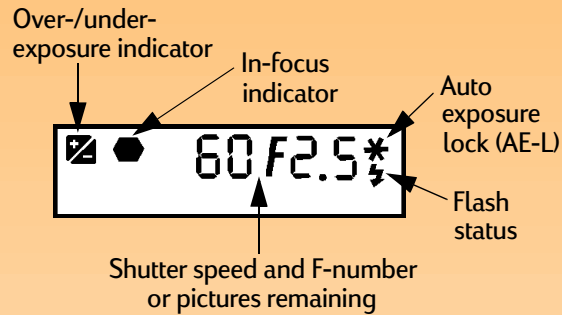
The camera pauses for 250 milliseconds (1/4 second) between steps. Digital zoom remains set shot-to-shot, but turns off when you cycle the power on the camera. It also turns off any time you exit the live view of Capture mode (for example, you press the MENU button on the camera to display the Capture mode menus, or you turn the camera mode dial to set the camera to another mode).

Using the Diopter Control

The rubber eye cup on the viewfinder is also a diopter control that you can turn (see Figure 18). The diopter control allows you to adjust the focus of the picture subject in the viewfinder. Note that the diopter control has *no* effect on the image you capture, however.

Understanding the Viewfinder LCD


Figure 19: Indicators in the Viewfinder LCD



Note: To see exactly how many stops over or under the exposure is, look at the exposure bar graph on the status LCD. When the exposure is nominally set, neither icon is displayed.

Your camera's viewfinder displays information in the same way other SLR cameras do: with an LCD within the viewfinder. Figure 19 shows the indicators you may see in your camera's viewfinder LCD. The following subsections explain these indicators.

Over-/Under-Exposure Indicator

The  icon in the viewfinder indicates over- and under-exposure. If the camera is in Manual exposure mode, the + (plus) will light to show that the image will be over-exposed, and the – (minus) will light to show that the image will be under-exposed.

If the metering is more than 3 stops over or under, the appropriate + or – icon will blink. The + and – will turn off if the exposure is within +/- 0.3 stops of nominal.

If exposure compensation has been turned on in Program, Shutter Priority (Tv), or Aperture Priority (Av) exposure mode, both the + and – icons will light.

When the EV (Exposure Value) Bracket script is running, the + icon lights during the capture of the over-exposed image, and the – icon lights during the capture of the under-exposed image. For more information, see “EV Bracket Submenu” on page 69.

In-Focus Indicator

The hexagon in the viewfinder LCD is for focus status. If the setting in the Focus Lock submenu is AF (Auto Focus) Lock, the in-focus indicator blinks when auto focus is unable to find focus, and it lights solid when the subject is in focus. If the focus lock is set to Continuous AF, the in-focus indicator is off. For more information, see “Focus Lock Submenu” on page 67.

Auto Exposure Lock (AE-L)

The asterisk in the viewfinder LCD lights to indicate that the exposure has been locked when you press the auto exposure lock (AE-L) button on the back of the camera. It will also blink when you press the shutter release button halfway down if the camera is processing a picture and is not yet ready to take the next picture.

Flash Status

The lightning bolt in the viewfinder blinks when the flash is charging, and it lights solid when the flash is charged and ready to fire. When the flash is off and the light in the scene is low, the lightning bolt will also blink as a warning when you press the shutter release button halfway down.

Shutter Speed and F-Number/Pictures Remaining

The viewfinder LCD shows either the shutter speed and the f-number, or the pictures remaining, as follows:

- ◆ When the camera is first set to Program, Shutter Priority (Tv), Aperture Priority (Av), or Manual exposure mode, the shutter speed and f-number are displayed. They are also displayed when you lock the exposure bar graph by using the auto exposure lock (AE-L) button. If there is no activity on the sub-dial or shutter release button for 20 seconds, then the viewfinder LCD displays the pictures remaining.
- ◆ Activity on the sub-dial or shutter release button will return the viewfinder LCD to showing shutter speed and f-number, and will reset the 20 second time-out.
- ◆ In Auto, Portrait, Landscape, Close-up, Action, or Night exposure mode, the shutter speed and f-number are displayed when you press the shutter release button halfway down.
- ◆ In Program or Aperture Priority (Av) exposure mode, the shutter speed will blink when it is out of range (for very bright or very dark scenes).
- ◆ In Program or Shutter Priority (Tv) exposure mode, the f-number will blink when the aperture has run out of range (for very bright or very dark scenes).
- ◆ At all other times, the number of pictures remaining is displayed.

Understanding the LEDs on the Camera

Your camera has several LEDs (Light Emitting Diodes) that light solid or blink to indicate that certain actions are occurring within the camera. This section describes what these LEDs are and how they behave.

Timer LED

The red timer LED on the front of the camera (see Figure 20) lights solid and/or blinks depending on the timer mode you set (see “Setting the Timer Mode” on page 14). If you set the timer mode to the:

- ◆ **10-Second Timer mode** when you press the shutter release button all the way down, the timer LED lights solid for 7 seconds. It then blinks for the final 3 seconds before the camera takes the picture.
- ◆ **Remote timer mode**, the timer LED blinks slowly while waiting for the trigger. When you press the HP Remote Control’s trigger button, the timer LED blinks very fast briefly to indicate that the image was captured.
- ◆ **3-Second Remote timer mode**, the timer LED blinks slowly while waiting for the trigger. When you press the HP Remote Control’s trigger button, the timer LED blinks faster for 3 seconds before the camera takes the picture. The timer LED then blinks very fast to indicate that the image was captured.

Figure 20: Timer LED



Note: The timer LED will not blink when either the memory card is full, or the camera cannot take a picture for some other reason.

Figure 21: Memory Card Access LED



Caution: Make sure the camera is powered *off* any time you remove the memory card from the camera. Removing the memory card when the memory card access LED is blinking could corrupt the images and other files on the memory card.

Memory Card Access LED

The amber memory card access LED on the back of the camera (see Figure 21) blinks whenever the camera is reading from or writing to the memory card.

Using Instant Review

The Instant Review feature allows you to see displayed on the image LCD either the One Shot image, the final image of a Continuous image sequence, or the first image of a Timelapse sequence you just captured. The default setting is that Instant Review is on for 3 seconds after the One Shot image or the final image in a Continuous or Timelapse sequence is captured.

You can change the duration that the image is displayed in Instant Review or turn Instant Review off through the Display menu option in the Preferences menu of Capture mode. (See “Display Submenu” on page 75.)

While an image is displayed in Instant Review on the image LCD, you can do any of the following:

- ◆ Record sound that will be attached either to the One Shot image, to the *final* image of a Continuous sequence, or to the *first* image of a Timelapse sequence (see the next section, “Recording Sound”).
- ◆ Delete the captured image(s) by pressing the middle (Delete) soft key. Either the One Shot image, the *final* image of a Continuous sequence, or *all* of the images in a Timelapse sequence will be deleted.

When you press the Delete soft key, you will be prompted Delete? in the top overlay bar. You can press either the left (Delete) soft key to delete the image(s), or the right (Cancel) soft key to cancel the delete operation. If you recorded sound, then the option of deleting Sound Only is also provided for the middle soft key.

- ◆ Save the image(s) to the memory card and return to the Capture mode *immediately* by pressing the right (Exit) soft key. Either the One Shot image, the *final* image of a Continuous sequence, or *all* of the images in a Timelapse sequence will be saved.
- ◆ Do nothing and, when Instant Review times out (the default time-out is 3 seconds), the image(s) are then saved to the memory card automatically. Either the One Shot image, the *final* image of a Continuous sequence, or *all* of the images in a Timelapse sequence will be saved.

Note: When Instant Review is set to Off, the camera immediately returns to Capture mode, and the captured image or sequence of images is automatically saved to the memory card.

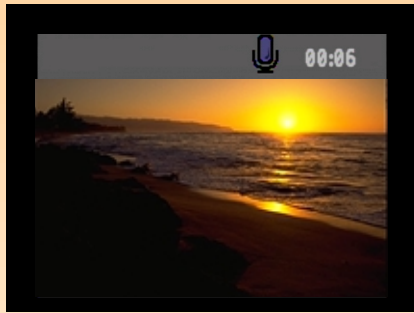
Note: If you are unhappy with any other images within a Continuous sequence (rather than just the final image, which you can only delete during Instant Review), you can delete those images in the Review mode. To do this, see “Deleting Images” on page 40.



Similarly, if you are unhappy with one or more images within a Timelapse sequence, you can delete only those images in the Review mode (rather than deleting *all* of the images in the sequence during Instant Review). To do this, see “Deleting Images” on page 40.

Note: You can record up to 45 seconds of sound per image or sequence of images.

Note: The microphone is located on the front of the camera. So if you are recording your own voice, you may get better sound quality by rotating the camera around to face you.

Figure 22: Screen During Sound Recording




Note: You can also record sound to attach to a One Shot image, any of the images in a Continuous sequence, or to the first image in a Timelapse sequence of images after the Instant Review period has finished. To do so, you must set the camera to either Playback  or Review  mode. Then select an image or sequence of images in the Playback or Review mode and follow steps 1-4 (to the right on this page) to record sound that will be attached to the selected image or sequence of images.

Recording Sound

You can record sound to attach to your images when your camera is in Capture mode and has Instant Review set on (see the previous section). During the Instant Review period, the camera records the sound and then attaches it to either the One Shot image, to the *final* image of a Continuous sequence, or to the *first* image of a Timelapse sequence that you just captured. The sound recording capability remains active during the entire Instant Review period.

You can also record sound in the Playback or Review modes to attach to images. (See the second Note on the left for more information.)

Once you have captured an image or sequence of images in Capture mode and the Instant Review is displayed on the image LCD, do the following to record sound that will be attached to the image:

- 1 Press the sound record button  on the back of the camera to activate the recording. A microphone icon flashes and the length of the recording in minutes and seconds (00:00) appears in the top overlay bar of the image LCD (see Figure 22).
- 2 Record your sound (up to 45 seconds).
- 3 Press the sound record button again to stop the recording. The screen displays Ready in the top overlay bar, and three soft key labels in the bottom overlay bar: Play, Delete, and Exit (from left to right).
- 4 Do any of the following:
 - ◆ Press the left (Play) soft key to play back the sound recorded.
 - ◆ Press the middle (Delete) soft key to delete either the image(s) and the sound, or to delete the sound only.
 - ◆ Press the right (Exit) soft key to *immediately* save the image(s) and the attached sound to the memory card.
 - ◆ Do nothing and allow the Instant Review to time out. In this case, the image(s) and the attached sound are automatically saved to the memory card.

Overview

This chapter explains how to view captured images via the Playback mode and how to review the images via the Review mode.

This chapter covers the following topics:


- ◆ “Using Playback Mode” on page 35
 - ◆ “Accessing the Playback Mode” on page 35
 - ◆ “Viewing Images Full Screen” on page 36
 - ◆ “Understanding the Overlay Bars” on page 36
 - ◆ “Turning the Overlay Bars Off and On” on page 36
 - ◆ “Zooming in on Images” on page 36
 - ◆ “Playing Back Timelapse and Grouped Images” on page 36
 - ◆ “Creating and Playing a Slideshow” on page 37

- ◆ “Using Review Mode” on page 38
 - ◆ “Accessing the Review Mode” on page 38
 - ◆ “Selecting Images” on page 38
 - ◆ “Marking and Unmarking Images” on page 39
 - ◆ “Expanding and Collapsing Timelapse or Grouped Images” on page 39
 - ◆ “Deleting Images” on page 40
 - ◆ “Grouping Images and Dissolving Image Groups” on page 41
 - ◆ “Protecting and Unprotecting Images” on page 42
 - ◆ “Categorizing Images and Deselecting Image Categories” on page 43
 - ◆ “Searching for Images by Date and by Category” on page 44

Using Playback Mode

Accessing the Playback Mode

To access the Playback mode:

- 1 Set the camera mode dial to Playback mode .

- 2 Power on the camera if you haven't already. The Playback mode screen is displayed on the image LCD.

Note: You cannot delete images while in Playback mode. You can delete images in Review mode, however. (See “Deleting Images” on page 40.)

Note: You can change the playback rate in the Playback Rate submenu of the Play Settings menu. For more information, see “Playback Rate Submenu” on page 84.

Viewing Images Full Screen

When you first enter Playback mode, the image LCD displays the last image saved on the memory card. The image appears full screen. To view a full screen image of the other captured images on the memory card, press the right or left arrow on the 4-way controller to scroll through the images.

Understanding the Overlay Bars

The Playback mode displays two overlay bars. The top overlay bar contains information about the image (including the image number, the date and time the image was captured, as well as some of the key camera settings that were used to capture the image, such as the image type and exposure mode). The bottom overlay bar contains the soft key labels.

Turning the Overlay Bars Off and On

By default, both the top and bottom overlay bars are displayed in Playback mode. However, you can turn one or both overlay bars off so you can see more of each image on the image LCD. Simply press the DISPLAY button on the back of the camera once to turn both overlay bars off, a second time to turn the bottom one on only, and a third time to turn both on again.

Zooming in on Images

If you want to see a portion of an image in more detail, press the middle (Zoom) soft key. When you are zoomed in, you can use the 4-way controller to see different parts of the image. You must then zoom out by pressing the middle (Zoom Out) soft key before moving to a different image.

Playing Back Timelapse and Grouped Images

You can play back sequences of Timelapse and grouped images at a pre-defined rate, much like a slideshow.

To play back image sequences:

- 1 Use the 4-way controller to scroll to the Timelapse or grouped images you want to play back.
- 2 Press the left (Play) soft key. The images, including any sound you have attached to them, will play back on the image LCD.
- 3 Press the left (Stop) soft key to stop playing back your images.

Creating and Playing a Slideshow

You can create a slideshow to display your images on the image LCD or on a television screen. Your slideshow can include all of the images on the memory card, or you can choose a single category of images to use.

For more information on:

- ◆ Categories, see “Categorizing Images and Deselecting Image Categories” on page 43.
- ◆ Connecting your camera to a television so that you can view a slideshow on the television, see “Connecting the Camera to Your Television” on page 58.


To create and play a slideshow:

- 1** Press the MENU button on the back of the camera. The Slideshow option of the Play Settings menu is highlighted.
- 2** Press the left (Edit) soft key to go to the Slideshow submenu.
- 3** Change any of the settings in the Slideshow submenu, as desired. For more information about these settings, see “Slideshow Submenu” on page 83.
- 4** Press the left (Start) soft key to begin the slide show.
- 5** You can stop the slideshow at any time by pressing the left (Stop) soft key.
- 6** After you have stopped the slideshow or it has ended, press the right (Exit) soft key to save the settings and exit the Slideshow menu.

Using Review Mode

Accessing the Review Mode

To access the Review mode:

- 1 Set the camera mode dial to Review mode .
- 2 Power on the camera if you haven't already.

The Review mode screen is displayed on the image LCD (see Figure 23). The image LCD displays the images that are saved on the memory card. The images appear as small thumbnails along the top of the screen.

The small thumbnail that has the selection marker under it is the selected image. The selected image is also displayed as the large thumbnail on the bottom left of the screen. Information about the selected image (including the image number and the date and time the image was captured) appears on the bottom right of the screen. If the selected image is a part of a group, the group name is also displayed. If the image was transmitted to this camera from another camera, and the other camera had a camera name assigned, then the camera name is displayed (instead of any group name).

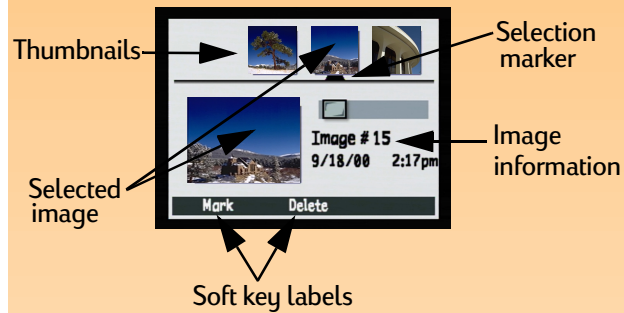
The icon bar above the image information area shows whether the selected image is a single image, a collapsed Timelapse sequence of images, or a collapsed group of images. The icon bar also shows a sound icon if sound is attached to the selected image, as well as a category icon if a category has been assigned to the selected image.

Selecting Images

The selection marker beneath the small thumbnail row indicates which image is selected and is displayed as the large thumbnail, along with its image information, at the bottom of the screen.

To select an image, press the right or left arrow on the 4-way controller to scroll through the thumbnails until the selection marker is under the image that you want to select. The selected image is now displayed as the large thumbnail, along with its image information, at the bottom of the screen.

Figure 23: Image LCD Screen in Review Mode



Marking and Unmarking Images

You can mark several images so that, when you select an action from the Review mode menus, that action will apply to all the marked images. For example, you can mark several images and delete them all at once, instead of having to delete one image at a time.

To mark or unmark *all* of the images on the memory card, press and hold the left (Mark or Unmark) soft key for 3 seconds, and then release it.

To mark one or more (but not all) images:

- 1 Press the right or left arrow on the 4-way controller to scroll through the thumbnails until the selection arrow is under an image you want to mark.
- 2 Press the left (Mark) soft key. A notch appears in the lower right corner of the selected thumbnail image (see Figure 24).
- 3 Repeat steps 1 and 2 to mark additional images.

To unmark an image, scroll to the marked image, and then press the left (Unmark) soft key.

Expanding and Collapsing Timelapse or Grouped Images

When you take Timelapse pictures, the camera takes a sequence of pictures and automatically groups the captured images, using the first captured image to represent the sequence. You can also group individual images using the Group menu option of the Review mode menus (see “Grouping Images and Dissolving Image Groups” on page 41). This section explains how to expand Timelapse or grouped images into the individual images, and how to collapse them again.

To expand Timelapse or grouped images:

- 1 Select the image that represents the Timelapse or grouped image sequence that you want to expand.
- 2 Press the right (Expand) soft key. Thumbnails of all the images in the sequence are displayed with links between them (see Figure 25).

To collapse Timelapse or grouped images:

- 1 Select any image in the Timelapse sequence or group you want to collapse.
- 2 Press the right (Collapse) soft key.

Figure 24: A Marked Image

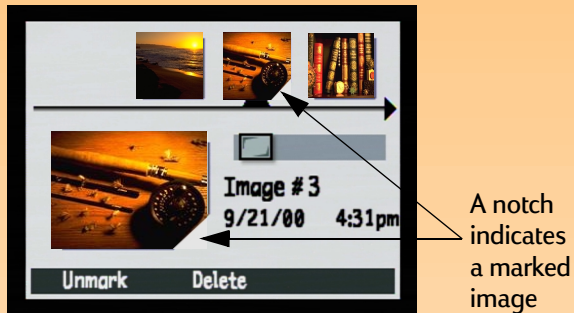
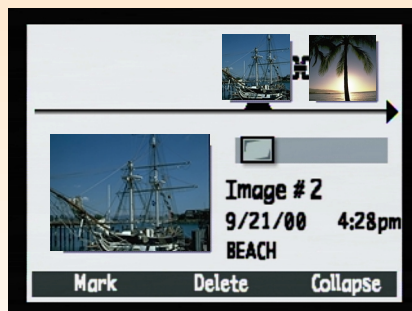


Figure 25: An Expanded Group



Note: To mark or unmark *all* of the images on the memory card, press and hold the left (Mark or Unmark) soft key for 3 seconds, and then release it.

Note: Protected images will not be deleted. See “Protecting and Unprotecting Images” on page 42.

Deleting Images

You can delete a single image that is currently selected (whether it is a One Shot or Continuous image, an individual image within an expanded Timelapse sequence, or an individual image within an expanded group of images), all marked images, a collapsed Timelapse sequence of images, or a collapsed group of images from the memory card.

To delete images:

- 1 Select the image or mark the images you want to delete.

If you want to delete one or more images (but not *all* the images) within a Timelapse sequence or a group of images, first follow the instructions in “Expanding and Collapsing Timelapse or Grouped Images” on page 39 to expand the Timelapse sequence or group of images. Then select the image or mark the images you want to delete from the expanded Timelapse sequence or group of images.

- 2 If you want to:

- ◆ Delete only the currently selected single image, collapsed Timelapse sequence of images, or collapsed group of images, press the middle (Delete) soft key in the Review mode screen.
- ◆ Delete all of the marked images, press the MENU button on the back of the camera. The Edit menu of Review mode is displayed, with the Delete menu option highlighted. Press the middle (Delete) soft key.

- 3 Press the left (Delete) soft key again to delete the image(s).

Note: A group becomes a folder on the memory card, in which all the images in that group are stored.

Note: Group names must be eight characters or less, and cannot contain spaces. Also, the camera does not accept group names that begin with BR or TL (regardless of language) because these letters are reserved.

Figure 26: Two Images in a Group



Note: Dissolving a group does *not* delete the images in the group, only the group name.

Grouping Images and Dissolving Image Groups

You can group images to organize them in one folder on the memory card. To group images:

- 1 Mark the images you wish to group.
- 2 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 3 Press the down arrow on the 4-way controller to scroll to the Group menu option.
- 4 Move to the Group Name menu by pressing either the left (Create) soft key if there are no existing groups, or the left (Add) soft key and then the middle (Create New) soft key if there are existing groups.
- 5 Name the new group by doing the following. (See the Note on the left for restrictions on group names.)
 - ◆ Press the up or down arrow on the 4-way controller to scroll to the letter you want to use.
 - ◆ Press the right arrow on the 4-way controller to add a letter to the name, or the left arrow to delete a letter. For example, if you select the letter “L” and then press the right arrow on the 4-way controller, the letter appears in the center of the screen.
- 6 Press the right (Exit) soft key to exit the Group Name menu, and then press Exit again to exit the Review mode menus. You are returned to the Review mode screen. The name of the group now appears in the image information for all the images in the group when each image is selected, and the images in the group have a link icon between them (see the example in Figure 26).

To dissolve (remove) the grouping on images:

- 1 Select any image included in the group you want to dissolve.
- 2 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 3 Press the down arrow on the 4-way controller to scroll to the Group menu option.
- 4 Press the center (Dissolve) soft key to dissolve (remove) the grouping.
- 5 Press the right (Exit) soft key. You are returned to the Review mode screen, and the images are no longer grouped.

Protecting and Unprotecting Images

You can protect images so that they won't be deleted accidentally. (When an image is protected, it cannot be deleted from the memory card.)

To protect images:

- 1 Select an image or mark the images you want to protect.
- 2 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 3 Press the down arrow on the 4-way controller to scroll to the Protect menu option.
- 4 Press the center (Protect) soft key. You are returned to the Review mode screen, and a Protect icon appears in the image information for the protected image(s) (see Figure 27).

To remove protection from (unprotect) images:

- 1 Select an image or mark the images you want to unprotect.
- 2 Press the MENU button.
- 3 Press the down arrow on the 4-way controller to scroll to the Protect menu option.
- 4 Press the left (Unprotect) soft key. You are returned to the Review mode screen, and there is no longer a Protect icon in the image information for the image(s).

Figure 27: A Protected Image



Categorizing Images and Deselecting Image Categories

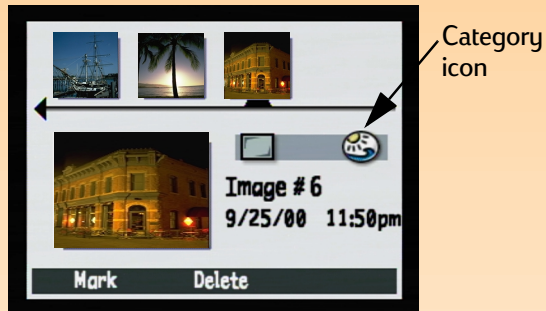
You can assign a category to your images to make them easier to find and organize. You can also play a slideshow of a category of images very easily.

You can either categorize one image at a time, or mark a number of them and apply one category to all of the marked images.

To categorize one or more images:

- 1 Select or mark the image(s) you wish to categorize.
- 2 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 3 Press the down arrow on the 4-way controller to scroll to the Categorize menu option.
- 4 Press the left (Edit) soft key to move to the Categories submenu.
- 5 Press the down arrow on the 4-way controller to scroll to the category you want to assign to the image(s).
- 6 Press the left (Select) soft key. A checkmark appears next to that category, and you are returned to the Review mode screen. An icon representing the category you assigned to the image(s) now appears in the image information for the selected image(s) (see Figure 28).

Figure 28: A Categorized Image



To deselect an image's category:

- 1 Select the image whose category you want to deselect.
- 2 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 3 Press the down arrow on the 4-way controller to scroll to the Categorize menu option.
- 4 Press the left (Edit) soft key to move to the Categories submenu.
- 5 Press the down arrow on the 4-way controller to scroll to the category you want to deselect.
- 6 Press the left (Deselect) soft key. You are returned to the Review mode screen, and the category icon is no longer in the image information for the selected image.

Searching for Images by Date and by Category

You can use the Find menu in Review mode to search for images by date or by category. For more information on categories, see “Categorizing Images and Deselecting Image Categories” on page 43.

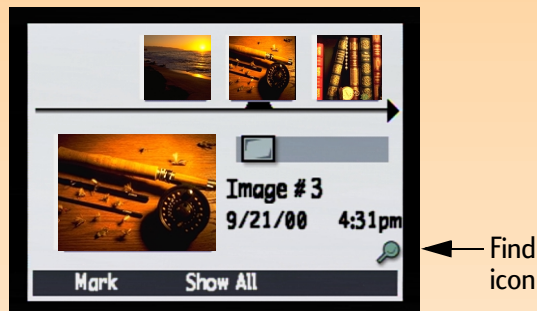
To search for images by date:

- 1 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 2 Press the right arrow on the 4-way controller to scroll to the Find menu.
- 3 Press the left (Edit) soft key.
- 4 Enter the range of dates you want the camera to use to search for images (see Figure 29):
 - ◆ Press the right arrow of the 4-way controller to scroll to the month, day, and year fields.
 - ◆ Press the up and down arrows to change the month, day, and year.
- 5 Press the left (Find) soft key. The results of your search appear on the image LCD (see Figure 30). Notice the Find icon at the bottom right of the screen, which indicates that the displayed images are the result of a Find operation.
- 6 Press the arrows on the 4-way controller to scroll through the images. When you are done, press the center (Show All) soft key to resume viewing all the images stored on the memory card.

Figure 29: Find By Date



Figure 30: Results of a Find by Date Operation



Note: If there are no images within the range of dates that you specified, the image LCD displays the message: “No images matched search criteria.” In this case, you can either press the middle (Show All) soft key to resume viewing all images stored on the memory card, or press the left (Find) soft key to select a new range of dates.

To search for images by category:

- 1 Press the MENU button on the back of the camera. The Edit menu of Review mode is displayed.
- 2 Press the right arrow on the 4-way controller to scroll to the Find menu.
- 3 Press the down arrow on the 4-way controller to scroll to By Category.
- 4 Press the left (Edit) soft key.
- 5 Press the down arrow on the 4-way controller to scroll to the category you want to view.
- 6 Press the left (Select) soft key. The results of your search appear on the image LCD. Notice the Find icon at the bottom right of the screen, which indicates that the displayed images are the result of a Find operation.
- 7 Press the arrows on the 4-way controller to scroll through the images. When you are done, press the center (Show All) soft key to resume viewing all the images stored on the memory card.

Overview

You can use the images you capture with your camera in many fun and creative ways. You can transfer them to your computer for use in creative projects, or for sharing with family and friends via the Internet. If you have a printer that supports the HP JetSend infrared technology, you can use HP JetSend for wireless printing of your images. You can even connect the camera to your television to view a slideshow of your images on the television.

This chapter covers the following topics:

- ◆ “Transferring Images to Your Computer” on page 46
- ◆ “Using a Digital Print Order Format (DPOF) File” on page 52
- ◆ “JetSending Images to a Printer” on page 54
- ◆ “Transmitting Images Between Two Cameras” on page 56
- ◆ “Connecting the Camera to Your Television” on page 58

Caution: Be aware that any sound (namely, sound tags and other EXIF tags) you have captured and attached to images with your camera may not be supported and may be lost if you use image editing software other than the HP Photo Imaging Software with the images on your computer.

Transferring Images to Your Computer

You can transfer images to your computer when the camera is set to PC Connect mode. The PC Connect Mode submenu of the Preferences menu lets you specify how the camera will appear to your computer when connected via the USB interface. You can set the camera to one of the following settings in the PC Connect Mode submenu depending on the operating system that is running on your computer:

PC Connect Mode	How Images are Transferred	Operating Systems
Digita™ Device (default)	You can use software included with your computer or camera to transfer images to the computer.	Windows® Me, 98, and 2000
USB Disk Drive	The camera is operated as a USB Mass Storage Device and appears as a disk drive connected to your computer. So you can copy images from your camera to the computer as you would from another disk drive.	Mac® OS 8.6 or better, and Windows Me, 98, and 2000

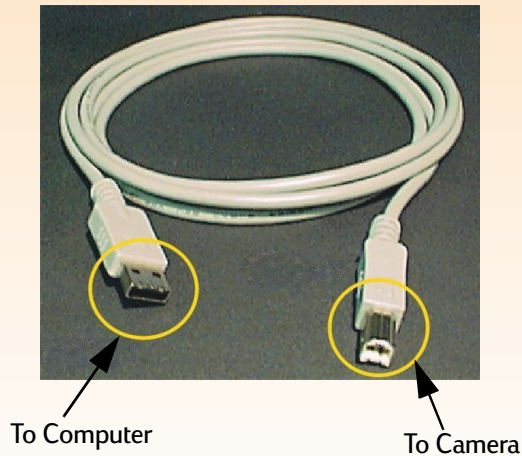
The one exception is Windows NT 4.0, because it does not support the USB interface. A Windows NT 4.0 computer must have either an HP P1000/1100 or similar printer, or a memory card reader connected to its serial or parallel interface. You can then transfer images from the camera's memory card to the computer via either the memory card slot in the HP printer, or the memory card reader.

The following three subsections explain how to transfer images to a computer depending on the PC Connect Mode setting on the camera and/or the operating system that is running on the computer:

- ◆ To use the Digita Device setting to transfer images from your camera to a Windows Me, 98, or 2000 computer, see the first subsection below.
- ◆ To use the USB Disk Drive setting to transfer images from your camera to either a Macintosh® computer running Mac OS 8.6 or better, or a Windows Me, 98, or 2000 computer, see the subsection on page 49.
- ◆ To transfer images from the memory card to a Windows NT 4.0 computer, see the subsection on page 51.

Note: If you have a Windows 98 or 2000 computer, it is assumed in this subsection that you have already followed the *HP 912 Digital Camera Quick Start Guide* to install the HP Photo Imaging Software on your computer.

Figure 31: Connectors on the USB Cable



Transferring Images Using the Digita Device Setting

If your computer is running Windows Me, 98, or 2000, you can transfer images from your camera to the computer by using the default Digita Device setting in the PC Connect Mode submenu. If your camera is running:

- ◆ **Windows Me**, you can then use the Microsoft® Scanner and Camera Wizard that is included on your Windows Me system to transfer the images from the camera to your computer.
- ◆ **Windows 98 or 2000**, you can then use the HP Photo Imaging Software that came with your camera to transfer the images from the camera to your computer.

To transfer images to your Windows Me, 98, or 2000 computer, do the following:

- 1 Power *off* the camera if it is still on.
- 2 Power *on* the computer if you haven't already.
- 3 Connect the *rectangular* end of the USB cable to the USB port on the front or back exterior of your computer (see Figure 31).

Figure 32: Connecting the USB Cable to the Camera



- 4 Open the door to the camera's connector compartment and connect the *square* end of the USB cable to the bottom (USB) connector (see Figure 32).
- 5 Set the camera to PC Connect mode **PC**.
- 6 Power *on* the camera. Within a few seconds, your computer detects the camera on the USB port. What happens next depends on what version of Windows your computer is running:

Windows Me	Your computer runs the Microsoft Scanner and Camera Wizard. Follow the prompts in the Wizard to copy the images to your computer.
Windows 98 or 2000	The main window of the HP Photo Imaging Software opens. Do the following: <ol style="list-style-type: none">1. Click Unload Camera in the main window.2. Click the Start button in the Unload Images window. The images are copied to your computer.


Note: If you have a Macintosh computer and have already followed the instructions in the *HP 912 Digital Camera Quick Start Guide* to set the USB Disk Drive mode on your camera, skip these instructions and go on to “Using Your Camera as a USB Mass Storage Device to Transfer Images” on page 50.

Transferring Images Using the USB Disk Drive Setting

If your computer is running either Macintosh OS 8.6 or better, or Windows Me, 98, or 2000, you can transfer images from your camera to the computer by using the USB Disk Drive setting in the PC Connect Mode submenu. In so doing, the camera will operate as a USB Mass Storage Device and appear as a disk drive connected to your computer. You can then copy images from your camera to the computer as you would from another disk drive. The following two subsections explain how.

Setting the USB Disk Drive Mode on the Camera

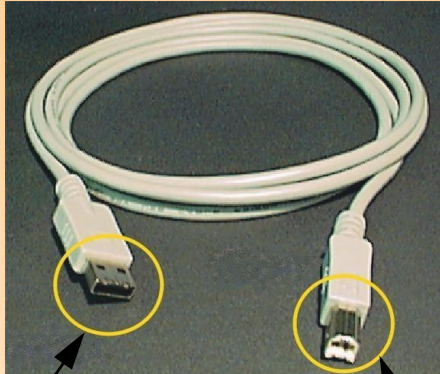
You must first set your camera to USB Disk Drive mode as follows:

- 1 Set the camera mode dial to Capture mode .
- 2 Power *on* the camera if you haven't already.
- 3 Press the MENU button on the back of the camera. The Capture mode menus are displayed on the image LCD.
- 4 Press the right arrow on the 4-way controller three times to move to the Preferences menu.
- 5 Press the down arrow on the 4-way controller three times to move to the PC Connect Mode menu option.
- 6 Press the left (Edit) soft key. The PC Connect Mode submenu is displayed, and the USB Disk Drive option is highlighted.
- 7 Press the left (Select) soft key. The checkmark moves to the USB Disk Drive option, and you return to the Preferences menu of Capture mode. The camera is now set to USB Disk Drive mode.
- 8 Press the right (Exit) soft key to exit the menu.
- 9 Power *off* the camera by using the camera's power switch.

The USB Disk Drive mode will remain set on your camera *only* if you power off the camera by using the power switch. By powering off the camera correctly, you will *not* have to repeat the previous procedures when transferring images to your computer via the USB Disk Drive mode in the future.

Note: Software for Macintosh computers was included with your camera. If you wish, you can use this software to transfer images to your Macintosh, instead of the procedures here. This software also provides tools for editing images and using them in creative projects.

Figure 33: Connectors on the USB Cable



To Macintosh Keyboard
or Windows Computer

To Camera

Figure 34: Connecting the USB Cable to the Camera



Using Your Camera as a USB Mass Storage Device to Transfer Images

Once your camera is set to USB Disk Drive mode, you can transfer images to either your Macintosh OS 8.6 or better computer, or your Windows Me, 98, or 2000 computer, by doing the following:

- 1 Power *on* the computer if you haven't already.
- 2 Connect the *rectangular* end of the USB cable to the USB port on either your Macintosh computer's keyboard, or to the front or back exterior of your Windows computer (see Figure 33).
- 3 Open the door to the camera's connector compartment and connect the *square* end of the USB cable to the bottom (USB) connector (see Figure 34).
- 4 Set the camera mode dial to PC Connect mode **PC**.
- 5 Power *on* the camera. If you have a:
 - ◆ Macintosh computer, an icon labeled "Untitled" appears on your computer's desktop. The camera is now viewed by your Macintosh as a new disk drive.
 - ◆ A Windows computer, the camera appears as a removable disk drive connected to your computer under the My Computer folder in Windows Explorer.

If you have a Windows 98 or 2000 computer and have installed the HP Photo Imaging Software on your computer (by following the instructions in the *HP 912 Digital Camera Quick Start Guide*), then the main window of the HP Photo Imaging Software also opens. You can either follow step 6 below to copy the image files from the camera to the computer in Windows Explorer, or you can use the HP Photo Imaging Software to transfer the images.

- 6 Copy the image files from the disk drive (the camera) to the hard drive of your computer as you would from a floppy disk.

Note: It is assumed in this subsection that you have already followed the *HP 912 Digital Camera Quick Start Guide* to install the HP Photo Imaging Software on your computer.

Transferring Images from a Memory Card to a Windows NT 4.0 Computer

To transfer images to your Windows NT 4.0 computer, you must have either an HP printer (such as the HP P1000/1100) that has a slot for reading a memory card, or a memory card reader connected to the computer's serial or parallel interface. (This is because Windows NT 4.0 does not support the USB interface.) You can then transfer images from the camera's memory card to your computer via either the HP printer's memory card slot, or the memory card reader.

If you are using an HP printer that has a memory card slot, refer to the printer's documentation to transfer images from the memory card to your Windows NT 4.0 computer via the printer's memory card slot.

If you are using a memory card reader, transfer images from the memory card to your Windows NT 4.0 computer as follows:

- 1 Power *off* the camera if it is still on.
- 2 Remove the memory card from the camera. To do this, open the memory card door and press the memory card release button to eject the card. Grasp the card by its side edges and pull it out of the slot.
- 3 Insert the memory card into the memory card slot in the memory card reader.
- 4 Power *on* the computer if you haven't already.
- 5 Double-click the HP Photo Imaging Software icon on the Windows desktop. The main window of the HP Photo Imaging Software opens.
- 6 Click **Unload Camera** in the main window. Because no USB camera is found, the software displays a dialog box in which you can select the drive letter for your memory card reader.
- 7 Select the drive letter (such as **H:**) for your memory card reader in the dialog box.
- 8 Click the **Start** button in the Unload Images window. The images are copied to your computer.

Note: If you delete an image that is referenced in a DPOF file on the memory card, you must erase and then re-create the DPOF file before you can print images via the DPOF file.


Note: For more information on the Print Order Form menu, see page 90.

Using a Digital Print Order Format (DPOF) File

A DPOF file is a file you create using your camera that allows you to pre-select which images you want to print. The file is stored on the memory card and contains information about which images are selected, how many of each image is to be printed, and at what size to print each of them. The file is used by selected HP printers and other printing devices that can read a DPOF file directly from the memory card.

Creating a DPOF File

To create a DPOF file:

- 1 Set the camera to Review mode .
- 2 Power on the camera if you haven't already.
- 3 Either select one image or mark multiple images in the Review mode screen that you want to include in the DPOF file. (See "Selecting Images" on page 38 and "Marking and Unmarking Images" on page 39 for more information.)
- 4 Press the MENU button on the back of the camera. The Review mode menus are displayed.
- 5 Press the right arrow on the 4-way controller once to move to the Print Order Form menu.
- 6 Press the left (Add) soft key to select the highlighted Add Images menu option. The Add to Order submenu is displayed.
- 7 Use the arrows on the 4-way controller to specify the number of Copies you want of the selected or marked images, as well as the Size you want them printed. The Size settings include:
 - ◆ Standard (default) – One of the standard print sizes. You specify the exact size you want your Standard prints to be at the printer. For example, you can specify that all Standard images be printed at 4" x 6".
 - ◆ Index – Thumbnails of the images.
- 8 Press the left (Add) soft key to save the settings and return to the Print Order Form menu.

Viewing a DPOF File

To view a DPOF file, do the following while in the Print Order Form menu:

- 1 Press the down arrow on the 4-way controller to highlight the View Order menu option.
- 2 Press the left (Select) soft key. The Print Order Form screen is displayed, which lists the contents of the DPOF file. You can scroll through this list using the up and down arrows on the 4-way controller. However, you cannot edit this list.

Erasing a DPOF File


To erase a DPOF file, do the following while in the Print Order Form menu:

- 1 Press the down arrow on the 4-way controller to highlight the Erase Order menu option.
- 2 Press the left (Erase) soft key. You will see a confirmation of your choice to erase all entries from the Print Order Form.
- 3 Press the middle (Erase) soft key to erase all of the entries from the Print Order Form.

Note: It will take an average of 20 seconds to JetSend an image from the camera to a printer.





JetSending Images to a Printer

HP JetSend allows for easy, wireless printing. If your printer supports the HP JetSend infrared technology, you can transfer your images directly from the camera to the printer without connecting any cables. See your printer's documentation for more information.

There are two different ways you can JetSend images to a printer. You can use the Send button  on the back of the camera to JetSend only the current image in the Capture, Playback, or Review mode to a printer. Or you can use the Transmit menu in Review mode to JetSend the current image or all marked images to a printer. Each of these methods is explained in the following subsections.

Using the Send Button to JetSend Only the Current Image

To JetSend only the current image to a JetSend-capable printer:

- 1 Set the camera mode dial to either Capture , Playback , or Review  mode.
- 2 Power on the camera if you haven't already.
- 3 If you are in:
 - ◆ Capture mode, you will automatically be JetSending the last image you captured. You do not need to do anything to select the image.
 - ◆ Playback or Review mode, press the right or left arrow on the 4-way controller to scroll through your images in the Playback or Review mode screen until the image you want to transfer is displayed or selected.
- 4 Set your printer to receive images to print. See your printer's documentation for details.
- 5 Aim the camera's infrared window (see Figure 35) at the printer's infrared sensor, and place the camera about 10 inches away from the printer.
- 6 Press the Send button  on the back of the camera. The camera immediately starts a JetSend session, searches for a compatible printer, and sends the current image to the printer. (If the current image is actually a collapsed Timelapse sequence or group of images, only the first image of the sequence or group is sent.)


During the transfer, the image LCD reads: "Sending 1 image..." and shows a progress bar. You can cancel the transfer at any time by pressing the center (Stop) soft key on the camera. A confirmation screen will display to show that the Send was successful.
- 7 Press the right (Done) soft key when you have finished transmitting images to the printer.

Figure 35: Infrared Window on the Camera



Using the Transmit Menu to JetSend the Current or All Marked Images

To JetSend the current image or all marked images to a JetSend-capable printer:

- 1 Set the camera mode dial to Review mode .
- 2 Power on the camera if you haven't already.
- 3 Either select one image or mark multiple images in the Review mode screen that you want to JetSend. (See “Selecting Images” on page 38 and “Marking and Unmarking Images” on page 39 for more information.)
- 4 Press the MENU button on the back of the camera. The Review mode menus are displayed.
- 5 Press the right arrow on the 4-way controller two times to move to the Transmit menu.
- 6 Press the down arrow on the 4-way controller to highlight the Camera-Printer menu option.
- 7 Set your printer to receive images to print. See your printer's documentation for details.
- 8 Aim the camera's infrared window (see Figure 35 on page 54) at the printer's infrared sensor, and place the camera about 10 inches away from the printer.
- 9 Press the left (Send) soft key on the camera. The camera immediately starts a JetSend session, searches for a compatible printer, and sends the current or all marked images to the printer.

During the transfer, the image LCD reads: “Sending X image(s)...” and shows a progress bar. You can cancel the transfer at any time by pressing the middle (Stop) soft key on the camera. A confirmation screen will display to show that the Send was successful.


- 10 Press the right (Done) soft key when you have finished transmitting images to the printer.

Transmitting Images Between Two Cameras

You can use the Camera-Camera option in the Transmit menu of Review mode to send images from your camera to another camera, or to receive images from another camera. The other camera must use the standard Digita transmit protocol. See the other camera's documentation for details.

Sending Images to Another Camera

To send the current image or all marked images to another Digita camera:


- 1 Set the camera mode dial to Review mode .
- 2 Power on the camera if you haven't already.
- 3 Either select one image or mark multiple images in the Review mode screen that you want to send to the other camera. (See "Selecting Images" on page 38 and "Marking and Unmarking Images" on page 39 for more information.)
- 4 Press the MENU button on the back of the camera. The Review mode menus are displayed.
- 5 Press the right arrow on the 4-way controller two times to move to the Transmit menu. The Camera-Camera menu option is highlighted.
- 6 Press the left (Send) soft key on your camera. Your camera's image LCD reads: "Receiving Camera Ready?"
- 7 Set the other camera to receive images. See the other camera's documentation for details.
- 8 Aim your camera's infrared window (see Figure 35 on page 54) at the other camera's infrared sensor, and set the cameras about 10 inches apart.
- 9 Press the left (Continue) soft key on your camera. Your camera immediately searches for another compatible camera and begins to transmit images to the other camera.

During the transfer, the image LCD reads: "Sending X image(s)..." and shows a progress bar. You can cancel the transfer at any time by pressing the middle (Stop) soft key on your camera. A confirmation screen will display to show that the transfer was successful.

- 10 Press the right (Done) soft key when you have finished transmitting images to the other camera.

Receiving Images from Another Camera

To receive images from another Digita camera:

- 1 Set the camera mode dial to Review mode .
- 2 Power on the camera if you haven't already.
- 3 Press the MENU button on the back of the camera. The Review mode menus are displayed.
- 4 Press the right arrow on the 4-way controller two times to move to the Transmit menu. The Camera-Camera menu option is highlighted.
- 5 Press the middle (Receive) soft key on your camera.
- 6 Set the other camera to send images. See the other camera's documentation for details.
- 7 Aim your camera's infrared window (see Figure 35 on page 54) at the other camera's infrared sensor, and set the cameras about 10 inches apart.
- 8 Send the images from the other camera. See the other camera's documentation for details.
- 9 Press the right (Done) soft key when your camera has received all of the images.

Note: Your camera comes with a 6 ft. audio/video cable, which you can use to connect the camera to a television.

Note: Refer to your television's or VCR's documentation for more information about the video input format.

Note: See your television's documentation for specific instructions on how to locate the video input connector, and how to set the video input.

Connecting the Camera to Your Television


When the camera is connected to a television, the television functions the same as the camera's image LCD. You can use your television to view a slideshow, making it easy to share your images with family and friends.

Selecting the Camera's Video Output Format

Before you connect the camera to the television, you need to select the camera's video output format. The format that you choose (NTSC or PAL) depends on your television's video input format:

- ◆ NTSC is the video connection standard used in the United States and Japan.
- ◆ PAL is the video connection standard used in Europe.

To select the video output format for the camera:

- 1 Set the camera mode dial to Playback mode .
- 2 Power on the camera if you haven't already.
- 3 Press the MENU button on the back of the camera.
- 4 Press the down arrow on the 4-way controller to scroll to Video.
- 5 Press the left (Edit) soft key.
- 6 Press the right or left arrows on the 4-way controller to select NTSC or PAL in the Video Preferences submenu.

Making the Connection

To connect the camera to the television:

- 1 Connect the video input end of the audio/video cable into your television:
 - ◆ If you are using an NTSC connection, plug the video input (yellow) end of the audio/video cable into your television's video input connector (on most televisions, this is also yellow).
 - ◆ If you are using a PAL connection, plug the video input (yellow) end of the audio video cable into your television's video input connector. On older television sets, plug the video cable into a SCART adapter (purchased separately), then plug the adapter into your television's video input connector.

Note: To conserve battery power, you may want to use an HP-approved AC power adapter to power the camera while you have it connected to a television.

Figure 36: Connecting the Video Cable to the Camera





Note: When the camera is connected to a television, the image LCD turns off.

- 2 Connect the audio input (red) end of the audio/video cable into the television's audio input connector. This will allow you to hear sound that you recorded and attached to your images.
- 3 Plug the other end of the video cable into the camera (see Figure 36).
- 4 On the television, set the video input to be the video input connector where you connected the camera.

Viewing Images on the Television

When the camera is connected to a television, you can play or review your images on the television screen just as you would on the camera's image LCD. You can also mark, protect, categorize, group, or delete images, or create a slideshow.

To view images on a television:

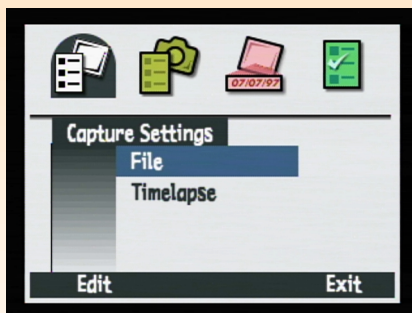
- 1 Turn on the television and select the video input. See your television's documentation for specific instructions on how to select the video input.
- 2 Set the camera mode dial to either Playback mode  or Review mode .
- 3 View your images on the television using either Playback or Review mode.

The television functions the same as the camera's image LCD. You can use the buttons on the 4-way controller to scroll through your images, or press the MENU button on the back of the camera to use the camera menus on your television's screen.

Note: Updates for your camera's firmware are posted from time-to-time on the HP website at: www.hp.com/photosmart. You can install these updates on your camera so that you can always have the most current functionality running on it.

Note: The PC Connect mode does *not* have any menus or soft keys; thus, that mode is not included in this chapter.

Figure 37: Capture Settings Menu




Overview

This chapter contains a reference to all of the menus and soft keys you can use to make or adjust settings on your camera. This chapter is divided into three main sections, which correlate to the three camera modes that have menus and soft keys:

- ◆ “Capture Mode Menus and Soft Keys” on page 60
- ◆ “Playback Mode Menu and Soft Keys” on page 82
- ◆ “Review Mode Menus and Soft Keys” on page 87

Capture Mode Menus and Soft Keys

To access the Capture mode menus and related soft keys, turn the camera mode dial to Capture mode  and press the MENU button on the back of the camera. You can choose options and settings from four Capture mode menus:

- ◆ “Capture Settings Menu” on page 60
- ◆ “Photo Assist Menu” on page 63
- ◆ “Image Stamp Menu” on page 70
- ◆ “Preferences Menu” on page 74

Capture Settings Menu

Use the Capture Settings menu to specify characteristics of how to capture each image.

Table 6: Capture Settings Soft Keys

Soft Key	Function
Edit	Opens submenu associated with selected menu option.
Exit	Exits this menu and returns the camera to Capture mode.

Note: All options you set are active from shot-to-shot; they also remain set when you cycle the power on the camera.

Figure 38: File Settings Submenu - JPEG

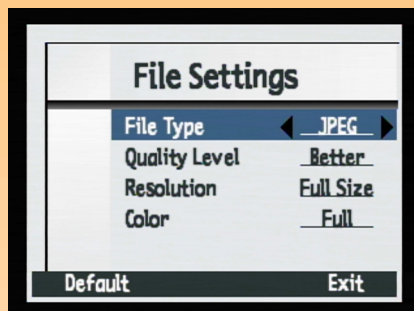
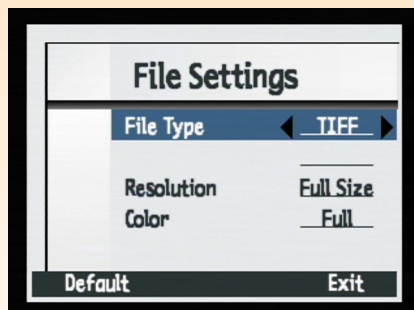


Figure 39: File Settings Submenu - TIFF



Note: TIFF is an uncompressed file type used when you need the absolute best image quality. Because TIFF file size is very large, it may take up to 50 seconds to save the image.

File Settings Submenu

Use the File Settings submenu to set how your pictures will be captured for all image types (One Shot, Continuous, and Timelapse).

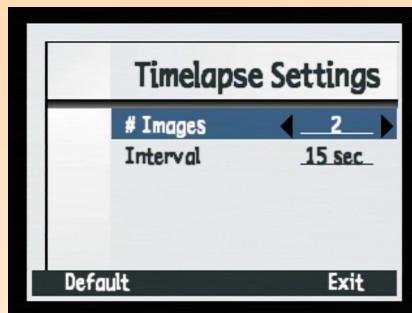
Table 7: File Settings Submenu

Setting	Default	Options
File Type	JPEG	JPEG, TIFF
Quality Level (Specifies JPEG compression level and does <i>not</i> apply to TIFF images)	Better	<p>Good - Produces quality images and uses less memory than the Better setting (uses the highest compression rate). Use this setting for images you plan to use on a computer, or to print photos of up to 4" x 6".</p> <p>Better - Produces high-quality images and uses less memory than the Best setting (uses a medium compression rate). Use this setting for images you plan to print photos of up to 5" x 7".</p> <p>Best - Produces the highest-quality images and uses the most memory (uses the lowest compression rate). Use this setting for images you plan to enlarge and print photos of up to 8" x 10".</p>
Resolution	Full Size	<p>Full Size (1600 x 1280 pixels)</p> <p>1/4 (800 x 640 pixels)</p>
Color	Full	Full, B&W, Sepia

Note: “Storage Capacities of Memory Cards” on page 119 lists the number of images an 8 MB, 16 MB, and 32 MB memory card can store, depending on the JPEG quality level or TIFF setting at which the camera is set.

Note: All options you set are active from shot-to-shot; they also remain set when you cycle the power on the camera.

Figure 40: Timelapse Settings Submenu



Note: If you select more # Images than there is space on the memory card, you will see the error message “Not enough memory” on the overlay bar.

Table 8: File Settings Soft Keys

Soft Key	Function
Default	Returns all settings on screen to their defaults.
Exit	Saves the settings, exits this submenu, and returns the camera to the Capture Settings menu.

Timelapse Settings Submenu

Use the Timelapse Settings submenu to specify the number and interval of images in a timelapse sequence.

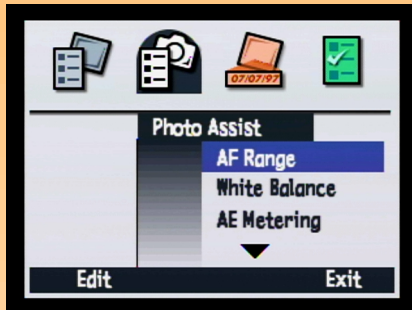
Table 9: Timelapse Settings Submenu

Setting	Default	Options
# Images	2	2-1,000
Interval	15 seconds	Seconds - 15 sec, 30 sec Minutes - 1 min, 2 min, 3 min, 4 min, 5 min, 10 min, 15 min, 20 min, 30 min, 50 min Hours - 1 hr, 2 hr, 3 hr, 4 hr, 8 hr, 12 hr, 24 hr

Table 10: Timelapse Settings Soft Keys

Soft Key	Function
Default	Returns all settings on screen to their defaults.
Exit	Saves the settings, exits this submenu, and returns the camera to the Capture Settings menu.

Figure 41: Photo Assist Menu



Note: The Photo Assist menu options are grayed-out when the camera is in any of these exposure modes: Auto, Portrait, Landscape, Close-up, Action, and Night. The menu options are grayed-out because the camera automatically sets these settings in these exposure modes.

Photo Assist Menu

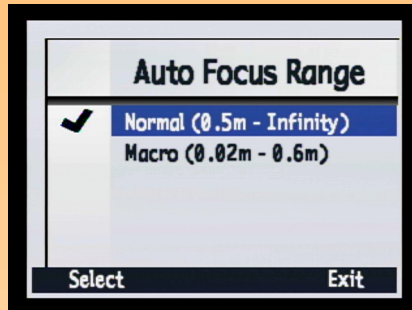
Use the Photo Assist menu to manipulate these more advanced camera operations when the camera is in either the Program, Shutter Priority (Tv), Aperture Priority (Av), or Manual exposure mode:

- ◆ AF Range
- ◆ White Balance
- ◆ AE Metering
- ◆ Focus Lock
- ◆ ISO Speed
- ◆ EV Bracket

Table 11: Photo Assist Soft Keys

Soft Key	Function
Edit	Opens submenu associated with highlighted menu option.
Exit	Exits this menu and returns the camera to live view in Capture mode.

Figure 42: Auto Focus Range Submenu



Note: If you want to focus on a picture subject between 0.02m and 0.2m, you must set the Auto Focus Range to Macro and put the zoom lens in the full telephoto position (that is, rotate the zoom ring on the lens barrel in the telephoto (T) direction until you can no longer rotate the zoom ring).

Auto Focus Range Submenu

Use the Auto Focus Range submenu to select the distance range over which the Auto Focus performs. Auto Focus Range does not apply when the camera is set to Manual Focus (MF).

Table 12: Auto Focus Range Submenu

Setting	Focus Range	When to Use
Normal (default for Program, Shutter Priority (Tv), Aperture Priority (Av), and Manual exposure modes)	0.5m to infinity	To take a picture of a subject that is in the normal focus range (not close-up) or in the distance.
Macro	0.2m - 0.6m when the zoom lens is in the normal (default) position 0.02m - 0.2m when the zoom lens is in the full telephoto position	To take a close-up picture of a subject, such as a flower.

Table 13: Auto Focus Range Soft Keys

Soft Key	Function
Select	Places a checkmark by the selected setting, then returns to the Photo Assist menu.
Exit	Returns to the Photo Assist menu without changing the setting.

Note: The option you set is active from shot-to-shot; it resets to its default setting when you cycle the power on the camera.

Figure 43: White Balance Submenu



White Balance Submenu

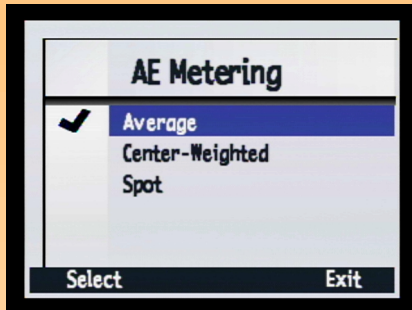
Use the White Balance submenu to correct the color applied to a captured image under different lighting conditions in order to make white areas in the image appear white without any color cast. You can select from these setting options:

- ◆ **Auto** (Default for Program, Shutter Priority (Tv), Aperture Priority (Av), and Manual exposure modes) – Use when you want the camera to automatically sense the lighting conditions and adjust the white balance appropriately for optimum color reproduction in the image.
- ◆ **Daylight** – Use when you are taking a picture in daylight without artificial lighting.
- ◆ **Tungsten** – Use when you are taking a picture under normal incandescent lighting, such as the light from tungsten filament light bulbs in household lamps.
- ◆ **Fluorescent** – Use when you are taking a picture under fluorescent lighting.

Table 14: White Balance Soft Keys

Soft Key	Function
Select	Places a checkmark by the selected setting, then returns to the Photo Assist menu.
Exit	Returns to the Photo Assist menu without changing the setting.

Figure 44: AE Metering Submenu



AE Metering Submenu

Use the AE (Automatic Exposure) Metering submenu to select the area of the scene that the camera will use to set the exposure when you take a picture.

Table 15: AE Metering Submenu

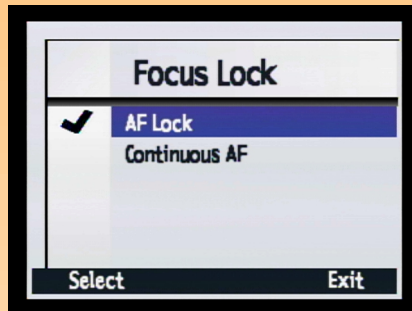
Setting	Function
Average (default)	The camera calculates exposure using the entire scene.
Center-Weighted	The camera uses the center half of the total pixels to calculate exposure.
Spot	The camera calculates exposure based only on the brightness of a small region in the center of the scene.

Table 16: AE Metering Soft Keys

Soft Key	Function
Select	Places a checkmark by the highlighted setting, then returns to the Photo Assist menu.
Exit	Returns to the Photo Assist menu without changing the setting.

Note: The option you set is active from shot-to-shot; it resets to its default setting when you cycle the power on the camera.

Figure 45: Focus Lock Submenu



Note: If the camera cannot focus when it is set to AF Lock and the Normal Auto Focus Range, it will focus at the hyperfocal distance and take the picture. However, if it cannot focus when set to AF Lock and the Macro Auto Focus Range, it will *not* take a picture. In both cases, you will see the warning “Unable to Focus” on the image LCD, and the in-focus indicator in the viewfinder will blink.

Focus Lock Submenu

Use the Focus Lock submenu to control how your camera performs focus metering and locking when the shutter release button is pressed halfway down.

Table 17: Focus Lock Submenu

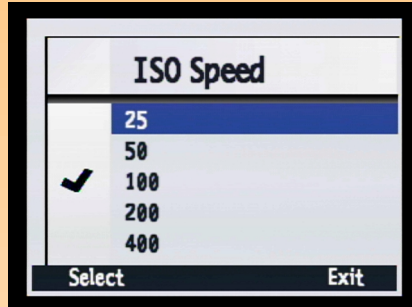
Setting	Function
AF (Auto Focus) Lock (default for Program, Shutter Priority (Tv), Aperture Priority (Av), and Manual exposure modes)	Calculates the auto focus when you press the shutter release button halfway down, then locks the focus at that setting. If you press the shutter release button all the way down before the camera is finished finding the focus, the camera will search the entire focus range and will make its best guess at where the focus should be (the in-focus indicator will blink inside the viewfinder). (see Note)
Continuous AF (Auto Focus)	Continuously calculates the focus when you press the shutter release button halfway or all the way down. This is a “release priority” mode; that is, the shutter will release immediately, even when the camera has not achieved focus.

Table 18: Focus Lock Soft Keys

Soft Key	Function
Select	Places a checkmark by the highlighted setting, then returns to the Photo Assist menu.
Exit	Returns to the Photo Assist menu without changing the setting.

Note: The option you set is active from shot-to-shot; it resets to its default setting when you cycle the power on the camera.

Figure 46: ISO Speed Submenu



ISO Speed Submenu

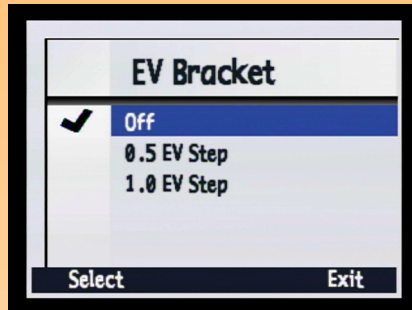
Use the ISO Speed submenu to set the ISO speed. Similar to film, slower ISO speeds require longer exposures, but produce higher quality images. In contrast, faster ISO speeds allow for shorter exposures, but produce noisier images. You can select from these setting options:

- ◆ 25
- ◆ 50
- ◆ 100 (Default for Program, Shutter Priority (Tv), Aperture Priority (Av), and Manual exposure modes)
- ◆ 200
- ◆ 400

Table 19: ISO Speed Soft Keys

Soft Key	Function
Select	Places a checkmark by the highlighted setting, then returns to the Photo Assist menu.
Exit	Returns to the Photo Assist menu without changing the setting.

Figure 47: EV Bracket Submenu



EV Bracket Submenu

Use the EV (Exposure Value) Bracket submenu to run a script that sets the exposure bracket. Use this when you want to try under- and over-exposing a shot to get the best exposure.

When you choose the 0.5 EV Step or 1.0 EV Step setting, live view is turned on and the message “Bracketing” appears in the center of the top overlay bar. Additionally, the Stop Script soft key appears as the middle soft key. All other buttons, except the shutter release button, are inactive while the script is running.

When you press the shutter release button all the way down, the camera takes three pictures: the first will be under-exposed by a half/full stop; the second will be nominally exposed; and the third will be over-exposed by a half/full stop.

Table 20: EV Bracket Submenu

Setting	Range
Off	Turns off EV bracketing.
0.5 EV Step	Sets the camera to capture images one half stop above and one half stop below the current exposure setting.
1.0 EV Step	Sets the camera to capture images one full stop above and one full stop below the current exposure setting.

Table 21: EV Bracket Soft Keys

Soft Key	Function
Select	Places a checkmark by the script, runs the script, then returns to live view in Capture mode.
Exit	Returns to the Photo Assist menu without running the script.

Note: An image stamp becomes permanently embedded in the image and overwrites data in the image. You *cannot* remove it later.

Figure 48: Image Stamp Menu

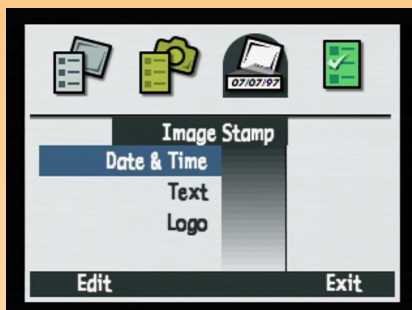


Figure 49: Date/Time Stamp Submenu

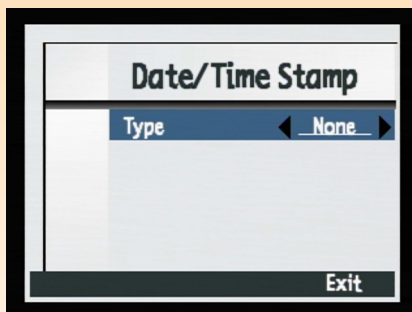


Image Stamp Menu

Use the Image Stamp menu to place watermarks on your images as you capture them. The Image Stamp menu has these options:

- ◆ Date & Time
- ◆ Text
- ◆ Logo

Table 22: Image Stamp Soft Keys

Soft Key	Function
Edit	Opens submenu associated with the selected menu option.
Exit	Exits this menu and returns to the live view in Capture mode.






Date/Time Stamp Submenu

Use the Date/Time Stamp submenu to stamp an image with the current date, time, both date and time, or neither.

You can set the following properties of the date/time stamp:

- ◆ Type
- ◆ Placement
- ◆ Transparency
- ◆ Text color
- ◆ Background

Table 23: Settings for Date/Time, Text, and Logo Stamp Submenus

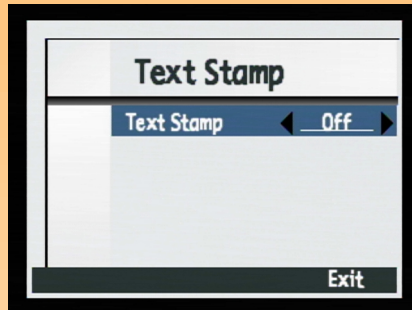
Setting	Options
Type	None (default), Both, Date, Time
Placement	 Top right quadrant of image  Center of image  Bottom left quadrant of image  Bottom right quadrant of image  Top left quadrant of image
Transparency	Opaque - There will be a background box around the text. Semi - There will be a translucent background box. Clear - There will be no background behind the text.
Text Color	White, red, green, blue, cyan, magenta, yellow, black
Background	Black, white, red, green, blue, cyan, magenta, yellow

Note: If you have set the Color in the File Settings submenu to either B&W (black and white) or Sepia, the Image Stamp will also be B&W or Sepia, regardless of the color you set for the Text and Background Colors in the Image Stamp menu.

Table 24: Date/Time Stamp Soft Keys

Soft Key	Function
Default	Returns all settings on screen to their defaults
Exit	Saves the settings, exits this submenu, and returns to the Image Stamp menu.

Figure 50: Text Stamp Submenu



Note: Text strings can be a maximum of 31 characters.

Text Stamp Submenu

Use the Text Stamp submenu to stamp an image with text that you enter using the text entry dialog.

Text Stamp is either On or Off, and the default is Off. When it is On, you can set the following properties of the text stamp:

- ◆ Placement
- ◆ Transparency
- ◆ Text color
- ◆ Background

Table 25: Text Stamp Soft Keys

Soft Key	Function
Edit	Opens text entry screen to enter the text stamp that will appear on the images. (Available only when the first line is set to On.)
Default	Returns all settings on screen to their defaults.
Exit	Exits this submenu and returns to the Image Stamp menu.

Figure 51: Logo Stamp Submenu



Note: By default, no logo files are included with your camera. To learn how to get logo files, see the HP website at: www.hp.com/photosmart.

Logo Stamp Submenu

Logo Stamp is either On or Off, and the default is Off. When it is On, you can:

- ◆ Stamp the image with a logo file
- ◆ Choose one logo from a list
- ◆ Choose the placement of the logo
- ◆ Choose the color
- ◆ Choose the transparency level

Table 26: Logo Stamp Soft Keys

Soft Key	Function
Edit	Opens the Logo Files dialog. (Available only when Logo Stamp is on.)
Default	Returns all settings on screen to their defaults.
Exit	Exits this submenu and returns to the Image Stamp menu.

Logo Files Dialog

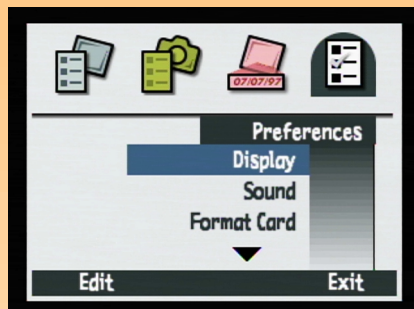
When you press the Edit soft key in the Logo Stamp submenu, the Logo Files dialog is displayed. Use the up and down arrows on the 4-way controller to select the file you want to use as the Logo Stamp from the list of available files.

Table 27: Logo Files Soft Keys

Soft Key	Function
Select	Places a checkmark next to the logo file, returns to the Logo Stamp submenu, and displays the selected file name in the second line of the submenu.
Exit	Exits this dialog and returns to Logo Stamp submenu.

Note: All options you set in the Preferences menu are active from shot-to-shot; they also remain set when you cycle the power on the camera.

Figure 52: Preferences Menu



Note: For more information on using the Preferences menu to set up your camera, see “Appendix A: Using the Preferences Menu” starting on page 103.

Preferences Menu

Use the Preferences menu to change a variety of your camera’s general settings. You can select from these options:

- ◆ Display
- ◆ Sound
- ◆ Format Card
- ◆ PC Connect Mode
- ◆ Date & Time
- ◆ Image Counter
- ◆ Camera Name
- ◆ Language
- ◆ Reset Settings

Table 28: Preferences Soft Keys

Soft Key	Function
Edit	Opens submenu associated with the highlighted menu option.
Format	Available only when Format Card is highlighted
Reset	Available only when Reset Settings is highlighted
Exit	Exits this submenu and returns camera to Capture mode.

Figure 53: Display Submenu



Note: The Instant Review setting determines the amount of time an Instant Review of an image you just captured is displayed on the image LCD. See “Using Instant Review” on page 33 for more information.

The Live View setting determines whether the live view of Capture mode will automatically display on the image LCD or not when you power on the camera and set the camera to Capture mode.

The Sleep Timeout setting determines how quickly the camera goes into sleep mode and turns off the image LCD when you are not using the camera.

Display Submenu

Use the Display submenu to control the display on the camera’s image LCD.

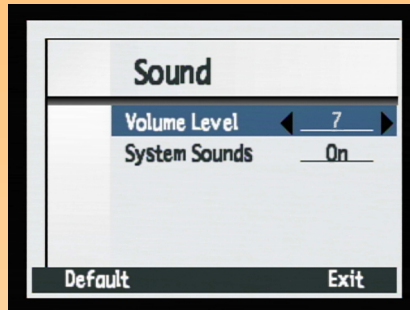
Table 29: Display Submenu

Setting	Default	Options
Brightness Level	4	1 (dimkest) - 7 (brightest)
Instant Review (see Note)	3 sec	1-10 sec 15 sec 20 sec 25 sec 30 sec Off
Live View (see Note)	Off	On / Off
Sleep Timeout (see Note)	2 min	30 sec 1 min 2 min 5 min

Table 30: Display Soft Keys

Soft Key	Function
Default	Returns all settings to their defaults.
Exit	Saves the settings, exits this submenu, and returns to the Preferences menu.

Figure 54: Sound Submenu



Note: The System Sounds setting determines whether or not you will hear the camera's system sounds, such as shutter clicks, beeps, and so forth.

Figure 55: Format Card Confirmation Screen



Sound Submenu

Use the Sound submenu to control the sounds used on your camera.

Table 31: Sound Submenu

Setting	Default	Options
Volume Level	7	1 (lowest) - 7 (highest)
System Sounds (see Note)	On	On / Off

Table 32: Sound Soft Keys

Soft Key	Function
Default	Returns all settings to their defaults.
Exit	Exits this submenu and returns to the Preferences menu.

Format Card Option

Use the Format Card option to reformat the memory card. Reformatting will erase all of the files on the card, including all images, protected files, folders, scripts, and so forth. You will see a confirmation of your choice to format the memory card (see Figure 55).

Table 33: Format Card Soft Keys

Soft Key	Function
Format	Reformats the memory card.
Cancel	Exits the confirmation screen and returns to the Preferences menu.

Figure 56: PC Connect Mode Submenu



Note: For more information on using the PC Connect Mode settings, see “Transferring Images to Your Computer” on page 46.

PC Connect Mode Submenu

Use the PC Connect Mode submenu to specify how the camera will appear to your computer when connected via the USB interface in PC Connect mode. You can then transfer images from your camera to the computer via the USB interface.

Table 34: PC Connect Mode Submenu

Setting	Function
USB Disk Drive	The camera is operated as a USB Mass Storage Device and appears as a disk drive connected to the computer. You can copy images from your camera to the computer as you would from another disk drive. Use this setting to connect the camera to a Mac OS 8.6 or better computer, or to a Windows Me, 98, or 2000 computer.
Digita Device (default)	You can use software included with your computer or camera to transfer images to the computer. Use this setting to connect the camera to a Windows Me, 98, or 2000 computer.

Table 35: PC Connect Mode Soft Keys

Soft Key	Function
Select	Places a checkmark next to the selected item and returns to the Preferences menu.
Default	Resets the settings to their defaults.
Exit	Exits this submenu without changing the settings and returns to the Preferences menu.

Figure 57: Set Date & Time Submenu

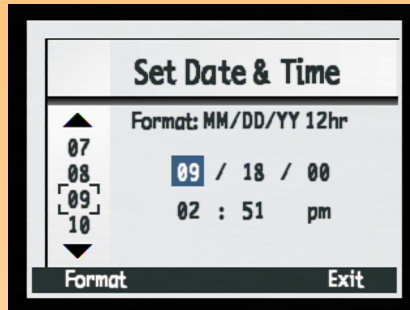
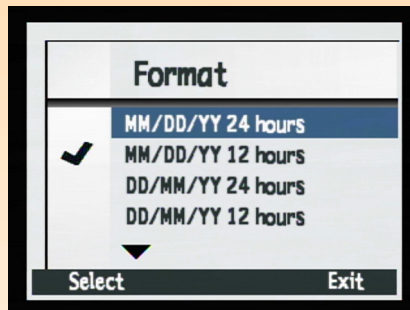


Figure 58: Format Dialog



Set Date & Time Submenu

Use the Set Date & Time submenu to set the camera's date and time. Press the up and down arrows on the 4-way controller to scroll through the list of numbers. Press the left and right arrows to move between the date/time fields.

Table 36: Set Date & Time Soft Keys

Soft Key	Function
Format	Opens the Format List dialog where you can select the format.
Exit	Saves the date and time settings, exits this submenu, and returns to the Preferences menu.

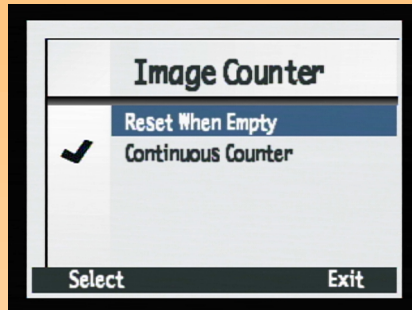
Format Dialog

When you press the Format soft key in the Set Date & Time submenu, you see the Format dialog, which allows you to select from a list of six, predefined date and time formats.

Table 37: Format Soft Keys

Soft Key	Function
Select	Places a checkmark next to the selected format and returns to the Set Date & Time submenu.
Exit	Exits this dialog and returns to the Set Date & Time submenu.

Figure 59: Image Counter Submenu



Note: Once you have changed the Image Counter setting, you must power the camera off and then on again for the new setting to take effect.

Image Counter Submenu

Use the Image Counter submenu to set how the image counter works.

Table 38: Image Counter Submenu

Setting	Function
Reset When Empty	Each time you delete all of the images on your camera, the counter restarts the first image captured at number 1.
Continuous Counter (default)	The images are counted according to the history of the camera's use. For example: image #400 is the 400th image to be captured with this camera.

Table 39: Image Counter Soft Keys

Soft Key	Function
Select	Places a checkmark next to the selected setting and returns to the Preferences menu.
Exit	Returns to the Preferences menu without changing the setting.

Figure 60: Camera Name Submenu



Note: Words wrap to the next line when they get too long.

Camera Name Submenu

Use the Camera Name submenu to enter a unique name for your camera.

Press the left (Character Set Icon) soft key to toggle through the four character sets (capital letters, lowercase letters, numbers, and symbols) until you see the character set you want to use displayed in the left soft key label area on the overlay bar. Then press the:

- ◆ Up or down arrow on the 4-way controller to scroll through the list of characters.
- ◆ Right arrow on the 4-way controller to enter the selected character and advance the insertion point in the center of the screen.
- ◆ Left arrow on the 4-way controller to back up and delete a character.
- ◆ Middle (Space) soft key to create a space between words in the camera name.

Table 40: Camera Name Soft Keys

Soft Key	Function
Character Set Icon	Toggles through four character sets: capital letters, lowercase letters, numbers, and symbols.
Space	Adds a space, instead of a letter, and advances the insertion point. (The Space key does not appear if a space is not a valid character.)
Exit	Saves the text entered and returns to the Preferences menu.

Figure 61: Language Submenu



Figure 62: Reset Settings Confirmation Screen



Language Submenu

English is set as the default language that is used on the camera. Use the Language submenu to select a language from the list of installed languages.

Table 41: Language Soft Keys

Soft Key	Function
Select	Places a checkmark next to the highlighted language and returns to the Preferences menu. The selected language is now used.
Exit	Returns to the Preferences menu without changing the setting.


Reset Settings Option

Use the Reset Settings option to reset all of the camera settings (except for the Language, Format for the Set Date & Time, PC Connect Mode, and Video Preferences settings) to their defaults in one step. You will see a confirmation of your choice to reset the camera settings (see Figure 62).

Table 42: Reset Settings Soft Keys

Soft Key	Function
Reset	Resets all camera settings to their defaults and returns to the Preferences menu.
Cancel	Returns to the Preferences menu without changing the settings.

Playback Mode Menu and Soft Keys

To access the Playback mode menu and related soft keys, turn the camera mode dial to Playback mode  and press the MENU button on the back of the camera. Once you have captured images, you can choose options and settings for the images within the one menu (Play Settings) of Playback mode.

Play Settings Menu

There are three options in this menu:

- ◆ Slideshow
- ◆ Playback Rate
- ◆ Video
- ◆ Overlay

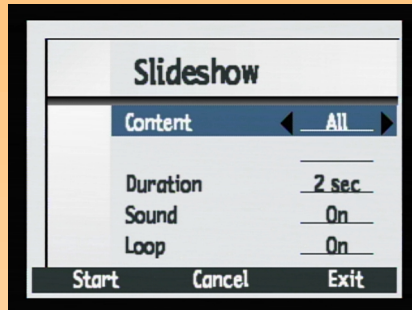
Figure 63: Play Settings Menu



Table 43: Play Settings Soft Keys

Soft Key	Function
Edit	Displays submenu for the highlighted option.
Exit	Exits this menu and returns to the Playback mode screen.

Figure 64: Slideshow Submenu



Slideshow Submenu

Use the Slideshow submenu to select the criteria for a slideshow to be viewed “on the fly.”

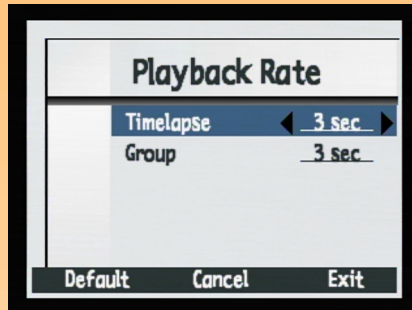
Table 44: Slideshow Submenu

Setting	Default	Options
Content	All	All, Category
Duration	2 sec	1-10 sec
Sound	On	On, Off
Loop	On	On, Off

Table 45: Slideshow Soft Keys

Soft Key	Function
Start	Exits this submenu and displays the slideshow.
Cancel	Exits this submenu without changing the settings and returns to the Play Settings menu.
Exit	Sets all the settings, exits this submenu, and returns to the Play Settings menu.

Figure 65: Playback Rate Submenu



Playback Rate Submenu

Use the Playback Rate submenu to establish a default playback rate for each image type.

Table 46: Playback Rate Submenu

Setting	Default	Options
Timelapse	3 sec	1-10 sec rate
Group	3 sec	1-10 sec rate

Table 47: Playback Rate Soft Keys

Soft Key	Function
Default	Returns all settings to their defaults.
Cancel	Exits this submenu without changing the settings and returns to the Play Settings menu.
Exit	Sets all the settings, then exits this submenu, and returns to the Play Settings menu.

Figure 66: Video Preferences Submenu



Video Preferences Submenu

Use the Video Preferences submenu to specify the video format: NTSC or PAL. The format that you choose (NTSC or PAL) depends on your television’s video input format:

- ◆ NTSC is the video connection standard used in the United States and Japan.
- ◆ PAL is the video connection standard used in Europe.

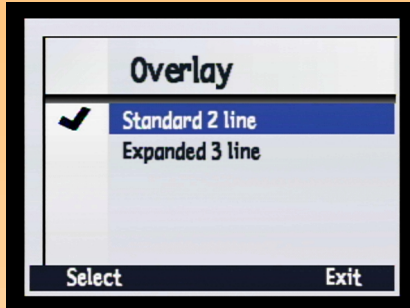
Table 48: Video Preferences Submenu

Setting	Default	Options
Video Out	NTSC	NTSC, PAL

Table 49: Video Preferences Soft Keys

Soft Key	Function
Cancel	Exits this submenu without changing the settings and returns to the Play Settings menu.
Exit	Saves the setting, exits this submenu, and returns to the Play Settings menu.

Figure 67: Overlay Submenu



Overlay Submenu

Use the Overlay submenu to specify how many lines of text the top overlay bar has in Playback mode: standard 2 line, or expanded 3 line.


Table 50: Overlay Submenu

Option	Function
Standard 2 line (default)	Specify the content of the overlay in 2 lines.
Expanded 3 line	Specify the content of the overlay in 3 lines.

Table 51: Overlay Soft Keys

Soft Key	Function
Select	Places a checkmark next to the highlighted setting and returns to the Play Settings menu.
Exit	Returns to the Play Settings menu without changing the Overlay style settings.

Review Mode Menus and Soft Keys

To access the Review mode menus and related soft keys, turn the camera mode dial to Review mode  and press the MENU button on the camera. Once you have captured images, you can change specifications for the images within the four Review mode menus:

- ◆ “Edit Menu” on page 87
- ◆ “Print Order Form Menu” on page 90
- ◆ “Transmit Menu” on page 93
- ◆ “Find Menu” on page 95

Edit Menu

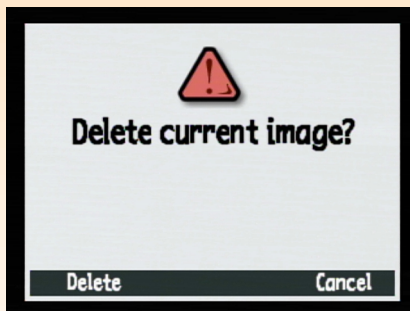
Use the Edit menu to perform the following actions on selected images:

- ◆ Delete
- ◆ Group
- ◆ Protect
- ◆ Categorize

Figure 68: Edit Menu



Figure 69: Delete Confirmation Screen



Delete Option

Use the Delete option to delete the current image, a group of images, or all of the marked images from the memory card. Note that protected images within a group marked for deletion will not be deleted until you unprotect them. You will see a confirmation of your choice to delete the images (see Figure 69).

Table 52: Delete Soft Keys

Soft Key	Function
Delete	Deletes the selected image(s) and then returns to the Review mode screen.
Cancel	Exits and returns to the Review mode screen without deleting image(s).

Note: A group becomes a folder on the memory card, in which all the images in that group are stored.

Figure 70: Group Name Submenu



Figure 71: Protect Option



Group Name Submenu

Use the Group Name submenu to group all of the images that you have marked. You can start a group, add images to an existing group, or move images from one group to a new group. Note that you can use the Dissolve soft key to dissolve groups.

Table 53: Group Name Soft Keys

Soft Key	Function
Add (If current image is not grouped, but at least one group exists.)	Displays a dialog that allows you to create a new group or add to an existing group. (Images are moved into groups, not replicated.)
Create (If current image is not grouped and no groups exist.)	
Dissolve	Removes any grouping previously applied.
Exit	Exits and returns to the Review mode screen.

Protect Option

Use the Protect option to protect or unprotect marked images. When an image is protected, you can't delete it. If there are no marked images, then the Protect command protects the currently selected image. If the marked or selected single image is unprotected, only the Protect soft key appears. If the image is protected, only the Unprotect soft key appears. If multiple images, both protected and unprotected, are marked, then both the Protect and Unprotect soft keys appear.

Once you have protected an image, the following restrictions apply to the image file:

- ◆ You cannot delete the image nor an attached sound.
- ◆ You cannot attach or re-record a sound.
- ◆ You cannot attach, change, or remove a category.
- ◆ Deleting a group will delete only the unprotected images within that group.
- ◆ You cannot change the file name.
- ◆ You can move the image file into and out of groups.
- ◆ The image file will be marked "Read Only" in Windows when transferred to a PC.

Note: A category is an image tag which is useful for finding images or playing a slideshow of a category of images.

Figure 72: Categories Submenu



Table 54: Protect Soft Keys

Soft Key	Function
Protect	Appears if selected images are unprotected. Allows you to protect the current image.
Unprotect	If multiple images are marked, this soft key appears along with the Protect soft key. Allows you to unprotect images.
Exit	Cancels the protect operation and returns to the Review mode screen.

Categories Submenu

Use the Categories submenu to assign images to a category. The camera has predefined categories, such as vacation, work, pets, family, and friends

Choose the category you want using the 4-way controller, then use the Select soft key to attach the category to the image. You can assign categories to one image at a time, or you can categorize all marked images at once.

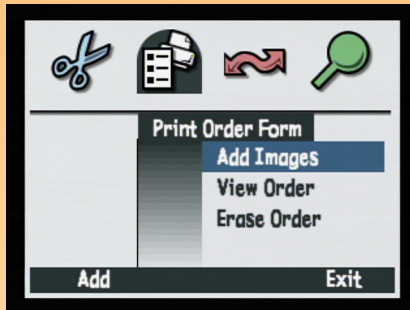
Table 55: Categories Soft Keys

Soft Key	Function
Select	Assigns a category to an image or marked images. Places a checkmark next to the assigned category.
Exit	Updates the image files with the new categories and returns to the Review mode screen.

Print Order Form Menu

Use the Print Order Form menu to create a Digital Print Order Format (DPOF) file.

Figure 73: Print Order Form Menu



Note: See “Using a Digital Print Order Format (DPOF) File” on page 52 for more information.

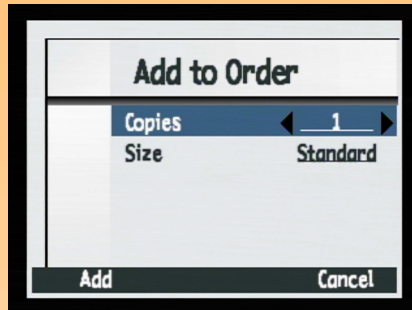
Table 56: Print Order Form Menu

Option	Function
Add Images	Allows you to add current image or marked images to the DPOF file. Opens a secondary screen to specify number of copies and size of photos.
View Order	Displays a scrolling list of the contents of the DPOF file.
Erase Order	Erases the contents of your DPOF file.

Table 57: Print Order Form Soft Keys

Soft Key	Function
Add/Select	Opens appropriate submenu.
Erase	Asks for confirmation to delete all entries of the DPOF file.
Exit	Exits and returns to the Review mode screen.

Figure 74: Add to Order Submenu



Note: Standard means one of the standard print sizes. You specify the exact size you want your Standard prints to be at the printer. For example, you can specify that all Standard images be printed at 4" x 6".

Add to Order Submenu

Use the Add to Order submenu to add current or marked images to the DPOF file and to set up the print settings for those images.

If you have any marked images, they are added to the order. If no images are marked, the image currently selected in the Review mode is added to the order.

Table 58: Add to Order Submenu

Setting	Options
Copies	1-999 (1=default)
Size	Index - Thumbnails Standard (default) - One of the standard print sizes (see Note)

Table 59: Add to Order Soft Keys

Soft Key	Function
Add	Adds images to the DPOF file.
Cancel	Exits without adding images.

Figure 75: Print Order Form Screen of the View Order Option

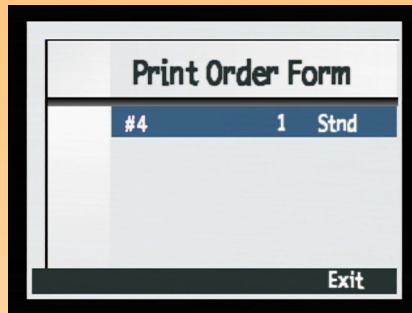
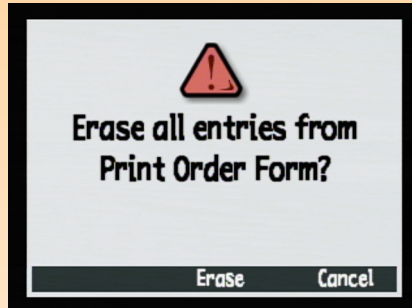


Figure 76: Erase Order Confirmation Screen



View Order Option

Use the View Order option to view a list of ordered images in the DPOF file. You can scroll through this list using the up and down arrows on the 4-way controller. However, you cannot edit this list.

Table 60: View Order Option Soft Key

Soft Key	Function
Exit	Returns to the Print Order Form menu.

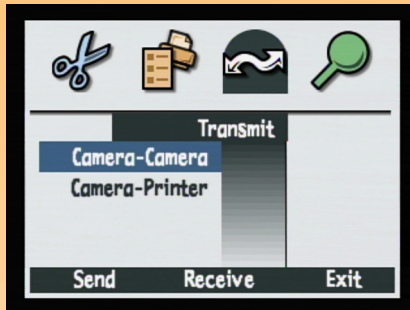
Erase Order Option

Use the Erase Order option to erase all of the entries from the DPOF file. You will see a confirmation of your choice to erase all entries (see Figure 76).

Table 61: Erase Order Soft Keys

Soft Key	Function
Erase	Erases the contents of the DPOF file.
Exit	Returns to the Print Order Form menu without clearing the DPOF file.

Figure 77: Transmit Menu



Note: For more information, see “Transmitting Images Between Two Cameras” on page 56.

Transmit Menu

Use the Transmit menu to transfer images in one of two ways:

- ◆ Camera-Camera
- ◆ Camera-Printer

Camera-Camera Option

Use the Camera-Camera option to send current or marked images to, or receive images from, another Digita camera.

Table 62: Camera-Camera Soft Keys

Soft Key	Function
Send	Sets the camera into sender mode. Displays a screen to confirm sending images to another camera and then returns to the Review mode screen.
Receive	Sets the camera to receiver mode. Brings up a screen to confirm receiving images from another camera and returns to the Review mode screen.
Stop	Stops transmitting and returns to the Transmit menu.
Exit	Exits this screen and returns to the Review mode screen.

Note: For more information, see “JetSending Images to a Printer” on page 54.

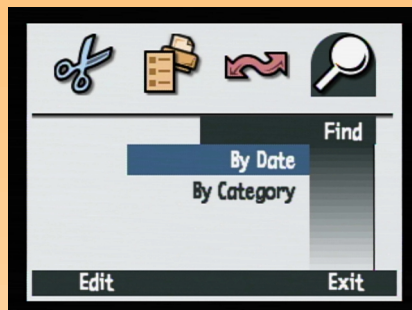
Camera-Printer Option

Use the Camera-Printer option to send current or marked images to a printer via the HP JetSend infrared technology.

Table 63: Camera-Printer Soft Keys

Soft Key	Function
Send	Sets the camera to sender mode. Displays a screen to confirm sending images and then returns to the Review mode screen.
Exit	Exits this screen and returns to the Review mode screen.

Figure 78: Find Menu



Find Menu

Use the Find menu to search for specific images, either by category or by date (but not both at the same time). When you return to the Review mode to view the results of the find operation, the Find icon will appear in the lower, right corner. All find results will be chronologically displayed. If no images match your search criteria, then you will see an error message.

Table 64: Find By Date and Find By Category Soft Keys

Soft Key	Function
Edit	Displays specific find options (Find By Date, or Find By Category).
Select	Selects the category to find.
Exit	Exits the Find screen and returns to the Review mode screen.
Mark	After the find operation, marks a selected image.
Show All	After the find operation, returns the thumbnail row to the original, chronological list of images and turns off the Find icon.

Figure 79: Find By Date Submenu

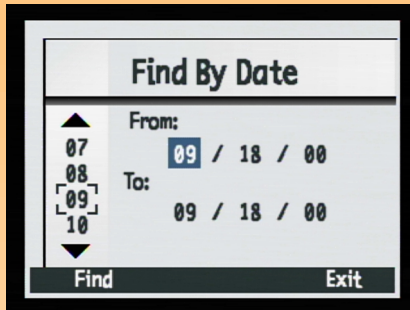


Figure 80: Find By Category Submenu



Find By Date Submenu

Use the Find By Date submenu to enter the range of dates using the 4-way controller.

Table 65: Find By Date Soft Keys

Soft Key	Function
Find	Executes the Find criteria and returns to the Review mode screen to display results.
Exit	Exits this screen and returns to the Find menu without executing the Find command.

Find By Category Submenu

Use the Find By Category submenu to scroll through the list of categories and enter the “find” category with the 4-way controller. You can then use the Select soft key to select the category with which you want to do the search.

Table 66: Find By Category Soft Keys

Soft Key	Function
Select	Selects the checkmarked category from the Find By Category list and executes the Find command.
Exit	Exits this screen and returns to the Find menu without executing the Find command.

Note: For information about preserving battery life and about HP accessories you can use to power the camera (such as the HP AC power adapter, and the HP rechargeable batteries and battery rechargers), see Appendix B starting on page 112.

Overview

This chapter explains how to troubleshoot some common problems you may encounter while using your camera.

If you still cannot remedy the problem, contact HP for help. See “Contacting HP Customer Care” on page 102.

Troubleshooting Common Problems

Problem	Solution
The camera will not power on	<ul style="list-style-type: none">◆ If you are using batteries:<ul style="list-style-type: none">◆ Check the type of batteries that you have installed in the camera. They may not be the appropriate type for a digital camera. Use only 4 high quality AA photo lithium, high drain alkaline, or NiMH batteries, or one high-quality Li Ion battery.◆ Check to make sure the batteries are inserted correctly. The positive and negative poles may be reversed.◆ The batteries' charge may be low or completely drained. Try installing new batteries or recharged batteries,◆ If you are using the HP AC power adapter instead of batteries:<ul style="list-style-type: none">◆ Is the AC power adapter plugged in?◆ Is there power at the outlet?◆ Is the AC power adapter dead?
The camera is powered on, but there's no display on the image LCD	<ul style="list-style-type: none">◆ Press the DISPLAY button again.◆ Power the camera off and then on again.◆ The batteries may be nearly drained. (If so, you should see an empty battery status icon on the status LCD.) Leave the image LCD turned off, or insert charged batteries.
The camera is powered on, but when I press a button, the camera does not respond	<ul style="list-style-type: none">◆ Try powering the camera off and then on again.◆ Remove the batteries or unplug the HP AC power adapter. Then reinstall the batteries or plug in the AC power adapter, and power on the camera again


Problem

Solution

The rechargeable HP NiMH batteries I'm using don't seem to power the camera for very long

You must recharge all 4 HP NiMH batteries after fully draining them four times for the batteries to reach their optimum capacity and performance. For more information, see "Using the HP NiMH Batteries and Recharger" on page 118.

The incorrect language is set on the camera

1. Set the camera mode dial to Capture mode .
2. Power on the camera if you haven't already.
3. Press the MENU button to display the Capture mode menus on the image LCD.
4. Press the right arrow on the 4-way controller *three* times to move to the Preferences menu.
5. Press the down arrow on the 4-way controller *seven* times to move to the Language menu option.
6. Press the left (Edit) soft key. The Language submenu is displayed.
7. Press the down or up arrow on the 4-way controller to highlight the language you want.
8. Press the left (Select) soft key to select the highlighted language and to exit this screen. You return to the Preferences menu of Capture mode, and the camera is now using the language you set.
9. Press the right (Exit) soft key to exit the menu.

The camera is displaying an error message

There are 3 different types of error messages you may see on the camera:

- ◆ Memory card is not formatted - "Err" is displayed on the status LCD and the message "Card requires formatting" is displayed on the image LCD. This means the memory card needs to be formatted. Either see "Formatting the Memory Card" on page 107 for information on how to format the card, or replace the current memory card with another, formatted one.
- ◆ Flash cannot charge - "Err" and the lightning bolt icon blinks on the status LCD for 3 seconds, then the camera powers off. "Err" and the lightning bolt will remain displayed on the status LCD until the batteries are drained. This problem requires repair of the camera. See "Contacting HP Customer Care" on page 102 to call HP for help.
- ◆ Other errors - The camera locks up and blinks a 3-digit error code on the status LCD. Try powering the camera off and then on again. You may also need to remove the batteries and install them again. If the problem persists, see "Contacting HP Customer Care" on page 102 to call HP for help. Be sure to tell the HP representative the error code that you see displayed on the status LCD.

Problem

Solution


The camera's status LCD is flashing 000

There is no memory card installed in the camera, or the memory card is full. If there isn't one installed, power off the camera, install a memory card in it, and then power on the camera again. If the memory card is full, transfer the images you want to keep to your computer (see "Transferring Images to Your Computer" on page 46), and then delete images from the memory card to free-up space.


The image counter on the camera's status LCD won't reset when the memory card is empty

The default setting for the image counter is continuous counting of images. If you want to have it reset to zero when the memory card is empty, you can change the setting in the Image Counter submenu (under the Preferences menu in Capture mode). See "Image Counter Submenu" on page 79. Once you have changed the image counter setting, you must power the camera off and then on again. Also ensure that the camera's memory card is completely empty.

The camera will not focus

- ◆ Ensure that the camera mode dial is set to Capture mode .
- ◆ You may be too close to the subject. Try using Close-up exposure mode.
- ◆ Try using Focus Lock. See "Using Focus Lock" on page 25.

Digital zoom is not working

For Digital zoom to work correctly, the camera's image LCD must be turned on. Ensure that the camera mode dial is set to Capture mode . Then press the DISPLAY button.

The HP Remote Control is not working

- ◆ The HP Remote Control does not work while the flash is charging. Try pressing the Remote Control's trigger again once the flash has charged.
- ◆ The HP Remote Control may not work if the camera is sitting under bright lights or in full sun. In this case, use the 10-Second Timer mode, instead. (See "Setting the Timer Mode" on page 14.)
- ◆ The battery in the HP Remote Control may be dead. If so, replace the battery.

The images I captured have flares of light across them

Be sure that the viewfinder cap is in place anytime you use the image LCD or the HP Remote Control to take pictures. Without it, light from the viewfinder may leak into the image you capture and cause a flare on the image.

I am trying to name a group of images, but the camera is not responding

- ◆ Try using a different group name. Note that the camera does not accept group names that begin with BR or TL (regardless of language).
- ◆ Group names must be eight characters or less, and cannot contain spaces.

Problem

Solution

I am searching through images by date, and have selected the find dates, but the camera is not responding

Make sure that the From date is prior or equal to the To date.

The computer does not recognize the camera when connected via the USB cable

On both Windows and Macintosh computers:

- ◆ Is the camera powered on?
- ◆ Is the camera mode dial set to PC Connect mode **PC**?
- ◆ Is the USB cable firmly attached to both the camera and computer?
- ◆ Is the USB port enabled on the computer?
- ◆ Are you using a USB hub? If so, you may need to reset the hub. (It may have become disabled due to an electrical disturbance such as that generated by static electricity.) To reset the USB hub, leave the camera connected to the hub, disconnect the hub from the computer, and remove power from the hub. Then reconnect the power to the USB hub and reconnect the hub to the computer.
- ◆ Try powering the camera off and then on again.

On Windows Me, 98, and 2000 computers:

- ◆ If you are using the Microsoft Scanner and Camera Wizard (for Windows Me) or the HP Photo Imaging Software (for Windows 98 and 2000) to transfer images, is the PC Connect Mode submenu setting (under the Preferences menu of Capture mode) in the camera set to Digital Device?
- ◆ If you are using the PC Connect Mode submenu setting of USB Disk Drive in the camera instead, does the camera appear as a disk drive in Windows Explorer?

Note: Computers running Windows NT 4.0 cannot connect to the camera via the USB cable, because Windows NT 4.0 does not support the USB interface. You must use either an HP P1000/1100 or similar printer, or a memory card reader to transfer the images to your Windows NT 4.0 computer, instead.

On Macintosh computers:

- ◆ Is the PC Connect Mode submenu setting (under the Preferences menu of Capture mode) in the camera set to USB Disk Drive?

Problem

Solution

A TWAIN error occurs when a software program tries to acquire an image from the camera

- ◆ Verify that the software program can see the camera through its own TWAIN select source. While software programs vary on how to select a TWAIN source, generally the easiest way to determine whether a program supports TWAIN is to see if there is an Acquire selection in the File menu. If not, then check for a TWAIN command located under the Import selection of the File menu. If neither exists, and you have a scanner, check the manual for the software program to see if you can use TWAIN to scan images, instead
- ◆ For more detailed information about this problem, consult the Technical Support section for this camera that is located on the HP website at: www.hp.com/photosmart.

I can't get images to display on my television when I connect my camera to it

Make sure that the video output format (NTSC or PAL) that you set in the Video Preferences submenu of Playback mode is correct for the video input format of your television. (See "Video Preferences Submenu" on page 85.)

I'm having trouble JetSending an image to my printer

- ◆ Be aware that it will take an average of 20 seconds to transfer an image from the camera to a printer via JetSend.
- ◆ Make sure that your printer is JetSend-capable.
- ◆ Make sure that the camera's infrared window is lined-up with the printer's infrared sensor, and that the camera and printer are about 10 inches apart.

I'm having trouble sending an image to another camera

- ◆ Make sure that the other camera is a Digita camera.
- ◆ Make sure that the camera's infrared window is lined-up with the other camera's infrared sensor, and that the cameras are about 10 inches apart.



Note: For a *complete* list of HP's Customer Support Centers worldwide, go to the HP website, www.hp.com/photosmart, and click the **Assistance** button on the navigation bar.

Contacting HP Customer Care

HP Customer Care Online

Click your way to a great solution! The HP website, www.hp.com/photosmart, is a great place to start for answers to questions about your HP products. You'll get instant access to helpful tips and tricks, downloadable drivers, and the latest product and software updates – 24 hours a day, 7 days a week.

HP Customer Care by Phone

If you encounter a problem with your camera that is not covered in this chapter, contact HP for help. HP has Customer Support Centers worldwide, some of which are listed below.

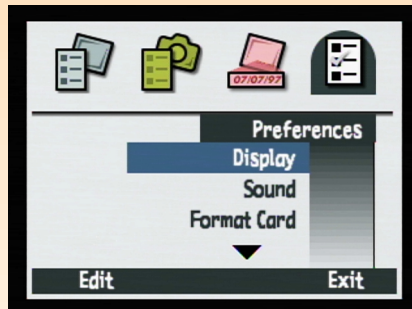
HP's Customer Support Centers

Replace a + with your international telephone access code.

North America	Canada: 905-206-4663 Mexico - Mexico City: +52 58 9922 Mexico - Outside Mexico City: +01 800 472 6684 United States: 208-376-3686
Europe	Belgium - Dutch: +32 (0)2 626 8806 Belgium - French: +32 (0)2 626 8807 Denmark: +45 39 29 4099 Finland: +358 (0)203 47 288 France: +33 (0)1 43 62 34 34 Germany (24PF/min): +49 (0)180 52 58 143 Italy: +39 02 264 10350 Netherlands: +31 (0)20 606 8751 Norway: +47 22 11 6299 Spain: +34 902 321 123 Sweden: +46 (0)8 619 2170 United Kingdom: +44 (0)207 512 52 02 English language support from other European countries: +44 (0)171 512 52 02
Asia/Pacific	Australia: +61 3 8877 8000 Korea: +82 (2) 3270 0700 Singapore: +65 272 5300 Taiwan: +886 (2) 2717 0055

Note: For reference information regarding the options and soft keys in the Preferences menu, see “Preferences Menu” starting on page 74.

Figure 81: Preferences Menu



Note: All of the settings you make in the Preferences menu are active from shot-to-shot; they also remain set when you cycle the power on the camera.

Overview

Use the Preferences menu in Capture mode to change a variety of your camera’s general settings. For example, with the Preferences menu options you can change the brightness of the camera’s image LCD or the volume of the camera’s sounds, reformat the memory card in the camera, change the date and time on the camera, or set the mode for connecting the camera to a computer.

This appendix covers the following topics:

- ◆ “Accessing the Preferences Menu” on page 103
- ◆ “Setting the Display” on page 104
- ◆ “Controlling Camera Sounds” on page 106
- ◆ “Formatting the Memory Card” on page 107
- ◆ “Selecting the PC Connect Mode” on page 107
- ◆ “Setting the Date and Time” on page 108
- ◆ “Setting the Image Counter” on page 109
- ◆ “Naming Your Camera” on page 110
- ◆ “Selecting a Language” on page 111
- ◆ “Resetting Camera Settings” on page 111

Accessing the Preferences Menu

To access the Preferences menu:


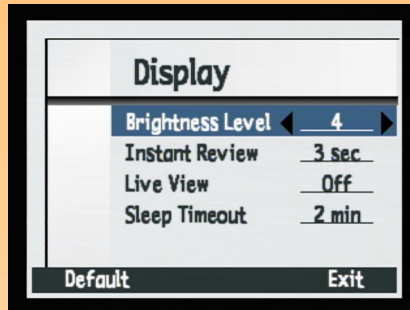
- 1 Set the camera mode dial to Capture mode .
- 2 Power on the camera if you haven’t already.
- 3 Press the MENU button on the back of the camera. The Capture mode menus are displayed on the image LCD.
- 4 Press the right arrow on the 4-way controller *three* times to move to the Preferences menu (see Figure 81).
- 5 Press the down arrow on the 4-way controller to move the highlight to the menu option you want to select.
- 6 Press the left (Edit, Format, or Reset) soft key to select the highlighted menu option.

Figure 82: Display Submenu



Setting the Display

Use the Display submenu to control the display on the camera's image LCD.

Brightness Level

Use the Brightness Level setting to control the brightness of the display on the camera's image LCD. You can set the Brightness Level from 1 (dimkest) to 7 (brightest). The default value is 4.

To change the Brightness Level:

- 1 Press the down or up arrow on the 4-way controller, if needed, to highlight the Brightness Level option.
- 2 Press the right or left arrow on the 4-way controller to scroll through the values until you see the value you want.
- 3 Press the right (Exit) soft key to save the setting, exit the Display submenu, and return to the Preferences menu.

Instant Review

The camera's Instant Review feature allows you to see displayed on the image LCD either the One Shot image, the final image of a Continuous image sequence, or the first image of a Timelapse sequence you just captured. (See "Using Instant Review" on page 33 for more information.) The default setting is that Instant Review is on for 3 seconds, and the maximum setting is that it is on for 30 seconds, after you capture either a One Shot image or the final image in a Continuous or Timelapse sequence.

To change the duration of the Instant Review period, or to turn Instant Review Off:

- 1 Press the down or up arrow on the 4-way controller to highlight the Instant Review option.
- 2 Press the right or left arrow on the 4-way controller to scroll through the values until you see the value you want.
- 3 Press the right (Exit) soft key to save the setting, exit the Display submenu, and return to the Preferences menu.

Note: The image LCD uses a lot of battery power. If you are running your camera on batteries rather than with the HP-approved AC power adapter, you may want to limit your use of the image LCD. In turn, you may want to leave the Live View setting at its default Off value to preserve battery power.

Note: For convenience as you learn to use your camera's features and menu options, you may want to set the Sleep Timeout to the longest interval (5 minutes). This will give you time to consider a feature or menu option before the camera goes into sleep mode and the image LCD turns off.

Live View

The Live View setting determines whether the live view of Capture Mode will automatically display on the image LCD or not when you power on the camera and set the camera to Capture mode. The default value for Live View is Off.

To change the setting so Live View is On (that it will always display on the image LCD when you power on the camera and set the camera to Capture mode):

- 1 Press the down or up arrow on the 4-way controller to highlight the Live View option.
- 2 Press the right or left arrow on the 4-way controller to change the value to On.
- 3 Press the right (Exit) soft key to save the setting, exit the Display submenu, and return to the Preferences menu.

Sleep Timeout

Prior to the camera completely powering itself off due to inactivity, the camera goes to “sleep” by turning off the image LCD and either turning off or slowing down other functions to conserve power. Pressing any button on the camera (except the power switch) “wakes” the camera from sleep mode.

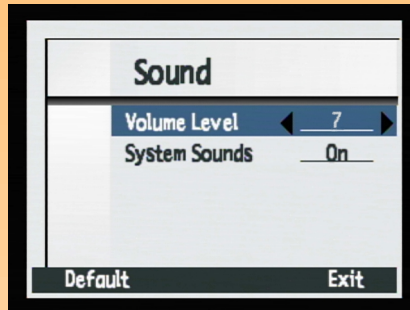
After the camera goes to sleep, it will power off after an additional 5 minutes of inactivity. Once the camera completely powers itself off, you must use the power switch to power it on again.

The Sleep Timeout setting determines how quickly the camera goes into sleep mode when you are not using the camera. The default value is 2 minutes.

To change the Sleep Timeout:

- 1 Press the down or up arrow on the 4-way controller to highlight the Sleep Timeout option.
- 2 Press the right or left arrow on the 4-way controller to scroll through the values until you see the value you want.
- 3 Press the right (Exit) soft key to save the setting, exit the Display submenu, and return to the Preferences menu.

Figure 83: Sound Submenu



Controlling Camera Sounds

Use the Sound submenu to control the sounds used on your camera

Volume Level

The Volume Level setting allows you to determine the volume level of the sounds on your camera. This includes both the system sounds (see the next subsection) and the sounds you attach to images via the Sound Record button (see “Recording Sound” on page 34). You can set the Volume Level from 1 (lowest/softest) to 7 (highest/loudest). The default value is 4.

To change the Volume Level:

- 1 Press the down or up arrow on the 4-way controller, if needed, to highlight the Volume Level option.
- 2 Press the right or left arrow on the 4-way controller to scroll through the values until you see the value you want.
- 3 Press the right (Exit) soft key to save the setting, exit the Sound submenu, and return to the Preferences menu.

System Sounds

The Systems Sounds setting determines whether or not you will hear the camera’s system sounds, such as shutter clicks, beeps, and so forth. The default value is On (that you will hear system sounds).

To change the setting so that System Sounds are turned Off:

- 1 Press the down or up arrow on the 4-way controller to highlight the System Sounds option.
- 2 Press the right or left arrow on the 4-way controller to change the value to Off.
- 3 Press the right (Exit) soft key to save the setting, exit the Sound submenu, and return to the Preferences menu.

Figure 84: Format Card Confirmation Screen

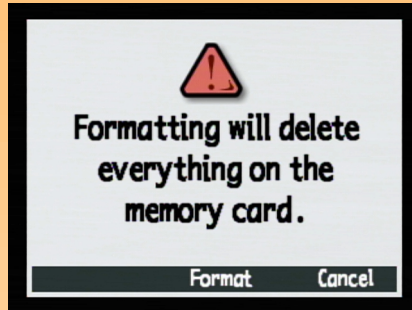


Figure 85: PC Connect Mode Submenu



Note: The USB Disk Drive mode will remain set on your camera only if you power off the camera by using the power switch. By powering off the camera correctly, you will *not* have to repeat these procedures when transferring images to your computer in the future.

Formatting the Memory Card

Use the Format Card option to reformat the memory card in your camera. Reformatting will erase all of the files (images) on the memory card, including protected files, folders, scripts, and so forth.

When you select the Format Card option by pressing the left (Format) soft key, you will see a confirmation of your choice to format the memory card (see Figure 84). You can either press the middle (Format) soft key to reformat the memory card, or press the right (Cancel) soft key to exit the confirmation screen without reformatting the memory card and return to the Preferences menu.

Selecting the PC Connect Mode

Use the PC Connect Mode submenu to specify how the camera will appear to your computer when connected via the USB interface in PC Connect mode. You can then transfer images from your camera to the computer via the USB interface. Table 67 explains the PC Connect Mode settings and their functions. The currently selected mode is indicated by the checkmark to the left of it. The default mode is Digita Device.

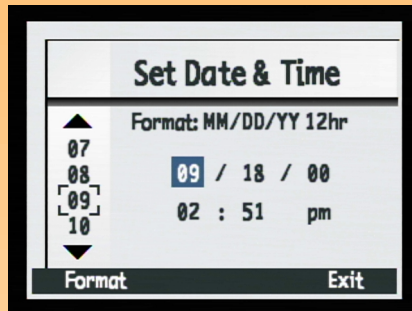
Table 67: PC Connect Mode Submenu

Setting	Function
USB Disk Drive	The camera is operated as a USB Mass Storage Device and appears as a disk drive connected to the computer. You can copy images from your camera to the computer as you would from another disk drive. Use this setting to connect the camera to a Mac OS 8.6 or better computer, or to a Windows Me, 98, or 2000 computer.
Digita Device (default)	You can use software included with your computer or camera to transfer images to the computer. Use this setting to connect the camera to a Windows Me, 98, or 2000 computer.

To change the PC Connect Mode:

- 1 Press the down or up arrow on the 4-way controller, if needed, to highlight the PC Connect Mode you want.
- 2 Press the left (Select) soft key. The checkmark moves to the highlighted mode, and you return to the Preferences menu. The camera is now set to the mode you just selected.

Figure 86: Set Date & Time Submenu



Note: Press the up or down arrow on the 4-way controller to scroll through the numbers on the left side of the screen. Press the right or left arrow to move between the date/time fields in the center of the screen.

Setting the Date and Time

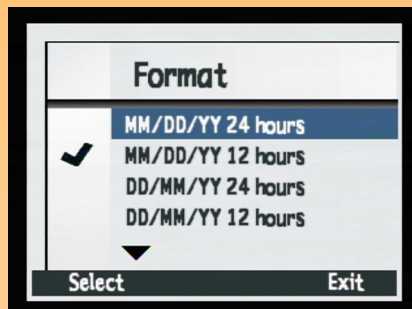
Use the Set Date & Time submenu to set the camera's date and time. If you wish to change the format that is used for the date and time, see the next subsection, "Format Dialog."

Press the up or down arrow on the 4-way controller to scroll through the list of numbers on the left side of the screen until you reach the number you want. The number in the currently highlighted field in the center of the screen (such as the Month field, as shown in the example in Figure 86) changes accordingly. When you have selected the number for the currently highlighted field, press the right arrow on the 4-way controller to move to the next field. When you have finished setting the date and time, press the right (Exit) soft key to save the date and time settings and return to the Preferences menu.

For example, to set the date to September 18, 2000 and the time to 2:51 pm, as shown in the example in Figure 86:

- 1 Press the up or down arrow on the 4-way controller until you highlight **9**, which sets the Month field in the center of the screen to 9 (for the month of September).
- 2 Press the right arrow on the 4-way controller to move to the Day field.
- 3 Press the up or down arrow on the 4-way controller until you highlight **18**.
- 4 Press the right arrow on the 4-way controller to move to the Year field.
- 5 Press the up or down arrow on the 4-way controller until you highlight **00**.
- 6 Press the right arrow on the 4-way controller to move to the Hour field.
- 7 Press the up or down arrow on the 4-way controller until you highlight **02**.
- 8 Press the right arrow on the 4-way controller to move to the Minutes field.
- 9 Press the up or down arrow on the 4-way controller until you highlight **51**.
Since the am/pm setting is set to pm by default, simply leave the am/pm field as it is.
- 10 Press the right (Exit) soft key to save the date and time settings and return to the Preferences menu.

Figure 87: Format Dialog



Format Dialog

When you press the left (Format) soft key in the Set Date & Time submenu, you see the Format dialog, which allows you to select from a list of six, predefined date and time formats. There are three formats which use the 24-hour clock format, and three formats which use the 12-hour clock format. The default format for the date and time is MM/DD/YY 12 hr, which means the date is in the Month/Day/Year format, and the time is in the 12-hour clock format.

For example, to set your camera to the MM/DD/YY 24 hour format (so that the date will be in the Month/Day/Year format, and the time will be in the 24-hour clock format), follow these steps:

- 1 Press the left (Format) soft key in the Set Date & Time submenu to move to the Format dialog.
- 2 Press the up or down arrow on the 4-way controller to highlight the MM/DD/YY 24 hours format in the Format dialog.
- 3 Press the left (Select) softkey, The checkmark moves to the highlighted date and time format, and you return to the Set Date & Time submenu. The camera is now set to the date and time format you just selected.

Figure 88: Image Counter Submenu



Setting the Image Counter

Use the Image Counter submenu to set how the image counter works. You can set the camera either to restart numbering at 1 (one) each time you delete all the images from your camera, or to keep a continuous count of images from the beginning of the camera's use.

Table 68 explains the Image Counter settings and their functions. The currently selected setting is indicated by the checkmark to the left of it. The default setting is Continuous Counter.

Table 68: Image Counter Submenu

Setting	Function
Reset When Empty	Each time you delete all of the images on your camera, the counter restarts the first image captured at number 1.
Continuous Counter (default)	The images are counted according to the history of the camera's use. For example: image #400 is the 400th image to be captured with this camera.

Note: Once you have changed the Image Counter setting, you must power the camera off and then on again for the new setting to take effect.

Figure 89: Camera Name Submenu



Note: If a group name is applied to an image, then the group name, rather than the camera name, appears in the image information area of the Review Mode screen.

Note: Words wrap to the next line when they get too long.

To change the Image Counter setting:

- 1 Press the down or up arrow on the 4-way controller, if needed, to highlight the Image Counter setting you want.
- 2 Press the left (Select) soft key. The checkmark moves to the highlighted setting, and you return to the Preferences menu.
- 3 Power the camera off and then on again for the new setting to take effect.

Naming Your Camera

Use the Camera Name submenu to enter a unique name for your camera. The camera name is used to identify images in the Review mode when you have transmitted images from one camera to another. (See “Transmitting Images Between Two Cameras” on page 56 for more information.) The default camera name is Digita Camera.

For example, if you transmit images from camera B to camera A, camera B’s name appears in the image information area of the Review mode screen on camera A when any images from camera B are viewed on camera A. The camera name does *not* appear in the image information area when you view images in Review mode on the camera you used to capture them.

To name your camera:

- 1 Press the left arrow on the 4-way controller to delete the letters of the default camera name.
- 2 Press the left (Character Set Icon) soft key to toggle through the four character sets (capital letters, lowercase letters, numbers, or symbols) until you see the character set you want to use displayed in the left soft key label area on the overlay bar.
- 3 Press the:
 - ◆ Up or down arrow on the 4-way controller to scroll through the list of characters on the left side of the screen.
 - ◆ Right arrow on the 4-way controller to enter the selected character and advance the insertion point in the center of the screen.
 - ◆ Left arrow on the 4-way controller to back up and delete a character.
 - ◆ Middle (Space) soft key to create a space between words in the camera name.
- 4 Press the right (Exit) soft key to save the camera name you set and return to the Preferences menu.

Selecting a Language

English is set as the default language that is used on the camera. Use the Language submenu to select a language from the list of installed languages.

To select a language:

- 1 Press the down or up arrow on the 4-way controller to highlight the language setting you want.
- 2 Press the left (Select) soft key. The checkmark moves to the highlighted language, and you return to the Preferences menu. The selected language is now used on the camera.

Figure 90: Language Submenu



Figure 91: Reset Settings Confirmation Screen



Resetting Camera Settings

Use the Reset Settings option to reset all of the camera settings (except for the Language, the Format for the Set Date & Time, the PC Connect Mode, and the Video Preferences settings) to their defaults in one step.

When you select the Reset Settings option by pressing the left (Reset) soft key, you will see a confirmation of your choice to reset the camera settings (see Figure 91). You can either press the middle (Reset) soft key to reset the settings, or press the right (Cancel) soft key to exit the confirmation screen without resetting the settings, and return to the Preferences menu.

Overview

This appendix covers the following topics:

- ◆ “Camera Specifications” on page 112
- ◆ “Battery Life” on page 115
- ◆ “HP Accessories for Powering the Camera” on page 116
 - ◆ “Using the HP AC Power Adapter” on page 117
 - ◆ “Using the HP Li Ion Battery and Recharger” on page 117
 - ◆ “Using the HP NiMH Batteries and Recharger” on page 118
- ◆ “Storage Capacities of Memory Cards” on page 119

Camera Specifications

The following table lists the specifications for the HP 912 digital camera.

Camera Dimensions	143.5mm (L) x 90.5mm (W) x 105mm (H) (5.6 in. x 3.6 in. x 4.1 in.)
Weight	570 g (20 oz.) without batteries and memory card
Zoom	<ul style="list-style-type: none">◆ 3x optical, 2x digital zoom◆ 8.2-25.8mm◆ 24-107 mm (35mm equivalent)◆ Digital zoom: shooting 1.2/1.5/2x, playback 2x
Sensor	<ul style="list-style-type: none">◆ 2.24 megapixel, 2/3" CCD◆ Professional frame transfer architecture
Color Depth	36-bit (12 bits x 3 colors)
Color Control	Full color, B&W (black and white), and Sepia
Resolution	<ul style="list-style-type: none">◆ Full: 1600 x 1280 pixels◆ 1/4: 800 x 640 pixels
HP Imaging Technology	<ul style="list-style-type: none">◆ Custom ASIC for higher-performance image processing◆ Image processing at 220,000,000 operations per image in <1/2 second◆ Excellent enlargements at 11" x 14"

Lens	<ul style="list-style-type: none"> ◆ PENTAX™ power zoom (8 elements in 7 groups; 1 aspherical element) ◆ f/2.5-f/3.9 ◆ 49mm diameter threads for filters and adapters
Image Type Settings	<ul style="list-style-type: none"> ◆ One Shot ◆ Continuous ◆ Timelapse
Exposure Compensation	+/-3.0 EV (Exposure Value) in .5 steps
Automatic Bracketing	3 frames in .5 or 1.0 EV Steps
Shutter Speed	1/1000 to 4 seconds
Sensitivity	Auto, Fixed (equivalent to 25, 50, 100, 200, and 400 ISO speeds)
Metering	TTL (through the lens) metering with choice of Average, Center-Weighted, or Spot
Viewfinder	<ul style="list-style-type: none"> ◆ SLR-type TTL optical viewfinder with full exposure read out and diopter adjustment ◆ AF area box ◆ Diopter adjustment from -2.5m^{-1} to $+1.5\text{m}^{-1}$ ◆ Field of view: 95% vertically/horizontally
Focus	<ul style="list-style-type: none"> ◆ TTL contrast-detection auto focus with manual override ◆ Normal: 0.5m (1.64 ft.) to infinity ◆ Macro: 0.02m (0.07 ft.) to 0.6m (1.97 ft.) ◆ Auto focus area settings: Wide or Spot ◆ Manual focus: 0.1m (0.33 ft.) to infinity
Flash	<ul style="list-style-type: none"> ◆ Built-in retractable TTL auto flash ◆ Flash modes: Auto, Auto with Red-Eye Reduction, Forced On, and Forced On with Red-Eye Reduction ◆ Pre-flash indicator ◆ Hot-shoe for attaching an external flash

Exposure Settings	<ul style="list-style-type: none"> ◆ Auto, Portrait, Landscape, Close-up, Action, Night, Program, Shutter Priority, Aperture Priority, and Manual ◆ Continuous exposure and exposure lock
Memory Card	CompactFlash™ card (Type I or Type II, Power level 0) shipped with camera
Timer	<ul style="list-style-type: none"> ◆ 10-second delay ◆ 3-second delay with HP Remote Control (included)
Sound	Capture and play back sound with 45 seconds of recording per image
White Balance	Auto, Daylight, Tungsten, Fluorescent, and 5500K
Interfaces	<ul style="list-style-type: none"> ◆ USB connection to computers ◆ HP JetSend and Digita infrared protocols ◆ NTSC/PAL TV connections ◆ Orientation sensor for automatic image rotation on TV, computers, and cameras
Camera Operating System	Flashpoint Digita
Image LCD	<ul style="list-style-type: none"> ◆ 2" low temperature poly-silicon TFT color LCD with 130,338 pixels ◆ Adjustable brightness control ◆ Displays thumbnails or full screen images ◆ Flip-up display
Image Control Functions	<ul style="list-style-type: none"> ◆ Create slideshows of images ◆ Send images via HP JetSend infrared technology to JetSend-capable printers ◆ Delete, protect, group, and categorize images ◆ Watermark images with Date and Time, Text, or Logo stamps
Status LCD	Displays image type setting, timer mode, auto focus area, flash mode, battery status, shutter speed and f-number or pictures remaining, and exposure bar graph
Power	<ul style="list-style-type: none"> ◆ 4 AA non-rechargeable batteries (included) ◆ Optional: AC power adapter, rechargeable Li-Ion battery and recharger, or rechargeable NiMH batteries and recharger

Caution: Use only 4 AA photo lithium, high drain alkaline, or NiMH batteries, or one lithium ion (Li Ion) battery in the HP 912 digital camera. Do *not* mix batteries of different types. If using AA batteries, replace all 4 batteries at the same time; do *not* replace the batteries individually. Always follow all of the manufacturer’s instructions on the battery package when handling, recharging, or disposing of batteries.

Battery Life

The life of the batteries you use in your HP 912 camera depends on how you use the camera and on the type of batteries you use. The following table provides estimates of battery life in a variety of usage scenarios, including:

- ◆ Light use in Capture mode (image LCD off, no flash)
- ◆ Moderate use in Capture mode (some use of image LCD and flash)
- ◆ Leaving the camera in the idle state (image LCD off)
- ◆ Using the camera in Review mode
- ◆ Using the camera in live view of Capture mode (image LCD on)

Usage Scenario	Photo Lithium	NiMH	High Drain Alkaline
Light Capture Mode (Shots)	640	350	180
Moderate Capture Mode (Shots)	380	210	100
Idle State (Minutes)	420	200	200
Review Mode (Minutes)	180	100	75
Live View Capture Mode (Minutes)	120	70	45

To preserve battery life:

- ◆ Limit the use of the image LCD, or turn it off.
- ◆ Limit the use of the flash, or turn it off.
- ◆ Set the camera to take lower resolution and/or lower quality images. (See “File Settings Sub-menu” on page 61.) Higher resolution and higher quality images take the camera longer to process and compress.
- ◆ Limit operating the camera in cold temperature conditions. Operating the camera at colder temperatures results in shorter battery life.
- ◆ Always replace all 4 AA batteries at the same time. One low-charged battery will reduce the life for all batteries in the camera. This is true of both non-rechargeable and rechargeable batteries.
- ◆ Use the HP-approved AC power adapter with your camera instead of batteries, or use rechargeable batteries. The following section lists the HP-approved accessories you can use for powering the camera.

Note: An AC power adapter provides power to the camera – it does *not* recharge the batteries.

Caution: Using a non-HP AC power adapter will void your camera's warranty.

HP Accessories for Powering the Camera

You can purchase any of the following accessories for powering the camera, as well as other camera accessories, from the HP Shopping Village website at: www.hpshopping.com. (Click the **Digital Photography** link on the main web page. Then click the **Digital Photography Accessories** link on the second web page.)

This table of power accessories was current at the time this manual was published. For the most up-to-date accessories list, refer to the HP Shopping Village website.

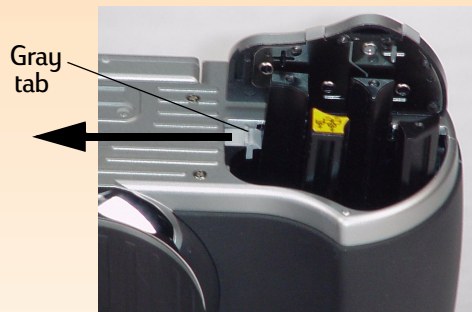
HP Model Number	Accessory	Specifications
A610	HP AC Power Adapter (See the next section, "Using the HP AC Power Adapter")	Input: 100-240 Volts AC Output: 9 Volts DC, 1.33 Amps, 12 Watts
A940	HP Accessory Kit, including: HP Li Ion Battery HP Li Ion Battery Recharger HP AC Power Adapter Camera case (See "Using the HP AC Power Adapter" on page 117 and "Using the HP Li Ion Battery and Recharger" on page 117)	HP AC Power Adapter (which powers the HP Li Ion Battery Recharger): Recharging time is approximately 3 hours Input: 100-240 Volts AC Output: 9 Volts DC, 1.33 Amps, 12 Watts HP Li Ion Battery: 7.8 Volts DC
A930	HP Li Ion Battery Recharger, including: HP Li Ion Battery HP Li Ion Battery Recharger HP AC Power Adapter (See "Using the HP AC Power Adapter" on page 117 and "Using the HP Li Ion Battery and Recharger" on page 117)	HP AC Power Adapter (which powers the HP Li Ion Battery Recharger): Recharging time is approximately 3 hours Input: 100-240 Volts AC Output: 9 Volts DC, 1.33 Amps, 12 Watts HP Li Ion Battery: 7.8 Volts DC
A920	HP Li Ion Battery (See "Using the HP Li Ion Battery and Recharger" on page 117)	7.8 Volts DC
AA30	HP NiMH Battery Recharger includes 4 NiMH Batteries (See "Using the HP NiMH Batteries and Recharger" on page 118)	HP NiMH Battery Recharger: Recharging time is approximately 3.5 hours Input: 9 Volts DC Output (charging voltage): 8.4 Volts DC HP NiMH Battery: 1.2 Volts DC (each)

Figure 92: Connecting the HP AC Power Adapter's Cable to the Camera



Note: Use the HP-approved AC power adapter as the power source for the camera during power-intensive operations, like when you are using the camera's image LCD for an extended period of time.

Figure 93: Releasing the AA Battery Adapter



Using the HP AC Power Adapter

To connect the HP AC Power Adapter to the camera:

- 1 Plug the AC power adapter into a power source, such as a wall outlet or power strip.
- 2 Open the door to the connector compartment on the camera. The connector compartment is located on the far right side of the camera when you are looking at the front of the camera.
- 3 Connect the round end of the AC power adapter's cable to the middle (power adapter) connector in the camera (see Figure 92).

To connect the HP AC Power Adapter to the HP Li Ion Recharger, see the next subsection.

Using the HP Li Ion Battery and Recharger

To install the HP Li Ion battery in the HP 912 camera:

- 1 Unlock and open the battery compartment on the bottom of the camera.
- 2 Remove any AA batteries from the battery compartment.
- 3 Release the AA battery adapter that is pre-installed inside the battery compartment by pushing the gray tab inside the battery compartment in the direction of the arrow shown in Figure 93. When released, the AA battery adapter pops up.
- 4 Remove the AA battery adapter from the camera.
- 5 Ensure the arrow on the Li Ion battery is pointing down and that the flat side of the Li Ion battery is facing the flat, back wall of the camera's battery compartment. Then insert the battery into the battery compartment so that it pushes the gray tab to the side and allows the battery to drop into the battery compartment.
- 6 Push the battery down until the gray tab snaps in place over the battery.
- 7 Close the battery compartment door by pushing it down until it snaps shut. The battery door automatically locks when closed.

To connect the HP AC power adapter to the HP Li Ion Battery Recharger in order to power the Recharger and recharge the HP Li Ion battery:

- 1 Plug the AC power adapter into a power source, such as a wall outlet or power strip.
- 2 Place the Li Ion battery in the Li Ion Battery Recharger, ensuring that the arrow on the Li Ion battery is pointing down.
- 3 Connect the round end of the AC power adapter's cable to the connector in the Li Ion Battery Recharger. The LED on the Battery Recharger will light to show that it is now powered on and is recharging the Li Ion battery.

Using the HP NiMH Batteries and Recharger

If you purchase the HP NiMH Battery Recharger, which includes 4 rechargeable NiMH batteries, please note the following:

- ◆ Before you install the batteries in the HP 912 camera, you must charge all 4 NiMH batteries in the HP NiMH Battery Recharger per the instructions that came with the Battery Recharger.
- ◆ You must recharge all 4 NiMH batteries after fully draining them four times for the batteries to reach their optimum capacity and performance.
- ◆ Always recharge all 4 NiMH batteries at the same time. One low-charged battery will reduce the battery life for all 4 batteries in the camera.
- ◆ Do not store the batteries in the HP NiMH Battery Recharger for an extended period of time if it is not necessary.
- ◆ Do not over-charge the batteries. Disconnecting and reconnecting the HP NiMH Battery Recharger to AC power frequently, without discharging the batteries, may cause over-charging.
- ◆ Do not expose the NiMH batteries to heat. Permanent damage will result if the batteries are exposed to temperatures above 110° F or 43° C. Always store the batteries in a cool location.
- ◆ After long-term storage, recharge all 4 NiMH batteries before use. This is because the battery cells discharge over time. (At room temperature, NiMH batteries generally discharge at about 1% per day.)

Storage Capacities of Memory Cards

The following table lists the number of images an 8 MB, 16 MB, and 32 MB CompactFlash memory card can store, depending on the JPEG quality level or TIFF setting at which the camera is set.

The number of images noted in this table are averages. In particular, the number of images per memory card can vary based on the JPEG compressed file size of each image.

Note: To make the most memory available on a memory card, reformat the card either on the camera (using the Format Card option in the Preferences menu – see page 76), or through the computer (using USB Disk Drive mode, reformat the card as you would a disk drive – see page 77).

	Resolution	JPEG-Good Quality Level	JPEG-Better Quality Level	JPEG-Best Quality Level	TIFF
8 MB Card	Full Size	26	13	6	1
	1/4	78	47	26	5
16 MB Card	Full Size	53	28	14	2
	1/4	159	96	54	10
32 MB Card	Full Size	107	56	29	5
	1/4	319	194	108	20

Limited Product Warranty

HP Product	Duration of Limited Warranty
HP 912 digital camera	1 year
CompactFlash memory card	1 year
HP Photo Imaging Software	90 Days

A. Extent of Limited Warranty

- 1 Hewlett-Packard (HP) warrants to the end-user customer that the HP products specified above will be free from defects in material and workmanship for the duration specified above, which duration begins on the date of purchase by the customer.
- 2 For software products, HP's limited warranty applies only to a failure to execute programming instructions. HP does not warrant that the operation of any product will be uninterrupted or error free.
- 3 HP's limited warranty covers only those defects which arise as a result of normal use of the product, and does not cover any other problems, including those which arise as a result of:
 - a. Improper maintenance or modification;
 - b. Software, media, parts, or supplies not provided or supported by HP; or
 - c. Operation outside the product's specification.
- 4 If HP receives, during the applicable warranty period, notice of a defect in any product which is covered by HP's warranty, HP shall either repair or replace the defective product, at HP's option.

- 5 If HP is unable to repair or replace, as applicable, a defective product which is covered by HP's warranty, HP shall, within a reasonable time after being notified of the defect, refund the purchase price for the product.
- 6 HP shall have no obligation to repair, replace, or refund until the customer returns the defective product to HP.
- 7 Any replacement product may be either new or like-new, provided that it has functionality at least equal to that of the product being replaced.
- 8 HP products may contain remanufactured parts, components, or materials equivalent to new in performance.
- 9 HP's limited warranty is valid in any country where the covered HP product is distributed by HP. Contracts for additional warranty services, such as on-site service, are available from any authorized HP service facility in countries where the product is distributed by HP or by an authorized importer.

B. Limitations of Warranty

- 1 TO THE EXTENT ALLOWED BY LOCAL LAW, NEITHER HP NOR ITS THIRD PARTY SUPPLIERS MAKE ANY OTHER WARRANTY OR CONDITION OF ANY KIND, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THE HP PRODUCTS, AND SPECIFICALLY DISCLAIM THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

C. Limitations of Liability

- 1 To the extent allowed by local law, the remedies provided in this Warranty Statement are the customer's sole and exclusive remedies.
- 2 TO THE EXTENT ALLOWED BY LOCAL LAW, EXCEPT FOR THE OBLIGATIONS SPECIFICALLY SET FORTH IN THIS WARRANTY STATEMENT, IN NO EVENT SHALL HP OR ITS THIRD PARTY SUPPLIERS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY AND WHETHER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

D. Local Law

- 1 This Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States, from province to province in Canada, and from country to country elsewhere in the world.
- 2 To the extent that this Warranty Statement is inconsistent with local law, this Warranty Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer. For example, some states in the United States, as well as some governments outside the United States (including provinces in Canada), may:
 - a. Preclude the disclaimers and limitations in this Warranty Statement from limiting the statutory rights of a consumer (e.g. the United Kingdom);
 - b. Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations; or
 - c. Grant the customer additional warranty rights, specify the duration of implied warranties which the manufacturer cannot disclaim, or not allow limitations on the duration of implied warranties.
- 3 FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND, THE TERMS IN THIS WARRANTY STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT, OR MODIFY, AND ARE IN ADDITION TO, THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THE HP PRODUCTS TO SUCH CUSTOMERS.

Hewlett-Packard Year 2000 Warranty

For Consumer Products Distributed Through Authorized Resellers

Subject to all of the terms and limitations of the HP Limited Warranty Statement provided with this HP Product, HP warrants that this HP Product will be able to accurately process date data (including, but not limited to, calculating, comparing and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000, including leap year calculations, when used in accordance with the Product documentation provided by HP (including any instructions for installing patches or upgrades), provided that all other products (e.g. hardware, software, firmware) used in combination with such HP Products(s) properly exchange date data with it. The duration of the Year 2000 warranty extends through January 31, 2001.

Safety Information

Using Batteries

The HP 912 digital camera comes with four non-rechargeable batteries. Do *not* attempt to recharge these batteries. Do *not* mix old and new batteries or batteries of different types. Follow the battery manufacturer's safety instructions.

Disposing or Recycling of Batteries

Follow the battery manufacturer's disposal and recycling instructions or the guidelines that are recommended for your area. Do *not* incinerate or puncture batteries.

Using an AC Power Adapter

Use only the HP-approved AC power adapter. Failure to do so could cause damage or destroy the camera and cause a fire. Use of a non-HP AC power adapter will also void your camera's warranty.

Mercury Disclosure Statement

The image LCD of the HP 912 digital camera contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or EIA: www.eiae.org.

Regulatory Notices

U.S.A.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled Digital Apparatus, ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur les matériels brouilleurs: Appareils Numériques, NMB-003 édictée par le ministre de la Communication.

4-way controller	A button on the back of the camera that has four directional arrows (up, down, right, and left) that you can press to navigate the menus and images displayed in the image LCD.
+/-/Av button	A button on the back of the camera that, when pressed and held down, changes the functionality of the sub-dial in certain exposure modes. See also “sub-dial” on page 133.
AC power adapter	Alternating Current power adapter. A power transformer that provides power to the digital camera and preserves battery life. (Note that the AC power adapter does <i>not</i> recharge the batteries.)
Action exposure mode	The exposure mode that automatically optimizes the camera settings for taking pictures of subjects in action, such as people playing sports. See also “exposure modes” on page 127.
AE-L button	Auto Exposure-Lock button. A button on the back of the camera that locks the exposure bar graph for 20 seconds or until pressed again. See also “exposure bar graph” on page 127.
AE Metering	Automatic Exposure Metering. A setting in the Photo Assist menu that determines the area of the scene used to set the exposure for a capturing an image.
aperture	The variable diameter opening in a camera lens that lets you control the intensity of light reaching the film or CCD. A camera's aperture and shutter speed determine a photo's exposure. Aperture diameters are expressed in f-numbers – the larger the f-number, the smaller the lens opening. Dividing the focal length of a lens by a specific f-number gives its aperture diameter. See also “CCD” on page 126, “f-number” on page 128, and “focal length” on page 128.
Aperture Priority (Av) exposure mode	The exposure mode that lets you select an aperture, and the camera automatically selects the shutter speed. See also “aperture” on page 125, “exposure modes” on page 127, “shutter” on page 132, and “Shutter Priority (Tv) exposure mode” on page 132.
Auto exposure mode	The exposure mode where all settings are at their defaults and cannot be changed. See also “exposure modes” on page 127.
auto focus area	The area of the scene that the camera will use to determine the auto focus. The auto focus area settings include Wide (default) and Spot.
auto focus area button	A status LCD button on the top of the camera that you press to set the auto focus area.
auto focus area icon	An icon that appears in the status LCD and shows the camera's current auto focus area setting.
Auto Focus (AF) mode	The default focus setting in which the camera automatically focuses the camera lens on a picture subject. AF mode enables the camera's auto focus system over a range determined by the settings in the Auto Focus Range submenu of the Photo Assist menu. Pressing the shutter release button halfway down in the AF mode initiates auto focus. To change the focus mode, turn the image LCD on and press the left (AF/MF) soft key in the live view of Capture mode. See also “Manual Focus (MF) mode” on page 130.
automatic shutoff	A feature that automatically shuts off the camera after a certain period in order to preserve battery power.

Av	See “Aperture Priority (Av) exposure mode” on page 125.
Av button	See “+/-/Av button” on page 125.
battery status	The amount of power that remains in the battery.
battery status icon	An icon that appears in the status LCD that indicates the amount of power left in the batteries.
camera mode dial	The dial on the back of the camera that allows you to choose one of four operational modes (Capture, Review, Playback, or PC Connect mode) for the camera.
Capture mode	An operational mode you use to take pictures (or “capture images”) with the camera. See also “camera mode dial” on page 126.
CCD	Charge Coupled Device. An integrated micro-electronic, light-sensing device built into a digital camera. The CCD image sensor is a silicon chip containing hundreds-of-thousands to a few million light-sensitive cells that convert light to electricity. A CCD sensor, combined with the digital image processing capability, is the functional equivalent of film in a digital camera.
CCD element	A single photosensitive area within a CCD array that is able to record a unique image detail. Also known as a photosite. See also “CCD” on page 126.
Close-up exposure mode	The exposure mode that automatically optimizes camera settings for taking pictures of subjects close up. See also “exposure modes” on page 127.
Continuous image type	The image type setting on the camera that captures a series of images in rapid succession. This image type is recommended for capturing action shots. You change the image type by pressing the image type button next to the status LCD. See also “image type” on page 128.
default	A setting that the camera automatically uses until you change it.
Delete	A command associated with a soft key that is used to erase marked images or the current image from the memory card.
digital zoom	Refers to digital cropping of the image, giving the appearance of greater zoom. After the optical zoom is at its maximum setting, you can digitally zoom in three steps (1.2x, 1.5x, and 2.0x). The image LCD must be on in order for the digital zoom to operate. Note that, in digital zoom mode, enlargement is accomplished without changes in lens configuration. Since the lens is not involved in digital zoom, the changes appear only in the image LCD; they are not evident though the viewfinder. See also “optical zoom” on page 130.
diopter control	The rubber eye cup on the viewfinder is also a diopter control that you can turn. The diopter control allows you to adjust the focus of the picture subject in the viewfinder. Note that the diopter control has no effect on the image you capture, however.
DISPLAY button	A button on the back of the camera that turns the image LCD on and off in Capture mode, and turns the overlay bars on and off in Playback mode. This button is inactive in Review and PC Connect modes. See also “image LCD” on page 128.

exposure bar graph

The exposure bar graph displays the number of stops that the camera is under- or over-exposing in +/- 3 stops. This bar graph is only displayed in the status LCD when the camera is set to the Program, Shutter Priority (Tv), Aperture Priority (Av), or Manual exposure mode.

exposure compensation indicator

An indicator in the status and viewfinder LCDs that shows how much exposure compensation is being applied, if any.

exposure lock button (AE-L)

See “AE-L button” on page 125.

exposure mode dial

A dial on the top of the camera that you turn to set the exposure mode.

exposure modes

The ten modes that you can select from to set the camera exposure to properly capture images, including: Auto, Portrait, Landscape, Close-up, Action, Night, Program, Shutter Priority (Tv), Aperture Priority (Av), and Manual. You turn the exposure mode dial to set the exposure mode. See also “Action exposure mode” on page 125, “Aperture Priority (Av) exposure mode” on page 125, “Auto exposure mode” on page 125, “Landscape exposure mode” on page 129, “Close-up exposure mode” on page 126, “Manual exposure mode” on page 129, “Night exposure mode” on page 130, “Portrait exposure mode” on page 131, “Program exposure mode” on page 132, and “Shutter Priority (Tv) exposure mode” on page 132.

file name

A set of letters, numbers, and symbols assigned to a file to distinguish it from other files on the computer or in the camera.

file size

The number of bytes in a file. The file size for images saved on a digital camera is determined by the resolution of the camera's CCD and the amount of image data compression. You can usually select the amount of compression on the camera and again in the computer software that processes the images. Note that if you compress an image on the camera and in the software, the compression is cumulative.

file type

The digital format in which a file is saved. Computer programs can insert or import files that were saved in a file type that the program supports. Common file types for images include JPEG (Joint Photo Expert Group format) and TIFF (Tagged Image File Format). See also “JPEG” on page 129 and “TIFF” on page 134.

firmware

The low-level software that runs in a digital camera and controls the functionality and user interface on the camera.

firmware update

The process of updating to a new firmware version on the digital camera.

flash

A brief, intense burst of light from an electronic flash unit on a camera. Use flash when the lighting in a scene is inadequate for taking pictures.

flash mode

This mode is set by pressing a status LCD button on top of the camera and determines how the flash will operate.

flash mode button

A status LCD button on the top of the camera that you press to set the flash mode.

flash mode icon(s)

An icon or set of icons in the status LCD that shows the current flash mode.

f-number	The f-number (also called the f-stop) is related to the diameter of the lens aperture — dividing the focal length of the lens by the f-number specifies the aperture diameter. The f-number is used in conjunction with the shutter speed to set the exposure. A standard set of f-numbers is commonly used in camera lenses. A lower f-number, such as f/2.8, indicates a larger aperture, which lets in more light. A higher f-number, such as f/16, indicates a smaller aperture, which lets in less light. See also “aperture” on page 125 and “focal length” on page 128.
f-number indicator	An indicator in the status and viewfinder LCDs that shows the current f-number setting of the lens.
focal length	The distance between the center of the lens (more precisely, its rear nodal point) and the CCD sensor in digital cameras when the lens is focused on infinity. The focal length is specified in millimeters.
focus	Refers to adjusting the lens in a digital camera in order to place a clear image on the plane of the CCD sensor.
focus mode	See “Auto Focus (AF) mode” on page 125 and “Manual Focus (MF) mode” on page 130.
four-way controller	See “4-way controller” on page 125.
f-stop	See “f-number” on page 128.
grouped images	A number of images that are bundled together. You can group images in the Edit menu of Review mode. Grouped images appear in a folder on the memory card when the camera is connected to a computer.
hot shoe	The fitting on the top of the camera that holds a portable, external flash unit. The hot shoe has an electrical contact that aligns with the contact on the flash unit’s foot and fires the flash when you press the shutter release button.
HP Imaging Technology	State-of-the-art image processing technology developed by HP that captures sharp, colorful images with exceptional levels of detail, individually optimizes every image, and produces great detail in highlights and shadows.
icon	A picture on an LCD, computer screen, or printed on a device that represents a specific setting. Icons on a digital camera’s LCD communicate the camera’s status, such as particular settings that have been made for taking a picture. See also “LCD” on page 129.
image	The electronic version of a photograph as it is stored in a digital camera, computer, or other electronic medium. Digital cameras capture and store an image when you take a picture. See also “picture” on page 131 and “photo” on page 131.
image LCD	The Liquid Crystal Display on the back of the camera. The image LCD and its accompanying buttons and soft keys let you view and work with images on the camera. See also “DISPLAY button” on page 126, “MENU button” on page 130, and “soft keys” on page 133.
image type	The type of image the camera will capture. There are three image types: One Shot, Continuous, and Timelapse. See also “Continuous image type” on page 126, “One Shot image type” on page 130, and “Timelapse image type” on page 134.

image type button	A status LCD button on the top of the camera that you press to select the image type.
image type icon	An icon that appears in the status LCD and shows the image type setting.
infrared	A type of connection that allows images to be transmitted between the camera and another device (such as a printer) without connecting wires when the infrared window on the camera is lined-up with an infrared sensor on the other device. See also “JetSend” on page 129.
infrared window	The window on the front of the camera that uses the HP JetSend infrared technology. See also “JetSend” on page 129.
interval	The time between images being captured for the Timelapse image type.
ISO number	The International Organization for Standardization rating for film or CCD sensitivity. A higher ISO number means less light is needed to take a picture. CCDs in digital cameras are rated in terms of ISO numbers. ISO is not an acronym; it is derived from the Greek “isos”, meaning equal. See also “CCD” on page 126.
JetSend	A protocol developed by HP for sending image data from one device to another without using any connecting cables between the devices. HP JetSend uses infrared technology to transmit images from the camera to a printer for printing.
JPEG	A compressed image file format developed by the Joint Photo Expert Group. Its strengths are very small file sizes and fast display rates. (It is 7 to 10 times faster than some other image file formats.) See also “file type” on page 127 and “TIFF” on page 134.
Landscape exposure mode	The exposure mode that automatically optimizes the camera settings for taking pictures of distant subjects, such as landscape scenes. See also “exposure modes” on page 127.
LCD	Liquid Crystal Display. A display technology that is used on digital cameras. An LCD displays numeric characters and/or icons to communicate the camera's status, such as the particular settings that you have made for taking a picture. See also “image LCD” on page 128 and “status LCD” on page 133.
LED	Light Emitting Diode. An indicator on the camera that shows the status of some feature or process by either lighting solid or blinking on and off.
lens	One or more pieces of optical glass or similar material designed to collect and focus rays of light to form a sharp image on the film (for traditional film cameras) or the CCD (for digital cameras). Lenses are rated according to their maximum aperture (smallest possible f-number) and their focal length (usually specified in millimeters). See also “aperture” on page 125, “CCD” on page 126, and “f-number” on page 128.
lithium ion (Li-Ion) battery pack	An optional battery that you can use in the camera, which you can recharge and re-use.
live view	Using the image LCD on the back of the camera to view the picture subject before taking the picture.
Manual exposure mode	The exposure mode in which you have complete control over shutter speed, aperture, and all other camera settings. A fixed tone curve is used to adjust exposure. See also “exposure modes” on page 127.

Manual Focus (MF) mode

The focus mode setting that disables the auto focus system and allows you to select the focus distance manually. When using MF mode, the camera will display the focus distance, bracketed by left and right arrows, in the text message area of the top overlay bar. Once you have selected MF mode, you can use the left and right arrows of the 4-way controller to increase or decrease the focus distance. To change the focus mode, turn the image LCD on and press the left (AF/MF) soft key in the live view of Capture mode. See also “Auto Focus (AF) mode” on page 125.

marking

Specifying an image or several images to which you will then apply a single action.

memory card

A small removable, non-volatile storage medium for digital information that acts as the film in a digital camera. The memory card stores the images so you can process or view them at a later time. Make sure the camera is powered *off* any time you remove the memory card from the camera.

memory card access LED

The LED that blinks to indicate the memory card is in use. See also “LED” on page 129.

memory card door

The door on the side of the camera that you open to access the memory card in the camera.

MENU button

A button on the back of the camera that lets you view menus on the image LCD in the Capture, Review, or Playback mode. See also “modes” on page 130.

menus

These appear on the image LCD when you press the MENU button in the Capture, Review, or Playback mode and are used to choose and set camera settings.

microphone

The audio device on the front of the camera used to record sound via the sound record button that is then attached to the current image.

mode dial

See either “camera mode dial” on page 126 or “exposure mode dial” on page 127.

modes

These set the way the camera functions. There are four operational modes: Capture, Review, Playback, and PC Connect.

Night exposure mode

The exposure mode that automatically optimizes the camera settings for dark scenes taken at night. The camera opens the shutter to collect ambient light. Then, if the flash is turned on, the camera fires the flash at the end of the exposure to illuminate objects in the foreground. See also “exposure modes” on page 127.

NTSC connection

National Television Standards Committee connection. The video (TV) connection standard used in the United States and Japan.

One Shot image type

The image type setting on the camera that captures one image at a time. You change the image type by pressing the image type button next to the status LCD. See also “image type” on page 128.

optical resolution

The true resolution of an imaging device, and the resolution at which the device captures images. See also “resolution” on page 132.

optical zoom

The process of changing the field of view and magnification of the lens by moving different lens groups within the lens to change its overall focal length. See also “digital zoom” on page 126.

orientation sensor	An electro-mechanical device in the camera that determines whether the camera is being held horizontally or vertically, and which side is up. The camera uses the data from this sensor to make sure the image is displayed right side up in the image LCD, regardless of the camera position when the image was captured.
overlay bars	Opaque or translucent information bars that appear on the image LCD.
PAL connection	Phase Alternating Line connection. The video (TV) connection used in Europe.
PC Connect mode	An operational mode you use to control the camera via a computer (PC or Macintosh) that you have connected to the camera. You use this mode to download images from the camera to the computer. See also “camera mode dial” on page 126.
PCMCIA adapter	Personal Computer Manufacturers Common Interface Agreement adapter. A small, electronic card that fits in a PCMCIA slot and controls or communicates with an external device. For digital cameras, this is usually an adapter into which you can plug the memory card from the camera for transferring images to your computer.
PCMCIA slot	The slot in a computer that holds a PCMCIA card. A PCMCIA slot is usually found in laptop computers.
photo	The printed version of an image. See also “image” on page 128 and “picture” on page 131.
photo type	See “image type” on page 128.
photosite	See “CCD element” on page 126.
picture	Picture refers to the original composition when capturing an image with a digital camera. See also “image” on page 128.
pictures remaining indicator	A numeric indicator in the status and viewfinder LCDs that shows how many more images you can capture and store on the memory card.
pixel	Picture element. The smallest element that can be assigned an independent color and intensity and displayed on a computer monitor screen or on an LCD. A pixel is a dot with either a square or rectangular shape. Digital images displayed on a monitor screen or LCD are composed of thousands of pixels.
Playback mode	An operational mode you can use to view the captured images on the camera’s image LCD. You can view images as full-sized stills, play back timelapse and grouped photo sequences, and create slideshows of the images. See also “camera mode dial” on page 126 and “slideshow” on page 133.
pop-up flash button	A button on the camera you use to pop-up and charge the internal flash unit for taking flash images.
Portrait exposure mode	The exposure mode that automatically optimizes the camera settings for portrait photography. See also “exposure modes” on page 127.
power switch	The switch on the camera that turns it on or off.
preview	See “live view” on page 129

Program exposure mode

protect

The exposure mode where the camera selects an appropriate aperture and shutter speed. However, you can change or override all settings. See also “exposure modes” on page 127.

record button

Marking an image so that no one can delete it.

red-eye

See “sound record button” on page 133.

red-eye reduction

Refers to a human’s or animal’s eyes that appear red in captured images, which is caused by using the flash on a camera.

reformat

A flash mode you can use to minimize red-eye in captured images of humans or animals. The camera does this by flashing twice. See also “flash mode” on page 127.

remote controller

Reformatting completely erases the memory card, including all images (protected and unprotected) and all other files.

resolution

A device used to trigger the shutter from a location that is remote from the camera, such as when you want to take a self portrait or want to be in a group picture. When you press the remote trigger, the image capture is delayed by a length of time specified by the timer mode. See also “timer mode” on page 134.

review

The measure of how many pixels are displayed or printed. The resolution of a CCD is determined by multiplying the X pixels by the Y pixels. The greater the resolution, the greater the amount of detail visible, and the larger the file size. The final output device (computer monitor or printer) on which an image is displayed or printed determines the actual resolution you will see. For example, if you capture an image at 1600 x 1200 pixels, and your printer is capable of printing at only 300 dpi (dots per inch), the printed image will be no more than 300 dpi.

Review mode

The process of using the image LCD to view the images stored on the memory card.

self-timer

An operational mode you can use to sort and edit the captured images on the camera, and to print photos of the images. See also “camera mode dial” on page 126.

Send button

See “timer” on page 134.

shutter

A button on the back of the camera you can use to send images from the camera to a printer via the HP JetSend infrared technology. The Send button is active in the Capture, Review, and Playback modes. See also “JetSend” on page 129.

Shutter Priority (Tv) exposure mode

A set of surfaces that block light from the film or CCD in a camera. When the shutter is released, the surfaces open for a predefined time, admitting a measured amount of light. See also “CCD” on page 126.

The exposure mode that lets you select a shutter speed, and the camera automatically selects the aperture setting. See also “aperture” on page 125, “Aperture Priority (Av) exposure mode” on page 125, “exposure modes” on page 127, “shutter” on page 132, and “shutter speed” on page 133.

shutter release button

A two-stage button on the top of the camera that is enabled in Capture mode. Pressing this button halfway down allows the camera to make various settings, such as Auto Focus Lock. Pressing this button all the way down in one motion allows the camera to make various settings and to capture one or more images, depending on the image type selected. The camera makes a shutter sound as each image is captured.

shutter speed

The amount of time the shutter stays open when you press the shutter release button.

shutter speed indicator

An indicator in the status and viewfinder LCDs that shows the current shutter speed setting of the camera. The shutter speed indicator is activated when you press the shutter release button halfway and the camera calculates its settings.

sleep mode

A feature that conserves battery power by automatically shutting off the image LCD after a period of time (default 2 minutes) that the camera hasn't been used.

slideshow

The sequential viewing of images stored on the camera's memory card in Playback mode.

SLR camera

Single Lens Reflex camera. A camera in which the viewfinder looks directly through the lens. The HP 912 is an SLR camera.

soft keys

Three buttons that are located just below the image LCD on the back of the camera. The soft keys let you work with images and menus on the image LCD. See also "image LCD" on page 128.

sound record button

A button on the back of the camera that allows you to record sound that is then attached to the current image.

speaker

The audio device on the back of the camera that allows you to hear the camera's system sounds (shutter clicks, beeps, and so forth). It also allows you to hear sound that was previously recorded and attached to an image via the camera's sound record button.

status LCD

The Liquid Crystal Display on the top of the camera that uses a combination of numeric characters and icons to communicate the camera's status, such as particular camera settings.

status LCD buttons

The four buttons next to the status LCD that you can press to set the image type, timer mode, auto focus area, and flash mode. See also "auto focus area button" on page 125, "flash mode button" on page 127, "image type button" on page 129, and "timer mode button" on page 134.

strobe

See "flash" on page 127.

sub-dial

A dial on the front of the camera that you can use to adjust settings in the Program, Shutter Priority, Aperture Priority, and Manual exposure modes. You can change the functionality of the sub-dial when in these exposure modes by pressing and holding down the +/-/Av button on the back of the camera. You can also use the sub-dial to scroll left and right in the Capture, Playback, and Review mode menus, and through images in the Review and Playback modes. See also "+/-/Av button" on page 125.

subject

The main object, person, or scene that you want to capture with your camera.

telephoto	A lens that has a longer focal length and narrower field of view (includes less subject area) than a normal lens. A telephoto lens makes a subject appear larger and/or closer than does a normal lens at the same camera-to-subject distance. See also “wide angle” on page 135.
thumbnail	A miniature of the original image that is large enough to allow you to identify the image, but is small enough to allow you to see multiple images in a single software window. Thumbnails are used to display on-screen images of the contents of a digital camera’s memory card.
TIFF	Tagged Image File Format. A bitmapped file format for images. TIFF does not compress the image. TIFF files are supported by many programs and can also be used on many types of computers. See also “file type” on page 127 and “JPEG” on page 129.
Timelapse image type	The image type setting on the camera that captures a slow process with a series of images. You change the image type by pressing the image type button next to the status LCD. See also “image type” on page 128.
timer	A device that lets you take a self portrait or be in a group picture. When you press the shutter release button or remote trigger, the image capture is delayed by a length of time specified by the timer delay. See also “timer delay.”
timer delay	The amount of time the camera waits to take the picture when using the timer.
timer LED	The Light Emitting Diode on the front of the camera that flashes to indicate the countdown of the timer delay when you have set the timer and then pressed the shutter release button or remote trigger.
timer mode	This mode is set by pressing a status LCD button on top of the camera and determines how the shutter release button will be triggered.
timer mode button	The status LCD button on the top of the camera that you press to set the timer mode.
timer mode icon(s)	An icon or set of icons that appears in the status LCD and shows the current timer mode.
Tv	See “Shutter Priority (Tv) exposure mode” on page 132.
TV (video) connection	The connector into which you plug the video cable to connect the camera to a television (TV). See also “NTSC connection” on page 130 and “PAL connection” on page 131.
unload	The process of copying images from the memory card directly to the computer.
unmark	The process of deselecting images in the camera that have previously been marked.
unprotect	The process of removing the protection on images in the camera so that they can be deleted.
USB	Universal Serial Bus. An interface for connecting peripherals, such as digital cameras, to a computer.
USB Mass Storage Device Class	A Microsoft Windows device class that lets the operating system display the files in a camera as though they are stored on a separate, additional computer device similar to a disk drive.
video cable	The wire that can be used to connect the camera to a television.

video input connector

The connector on a television into which you plug the video cable.

viewfinder

The window on the back of the camera through which you look to frame the subject that will be recorded when you capture an image.

viewfinder display

An LCD within the camera viewfinder that provides information about particular settings that you have made to take a picture, such as whether the strobe is on, and about the camera status, such as the number of remaining pictures. See also “LCD” on page 129 and “viewfinder” on page 135.

wake up

The process of bringing the camera out of sleep mode.

White Balance

A setting in the Photo Assist menu that is used to correct the color applied to a captured image under different lighting conditions in order to make the white areas in the image appear white without any color cast.

wide angle

A lens that has a shorter focal length and a wider field of view (including more subject area) than a normal lens. A wide angle lens makes a subject appear smaller than does a normal lens at the same camera-to-subject distance. See also “telephoto” on page 134.

zoom

To enlarge the subject by changing the field of view and magnification of the lens by using the zoom ring. Once the camera lens is at maximum optical zoom, you can switch into digital zoom mode, if the image LCD is on. See also “optical zoom” on page 130 and “digital zoom” on page 126.

zoom ring

The ring around the barrel of the camera lens. Continuously rotating the zoom ring clockwise and counterclockwise around the lens barrel moves the lens between telephoto and wide angle focal lengths. The zoom ring also controls the digital zoom. See also “digital zoom” on page 126, “focal length” on page 128, “telephoto” on page 134, and “wide angle” on page 135.

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