

BUYING AND USING A DIGITAL CAMERA AND CAMCORDER

GENERAL INFORMATION

Digital Camera Basics - A primer

<http://www.bobatkins.com/photography/digital/digitalbasics.html>

How Stuff Works: Digital Cameras

<http://electronics.howstuffworks.com/digital-camera.htm>

How Stuff Works: Camcorders

<http://electronics.howstuffworks.com/camcorder.htm>

Digital Photo Superguide

<http://www.pcworld.com/howto/article/0,aid,123408,00.asp>

Selecting a Digital Camera (Purchasing Guide - Pentax USA)

http://www.pentaximaging.com/learn/buying_guides/selecting_digital_camera/index.jsp

PURCHASING INFORMATION

PC World: Digital Cameras

<http://www.pcworld.com/resource/infocenter/0,ctrid,4,ic,DigitalCameras,00.asp>

PC World: Digital Camcorders

<http://www.pcworld.com/reviews/article/0,aid,102518,00.asp>

DIGITAL CAMERA AND CAMCORDER BASICS

Lenses

- material (glass or plastic)
- autofocus



DIGITAL CAMERAS

M. Hartenstein

hartensteinm@netscape.net

- focal length (e.g., 6.2mm - 18.6mm) What is the 35mm SLR equivalent? (e.g., 38mm - 113mm)
- aperture range (e.g., f2.7 - f5.2)
 - > This determines your low light capabilities. The smaller the number the less light you need

Resolution (megapixels)

How many megapixels do you need?

	3MP	4MP	5MP
Largest Image (typical)	2048 × 1536	2272 × 1712	2592 × 1944
Print size at 320dpi	6.5" × 4.8"	7.1" × 5.4"	8.1" × 6.1"
Print size at 240dpi	8.5" × 6.4"	9.5" × 7.1"	10.8" × 8.1"

Viewers

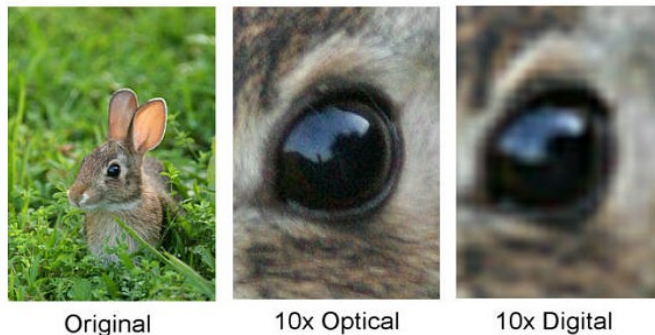
- Eyepiece (like SLR's)
- Displays - LCD Screens (Is bigger better? How big is too big?)
 - > size, contrast, daytime/outdoor use (especially because of outside ambient light)

Zoom

What's the difference between optical and digital zoom?

Digital Zoom and Optical Zoom

Most cameras have both optical zoom and digital zoom. Optical zoom works just like a zoom lens on a film camera. The lens changes focal length and magnification as it is zoomed. Image quality stays high throughout the zoom range. Digital zoom simply crops the image to a smaller size, then enlarges the cropped portion to fill the frame again. Digital zoom results in a significant loss of quality as is clear from the examples below. It's pretty much a last resort, and if you don't have it in camera, you can do a similar job using almost any image editing program.



Memory

- In Camera Storage storage is typically small. (e.g., 8-16mb)

Storage Media

Still Camera

- Compact Flash (CF)
- Secure Digital Media (SD)

Camcorder

- MiniDV tape



Out of Camera Storage

- hard drive space
- removable hard drives
- flash drives
- CD-ROM (R, RW)
- DVD (R, RW)
- **DVD-extended (Blu Ray)**

Image Stabilization (Camcorder)

nice feature

Low Light Recording (Camcorder)

a "must have" feature

Connecting to a PC or Printer

Still Camera

- USB 1.1, 2.0
- Firewire IEEE1394
- Docking Station

Camcorder

- USB 1.1, 2.0
- RCA phone and video connects

Run Time - Batteries



rechargeable NiCad, NiMH (preferred)

Photo Software

- Communications and Display (should be bundled)

Image Manipulation

Still Camera

Adobe PhotoShop

Adobe PhotoShop Elements

GIMP 2.4

Microsoft PowerToys RAW Image Thumbnailer and Viewer

<http://www.microsoft.com/windowsxp/using/digitalphotography/prophoto/default.mspx>

Camcorder

Final Cut

Adobe Premier

On-line Photo Sharing Services

IMEEM

<http://www.imeem.com/>

SLIDE

<http://www.slide.com/>



DIGITAL CAMERAS

M. Hartenstein

hartensteinm@netscape.net