

## Digital Camera Recommendations - Fall 2009

- 5x optical zoom or better (digital zoom not important)
- 3 megapixels is good for up to an 8 x 10 print (4-5 is all you'll probably need)
  - But 8 or more megapixels is much better!
- Battery 2200-2500 mpc - Rechargeable is recommended
  - Built-in is best (Lithium)
- Memory cards - For more storage capacity!
- Screen size: 2" or more is good



### How to Buy a Digital Camera- Digital Camera Shopping Tips

Ready to buy a digital camera? Here are *PC World's* recommendations:

#### **Match megapixels to your use.**

If you want to produce 8-by-10-inch prints, you'll need at least a 3-megapixel camera. Four- or 5-megapixel or larger cameras will yield even larger prints and allow you to blow up a part of an image with less likelihood that the print will be blurry.

- **Look for rechargeable batteries and a charger.**  
Disposable batteries don't last as long, and their cost starts to add up over the long run. Built-in is best (Lithium)
- **Get at least 3X optical zoom.** (I suggest 5+)  
Nearly all cameras offer digital zoom, but it results in photos that aren't nearly as good as those produced with an optical zoom. Get more if you can!
- **Make sure you can use removable storage media.**  
While the camera may have on-board memory, which is good; SD, XD, or Memory Sticks. Your computer may have card reader, otherwise you can connect a USB cord to download pictures.
- **Try the camera before you buy.**  
Some cameras have commands and menus that are easier to use than others, a comparison you can only make with a hands-on trial. Also evaluate the lag time between when you press the shutter button and when the camera actually takes the picture. Try out the zoom lens--does it operate quickly and smoothly? Find out how long you must wait between taking pictures. And try the LCD viewfinder--in the sun if possible--to determine how easy it is to read.
- **Make sure the camera comes with image editing software.**  
Look for useful packages like Adobe Photoshop Elements and Ulead Photo Impact.
- **Insist on a camera with an LCD viewfinder. (screen on the back)**  
It allows you to view your photos on the spot.
- **Don't base your decision on video capability.**  
Any still camera's ability to take moving pictures is extremely limited. If you want to shoot video, invest in a camera dedicated to the job.

- **Consider investing in a memory card reader. Many computers now come with them**  
These readers act like an external hard drive attached to your PC, allowing you to download pictures directly from the storage media your camera uses. That saves time and, since the camera doesn't have to be on, saves battery life.

### **Introduction**

Who needs film? The latest digital cameras are small, relatively inexpensive, and produce great pictures, whether you want to show them on a computer screen or make conventional prints.

### **The Big Picture**

When it comes to digital cameras, both manufacturers and shoppers seem to care most about megapixels. Relatively inexpensive 8-10 megapixel models have become common. Though resolution is important, a camera needs more than just a high pixel count to take great pictures, so pay attention to traits that the specs may not reveal. For example, a lethargic camera that takes too much time between shots may miss the best action, and a big, heavy camera may spend more time on the shelf than in your carry-on bag.

### **Key Features**

**Resolution:** If you intend to take pictures only to e-mail them to distant friends or to print at snapshot size, a camera of most any resolution will do. Even so, more pixels give you greater flexibility--you can print sharper pictures at larger sizes, or crop and print small sections of pictures. Rules of thumb: A 2-megapixel camera can usually produce a pretty 5-by-7 print; a 3-megapixel camera, an 8-by-10; and a 4-megapixel model, an 11-by-17.

**Size, weight, and design:** To some users, how much a camera weighs and whether it fits in a pocket may be more important factors than resolution. *PC World* has tested cameras that weigh as much as 2.6 pounds and as little as 6.8 ounces. Small cameras are convenient, but they frequently have tiny dials and buttons that make changing settings somewhat trying.

**Zoom lens:** Inexpensive cameras often lack optical zoom lenses. If we had to choose between a camera with an optical zoom and one with higher resolution, we'd take the camera with a zoom--it means you won't have to magnify your subject and then use software to crop the image (and discard some of that resolution as a result). Be wary of advertised zoom ratings--many vendors combine the optical zoom (which moves the lens to magnify the subject) with digital zoom, which merely captures fewer pixels and magnifies those.

**Manual focus:** For close-ups or situations in which the camera can't get a focus lock, switching to manual focusing can help you get the shot. Low-end cameras often omit manual focusing or allow only stepped focusing, which only allows you to choose from a few preset distances.

**Storage:**

*2003-At its highest resolution, a typical 2-megapixel camera can store eight to ten images on an 8MB "starter" memory card. CompactFlash and SmartMedia cards cost about \$35 for 64MB, or \$65 for 128MB; Secure Digital Cards cost a bit more: about \$45 for 64MB, or \$75 for 128MB.*

2007-1000mb or 1 Gb cards are available for \$15 while 2000mb or 2 Gb cards are \$20!

**Exposure settings:** All digital cameras let you shoot in fully automatic mode--just press the shutter release and you get a picture. Better cameras offer aperture- and shutter-priority modes, in which you adjust the size of the lens opening or how long the shutter stays open, and the camera automatically controls the other variable to give you the proper exposure. Usually the same cameras also offer full-manual exposure control, in which you set both variables. These modes make a camera adaptable to almost any situation.

**Menus:** When evaluating a camera, consider how easily you can reach common settings--resolution, macro mode, flash, and exposure adjustments--and how easily you can play back just-taken images. Too many buttons, and you waste time trying to figure out which button does what; too many menus, and you waste time digging through them.

**White balance:** Almost all digital cameras allow you to choose a white-balance setting via presets. This setting tells the camera which elements in a shot should look white and, by inference, what should look black and what everything in between should look like. If you're finicky about color accuracy, look for a manual calibrator in which you press a button while aiming at a white object.

**LCD:** Low-end models often omit an LCD screen, which is necessary for reviewing just-taken images on the camera. LCD quality varies widely: Many wash out in sunlight or become grainy in low light, or the image may change if you tilt the camera slightly. If you can, try a camera outside before you buy it.

### The Specs Explained

The term you'll hear most often when shopping for a digital camera is *megapixel*. Many shoppers--and salespeople--believe that when it comes to megapixels, more is better. But that's not always the case.

Cameras with more megapixels produce larger crisp images. The tradeoff is that those images take up so much space you may be able to store only a dozen (or fewer) images in the camera's memory.

Along with megapixels, you'll also often hear about resolution. If your camera can capture more megapixels, the resolution of your images measured in pixels will be higher, and you'll be able to produce larger high-quality prints. A 2-megapixel camera can produce images of about 1600 by 1200 pixels, allowing for high-quality 5-by-7 prints. A 3-megapixel camera can produce images of about 2048 by 1536 pixels, allowing for crisp 8-by-10 prints.

So if you're interested in producing mostly small snapshots or images to send via e-mail or post on the Web, you probably don't need anything better than a 2-megapixel camera. If you want to create large copies of your masterworks, you'll want a camera that captures 3 megapixels or more.

*2003 Specs*  
**2007 specs**

Feature	(\$50-\$200)	(\$200-\$600)	(\$600 and up)
<b>Megapixels (resolution)</b>	<i>2 megapixels or less</i>	<i>3 megapixels</i>	<i>4 megapixels or more</i>
	<b>5-6 megapixels</b>	<b>5-6</b>	<b>7-10</b>
	<b>An important consideration.</b> This figure provides a measure of how much fine detail a camera can capture. With more megapixels, you can print larger photos with better image quality.		
<b>Storage capacity</b>	<i>2MB to 8MB</i>	<i>8MB to 16MB</i>	<i>16MB or more</i>
	<b>None Cards are now inexpensive and can store 1gb-2gb</b>	<b>32 Internal Cards are now inexpensive and can store 1gb-2gb</b>	<b>32 Internal Cards are now inexpensive and can store 1gb-2gb</b>
	<b>An important consideration-no more!.</b> Amount of data, in megabytes, the camera can store in on-board memory, removable memory cards, or both. How many photos you can store depends on the resolution at which you shoot them.		