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Summer is nearing, meaning vacations and outdoor activities will soon be upon us. Whether you're going on a much anticipated getaway or a Bar-B-Q in the backyard, memories are waiting to be captured. For this edition of *Missoula Computer Facts* we will be discussing digital cameras and all they have to offer.

## **What Specifications matter the most?**

One of the most common questions about digital cameras is "what are the specifications that matter most?" There are three specs that matter the most when buying a new digital camera, (Resolution, Zoom and Memory).

### **Resolution**

The resolution is the amount of pixels the camera is able to capture. The higher the resolution the better and sharper the image will be. Resolution is often referred to megapixels in digital camera jargon. Unfortunately the higher the resolution the higher the price is generally going to be.

The first step in deciding how many megapixels that you are going to need is to determine what you are going to use the camera for. For example, if you are going to use the camera for posting pictures on the web, or email, a 1 megapixel camera will do the job just fine. If you plan on using your camera to print off 5" x 7" photos then a 2 megapixel camera will be adequate. The following table will give a rough estimate on the resolution your camera must handle in order to produce quality photos at the specified size.

Resolution	Email & Web Sites	5" x 7" prints	8" x 10" prints	11" x 14" prints
1 Megapixel	Yes	-	-	-
2 Megapixel	Yes	Yes	-	-
3 Megapixel	Yes	Yes	Yes	-

4 Megapixel	Yes	Yes	Yes	Yes
5 and up	Yes	Yes	Yes	Yes

Digital Camera Buyers Guide and Tips Megapixel Summary

## **Zoom**

Zooming brings the action closer enabling your camera to take closer pictures. With digital cameras there are two different types of zoom, optical and digital. Optical zoom uses the lens to bring the target closer, while digital zoom simulates optical zoom, all it does enlarge the image much like image editing software would. While digital zoom allows for closer pictures, it also degrades the quality of the image. Therefore, optical zoom is better than digital zoom.

## **Memory**

In digital cameras, memory is like the film in 35mm cameras. With that in mind it is important to choose a camera with the right type of memory support. Some lower end digital cameras have built in memory, not allowing for additional memory upgrades in the form of memory cards.

Generally it would be a good idea to purchase a camera that has support for external memory as it is an easy upgrade and allows photographers the option to swap memory cards once the other one gets full of pictures. If your camera only had internal memory and your memory was full of pictures you would have two options at that time. Wait until you have access to a computer to save them, or delete ones that aren't needed.

The main memory types are:

1. CompactFlash
2. SecureDigital/Multimedia
3. xD Picture Cards
4. Memory Stick
5. MicroDrive
6. SmartMedia

For the casual photographer, the memory types don't offer huge differences between one another. For this reason if you have a device (PDA, MP3 Player) that already uses a certain type of memory it might be beneficial to stick with that type of memory as you could use the memory card in either device.

## **Pro's and Con's**

### **Pros**

1. Photo Preview
2. Delete bad photos
3. Easily transferred to a PC
4. Easily edit photos on a PC
5. No film cost

With traditional 35mm cameras, you couldn't tell if the picture that you just took was going to turn out or not until you got the print back from the developers. Digital cameras change all that. Most digital cameras have a preview screen on the camera, allowing you to determine the quality of the shot. If the picture was blurry or off center, the preview image will show that allowing for the deletion of the image from memory and a new picture can be retaken.

Another great feature that digital cameras have to offer is how easy it is to transfer photos to a pc. Once your photos are on your PC you can email them to family and friends, upload them to a website, print them on photo paper, and edit them. With photo editing software you can often enhance the quality of the image by removing red eye, cropping out an unwanted portion of the photo, or add text to the photo. With traditional cameras you would have had to have your developer burn them to a CD, for an additional cost, or you can use a scanner to scan them to your computer. Scanning photos to your PC not only takes a considerable amount of time, but it also decreases the quality of the image.

Digital cameras in the long run can save you money because they work on reusable memory cards. Unlike traditional 35mm cameras that use costly film in order to capture the image.

### **Cons**

1. Short battery life (especially if you use the LCD viewfinder)
2. Memory cost (which will pay for itself if you take lots of photos)

Digital cameras are not without their disadvantages however. In traditional 35mm cameras, the battery could last years without having to replace it. In digital cameras this is not the case. Especially when using the LCD viewfinder your digital camera will use batteries at a much higher rate.

Memory costs also concern consumers. Although it's true that memory costs more than film, memory in digital cameras can be reused. This memory cost will save you money in the long run if you take many pictures.

## **Reviews**

The following are reviews conducted by two well respected online tech websites. The first review was performed by CNET.com, followed by PCMAG.com.



### Canon PowerShot s80



**The good:** Great image quality; snappy performance; sturdy and attractive.

**The bad:** Vignetting at widest angle; slowish lens; no uncompressed or raw-file support; jaggies and audio noise in movie mode.

**The bottom line:** Aside from one or two very minor lens shortcomings, Canon's new flagship S-series model stands out in its class.

### Nikon Coolpix 7900



**The good:** Great-looking and compact; unique set of features for its class; above-average image quality, no red-eye.

**The bad:** Slow shot-to-shot times with flash, dual-purpose control buttons impose a learning curve; weak low-light autofocus.

**The bottom line:** Despite a few shortcomings, the handsome little Nikon Coolpix 7900 packs a punch, with practical snapshot features and solid picture quality.

### Nikon Coolpix 7900



**The good:** 5X optical zoom; context-sensitive advice; Adaptive Lighting feature; manual exposure modes; postcapture red-eye removal; compatible with HP's Instant Share system.



**The bad:** Excessive visual noise in some photos; flimsy lens cover; long recharge time for battery; no optical viewfinder.

**The bottom line:** The compact HP Photosmart R817 combines some unusual photo-enhancement technologies with a strong feature set for both novices and experienced photographers.



### Canon PowerShot s80



**The good:** Excellent quality. Very good performance. Wide-angle is 28mm.

**The bad:** No RAW files. Recycle time could be quicker. A little pricey.

**The bottom line:** The Canon PowerShot S80 is a little expensive, but it's a solid, compact camera that takes excellent photos.

### Nikon Coolpix P1





behind.

**The good:** Solid picture quality. Good performance and features.

**The bad:** Connecting to wireless signal can be frustrating. Manuals and help guides need improvement.

**The bottom line:** The Nikon Coolpix P1 may have been the first wireless point-and-shoot to reach the market, but its wireless capabilities lag

## Kodak EasyShare-One



**The good:** Easy photo-sharing via wireless connection. 256MB of internal memory. Great user interface and help features.

**The bad:** Expensive. Image quality could be better.

**The bottom line:** If you're looking for an easy way to take and share digital photos, check out the Kodak EasyShare-One. It's the best wireless digital camera we've seen for consumers, though it's not without flaws.