

Digital Photos

When dealing with a digital camera, you need to become familiar with the terms “pixel” and “megapixel.”

Pixel is short for “picture element” and refers to the tiny cells (or dots) that contain the information that makes up the digital photo.

Megapixel means “1 million pixels.” That may sound like a lot, but each pixel is very, very tiny. One million may look good on a computer monitor or on a very small print, but if you spread those dots out to cover a 5"x7" or 8"x10" print, they will look mighty sparse.

The higher the number of pixels, the better the resolution (density of dots) of the photos the camera will produce. The higher the resolution, the larger the prints you can make from that digital photo (and the higher the quality of the prints). A 1.0-megapixel camera will produce 1 million cells (dots) per image; a 4.0-megapixel camera will produce 4 million dots per image — quite a difference when you are thinking about expanding your photos up to 8"x10" or larger.

Higher-quality (better resolution) photos take up more space on your media card (the little disk that goes in the camera), so you can't fit as many on each disk. But more pixels (higher resolution) will give better prints. Here's what you can expect from various digital cameras.

Camera marked	Largest (good-quality) print size you can expect
0-0.9 megapixel	Will look good on a computer monitor and is great for e-mailing or posting on a web page.
1-1.9 megapixels	4x6-inch prints
2-2.9 megapixels	5x7-inch prints
3-3.9 megapixels	8x10-inch prints
4-4.9 megapixels	11x14-inch prints
5&up megapixels	16x20-inch prints

You may be very happy with an 8"x10" print made by your 1.0-megapixel camera, but it won't reproduce well in a newspaper or magazine because of how the pixels (dots) are spread out and the type of paper and printing process used to produce newspapers and magazines. Shotgun Sports needs photos from at least a 2.1-megapixel digital camera for use in the copy of a story (not to run over 4"x6" in size in the magazine). We prefer at least a 3.0-megapixel camera for photos that will run a full page or on the cover (7"x10" minimum). That requirement is higher than the sizes listed above because of the type of paper used in the magazine and the printing process used. We always ask that photos be a minimum of 4"x6" (larger for full-page or cover) and at least 300 dpi (dots per inch).

Your digital camera will usually allow you to adjust the image quality when you are taking pictures. Your memory card can contain both high and low-resolution images at the same time. Use the highest resolution setting on your camera when you need the best-quality prints for reproduction. Use the lower resolutions if you know you are just going to be using the photos for a web page or to e-mail to a friend (the quality is fine for that and the file is smaller, so it e-mails faster). But keep in mind, once you take a photo at a lower density, you cannot reproduce it at a higher density later on if you decide you would like an 8"x10" print of that photo you took to e-mail to grandma.

Another thing to keep in mind is the size the image will be after it is printed. Most digital photos will not fit exactly into the “standard” 4"x6" print from your home printer or the local photo shop. Most photo printers will “crop” about 1/4" from the top and bottom of the image and you may lose a part of your image. To avoid this, your camera may have the option to choose a “3:2 aspect ratio.” If not, always make sure you leave room at the top and bottom of each photo when you're taking it so it will fit in a 4"x6" print format.

If you print your own pictures at home on a color printer, you must make sure the printer is capable of producing good-quality photos and you must use the best-quality paper for printing the photos. Even then, they are not comparable to prints produced at a photo shop because of the process, inks and paper used. Many home-produced photos look great, but they may fade quickly and if they get wet the ink may run. Many home printers can't produce enough pixels (dots) to make a high-density good-quality photo (even if the picture was taken at the highest resolution on your camera) and they may “fudge” the pixel factor to produce a photo that looks good to the naked eye but shows a lot of space between the dots when enlarged for use in a magazine. The best-quality prints come from a good photo service (whether it's down the street or online). When submitting stories to a magazine, send only high-quality, professional photo prints.

When purchasing a digital camera, keep in mind what you plan to do with the photos you produce. If you just want to e-mail photos to family and friends, a 2.0-megapixel or less camera will fit your needs. If you are producing photos to be used in a magazine, you will want to purchase a good-quality camera that is at least 3.0 megapixels. Then you should learn how to use the settings on your camera to assure you are using the right resolution when taking pictures that will be reproduced in a magazine (keeping in mind they may be run full-page size, not just as a small print in the story). Make sure the subject matter fills the image area but leaves enough space so you won't lose the top and bottom when the photo is printed. After that, make sure the digital files you send to the magazine are of the right density and size and/or the prints are printed on good-quality paper and with good resolution.

It's not rocket science, but it does take some planning and knowledge of what the requirements are for the photos you want to produce when you purchase your digital camera. If you take time to learn just enough about your camera so you can produce photos that will meet the needs of their final destination (web page, e-mail, newspaper, magazine, a 20"x40" print to grace your living room wall...whatever), you will be happy with your purchase and will enjoy the fruits of your labor. The personnel at most stores can help you decide which camera is for you and many places offer classes in how to use your digital camera. Take advantage of these sources to learn how to get the most out of your digital camera.