

THIS & THAT



by
Bob Lunaburg

The holidays are upon us. Everyone is looking for that special something to get for a loved one. One of the *in* things this year is the digital camera. Ads showing digital cameras selling for less than a hundred dollars appear in Sunday paper flyers all the time now. So I guess it would be a good idea if we answered some questions about them. Here goes...

Q. What, just exactly, is a digital camera?

A. It's a device that records single images (what it sees) as computer data on a permanent storage device.

Q. What's that mean?

A. Well, for one, it doesn't use film. It uses micro-chip or floppy computer disk media to record the pictures you take. Both cameras (film and digital) are bound by the same rules when it comes to shutter speed, focal lengths, and focus. These factors determine how clear the image will be when you see the picture.

Shutter speed is important when you are photographing things that might move, like an extremely active two year old.

Focal length (*f* stops) determines how much light will enter the camera. The larger the *f* stop the more light you have and that can be a good thing, but it also decreases the distance from the camera in which objects will appear in focus, and that may be a bad thing.

General focus determines whether objects

that could be captured in sharp focus are actually captured in sharp focus.

Like I said, both film and digital cameras work the same for these things.

The difference comes with how the image you photograph is stored.

Film cameras use light sensitive chemically coated celluloid type strips of material to record the image. Light causes chemical changes in the film which, when passed through other chemicals, results in visible changes. You see the image, when developed, in negative form. Negatives are then run through another machine, and a positive is made on photographic paper. You knew that.

Digital cameras use a single light sensitive matrix (something square and made up of millions of very small solar cell type things). Each cell records one dot of the picture, a pixel. Actually each cell is made up of three light sensitive transistors. Each of these transistors is covered with a red, a green, or a blue light filter. Bright light causes the transistor to develop a large electric signal. Low light results in a low electric signal. So, each transistor in a digital camera's matrix is charge based on how much light passes through each filter.

Once charged (the picture is taken), each transistor is sampled, and it's power level is digitally recorded on an electronic memory chip, or magnetically on a floppy disk. This takes the place of film. You need a computer and a program to see digitally recorded pictures.

Generally, the more dots, the camera is capable of recording, the sharper (granularity not focus) the picture will appear when you view it, and the more the camera will cost.

Digital cameras that rival film cameras

begin at the two mega (million) pixels (cells) level, and go up. Cameras having less than two mega pixels will still produce high quality pictures, which can be printed using an inkjet printer and photo quality inkjet paper, but will look a bit less sharp than those of the same size picture printed on film paper from a film negative.

If you're not fussy about your pictures, any digital camera sold these days will satisfy you. If you are fussy, buy the best your pocket book will allow.

And by the way, remember when you use a digital camera, you will need a computer, a program, an inkjet printer, and photo quality inkjet paper before you can hold and view your pictures.

And yes, you can use the digital camera's picture recording media over and over again. But be prepared to buy a lot of batteries, because digital cameras eat them up fast.

Happy Holidays!