

DIGITAL PHOTOGRAPHY GUIDE

Are you into digital photography? As a beginner, the large number of choices for digital cameras, photo editing software programs and photo printers out in the market may be overwhelming and a bit confusing for you.

One of the main advantages of digital cameras is that you can immediately review your picture and do not have to wait till it gets developed. If you don't like the picture, you can simply delete it and take another one. With a digital camera, there are no limits to the number of pictures you can take. You can use photo editing software to make the adjustments your pictures need and make them even better. Another advantage is that you can instantly share your pictures by emailing or printing them and posting them on online albums.

This digital photography guide will give you all the information you need on digital photography, finding the right digital camera, taking better pictures, editing photos, and choosing the right photo printer. It will give you many useful tips and techniques. In just a few hours you can learn, how you can take and print better pictures. Understanding the terminology and weighing the features that will be most or least useful to you will help you make an educated choice.

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Finding the Right Digital Camera

Here, you will find the help you need to get the maximum performance out of the digital camera you are planning to buy or the one you currently own.

When choosing a digital camera, you will come across many different models in different shapes, sizes, and of course price ranges. Other than considering a digital camera that fits in your price range, you also need to decide whether if you need a professional digital camera with advanced technical features or a digital camera that takes good pictures is easy to use and has just the features you need. Let's look at the important details you should pay attention to when buying a digital camera.

Resolution

Resolution is one of the most important features to consider when buying a digital camera. Resolution is determined by pixels: the more pixels, the higher the resolution and therefore the more detail, the higher the photo quality. On a digital camera resolution is determined by megapixels (1 million pixels=1 megapixel).

A typical consumer level digital camera may have a resolution between 0.3 megapixels to 14 megapixels. The higher the number of megapixels your camera has the more flexibility and options you will have when editing, cropping and printing your pictures. A larger original image will allow you to crop a smaller portion of the large photograph and still have a high quality print at 4" x 6" or larger. A digital camera with a resolution of 3 mega pixels will generally give photo quality results. A digital camera with a resolution of 1 mega pixel can be sufficient for printing small pictures (up to 4 x 6) or using them on the web. Please check the chart below for detailed size information:

Camera Resolution	The size you can print at good quality
0.3 Megapixels (680 x 480)	Not good for printing
1.2 Megapixels (1280 x 960)	3" x 5"
2.1 Megapixels (1600 x 1200)	4" x 6"
3.3 Megapixels (2048 x 1536)	5" x 7"
4.0 Megapixels (2400 x 1800)	8" x 10"
5.0 Megapixels (2500 x 1900)	9" x 12"
6.0 Megapixels (3000 x 2000)	11" x 14"
4.0 Megapixels (4000 x 2000)	12" x 16"

Optical and Digital Zoom

Digital cameras may be equipped with an optical zoom lens, optical and digital zoom settings, or a digital zoom only.

Optical zoom works similar to the traditional camera where optical zoom lenses actually "move" you closer to the subject of the photograph without sacrificing quality. The higher the optical zoom rating on a camera, the farther away you can be to take a photograph and still get a clear, close-up image. You want to pay close attention to the optical zoom number as it's the zoom that will give you the quality results you want.

Digital zoom is not really zoom, in the strictest definition of the term. What digital zoom does is enlarge a portion of the image, thus 'simulating' optical zoom. In other words, the camera crops a portion of the image and then enlarges it back to size. This results in a loss of quality, and is no different than cropping and enlarging an image with editing software. The benefit of using image -editing software instead of the digital zoom on a camera is that you can decide how much to crop, and how much to enlarge the image to where the quality is acceptable to you. When you use digital zoom on the camera, the image quality is irreversibly lost.

Cameras with a 2X-3x zoom lens have established themselves in the medium range. In short, compare optical zoom and ignore digital zoom. Optical zoom capabilities make all the difference in the final product. The higher the optical zoom, the farther away from the subject you can be and still get a great, clear, crisp quality shot.

Memory

Some digital cameras may have a built in memory capacity of 8MB to 1GB. A digital camera with a 16MB memory is able to store up to 110 pictures. However this number is valid if you only use the lowest resolution mode. If you take pictures in high resolution, this number could go down to as low as 2 pictures for the 16MB memory card .

Most consumer digital cameras use external memory that allows you to use a memory card which you can remove when it's full. SmartMedia, Secure Digital, Compact Flash, and Memory Stick are the most common technologies. With this memory card technology, you can easily insert a fresh memory card and continue taking shots. Some digital cameras only have built-in memory and don't have a memory card slot, which is a good reason not to choose that camera.

You can save your digital photographs in two ways; as compressed and uncompressed files. With the uncompressed format, you can save a maximum of image-forming information for color reliability and clearness. And with the compressed format you can decrease the file size and occupy less space on your disk.

Below is a chart that will help you determine how many pictures you can store at different memory sizes on a typical consumer camera .

	8MB	16MB	32MB	64MB	128MB	192MB	256MB	1GB
1 megapixel	22	45	91	182	365	548	731	2850
2 megapixels	8	17	35	71	142	213	284	1107
3 megapixels	6	13	26	53	106	160	213	830
4 megapixels	4	8	16	32	64	96	128	499
5 megapixels	3	5	10	21	43	65	86	360

Battery Life

Digital camera batteries go through very fast, so get one that uses rechargeable batteries. Some of them come with a rechargeable NiMH battery of their own, included with the camera. Some work with standard AA size batteries. In that case, we recommend getting a rechargeable NiMH AAs. Otherwise the one-times use regular AA batteries will run out faster.

Some cameras also have an AC adapter which means you can save by powering the camera from the wall socket.

Style & Size

Some digital cameras are easier to use and for others you may need to read the manual a few times. Have a good look at the camera before you buy it and be sure to test it. Look through the lens and see if the image is clear and if the viewfinder is comfortable. Go for the one with buttons easy to locate and use. Size is an important consideration too. Do you want a stylish camera that fits into your pocket or a large one with better control? Being able to take it everywhere is a great advantage of a small camera but they are harder to manipulate.

Prices

The price of a typical snapshot digital camera will vary between \$100 and \$600. The lower priced ones have lower resolution which is more suitable for e-mailing and posting on the web but not for printing. The high priced ones usually offer advanced features and professional quality pictures. There are higher priced models with more advanced features and prices up to \$4800. Keep in mind that as new models are released, price of the older models usually decrease. Also add the cost (\$50-\$100) of some necessary accessories like memory cards, extra batteries, cover case, etc. on your budget.

We recommend you visit www.dpreview.com for digital camera comparisons and supplies information.

Taking Better Pictures

Here you will find few important tips and techniques that will help you take great pictures.

Take Time to Prepare Background

Before you start taking your pictures, take some time to prepare. Set a plain background; remove objects that will distract the attention. A plain background will keep the focus on your composition.

Stay At the Eye Level

When taking your shot, stay on the person's eye-level. Direct eye contact can also be very charming in a photo, though it is not always necessary. But staying at the eye-level will always have a certain positive effect in the picture.

Try Different Angles

Try some new and creative angles. Use your imagination and try different perspectives. Before taking your shot try a few different angles to find the best point. Take some vertical pictures.

Stay Close

Get closer to your subject especially if it's small. Stay within 2-4 feet. Try not to get more than 5 feet away. You want the focus to be on your subject. Zoom in, but don't get too close. Otherwise your pictures won't look clear and they'll be blurry.

Don't Place Subject in the Middle

Move your subject from the middle of the picture. Try keeping it on the side and make it more interesting. Take your time and try different sides. Lock the focus if you have an auto-focus camera as it will most likely focus on the object in the middle.

Use of Flash

Lighting is one of the most important aspects of a good picture. It has a strong effect on your picture. Your camera has a certain flash range which is usually less than 15 feet. This means that any picture taken from more than 15 feet distance will be too dark. Try to use natural light to give a brighter look on people's faces. Change your angle to find the best light. Try to reflect the daylight from the side, indirectly on your subject. Then one side will be light and the other a little darker which will create a meaningful expression. Early mornings or late afternoons are the best times to catch a soft natural daylight for taking landscape pictures.

Be a Director

Be active and take charge when taking your pictures. Move your subjects if you don't like their position. Choose the location to place them where you want, give them directions and your pictures will start looking more interesting and attention-grabbing than ever.

Photo Editing Software

Most photo printers come with photo software programs which are great tools to edit and correct your pictures and get perfect results. Once you have taken your pictures, you can archive and publish them on the web or print them (either directly from digital camera to pc or from pc).

Some photo printers come with programs, like EasyShare photo software that adjust the resolution of your digital picture automatically, depending on whether you're sending e-mail or printing. Others require you to change the resolution yourself. Usually with these photo software programs you can edit your pictures on your computer before you print them. You can adjust the color balance, size, sharpness, brightness, contrast, and saturation.

Here, you will find information about some popular free photo editing software programs with their links for free downloading.

[Kodak EasyShare Software](#) - A popular software program for editing, sharing and printing your pictures is the new which makes it even easier to organize, print and share your digital pictures.

[Irfan View](#) – A simple program that you can change the way your graphics look, create slide shows, cut and crop your graphics and convert your graphics and much more. Batch processing is available.

[ADG Panorama Tools](#) - A popular photo editing software that lets you generate, edit & embed publish 360 degrees interactive panoramic composition on the Web from a series of photos quickly and easily.

[Photo Paper Saver.](#) - Convenient and easy-to-use photo editing software programs that help you save on photo paper costs. Lets you make lots of photo reprints quickly, easily, and save money at the same time. The program will automatically layout all your different prints using the LEAST amount of space so you waste less photo paper when you cut them out.

[Albumatic](#) - One of the easiest and fastest ways to get your photos on the Web is by using this program. It can take your photos all the way from a scanner to your Web site by itself. TWAIN and FTP support are built -in. [MyAlbum](#) is another free program that is a picture cataloger for easily building digital photography albums.

You upload your picture free of charge on [Yahoo Photos](#) and also print your pictures online for a small fee. [Snapfish](#) is another website where you can post and store your pictures for a fee.

PrintCountry.com offers a list of popular Free Digital Photo Software downloads. Visit http://www.printcountry.com/free_software.asp for more info.

We also wanted to include some software programs that you can purchase:

[Adobe Photoshop](#) – Advanced photography software program that is widely used by graphic and Web designers, photographers, and video professionals. Most people will do just fine by utilizing the free programs mentioned above. For the information purposes, some key features of Photoshop include:

Color correction: improve the color, contrast, and dynamic range of any image with a comprehensive set of professional color-correction tools.

Healing Brush: effortlessly remove dust, scratches, blemishes, wrinkles, and other flaws with the Healing Brush.

Comprehensive 16-bit support: perform more precise editing and retouching with expanded support for 16-bit images in core features, including layers, brushes, text, shapes, and more.

Integrated digital camera raw file support: Get truer, higher quality output by working with the complete raw data files from most major digital camera models.

File Browser tagging: protect your images by adding key copyright information in the editable metadata panel of the File Browser.

The list price of Adobe PhotoshopCS version is \$540 - \$670

[Paint Shop Pro](#) - A cheaper alternative to Adobe's Photoshop. It costs \$95.00 and it's a quite efficient program for photo editing. With this program you can most of the features that Adobe Photoshop can do.

Choosing the Right Photo Printer

The photo printers in the market provide great quality photo printing; they are affordable and easy to use. If you choose the right photo printer, you can easily print great pictures and be amazed. If you do not feel ready to start using a photo printer yet, you can also find an inkjet printer that produces good quality high resolution pictures. There are also mobile photo printers if you are planning to print on the go. Here are the important points to consider when buying a photo printer:

Resolution

Resolution is one of the most important aspects of photo printing. You will need a printer with a resolution of at least 1200 dpi. The higher the resolution, the sharper and clearer your results will be.

Ink Cartridges

The printers that use multiple ink cartridges (4 to 8 ink cartridges) provide a better quality, sharp and clear pictures. They are also inexpensive to maintain as you can replace only the color that is empty. If you get the additional gray ink cartridge, this will give you better quality rich blacks, whites and grays. Some photo printers provide long lasting fade-resistant photo prints that keep their colors for many years.

Please read the important tip below before purchasing a printer.

Speed

If you will make a lot of prints, speed will also be an important factor for you. In that case, get a fast printer, though keep in mind that their prices are higher.

Printing without a PC

If you want to print your pictures without using a computer, than you can select one of the photo printers that have this feature. Such photo printers have memory card slots and most are compatible with the PictBridge technology. So you can use a PictBridge compatible camera and print directly from these printers.

Paper Handling

Also consider the paper handling features of the photo printer when buying it. How much capacity does it have? Depending on how often you will print, you can determine how many sheets your printer should hold. Usually personal printers hold 100 to 300 sheets which is quite sufficient. What kind of media does the photo printer accept? Can it print on thicker papers for example? Some can print on envelopes. If you are willing to use different types of media such as postcards, envelopes, glossy photo papers, transparencies, or iron-on transfer sheets, make sure to get one that accepts these kinds. Most personal printers handle letter and legal size paper. Some printers also provide double-sided printing.

Compatibility

Make sure the technology your printer uses is compatible with your computer's technology. Most printers use USB interface, some still use the older parallel port technology.

Most common photo printers are HP, Canon, and Epson brands.

Important Tip:

ALWAYS check for the ink cartridge prices before you purchase a printer. Why? Because sometimes cheaper printers end up costing you more due to the high costs of their ink cartridges. You should calculate the "**cost of ownership**" per month. The math is simple: (number of prints per month) times (cost of the printer cartridge) divided by (the yield of the printer cartridge). Yield is the number of pages that can be printed with one particular printer cartridge.

For example, assume that average home user prints 150 black pages per month using a black printer cartridge that yields 200 pages and costs \$28. The monthly "**cost of ownership**" is

$$\frac{(150 \text{ pages}) \times (\$28)}{200 \text{ pages}} = \$21$$

Also look at the printer ink alternatives; besides the original manufacturer's printer cartridges (OEMs), you may have the selection of remanufactured printer cartridges, compatible ink/toner cartridges, and refill kits.

Before purchasing your printer, visit www.printcountry.com to check out the prices of the available ink cartridges your target printer uses. Visit our [Photo Paper Section](#) as well.

Also read our [Printing Buying Guide](#) for fully detailed information before choosing a printer.

Photo Printing Secrets

The photo printers in the market today are able to produce professional quality pictures with true-life colors. But there are some tips and techniques for getting the best out of your photo printer. With the following photo printing secrets, you can improve the print quality of your pictures to a great extent.

High resolution: Make sure that the electronic file of your photo is at least 240 dpi for smaller photos (4 x 6 and below) and 300 dpi for larger ones (5 x 7 and above).

Correct format: Save your picture in the correct format i.e. TIFF or JPEG. You can use the JPEG format for emailing and TIFF for printing.

Editing software: Use a good photoediting software program to adjust your pictures.

Driver settings: Set your printer's preferences to highest print quality and always use the latest driver version available.

Type of Paper: You will get the best results with photo papers. PrintCountry sells a wide variety of photo papers and other photo printing documents. Please visit [PrintCountry Photo Papers Section](#) for more information on types and prices of different photo papers.

Paper Settings: Different paper types require different settings. For example plain paper setting uses more printer ink compared to glossy and photo paper setting. Find the right setting for the paper you are using by trying different settings.

Drying Time: Give your picture enough time to dry before you frame it. Drying time can change according to temperature, light and humidity. Generally it is a good to let the print dry for about 24 hours.

Digital Photography Glossary

Here is a list of terms that may be beneficial for you if you are unfamiliar with the terminology used in the world of digital photography.

Pixel (Picture Element): each single dot in a digital photograph is called pixel.

Megapixel: a unit equal to one million pixels.

Resolution: the number of pixels in a digital photograph.

DPI: abbreviation for dots per inch. It is a measurement of print resolution that indicates the maximum number of dots that the printer can print in a square inch.

JPEG: a standardized format used by many digital cameras for storing images. This format is commonly used for emailing and posting images on the web.

USB: an input/output bus capable of transferring data at 12 megabits used for connecting peripherals to a microprocessor. It can connect up to 127 peripherals through a single port.

Media Size: the size range of the paper the printer can handle (letter, legal, etc.).

Input Capacity: maximum number of pages the printer can hold.

Memory card: a storage device used to store data, like picture and movie files, available in different sizes, such as 8 MB, 32 MB, and 256 MB.

Cropping: cutting off a portion of the original picture to eliminate distracting elements or improve composition.

Brightness: lightening or darkening a picture when it's too dark or light.

Contrast: Increasing or decreasing the difference in darkness between one tone and another.

Sharpness: creating the appearance of sharper focus.

Color balance: changing the overall color tint of an image when it's too red, too green, or too yellow.

Saturation: the strength or purity of a color.

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