

Choosing a Digital Camera

Introduction

What do you want from a camera?

- What type of photography will the camera be used for, sports, architectural, nature, macro, recording family and friends etc?

Do you understand the various aspects of the camera specification?

- Megapixels, zoom ratio, memory cards etc.

Which is the best one for you?

- Does it feel “right” in your hands, how is the view through the viewfinder, do the controls seem to be in the correct position?

The important thing you need to do is to think about what you want you want to use the camera for; you need to know what the various specifications mean and to work out which the best is for you.

Essential Questions

To find the best camera for you, consider a number of factors. Some are questions you need to answer, others information about the possible choices and their significance.

What type of photographer are you?

- Beginner, enthusiast or perhaps upgrading from a previous camera.

What will the camera be used for?

- Sports, architectural, nature, macro, recording family and friends etc

How important are megapixels and how many do you need?

- Will you be satisfied with viewing your images on the Internet or on computer screen; if so there is generally little point in getting a camera which it more than 1.5Mp?
 - You will simply paying more than you need and using more storage per image in the camera than you require.
 - If the largest print you will ever want is 6"x4" or 7"x5", a 2Mp camera will be fine – and most of these cameras will sometimes allow you to get a reasonable print around 10"x8" too.
 - However if you know you will want to print to 10"x8" regularly, then it makes sense to buy a 4 or 5 Mp camera.
 - For professional quality prints up to 15"x10", a good 6Mp camera will be needed.
 - For results that will come close to medium format quality you will need to be thinking about 11 Mp or more.

What are the lens options?

- Most digital cameras have zoom lenses, but some are available with a fixed focal length.
- Would a 3:1 zoom ratio be sufficient for your needs?
- Do not be misled by claims about ‘digital zooms’. This is simply a feature that magnifies the centre of the image (thus reducing quality)

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and is of little real use. Look for the 'optical zoom' range, which represents what the lens will actually achieve.

- Interchangeable lenses – these are found on digital single lens reflex cameras designed for professional and advanced amateur use and are available in a variety of focal lengths. These lenses will generally give a slightly magnified image compared with the same lens being used on a film camera. The difference is usually expressed in terms of a 'multiplication factor' or 'crop factor' which calculates the effective focal length of the lens which gives a similar image on film. On most Canons it is 1.6, except on the Canon EOS 1DS Mark II it is 1 as this camera has a full frame sensor, on Nikons it is 1.5 and Sigma 1.7.

Memory what are the choices – and how much do you need?

- The memory used for immediate storage and manipulation of the data is sometimes called the 'buffer'; this is where the raw data from the sensor is converted into a suitable image file. Once converted the images are transferred from the buffer to the memory card.
- Cameras normally make use of solid-state memory cards for image storage. Each camera manufacturer will favor a particular type of memory card for its cameras.
- Cameras are usually supplied with a memory card to provide storage. Frequently they come with a small capacity card – such as 8 or 16Mb and you will often need to add the cost of a larger card to your purchase. It makes sense to have a card that will allow you to take at least 50 photographs, probably more. Fortunately memory cards are now relatively inexpensive.

How do cameras differ in size, handling and quality of results?

- How important is camera size to you, will it be carried in your pocket or in an external carrying case?
- Check how comfortable it is to hold the camera. Put your eye to the viewfinder and look through it and see how well you can see the image. If possible take a photograph and then view it on the LCD screen.
- How easy is the LCD screen to use and how good is the image on it, is the screen bright enough to be seen in daylight? Does it show roughly the same view as you saw in the viewfinder (check this by lining up a shop window in the frame and taking a photograph using both the eyepiece and screen).
- Does the LCD screen swivel? Will this help you in the type of photographs you take?

Operational Options

- How long do you have to wait when you switch on the camera before you can take a photograph? Digital single lens reflex cameras are generally ready immediately, while some less expensive models may take up to 10 seconds to be ready to take a photograph. How important is this to you?

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- Having taken one photograph, how long before you can take the next? And the next? Again, pro cameras allow you to take several a second at least for three or four frames, while some less expensive cameras leave you waiting for perhaps twenty second before allowing the next photograph to be taken.
- Is the autofocus and auto exposure rapid, or do you get a noticeable delay between pressing the shutter and the photograph being taken. This is something that will matter more to you if you want to be able to take action photographs.
- How easy and fast is it to alter the zoom setting?
- Can the focus and the exposure be locked?
- Can the focus or exposure be set manually?
- Read the reviews – If you cannot get to handle a camera before you buy, the next best thing is to look through several detailed reviews – usually you will be able to find these on the Internet (see references at the end of this article).
- Do not rely on reviews on camera manufacturers sites; look for independent reviews (again see references at the end of this article). These should give you at least some idea about most of the points raised above, as well as mentioning any special features the camera may have – for example the ability to record video or sound.
- Reviews should also deal with an important factor not easily assessed in a short hands-on test; image quality. How sharp is the image, how good are the colours?
- On some review sites you may be able to find actual sample images taken by the reviewers using the camera; these will give you a good idea of its quality. It is worth downloading these images and carrying out careful comparisons with those of other cameras you are considering.

What budget will be allocated to purchase the camera?

- How much can you afford to pay for a camera and how much should you pay? Would expect a digital camera to last for at least two or three years before you deciding to replace it by a new model, perhaps longer? One way to look at the cost of changing from film to digital is to add the cost of a new film camera to the projected cost of purchasing film and processing and equate that to the cost of a digital camera.

Example megapixel count and price (August 2006)

- Fujifilm A400, 4.1Mp, 3 x zoom, price: £90
- Nikon Coolpix P3, 8.1Mp, 3 x zoom, price £234
- Panasonic Lumix FZ20, 5Mp, 12 x zoom, £250
- Nikon D2xs, 12Mp, price of body £2418 to £3499
- Canon 1DS Mk II, 17Mp full frame, price of body £4589 to £4899

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In order to maximize your digital camera investment you may need a PC with a large hard drive and lots of RAM, image editing software, a photo capable printer and a colour accurate monitor.

Conclusion

Finally, from all of the foregoing, you should be able to decide which camera will best suit your needs. If you have been to a dealer to handle it and see it, you are more likely to be sure. Purchasing from a dealer that you can visit may sometimes cost a little more than ordering from the cheapest on-line supplier, however a good dealer will help you out in the future if you have a problem with the camera.

Whatever camera you buy, I hope you will have fun using it and find that it expands the photographic possibilities for you.

References:

<http://www.buyacamera.co.uk> †

<http://www.cameras.co.uk/> * †

<http://www.dcviews.com/> *

<http://www.dpreview.com/> *

<http://www.dcresource.com/> *

<http://www.ephotozine.com/> *

<http://www.greatdigitaldeals.co.uk> †

<http://www.imaging-resource.com/> *

<http://www.outbackphoto.com/> *

<http://www.pbase.com/> (Users photographs from many different types of camera)

<http://www.purelygadgets.co.uk/> †

<http://www.shortcourses.com/>

<http://www.steves-digicams.com/> *

<http://www.warehouseexpress.co.uk/> †

* News and reviews

† Camera purchase site