

Digital SLRs

**Serious about photography?
A digital SLR may be for you**

This report focuses on large digital cameras, but if you're really keen on photography you might want to consider upgrading to a digital SLR. An SLR's superior image quality and minimal shutter delay mean it's in a different league from fixed-lens digital cameras. And with a wide range of lenses to choose from, you can select the right one

for the photo you want to take.

If you already own lenses for a film SLR camera, you can use them on your digital model but this usually affects the zoom range.

Prices of digital SLRs have fallen in recent years. Entry-level models are now as little as £350 and the Best Buy Nikon D50 Kit DX 18-55mm EF-S is £397. This is still more expensive

than most compacts and that's before you count the cost of extra lenses. These are less than £100 for a lens with limited zoom up to £1,000 and beyond for a high-quality one.

We'll be reviewing digital SLRs in June. For more information on digital SLRs, go to www.which.co.uk/digitalcameras.



What you should look for

ISO SETTINGS

The higher the ISO number, the more sensitive the camera is to light. So if you don't want to use flash, manually select a high ISO number of 400 or above



IMAGE STABILISATION

This involves the lens or digital sensor adjusting to compensate for hand movements, tackling the camera shake that results in blurry pictures – a common issue when using a long zoom or shooting in dim light

Insider information

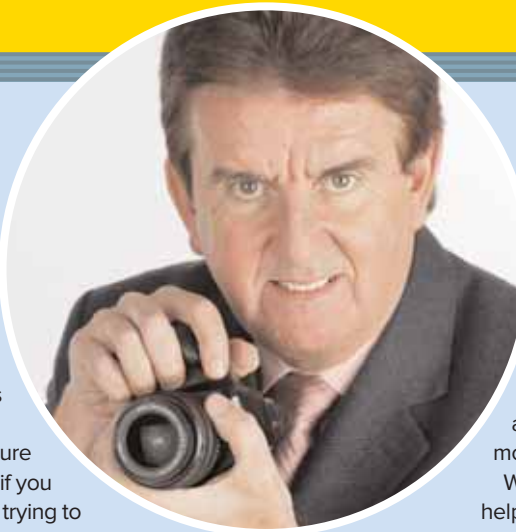
We asked Mike Maloney OBE, top Fleet Street photo-journalist, award-winning photographer and *Amateur Photographer* magazine's resident expert, for his advice for the keen amateur

Small compacts are great for taking simple holiday snaps, yet they have their limitations. According to Mike: 'They take the picture for you. Larger cameras, with manual focus and aperture control, let you take the photo and give you back control of the creative process.' The results can be impressive, and Mike has had photographs taken with large, advanced digital cameras, rather than more expensive SLRs, published in many different magazines.

To help improve your shots, Mike recommends experimenting by manually adjusting the different settings, such as white balance and shutter speed, rather than taking the easy option of sticking to the pre-programmed scenes modes.

Mike never underestimates the importance of shutter delay when choosing a camera, as 'a photograph is a moment in time' – picture quality doesn't matter if you miss the image you're trying to capture. However, you will find that adjusting the focus manually eliminates shutter delay, as well as providing greater control.

Using the correct exposure is central to producing a good-quality image. Underexposing your shot will produce a dark, gloomy picture, while overexposing it will produce one that looks too bright. Mike avoids this through the use of 'bracketing exposures' – manually selecting three



different apertures around the light meter's recommended exposure. So if the camera states f8, also take shots at f5.6 and f11.

Mike recommends avoiding using a flash where possible, believing that it produces an artificial-looking light. Instead, he advises making use of the available natural light by turning your ISO setting to a high number (this will introduce more

'noise' – see 'How we test', p58, for more details). If it really is necessary to use flash, be aware that it can be too powerful, especially when shooting close-up photographs. Mike suggests placing a small sheet of white tissue paper over the flash to reduce the amount of light and produce more even coverage.

While these techniques will help develop your photography, you should never forget the basics. Battery life is crucial. As Mike says: 'It doesn't matter how good your camera is if the battery is flat. Always carry a spare one with you.'

Caring for your memory card is also important. Keep the cards away from magnetic fields, such as audio speakers, and ensure they remain cool and dry. And, finally, don't take chances with your images. Make sure that you always back them up.

Big is beautiful

Calling all keen photographers – large, advanced digital cameras are now affordable. We test 14 of the latest models and provide you with shooting tips

BURST MODE

This allows the camera to take several shots, one immediately after the other, until you take your finger off the shutter button or the camera's limit is reached – see table, p60

MANUAL FOCUSING

Useful for close-ups, this lets you focus on exactly what you want and is also handy for special effects

Digital cameras are hugely popular – it is estimated that more than a third of the UK population now owns one. Last year alone, 6.3 million were sold in the UK, at a cost of £1 billion. Most of these were fairly basic point-and-shoot models, but our growing familiarity with digital technology, combined with falling prices, means that keen photographers are increasingly looking to trade up to bigger, more advanced cameras.

Larger, higher-end models offer considerable advantages over cheaper compacts. Their greater size allows them to incorporate long zoom lenses and large

LCD screens, making it easier to see what you're photographing. A larger surface area means the camera can be designed to include buttons that directly access features, whereas smaller compacts are more fiddly as you have to wade through a menu system on the LCD screen. Higher-end cameras usually also offer a better built-in flash, plus the capacity to mount an external one, and improved ISO capability, which allows them to be used in low light.

Anyone who wants to develop their photography is likely to be attracted to some of the more advanced features that

are found in larger cameras, which give much greater control over the final shot – see 'What you should look for', p56, for more details. And with our Best Buys available from £250, you don't need to have a professional photographer's bank balance to be able to afford a model that takes sophisticated snaps.

However, if you'd prefer to buy a simpler, smaller digital camera, or you're interested in taking your photography even further and upgrading to a digital SLR, go to www.which.co.uk/digitalcameras to read reviews of more than 145 of the latest models.



70% Sony Cyber- shot DSC-H5 £349

The Sony Cyber-shot DSC-H5 has a really powerful zoom which, combined with its image-stabilisation system to help keep camera shake at bay, produces good-quality pictures. Another strength of this camera is its LCD screen, which is very large and of high quality – making it easy to see your prospective snap. Shot-to-shot time in both burst and single-shot mode is better than average, while shutter delay and start-up time are about average. Available from Jessops.

WORTH KNOWING Although the camera's movie quality is OK, you can't zoom while recording.

WHICH?
**BEST
BUY**

Cheapest store Jessops **Megapixels** 71 **Optical zoom** 36-432mm (12x) **Size** 11.5x8.5x10.5cm **Weight** 510g



68% Fujifilm FinePix S6500fd £250

This 6.1Mp camera comes with an excellent flash and a maximum ISO setting of 3200, making it a great choice when taking shots in poor light. Picture quality is good and there's little shutter delay – just 0.5 seconds. However, movie quality is poor, even for a camera, and the burst mode was the slowest on test. Widely available on the high street.

WE LIKE This model features face-detection technology which automatically recognises human faces in the frame and adjusts focus and exposure accordingly.

WHICH?
**BEST
BUY**

Cheapest store Currys and PC World **Megapixels** 6.1 **Optical zoom** 28-300mm (10.7x) **Size** 13.5x10x14cm **Weight** 730g

The Fujifilm FinePix S6500fd can recognise human faces



68% Fujifilm FinePix S9500 £250

This Fujifilm has a good-quality LCD screen, a powerful zoom and very little shutter delay, while its start-up time is an impressive 1.7 seconds. Unfortunately, the burst mode is slow, taking a picture only every 1.3 seconds. This camera was awarded three stars for overall picture quality, but very narrowly misses out on a four-star rating – in fact, it does get four stars for picture quality using a manual focus. Available from Comet, PC World and Woolworths.

WORTH KNOWING The S9500 comes only with alkaline batteries. For long-term cost-effectiveness, buy a set of rechargeables and a charger.

WHICH?
**BEST
BUY**

Cheapest store PC World **Megapixels** 9.1 **Optical zoom** 28-300mm (10.7x) **Size** 14x9.5x15cm **Weight** 795g

How we test

Image quality is the most important factor when choosing a digital camera. We rigorously evaluate each model on test to assess its ability to reproduce detail and colour and avoid common photo imperfections

A camera's resolution – the amount of detail it records – is key to photo quality. If the resolution is poor, pictures look pixelated or blocky when printed in a large format (such as A4) or if blown-up using image-editing software.

Our experts measure resolution by taking a series of photographs using different settings, such as wide angle and telephoto. Washed-out colours or a tendency to over-emphasise one colour can ruin a photo.

We assess the cameras' ability to produce images with the correct white balance and colour contrast by taking several shots, including portrait and landscape, on the highest resolution and quality setting. We then use specialist software to evaluate a range of factors, including brightness, contrast, intensity of colour and how well defined the images are.

When using a long exposure and a high ISO (see 'What you should look for', p56), you can produce images with a lot of 'noise' – this shows as coloured speckles in the picture. We take shots of a plain white test chart under different light conditions and then transfer the images to a computer. This allows us to closely examine the images and assess noise by calculating the brightness of each pixel – these are the dots that make up an image.



68% Panasonic Lumix DMC-FZ50

£499

The new flagship in Panasonic's big-zoom Lumix range, the DMC-FZ50, boasts a ten-megapixel resolution and offers very good picture quality, with little picture 'noise' – the speckles that can appear on a digital photo. It has a large 35-420mm zoom and a good image-stabilisation system to help reduce camera shake. Burst mode is not the fastest and, at 0.8 seconds, its shutter delay doesn't measure up to that of most of our other Best Buys. Movie quality is also poor. Available from Jessops and John Lewis.

WE LIKE The LCD screen is adjustable both horizontally and vertically.

Cheapest store John Lewis **Megapixels** 10 **Optical zoom** 35-420mm (12x) **Size** 14x8.5x15cm **Weight** 770g



Unlimited burst mode on the Samsung Digimax Pro815 is impressive. It takes almost three shots a second



68% Samsung Digimax Pro815 £500

This 8Mp Samsung is the heaviest camera on test, weighing more than a kilo. It does have a very powerful 28-420mm (15x) wide angle zoom lens, though, and is able to zoom considerably further than the average camera. Picture quality is very good and it has a huge high-quality 69x52mm LCD screen at the back. However, shutter delay is quite long – at 0.8 seconds it is not even as good as the average small camera – making it a poor choice for spontaneous action shots. Available from Boots.

WE LIKE The unlimited burst mode on this model is impressive, taking almost three shots a second.



Cheapest store Boots **Megapixels** 8 **Optical zoom** 28-420mm (15x) **Size** 13.5x9.5x17cm **Weight** 1,042g

Worth tracking down

PANASONIC LUMIX DMC-FZ30, £350

One of the highest-scoring cameras ever, the FZ30 combines really impressive image quality with great features, such as a powerful 35-420mm (12x) zoom. It's also fast, with a 0.1 second shutter delay.

SCORE 73%



KODAK EASYSHARE P712, £242

This mid-sized camera is a good all-rounder with a potent 36-432mm (12x) zoom. Image quality is impressive – few cameras can match it – and it comes with a handy image-stabilisation system. Shutter delay is quite short at just over 0.3 seconds.

SCORE 68%



PANASONIC LUMIX DMC-FZ7, £230

This Panasonic camera also comes with a good 36-432mm (12x) zoom. Picture quality is not quite up with the best in the class if you use auto focus, but you can switch over to manual focus for those really important shots.

SCORE 68%



The way we were



Digital cameras have come a long way since we first tested them nine years ago

Agfa's ePhoto 1280 was a Best Buy in August 1998. Despite being a large camera, it could manage only a puny 38-114mm (3x) zoom and had a resolution of 0.79Mp – far less than most camera phones produce these days. It was also terribly slow, taking an incredible 19 seconds between single shots, and it cost a rather expensive £700.

By comparison, our top Best Buy, the Sony Cyber-shot DSC-H5, is capable of 7.1Mp, has a 36-432mm (12x) zoom and takes individual shots every 1.79 seconds. And at £349 it is just under half the price of the Agfa model.

SONY CYBER-SHOT DSC-R1, £530

At over a kilo, this Sony is one of the heaviest models we've tested. It's also one of the fastest – it's ready to shoot just 1.6 seconds after turning on. The DSC-R1 also has a cleverly designed LCD screen on top, which can be twisted to various angles, and an excellent maximum ISO rating of 3200.

SCORE 71%



Do megapixels matter?

A greater number of megapixels (Mp) does not necessarily mean that a digital camera will take better-quality pictures. A camera with fewer megapixels, a high-class lens and the ability to produce brilliant colours is a better bet

than a camera with a larger number of megapixels, a poor lens and a tendency towards washed-out colours. More megapixels actually means that you can make bigger prints without the picture looking blocky or pixelated.



For top-quality
6x4-inch prints, buy at least a **2.2Mp** camera



For **7x5-inch** prints, pick a **3.2Mp** model or higher



For **10x8-inch** prints, pick one with at least **7.2Mp**

DIGITAL CAMERA COMPETITION

Win a Best Buy digital camera worth £349

We are giving away five Best Buy Sony Cyber-shot DSC-H5s – these advanced digital cameras are worth £349 each

TO ENTER, SIMPLY ANSWER THE FOLLOWING QUESTION

According to our report, what is the image-stabilisation feature used for?

- (a) Increasing battery life (b) Combating red eye
- (c) Preventing blurry images

To enter our Best Buy competition, go online to www.which.co.uk/bestbuycompetition or send your entry on a postcard to 'Best Buy April 07', Which?, PO

Box 44, Hertford X SG14 1SH. Include your name, address and postcode, daytime phone number and Which? membership number (found on your

Which? membership card as your user name). Entries received by 30 April 2007 will be entered. Our competition is open only to current Which? members.

Only one entry per household. Usual rules apply. See www.which.co.uk/bestbuycompetition or Which?, December 2006, p79, for a full set of rules.



Worth £349

Facts & scores

Extra interesting info that we uncovered during our tests

As seen on TV

The Samsung Digimax Pro815 is the world's first HDMI (high-definition multimedia interface) camera. This means that if you plug it in to an HD-ready television, your onscreen photos will retain most of their detail – unlike non-HDMI cameras.

Under control

The Nikon Coolpix L5 was the only camera on test that does not allow the photographer to manually select the ISO setting, which reduces the amount of control you have when framing a shot.

Last past the post

With the longest shutter delay of any model on test, taking a picture with the Kodak EasyShare Z710 may mean that you're left with a photo of an empty racetrack rather than the winning car.

MODEL		SPECIFICATION									
		PRICE (£)	MEGAPIXELS (Mp)	OPTICAL ZOOM (mm)	SIZE (cm) (wtxhxd)	WEIGHT (g)	MEMORY CARD TYPE	VIEWFINDER	LCD SCREEN (mm) (wtxh)	BURST SPEED (sec/shot)	BURST MODE (MAX NUMBER OF PHOTOS)
1	SONY Cyber-shot DSC-H5	349	7.1	36-432	11.5x8.5x10.5	510	MSD	✓	60x45	0.77	unlimited
2	FUJIFILM FinePix S6500fd	250	6.1	28-300	13.5x10x14	730	xD	✓	50x37	1.82	unlimited
3	FUJIFILM FinePix S9500	250	9.1	28-300	14x9.5x15	795	CF, xD	✓	35x27	1.25	40
4	PANASONIC Lumix DMC-FZ50	499	10	35-420	14x8.5x15	770	SD	✓	39x29	0.76	unlimited
5	SAMSUNG Digimax Pro815	500	8	28-420	13.5x9.5x17	1,042	CF	✓	69x52	0.4	unlimited
6	CANON PowerShot A630	249	8	35-140	11x7x5	370	MM	✓	50x38	0.53	unlimited
7	PANASONIC Lumix DMC-LX2	290	10	28-112	11x6x5	240	SD		60x34	0.72	unlimited
8	CANON PowerShot G7	449	10	35-210	11x7.5x4.5	380	SD	✓	50x38	0.65	unlimited
9	CANON PowerShot S3 IS	247	5.9	36-432	11.5x8x8.5	560	SD	✓	39x30	0.62	unlimited
10	SAMSUNG Digimax L85	230	8	38-190	11x7x4.5	235	SD		50x37	1.42	unlimited
11	OLYMPUS SP-510UZ	260	7.1	38-380	10.5x7.5x8.5	480	xD	✓	50x38	0.68	unlimited
12	SAMSUNG NV7 OPS	280	7.1	38-270	11x6.5x6.5	290	SD		50x38	1.31	unlimited
13	NIKON Coolpix L5	170	7.1	38-190	10x6.5x5	245	SD		50x37	1.36	unlimited
14	KODAK EasyShare Z710	200	7.1	38-380	10.5x8x8.5	375	SD	✓	40x30	0.51	3

a 3200 at lower resolution b 4000 at lower resolution c Only if movie is recorded without sound d Automatic ISO only – see 'Facts & scores', left e 800 at lower resolution

USING THE TABLE

We tested large models from popular brands. The more stars the better.

Specification

Price For Best Buys we give the cheapest widely available high-street price as we went to press.

Prices for other models

are a guide to what to expect. **Optical zoom** A low first number means a wider angle of view, useful for landscapes; a higher second number means you can zoom further. **Weight** Includes battery, memory card, neck strap and lens cap. **Memory card type** CF = CompactFlash; MM = Multimedia; MSD = MemoryStick Duo; SD = Secure Digital; xD = xD Picture.

Burst mode See 'What you should look for', p56.

Max ISO The maximum manual setting for the ISO without reducing the resolution. See 'What you should look for', p56.

Image stabilisation See 'What you should look for', p56. **Movie**

length Maximum recording time on a 512MB memory card at the highest-quality setting. **Shutter speed priority mode** This lets you set the shutter speed manually, giving greater control and allowing you to take sharp, accurate images or stylised, blurred ones. **Aperture priority mode** Lets you alter the size of the aperture to control how much of your scene is in focus – the aperture is the hole in the lens that light passes through to form an image. **Manual focus** See 'What you should look for', p56.

Test performance

Shutter delay A rating of ★★★★★ means a delay

of 0 to 0.3 seconds; ★ is a delay of more than 1.2 seconds. **Viewfinder/screen** The accuracy of the viewfinder, if applicable, and how easy it is to see the screen in adverse conditions, such as bright or dim light. **Ease of use** Includes clarity of instructions, camera speed and ease of changing memory cards/battery.

Score

This ignores price and is based on:

Picture quality	30%
Ease of use	25%
Features	12%
Viewfinder/LCD screen	12%
Battery life	10%
Flash	8%
Movie quality	3%

FIND MORE RESULTS ONLINE

FREE website access

To read reviews of more than 145 of the latest digital cameras, and for help with picking the perfect model for your needs and budget, go to www.which.co.uk/digitalcameras. If you haven't logged in to our website before and would like some help doing so, follow our step-by-step guide at www.which.co.uk/loginhelp.

							WHICH? TEST PERFORMANCE							SCORE %
MAX ISO	IMAGE STABILISATION	MOVIE ZOOM	MOVIE LENGTH (min)	SHUTTER SPEED PRIORITY MODE	APERTURE PRIORITY MODE	MANUAL FOCUS	SHUTTER DELAY	PICTURE QUALITY	MOVIE QUALITY	VIEWFINDER/SCREEN	FLASH	BATTERY LIFE	EASE OF USE	
1000	✓	n/a	6.00	✓	✓	✓	★★★★★	★★★★★	★★★	★★★★★	★★★★★	★★★★★	★★★★★	70
3200		optical	7.24	✓	✓	✓	★★★★★	★★★★★	★★	★★★★★	★★★★★	★★★★★	★★★★★	68
1600 ^a		optical	7.24	✓	✓	✓	★★★★★	★★★★★	★★★	★★★★★	★★★★★	★★★★★	★★★★★	68
1600 ^a	✓	optical	4.40	✓	✓	✓	★★★★	★★★★★	★★	★★★★★	★★★★★	★★★★★	★★★★★	68
400		optical	8.31	✓	✓	✓	★★★★	★★★★★	★★	★★★★★	★★★★★	★★★★★	★★★★★	68
800		digital	4.09	✓	✓	✓	★★★★	★★★★★	★★★	★★★★	★★★★★	★★★★★	★★★★★	66
1600 ^a	✓	n/a	4.00	✓	✓	✓	★★★★★	★★★★★	★★	★★★★★	★★★★	★★★★★	★★★★★	66
1600 ^a	✓	digital	3.57	✓	✓	✓	★★★★	★★★★	★★★	★★★★	★★★★★	★★★★★	★★★★★	65
800	✓	optical	4.09	✓	✓	✓	★★★★★	★★★★	★★★	★★★★★	★★★★★	★★★★★	★★★★★	64
400		optical	26.17	✓	✓	✓	★★	★★★★★	★★★	★★★★	★★★★★	★★★★★	★★★★	63
1600 ^b		optical ^c	4.24	✓	✓	✓	★	★★★★★	★★	★★★★	★★★★★	★★★★★	★★	59
1000	✓	optical	25.02	✓	✓	✓	★★★★★	★★★★	★★	★★★★	★★★★	★★★★★	★★★★	58
400 ^d	✓	digital	13.21				★★★★	★★★★	★★★	★★★★	★★★★★	★★★★★	★★★★	57
400 ^e		n/a	31.57	✓	✓		★	★★★★	★★	★★★★	★★★★	★★★★★	★★	50

Which should you choose?

Most portable

PANASONIC LUMIX DMC-LX2, £290 The DMC-LX2 (7) weighs just 240g yet retains most of the advanced features found in larger models. It has a limited (4x) zoom, but is a good choice if you don't mind not taking long range shots.

Best for zoom

CANON POWERSHOT S3 IS, £247 The Canon PowerShot S3 IS (9) has a huge 36-432mm (12x) zoom lens, allowing you to capture even the smallest detail from a long distance. And it comes with a great image-stabilisation system, cutting down on the camera shake that can blight pictures taken using a high zoom.

Best for action shots

SAMSUNG DIGIMAX PRO815, £500 This Samsung (5) is incredibly quick, taking just 0.4 seconds between shots when shooting in sequence (burst mode) – great when you're trying to capture a moving scene, such as a sporting event. And there's no limit on the number of shots you can take.

Best budget buys

FUJIFILM FINEPIX S6500fd, £250; FUJIFILM FINEPIX S9500, £250 Both of these Best Buys (2 and 3) achieved the same high test score of 68 per cent, despite costing little more than many small compacts on the market.



Contacts

Canon
0870 514 3723
www.canon.co.uk

Fujifilm
0870 084 1310
www.fujifilm.co.uk

Kodak
0870 243 0270
www.kodak.co.uk

Nikon
0870 770 0233
www.nikon.co.uk

Olympus
020 7253 0513
www.olympus.co.uk

Panasonic
0870 535 7357
www.panasonic.co.uk

Samsung
0870 242 0303
www.samsungcamera.co.uk

Sony
0870 511 1999
www.sony.co.uk