



Diminutive digital delights

Even at the smaller end of the market, there are some excellent Best Buy digital cameras

With Christmas approaching, family parties provide plenty of photo opportunities. A small digital camera that's easy to use is ideal to capture those magic festive moments and makes a good present on the big day itself.

One of the key problems with digital cameras is the shutter delay – that is, the time lag between pressing the shutter button and the photograph being taken. If a camera is too slow to capture the moment you want, it can be frustrating. Thankfully, the best cameras we tested have a delay that is less than 0.3 seconds. The worst can take more than a second.

There's also a difference with movie quality. Some cameras such as the Canon Digital Ixus i7 (6) and Panasonic Lumix FX-3 (15) take fairly high-quality video but a glance at our table on

p56 shows that most cameras don't shoot moving images of a particularly high standard. So, if it's video you want, you're more likely to buy a camcorder.

We found the quality of still photos from all the cameras we tested was pretty high. Only one, the Nikon Coolpix S50c (23), scores less than 50 per cent overall.

And you really don't need to spend a fortune to get a good camera, either. Two of our Best Buys, the Canon Digital Ixus 70 (1) and Panasonic DMX-FX12 (3), are £140 and take better-quality photos than some cameras which cost twice that.

While larger, more expensive cameras offer more features (see 'Getting serious about digital photography', p54), small cameras like these are a great way to get started in digital photography.

How we test



We get flash for our tests

Flash points

We assess the quality of the flash by taking photographs of cards at different distances. Flash strength, distribution and reflections are measured. We also test the 'intelligence' of the flash – how well it automatically adjusts its power according to the brightness of the scene photographed.

However, the acid test for digital cameras is the quality of their pictures. We shoot different test cards that use geometric patterns to reveal lens distortion, and charts to measure how accurately the camera captures different colours.

BEST BUY COMPETITION

Win a Best Buy digital camera and satnav

To help you have a stress-free journey and capture those special moments, we're offering five lucky members the chance to win a Best Buy TomTom Go 520 and Canon Digital Ixus 70 camera

Worth
£440



TO ENTER, SIMPLY ANSWER THE FOLLOWING QUESTION
What aspect ratio is 'widescreen'?

- (a) 9:5 (b) 15:8 (c) 16:9

See p64 for closing date and details of how to enter and p82 for full competition rules



64% Canon Digital Ixus 70 £140

This classy Canon has good picture quality, minimal shutter delay and there's very little wait between it taking one shot and being ready for the next one. Battery life is excellent, too. It is very easy to use and it's a great choice for beginners who want to learn the digital ropes or those who just want to point and shoot. Cheapest from Jessops.

WHICH?
BEST BUY

WORTH KNOWING The Ixus 75 is also available. It has a bigger LCD screen but no viewfinder.

Available Argos, Comet, Currys
Jessops, PC World **Megapixels**
7.1 Optical zoom 35-105mm
Size 5.5x9x2cm Weight 142g



62% Panasonic Lumix DMC-FX07 £160

The neatly designed black or silver FX07 has optical image stabilisation, which means you are more likely to get clear and steady images. Shutter delay is minimal, so there is a good chance of capturing the moment you want. Picture quality is average but the clarity and brightness of the screen are impressive and we found the camera easy to use. Cheapest at Currys.

WHICH?
BEST BUY

WE LIKE The wide-angle lens means it's easy to cram lots of subjects into a shot in tight spaces.

Available Currys, John Lewis
Megapixels 7.1 Optical zoom 28-102mm
Size 5.5x9.5x2.7cm Weight 160g



61% Sony Cyber-shot DSC-T100 £250

With a zoom range of 35-175mm, the attractive but pricey T100 from Sony can zoom much further than most small cameras. Optical zoom is also available when recording video, although movie quality is poor compared with that of other cameras on test. Picture quality is only average, but the camera is easy to use, the flash is good, and you get optical image stabilisation to help in low-light conditions. Cheapest store is Comet.

WHICH?
BEST BUY

WE LIKE Shutter delay is very short at just 0.2 seconds.

Available Argos, Comet, Currys, Jessops, John Lewis,
PC World **Megapixels** 8 Optical zoom 35-175mm
Size 6x9.5x2.3cm Weight 171g



61% Sony Cyber-shot DSC-W80 £159

Sony's W80 takes fairly high-quality pictures, is easy to use and has a very short delay from pressing the shutter button to taking a photo. We found that the viewfinder was not particularly accurate, so you'd be best off using the screen to frame your shots. This should not take too much of a toll on the battery, though, which lasted well in our tests. Currys, John Lewis and PC World are the cheapest stockists.

WHICH?
BEST BUY

WE LIKE The W80 is ready to start snapping just two seconds after you turn it on.

Available Argos, Comet, Currys, Jessops, John Lewis,
PC World **Megapixels** 7.1 Optical zoom 35-105mm
Size 6x9.5x2.5cm Weight 150g

The Canon Digital Ixus 70 is a great choice for beginners



61% Panasonic Lumix DMC-FX12 £140

For a small camera, the FX12 takes very good-quality photos. There are 21 different scene modes, which means you can get the best out of the camera in different situations. For example, portrait mode should help when taking photos of people, while snow should come in handy on a skiing trip. The screen wasn't quite as sharp as that of the other Panasonic Best Buy (2), but was still acceptable. The flash was impressive, although with a high maximum ISO (sensitivity to light – see 'Using the table', p56, for more details), you may not need it until it gets really dark. Cheapest at Currys and PC World.

WHICH?
BEST BUY

WORTH KNOWING There's no option to zoom when filming video.

Available Argos, Currys, PC World **Megapixels** 7.1
Optical zoom 35-105mm Size 5x9.5x3cm Weight 150g

Worth tracking down

The Sony T10 looks and feels like the Sony T100 (4), and if you can find it out there, it's more than £70 cheaper

SONY CYBER-SHOT DSC-T10 £180 ONLINE The Sony T10 is very similar to the Best Buy Sony T100 (4). It's easy to use, has a long-lasting battery as well as a short shutter delay and a flash that matches the best of that on our current Best Buys. Solid optical image stabilisation should lower your chances of producing blurred shots, and picture quality is good enough for a small camera. Movie quality isn't quite up to the mark but it's unlikely you'd buy the T10 for its cinematic capabilities. Available online. **SCORE 61%**



Getting serious about digital photography

We review the best larger cameras and digital SLRs

If you are looking to become a proficient digital photographer and want more than snaps, larger, more advanced models may well be for you. These have more features and generally take better photos.

Medium size

If you want something reasonably compact that still has solid zoom, the **Canon Powershot A570IS** fits the bill. It is a high-quality medium-sized camera and costs about £170. If you aren't so concerned about zoom range, pick up the **Fujifilm FinePix F30** which, at £100, is cheaper than many smaller digital cameras.

Big shots

Stepping up from medium-sized cameras, our current top Best Buy large camera, the **Panasonic Lumix DMC-FZ8** (£230), has



Clockwise from top left: Canon Powershot A570IS; Fujifilm FinePix; Nikon D40X; Panasonic Lumix DMC-FZ8

zoom from 36 to 432mm (much further than even the furthest small camera in this test) and has lots of options and settings for keen photographers to experiment with.

Top of the line SLRs

Experienced snappers should think about getting a digital SLR which gives a huge amount of control over pictures. SLRs also tend to have much shorter shutter delay than other cameras and very accurate viewfinders.

Our current favourite widely available SLR is the **Nikon D40X**. This ten-megapixel camera not only takes excellent photos but also provides on-screen tips if it thinks that your picture is not going to come out very well. It costs just over £400 including a basic 'kit' lens. More expensive lenses improve picture quality and can be bought separately.

OUR RESEARCH

When selecting digital cameras to test, we consult manufacturers, market intelligence reports and industry experts, then check availability on the high street and online. Tested cameras include, top-sellers from the most popular brands, products with innovative features, models from some lesser-known brands and widely available Best Buys from previous tests.

Out of the box and into the real world

We examine the best way to transfer, save, share and edit your digital photos

Transferring photos

Once you've taken your photos, you need to send them to your computer through the USB cable, which will be included. Usually this is as simple as plugging the camera into the computer and switching it on. The camera should appear like any other storage device, such as a hard disk or memory stick. Then simply copy your pictures from the camera to your computer. You could also use a memory card reader for this, which you can buy for less than £5 online.

Back them up

Remember to back up your photos on to blank CDs, DVDs or an external hard drive (see 'How to buy a

computer, *Which?*, September 2007, p38 for more).

Sharing sites

Once your photos are on your computer, you can upload them to websites, that allow you to view and share them online. You can then have your pictures printed and sent to you. Two Best Buy sites are bonusprint.co.uk and kodakgallery.co.uk (see 'Get the picture', *Which?*, June 2007, p50).



Edit your work

Photo-editing software on the computer lets you crop, correct colour, add effects to your pictures and much more. Some digital cameras come with a software CD that lets you do this but features are usually lacking. Alternatively, there are other free options. Macs come with iPhoto, or try Gimp or Photofiltre, both available to download free online. If you want something considerably more advanced, you could try Adobe Photoshop Elements software, as recommended by *Computing Which?*. Buy it online for around £75.



What to look for when you go shopping for a new camera

Face and image

Two features of digital camera currently in vogue and worth checking out are face recognition and image stabilisation. The two Sony Best Buys have both these features (see the table, p56, for other models). For face recognition, the camera uses face-recognition software and is able to detect when it is photographing a face and adjust focus and other settings to get the best possible result. Image stabilisation allows the camera to compensate for unsteady hands and therefore



help avoid blurred shots, especially in dim light. Beware, though: true image stabilisation requires either elements of the lens or the light sensor in the camera to move. Some cameras try to stabilise images with digital processing, which doesn't achieve results that are as good. If in doubt, ask how the camera achieves its image stabilisation.

No added extras

When you buy a digital camera you may not get rechargeable batteries (but this is rare and not the case for any of our Best Buys), a decent-sized memory card (1GB) or a case. If you're buying in a shop, ask about all these and if they don't come as standard, ask for some of them free or at a discount. If you're buying online, remember to order these at the same time to save on postage.

Mobile phone versus camera

Can the best mobile now match the quality of a digital camera?

With mobiles being more adept at taking good photos, it's fair to ask whether buying a small digital camera makes much sense.

For example, Nokia's new N95 phone (left) has a five-megapixel camera and Carl Zeiss optics, which seem comparable to some of cameras in our table.

But, in practice, even

the N95 won't take pictures that are as good as those of our Best Buys. The mobile's inability to zoom in and out optically is an obvious area where phones are found wanting, as is the lack of an effective flash.

If you're taking pictures outside, a very good mobile can compete, but indoor or low light shots will see a digital camera comfortably on top.

Cameras also have extra features and settings to improve your pictures – phones don't. Phones with good cameras tend to be very pricey, too – the N95 can cost upwards of £250, more than all but one of the cameras tested here.

And as phones and cameras are pretty small these days, carrying both around isn't much of a chore.

(See p11 and p62 for more on the N95.)



Accessories

The add-ons that can make all the difference

Memory card

This stores the pictures and videos that you take. Most of the cameras on test should be



able to get around 250 to 300 pictures (taken at the highest-quality setting) on a 1GB card. If you plan to shoot lots of video, more space is a definite plus. Typically, a 1GB card will hold just under half an hour of high-quality video with sound but it depends on your camera. The most common type of card is known as SD. You can buy a 2GB card for as little as £6 online. Strangely, a 4GB card will rarely be less than £20 – so you may be better off buying two 2GB cards. Some cards claim to be faster than others

and are more expensive. While it's true these cards can perform better than cheaper, slower ones, you probably won't notice a difference unless you have an advanced camera such as a digital SLR (see 'Getting serious about digital photography', opposite).

Carry cases

If you are going to spend £150 or so on a digital camera, it makes sense to buy a case to protect it. Cases start at around £6. As well as preventing the camera getting scratched, a case can also prevent dust and sand fouling the focusing and zoom mechanisms.



Waterproof cases

If you fancy taking pictures underwater, a waterproof case will give your camera the full Jacques Cousteau treatment. Waterproof cases are expensive, though. Canon's WP-DC13 case for its Ixus 70 (1) costs more than £130. Cases aren't available for all types of camera, so bear in mind that Canon's digital cameras are better catered for than those of other makes. If you do get one, it's advisable to test it first – put a tissue inside and take it underwater to test the seal. If £130 seems a little hefty but you still want to take undersea snaps, a single-use Kodak Sport will cost only £10 (see 'One-time wonders', *Which?*, August 2007, p58).



Facts & scores

Quick shots about some of our digital cameras

Little and light

If you're looking for a real pocket-sized camera, our top Best Buy, the **Canon Digital Ixus 70 (1)**, is the smallest camera on test with a volume of just 99cm³. The lightest is its sister camera, the **Canon Digital Ixus i7 (6)**, weighing in at a mere 123g.

More megapixels

The **Casio Exilim EX-Z1200 (8)** has the highest resolution sensor of any camera on test at 12 megapixels (Mp) – 2Mp more than any other camera. Even so, its images aren't as good as those on other cameras that make do with fewer dots.

Zoom, zoom

We were impressed that Casio managed to squeeze a lens with a zoom range of 38-266mm into the small case of its **Exilim EX-V7 (12)**. It's considerably better for capturing distant objects than the other cameras on test.

Merry Christmas

If you're thinking of buying a camera for kids, the **Olympus µ725SW (14)** is shockproof and waterproof, so it ought to be safe in eager young hands. However, at around £200, this is very much a main present rather than stocking filler.

MODEL		SPECIFICATION								
		PRICE (£)	MEGAPIXELS (Mp)	OPTICAL ZOOM (mm)	SIZE (hxxwxd) (cm)	WEIGHT (g)	MEMORY CARD TYPE	LCD SCREEN (mm) (hxxw)	VIEWFINDER	SCENE MODES
1	CANON Digital Ixus 70	140	7.1	35-105	5.5x9x2	142	SD	37x50	✓	11
2	PANASONIC DMC-FX07	160	7.1	28-102	5.5x9.5x2.7	160	SD	38x50		19
3	PANASONIC Lumix DMC-FX12	140	7.1	35-105	5x9.5x3	150	SD	37x49		21
4	SONY Cyber-shot DSC-T100	250	8	35-175	6x9.5x2.3	171	MSD	45x60		9
5	SONY Cyber-shot DSC-W80	159	7.1	35-105	6x9.5x2.5	150	MSD	37x50	✓	7
6	CANON Digital Ixus i7	169	7.1	38-90	4.5x10x2.4	123	SD	27x37		11
7	CASIO Exilim EX-Z1050	130	10	38-114	6x10x2.6	151	SD	36x53		34 ^b
8	CASIO Exilim EX-Z1200	239	12	37-111	6x9.5x2.5	180	SD	38x60		34 ^b
9	SONY Cyber-shot DSC-W55	122	7.1	38-114	6x9x2.5	145	MSD	37x50	✓	7
10	NIKON Coolpix S500	150	7.1	35-105	5.5x9x2.3	136	SD	37x50		14
11	OLYMPUS FE-240	160	7.1	38-190	6x9.5x2.4	134	xD	38x50		13
12	CASIO Exilim EX-V7	200	7.1	38-266	6.5x9.5x2.5	178	SD	37x50		34 ^b
13	OLYMPUS FE-250	230	8	35-105	6x10x2.3	129	xD	37x50		13
14	OLYMPUS µ725SW	200	7.1	38-114	6.5x9.5x2.2	165	xD	37x49		24
15	PANASONIC Lumix FX-3	170	5.9	35-105	5.5x9.5x2.7	152	SD	38x50		17
16	OLYMPUS µ750	160	7.1	36-180	5.5x9.5x2.8	136	xD	36x48		23
17	FUJIFILM FinePix Z5fd	130	6.1	36-108	6x9.5x2.3	148	xD	37x50		14
18	PENTAX Optio M30	106	7.1	38-114	6x10.5x2	133	SD	37x49		10
19	NIKON Coolpix S9	140	5.9	38-114	6x9.5x2.2	132	SD	38x50		14
20	CASIO Exilim EX-Z700	90	7.1	38-114	6x9.5x2.2	140	SD	40x53		34 ^b
21	PENTAX Optio T30	149	7.1	37.5-112.5	6x10x2	133	SD	45x59		11
22	PENTAX Optio A30	170	10	38-114	6x9.5x2.4	147	SD	38x50		10
23	NIKON Coolpix S50c	180	7.1	38-114	6x10x2.3	144	SD	46x61		14

a Special setting required b Plus one 'user' setting c Only without sound d Available only with reduced resolution (reduced Mp)

USING THE TABLE

The more stars the better.

Specification

Price For Best Buys we give the cheapest widely available price as we went to press. Prices for other models are a guide.

Megapixels The maximum effective resolution (number of dots) that the camera can take pictures at. **Optical zoom** The range that you can zoom out to get lots of subjects in frame (low number) and zoom in to

photograph distant objects (high number). **Weight** Includes battery, memory card and wrist strap. **Memory card type** This shows the type of memory card that the camera accepts. MSD = MemoryStick Duo; SD = Secure Digital; xD = Extreme Digital. **Scene modes** Presets that optimise the camera's setting for certain types of shot. A 'twilight' mode, for example, optimises the camera for low-light conditions. **Face**

detection Camera recognises that it is photographing a face and refines its settings accordingly (see 'How to buy', p55, for more). **Continuous shooting** Whether the camera can take pictures continuously. If a number is shown, this is the limit. 'Unlimited' means the camera will shoot until the memory card is full. **Maximum ISO** The greater the manually selectable ISO, the more sensitive the camera is to

light. This means that you can take pictures in dimmer light without a flash. **Image stabilisation** Whether the camera features true (that is non-digital) image stabilisation. 'Optical' means elements of the lens move to compensate for shake while 'mechanical' means the light sensor moves (see 'How to buy', p55). **Movie zoom** Whether zoom is available when shooting films, and whether it is optical or digital.

					WHICH? TEST PERFORMANCE							SCORE %
FACE DETECTION	CONTINUOUS SHOOTING	MAXIMUM ISO	IMAGE STABILISATION	MOVIE ZOOM	SHUTTER DELAY	PICTURE QUALITY	MOVIE QUALITY	SCREEN/VIEWFINDER	FLASH	BATTERY LIFE	EASE OF USE	
✓	unlimited	1600		digital	★★★★★	★★★★★	★★★	★★★★	★★★★	★★★★★	★★★★★	64
	unlimited	3200 ^a	optical		★★★★★	★★★★★	★★★	★★★★★	★★★★	★★★★★	★★★★★	62
	unlimited	3200 ^a	optical		★★★★★	★★★★★	★★★	★★★★	★★★★★	★★★★★	★★★★	61
✓	100	3200	optical	optical	★★★★★	★★★★★	★★	★★★★	★★★★★	★★★★★	★★★★★	61
✓	100	3200	optical		★★★★★	★★★★★	★★	★★★★	★★★★	★★★★★	★★★★★	61
✓	unlimited	1600		digital	★★★★★	★★★★★	★★★★★	★★★★★	★★	★★★★★	★★★★★	60
✓	unlimited	1600 ^a		digital	★★★★	★★★★★	★★	★★★★	★★★★	★★★★★	★★★★	60
✓		1600 ^a	mechanical	digital	★★★★★	★★★★★	★★	★★★★	★★★★	★★★★★	★★★★★	60
	100	1000			★★★★★	★★★★★	★★	★★★★	★★★★	★★★★★	★★★★★	60
✓	unlimited	2000	optical	digital	★★★★	★★★★★	★★	★★★★	★★★★★	★★★★★	★★★★	59
		1000 ^c		optical ^c	★★★★★	★★★★★	★★★	★★★★	★★★★★	★★★★★	★★★★	59
	unlimited	1600 ^a	mechanical	optical	★★★★	★★★★	★★★	★★★★	★★★★	★★★★★	★★★★★	58
	unlimited ^d	1000 ^a		optical ^c	★	★★★★★	★★★	★★★★★	★★★★★	★★★★★	★★	58
	unlimited	1600		digital	★★★★★	★★★★	★★	★★★★	★★★★★	★★★★★	★★★★	58
	unlimited	1600 ^a	optical		★★	★★★★	★★★★★	★★★★★	★★★★	★★★★★	★★★★	58
	unlimited	1600	mechanical	digital	★★★★★	★★★★	★★	★★	★★★★★	★★★★★	★★★★	57
✓		1600			★★★★★	★★★★	★★★	★★★★	★★★★	★★★★★	★★★★	56
✓	unlimited	3200		digital	★★	★★★★	★★	★★★★	★★★★★	★★★★★	★★★★	56
✓	unlimited	400		digital	★★★★★	★★★★	★★	★★★★	★★★★	★★★★	★★★★	52
	unlimited	800 ^a		digital	★	★★★★	★★	★★★★	★★★★	★★★★★	★★	51
✓	unlimited	3200		digital	★	★★★★★	★★	★★★★	★★★★	★★★★★	★★	51
✓	unlimited	3200 ^a	mechanical		★	★★★★	★★	★★★★	★★★★	★★★★	★★	50
✓		1600	optical	digital	★★★★	★★★★	★★	★★★★	★★★★★	★★	★★★★	49

Test performance

Shutter delay How rapidly a photo is taken after you press the shutter: ★★★★★ means less than 0.3 seconds, ★ is more than 1.2 seconds.

Screen/viewfinder How good the screen is in terms of clarity and brightness. Viewfinder is rated for accuracy of the shot it portrays – only seven of the cameras on test have viewfinders. **Flash** Rated for evenness and correct intensity. **Battery life** Rated for how long it can power the camera when taking photos on a single charge.

Ease of use Includes the quality of the manual, how easy it is to remove the memory card, how quickly the camera is ready to shoot after being turned on, and how well the menus and controls work.

Score

Ignores price and is based on:

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

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For monthly updates on new models, and full reviews of all the digital cameras including SLRs we've tested, regularly check www.which.co.uk/digitalcameras. See www.which.co.uk/loginhelp if you would like help logging in.

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