

PROFESSIONAL DIGITAL CAMERAS AND CAMCORDERS

Professional digital cameras		Last month's position	First reviewed	Price (ex VAT)	Warranty	Actual sensor (megapixels)	Maximum resolution	Optical zoom/ equivalent range	Maximum aperture	Viewfinder type/LCD size	Shutter speed (bulb is user controlled)		Storage media/ supplied memory	Approx file size at best Jpeg quality	IBM Microdrive support	Closest focus distance (macro)	External flash	Image formats	Movie mode/ with sound	Rechargeable batteries/charger supplied	Dimensions (width x depth x height) mm	Weight including battery
1	Nikon Coolpix 5000 0800 230 220 www.nikon.co.uk	NEW	Jun 02	£765	1-year	5Mp	2,560x 1,920	3x/28-85mm	f2.8-4.8	optical/ 1.8in	1/2,000 to 60 secs		CompactFlash/ 32MB	1.6MB	Y	2cm	Hotshoe	Jpeg, Tiff	Y/Y	Y/Y	102x82x68mm	414g
2	Sony CyberShot DSC-F707 08705 111 999 www.sony.co.uk	NEW	Apr 02	£765	1-year	5Mp	2,560x 1,920	5x/38-190mm	f2.0-2.4	EVF/ 1.8in	1/1,000 to 30 secs		Memory Stick/ 16MB	2MB	N	2cm	Sync plug	Jpeg, Tiff	Y/Y	Y/Y	120x67x148mm	667g
3	Olympus Camedia E10 0800 072 0070 www.olympus.co.uk	NEW	Jul 02	£1,062	1-year	4Mp	2,240x 1,680	4x/35-140mm	f2.0-2.4	SLR/ 1.8in	1/640 to 8 secs and bulb		CompactFlash and SmartMedia/16MB	2.3MB	N	20cm	Hotshoe and sync plug	Jpeg, RAW, Tiff	N/N	N/N	128x161x103mm	1.17kg
4	Canon EOS D30 0800 616 417 www.canon.co.uk	NEW	Mar 02	£1,532	1-year	3.3Mp	2,160x 1,440	any Canon EOS lens	depends on lens	SLR/ 1.8in	1/4,000 to 30 secs and bulb		CompactFlash/ 16MB	1.4MB	Y	depends on lens	Hotshoe and sync plug	Jpeg, RAW	N/N	Y/Y	150x107x75mm	750g (body only)
5	Minolta Dimage 7 01908 200 400 www.minolta.co.uk	NEW	Oct 01	£850	1-year	5Mp	2,560x 1,920	7x/28-200mm	f2.8-3.5	EVF/ 1.8in	1/2,000 to 30 secs		CompactFlash/ 16MB	1.9MB	Y	25cm	Hotshoe	Jpeg, RAW, Tiff	Y/N	N/N	117x91x113mm	603g

Digital camcorders		Last month's position	First reviewed	Price (ex VAT)	Warranty	Image processor	Charge-coupled device	Optical zoom	Digital zoom		Maximum aperture	LCD (liquid crystal display)	Horizontal DV (digital video) resolution	FireWire in/out	Focal distance	Dimensions (width x depth x height)	Weight	Multimedia card	USB
1	JVC GR-DVL767EK 0870 330 5000 www.jvc.co.uk	NEW	Jul 02	£800	1-year	1/3.8in CCD	1.02Mp (megapixels)	10x	500x		1.8	2.5in	530 lines	Y/Y	3.8-38mm	70x170x85mm	640g	8MB	Y
2	Sony DCR-TRV18E 0990 111 999 www.sony.com	NEW	Jul 02	£700	1-year	1/4in CCD	680,000 pixels	10x	120x		1.7	2.5in	500 lines	Y/Y	3.3-33mm	76x162x93mm	705g	8MB	Y
3	Samsung VPD77i 0800 521 652 www.samsungelectronics.co.uk	NEW	Jul 02	£700	1-year	1/4in CCD	800,000 pixels	22x	500x		1.6	2.5in	500 lines	Y/Y	3.6-79.2mm	75x155x90mm	590g	8MB	Y
4	Canon MV550i 0870 5143 723 www.canon.co.uk	NEW	Jul 02	£850	1-year	1/6in CCD	680,000 pixels	22x	440x		1.8	2.5in	500 lines	Y/Y	2.8-61.6mm	58x144x99mm	530g	8MB	Y
5	Panasonic NV-DS29B 0870 535 7357 www.panasonic.co.uk	NEW	Jul 02	£499	1-year	1/4in CCD	800,000 pixels	10x	500x		1.8	2.5in	500 lines	N/Y	3.6-36mm	65x180x90mm	510g	N/A	N

PROFESSIONAL DIGITAL CAMERAS

1 Nikon Coolpix 5000

Nikon's Coolpix 5000 trades the unique split-body design of the earlier Coolpix 900 range for more conventional looks. Whichever style you prefer, though, there's no denying that the Coolpix 5000 is small but perfectly formed. Measuring 102x82x68mm (width x depth x height) and weighing just 414g including the battery, this is a compact camera with plenty of features inside.

The Coolpix 5000 offers 5Mp (megapixel) resolution, delivering 2,560x1,920 pixel images with sufficient detail to make 13x10in inkjet prints. Images are stored on a 32MB CompactFlash card, which can store around 20 high-resolution Jpeg images that take up about 1.6MB each. The 5000's slot is also officially certified to handle IBM's tiny Microdrive hard disk. It's easy to overlook the Coolpix 5000's lens as another standard 3x optical zoom but, where most

cameras have equivalent ranges of around 34-102mm, the Nikon features 28-85mm. This offers much wider-angle shots, although it also means that you can't get as close to the telephoto end. There are an additional four optional lens attachments that further widen or magnify the range. Like earlier high-end Coolpix cameras, the 5000 boasts one of the closest macro focusing distances of just 2cm.

The 1.8in LCD (liquid crystal display) can be flipped out and twisted to any angle – great for shooting at waist height, above people's heads or for self-timer shots. There's a huge range of manual settings for exposure, focusing and metering, as well as foolproof automatic modes. Other useful features include noise reduction on long exposures, a hotshoe for Nikon flashguns and a movie mode that can capture up to 60 seconds of basic video with audio.

2 Sony CyberShot DSC-F707

Sony's CyberShot DSC-F707 employs a unique design – the large lens barrel rests in your left hand, leaving your right hand to tilt the body and operate the controls. This Recommended device has 5Mp (megapixel) resolution, producing images measuring 2,560x1,920 pixels with enough detail to make 13x10in inkjet prints. Images are stored on Sony's own



Memory Stick format, which, while not as cheap as CompactFlash, has dropped considerably in price recently. The largest sticks still only offer 128MB, though, and you can't squeeze an IBM Microdrive in there instead. The best-quality Jpegs measure around 2MB each, which means only eight pictures can fit on to the supplied 16MB card. The CyberShot's lens barrel houses a pop-up flash and an impressive 5x optical zoom, equivalent to 38-190mm. Since the lens is already extended, the startup and shutdown times are very fast. The macro performance is also very good, getting as close as possible to 2cm. Composition is with a 1.8in LCD (liquid crystal display) or an EVF (electronic viewfinder). The tilting body also lets you compose shots at waist height or over the heads of crowds. A sync port connects to external Sony flashguns.

Battery life is excellent, and Sony's info-lithium pack displays exactly how many minutes are remaining onscreen. Night fans will love the infrared illuminated night-framing and night-shot modes, while the noise reduction effectively cleans up long exposures.

3 Olympus Camedia E10

The E10 is the cheapest digital camera with an optical SLR (single lens reflex) viewfinder. This allows it to be focused precisely, unlike the LCD (liquid crystal display) screens and EVFs (electronic viewfinders) on cheaper cameras. The E10 also features a 1.8in LCD, but most will only use it for playback. The Camedia's resolution is 4Mp (megapixels) – note the E20 version sports 5Mp – but the E10's chip is larger and better quality than normal 4Mp models. Images have 2,240x1,680 pixels and make great-looking 11x8in inkjet prints. The 4x optical lens is equivalent to 35-140mm and zooming is performed with a mechanical ring that we think is preferable to motorised control. There's also a pop-up flash and a sync plug for proper studio lighting. With the E10, Olympus has effectively bridged the gap between sub-£1,000 consumer models and expensive removable-lens digital SLRs. It's the cheapest digital camera with truly professional control, so you should ask yourself if you really need removable 35mm lenses.



4 Canon EOS D30

NEW

The EOS D30 has access to Canon's vast range of EF 35mm lenses, although, like most other digital SLR (single lens reflex) devices, their effective focal length is multiplied by 1.6x. The resolution may only be 3.3Mp (megapixels), but the chip is much bigger and therefore of better quality than traditional 3.3Mp models. Files have 2,160x1,440 pixels, and make superb 11x8in inkjet prints. The D30 is essentially a digital version of a traditional Canon EOS camera, and as such it handles beautifully. It's the cheapest digital SLR with removable lenses you can get on today's market, although you might want to wait for the 6Mp D60 model, which is out soon.



5 Minolta Dimage 7

Minolta's Dimage 7 was one of the first 5Mp (megapixel) cameras on the market, delivering enough detail to make good clear 13x10in inkjet prints. Particularly impressive is its 7x optical zoom lens, with an range equivalent to 28-200mm. Its 1.8in LCD (liquid crystal display) and EVF (electronic viewfinder) allow accurate framing and there's decent manual control alongside automatic, although newer models like Nikon's 5000 and Sony's F707 have overtaken it on overall quality and features.



Another down side is that the Dimage 7 runs through its batteries at an alarming rate; even so, it still represents a fair deal. Keep an eye out for a new and improved Dimage 7i model, due for release soon.



DIGITAL CAMCORDERS

1 JVC GR-DVL767EK



When we reviewed JVC's GR-DV3000 in May 02, we were pleased to note its generous complement of features. However, those who consider £1,200 too much to pay will be glad to hear it is possible to get hold of a cheaper model without sacrificing quality and functionality in the form of JVC's new entry-level £800 camcorder, this month's Best Buy digital camcorder.

The GR-DVL767EK is a long yet compact camera that is comfortable to use, with its zoom and record controls within easy reach. It has a side-loading tape mechanism, so that you can replace tapes easily when shooting on a tripod, and an articulated viewfinder. Less impressive is the 2.5in LCD (liquid crystal display) screen, which is small and lacking in detail, and the lens, which doesn't have a manual focus ring.

In contrast, the JVC's 10x optical zoom was smooth and we only noticed grain at around 8x magnification. JVC claims a figure of 500x for the digital zoom and the GR-DVL767EK is capable of higher magnification than the Sony in second place. However, by the time you push it to the maximum the picture is very grainy and it's debatable whether anyone who cares about their footage would want such low-quality images.

The JVC's 1/3.8in, 1.02Mp (megapixel) CCD (charge-coupled device) can capture high-quality stills that can be stored on a separate 8MB multimedia card. Video quality was also excellent for a single-chip camcorder. Colours were rich and the footage was bright whether shooting indoors or out. The auto-exposure also copes well with transitions from low to bright light, and it features a manual white balance.

Connectivity on the GR-DVL767EK is second to

none. It features a bi-directional DV (digital video) port to transfer your footage to a PC for editing and record your final cut back to a tape, AV inputs and outputs, S-Video and USB. The JVC's price may be one of the highest in the chart, but it's certainly worth the extra premium.

2 Sony DCR-TRV18E



Sony reaffirms its position as one of the most established names in the camcorder market this month with the DCR-TRV18E. It has revamped its entire range of digital camcorders, and this is one of the first models off the blocks. Its sleek, stripped-down body is comfortable to handle, with zoom and record controls within easy reach of a thumb and forefinger. It also has a side-loading tape mechanism and a manual focus ring on the lens.

The Recommended Sony features a superb f/1.7 lens and a 10x optical zoom. Don't be put off by the 120x digital zoom; this figure may be lower than the JVC and Samsung entries, and it may not be capable of such great magnification as the other cameras, but the DCR doesn't get fuzzy when you push its zoom to the limit.

The 1/4in 680,000 pixel CCD (charge-coupled device) captures good-quality stills and stores them on an 8MB Memory Stick. With 500 lines of horizontal DV (digital video) resolution, this



camcorder boasts great video quality, too. Pictures are rich in colour whether shot indoors or out, and have a level of sharp detail that some of the other models lack. The Sony is particularly suited to shooting in low light and copes well with transitions between dark and light.

Digital camcorders: the lowdown

Buying a digital camcorder can be a bewildering process, as manufacturers revel in jargon. Image quality is not as easy to gauge as it is for digital stills cameras. When a manufacturer slaps 800,000 pixel CCD (charge-coupled device) on the side of the box, this refers only to the resolution of still pictures, not video. These resolution figures tend to be much lower than those for digital still cameras; camcorders offering even 1Mp (megapixel) are rare because the main purpose of a video camera is to capture movie footage, not stills.

Video resolution is a measurement of the number of horizontal and vertical lines of colour that go to make up the

picture on your TV screen, but many cameras do not advertise this figure. The vertical resolution for DV (digital video) camcorders is usually 540 lines – the theoretical limit for the video format PAL. The horizontal resolution will vary between models, but the higher the number of lines the better the video quality is likely to be.

If you want to edit video on your PC, it would be prudent to invest in a model which has FireWire in and out connections. This will let you record your final cut from your PC to a MiniDV tape in your camcorder without any loss of picture or sound quality.

The DCR-TRV18E could have done without the bottom-loading tape mechanism, but it is saved by its excellent features set, including facilities for converting DV footage to the email-ready Mpeg-4 format and emailing them via the USB connection. The DCR-TRV18E has AV and S-Video inputs and outputs, but the FireWire port is uni-directional, so you cannot record back to a MiniDV tape from your PC. Overall, though, this is a classy camcorder with some great professional add-ons and excellent performance. Sony just loses out to JVC on the balance of features and performance, but there's not much in it.

3 Samsung VPD77i

Samsung's latest entry-level camcorder is strikingly similar in appearance to JVC's Best Buy offering. It's a compact and ergonomic unit with a well placed side-loading tape mechanism and controls that are comfortable and easy to operate. However, as with the JVC, the 2.5in fold-out LCD (liquid crystal display) lacks clarity and detail.

In its favour, the 1/4in, 800,000 pixel image processor is capable of capturing high-quality images. Footage we shot outdoors was brimming with stunning colours and vivid detail. It's also eminently suited to shooting in low-light conditions. The 22x optical zoom is impressive, although when using the 500x digital zoom the picture became quite fuzzy.

The autofocus was also rather poor, taking far too long to adjust to changes when the camera was pointed at different objects. In addition, the digital image stabiliser proved inferior when we tried to use it to clean up shaky camera work. However, connectivity is up to scratch, with support for USB and S-Video AV (inputs and outputs), and it also has a useful bi-directional FireWire connection.

At £700, the Samsung is a versatile camcorder which offers plenty of features to enhance your filming, as well as value for money. However, we weren't as impressed by the image quality we got, nor by its technical performance.



4 Canon MV550i

Canon's vertical model has a sleek, attractive design and plenty of features – but at £850 it's the most expensive in the chart. However, while it has a surfeit of add-ons, the MV550i lacks some key requirements that might have made it an essential purchase. The 680,000 pixel, 1/6in CCD (charge-coupled device) captured pictures that lacked detail and were drained of colour. The auto-exposure also coped quite badly during transitions from low to bright light. Transferring footage via the DV (digital video) port was very easy and footage takes up about 11,160MB per hour at AVI quality. It's also supplied with Presto VideoWorks video-editing software, which is basic but acceptable for beginners.

There are some very useful inclusions, such as a bi-directional DV connection, but Canon has cut corners to pack this much into its model. For example, the unit sports an inferior electronic image stabiliser and a poor front-mounted microphone. The MV550i offers you all the basics you need to shoot and edit your home movies for a competitive price, but you can get better quality camcorders for your money.



5 Panasonic NV-DS29B

Panasonic has produced some top-quality budget camcorders, but the NV-DS29B failed to impress us, despite its bargain price of £499. We found image quality was excellent, with sharp detail and bright colours. There's a smooth 10x optical and a 500x digital zoom too, and something we've not seen elsewhere: a tape loader hidden behind the fold-out LCD (liquid crystal display) panel.

However, there's a serious lack of features on this camera: there are no special effects other than the ability to fade between shots, and DV is out only, so you can't record back to a MiniDV tape. There are S-Video and serial connections, but no USB.

