

REVIEWS AND TESTS YOU CAN TRUST

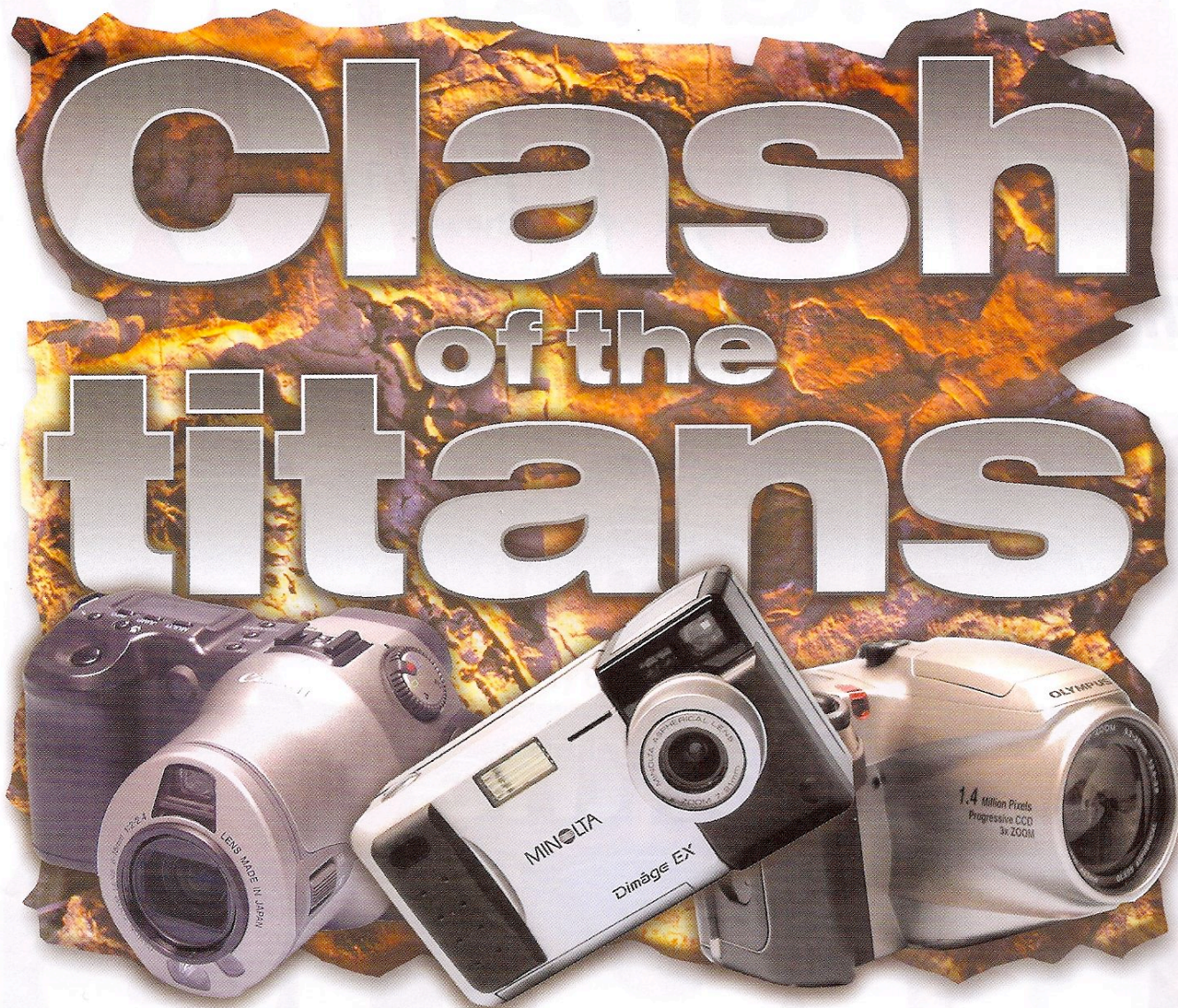
DIGITAL **PHOTOFX**

The practical guide to creative imaging

Clash of the titans



Canon



Three of the latest megapixel cameras – only one is worthy of being awarded a DPFx Best Buy

Words and pictures Mike Stroud Technical Director of The Digital Camera Company <www.digital-cameras.com>

Choosing a high quality, versatile, well-specified and reasonably priced digital camera has so far tended to be a one-horse race. The Olympus C-1400L has been the only contender in its class – until now. The three cameras we've tested are all competing for the digital 'jaw-dropper' award. One of them is the C-1400XL, Olympus' long awaited sequel to the C-1400L. The others are from Minolta and Canon, both of whom have extensive experience in the very high-end digital camera market as well as in the lower end. In addition, all three are well known for their optical quality. Which will gain this coveted crown? Read on...

The digital camera market

Digital cameras split into three sectors. The first is a compact style point & shoot camera with little or no creative control that's perfect for Web use and general-purpose photography for most users.

In the middle are high-resolution (1-2 million pixel) models with high quality optics, high precision exposure capabilities and varying degrees of manual control. These are capable of producing outstanding results at a reasonable cost. The ones reviewed here are in this group.

The third group are professional cameras that are based on conventional SLR bodies, providing interchangeable lenses, full manual control and access to a full range of system accessories.

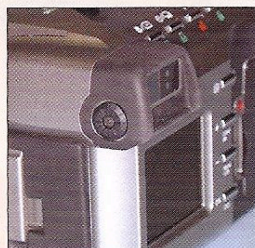
Handling & using Olympus C-1400XL

With its excellent ergonomic design, the C-1400XL feels instantly comfortable. The major controls seem to be exactly where your hands expect them to be and the ultra-fast recycle time means you can generally shoot away as and when you want without having to wait for it to process the last image.

In low light conditions the autofocus sometimes struggles, but the quick-focus override buttons neatly overcome this.

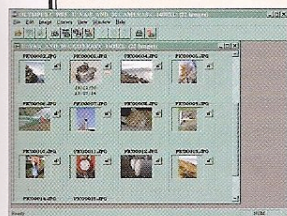
Using the external flash socket may prove difficult, as there is no aperture control facility on the camera.

This means you need flash-heads with adjustable power or a collection of 43mm neutral density filters to achieve optimum exposures.



Out of the box and setting up

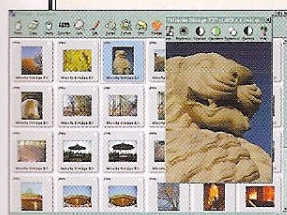
Olympus C-1400XL



Unlike its predecessor, the C-1400XL is shipped with a relatively austere collection of accessories. You get a set of Ni-MH AA rechargeable batteries, charger, 4Mb SmartMedia card, serial cable, lens cap and a neck strap. On the software front there is a basic download application, Olympus Photo Album and a TWAIN driver. There's a small charge in the batteries when you unpack the camera but you have to wait until they are fully charged, about three hours, before the fun can start.

Software installation is straightforward and downloading via the serial lead works faultlessly. Downloading the largest images is time consuming so ensure the batteries are fully charged before starting, especially if you have a 16Mb card full of pictures.

Minolta EX Zoom 1500



The number of goodies supplied with this camera is breathtaking. You get 2x 8Mb CompactFlash cards, four Alkaline Batteries, four rechargeable Ni-MH batteries, charger, AC adaptor, case, strap, serial cable, video cable and a CompactFlash card reader that plugs in your parallel port. Pixology Piccolo SE, a serial download utility and Adobe Photoshop 4LE software is supplied.

Installing the card reader is simple, just connect it up and install the driver. Piccolo loaded up just as quickly. The impressive bit is when you put the camera card into the reader and Piccolo springs automatically to life showing you your pictures instantly.

Canon PowerShot Pro70



The PowerShot comes with an 8Mb Compact Flash card, rechargeable Ni-MH battery pack, charger, DC power lead, video lead, serial lead and neck strap. The software supplied is comprehensive and includes PhotoStitch (for panoramas), SlideShowMaker, Time Tunnel, Ulead PhotoImpact and a TWAIN driver. It all installed without a problem.

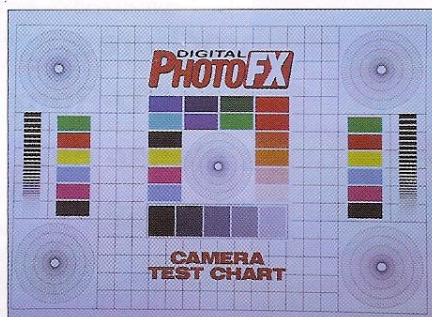
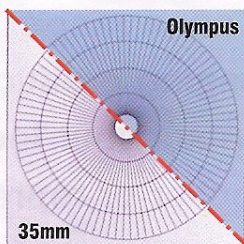
Connecting to the camera is straightforward but, as with the Olympus, download times are lengthy particularly when using the Raw data mode or a very large capacity card. Fortunately it's possible to power the camera from the mains while downloading, but a card reader is a worthwhile investment.

Performance

Olympus C-1400XL



Flash gave some close-ups or light coloured subjects a blue cast. This can be resolved by simple hue adjustment using your image editing software. The lens is sharp and suffers from slight pincushion distortion.



The flash delivers a well balanced result, outdoor exposures are also good and you can easily shoot results good enough for A4 prints, but A3 is starting to push things.



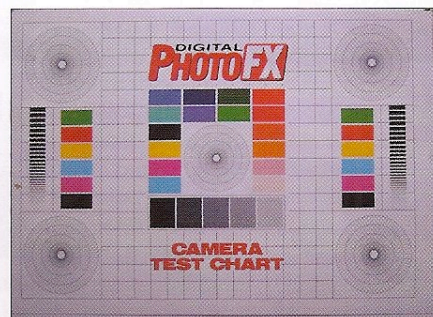
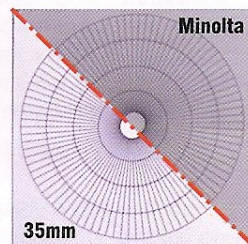
ENLARGED TO A4



ENLARGED TO A3

Minolta Dimâge EX Zoom

The test chart image shows the most neutral colour balance of the three with good sharpness and only slight barrel distortion. Uneven illumination is apparent at the bottom of the frame when using flash.



Gave accurate colours, with good shadow detail but highlights are bleached out with flash. Amazing close-ups and just capable of stretching to A3 prints.



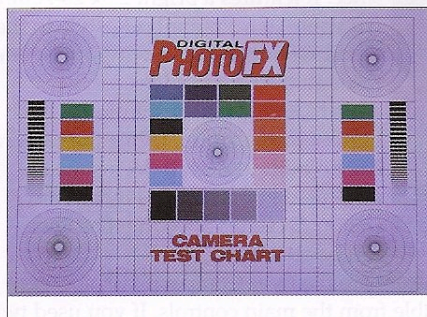
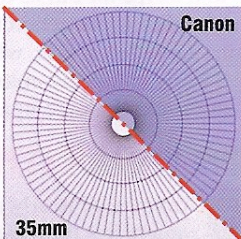
ENLARGED TO A4



ENLARGED TO A3

Canon PowerShot Pro70

The Canon produced the sharpest results of the group and is the only one that could maintain any detail in the innermost circle of the test chart. Flash caused the blue cast. The slight pincushion distortion is nothing to worry about.



Offers well-balanced exposures with daylight and flash, razor sharp optics capable of making A3 prints and aperture-priority for good focus control.



Image analysis

Test chart

Our A3 camera test chart indicates the camera's ability to resolve colour and fine detail. In addition, distortion introduced by the lens is likely to show as bending of the straight lines at the edges while internal image processing problems will show up as distorted circles and colour fringing. Compare camera's tested in previous issues using this image.

Still life

Are the colours accurate? Errors could be due to exposure problems, image processing or white balance. Also dynamic range can be indicated by the amount of detail in the shadow areas relative to highlight intensity. We've also blown up a segment to show what each camera is capable of.



Summary

Olympus C-1400XL

The C-1400XL is a welcome improvement on an already successful formula – the 1.4 million pixel CCD produces images that were otherwise, until very recently, unobtainable in this price range. The fast recycle time makes the camera a joy to use although the feature is hampered in low light by the hesitant autofocus system. The value of the external flash sync is also reduced by the lack of exposure control. All in all, a capable camera that will find its way into a large number of diverse applications.

Minolta Dimâge EX Zoom 1500

A great camera to use and a good choice as a digital replacement for a high quality conventional compact camera, particularly considering the comprehensive package that comes with it. This camera's also a good choice for business users as the scripting ability means a lot of the chance can be removed from repetitive picture taking. Only the difficulty experienced focusing in macro mode spoils an otherwise perfect combination of quality and capability.

Canon PowerShot Pro70

Wow! This is a photographer's digital camera. The image quality – which is a result of high resolution, superb optics and perfectly optimised processing – is outstanding. It feels and behaves how a real camera does and you can talk to it as well. In addition to fully programmed exposures there is an aperture-priority mode which, when coupled with remote flash, makes the camera equally happy in a studio or on the road. The only complaint that we have is the lack of built-in flash, otherwise we can't fault it.

DIGITAL PHOTO EX VERDICT

The three cameras here represent the cream of a relatively new technology that is only just gaining general acceptance. Any one of them will easily produce results that are outstanding in the majority of user applications, each of them is a bright star in the digital camera galaxy.

The Olympus is the easiest camera to use, which will make it very popular with users who do not want to get into the intricacies of photography but need professional looking results. The Minolta on its own is a very desirable camera but when coupled with the array of accessories supplied, it is clearly the best value high-quality camera on the market. But, the brightest star in our trio has to be the Canon PowerShot Pro70. In terms of sheer quality – in its images, build and handling – this camera twinkles much more fiercely than its rivals.



Features

Olympus C-1400XL £1000

At first glance the C-1400XL looks identical to its predecessor, although it's the more attractive silver colour of the C-1000L.

It's the only digital SLR below £3000 and retains the same superb 3x (36-110mm) power zoom, 1280x1024 resolution, built-in flash, spot metering and slightly quirky autofocus of the original model.

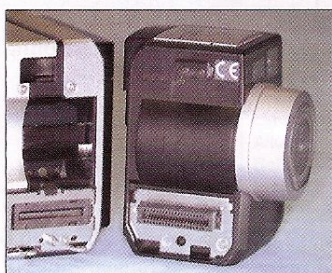
There's viewfinder eyesight correction and it's the only model in the group that prints direct to a suitable printer without a PC.

New to the C-1400XL are features that make the camera even more versatile. These include an external flash-sync socket and a burst mode that offers 3.3fps for up to 5 frames. When using single-shot mode and no flash the rewrite time is less than half a second. Other features include infinity mode to complement the 40cm and 2.5m quick focus settings of the previous model. It's also compatible with the latest 16Mb SmartMedia cards.



Minolta Dimâge EX Zoom 1500 £1000

Just like the earlier VGA quality Dimâge V camera, the EX has a removable lens unit. This, according to Minolta, means that different CCD/lens assemblies can be attached allowing the



user to keep up with advances in resolution without replacing the entire camera. The camera on test produced 1344x1008 pixel images from a 38-115mm zoom lens. There will soon be a 28mm f/1.9 wide angle lens assembly with the same resolution. As well as replacing the CCD/lens, in

the future it will be possible to replace the in-camera software.

Either way there is no control over depth-of-field as the lens is set to maximum aperture when an external flash is used. One regrettable change from the C-1400 is moving the spot meter button from a location where it was accessible without moving your eye from the viewfinder to a location out of reach. On top of that, you must now press the button twice to use it.

Minolta Dimâge EX Zoom 1500



Once you're familiar with the control layout, the Dimâge is very easy to use. In general day-to-day use there's rarely any need to detach the lens assembly. This only becomes necessary if you wish to attach the

optional flash hot-shoe or remote lens cord. The Digita logo appears on the display when you switch on along with access to the

comprehensive menu structure, via surprisingly few buttons. The supplied CompactFlash card reader makes loading scripts on to the camera very easy.

Using the camera in point & shoot mode yields excellent results, but it's worthwhile taking the time to use the pre-set scene settings, particularly the Night mode.

Selecting macro re-assigns the zoom buttons to manual focus and the LCD screen becomes active, but the relatively slow refresh rate can make focusing difficult. The CompactFlash card is housed in the battery compartment and it's easy to drop the batteries all over the floor, before you learn which way up to hold the camera when accessing the card!

Canon PowerShot Pro70

If you've used a Canon SLR this will feel very familiar. The camera takes slightly longer to focus than the others in the group but it's the only one that achieved focus successfully virtually everywhere it was tried. This is thanks to the built-in focus illuminator that shines a beam of visible light onto the subject under conditions with insufficient illumination.

The only real drawback is the need to carry a separate flash unit, even for grab shots. The flip

the future it will be possible to replace the in-camera software.

The Dimâge EX is the latest in a select group of cameras that use the Digita operating environment. This means the camera can be programmed to do all sorts of useful things such as auto-bracketing, time-lapse and user guidance. In addition the entire environment can be upgraded to add new functions.

Other features include Portrait, Evening, Night, Landscape and slow-sync modes and 3.5fps for bursts up to 7 frames. There is a video socket for direct connection to a TV or video and the camera contains a rotation sensor, which means that pictures taken in portrait orientation are automatically rotated when they are saved on the camera's CompactFlash memory.

Canon PowerShot Pro70 £1175

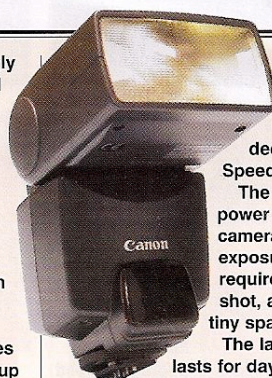


Announced nearly a year ago, this camera has been eagerly awaited ever since. It features a bright 2.5x 28-70mm f/2 zoom in a similar body style to the Olympus, although viewing isn't done through the Canon's lens.

At 1536x1024 the resolution is the highest in the group. While the camera has no built-in flash it does have a dedicated hot-shoe. This means any Canon EX series Speedlite flashgun can be attached.

Another unique feature are the twin CompactFlash sockets that are easily selectable from the main controls. If you used two of the recently announced 96Mb memory cards, this camera could shoot and hold over 2300 pictures! It will also accept the 340Mb Microdrives expected from IBM later this year.

Power is supplied by a large dedicated Ni-MH battery pack. It will also accept two standard 2CR5 lithiums should you be stuck without your charger. The inclusion of eyesight correction, an unfolding and rotating LCD screen, remote release connector, sound recording capability, video output and a sturdy metal body makes this a very well specified camera.



side of this is the superbly exposed flash shots when using an optional dedicated Canon Speedlite flash unit.

The flash emits a low-power test pulse, so the camera can compute the exposure and flash power required. It then takes the shot, and it all happens in a tiny space of time.

The large Ni-MH battery pack lasts for days, particularly if you are frugal with the use of the LCD screen, which can be reversed to be protected

by a metal panel. Couple this with its massive storage potential and you can happily be away from a PC and mains for ages.



**For more information on the
PowerShot Pro 70 or the
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The Canon logo, featuring the word "Canon" in a bold, red, sans-serif typeface. The letter "C" is stylized with a white cutout on its left side.