



TECHNOLOGY INSIGHTS

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The Perfect Go-Anywhere Camera

Is there a camera that takes great photos and doesn't weigh you down?

Isn't that what pocket digicams are for, I hear you ask? If you're not too fussy about Image Quality, the answer is Yes. If you are, you'll want something better. This week, a good friend is going on his first trip to the Kimberleys and Kakadu. He owns an Olympus Tough 720SW but wants to take a camera that will do the scenery justice. I suggested a Nikon D90 DSLR, about the best deal going right now for around \$1800 (with Nikon Australia warranty and \$200 cashback) at http://www.digitalfunstuff.com.au/category17_1.htm

That's for the twin lens kit comprising 18-55 and 55-200mm, lightweight lenses that are better than they have any right to be. Still, the size and bulk of the D90's body raised my friend's eyebrows, even though it's one of Nikon's smaller DSLRs. It weighs around a kilo with the battery up its skirt and a kit lens on, not that heavy but not ideal for a walkabout camera.

So what are the LITE options?

There aren't too many in the DSLR space. The smallest, the Olympus E-450, will fit into a bum bag with the 25mm pancake lens on. So will a Nikon D40/D60/D3000 with the new 35mm prime lens, at a pinch. You can carry a second (zoom) lens in your pocket or backpack, and the travelling becomes relatively easy. These two are easy on the wallet too, leaving you a lot of change out of \$1,000 for the twin lens kits.



Rangefinders

In the old 35mm days, rangefinders filled the gap between pocket cameras like the Olympus XA and the bulky SLRs. Almost every camera maker produced rangefinders back then, most with fixed lenses, but some (such as Leica) offered exchangeable lenses, which were much smaller than those made for SLRs. The finder window shows two images of the same subject, one of which moves while focusing; sharp focus results when the two images fuse into one.



Leica's 35mm rangefinders have survived, and are still more elegant than the lumpy DSLRs, and lighter despite the solid metal case. The M8 is Leica's first serious foray into digital technology. It comes at a price that matches the brand's legendary cachet: around A \$10,000.

That cachet suffered serious damage when the M8 was born with obvious technical flaws. Depending on whom you listen to, the M8 is either a purist's delight or a rich man's toy.

Leica only survived because a rich man rescued it, and is still absorbing losses. Cosina in Japan survives making 35mm cameras, including the Zeiss-Ikon rangefinder for about \$2,000. Cosina also makes a line of Leica compatible lenses for Carl Zeiss.



Carl Zeiss lenses are legendary yet are a lot cheaper than Leica's glass which can set you back \$5,000 a piece. They're very sharp but don't offer advances we tend to take for granted, like autofocus. Cosina also makes rangefinders under the old Voigtlander name, a once well-respected German maker <http://www.cameraquest.com/voigtr2ar3a.htm>. These cameras are less expensive, lens-compatible alternatives to Leicas, but they still cost a bundle and they still use 35mm film. Cosina seems happy to rest on a glorious history of producing 35mm cameras and lenses that often wore famous names.

Four Thirds cameras - two thirds of the Promise

Several years ago, Olympus, Panasonic and a couple of others formed the Four Thirds coalition with a vision to make smaller cameras with interchangeable lenses that could produce quality photos. Their new Micro 4/3 standard does away with the DSLR's mirror box, making room for designs with smaller bodies and lenses - for more detail on the Micro 4/3 format, see <http://www.technoledge.com.au/pdfs/digital-cameras-untangled.pdf>

The 4/3 format uses sensors that are 17x13.5 mm in size, about one third the size of a 35mm frame but 5-6 times bigger than the sensors used in digicams. In other words, image Quality is close to that of DSLRs.

We can only wonder why Panasonic made the G1, the first of the new line (on the left), look like a lumpy DSLR instead of a rangefinder (there's no mirror box after all). At \$1500, the body isn't the only thing that's the wrong shape either.



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A Big Promise from Sigma

A couple of years ago, Lensmaker Sigma produced its own version of the digital rangefinder in the DP1, which uses a Foveon X3 sensor. Foveon's is a 'layered' sensor with 14 million 7.8µm photodiodes that capture 100% of RGB colour information at every pixel location. By contrast, the Bayer 'mosaic' sensor employed by just about every other camera maker uses 4 pixel locations to collect RGB (one R, two G and one B) and interpolates much of what you see.



Earlier in 2009, Sigma released the DP2 with a long list of much-anticipated improvements. The DP2's digital files are just 4.6 megapixel in size, which has spawned heated debates on the internet, but these debates miss the point that this Sigma is a point-and-shoot size camera with a decent size sensor (25mm in diameter). The DP2 adds a quality 40mm f/2.8 prime lens, which is fixed rather than interchangeable.

On paper at least, it looked like the purist's pocket camera, the perfect blend of digicam size shell and DSLR-size sensor capped off with a perfect prime lens. Reviews confirm that it is all of those things but add that the build quality is well below par, the ergonomics a shambles, the handling unpredictable and the price over the top at A\$1,100.

It seems that Sigma has stubbornly carried over most of the mistakes that scarred its first attempt, the DP1. They fixed the lens, but not the build quality, the ergonomics and the rest. The reviewers say that the DP2 is capable of making great photos, but only in experienced hands. And at over A\$1,000, the DP2 faces some pretty accomplished competitors. Here's a full review: <http://www.photoreview.com.au/reviews/advanced/sigma-dp2.aspx>

Sadly, Sigma's DP2 is an exotic camera of limited interest.

Third time lucky?

Olympus loaded up the new E-P1 with a 12.3-megapixel 18 x 13.5 mm sensor, Supersonic Wave Filter dust reduction system, 324-area TTL ESP metering system, 11-area Contrast Detection AF system, sensor-shift Image Stabilization, built-in digital leveling, burst mode shooting at up to 3fps, 720p HD video capture, JPEG and RAW image formats, hot shoe for external flash units or optical viewfinder.

Its metal body is no bigger than a Canon Powershot G10 yet the E-P1 offers a choice of lenses, starting with the M.Zuiko 14-42mm zoom and 17mm pancake lens. Other 4/3 system lenses can be used via an adaptor.



Image quality has been widely praised for colour and contrast, with poor light performance said to be okay up to ISO 800. That's on par with entry level DSLRs, and a big advance on digicams. Here's a photo gallery - http://pen.olympus.com.au/olympus_pen_gallery.html



The E-P1 has no inbuilt flash – it's an optional extra like the viewfinder. And the 3in screen on the back isn't quite as sharp as it could be at 230,000 pixels. And there are more serious shortcomings: the same slow shutter lag that makes digicams so frustrating for shooting kids, pets or sports people in action. Autofocus is said to be very slow especially in low light situations, even with the flash on, and it's either flash or viewfinder since both work through the hot shoe.

DP review, while praising Olympus for at last producing a decent pocket camera, added some serious caveats: 'Firstly it simply doesn't work anywhere near as well as a decent compact in social situations ... [and] the output when using the full auto mode with either kit lens isn't going to look that different from a good compact when used outdoors in good light ... Finally the sheer number of options and controls and features will leave many novices scratching their heads ...'

<http://www.dpreview.com/reviews/olympusep1/> .

In other words, the Olympus E-P1 can take great pictures once you've learnt to work around its shortcomings and mastered its complexities, like the Sigma DP2.

Who's going to buy these cameras?

So what's the market for these cameras? Not the faint-hearted, judging by their prices. This one is \$1350 with the 14-40 zoom lens, or \$1750 for the two lens kit with a viewfinder. That puts it up there with the Panasonic Lumix G1, which is the same ballpark you can buy a Nikon D90 for.

The Nikon comes with a stunning viewfinder and a built-in flash, it shoots faster than a Colt in a Western and has no trouble producing quality photos in the ISO 1600 – 3200 range. If the size puts you off, you could opt for the D5000 and get a camera the same size as a D40/60 with the D90 electronics. Still too big or more than you need?

The obvious market is digicam buyers who're tired of the limitations and frustrations of digicams but weary of the complications DSLRs might bring. Trouble is, Panasonic and Olympus are asking these folks to pay twice as much as they would for a high-end Point & Shoot like a Canon G10 or Lumix LX3. With Panasonic and Olympus asking \$1,500 plus, twin lens DSLR kits selling for less than a grand look like outstanding value. These new cameras were designed to bridge the gap between high-end digicams and consumer DSLRs, so why are they priced like miniature Leicas?

At these prices, the only people who're going to buy the Olympus or Panasonic G1 or the Sigma DP2 will be pro shooters who want a quality camera they can take anywhere easily, gadget geeks who want to show off something cool and different, and serious enthusiasts who're not on a limited budget. That makes us wonder why Olympus added P&S features like an intelligent auto mode, 13 scene modes and six 'art' filters. It looks like Olympus isn't sure which market to target with the E-P1, and it looks like we'll have to wait longer for an affordable camera that bridges the great divide.

What about the Serious Digicams?

Yes, there are a few making bold claims and wearing big price tags. The Canon G10, Panasonic Lumix DMC-LX3 and Nikon P6000 come closest to being serious (offering RAW format shooting for example), according to reliable camera websites, ahead of the top Fujis, Casios and Ricohs.

The 14mp Canon can take stunning pictures under perfect conditions but struggles as the sun goes down. The LX3 is more comfortable with landscapes in the sunset due to its faster, wider Leica lens - f2.0 - 2.8 and 24mm, but only zooms to 60mm. Panasonic also resisted the temptation to set new records for megapixels and, with a mere 10mp, the noise level is acceptable.



The Nikon P6000 continues the tradition of Coolpix models that fail to excite reviewers or consumers. Thom Hogan compares the three contenders here: <http://bythom.com/compactchallenge.htm>

A surprise about-face



On August 20, 2009 Canon released two new models with LOWER megapixel sensors: Both the G11 and the tiny S90 are back to 10mp on a large-for-digicams 1/1.7" sensor. The S90 also features a fast 28-105 f/2-4.9 lens, taking direct aim at the Panasonic Lumix LX3. A lens control ring ups the ante, offering fast, DSLR-like adjustments to camera settings.

It seems Canon has at last worked out that these cameras appeal to enthusiasts and pro shooters rather than the general digicam-happy-snaps crowd. Not before time.

So what's the bottom line?

If you're looking for one camera that does most things at a reasonable price while it fits snugly in your hand and your shirt pocket, get a top-of the line Panasonic or Canon. If you're looking for a good camera with a choice of lenses at a good price, and don't mind carrying a small bag, get an entry-level DSLR twin lens kit from Nikon, Canon, Olympus, Sony or Pentax.

If you want to impress your friends with cool new technology, get the Panasonic Lumix G1 or GH1 (with video) or the Olympus E-P1. If you want to impress true photo geeks, go for the Sigma DP2 whose Foveon sensor will fuel the conversation for hours. If you want a camera that's easy to carry but works like a real camera and produces comparable image quality, wait for the next generation.

Panasonic is rumoured to be close to releasing its second act, the Lumix GF1. The spy photos suggest that it has lost the hump that makes the G1 look like an unsanforized DSLR. Samsung has thrown its hat into the same ring with a planned NX model that uses a Nikon DX sized digital sensor. As this market segment becomes more competitive, the products will improve and the prices drop.

Until that happens, entry-level DSLRs like the Nikon D60, Canon 1000D or Olympus E-450 offer exceptional value. Faster shooting, better handling, inbuilt flash/ viewfinder, superior ergonomics and sheer value for money make it easy to put up with the extra bulk.

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