Lumix GX9 Billed as a **premium street camera** and well-specced, but does it deliver?

Passionate about photography since 1884 CLASSY CLOSE-UDS

Get macro right with Ross Hoddinott and other experts • Butterflies & bugs • Frogs & reptiles • Flowers • Focusing • Lighting

The art of abstraction

Sandra Bartocha's fresh take on macro photography



Tamron gets the gold

Why we love its new 100-400mm f/4.5-6.3

Rising star How one 15-year-old wildlife photographer is building her career









INSTAX²

Digital. Editable. Instant. Film. The new instax SQUARE SQ10.

instax SQUARE 5010

instax.co.uk/sq10

In this issue

Photographer Classy close-ups

12 Mastering macro Ross Hoddinott, Victoria Hillman and Sue Bishop show you how to reveal the intricacies of flowers, insects and other subjects

20 Spring forward

The dream-like plant images popularised by Sandra Bartocha are often copied but never bettered. Keith Wilson interviews her

30 Join the club

We focus on the thriving Cambridge Camera Club

32 Light the way

Light is key to revealing intricate details of tiny subjects. Macro specialist Colleen Slater shares her top tips

36 Rising star

In the first of our Risina Star series, AP talks to 15-year-old Ashleigh Scully about conservation, competitions and making a photography career

38 Panasonic Lumix DC-GX9

Andy Westlake checks out Panasonic's newest rangefinder-style mirrorless camera

44 EISA Maestro

Enter your nature shots in the EISA competition!

45 Tamron 100-400mm f/4.5-6.3 **Di VC USD**

Michael Topham reviews Tamron's latest zoom lens

Regulars

- 3 7 days
- **18** Legends of photography
- **26** Inbox
- **49** Accessories
- 51 Tech talk
- **66** Final Analysis



One of the things that I love about photography is the way it trains us to see the world in a different way. Photographers observe how the light falls; we

notice curious juxtapositions and the shapes, patterns and colours in daily objects. It's a 24/7 thing for us - not just when we have a camera. These skills get heightened the minute we attach a macro lens to our cameras. Suddenly



Facebook.com/Amateur. photographer.magazine

ONLINE PICTURE OF THE WEEK

Mount Kanchenjunga by Subhankar Das

Nikon D750, 24-120mm, 2 sec at f/16, ISO 64

This picture of Mount Kanchenjunga was uploaded to our Twitter page using the hashtag #appicoftheweek. It was taken by photographer Subhankar Das. He tells us, 'Mountain Kanchenjunga is the world's third highest mountain peak, and I captured this image during my recent trip to Kaluk, a small village in West Sikkim, India. The morning slanting light falling on the mountain

peaks made the scene heavenly, and I took the opportunity to document the colours on the mountain peaks. Being a visual artist specialising in fine art landscape photography, I always try to represent a scene to the world with my own taste of aesthetic pleasure, thereby trying to make human beings humble and respectful towards Mother Nature.'



Each week we choose our favourite Flickr, Twitter or the reader gallery using #appicoftheweek. PermaJet proudly supports the online picture of the week winner, who will receive a top-quality print of their image on the finest Perma Jet paper*. It is important to bring images to life outside the digital sphere, so we encourage everyone to get printing today! Visit www.permajet.com to learn more.

Send us your pictures If you'd like to see your work published in Amateur Photographer, here's how to send us your images: Email Email a selection of low-res images (up to 5MB of attachments in total) to appicturedeskldtimeinc.com. CD/DVD Send us a disc of high-resolution JPEG, TIFF or PSD images (at least 2480 pixels along its longest length), with a contact sheet, to the address on page 53. Via our online communities Post your pictures into our Flickr group, Facebook page, Twitter feed, or the gallery on our website. See details above. Transparencies/prints Well-packaged prints or slides (without glass mounts) should be sent by Special Delivery, with a return SAE, to the address on page 53.

A week in photography

our eyes are drilling down to pick out those little details for a good photograph, be they tiny subjects or the details of larger objects. It's a fascinating perspective. But macro photography is not without its technical and aesthetic challenges, so we've got the experts to show how it's done (page 12). Finally, don't forget to enter APOY 2018 - you'll find the details, plus a free entry voucher code on page 27. Nigel Atherton, Editor

amateurphotographer

magazine





NEWS ROUND-UP

The week in brief, edited by Amy Davies and Hollie Latham Hucker

lggy tabletop tripod released

British tripod maker 3 Legged Thing has introduced a tabletop tripod called Iggy. Built of rugged ABS plastic, it will be sold complete with a GoPro mount for £19.99. It will also be available in a kit with the firm's new smartphone mount The Cradle' for £24.99.



'Cannibalism is OK', says Canon

Canon is prepared to cannibalise sales of its DSLRs with the new EOS M50 mirrorless model, reports the *Nikkei Asian Review*, quoting the president of Canon Marketing Japan, Masahiro Sakata. The company is currently second in the Japanese mirrorless market with a 23% share, but is bidding to steal top spot from Olympus.

Leather accessories for PEN-F

To celebrate the second birthday of the PEN-F, Olympus has teamed up with French leather makers Bleu de Chauffe to create an exclusive range that includes two bags, one pouch and a strap. This exclusive range will be available through selected outlets with prices starting from £169.99. See shop.olympus.eu and www. bleu-de-chauffe.com for more details.

Manfrotto launches Lumimuse Bluetooth

The new Lumimuse 8 LED has built-in Bluetooth wireless technology. Using the free Lumimuse app on their iOS devices, users will have full control of light output, from 0-100%. The LED comes with three colour filters, a diffuser, standard 1/4-inch thread, static shoe mount and a USB charging cable. It will be available for £129.95.





New addition to Fotospeed's range

Fotospeed has developed a new brand of paper in partnership with landscape pro Doug Chinnery. The Cotton Etching 305 is a textured paper designed to give more depth and detail in prints. To celebrate the launch, a £100 voucher will be hidden in a pack of Cotton Etching 305. Prices start from £32.99. See fotospeed.com.





Forgotten Little Creatures, a photographic nature project

Forgotten Little Creatures is the work of scientist and nature photographer Victoria Hillman. The project spans four years of research, observation and photography of plants, invertebrates, amphibians and reptiles, all within a 40-mile radius of Victoria's home in Frome, Somerset. The aim was to encourage other people



Perez's frogs shed and eat their skin, which is thought to be a way of recycling the skin's nutrients Canon EOS 5D Mark III, Sigma 180mm f/2.8 macro, 1/60sec at f/9, ISO 250

to find and understand the importance of the smaller species that usually go unnoticed. This image of a Perez's frog came about after months of research and observation. This led to the discovery that this frog was eating its own skin: dermatophagy.

The accompanying book can be bought from Victoria's website www.vikspics.com for $\pounds 20$ (unsigned) or $\pounds 22$ (signed), and includes scientific facts about the subjects. Check out Victoria's macro tips on page 14. Words & numbers

Photography helps people to see Berenice Abbott

American photographer (1898-1991)





Jiri Michal of the Czech Republic made the shortlist in the Open Wildlife category

2018 Sony awards shortlist announced

THE SONY World Photography Awards, now in its 11th year with partners World Photography Organisation, has announced its shortlisted and commended photographers for the 2018 competition. Organisers reveal they've had a record number of entries, with a whopping 319,561 images submitted from over 200 countries – a 40% increase over 2017.

The judges say they are impressed with the high quality of entries, and the ability of the successful images to offer insight into the trends and contemporary concerns of photographers working today. The awards comprise four competitions: Professional, Open, Youth and Student Focus.

The Professional competition features ten categories: Architecture, Contemporary Issues, Creative, Current Affairs & News, Discovery, Landscape, Natural World & Wildlife, Portraiture, Sport, and Still Life. This category is judged on a series of works and, according to the organisers, saw an impressive number of entries with some exceptionally strong images, particularly across its two new categories introduced this year: Creative and Discovery.

The Open competition is judged on a single image and also saw a wide variety of subject matter submitted to its 10 categories, with Street, Landscape & Nature, and Nature receiving the most entries.

The Youth competition saw entries from photographers aged 12-19,



Zongyi Lin's image from the Culture (Open competition) category

based on the theme, Your Environment, with nearly 8,000 more entries than last year.

The Student Focus competition saw applications from universities worldwide. Ten shortlisted students from the UK, India, France, New Zealand, South Africa, Argentina, Canada and China will now go on to produce a body of work, with the chance of winning €30,000 of Sony digital imaging equipment for their university.

All the shortlisted Professional and Open photographers will go on to compete to become category winners, with the chance of scooping the top prize, be named Photographer of the Year and win \$25,000 or Open Photographer of the Year winning \$5,000.

The winners will be announced at the awards ceremony in London on 19 April. Category winners will receive the latest Sony digital imaging equipment and be included in the 2018 awards' book. All shortlisted and winning images will be exhibited at Somerset House, London, from 20 April to 6 May 2018. Tickets are available at www. worldphoto.org/2018exhibition.



BJP shortlist revealed

THE SHORTLIST for the 14th annual British Journal of Photography (BJP) International Photography Award 2018 has been revealed. One of the five shortlisted photographers, Alys Tomlinson from the UK, made the cut with her Ex-Voto series of work, which was shortlisted for the 2017 Taylor Wessing Portrait Prize.

The overall winner will be announced on 27 March and will receive a £5,000 exhibition grant and a show at leading London gallery, TJ Boulting, due to open on 13 July. The winner and shortlisted photographers will also be flown to London to attend a networking event at Photo London. They will receive coverage through BJP's channels and be featured in the magazine.







levels of 2.5x to 5x

Laowa introduces 25mm ²/2.8 ultra-macro lens

CHINESE firm Venus Optics has announced an unusual lens for extreme close-up photography: the Laowa 25mm f/2.8 2.5-5X Ultra-Macro. It's designed purely for shooting at magnification levels of 2.5x-5x, well beyond those achieved by conventional macro lenses; in return, it doesn't focus to infinity. The firm savs that its relatively short focal length affords greater depth of field compared to longer lenses, which also means macro photographers need to stack fewer frames to achieve extended in-focus detail.

The lens is specifically designed to make it easier to light your subjects, with an unusual slimline barrel shape and a relatively long working distance from the subject (40mm at 5x magnification). Both the aperture and magnification are set manually using



controls on the lens, while focusing is achieved by moving the camera and lens back and forward relative to the subject. An optional tripod mount will be available.

Measuring 82x65mm. the lens weighs around 400g, and will be available in Canon EF. Nikon F. Pentax K and Sony FE mounts. Its optical construction consists of eight elements in six groups, including a low-dispersion (LD) glass element to minimise chromatic aberration. It's already available for pre-order from distributor UK Optics for £399. See www.laowalens.co.uk.

Tokina shows off two new lenses

.....

TOKINA has shown two new lenses at the CP+ trade show in Yokohama,

Japan. Firstly the Firin 20mm f/2 FE AF is an autofocus wideangle prime for Sonv full-frame mirrorless cameras. It's a reworking of the existing manual-focus Firin 20mm f/2 FE MF, with a ring-type ultrasonic focus motor and electronic rather than mechanical aperture



Meanwhile the Opera 50mm f/1.4 FF is the first in a new line of premium optics designed for use on full-frame DSLRs.It will feature an ultrasonic focus motor and weather-sealed barrel and should go on sale in the summer.

operation. It's due to go on sale at the end

of May; pricing is not yet known.

For the latest news visit www.amateurphotographer.co.uk

Back in the day

A wander through the AP archive. This week we pay a visit to March 2005



WHAT a timely issue to look back at, given the Sergei Skripal affair. In March 2005 AP was celebrating the Russian Fed range of cameras. This was back in the day when everyone was feeling pretty positive about improving Anglo-Russian relations; how things change... The Fed series of rangefinder cameras started out as rough Leica model III copies - their build is described by then-editor Garry Coward-Williams as 'agricultural' – before the owners branched out with their own styles. Other highlights included a review of the classic Sigma 150mm f/2.8 APO Macro EX DG HSM by the redoubtable Geoffrey Crawley. And former Stars on Sunday presenter Jess Yates featured apparently he was a 'fanatical' amateur photographer. Some of his pictures are a bit disturbing, as befits this complex character - who incidentally wasn't Paula Yates's dad after all, Hughie Green was (younger readers may want to look all this up on Wikipedia).



Former Stars on Sunday presenter Jess Yates also featured

subscribe 0330 333 1113 | www.amateurphotographer.co.uk | 24 March 2018



Exhibition

Andreas Gursky

Hayward Gallery, Southbank Centre

Crossing the boundaries between reality and fiction is what Andreas Gursky's work is all about

'Andreas Gursky' is on at the Hayward Gallery, Southbank Centre, London, until 22 April 2018. www. southbank centre.co.uk

t's hard to mention Andreas Gursky without thinking of his image 'Rhine II, which fetched an incredible £2.7million at auction at Christie's New York in November 2011. But fixating on this piece of art would do him a disservice. He has been producing thought-provoking work for the past four decades, repeatedly crossing the boundaries between reality and fiction, and asking the viewer to play a pivotal role in the process.

Gursky was born in 1955 in Leipzig, East Germany, and is the son of commercial photographers. From 1970 to 1980, he studied Visual Communication at Folkwang University of the Arts in Essen. He continued his artistic education at the Academy of Art in Düsseldorf where he became a student of conceptual artists Bernd and Hilla Becher. Gerhard Richter taught classes at the Academy, and some of the Academy's students include Thomas Struth, Thomas Ruff, Candida Höfer and Axel Hütte.

Like most photography students at the time his early work was shot on black & white film, but he was soon bucking the trend and shooting colour using a large-format camera. (Gursky began using digital equipment in the 1990s.) Since the late 1980s the artist has focused his attention on sites of commerce, industry and tourism around the world. His images encourage us to question our relationship with the natural world, and the effects of globalisation and capitalism. He also likes to explore how we behave as humans in a collective sense. In 2010 he was appointed professor for Liberal Arts at the Academy of Art in Düsseldorf.

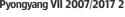
'His work is a comment on image making, and the perfect blend of reality and fiction'

In January this year the Hayward Gallery in London reopened after an extensive refurbishment, and the first exhibition on its calendar is a major retrospective of Gursky's work - the first of its kind in the UK. The show looks at his entire career and features some 60 images including a remastered version of 'Rhine II', and the equally iconic image 'Paris, Montparnasse' (1993), which features all 750 flats in the city's largest apartment block. Hayward director Ralph Rugoff suggests that one of the attractions of Gursky's work is that you cannot take an image in all at once some of the images are three-metres wide; instead you have to move in close and look at the details.

It's well known that Gursky carries out substantial image manipulation - 'Rhine II' is a good example, as he actually removed several buildings situated on the far side of the river. But he never professes to create a pure document of places or situations. Instead his work is a comment on image



BONN 2018. COURTESY SPRÜTH







The latest and best books from the world of photography



Dreamscapes

By Claire Takacs, Hardie Grant Books, £35 304 pages, hardback, ISBN 978-1-743-793527



It's been 10 years since Australian photographer Claire Takacs won the overall International Garden Photographer of the Year competition with her beautiful shot of Kenrokuen gardens in Japan. and her passion for capturing the essence of gardens and landscapes

has grown exponentially since. Claire divides her time between Australia, Europe and the USA, and this dorious celebration of her work is suitably diverse as a result. It opens with a portfolio of Cloudehill in Olinda. Australia, the first garden she ever photographed. From the outset it's clear that light plays a major part in Claire's work, and the way she uses it to highlight colour and design elements is wonderful to observe. There are plenty of UK gardens on show, including Great Dixter in Sussex (above) and Hopetoun House on the outskirts of Edinburgh. Dreamscapes will delight both photographers and gardeners alike. ★★★★★ Tracy Calder

Retro Cameras: The Collector's Guide to Vintage Film Photography By John Wade, Thames & Hudson, £18,95.

288 pages, hardback, ISBN 978-0-500-544907



If you're a fan of film-camera guru John Wade's regular articles in AP, then you'll love his latest book. This beautifully presented tome includes 100 profiles of classic analogue cameras of every type

and film format, be it SLR, stereo or subminiature, all from the days before electronics and autofocus were widespread. Illuminated by John's signature topguality product photography and knowledgeable commentary about each camera, it's not intended to be merely a guide to collectible museum pieces, but also includes useful tips and insights for how to get great photos using these still very usable classics. Whether you're an avid film user, a budding collector, or simply nostalgic for the days when proper cameras were made of metal and focused manually, it's camera geek heaven. *** * * * * Andy Westlake**



making, and the perfect blend of reality and fiction. Where this reality ends and fiction begins differs from picture to picture. Gursky has gone so far as to say: 'reality can only be shown by constructing it.' He has recently started experimenting with 'unsharpness', which is an interesting departure when you consider that most of his large-scale works are super-sharp throughout. 'Utah, 2017' is one such example of this new technique.

The scale of the exhibition is impressive, and the revamped space at the Hayward is a fitting temporary home for these, mostly large-scale, prints. For the first

Amazon. 2016

time since the Hayward's original opening in 1968, the gallery's pyramid roof lights allow natural light to flood into the spaces below, showing the artworks at their best. More recent, and perhaps less well known, pieces include 'Untitled XIX' (2015), which appears to be an abstract painting consisting of lines of colour, occasionally broken by blank patches of canvas. This is actually an aerial shot of acres and acres of Dutch tulips. Gursky makes us question what we are seeing, and what the medium is capable of showing us. It's a thoughtprovoking picture exhibition in a world-renowned space.



Viewpoint Tim Dawson With more and more photographers expected

to provide images for free, the NUJ's Tim talks about the new'#Useitpayforit' campaign

e love your pictures and are really keen to publish some of your work' – it was the kind of unsolicited phone call that any amateur

photographer dreams of. I was still composing my exclamation of delight when the reality check arrived. 'I am afraid that we don't have a budget, so we won't be able to pay you.'

Twenty years ago, such calls were rare; there were hardly any cheap-shot publishers taking a chance. Today, an extraordinary proportion of all published images are not paid for, and professional editorial photographers have had a correspondingly hard time. Hundreds have had to seek out new lines of work.

'Lots of photographers that I know – many of them enormously talented, dedicated professionals – have struggled as a tide of free images has locked them out of markets on which they have depended for years,' says Nick McGowan– Lowe, who represents the National Union of Journalists's (NUJ) 2,000 photographers on the union's National Executive Council.

The #Useitpayforit campaign Hoping to improve this situation, union photographers have launched a campaign '#Useitpayforit' to encourage talented amateurs and those lucky enough to catch newsworthy moments to seek payment from those who use their photos. They are highlighting individuals who have been savvy enough to charge. Joshua Latchford, for example, was just 17 years old when he snapped a crumpled £200,000 McLaren supercar that came a cropper 10 minutes after its owner had picked up the keys.

He sent the picture to his local weekly paper, offering to allow them to publish it for free, so long as they credited him. Alas, the picture appeared without his name, and the paper syndicated the picture to a third party, ensuring it appeared in several national newspapers and websites around the world. Latchford threatened action and after several exchanges of letters found himself a few



Joshua Latchford's case is used as an example in the #Useitpayforit campaign

hundred pounds better off. Today where the picture appears, so does his credit.

To help those inexperienced in selling their works, the NUJ has introduced a suite of free guides. At the heart of these are a basic set of rules-of-thumb to ensure that you are not ripped off and get the best price for your work. These link to the union's Freelance Fees Guide and to the Rate For The Job database that details actual prices paid for work going back over 30 years. You can find them all at useitpayforit.info.

'For a lot of jobs, particularly news, it is vital to use a genuinely experienced professional – quite apart from getting the shot, there are legal and ethical considerations that publications require certainty over,' says McGowan-Lowe. 'We recognise, however, that there are great photographers out there who are not professionals, and a lot of moments when someone at the scene of an incident gets the crucial shot. If more of these people charged, it would halt the tide of images offered for nothing, crowding out those by photographers who demand a fee.'

For myself, I politely declined the flattery of the budget-less publisher. Only occasionally have I been paid for my photography. Receiving even a modest fee, however, feels so much better than fretting that the publication of my pictures illustrates only how little I value them.

Tim Dawson is president of the National Union of Journalists. He has worked as an editor, reporter and feature writer for national newspapers for the past 20 years. See his work at www.nujpresident.orq.uk.

In next week's issue

On sale Tuesday 27 March



Seers of scenery

Experts from the *Masters of Landscape Photography* book share their skills and wisdom



Stars of the show

Andy Westlake rounds up all the new gear released at the CP+ 2018 trade show

Small wonders

AN GE

John Wade tells us all about the Minox subminiatures from the 1930s to 1960s

Sweetness and light

Get great child portraits with Rotolight LEDs – James Paterson shows you how

IHE VIEWS EXPRESSED IN THIS COLUMN ARE NOT NECESSARILY THOSE OF AMATEUR PHOTOGRAPHER MAGAZINE OR TIME I

Do you have something you'd like to get off your chest? Send us your thoughts in around 500 words to the address on page 53 and win a year's digital subscription to AP, worth £79.99



online, by phone or in store

Spring Clean Event 2018

Visit your local Wex Photo Video or Calumet store for exclusive trade-in deals and further discounts across our range of used cameras and lenses.

- Exclusive trade-in bonuses
- Discounts on used cameras and lenses*
- Expert advice from our suppliers[†]
- Half-price sensor cleaning for the first 100 customers who make a purchase

7th April	37-39 Commercial Road, London
14th April	Station Road, Montpelier, Bristol
21st April	4-6 Boucher Plaza, Belfast
28th April	100 Hagley Road, Birmingham
5th May	3 Tennant Street, Edinburgh
12th May	Frenbury Estate, Norwich
19th May	Downing Street Industrial Estate, Manchester
26th May	Oakbank Industrial Estate, Glasgow

Visit wex.co.uk/stores for store opening times *Selected items only. Offers while stocks last, *Supplier attendance will vary across stores.

For more information visit wex.co.uk/events

Technique MACRO TIPS

Mastering **Macro**

Macro photography proves that small is beautiful, and is a wonderful way to reveal the intricacies of flowers, insects and other subjects. Three experts show you how

Ross Hoddinott



Ross is one of the UK's leading outdoor photographers. He is a multi-award winning artist and the author of eight books. Ross has been an Ambassador for

Manfrotto and Nikon UK. Visit **www.** rosshoddinott.co.uk.

Insects and bugs

LITTLE critters have always fascinated me. I've been shooting insects since I was 10 years old, using inexpensive close-up filters at first to enable me to achieve frame-filling results. When I was 11, I won BBC's Countryfile inaugural photography competition with my photograph of two emperor dragonflies. I enjoy capturing the exquisite beauty, intricacy, shape and form of insects. I favour natural light and photograph my subjects in situ in the wild to cause minimum disturbance. I authored the book Digital Macro and Close-up Photography and have won awards in competitions such as Wildlife Photographer of the Year. British Wildlife Photography Awards and International Garden Photographer of the Year with my close-ups of insects.

1 Get up early and stay out late

Insects are at their least active and most approachable early in the morning and late in the evening, when their bodies are cool and they are generally settled. Butterflies will roost among tall grasses or on flowers, while damselflies and mayflies will settle among reeds close to water. Tread and search carefully. Once you've located a suitable subject, you should be able to get within the best distance to take a picture relatively easily. You may even be able to set up a tripod, which will greatly aid with framing and focusing.

7 Keep it simple

In all my years of experience with shooting wildlife, I've found that the best insect close-ups are simple in their construction. To help your subject really stand out, opt for a clean, diffused backdrop, free of clutter or distraction. You could photograph insects with distance between them and the surroundings: for example, select an angle where you can contrast them against sky, water or distant foliage. Also, set the largest practical aperture to help throw your subject's surroundings attractively out of focus.



KIT LIST



Telephoto macro

A telephoto macro is ideal for insects. 100mm and above will generate a larger working distance from the subject and minimise the risk of disturbing your subject.

Small LED

Small LED devices, like Manfrotto's Lumimuse range, are great lighting aids. They can be



camera-mounted or handheld. With a continuous light source, you can preview the effect before triggering the shutter.

Geared head

The design and type of tripod head you use is down to personal taste, but personally I favour a geared head for close-ups. They allow you to make very precise micro adjustments to composition, which suits the fiddly nature of close-up work.

Maximise depth of field

3 Depth of field is inherently shallow at higher magnifications. To help maximise the zone of acceptable sharpness (for any given aperture) try to keep your camera parallel to your subject. Why? Well there is only one geometric plane of complete sharpness, and you will normally want to place as much of your subject within this plane as possible. If you hold your camera at an angle in relation to your subject, wing tips and tails will quickly drift out of focus.

Capture behaviour

Try to capture elements of insect behaviour. Dragonflies are difficult to capture in flight, but it can be possible using a long telephoto and shooting continuous bursts with a fast shutter. Mating butterflies and damselflies add symmetry or shape to compositions. In the spring, you'll find damselfly larvae clinging to reeds by the water's edge and hatching into their adult form. Close-ups of dragonflies or spiders devouring prey can also be fascinating.

Marbled White butterfly (Melanargia galathea) in the evening light, Dunsdon Nature Reserve, Devon

Use backlight

Backlighting really suits insects, as it tends to highlight their form, detail and intricacy. It particularly suits the translucency of butterflies. Low early-morning or late-evening light is perfect for shooting backlit subjects - the light's quality is warmer and softer too. Position yourself carefully, so you sandwich your subject between the light and your camera. TTL metering can be fooled in tricky light, so check your histogram and apply positive exposure compensation if images are underexposed.

'Try to photograph insects within days of their emergence'

Pristine subjects In close-up, even the smallest imperfection will be highlighted. Therefore, it is normally advisable to only photograph insects that are in pristine condition. Butterflies lose some of their vibrancy and wings tend to get damaged as they near the end of their adult stage. Try to photograph insects

within days of their emergence. By

habitats at the right time of year.

researching the life cycle of potential

subjects, you can plan to visit suitable

Meadow Grasshopper (Chorthippus parallelus), Vealand farm, Devon



Stalking subjects

During the day, when it's warm and insects are busy, shoot handheld. It can be frustrating stalking insects, so be patient and persevere. When you move into position, try not to disturb the surrounding vegetation, and avoid casting a shadow across the subject. Increase ISO to generate a sufficiently fast shutter to eliminate camera and/or subject motion. I would recommend a minimum speed of 1/250sec when working handheld in close-up.



Technique MACRO TIPS



Victoria Hillman

Victoria Hillman has a BSc in Zoology with Marine Zoology and an MSc in Wildlife Biology and Conservation. Photography was a hobby but soon aided her studies. She is fascinated by plants, invertebrates, amphibians and reptiles. Visit **www.vikspics.com**

Amphibians and reptiles

I AM self-taught as a photographer, learning how to make the most of my equipment and available light as I go along. Ethical, truthful and responsible photography is something I feel very strongly about, making the welfare of my subject and its habitat my priorities. I am very careful to cause minimal disturbance to both my subjects and their habitat. I never move or garden around my subjects, and everything is photographed where I find it. I will spend weeks, months and even years with just a handful of subjects, learning as much as I can about them and how they interact with their habitats. This has allowed me to capture both close–up and wider in–habitat images. I rarely use additional light, but when I do I prefer a soft constant light to flash, and only apply the light as I take the shot, removing it straight afterwards.

1 Understand your subject

Carry out research into the best time of the year and day to photograph your subject. Reptiles are creatures of habit and generally use the same basking spots, basking in the early mornings. Amphibians tend to use the same breeding ponds year after year and are most active in damp conditions and at night.

2 Concentrate on composition

Amphibians and reptiles have beautiful and intense eyes so make them your focal point. Try composing with your subject off centre for a different perspective, and photograph at eye level. To give your subject more context and create a more complex image that tells a story, look at incorporating the surrounding habitat.



3 Shoot portraits and behaviours Frame-filling portraits can be eye-catching and striking, but amphibians and reptiles also have some interesting behaviours and patterns. By understanding your subject you can increase your chances of capturing these behaviours and achieve close-up images of eyes or skin patterns and show something that most people won't see.

'The lack of colour can add more drama and impact to some images'



Try experimenting with both colour and black & white images. Although reptiles and amphibians have some wonderful colours, by using black & white you can really draw the viewer's eye into the subject's finer details, patterns and behaviours. Also the lack of colour can add more drama and impact to some images.

Common toad (Bufo bufo) mating ball, one of three in this breeding pond. Unfortunately the female was long dead, but the males are so intent on breeding they don't notice

5 Be respectful and responsible

The welfare of your subject should always be your priority. Do not disturb or move them to clearer areas as you may cause stress and interfere with important behaviours. Photograph from a respectful distance and where you find them. You will be rewarded with natural images of your subject.



6 Think about lighting

Personally I don't like to use flash as it can startle the subject and look unnatural. Instead I use natural light as much as I possibly can. In some situations when I do require additional light, I will use a soft constant LED light with a diffuser from a distance as a fill-in light.

Choose ISO carefully

Use as low an ISO as you can get away with. This will be dependent on what you're shooting, the lighting, and environmental conditions. Experiment with using wider apertures to blur out some foregrounds and backgrounds, thus drawing the attention to your subject. Ensure your shutter speed is fast enough to freeze the action.

KIT LIST

Macro lens Most of my work is taken using a Sigma 180mm macro lens, but I will use longer lenses when required, especially when photographing snakes.



I use a Manfrotto 190 Go! for my amphibian photography so that I can achieve the low angle needed. I also tend to shoot my reptile photography hand-held to limit disturbance. Lights 🕨

I use small and larger LED lights, with one but normally two different diffusers to soften the light. I use them on low-power settings.



Technique MACRO TIPS



Sue Bishop

Sue Bishop specialises in flower and landscape photography, and is the author of three books. She has exhibited her work many times and sold her images worldwide. In 1994 she and Charlie Waite founded Light & Land. Visit **www.suebishop.co.uk**.

Flowers

IF I WAS allowed to keep only one of my lenses, it would have to be my macro lens. It's a Micro Nikkor 105mm and probably my oldest lens – so old that it doesn't have any new-fangled features like vibration reduction. But the reason why I love it is that it allows me to see things in a completely different way. As an adult you probably wouldn't choose to lie flat on frosty ground to look at a crocus. Add a macro lens into the mix and perhaps you would – just to see each delicate crystal of ice on the petals. It's a whole new world of beauty!



Use a tripod

means that you can really

For very low-growing

myself on my elbows.

fine-tune vour composition.

flowers, use of a tripod can

be awkward. So I usually lie

Group shot

photograph one flower with

others of the same type in

the background, using a wide

aperture to throw them out

Lt's always lovely to

flat on the ground and brace

I always use a tripod if possible, as it helps with very precise focusing. It also

of focus. They support the main subject in terms of colour and shape, but are soft enough not to distract from the main flower.

D Light conditions

◆ Very often the best light for photographing flowers is bright and overcast. Because the light is diffused by high white cloud, it doesn't create any shadows. If you do photograph on a sunny day, using a reflector will help to boost the light on the shadowed side of the flower.

4 Creative cropping

It's also fun to photograph just part of a flower, cropping right into it so that the petal edges are cut off. Make sure though that your crop looks definite enough to come across like it is obviously intentional – if you only crop off a couple of petal tips, it might just look like a mistake.





KIT LIST



Close-up lens

If you don't have a macro, try a close-up lens. They screw onto the front of a lens like a filter and reduce the minimum focusing distance of the lens. They are inexpensive and a great introduction to macro photography.



Reflector
The smallest Lastolite

The smallest Lastolite reflector is big enough for flower photography, or I even use just a piece of white card. A diffuser can be useful if the light is really harsh.

Tripod

This helps me to take time over my composition as well as focus precisely. I also use a cable release to avoid moving the camera when I press the shutter button. Shooting in close proximity to your subject will reduce the depth of field significantly

5 Focus manually When you are working on

When you are working on close-ups, your depth of field will be very shallow, especially at your widest aperture. So it's important to decide exactly which part of the flower you want to be sharp. To achieve this, manual focus is best, and live view can help you check that you've got it perfectly right.

'If you fill the frame with your flower, you won't have to worry about backgrounds'

7 Viewpoint Think about your viewpoint. It's

often good to get down to a flower's level and approach it from the side, rather than looking down on it from above. Look through your viewfinder as you move around – every tiny change in your angle to the flower will affect the image radically.

6 Consider your backdrop

If you fill the frame with your flower, you won't have to worry about backgrounds. But if there is a background in your image, make sure it isn't distracting. Avoid bright colours, especially if your subject is a paler colour. If the background is messy, use a wide aperture to throw it out of focus.







Now a pillar of the art establishment, Parr has sparked a lot of controversy

artin Parr is so influential today, he's inspired an adjective:

Parr-esque. His unique brand of social satire and wry observation, often focusing on mass culture, British idiosyncrasies and the tourism explosion, is widely emulated. So why has he turned out be such a seminal artist?

Parr was born in 1952, in Surrey, England, the son of a civil servant. While not particularly academic, Parr was passionate about photography and went to the then-Manchester Polytechnic to study the subject in 1970. During this time, he became very interested in the new wave of documentary and 'real life' photographers emerging in the USA - Garry Winogrand, Lee Friedlander and other key influencers featured in the magazine Creative Camera. Parr also admired the work of British photographer Tony Ray Jones. Unlike earlier social documentary photographers

in the humanist tradition, Parr was less about changing the world and more about recording its banalities, contradictions and crassness.

Birth of the Parr-esque Parr really found his voice in the 1980s, using his trademark Plaubel Makina camera, wideangle lens and flash to capture detailed, strongly lit images in colour - something quite adventurous for a serious documentary photographer at the time. The new affluence of the Thatcher era proved to be fertile subject matter, along with the dogged survival of the British class system and food as a signifier of social change. The Last Resort (1986) is a classic example, prompting accusations that Parr, who came from a privileged background, was belittling his working-class subjects. Parr aficionados strongly refute such claims, pointing out his equally merciless, Hogarthian

depictions of middle and upper-class pretence. The arguments became heated, and Parr managed to scrape into Magnum Photos by one vote. 'Magnum photographers were meant to go out as a crusade... to places like famine and war,' he later reflected. 'I went out and went round the corner to the local supermarket because this to me is the front line.'

All this is water under the bridge now, and Parr is very much part of the British art establishment. He isn't a parochial photographer, though, and travels all over the world, chronicling the rise of mass tourism and social change, or just having fun. He is also an avid collector of photo books and opened an eponymous foundation in his adopted home town of Bristol, with the goal of supporting up and coming photographers. The Parr brand goes from strength to strength.

SIGMA

A compact body and top performance in one complete package. Introducing the light, new ultra-telephoto zoom that goes beyond the ordinary.



C Contemporary

100-400mm F5-6.3 DG OS HSM

Dedicated lens hood included. Available for Sigma, Canon and Nikon AF cameras.

Made in Japan



Mount Converter MC-11 Use your SA or EOS mount SIGMA lenses with a Sony E-mount camera. Sold Separately.





Sigma Imaging (UK) Ltd, 13 Little Mundells, Welwyn Garden City, Hertfordshire AL7 1EW | Telephone: 01707 329 999 | Email: sales@sigma-imaging-uk.com Website: www.sigma-imaging-uk.com | Twitter: @SigmaImagingUK | Facebook: facebook.com/sigmaimaginguk

Spring forward

The dream-like plant images popularised by **Sandra Bartocha** are often copied but never bettered. **Keith Wilson** hears how she is looking for a new direction





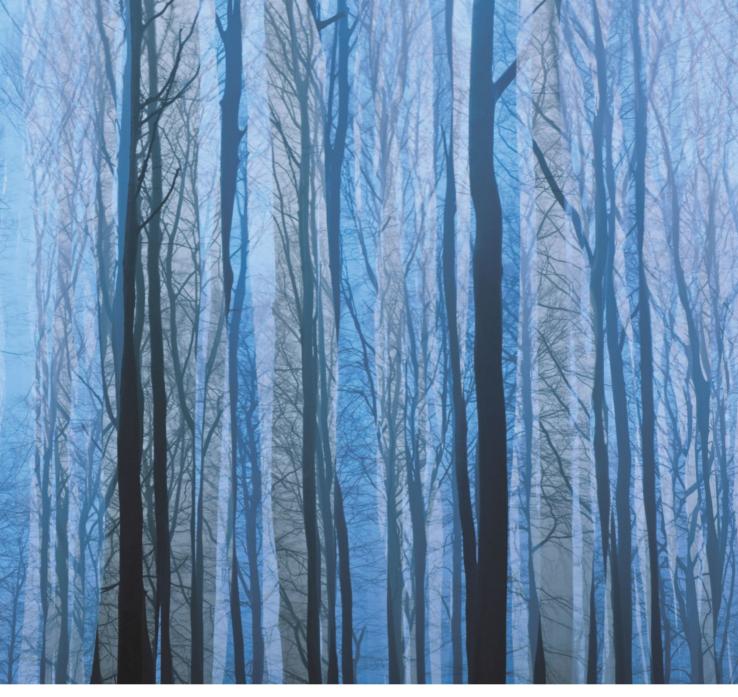
here is probably no better example of the photographic potential to be realised from one's local area than the work of Sandra Bartocha. Nearly seven years after her breakthrough success as a category winner in the Wildlife Photographer of the Year competition, Sandra continues to make frequent trips to the shores of her local lake in Mecklenburg, northern Germany, where she took her prize-winning picture of snowdrops against the golden surface of sun-reflected water (see above). Much has happened since then: exhibitions, judging duties, the publication of LYS - arguably one of the best nature photography books of the decade - workshops and yet more awards, but still Sandra returns to her local lake for inspiration, particularly during

spring, her favourite time of the year. 'I think that everybody needs a place where he or she feels at home and where they are constantly returning,' she says. 'I have this little multi-visual show and people who grew up with me in my home town say it's funny because 80% of what's shown is taken at this one lake shore.' It's February when we speak and although Sandra's schedule is taking her to the rugged shores of Lofoten in March, she is looking forward more to shooting the early spring flowers at home. 'From March you can find all kinds of different flowering periods because the limestone is facing west, so you always have light and you always have water in the background and you have all the spring flowers, so I return every year with the aim of producing images that I have not done before.'

Above left: Sandra's beautiful image of snowdrops against sun-reflected water wowed the judging panel of Wildlife Photographer of the Year 2011 **Bubble bokeh**

Another key component of Sandra's success in 2011 was her technique and choice of lens. Explaining how she took her prize-winning image, she said: 'I took an in-camera double exposure, with one sharp exposure and one much softer one, so the scene would appear as dreamy as it felt.' Her lens choice was unusual at the time, a Meyer Optik Görlitz Trioplan 100mm f/2.8 macro, also known as the 'soap bubble' lens because of the bokeh it generates. The combination of this 15-aperture blade prime lens, based on an early 20th century design, and Sandra's soft focus technique has inspired hundreds of plant photographers. Many have mimicked her style, some successfully, so does she feel flattered by this, or has it become an obstacle to her future path?

PICTURES © SANDRA BARTOCHA



'On the one hand it is flattering,' she says, 'but on the other hand it's definitely an obstacle because I see people are getting tired of that style.' To support her observation, she cites the response of fellow judges to entries clearly influenced by the technique she popularised. 'I've been on many competition juries judging plant categories and as soon as there's a flower with bokeh background they say, "No! We've seen that." I'm regretting it a bit because I still think that they have their value and they are still beautiful.' Fortunately, the views of her fellow competition judges have not put her off entirely, although she does admit to using the Trioplan 100mm 'just 2% of my time now'. Sandra didn't feel she was inventing anything new at the time, she was simply finding a way to convey the emotions she felt while enjoying the

Above: A triple exposure of a beech forest. The fog helps to create an interesting pattern in the overlay outdoors and drawing inspiration from her surroundings. 'I never saw myself as a role model in any kind of photographic journey; it's more like I'm happy to do it and I'm still happy at the results, but my inner self is not progressing enough.'

An intimate journey In 2016 Sandra and fellow photographer Werner Bollmann published LYS: An Intimate Journey to the North, the culmination of four years of dedicated coverage of the landscape and natural history of Scandinavia from the pastures of Jutland in the south to the frozen frontier of Svalbard in the Arctic. In total, Sandra and Werner spent around a year on and off the road, attempting to capture the essence of these landscapes in all their moods, in every season, up close and from

afar. The book was widely acclaimed and the exhibition continues to tour across Europe. Shooting images for LYS represented a challenge for Sandra as she had to adapt to a style that didn't immediately reflect her natural instincts. She explains: 'With LYS, we tried to go away from the fancy stuff a bit, not playing around too much, not making double exposures and moving exposures (intentional camera movements), but to go back to the classic way of seeing the world and producing timeless pictures. I really liked that approach, to just go back to the core of what is out and to try to capture the essence of what's in front of you. I really do enjoy both ways of seeing the world, it's just that they don't fit together too well.'

After four years devoted to such a demanding project, and

SANDRA BARTOCHA

the logistical challenges of editing images for a book, exhibition and multimedia presentation, Sandra admits to struggling to find a new sense of purpose. 'I was in the midst of this project and I was very focused. Now it's finished, I'm a bit lost,' she reflects. 'I know what I have to do, I know when I'm out I can create nice pictures, but people seem to be repeating all the same stories, again and again. I just don't want to add to stuff that's been done before.'

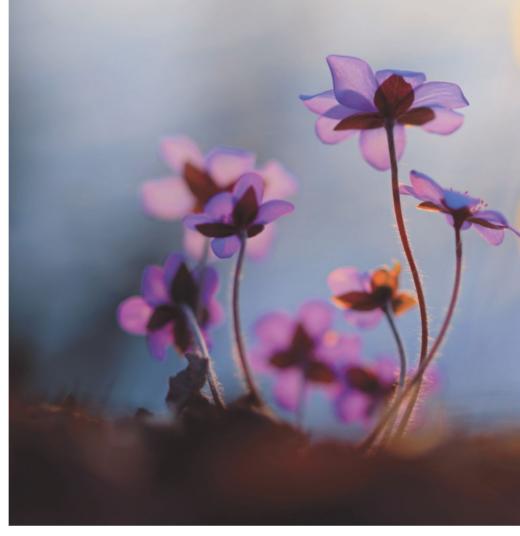
Managing expectations As much as Sandra likes being outside photographing early spring flowers for no other reason than to enjoy the moment, she is conscious of the expectation of others as they look to see what she will be showing next. 'I've been invited to a landscape conference and I'm currently preparing what I'm going to talk about. Even this makes me think, what is it I'm about right now? What do I stand for, what are my goals, what's most important? People still refer to me as a plant photographer - I enjoy it, but when I started it was not as popular as it is these days, and you can't relax on the status of the past; you have to get going and produce new stuff.'

All that said, Sandra says there has been another project taking shape and now perhaps she has the time to develop it further. She reveals: 'I wanted to do a book about the seasons. I've been

LENS CHOICES



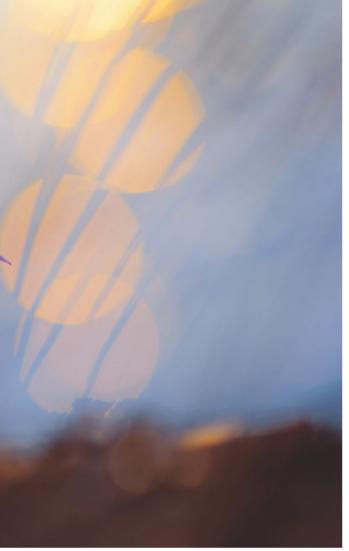
TODAY, Sandra only occasionally uses her Mever Optik Görlitz Trioplan 100mm f/2.8 macro lens. She is more likely to reach for the Micro-Nikkor 105mm f/2.8 macro, the Nikkor 24-70mm f/2.8 zoom, or one of three tilt-and-shift Nikkor lenses - 24mm f/3.5, 45mm f/2.8 or 85mm f/2.8 - with her recently acquired Nikon D850. 'The 85mm tilt and shift macro lens has a magnification factor of 1:2, so Sandra uses it for images of forest floors or stones, where she can move in close without compromising on sharpness. Her next favourite lens is the Nikkor 80-400mm f/4.5-5.6 zoom. 'This is a very versatile zoom,' she explains. It's very good quality for the flexibility I get because I like the compression of 400mm, even for flower and macro work.

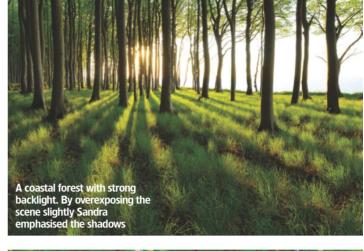




planning this for many years and I already have a foreword and some poems by people prepared. I have to find the time to edit the pictures and make it into a little book.' After the epic undertaking of *LYS*, a 'little book' seems like a step in the right direction for the attainment of new goals. It's also easier to Above: Sandra loves to create texture by blending multiple frames together. This image of a rowan tree comprises 10 exposures accommodate with her need of making regular returns to familiar locations, subjects and themes – her local lake, spring flowers and the seasonal changes on the woodland floor. 'It's just fascinating how the seasons play within a wood,' she says, 'With different undergrowth from time to time, it just changes so

SANDRA BARTOCHA







much. Nature photographers shoot during the spring and autumn because of the colours and then maybe in winter when there's snow, but summer is often neglected. It's absolutely fascinating to be in a forest in the summer because you understand why nothing is growing in a beech forest, for example, it's pitch dark in there.'

Favourite flower

But there is spring to enjoy first and Sandra knows exactly which flower she will be looking out for by the lakeside in Mecklenburg: a little purple perennial called Liverwort. Common all over central and northern Europe, Sandra has photographed it hundreds of times already. 'It's my favourite flower,' she admits. 'It's so over-photographed but it's just so beautiful and elegant and for me it marks the start of spring. It's the first flower that appears in our forests, and I have to photograph it every year.'

It now seems a good time to ask her about the steps she follows when making one of her dream-like photographs, and for her advice to anyone who wants to improve their macro photography. 'I think first you need to find the right spot,' she

Above: It was the light dancing in the background that fascinated Sandra when she was shooting these liverleafs



Sandra Bartocha was born and raised in Mecklenburg, Germany, and graduated in media studies and English from Potsdam University. She is vice president of the German Society of Nature Photographers (GDT) and editor-in-chief of their GDT magazine – Forum Naturfotografie. Her book, LYS: An Intimate Journey to the North (with Werner Bollmann) can be ordered here: www.lys-publishing.

com/en/

replies. 'You have to find a spot where you can be flexible with light and with the background. Finding the right spot includes paying attention to which plant you are photographing. If you have a forest floor of anemones then look for the one that is intact, that's not beaten up, hit by the rain or nibbled by an insect. Then, of course, nothing beats getting down as much as you can, especially for macro work with very small subjects, getting really close and almost under the ground.'

So you've got to be prepared to get dirty, then? I ask. She laughs: 'Yeah, you have to get dirty, that's for sure! So, wear clothes that make it easy for you to get dirty!' She continues: 'Then pay attention to the light and the composition. I'm always seeing this in workshops: people are not paying attention to the smallest things, because with macro every millimetre you move changes the picture tremendously. Look for how the light is hitting the subject and how the composition is changing.'

Tripod? What tripod? When it comes to making a list of the macro photographer's essential kit, a tripod is mentioned virtually in the same breath as a high-quality macro lens. But here again, Sandra is happy to break with convention. 'I'm not using a tripod for this kind of work because it's too clumsy to change the composition,' she declares. 'Also, I'm destroying more of the surroundings I'm in because I'm trying to adjust it, so I think I'm much more flexible working without these things and especially with the high ISO capabilities now available. Even if it's getting dark you can boost the ISO to take the picture without any stabilisation.'

She makes an exception for landscapes, however, when she will use a tripod '100%' of the time. But she is quick to acknowledge that there is more to macro photography than her own indomitable style. 'But, of course it depends on the direction you go with your macro work. If you want to do all this focus stacking then of course you need a tripod, but for my kind of photography where I'm really focusing on the light and the emotion and limited depth of field, no tripod is needed and it's much easier to compose with a really nice background without [one].' In other words, find your location, subject and background, get down low, and get dirty.

ADVERTISEMENT FEATURE



Why I swapped **flash** for **LED**

Celebrity photographer **Mark Mann** explains why he ditched his strobes in favour of the Rotolight Anova PRO 2

ew York-based celebrity and advertising photographer and film-maker Mark Mann owes his career to a stranger he met on a train from his childhood home in Glasgow when he was still at school. 'I was on my way to the Edinburgh Festival and met an older lady - the most beautiful older woman in the world,' he recalls, 'She was probably about 18.' They got talking and it turned out that the girl was studying photography at Manchester Polytechnic. 'I got back from the festival and decided I was going to go to Manchester Poly too, so I could do

photography and see her. True story! Although there was no romance, I did actually see her there and we became friends.'

Today Mark spends his time working with A-list celebrities like Benedict Cumberbatch and Martin Scorsese, and because he shoots both stills and video he needs one set of lights that can do both.

Quality and versatility 'I used strobe for a long time for my stills photography but was always interested in the idea of being able to use the same continuous lighting for everything,' he says. 'I'd tested a few continuous lighting panels, but I never really liked

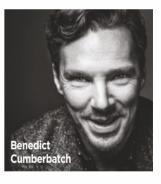


the feel or the versatility of them until I discovered the Rotolight Anova PRO.'

The Anova PRO (and now the Anova PRO 2) is the big brother of Rotolight's awardwinning trio of lights, which also include the AEOS and NEO 2. They are the world's first continuous LED studio lights to incorporate High Speed Sync flash (HSS) with no recycle time, and electronically adjustable colour temperature.

As well as the practicality of having lights that are versatile enough to be used for multiple purposes, Mark also likes the quality of the illumination that the Rotolights produce. 'I shoot exclusively with Leica, so my shots are very, very sharp. I was looking for a light that would keep the detail but be less sharp in terms of lighting. Friends had suggested continuous lighting, but I never liked HMI's as they didn't give me enough light, and I don't like lights that get hot. With the Anova PRO there's something about the "slowness" of the light mixed with the quality of the Leica; its absolutely beautiful. It gives you a filmic feel.'

A key feature of the Rotolight range is the ability to dial in a precise colour temperature, **Gillian Anderson**



and use that for either flash or continuous lighting. 'With strobe I'd put a warming or cool filter over the flash, but that isn't necessary with these. Often when you're using strobe you're not seeing what you're gonna get when you look through the viewfinder, and you're anticipating what the shots are going to look like. So to actually look through my screen and know that this is how the colour and light are going to fall allows me to get to where I need to be a lot quicker.'

A beautiful workhorse Mark now exclusively uses the Anova PRO 2 and smaller AEOS for all his work, and finds that they have improved his workflow, especially in situations when he's shooting





Alan Cumming



Geoffrey Rush



Martin Scorsese

Anova PRO's joined together), and it was incredible. But I do a lot of rim lighting too and it's really nice putting three on top of each other.'

What impresses Mark the most is the quality of the engineering. 'The reliability and quality of a product are very important to me and the Rotolights over the last couple of years have been incredibly reliable. They've never broken, and I'm not exactly gentle with my gear. Rotolight also has fabulous customer service if I have any questions.'

portraits on location at film festivals. 'At these events I'm working in a fairly confined space and have a really high turnover of people so have to work fast, and Rotolight has been perfect for that. What's fantastic about the LEDs is that they don't give off any heat; so people don't come in and start sweating within seconds."

In Mark's business it also helps that Rotolights are striking to look at. 'When you shoot people who haven't been in a studio much then it's all new to them and they

are impressed. But the type of people I shoot have seen it a 100 times, so having something different like the Rotolights - which are beautiful to look at - is great. People come in and go "Wow, what's that?" and it creates a conversation. At the Sundance Film Festival I photographed a lot of directors, and they were very interested in the lights.

Mark usually uses three or four Anova PRO 2s, but the setup varies. 'I'm photographing a lot of different faces, types of people, skin tones, ages, etc.,

often very quickly. One light setup doesn't work for all. You may have a woman of a certain age, so you need a softer light with not too much side light across her face.

'But then if you have someone with a very interesting face and you want to show that, you can move the light to wherever you want it to get the desired effect. Being continuous they're easy to set up. I tend to use a fill, key and shadow fill. But I love the fact you can join them together. At Sundance I used the Anova Hex Ring (seven

MARK'S KIT

Mark has been using the Rotolight Anova PRO for a couple of years (and now the Anova PRO 2) but recently added the new, smaller AEOS to his kit. 'It's superlight and the handles make it really great for location work,' says Mark. His cameras of choice are the Leica S medium-format system and Leica M240. 'The results from Leicas are incomparable to other brands,' he says. 'My favourite camera though is a 1940's Graflex Super B that I

call Meredith. I love using it as it slows you down, shooting one 4x5 at a time."

For more information, visit

www.rotolight.com



Rotolight Anova PRO



Email ap@timeinc.com and include your full postal address. **Write to** Inbox, Amateur Photographer, Time Inc. (UK), Pinehurst 2, Pinehurst Road, Farnborough Business Park, Farnborough, Hants GU14 7BF

LETTER OF THE WEEK

Josh has achieved a lot sin taking up photography

Josh's story

Thanks for the excellent feature 'Photography can save your life' (AP 24 February), specifically the part on Matt Doogue and his macro work. Matt has been an inspiration for me and Josh, my 15-year-old son, for some time and he has given tremendous support to Josh who suffers with Tourette's syndrome.

Josh started wildlife photography with me about four years ago and his Tourette's symptoms were significantly reduced while he was using the camera. It all started with having an image shown on BBC's *Springwatch*. This led us to enter the 2016 BWPA where he was highly commended.

We entered him into the 2017 RSPCA Young Photographer Awards where he won both 3rd place and the overall 1st place in the 12-15 category. He has spoken and received online support through social media from Matt, and seeing how others cope with mental health issues too is great for him to see.

Josh has set his heart on photography as a career and his school wholeheartedly supports him: he has galleries displayed in the school and is enrolled on a course where his photography will be used to gain his GCSE. His Instagram account, which he created and promoted by himself, has over 1,280 followers.

Josh also received a grant from Tourette's Action to help fund equipment for wildlife photography. He has been featured in local magazines and local newspaper articles, and recently took part in BBC Radio 4's Tweet of the Day segment (about short-eared owls) – his details were passed to the BBC by our local wildlife trust, who we didn't even know were aware of Josh. **Lee Myers**

Amazing work, Josh. Do stay in touch and let us know of future successes – Geoff Harris, deputy editor



Printer feature feedback

Your review of an Epson printer (AP 3 March) reminded me of my experience with my Epson P600 compared with my general use Brother printer/scanner. If the Brother has a blocked nozzle (very rare) the nozzle clean function asks which colour hasn't printed correctly and then cleans only that colour's nozzle, thereby avoiding wasting the other three inks.

The P600 purges all eight colours even if only one nozzle is blocked. I think is another Epson trick to make more money. I can see no reason why Epson, who now claim to be environmentally aware, could not do the same as 'little' Brother and issue a firmware update to correct this seemingly criminal waste of ink plus the extra tanks and packaging that it causes. And let's not forget the cost! **Clive Pearson**

Isn't it about time that printer manufacturers like Canon, Epson, HP etc were brought to book over the extortionate cost of their inks? In his review of the Epson XP-15000 (AP March 3) Matthew Richards revealed that even Epson XL cartridges offer a measly 10ml of ink which costs an eve-watering £1.80 per ml. Even the inks supplied with the XP-15000 are low capacity 'set up' cartridges which began running out after Matthew had produced only a few prints. I belong to a camera club with 20 members yet only three own an inkjet printer. The rest are frightened off by the crippling costs of running one. I challenge Canon or any other printer manufacturer to break down the costs of producing their inks and justify the sky-high price they charge for them. Photographers deserve to know whether 'liquid gold' - as the inks are flippantly called – is one of the components that Canon, Epson and co use in producing them. Their prices certainly suggest that's the case. **Mick Bidewell**

Thanks for these comments. Ink pricing remains a sore point for many readers, so we have passed your comments on to Canon and Epson and will let you know their response. We are also planning a feature on how to cut your printing costs while still getting great results – Nigel Atherton, editor



Ian Pratt LRPS sent us his image of a goldfinch, lit only by natural light

Winging it?

I appreciated the article by Andrew Fusek Peters (AP 3 March) about bird photography using flash, and his technical skill. However, my concern is that all the photographs look as though they have been taken at night. I prefer photographs which show the birds in their natural habitat using fill-in flash if necessary but ideally using natural light. As far as I am aware most birds are not flying at night but are roosting somewhere safe.

l attach one of my photos of a goldfinch which in my opinion is much more natural than the one shown in the article. **Ian Pratt**

Each to their own, but we'd argue that bird photography can benefit from a variety of approaches. Do other readers feel the same way or have you put Andrew's tutorial to good use? – Geoff Harris, deputy editor

A Minor point

Congratulations on the 24 February issue. AP continues to be a journal of originality and substance in the world of photography; in particular because of the feature on mental wellbeing. References were made to Cartier-Bresson and others. Your readers might also like to know that the influential American photographer Minor White often resorted to the I Ching, the ancient Chinese system of divination, in connection with his work. **Peter McKenzie**

Thanks, Peter. I do indeed know the work of Minor White, a great photographer and teacher, who was also influenced by Zen Buddhism. *The Practice of Contemplative*

MICROSD CARD. NOTE: PRIZE APPLIES TO UKAND EU RESIDENTS ONLY

SAMSUNG EVO PLUS

ETTER OF THE WEEKWINSA:

Photography by Andy Karr and Michael Wood is a great book to read if you are interested in this subject, or The Zen of Creativity by John Daido Loori - Geoff Harris, deputy editor

Politician's answer

Regarding the letter from Roger Fox, replied to by Geoff Harris about memory cards (AP, 3 March). I did not write 'answered by' because the direct question was not answered directly. Perhaps the deputy editor has been watching too many sessions of Prime Minister's Question Time? The question was - is it better to fill up a memory card before deleting all the pictures or is it ok to delete pictures regularly from the beginning of the card without causing damage to the card? I would like an answer to this sensible question because each time I load photographs from my camera to my computer and then to my back up external drive, I delete them from my camera. **Lionel Bailey**

I can honestly say that is the first time I have been compared to Mrs May! Here's a fuller answer to clear it up. Flash memory is near-impossible to wear out, so it doesn't really matter. Theoretically it's marginally preferable to fill the card each time before reformatting, but practically it's usually preferable to start with a blank card before a new shooting session. AP has found that SD cards usually physically break before suffering from memory failure, so do handle them sensibly - Geoff Harris, deputy editor

Gursky groan

I was reading AP 17 February. It had a wonderful landscape with a magical waterfall on the cover. Being a landscape photographer, I was excited about the content, and on opening AP I saw 'Online Picture of the Week', by Rvan Kuhl, a magical monochrome of simplistic form, and thought that was something I would like to create. The magic stopped on the next page, when the 'Big Picture' was Andreas Gursky's 'Rhine II'.

I had just seen two good photographs which inspired me, but could only give 'Rhine II' blank looks. I asked my 11-year-old daughter, a keen photographer, what she thought. Her response was also blank looks. I work hard to create an image. I am not an artist but take an artistic approach. and for me photography lies in its own place, between art and science. Gursky is an established artist, his photograph sold for £2.7 million, and good on him; does this mean it is worth the money it went for, or has he found a nice little earner in the 'art world'? In the words of Ansel Adams, 'There are always two people in every picture. the photographer and the viewer.' **Steve Smith**

I think the answer is in your last sentence - enough viewers enjoy and value Gursky's work for it to be able to command that kind of money. Big bucks aside, landscape photography can suffer from rather formulaic and predictable approaches, so we say vive la différence, and Gursky's current exhibition at the Hayward Gallery is going down a storm. Over to other readers for comment! - Nigel Atherton. editor



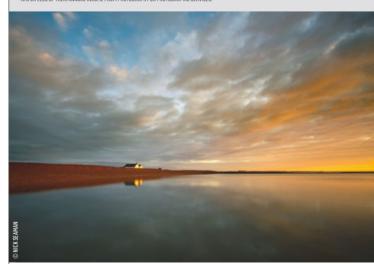
The UK's oldest and most prestigious photo competition for amateur In association with photographers is

Amateur Photographer of the Year Competition

£10, **OF SIGMA PRIZES TO BE WON**

FOR THE second year running AP has teamed up with Sigma and Photocrowd to bring you more than £10,000 of Sigma prizes and an easy-to-use portal that makes entering the competition straightforward. APOY is open to amateur* photographers from around the world.

*FOR THE PURPOSE OF THE COMPETITION, THE DEFINITION 'AMATEUR' REFERS TO A PERSON WHO EARNS 10% OR LESS OF THEIR ANNIAL INCOME FROM PHOTOGRAPHY OR PHOTOGRAPHIC SERVICES



Round One **Best of British**

The first round of APOY 2018 is Best of British. From castles and seaside piers to country fairs. Beefeaters and fish & chips, the culture. people and places of Britain offer plenty of scope for varied and unique imagery. In this round we are looking for images that communicate British-ness in all its forms.

YOUR FREE ENTRY CODE

Enter the code below via Photocrowd to get one free entry in Round one - Best of British

AP0Y32594581

TO ENTER VISIT WWW.AMATEURPHOTOGRAPHER.CO.UK/APOY



estminster naus of Exclusively... Nikon

Grays of Westminster

DEAL

Nikon

ER

40

40

Nikon

AUTHORISED ALE

Tel: 020 7828 4

0

F

40

"Grays of Westminster has enjoyed many notable achievements over the years and has the distinction as the nation's most respected camera store." – Dan Lezano, Editor, Digital SLR Photography magazine



SPECIALISING IN THE EXCEPTIONAL

NIKON F3/T

Nikon introduced a titanium version of the F3, the F3/T, in 1982 to emphasize its professional status for a more robust and durable camera. All the usually vulnerable parts are made of titanium and it was supplied with the titanium DE-4 HP (High Eyepoint) type finder. Initially the camera was available in a champagne coloured finish, although a less conspicuous black version was offered later. The camera can be identified by the addition of a 'T' after the F3 logo and its serial number is prefixed with a 'T' otherwise all specifications were identical to the standard F3HP, except for its weight which was reduced by 20g. The transparent display case for both models was only available in Japan. Both the

black and champagne finish are available at Grays of Westminster. Price: $\pounds 5000.00$



TO ORDER TELEPHONE 020-7828 4925

Lens not included.











Join Club

Cambridge Camera Club Volac Park, Cambridge

This week we focus on a thriving club in the university city

When was the club founded?

Founded in 1902, Cambridge Camera Club is one of the oldest photographic societies in the UK and the biggest in East Anglia, with 200 members.

What does it offer new members?

It offers weekly meetings with speakers and competitions, plus monthly meetings for seven different special-interest groups. There are groups for portraiture, digital techniques and new members. Aperture is for those interested in personal projects, another group is external exhibitions or distinctions, while the Wednesday workshop is for practical sessions. Finally, there's the out and about group.

Describe a typical club meeting.

Most members arrive early for a chat, followed by the main event of the evening with a refreshment break at half time. Members often stay for a short while after the main business finishes at 9.30pm.

Do you invite guest speakers?

Yes, both locals and from farther afield. Recent speakers include sports photographer Mark Pain, who spoke about his experiences of photographing the Rio Olympics, and fine-art photographer Tony Worobiec.

Apart from meetings, in what other ways do members interact?

The club's popular website includes a members-only section. It provides a lightbox for members to share images with comments, a forum for wide-ranging discussions and two online members' competitions.

Do members compete in regional and national competitions? Yes, they compete both individually and in interclub competitions, including the

Interclub Digital Competition, which Cambridge Camera Club hosts in January. It's a digital competition in which 36 East Anglian clubs take part.

Has the club, or individual members, ever won any big competitions?

We regularly win, or are in the top three places, of East Anglia Federation (EAF) Interclub competitions. In 2017 we won the EAF Print Championship and so we attended the Photographic Alliance of Great Britain (PAGB) finals, which was held in Blackburn in November.

What about national photographic society distinctions?

Many members hold the LRPS or CPAGB distinctions, with some at the next level (ARPS/DPAGB). We also have three FRPS holders and one MPAGB.

What are the most popular photographic genres among your members?

Among our 200 members we cover all the main photographic genres. Our 2017 annual exhibition, held in April, featured more than 400 print and digital images – the subjects included landscapes, architecture, nature, portraiture, street photography and sport.

How old are your members?

Our keenest cohort are members in their mid-60s, as people at that stage in life often have more time to devote to the club. However, we are fortunate to have a fair number in each of the age brackets from mid-30s upwards. For those aged 18 and under, we hold an annual competition and Young Photographer exhibition. Prizes are given for the best entries in different age categories.

What are the club's goals for the future?

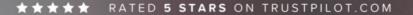
We want to maintain the friendly, open nature of the club and yet still do well in external competitions. We would like to provide more for those people on our waiting list – we have a cap of 200 on membership, so people often wait two years or more to join the club. Our annual exhibition, mentioned above, is held in a prestigious central Cambridge venue and is supported by local businesses; we seek to expand and to improve this each year.

Club essentials

Meets Mondays at 7.30pm from September until mid-May at Cambridge Rugby Club, Volac Park, Grantchester Road, Cambridge CB3 9ED.

Membership Annual ordinary membership £43; Senior (over 60) membership £37; Student £21.

Contact clubsec@cambcc.co.uk
Website www.cambcc.org.uk





SELL, TRADE OR UPGRADE YOUR USED PHOTO & VIDEO GEAR

WITH OUR FAMOUSLY HASSLE-FREE SERVICE



5 star



- customer service for grading
- **16 point system** for grading equipment



Six month warranty on used products

#MYMPB



Super fast payment for sellers



Market leading prices when buying or selling



FIVE STAR CUSTOMER SERVICE • TRUE MARKET VALUE WHEN BUYING OR SELLING • SIX MONTH WARRANTY SIMPLE SELLING AND TRADING • FREE COLLECTION • 16 POINT EQUIPMENT GRADING SYSTEM • PRODUCTS ADDED DAILY





EXPERIENCE BETTER

Buy, sell or trade at www.mpb.com • 0330 808 3271 • @mpbcom



Colleen Slater

Colleen Slater is a professional photographer and macro specialist with an interest in the smaller things in life. Her images draw attention to the ordinary, often unnoticed, things in the everyday world. Based in Brighton, she teaches photography one-to-one and gives talks on macro. Find out more at **www.colleenslaterphotography.co.uk**

Make use of shallow depth of field and selective focus for creative results Canon EOS 5D Mark II, 100mm, 1/400sec at f/3.2, ISO 200

KIT LIST

Canon Macro

Twin Lite MT-24EX You can adjust the flash ratio of each flash or fire only one of them. This provides modelling light rather than the flat light you get from a ring flash.

Lastolite umbrella

This translucent, white umbrella is placed so that sunlight shines through the fabric. It will scatter the harsh light with a softening effect that will greatly enhance your images.





Light is key to revealing intricate details of tiny subjects. Macro specialist **Colleen Slater** shares her top tips and lighting techniques

acro photography presents a unique set of challenges to the photographer. When overcome though, it's possible to create intriguing images of things that may be overlooked or unseen with the naked eye. The difficulty lies in the close subject-to-sensor distance, which magnifies the subject and results in very shallow depth of field.

To get as much of the subject in focus as possible, it's necessary to stop down the aperture of the lens. For fast shutter speeds to avoid blur caused by subject or camera movement, you need a lot of light. Opening up the aperture will let more light in and diffuse the background, making the subject stand out. The depth of field will be extremely shallow, but you can achieve unusual, creative



These 5-in-1, collapsible,

Reflector

lightweight reflectors come in various sizes. Illuminate your subject by angling the reflector to bounce light onto the subject, moving it nearer or further away to change the intensity.



Mirror

Simple 30x30cm mirror tiles can be bought in DIY shops. They are fairly robust and ideal for stowing away safely in a camera bag.

1/40sec at f/9, ISO 200

Technique MACRO LIGHTING

images by precise use of selective focus.

You can shoot in daylight using the ambient light available, introduce flash on or off the camera or use continuous light from torches, LED lights, mirrors and reflectors. The quality and position of the light are important.

Ensure you diffuse bright sunlight and the light from flash heads. Harsh light creates too much contrast, with over-bright highlights and shadows lacking detail, especially when shooting subjects with shiny surfaces. Diffusers help to eliminate reflections, softening the light to give beautiful colours and tones. I use a white umbrella attached to a small tripod to filter sunlight. Bringing well-diffused flash heads closer to the subject will also help soften the light.

Using flash

Flash allows a smaller aperture to be used, giving greater depth of field. The built-in flash on some cameras is best avoided as the light is harsh and doesn't allow enough control over the power of the flash or its direction. Also, the flash may be obscured by the lens owing to the short working distance. The flash heads of the Canon Macro Twin Lite MT-24EX flash system I use are attached to the end of the lens, which helps to avoid this problem. You can adjust the flash ratio and angle of each flash head or fire only one of them. This offers a lot of control and more modelled light than that from using a ring flash.



Fill light

Flash can be used as fill light to bring out the details, colours and textures of your subject, especially in the shadows. The trick to achieving a natural look is to balance the ambient light with the flash, and if done well, its use should be almost undetectable. First, take a shot to correctly expose the background, then introduce flash to expose the subject and alter the settings until it looks right. I usually use minus 1 or 2 stops of flash exposure compensation and set the camera to underexpose the background slightly. I find this gives the best results, making the subject stand out from the background.

Consider the background Having flash as the only light source can be especially useful when

shooting handheld. The short duration of the flash freezes subject movement, allowing a smaller aperture to be used with the optimum ISO setting for image quality. The downside is that the flash will correctly expose the subject, but the background will be underexposed and may look dark and artificial. Avoid this by keeping the background very close to the subject. I usually set a shutter speed of 1/160sec and an aperture between f/8-f/16, at ISO 100. Manual exposure must also be used, otherwise the camera will attempt to correctly expose the background using a shutter speed that's much too slow. Mastering lighting techniques is key to producing great macro shots. Experiment and you'll soon learn which techniques and pieces of kit work best.



COLLEEN'S TOP TIPS FOR LIGHTING MACRO SUBJECTS



Use natural light

Outdoors, the best light for macro photography is a bright, overcast sky where the thin cloud diffuses sunlight and acts as a giant softbox. This provides an even, gentle light that brings out texture and detail and renders colour beautifully. This caterpillar was drying out after a rain shower.



Diffuse the flash

The plastic diffusers sold to go over flash heads won't work, because they don't increase the size of the light source. Many photographers make their own using styrofoam, tissue paper and tape, and so on. A quick internet search will bring up a wealth of information on how you can make these.



Avoid a black background To achieve a natural look when using flash as the only light source, angle a leaf upwards, behind the subject or the petals of a flower to create a natural-looking backdrop. Or shoot up towards a bright sky, which will render as blue, use water as a backdrop, or try using a board/ fabric close to the subject.

Why it works

Working in strong sunlight can create light effects with real sparkle and brilliance. I submerged a white chrysanthemum in water and the oxygen bubbles formed a decorative effect on the petals. Using a wide aperture, the out-of-focus specular highlights have taken on the shape of the 100mm lens diaphragm and become part of the composition. I used coloured gels (actually sweet wrappers!) on the top and sides of the tank to act as coloured filters as the sunlight shone through them onto the petals. It took a lot of experimenting to get something that worked, but I was happy with this one.



Diffuse the sunlight

A white translucent umbrella can be easier to use in the field than flat diffusers, especially if there is a breeze. Attach this to a tripod or lighting stand; I use a Manfrotto Lite–Tite Swivel Aluminium Umbrella adapter. Angle the umbrella and place it to filter the sunlight falling on to the subject.



Use reflectors and mirrors

Use a reflector to inject light into dark areas of the subject. Silver reflects more light than white, and gold can inject warmth when the light is cool. A mirror can be placed in sunlight, angled towards the subject to reflect much stronger light; this is especially useful when the subject is in shade.



Change the light position Backlight your subject using a mirror, a powerful torch, sunlight or off-camera flash to provide a dramatic rim-light around your subject. Try side lighting to bring out all the texture on the surface of the subject and emphasise the details in the subject by keeping the background simple.





AP talks to 15-year-old photographer Ashleigh Scully about conservation, winning competitions, and making a career out of photography

When did you first become interested in photography?

When I was eight I took a trip to the Alaskan coast. I was amazed by the diversity of the wildlife and came home with the intention of photographing animals in my own backyard. Alaska is still my favourite place to visit. Wildlife has always been my focus because I love observing and recording animal behaviour. I am mostly self-taught, but have had several mentors including Henry Holdsworth and Melissa Groo.

Do you have a favourite animal to photograph?

Coastal brown bears. Ever since my trip to Lake Clark National Park in Alaska, I keep thinking back to my time watching them interact. I observed sows with their cubs, and photographed them hunting, playing and sleeping. The affection between them was amazing.

What has been your most memorable experience so far?

Some of my favourite experiences have been in the field with biologists. Two summers ago, I joined Panthera's Teton Cougar Project visiting mountain lions and studying their positive impact on ecosystems. I have also been out in the field with owl researchers studying great grey owls. Data collected from these studies is important because it helps us to understand how the species is faring.

Who are your main influences?

Many young nature photographers have influenced me: Connor Stefanison and Jess Findlay are two examples. I also consider Thomas Mangelsen an influence because he cares so much for his subjects. Melissa Groo is a friend of mine – she is a dedicated conservation photographer and has encouraged me to focus on images that tell meaningful stories. In addition, Paul Nicklen and Cristina Mittermeier are people I've looked up to for years and have been lucky enough to meet – they combine photography and science to tell stories they hope will drive positive change.

What equipment do you use?

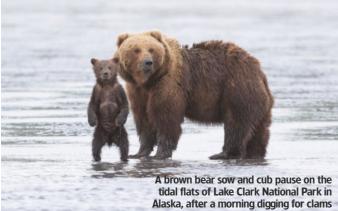
I started out with a Canon EOS 7D and gradually upgraded to other bodies that enabled me to shoot in lower light, like the Canon EOS 5D Mark III. Thanks to some media jobs, awards and print sales, I recently upgraded to a Canon EOS-1D X Mark II. I use Canon EF 100-400mm f/4.5-5.6L IS II USM and Canon EF A leopard relaxing next to its kill during an early morning game drive in Tarangire, Tanzania



500mm f/4L IS II USM lenses. Last year, I was finally able to pay my parents back for some of my lenses!

Do you have any go-to settings?

I mainly shoot in aperture priority, although I do switch to manual when I want more control. With my Canon EOS-1D X Mark II, I usually use ISO 800 or higher, depending on the light and shutter speed I require.







Why was 2017 a great year?

I was named the 2017 Nature's Best Windland Smith Rice Youth Photographer of the Year. I also won my age category (11-14) in the Wildlife Photographer of the Year awards. In addition, I was selected to take part in the NANPA High School Scholarship Program, where I learned some photography techniques from leaders in the field and got to know a lot of other young nature photographers. I did an Instagram takeover for Adobe, which was an honour, and completed my year by self-publishing a children's book to support great grey owl research.

Why do you enter competitions?

The relationships I have developed through entering competitions are worth more to me than the prizes. Getting to know people I look up to, and connecting with people my own age is very rewarding. Competitions also give me a platform to tell a story with my images, which is important to me.

What advice can you offer entrants? Prioritise shots that tell a story. Focus on conservation topics, and don't be afraid to enter something different or unorthodox. A picture that may encourage compassion for a subject, or perhaps raise conservation

issues, is always worth entering.

What advice would you offer to a newcomer to wildlife photography? Stay focused and shoot what you love. I limit my goals to species I want to learn more about. This means I can concentrate on what I feel is important, not what I think may be the best-selling print, etc.

Describe your dream assignment? I would love to go back to Alaska and work on a wolf project.

Do you plan to make a career out of wildlife photography?

I'm not sure yet. I hope that a few more years of high school and then college will help me to decide what the opportunities are. I am inspired by what some professional photographers are doing, and this keeps me motivated and hopeful that there may be something to pursue when I'm a little older. Right now, I am trying to learn more about science and animal behaviour through smaller projects to see if I can combine biology with journalism and photography in college/university.

Can photography instigate change?

Yes. I think we need to focus more on creating and celebrating images that grab people's attention and wake them up to conservation issues. Nature's Best and Wildlife Photographer of the Year are doing an awesome job of this. Some of my favourite photographers focus on storytelling and I know that they are inspiring other photographers to do the same: Paul Nicklen, Cristina Mittermeier, Brian Skerry, Steve Winter, and Brent Stirton are among them. Sometimes all it takes is a single photograph to instigate change.

Ashleigh Scully is an accomplished nature photographer with a keen interest in wildlife conservation. Based in New Jersey, she has travelled all over the US, but lists Wyoming, Florida and Alaska among her favourite destinations. Her preferred subjects include red fox, grizzly bear, and all species of North American owls. Visit **www.ashleighscullyphotography.com**.

Testbench CAMERA TEST



Panasonic's latest rangefinder-style mirrorless camera ticks a lot of the right boxes and offers some unique features, but just fails to wow Andy Westlake

For and against

Compact design is more portable than SLR-styled competitors

In-body stabilisation gives sharper results with every lens



Quiet shutter allows discreet shooting Excellent Bluetooth and Wi-Fi



Default control setup is awkward for viewfinder shooting

smartphone connectivity

ALL PRICES ARF

16:9 viewfinder is a poor match to sensor

Control dials are under-utilised

Data file

Sensor	20.3MP Four Thirds Live Mos
Output size	5184x3888
Lens mount / Lens	Micro Four Thirds
Shutter speeds	1/4,000 – 60sec mechanical 1/16,000 – 1 sec electronic
Sensitivity	ISO 200-25,600 (standard) ISO 100-25,600 (extended)
Exposure modes	PASM, Auto, Creative Control, Scene, Panorama, Manual Movi
Metering	Multiple, centre-weighted, spot
Exposure comp	+/- 3 EV in 1/3 steps via dial +/- 5 EV via menu
Contimuous	9fps with focus fixed
shooting	6fps in AFC mode
Screen	3in, 1.24m-dot touchscreen
Viewfinder	2.76m-dot equivalent LCD
AF points	49
Video	4K (3840x2160) 30p, 100Mbps
External mic	No
Memory card	SD / SDHC / SDXC
Power	DMW-BLG10E Li-ion
Battery life	900 shots (power save mode)
Dimensions	124x72.1x46.8mm
Weight	450g

experimented with making mirrorless cameras in a wider range of shapes and sizes than any other manufacturer. In addition to its central-viewfinder SLR-like designs, it has made plenty of flat-bodied rangefinder-style cameras in a large variety of sizes, both with and without electronic viewfinders. Many users felt that the much-loved GX7 of 2013 hit a

anasonic has

sweet spot, with a relatively compact flat-body design that included a tilting electronic viewfinder and tilting screen. Its replacement, the GX8, gained a fully articulated screen and larger viewfinder, but its bulky body wasn't so well-received. The mid-range GX80 essentially revived the GX7 design, but with a fixed EVF.

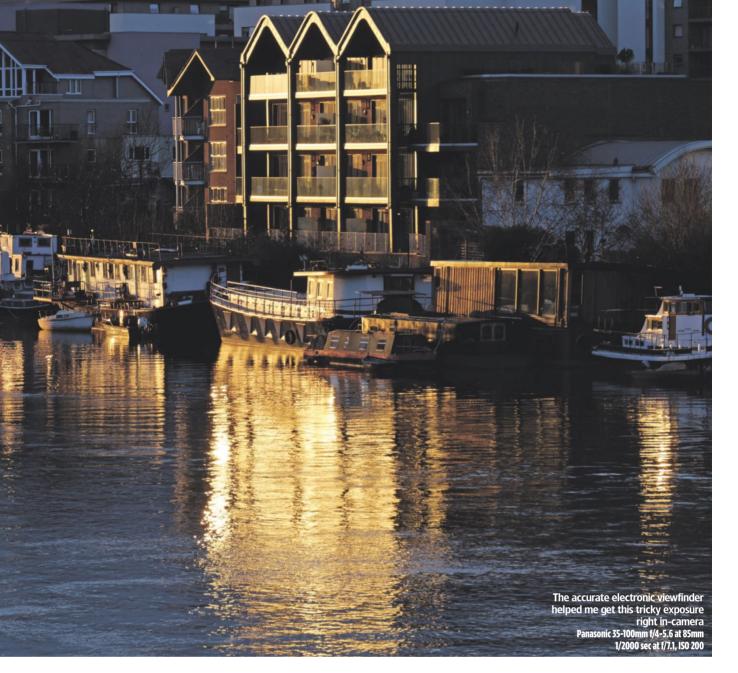
With the new GX9, Panasonic has listened to its users and made what many will see as a true



successor for the GX7. Available in a choice of silver or black versions. it's based on the GX80 body design. But it adds many of the best bits from the GX8 too, while throwing in all of the firm's latest technology. In the process, the firm has come up with an attractive little camera that should appeal strongly to enthusiast photographers. However, it does have its flaws.

Features

Panasonic has based the Lumix GX9 around a 20.3MP Four Thirds sensor similar to that used in the GX8. But it's removed the optical low-pass filter, which in principle should give slightly sharper, more detailed images at the possible expense of image artefacts such as false colour moiré and maze-like aliasing. The sensitivity range covers ISO 200-25,600 as standard, with an



extended ISO 100 option also available, but at the risk of clipping highlight detail.

Continuous shooting is slightly uprated compared to its predecessors, with the GX9 capable of 9 frames per second when the focus is fixed at the start of a burst. If you need the camera to adjust focus between shots, it's capable of doing so at 6 frames per second. The mechanical shutter offers speeds from 60-1/4,000sec, and operates with a pleasingly quiet, welldamped snick. It's supplemented by a fully electronic shutter option. which extends the speed range up to 1/16,000sec, and is completely silent in operation.

The autofocus system is similar to previous Lumix models, using Panasonic's contrast detection with Depth from Defocus (DFD) technology. The specified focus acquisition time is a decent 0.07sec, and Panasonic's usual huge range of autofocus modes is available, including face detection and pinpoint AF for homing in on small subjects. For holding focus on moving subjects the camera is now capable of tracking the entire image area in 3D, which Panasonic says should prevent objects that pass in front of your main subject from interfering with the focusing.

As with other recent Panasonic bodies, the GX9 includes the firm's latest 5-axis in-body image stabilisation. This is compatible with the firm's Dual IS system, working in concert with the optical stabilisation found in many Panasonic lenses for greater overall effect. As a result, users can expect to hand-hold at shutter speeds 4 stops slower than would otherwise be possible, without seeing image blur from camera shake.

One welcome update sees the GX9 adopting the same improved JPEG colour processing as the high-end G9, which aims to give more attractive sky colours and skin tones in particular. With updated processing and noise reduction, the firm says the camera can record more detail both at low and high ISOs compared to older models. There's also an enhanced version of Panasonic's attractive L. Monochrome mode that aims to simulate the look of black & white film. You can now add a grain effect to your shots, with a choice of different strengths. In addition to this, a cryptically named L. Monochrome D variant adjusts the tonality to bring out more detail in

darker regions of the frame. Panasonic's Power Save LVF mode comes to the GX series for the first time, too. This uses the eye sensor to power the camera down when you're not looking through the viewfinder. When it's enabled, the DMW-BLG10E battery is rated for 900 shots per charge, compared to 250 shots without. The battery can be topped up through the Micro USB port, which sits behind a cleverly designed door that springs back inside the camera body when it's opened.

As usual for Panasonic, the camera is capable of 4K video recording, although it lacks the microphone and headphone ports found on the GX8. But it gains a few new additions to the firm's useful 4K Photo mode; the camera will auto-mark its suggested best shot in a burst, and can create composite images by combining selected frames from a sequence.

Alongside the usual Wi–Fi connectivity, Panasonic has added Bluetooth for making



an always-on connection to vour smartphone via the free Panasonic Image App for iOS and Android. This brings a number of benefits; for example, you can easily use your phone as a simple remote shutter release. The Bluetooth connection can also be used to turn on the camera's Wi-Fi, either for remote control with a live view display and the ability to change almost any shooting setting from your phone. or for browsing and copying images for sharing to social media. It's even possible to do the latter while the camera is turned off and in your bag. Overall, this means that the GX9's smartphone connectivity is at least as good as any other camera on the market.

Design and build In essence, the GX9 is an evolution of the GX80, being a compact, flat-bodied design with a tilting screen and corner-mounted viewfinder. This results in a very neat layout that's just a bit more portable than SLR-shaped rivals with central viewfinders. The GX9 seems pretty well made too, with a reassuringly dense feel, but unlike the GX8 it's not weather-sealed. For that, Panasonic fans will have to choose an SLR-shaped camera like the G80 or G9.

Like its predecessors, the GX9 has twin electronic control dials. one around the shutter button and the other embedded into the camera's back. But it adds an exposure-compensation dial nested below the exposure-mode dial, and a focus-mode selector switch on the back. An array of buttons arranged across the camera's back gives plenty of direct access to the most-used functions, but they're all quite small and flush to the body, with very shallow click actions. The GX9 also features Panasonic's well-designed touch interface for changing settings and browsing though images in playback.

The addition of the exposurecompensation dial is certainly a welcome touch that's in keeping with current camera fashion. Indeed the GX9's is particularly large and easy to use, clicking firmly into place at each setting while being easy enough to set with your thumb. The problem is that Panasonic hasn't taken the opportunity to rethink how the other two dials work, so most of the time they simply share the same function. It's only in manual-exposure mode that they're properly employed, with one controlling shutter speed and the other, aperture.

It's possible to set the camera so that pressing a programmable Fn button temporarily reassigns the control dials to alternate functions. I used this to give quick access to ISO and white balance by pressing the Fn1 button, which is handily placed beside your thumb. Out of the box, this operates Panasonic's 4K Post Focus mode, which I find to be very clever, but unfortunately of little practical use.

As on many previous Lumix cameras, the rear dial can be clicked inwards like a button, but strangely this doesn't seem to have any useful function on the GX9. It seems blindingly obvious to me that this should be used to toggle between dial functions, which would make the GX9 really quick to use. Unfortunately that's not an option.

As with many recent cameras, the touchscreen is used to select the focus point, even when you're using the viewfinder. Unfortunately if you don't like this approach, there's no physical control for moving the focus point. Instead you have to press the left and down keys in turn and then use the D-pad, which is rather slow and clunky. It's possible to reconfigure the D-pad to move the AF area directly, but then you need to reassign its functions 'The smartphone connectivity is at least as good as any other camera'



CAMERATEST Testbench

elsewhere, most obviously to the customisable onscreen Q Menu.

With all these controls and user-customisability, it should be possible for most users to configure the camera to suit their preferences, as long as they're prepared to delve into the camera's settings. Fortunately Panasonic's menus are relatively clear and well laid-out, including a user-customisable Mv Menu for vour most-used items. However I can't help but think that Panasonic is using the camera's customisability as a crutch for delivering a mediocre setup out of the box. Yet again, the firm has missed an opportunity to revise how its cameras work to make them better for viewfinder shooting. It's frustrating, because the GX9 has more than enough controls to be a really likeable camera, but it lacks the ability to make the best use of them.

Viewfinder and screen If there's one feature that sets Panasonic's single-digit GX-series cameras apart, it's the tilting electronic viewfinder. In essence, the GX9 uses the same LCD viewfinder as the GX80, but in a tilting housing that lets it rotate upwards by 80°. Some photographers find this feature very valuable, but to be honest, I don't have any use for it at all. If I need to shoot at an angle, I prefer using the tilting LCD.

Just like the GX80, the GX9 uses a 2.76m-dot equivalent field-sequential LCD viewfinder with a 16:9 aspect ratio. Rather than using separate red, green and blue pixels in the panel, this displays red, green and blue images in very quick succession, to give a convincing illusion of a full-colour display. However, in certain situations, for instance when you're panning, it can display colour-tearing artefacts, where white areas flicker through the three colours. It's not a serious problem, but some photographers do find it very disconcerting.

The 16:9 aspect ratio is great when recording video, giving a wide view with a very decent 0.7x equivalent magnification. But when you're shooting stills at the sensor's native 4:3 aspect ratio, the area of the display that's actually used decreases significantly, giving a magnification around 0.6x. Compared to the GX8 this is a major step backwards. Overall I found the GX9's EVF to be quite acceptable, but it's a long way from being the best I've used.

Below the viewfinder, the 1,240k-dot LCD is very nice indeed, and can tilt up and



Focal points

The GX9's compact, flat-bodied design packs in a huge array of features

Power save mode

The DMW-BLG10E battery is rated for 900 shots per charge with power save enabled, compared to 250 shots without

46.8

Wi-Fi and Bluetooth

Panasonic's smartphone connectivity is excellent, with the always-on Bluetooth connection making it especially easy to copy images for sharing



Tilting viewfinder Like the GX7 and GX8 before it, the GX9's viewfinder tilts 80° upwards Built-in flash A small flash unit pops up from the top-plate, with a hotshoe beside it that can accept more powerful units for creative lighting

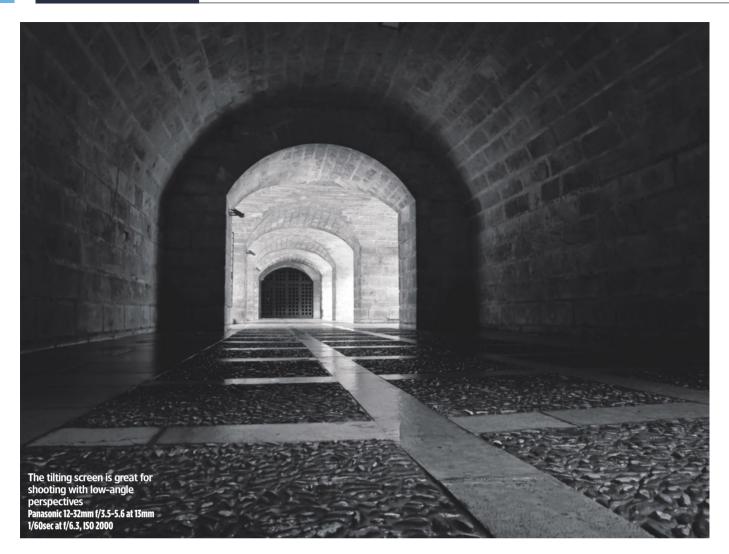


124 mm

Tripod socket

This is located in line with the lens but right at the front of the camera body, which could cause problems with some large lenses and quick-release plates

subscribe 0330 333 1113 | www.amateurphotographer.co.uk | 24 March 2018



down for shooting at unusual angles. While this design is limited in comparison to the GX8's fully articulated display, and only really useful when you're shooting in landscape format, many photographers find it a good fit to this kind of small-bodied camera. Tilting the screen now turns off the viewfinder eye sensor, which makes shooting at waist level very much easier.

Autofocus

Like other Lumix cameras, the GX9 employs a unique autofocus system that uses contrastdetection supplemented by Panasonic's Depth from Defocus technology. This exploits knowledge of the lens's defocus characteristics to determine how it needs to adjust the focus group from two AF measurements taken at slightly different positions. In essence, it tries to do a similar job to phase detection without needing dedicated focus pixels on the sensor.

With static subjects the GX9's

autofocus works extremely well, and Panasonic's vast array of focus modes gives you the tools to deal with every kind of subject. It's as quick as you could possibly need it to be, and accurate too, even with large-aperture lenses and off-centre subjects.

Once your subjects start to move, however, the GX9 reveals its limitations. It's not terrible by any means, but it does feel a little bit sluggish and less decisive compared to cameras that can exploit phase detection to measure movement. I don't think that it would be the best choice for sports and action photography, but for less-pacey subjects such as street photography, it should be just fine.

Performance

We've become used to Panasonic's cameras being very capable performers, and the GX9 continues in this vein. In everyday shooting it's quick and responsive, and I never found myself being held up by the camera's operation. Metering is quite reliable, with the GX9 generally doing a good job of avoiding losing highlight detail due to overexposure. It's not perfect though and I often found myself applying exposure compensation to lighten or darken my shots. However the viewfinder is accurate enough to make this easy with a twist of the exposure compensation dial; indeed the ability to accurately judge exposure before pressing the shutter button is a key advantage of mirrorless cameras over DSLRs.

Panasonic's improvements to its JPEG colour rendition are quite evident, with the GX8 delivering noticeably more attractive output than the likes of the GX8 and GX80. However it's still perhaps not quite as good at judging auto white balance as the best of its rivals, so I often found myself overriding the camera and switching to a preset. Alternatively, Panasonic's well-designed in-camera raw converter allows you to adjust your settings after shooting and generate a new file in-camera for sharing.

High ISO noise reduction is also slightly improved compared to previous Lumix models, giving pretty clean-looking images up to ISO 3200. Above this, though, detail suffers quite significantly, although this isn't necessarily a problem if you're only using the images on social media or for small prints. Switch to monochrome and you can get away with shooting at very high ISOs, especially if you exploit the grain setting to hide the effects of noise and noise-reduction.

Panasonic's in-body image stabilisation works pretty well, and the fact that it works with every lens you can mount on the camera is a huge practical advantage. This includes types that aren't usually optically stabilised, such as wideangles and fast primes. It means that with static subjects you can often get away with shooting hand-held at slower shutter speeds than you might expect, and therefore use lower ISOs for better image quality.

Lab results

Andrew Sydenham's lab tests reveal just how the camera performs

Our cameras and lenses are tested using the industrystandard Image Engineering IQ-Analyser software. Visit www.image-engineering.de for more details

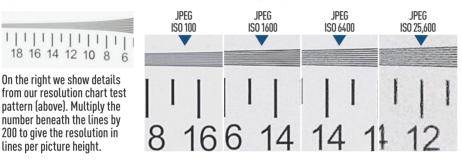


Panasonic has used essentially the same 20MP sensor that we first saw in the GX8 almost three years ago, but now without an optical low-pass filter. In principle this should give the maximum possible detail, but at the risk of artefacts such as a moiré patterning and maze-like aliasing. Both Panasonic's JPEG processing and the SilkyPix raw processor, however, take the approach of blurring away these artefacts, which loses any resolution advantage. I'd expect to be able to extract finer detail using Adobe Lightroom or Camera Raw when GX9 support is available.

Resolution

With no low-pass filter in front of its 20MP sensor, in principle the GX9 should do well in our tests. But with both the camera's JPEG processing and the SilkyPix raw conversion being a little heavy-handed with respect to noise reduction, it's a bit behind what we'd

expect. At ISO 100 it resolves a respectable 3,300 l/ph, but this falls off progressively as the ISO sensitivity is raised, to around 2,900 l/ph at ISO 1600. This drops to 2.700 L/ph at ISO 6400, before plummeting at higher settings to just 2,400 l/ph at ISO 25,600.



Noise

lines per picture height.



The crops shown below are taken from the area outlined above in red

At ISO 100 the GX9 delivers very clean images, with plenty of detail and essentially no visible noise. As the sensitivity is raised, fine detail is gradually lost due to the effects of noise and noise reduction, until at ISO 1600 low-contrast texture is substantially lost. Crucially though, colour is retained well, which means images continue to look good if you don't stare closely at the pixel level. Saturation remains strong up to ISO 6400, but beyond this it deteriorates quickly, and I'd avoid using ISO 12,800 or higher for colour images. If you shoot raw, you'll be able to tease a bit more detail out at high ISOs, compared to the camera's default JPEG processing.

JPEG ISO 1600

DURACEL

JPEG ISO 6400

JPEG ISO 100



JPEG ISO 400 DURACEL





DURACE

Verdict



In many ways the GX9 is a really fine camera. It's small and easy to carry around, and I prefer its compact design to the bulkier GX8. Yet it still finds space for plenty of external controls, allowing enthusiast photographers to tinker with their settings. It has a solid core specification, but is also packed full of useful features that you won't find anywhere else. Crucially, Panasonic has delivered on its promise to give more attractive JPEG colour rendition. So far, so good: this is a camera that I can't help but feel that I should like, a lot.

As an overall package, though, it just comes up short. The body design is nice enough, but doesn't really excel. The controls aren't set up especially well straight out of the box, especially if you like to be able to easily change settings while looking through the viewfinder. It's great to see the addition of a dedicated exposure compensation control, but it's unfortunate that Panasonic hasn't made any better use of the dials that were already on the GX80. It just feels like a half-finished job.

It's also disappointing to see Panasonic's 16:9 field-sequential EVF appear yet again, as it's a poor match to the sensor's 4:3 aspect ratio. I'd rather have a taller, but narrower EVF that gave greater magnification for stills, like that on the GX8.

Perhaps I'm being overly churlish here: after all, it's clear that the GX9 packs a lot of useful technology into a relatively small body at an appealing price. When you consider its compatibility with a huge range of Micro Four Thirds lenses, not just from Panasonic but also Olympus, Samyang and Sigma, it's clearly got the potential to sit at the heart of a very powerful, yet portable set-up. But it doesn't guite feel like it's worth the premium over the GX80, especially as it retains many of the same flaws, two years on. It's almost excellent, but surely Panasonic can do better.

FEATURES	9/10
BUILD & HANDLING	8/10
METERING	7/10
AUTOFOCUS	8/10
AWB & COLOUR	8/10
DYNAMIC RANGE	8/10
IMAGE QUALITY	8/10
VIEWFINDER/LCD	8/10



THE EISA PHOTOGRAPHY MAESTRO CONTEST 2018

This Year's Theme: Nature 1st PRIZE **€1500 & EISA Maestro Trophy** 2[№] PRIZE **€1000 & EISA Maestro Trophy** 3[№] PRIZE **€750 & EISA Maestro Trophy**

HOW TO ENTER

*

Provide 5-8 photographs on the theme of 'Nature'. All entries must be in digital format (from a digital camera or scanned film originals).

All National Maestro winners' images will also be published on Facebook at the end of June for the EISA Public's Choice competition. Prize for the winner: €1000.

UK DEADLINE: 1 MAY 2018

AP has teamed up with Photocrowd to host the contest, so to enter the competition, simply go to www. photocrowd.com/maestrouk. The top three winners will be chosen by the *Amateur Photographer* team and the results will be published in a June issue of AP. The first prize winner will win a print subscription to AP and will also go forward to the International round of the contest.

INTERNATIONAL JUDGING: JUNE 2018

The winning entries from each of the 15 participating EISA countries will then be judged together at the Association's general meeting in June 2018. The final results of the International Maestro contest will be revealed at the EISA Awards Gala on 31 August 2018.

Maestro

Contest

Photo

2018 Nature

Results will be published in the September or October issues of all 15 EISA photo magazines/websites. All three winners will be invited to Berlin at the official EISA Awards ceremony on 31 August

LENSTEST Testbench

The lens is equivalent to a 150-600mm zoom when it's paired with APS-C DSLRs, making it a good candidate for wildlife photography Canon EOS 77D, 400mm, 1/2000sec at f/6.3, ISO 800

Tamron 100-400mm f/4.5-6.3 Di VC USD

This Tamron zoom promises impressive image quality in a lightweight, compact design. **Michael Topham** finds out if it lives up to high expectations

enerally speaking, we expect long telephoto zooms to be large, heavy and cumbersome items. Last year, however, Sigma bucked this trend with the announcement of the 100–400mm f/5–6.3 DG OS HSM | C. Unlike the company's Sport and Contemporary 150–600mm zooms, which are aimed at advanced photographers, it's a lens that's designed for keen amateurs and aspiring enthusiasts who want to get close to distant subjects without having to spend a four-figure sum. It quickly became a hit with its intended audience, as well as full-frame users who liked the idea of owning a lightweight and

versatile zoom for travelling and general use.

Since then, Tamron has launched its own variant in the guise of the 100–400mm f/4.5–6.3 Di VC USD. The concept is similar to its Sigma rival, but with subtle differences between the two, it begs the question, which makes the better choice?

Features

Unlike its Sigma rival, which has a maximum aperture of f/5 at the widest end and f/6.3 at full telephoto, this lens is a third of a stop faster at 100mm and has a variable aperture of f/4.5-6.3. When you set the lens to f/4.5 and

advance through the zoom range, it closes to f/5 just beyond 135mm and f/5.6 at 180mm. Extending the lens beyond 280mm sees the maximum aperture close to f/6.3. The drawback compared to the likes of Canon's EF 100-400mm f/4.5-5.6L IS II USM and Nikon's AF-S 80-400mm f/4.5-5.6G ED VR is that it's a third-stop slower at full telephoto, but it makes up for this by being lighter and more portable. The barrel is noticeably thinner than the aforementioned zooms and it weighs around half a kilogram less, putting noticeably less strain on your body when it's carried as part of your kit or slung over the shoulder.

Precise autofocus and effective optical image stabilisation are essential to the performance of a telephoto zoom lens, and this optic provides both. In addition to having a microprocessing unit with a built-in digital signal processor to ensure excellent AF



This shot was captured at the widest point in the zoom range at the maximum aperture on an APS-C DSLR Canon EOS 77D, 100mm, 1/1000sec at 1/4.5, ISO 800

responsiveness, the lens features a separate micro-processing unit that's dedicated to vibration compensation (VC). This, combined with the fine-tuning of the enhanced control algorithm, provides a level of stabilisation that allows users to shoot with shutter speeds four stops slower than is otherwise possible.

The Tamron's optical formula isn't as complex as its Sigma rival. It features 17 elements in 11 groups as opposed to 21 elements in 15 groups. Three low-dispersion (LD) glass elements are relied upon to control optical aberrations and Tamron's proprietary eBAND (Extended Bandwidth & Angular-Dependency) coating is used to prevent reflections and produce clear, vivid images. The nine-bladed circular diaphragm closes down to a minimum aperture of f/32 at 100mm (f/45 beyond 290mm) and it has a minimum focus distance of 150cm with a maximum magnification ratio of 1:3.6.

Available in Canon or Nikon mounts, the lens accepts filters via a 67mm thread at the front. It's also compatible with Tamron's TAP-in console, which provides a USB connection to your computer, enabling users to easily update the lens's firmware when required as well as customise and fine-tune the AF and VC.

As part of the boxed contents you get a nicely profiled plastic lens hood and lens caps, but annoyingly the tripod mount is an optional extra, adding £109 to the cost of the lens.

Build and handling

The styling of the lens conforms to Tamron's premium G2 lenses. The metal barrel is presented in an attractive matte-black finish with easy-to-read lettering and numbering



'The zoom ring is rotated anti-clockwise to zoom in'

standing out in white. From the metal lens mount looking forwards, the barrel tapers outward slightly before it reaches its maximum diameter, just beyond where the optional tripod collar attaches. Ahead of this, you get a focus distance window, with large and positive focus and vibration-compensation switches offset to the side. Both switches have three settings, with the limit setting in-between AF and MF being useful when you'd like to restrict the closest focus distance to 7m and reduce hunting when shooting distant subjects. The VC switch can be set to Mode 1 to compensate for handshake related to general photography, or Mode 2 for panning with moving subjects. Alternatively, it can be turned off when the lens is fixed on a tripod or mounted to a support.

Further down the barrel there's a plasticribbed manual-focus ring that operates fluidly with just the right level of resistance for fine focusing adjustments. Ahead of it is a large rubberised zoom ring that benefits from a zoom lock off to the side to keep the focal length locked at 100mm for storage and transportation purposes. Our sample didn't show any sign of zoom creep and extended from wide to full telephoto lengths consistently smoothly, whereas its Sigma rival requires just a touch more effort at the long end of its focal range. The zoom ring is rotated anti-clockwise to zoom in and the throw of the zoom is such that it's a two-stage process to get from 100mm to 400mm. Like its Sigma rival, it can be extended quickly by pushing the lens hood



At full telephoto (400mm) I achieved consistently sharp handheld shots at 1/80sec with VC turned on

away from the camera. That said, it lacks a ridge at the rear of the hood, making it less easy to retract, especially when wearing gloves.

Its moisture-resistant construction and fluorine-coated front element provide extra reassurance when it's used in harsh conditions.

Image quality

To get a clear understanding of how the lens performs across its full image circle, it was coupled to a full-frame DSLR for our stringent lab tests. Results at the wider end of the zoom show that there's an improvement in centre and corner sharpness by stopping the lens down from its maximum aperture to f/8. Sharpness figures at the edge at full telephoto aren't as high as those recorded at 100mm or 200mm. However, centre sharpness at 400mm is impressive, peaking between f/8-f/11. Ultimately, to get the best out of the lens at any given focal length, it's best to use it at around f/8. There is the option to stop the lens down and shoot at apertures smaller than f/22, but as you begin to hit f/16 you'll start to notice a loss of sharpness due to diffraction. As the image of St Paul's Cathedral illustrates, vignetting is evident when the lens is used at its maximum aperture on a full-frame DSLR, both at wide and full telephoto lengths. Corner shading becomes less obvious when the lens is stopped down to an aperture of f/8 or beyond. On crop-sensor cameras, only the central portion of the lens's image circle is used, thus corner shading is noticeably less severe. I was very impressed by the way the zoom controls chromatic aberration, with virtually no green or purple fringes being observed along highcontrast edges. Distortion testing tells us that pincushion distortion is greater at 400mm than it is at 100mm, but this along with the vignetting at wide apertures was a one-click fix by placing a tick in the Enable Profile Corrections box within Lightroom CC.

Verdict

Its size, build quality and performance implies it'll be more of a hit with amateurs and aspiring enthusiasts using APS-C DSLRs than it will be with full-frame DSLR users. That being said, I wouldn't disregard pairing it with the latter when a smaller and lighter tele-zoom is preferable. The only thing full-frame users will want to do is apply lens corrections in post – a must to get around the issue of heavy vignetting at the corners.

Sigma missed a trick on its lens by not equipping it with a tripod collar. Tamron

hasn't made the same mistake and the optional tripod collar with Arca-Swiss compatibility is essential if you'd like to mount it to a tripod. It's \$199 more expensive than its Sigma rival with the tripod collar included, but I'd say this is a price worth paying for better support and stability midway down the barrel. Overall, it's a fine example of a lightweight tele zoom.



Data file

Price £789 Filter diameter 67mm Lens elements 17 Groups 11 Aperture blades 9 Maximum aperture f/4.5-6.3 Minimum aperture f/32-45 Minimum focus distance 150cm Dimensions

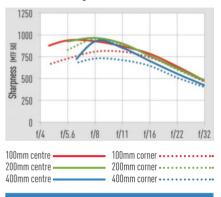
86.2x199mm Weight 1,135g Lens mount Canon, Nikon Included accessories Lens caps, Lens hood

Amateur Photographer Testbench GOLD * * * * * *

Tamron 100-400mm f/4.5-6.3 Di VC USD

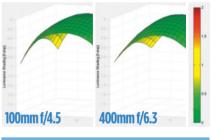
Resolution

Our Image Engineering MTF tests reveal that the lens is sharpest at maximum aperture at the wide end of the zoom. At 400mm, centre sharpness sees a considerable improvement by stopping down from f/6.3 to f/8. Corner sharpness figures at 400mm aren't as high as they are at 100mm or 200mm, but this isn't enough to put you off using the lens at the end of its zoom range.



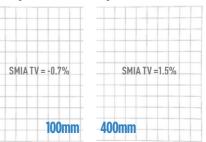
Shading

On an APS-C DSLR, only the central portion of the lens's image circle is used, meaning it exhibits less vignetting than when it's coupled to a full-frame camera. To reduce the effects of vignetting, users can stop the lens down to f/8 or remove it in post effectively by applying the correct lens profile.



Curvilinear distortion

Our tests reveal the lens exhibits greater distortion than the Sigma 100-400mm f/5-6.3 DG OS HSM | C. Pincushion distortion gradually becomes more noticeable the further the zoom is extended, with horizontal and vertical lines on the test chart bowing inwards from the edge to the centre.



lenstest Testbench

Whether you're an amateur or semi-professional

Whether you're an amateur or semi-professional photographer, we know your camera kit doesn't just stay safely locked up in your home or studio, so you need to be protected. **Why not try insuring with us?**

o you have more than one lens? What about a tripod, carry case or any additional video or audio equipment? The value of all your kit soon mounts up – but would you be able to replace it if something happened?

Cameras are designed to be taken out and about, whether to shoot your next landscape, capture wildlife or travel photos for your portfolio, or just to capture those precious family moments. Plus, if you're passionate about photography, as well as investing your time, you've probably invested heavily financially too. That's why we've teamed up with well-known insurance provider, Thistle Insurance Services Limited, to bring you the cover you may need.

> Amateur Photographer Insurance Services can provide protection

against theft and accidental damage for your camera and accessories up to $\pounds 25,000$ ($\pounds 10,000$ per individual item) plus 20 days worldwide cover included as standard, to give you peace of mind that your kit is protected at home and abroad.

In the unfortunate event that you need to make a claim, our aim is to make the process as straightforward and stress-free as possible. We even provide the option for you to hire equipment while you wait for yours to be repaired or replaced (subject to approval) – so you don't have to miss out capturing the perfect shot. Not sure? Be sure to try out our instant quote generator!

To take a closer look, call 0345 450 7203 or visit www.amateurphotographer insurance.co.uk.

Amateur Photographer Insurance Services is a trading style of Thistle Insurance Services Limited. Thistle Insurance Services Limited is authorised and regulated by the Financial Conduct Authority. LLoyd's Broker. Registered in England under No. 00338645 Registered office: 68 Lombard Street, London EC3V 9LJ. Time Inc. (UK) Limited is an Appointed Representative of Thistle Insurance Services Limited.

Accessories Testbench



Verdict

RF /

SIGMA

More than just a lens choice





Sigma Imaging (UK) Ltd, 13 Little Mundells, Welwyn Garden City, Hertfordshire AL7 1EW Telephone: 01707 329 999 | Email: sales@sigma-imaging-uk.com Website: www.sigma-imaging-uk.com | Twitter: @SigmaImagingUK | Facebook: facebook.com/sigmaimaginguk



TechSupport

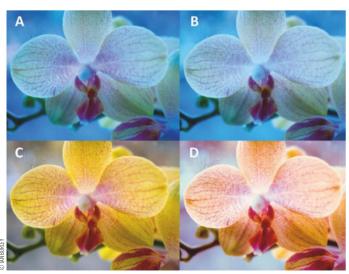
Email your questions to: ap@timeinc.com, **Twitter** @AP_Magazine and #AskAP, or **Facebook**. **Or write to** Technical Support, Amateur Photographer Magazine, Time Inc. (UK), Pinehurst 2, Pinehurst Road, Farnborough Business Park, Farnborough, Hants GU14 7BF

Adjusting white balance – raw only?

Excuse my ignorance, but I am relatively new to this and expect my question goes beyond Lightroom. I thought that one of the advantages of capturing raw images as opposed to JPEGs is that you can change the white balance. Lightroom seems to allow me to change the white balance on JPEG files as well. What am I not understanding? John (AP forum)

The white balance of an image is subjective. In simple terms, a neutral white balance is demonstrated when neutral grev areas. including white. don't exhibit an abnormal hue. In a perfect world, vou can correct the white balance by globally adjusting the colour of an image until a target grey area becomes neutral. For ease of use, you can do this by clicking a pointer on a target area in the image. The pixels covered are then sampled and analysed, and the colour channels adjusted accordingly. As you point out, this will work for both raw and JPEG images. Lightroom is no exception. The big advantage of

correcting white balance in raw files is that you get a more accurate result. See the pictures of the orchid bloom here. I shot the pictures in raw and JPEG at the same time, deliberately in daylight with the camera set to tungsten light colour temperature. Both the unadjusted raw file (A) and JPEG version (B) have, as you would expect, a blue cast. But look what happens when the same target area was used to correct the white balance. The raw file produced a natural-looking result (C), while the JPEG (D) colours are wrong. This is because the colour channels in the raw file are still discrete. They can be adjusted independently at the pixel level. With JPEG, the pixels are made up of colours that have already been mixed from the separate channels, making overall adjustment much less consistent. My example is an extreme one to demonstrate the point. Fortunately, this inherent inconsistency is less obvious where the white-balance error is not so extreme in JPEG images. So ves, you can correct white balance in JPEGs, but beware of inconsistencies compared to correcting it in raw files.



Correcting white balance in a raw file is more accurate compared to a JPEG

Panasonic lens with an Olympus camera

I have bought an Olympus OM-D E-M1 Mark II. Could you tell me if my Panasonic Leica 100-400mm lens will work with this camera?

This is a slightly curious question, as one would expect that you have tried the lens with your new camera body. The simplest answer I can give is yes, but with a small caveat. The Panasonic Leica 100-400mm is a Micro Four Thirds lens and, by definition, is compatible with your Micro Four Thirds Olympus OM-D E-M1 Mark II camera. However, although both are designed to operate in dual-IS mode, whereby sensor-shift in-body image stabilisation (IBIS) works in tandem with the lens optical image stabilisation (OIS), Olympus and Panasonic have independently developed dual-IS systems that are not compatible. With telephoto lenses, optical

stabilisation is usually more effective than in-body IS, so it's best to keep the lens's IS switch set to On. There's no need to turn off the in-body stabilisation, as the E-M1 Mark II will do this itself.



With long telephotos OIS is more effective than IBIS

Flashing Steady Shot icon with exclamation mark

In July I purchased a Sony Cyber-shot RX10 III, as I found that lugging around the 600mm lens for my Nikon camera was difficult on holiday. I am really pleased with its performance, but have noticed recently that the Steady Shot icon is constantly flashing. As I am due to go on a holiday of a lifetime to Costa Rica in the near future. I am concerned that there may be problems which could affect my ability to take some amazing shots without them blurring. Sandra Talbot

It's more than likely that your recent use of the RX10 III camera, when you noticed the Steady Shot warning symbol, was under conditions where there wasn't adequate light to ensure a fast enough shutter speed, therefore, risking camera shake blur. Your question was received in early 2018 - in the middle of winter. when the days are usually darker than a typical July day. A simple way of checking to see whether my hunch is correct is to point the camera at a bright light. The Steady Shot warning should then go away. If it remains, double check the camera settings and try again. If the Steady Shot icon continues to flash, however, then you will need to consider getting the camera serviced.

Q&A compiled by Ian Burley

Subscribe from just £24.99*

ENJOY THESE FANTASTIC SUBSCRIPTION BENEFITS:

- Never miss an issue
- Enjoy the luxury of home delivery
- Get exclusive rewards for subscribers every month. Join Rewards at amateurphotographer.co.uk/rewards

Amateur

Shoot

he stars

Last chance this year to capture the **Milky Way** or take stunning **star trails**

Bird photo masterclass

Nikon D850

e the most

SAVE UP TO <u>35</u>2

0330 333 1113 Quote code: 14AW

Monday-Saturday from 8am-6pm (UK tir

()

Subscribe online at

amateurphotographersubs.co.uk/14AW

Complete \sim the coupon below

THE DIRECT DEBIT GUARANTEE: This Guarantee is offered by all banks and building societies that accept instructions to pay Direct Debits - If there are any ch ges to the amount, date or frequency of your Direct Debit Time Inc. (UK) Ltd will notify you 10 worl ng davs in advance of your ng debited or as otherwise agreed. If you request Time Inc. (UK) Ltd to collect a p de in the navm ent of your Di ct Debit, by Time Inc. (UK) Ltd or your bank or bu unt he society you are entitled to a full and immediate refund of the amount paid from your bank or building ist pay it back when Time Inc. (UK) I to asks you to - You can cancel a Direct Debit at any ti nly contacting your bank o

Complete this coupon and send to: FREEPOST Time Inc (No further address needed. No stamp required - for UK only)

YES! I would like to subscribe to Amateur Photographer	I would like to send	a gift to:	3. Pay only £24.99 every 3 months by Direct Debit (UK only)	
UK 3 monthly Direct Debit, pay only £24.99 per quarter, SAVING 35% (full price £38.88) OFFER	please supply address detai		Instruction to your Bank or Building Society to pay by Direct Debit For office use only. Originator's reference - 764 221	
2 years (102 issues) Credit Card - pay only £201.99, saving 35% (full price £311.00) across the two years	Mr/Mrs/Miss: Forenan Surname: Address:	ne:	Name of Bank: Address:	
□ 1 year (51 issues) Credit Card - pay only £108.49, saving 30% (full price £155.50) across the year		Postcode:	- Postcode:	
Your details: Wr/Mrs/Ms/Mss: Forename: Sumame:	2. Please debit £ f	r ways to pay: vrder made payable to Time Inc. (UK) Ltd., for £ rom my: JMasterCard Amex	Sort Code:	main
Mobile No.	Signature:	Date:	Sionature: Date:	

Date of Birth: D D M M Y Y Y Y

Ac Но Mo

By submitting your information, you agree to our Privacy Policy available at www.timeincuk, comprivacy. Praese keep, me up to date with special offers and news from Amateur Photographer and other brands within the Time Inc. LK Group by email _ part__ Leisphone__ and/or SMS _ You can unsubscribe at any time. Please keep me up to date with special offers and news just by email from carefully selected companies. Your personal details will not be shared with those companies - we send the emails and you can unsubscribe at any time.

*E24 99 payable every 3 months by Direct Debit. This price guaranteed for the first 12 months and we will notify you in advance of any price changes. Offer open to new subscribers only. Direct Debit offer is available to UK subscribers only. **Offer closes 30th September 2018**, Please allow up to 6 weeks for delivery, 8 weeks for delivery, and the subscription rate is for 1 year (51 issues and includes possige and packaiging. If the magazine ordered changes frequency per annum, we will horute the number of issues paid for, not he term of the subscription. For full terms and conditions, visit www.magazinesdirect.com/terms. For enquires from the UK please call: 0330 333 1113, for overseas please call: +44(0) 330 333 1113, lines are open Monday–Saturday, 8/Diam–6/Digm UK time) or e-mail: help/magazinesdirect.com. Calls to 0330 numbers will be charged at no nore than a national landine call, and may be included in your phone providers call bundles.





The Ricoh 500ME with its unusual SP-Winder attached

BLAST FROM THE PAST

icoh 500ME

John Wade examines a 35mm compact with some unexpected features

LAUNCHED: 1980

PRICE AT LAUNCH (WITH MOTOR DRIVE): approx £65

GUIDE PRICE NOW (WITH MOTOR DRIVE): £40-£60

By 1980, 35mm coupled rangefinder cameras, other than those in the Leica M series, were largely a thing of the past. Likewise, clockwork in motor drives had long been superseded by batteries. The trouble is, no one seemed to have told Ricoh when it decided to launch the 500ME.

It's a compact camera in all senses of the word, measuring just 10.5x8x5.5cm. The shutter is mechanical and speeded 8-1/500sec. The f/2.8 Rikenon lens closes down to f/16 and focuses to 0.9m. The lens is coupled to a coincident image rangefinder in the viewfinder, which springs into action as the focusing ring is turned.

Exposures can be set manually, but turn the aperture scale to its 'A' setting and you get shutter priority automation, with autoselected apertures displayed in the viewfinder, courtesy of an in-built CdS meter powered by a 1.3-volt mercury cell. A battery-check button, delayed action lever and multi-exposure control complete the specification.

What makes the 500ME different from its contemporaries is the SP-Winder, which is now



rarer than the camera. Like most power winders, it screws into the tripod bush and makes a connection to the film wind mechanism via the base plate. Unlike other power winders, it works by clockwork. A full wind of the motor, using the fold-out crank, gives enough power to wind 10 frames.

Today we talk about cameras of the past being a bit retro, but the

The 500ME from the top, showing the shutter speed, aperture and focusing

Ricoh 500ME was already retro

What's good Manual or automatic

exposure, mechanical operation if

What's bad Aperture setting ring

very narrow and fiddly, central

rangefinder image small and

on the day it was launched.

the battery fails, power wind

without batteries.

difficult to read

), NICK Koberts,
07949 179 200 e 07961 474 548 Gill 07583 106879 tt 0203 148 2694
Samantha Blakey
Marcus Rich Oswin Grady Gareth Beesley

Photo-Science Consultant Professor Robert Newman

Special thanks to The moderators of the AP

Contact

bank holidays)

Test Reports

Back Issues

Advertising

Editorial team

Group Editor Deputy Editor Technical Editor

Reviews Editor

Features Editor

Technique Editor

Production Editor

Chief Sub Editor Senior Sub Editor

Senior Designer

Studio Manager

Office Manager

Senior contributor

Art Editor Senior Designer

Email liz.reid@timeinc.com Inserts Call Mona Amarasakera Canopy Media, on 0203 148 3710

Hampshire GU14 7BF Telephone 01252 555 213 Email ap@timeinc.com

Amateur Photographer, Time Inc (UK) Ltd, Pinehurst 2, Pinehurst Road, Farnborough,

Picture returns: telephone 01252 555 378 Email appicturedesk@timeinc.com Subscriptions Enquiries and orders email help@magazinesdirect.com

Telephone 0330 333 1113 Overseas +44 330 1113 (lines open Mon-Fri GMT 8.30am-5.30pm excluding

One year (51 issues) UK £155.50; Europe €259; USA \$338.99; Rest of World £221.99

Contact 01795 662976; support@mags-uk.com

Nigel Atherton Geoff Harris

Andy Westlake

Michael Topham

Jacqueline Porter Jolene Menezes Ailsa McWhinnie

Hollie Latham Hucker

Tracy Calder

Sarah Foster

Robert Farmer

Steph Tebboth

Roaer Hicks

Hollie Bishon

Andrew Sydenham

Contact OTC for copies of AP test reports. Telephone 01707 273 773

Editorial Director Simon Collis Printed in the UK by the Wyndeham Group Distributed by Marketforce, 5 Churchill Place, London E14. Telephone 0203 787 9001

Editorial Complaints We work hard to achieve the highest standards of Editorial Complaints We work hard to achieve the highest standards of editorial content, and we are committed to complying with the Editors Code of Practice Intrps://www.jos.co.uk/IPS/ICop.html as enforced by IPSO. If you have a complaint about over editorial content you can enal us at complaints@timenc.com or write to Complaints Manager. Time Inc. UKI Lid Legal Department, 16 Marsh Wall, London EL4 AP. Please provide details of the material you are complaining badrout and explain your complaint by reference to the Editors' Code. We will endeavour to acknowledge your complaint with its working days, and we aim to correct substantial errors as soon as possible.

substantiate trives as a pressure. All contributions to Annate up Photographer must be original, not copies or duplicated to other publications. The editor reserves the right to associated companies reserves the right to re-use any submission sent to the letters count of Annateur Photographer magazine in any format or medium, WHE THER PRINTED, ELECTRONIC OR UNE ANNATED. to the letters column of Annaleur Photographer magazine. In any format protographe (0) is a registered trademark of Time Inc. UKI (O) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. Can Uki (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C) Time Inc. UKI (2) Time Inc. UKI (C) Time Inc. UKI (C)





Camtech

NEXT DAY DELIVERY GUARANTEED

MAIL ORDER HOTLINE:

www.camtechuk.com

Open 9am — 9pm, 7 days a wee

Specialists in fine pre-owned cameras, lenses, binoculars and accessories

M7

Digital Photography
CANON EOS 5D MK 3 BODY COMPLETE MINT-BOXED £1,275.00
CANON EOS 6D BODY COMPLETE MINT- £795.00
CANON EOS 7D BODY COMPLET LITTLE USEMINT BOXED £399.00
CANON 1000D BODY WITH 18-55 EFS MK2 MINT-BOXED £159.00
CANON EOS 100D BODY COMPLETE WITH ALL ACCESMINT BOXED £265.00
CANON EOS 40D BODY ONLY MINT- £125.00
CANON POWERSHOT G9 COMPLETEMINT £129.00
CANON 270EX SPEEDLITE + MANUALMINT CASED £69.00
CANON 430 EXII
CANON 580EX MK II SPEEDLITE + MANUALMINT CASED £175.00
CANON 580EX MK II SPEEDLITE
CANON 580 EX SPEEDLITEEXC++CASED £123.00 CANON 580 EX SPEEDLITE
CANON 550 EX SPEEDLITE
CANON 550 EX SPEEDLITE
CANON ST-E2 SPEEDLITE TRANSMITTERMINT BOXED £125.00
CANON BG-E11 GRIP FOR 5D MK IIIMINT BOXED £175.00
CANON BG-E7 BATTERY GRIP FOR EOS 7DMINT BOXED £69.00
CANON BG-E4 BATTERY GRIP FOR EOS 5DMINT BOXED £49.00
FUJI X PRO 1 HANDGRIP GENUINE FUJI
FUJI 18 - 55mm f2.8/4-R LM OIS XF FUJINON (NEW)MINT CASED £475.00
FUJI 18 - 55mm f2.8/4-R LM OIS XF FUJINON + HOOD MINT- £375.00
FUJI 50- 230mm f4.5/6.7 OIS XC LENS FOR X PRO ETC MINT BOXED £245.00
FUJI TCL-X100 TELECONVERTER FOR X100/100S etcMINT BOXED £195.00
LEICA X VARIO TYPE 107 + HANDGRIP & FINGER LOOP .MINT BOXED £1,195.00
NIKON D750 BODY COMPLETE ONLY 2719 ACTUATIONS MINT BOXED £1,075.00
NIKON D700 BODY COMPLETE MINT-BOXED £525.00
NIKON D7200 BODY COMPLETE WITH ACCESSORIES MINT-BOXED £599.00
NIKON D610 BODY COMPLETE ONLY 696 ACTUATIONSMINT BOXED £765.00
NIKON D500 BODY AS NEW ONLY 8640 ACTUATIONSMINT BOXED £1,175.00 NIKON D3S BODY COMPLETEEXC+++BOXED £995.00
NIKON D3S BODY COMPLETEEXC+++BOXED £393.00 NIKON D2 HS BODY COMPLETEEXC+++BOXED £375.00
NIKON D2 HS BODT COMPLETE
NIKON D40 BODY COMPLETE MINT-BOXED £125.00
NIKON R1C1 CLOSE UP SPEEDLIGHT KIT LATESTMINT BOXED £499.00
NIKON SB-R200 COMPACT SPEEDLIGHT FLASHMINT BOXED £110.00
NIKON SB 700 SPEEDLIGHT AS NEWMINT BOXED £199.00
NIKON MB-D80 BATTERY GRIP FOR NIKON 7200 MINT-BOXED £59.00
NIKON MB-D16 BATTERY GRIP FOR NIKON D750MINT BOXED £195.0
SIGMA EM-140 DG NA - ITTL MACRO FLASHMINT BOXED £225.00
SIGMA EF 610 DG SUPER FLASH NIKON FITMINT BOXED £95.00
SIGMA EF-530 DG ST ELECTRONIC FLASH ITTL NIKON FITMINT BOXED £75.00
PANASONIC 45-200mm f4/5.6 LUMIX G VARIO M 4/3RDS.MINT BOXED £199.00
OLYMPUS 50mm F2 MACRO ZUIKO DIGITAL ED 4/3RDSMINT CASED £325.00
OLYMPUS 40 - 150mm F3.5/4.5 ZUIKO DIGTAL ED 4/3RDS MINT + HOOD £69.00
OLYMPUS DIGITAL EX - 25 EXTENSION TUBE 25MMMINT £95.00
OLYMPUS FL-14 FLASH UNIT
PANASONIC GF2 BODY COMPLETE WITH ALL ACCESSMINT BOXED £145.00
SONY 18 - 250mm f3.5/6.3 A/F DT LENSMINT BOXED £325.00
SIGMA 30mm F2.8 DN MICRO 4/3RDSMINT BOXED £115.00 SONY 16mm f2.8 FISH-EYE FOR ALPHAMINT BOXED £545.00
SONY 16mm 12.8 FISH-EYE FOR ALPHAMINT BOXED £345.00 SONY 20mm f2.8 WIDE ANGLE FOR ALPHAMINT BOXED £399.00
SONY 2000 T2.8 WIDE ANGLE FOR ALPHA
SONY ECM - XTSTIM STEREO MICROPHONE NEW UNUSED £393.00
METZ 44A/F1 FLASH UNIT FOR SON DLSRMINT BOXED £95.00
SONY DSC-HX90V COMPLETE VERY LOW USEMINT BOXED £275.00
DOW LETE TENT EVIT OVERNMINIT DOVED 2210.00

Canon Autofocus, Digital Lenses, Canon FD

,,,,,,,
CANON 14mm f2.8 USM "L" MINT-BOXED £795.00
CANON 24mm f1.4 "L" USM
CANON 85mm f1.2 USM "L" MK II LATEST MODELMINT CASED £899.00
CANON 85mm f1.2 USM "L" MK II LATEST MODELMINT BOXED £1,045.00
CANON 100mm f2.8 USM "L" MACRO IMAGE STABILIZER MINT BOXED £525.00
CANON 300mm f4 USM "L" IMAGE STABILIZER MINT BOXED AS NEW £895.00
CANON 300mm f4 USM "L" IMAGE STABILIZERMINT CASED £825.00
CANON 500mm f4 USM "L" IMAGE STABILIZER MK1 MINT-CASED £3,750.00
CANON 8 - 15mm f4 USM "L" FISHEYEMINT CASED £799.00
CANON 16 - 35mm f2.8 USM "L" MK 2MINT BOXED £875.00
CANON 16 - 35mm f4 USM "L" LATEST MINT+HOOD £699.00
CANON 24 - 70mm f4 "L" USM IS LATEST + HOODMINT CASED £525.00
CANON 28 - 70mm f2.8 USM "L"EXC++ £399.00
CANON 28 - 70mm f2.8 USM "L" MINT- £495.00
CANON 28 - 80mm f2.8/4 USM "L" EXC++CASED £375.00
CANON 70 - 200mm f4 USM "L" IMAGE STABILIZERMINT CASED £699.00
CANON 70 - 200mm f4 USM "L" IMAGE STABILIZERMINT BOXED £795.00
CANON 70 - 200mm f2.8 USM "L"MINT BOXED £699.00
CANON 80 - 200mm f2.8 "L" USM WITH HOOD MINT-BOXED £499.00
CANON 100 - 400 "L" USM IMAGE STABILIZER MINT-BOXED £675.00
CANON 20mm f2.8 USM EXC++ £245.00
CANON 24mm f2.8 EF-S STM PANCAKE LENSMINT BOXED £110.00
CANON 50mm f1.8 MARK 1 (VERY RARE NOW)MINT £129.00
CARL ZEISS 50mm f1.4 PLANNAR T* WITH HOOD MINT £375.00
CANON 60mm f2.8 EFS USM MACRO LENS MINT- £295.00
CANON 85mm f1.8 USM
CANON 100mm f2 USMMINT £275.00
CANON 100mm f2 USM EXC++ £215.00
CANON 100mm f2.8 MACR0 EXC++ £195.00
CANON 10 - 22mm f3.5/4.5 USM EXC++ £345.00
CANON 10 - 22mm f3.5/4.5 USMMINT BOXED £375.00
CANON 17 - 55mm f2.8 EFS IS USM WITH HOODMINT £499.00
CANON 18 - 55mm f3.3/5.6 STM VIBRATION REDUCTIONMINT £125.00
CANON 18 - 135mm f3.5/5.6 EF-S IMAGE STABILIZER MINT £325.00
CANON 18 - 200mm f3.5/5.6 EF-S IMAGE STABILIZER MINT+HOOD £299.00
CANON 70 - 300mm f4.5/5.6 USM IMAGE STABILIZERMINT £299.00
CANON 70 - 300mm f4.5/5.6 USM IMAGE STABILIZERMINT BOXED £325.00
CANON 75 - 300mm f4.5/5.6 MKII USMMINT £99.00
CANON 75 - 300mm f4.5/5.6 MKIIIMINT BOXED £99.00
KENCO DG CANON FIT TUBE SET 12,20,36MMMINT BOXED £99.00
CANON EF 1.4X EXTENDER MK I EXC £95.00
CANON EF 2.0X EXTENDER MK IMINT BOXED £129.00
CANON EF 2.0X EXTENDER MK IIMINT CASED £185.00
KENCO DG CANON FIT TUBE SET 12,20,36MM MINT- £99.00

DELTA

VISA

KENCO TELEPLUS PRO 300 DGX 1.4 TELECONVERTERMINT CASED £99.00
SIGMA EX 1.4 APO DG TELECONVERTERMINT £125.00
CANON TC-80N3 REMOTE RELEASE/TIMER FOE EOSMINT BOXED £75.00
SAMYANG 85mm T1.5 AS IF UMC CANON EOS FITMINT CASED £175.00
SIGMA 4.5mm f2.8 EX DC HSM CIRCULAR FISHEYEMINT CASED £475.00
SIGMA 10mm f2.8 EX DC FISHEYE HSMMINT BOXED £345.00
SIGMA 14mm f2.8 EX HSM ASPHERICMINT CASED £365.00
SIGMA 105mm f2.8 MACRO EX WITH CASE MINT £179.00
SIGMA 105mm f2.8 MACRO EX DG OS HSM MINT- £279.00
SIGMA 150mm f2.8 EX DG-OS HSM MACRO LATESTMINT BOXED £595.00
SIGMA 12 - 24mm f4.5/5.6 DG HSM MK2 IIMINT CASED £475.00
SIGMA 15 - 30mm f3.5/4.5 EX DG ASPHERIC MINT-BOXED £199.00
SIGMA 17 - 35mm f2.8/4 EX HSM APHERIC MINT- £179.00
SIGMA 18 - 50mm f 2.8 EX DC SLD GLASS MINT-BOXED £165.00
SIGMA 18 - 250mm f3.5/6.3 DC SLD HSM OSMINT BOXED £199.00
SIGMA 50 - 150mm f2.8 EX APO HSM AF-DC MK II MINT- £325.00
SIGMA 70 - 200mm f2.8 DG HSM OS LATESTMINT £595.00
SIGMA 120 - 400mm f4/5.6 APO DG HSM 0SMINT BOXED £425.00
TAMRON 180mm f3.5 A/F SP DI MACRO LATESTMINT BOXED £499.00
TAMRON 500mm f8 MIRROR LENS & FILTERS FD MOUNT MINT-CASED £175.00
TAMRON 28 - 75mm f2.8 XR Di LENS LATESTMINT £345.00
TAMRON 28 - 300mm f3.5/6.3 I/F LD DI ASP VIB CONTROLMINT BOXED £375.00
TOKINA 10 -17mm f3.5/4.5 ATX DX FISHEYE (LATEST)
TOKINA 11 - 16mm f2.8 ATX - PRO ASPHERICALMINT BOXED £279.00
LENSBABY COMPOSER WITH 0.42 SUPER WIDEMINT CASED £99.00

Contax 'G' Compacts & SLR & Ricoh

CONTAX 28mm f2.8 BIOGON "G" HOOD,FILTER CAP BLMINT CASED £299.00
CONTAX 35 - 70mm f3.5/5.6 "G" VARIO-SONNAR T*MINT BOXED £395.00
CONTAX TLA 140 FLASH FOR G1/G2MINT CASED £65.00
CONTAX GD1 DATABACK FOR CONTAX T3MINT-BOXED £69.00
CONTAX TLA 200 FLAH FOR CONTAX "G"MINT CASED £99.00
CONTAX CARL ZEISS 28mm f2.8MINT BOXED £199.00
CONTAX 50mm f1.7 AE LENS MINT £95.00
CONTAX CARL ZEISS 85mm f2.8 AEMINT BOXED £265.00
CONTAX 300mm F4 TELE TESSAR MMMINT BOXED £295.00
CONTAX TLA 140 FLASHMINT CASED £45.00
CONTAX TLA 280 FLASH MINT- £59.00
CONTAX TLA 280 FLASH UNITMINT BOXED £75.00

LEICA "M", "R", & SCREW & RANGEFINDER

LEICA M6 TTL SILVER CHROME 0.72 WITH LEICA CASE .MINT CASED £1.395.00
LEICA X VARIO TYPE 107 + HANDGRIP & FINGER LOOP .MINT BOXED £1,353.00
LEICA X VAND THE TO THANDON A THAD AND A THAD THE LOOT MINT BOXED £1,27,000
LEICA MR METER BLACK BOXED MINT- £295.00 LEICA MDA BODY SER NO 12659XX CIRCA 1970 MINT- £425.00
LEICA MDA BODY SER NO 14111XXCIRCA 1975-76 EXC++ £399.00
LEICA IIIG BODY WIT 5cm f2 SUMMITAR & CASE MINT- £1,195.00
LEICA CL BODYEXC+ £365.00
LEICA MINILUX DB EXCLUSIVE DATA BACK VERSIONMINT BOXED £465.00
MINOLTA 28mm f2.8 M ROKKOR FOR CLE / CL LEICA M EXC++ £375.00
LEICA 28mm f2.8 ELMARIT BLACK WITH HOOD MINT- £895.00
LEICA 40mm f2 SUMMICRON C FOR CLE / CL FOR M MINT - £395.00
LEICA 35mm f3.5 SUMMARON M WITH LEICA FILTER MINT- £325.00
LEICA 5cm f2.8 COLL ELMAR MINT- £295.00
LEICA 90mm f2 COLLAPSIBLE SUMMICRONMINT £375.00
LEICA 50mm f2 CLOSE FOCUS SUMM + SPECS EXC++ £595.00
LEICA 50mm f2.8 COLLAPSIBLE ELMAR
LEICA 5cm f3.5 ELMAR RED SCALE
LEICA SCHI 13.3 ELMAR RED SCALE
LEICA 90mm 14 ELMAR O POR CLE / CL LEICA M
LEICA 90mm 14 ELMAR W WOONT
LEICA 135mm f4.5 HEKTOREXC+ £75.00
VOIGTLANDER 25mm f4 SNAPSHOT SKOPAR SCREW
VOIGTLANDER 35mm f2.5 MC COL SKO WITH M RINGMINT £275.00
VOIGTLANDER BESSA L BODY CHROMEMINT £129.00
VOIGTLANDER BESSA T WINDERMINT BOXED £149.00
VOIGTLANDER VC METER II
VOIGTLANDER BESSA R GRIP FOR R,R2,R3 ETCMINT BOXED £49.00
LEICA 35mm f3.5 SUMMARON SCREW IN KEEPER MINT- £375.00
LEICA M2/M3 BROWN LEATHER CASE WITH STRAPEXC++ £65.00
LEICA 5cm f2 SUMMITAR COLL EXC++ £275.00
LEICA 135mm f2.8 ELMARIT M WITH SPECSEXC+++ £299.00
LEICA 135mm f4.5 HEKTOR + HOOD M MOUNTEXC++ £99.00
LEICA 135mmf4.5 HEKTOR IN KEEPEREXC+++ £199.00
LEICA FIT DALLMEYER 13.5CM F4.5 DALRACEXC+++ £375.00
LEICA 90mm f4 ELMAR BLACK SCREW
LEICA 30mm 14 ELMAN BERGK SONEWEXC++ £143.00
LEICA 135min 14.5 REKTOR + HOOD SCREW
LEICA ST20 FLASH FOR WO BC
LEIGA PUNUK BLAGK KANGEFINDER
LEICA R7 CHROME BODY MINT- £365.00 LEICA R8 MOTORDRIVE 14313 & CHGR 14424
LEICAFLEX BODY CHROME MINT- £195.00
LEICA CURTAGON 35mm f4 MINT-BOXED £395.00
LEICA 50mm f2 SUMMICRON 3 CAM MINT- £379.00
LEICA 90mm f2.8 ELMARIT 3 CAM MINT- £375.00
LEICA 180mm F4 ELMARIT R 3 CAM EXC++ £345.00
LEICA PRADOVIT P150 WITH 2 EXTRA SLIDE TRAYSMINT BOXED £95.00
SWAROVSKI EL RANGE 10x42 RANGEFINDER BINOS NEW UNUSED £1,695.00
SWAROVSKI 10x42 SL HABICHT+STRAP AND COVERS MINT- £565.00
LEICA 10 X 42 TRINOVID BA WITH LEATHER CASEMINT £595.00
LEICA 10 x 25 TRINOVID COMPACT BINOCULAR GREEN MINT-CASED £275.00
LEICA 10 x 25 TRINOVID COMPACT BINOCULAR BLACK MINT-CASED £279.00
OPTICRON 20X80 BCF BINOCULARS & TRIPOD MOUNTMINT BOXED £250.00
Modium & Largo Format

Medium & Large Format

BRONICA SQB COMPLETE WITH 80mm FINDER & BACKMINT £345.00
BRONICA 50mm F2.8 ZENZANON MCEXC+++ £99.00
BRONICA 110mm F4 MACRO LENS PS MINT- £295.00
BRONICA 150mm F3.5 ZENZANON E MC MINT £89.00
BRONICA 150mm F4 E MINT- £89.00
BRONICA FTRSI 120 BACK MINT- \$69.00

BRONICA POLAROID BACK FOR ETRSI, ETRS ETCMINT BOXED £59.00
BRONICA AEII METERED PRISMEXC+ £75.00
BRONICA PLAIN PRISM FOR ETRS/ETRSIMINT £75.00
BRONICA PLAIN PRISM FOR ETRS/ETRSIEXC++ £59.00
BRONICA ROTARY PRISM FINDER FOR ETRS, ETRSI ETC MINT- £75.00
BRONICA MOTOR WINDER EEXC+++ £89.00
BRONICA 150mm F3.5 ZENZANON S MINT- £165.00
BRONICA 40mm f4 ZENZANON S ULTRA WIDE FOR SQ MINT- £199.00
BRONICA 50mm f3.5 PS LENS & CASE MINT-BOXED £199.00
BRONICA 65mm F4 ZENZANON PS FOR SQ MINT-CASED £145.00
BRONICA 110mm F4 PS ZENZANON MACRO FOR SQ MINT-CASED £365.00
BRONICA 150mm F4 PS ZENZANON F0R SQ MINT-CASED £145.00
BRONICA 180mm f4.5 PS LENS & CASEMINT-BOXED £199.00 BRONICA AE PRISM FINDER SQ-i LATST MODELMINT BOXED £225.00
BRONICA PRISM ME METERED FOR SQA/SQAI MINT- £89.00
BRONICA SPEED GRIP FOR SQA/SQAIMINT- £69.00 BRONICA FILMBACK SQ-i220 FOR SQA/SQAiMINT BOXED £79.00
BRONICA FILMBACK SU-1220 FOR SUA/SUAIMINT BOXED £79.00 HASSELBLAD 28mm f4 HC FOR H SYSTEMMINT BOXED £1.475.00
HASSELBLAD 28mm 14 HC FOR H SYSTEMMINT BOXED £1,475.00 HASSELBLAD 120mm 14 HC FOR H SYSTEMEXC++ £1,195.00
HASSELBLAD 120mm 14 HC FOR H STSTEMEXC++ £1,195.00 HASSELBLAD 503 CX BODY WITH BACK & WLF
HASSELBLAD 503 CX BODT WITH BACK & WLF
HASSELBLAD 150mm f4 SONNAR T* BLACK
HASSELBLAD 130mm 14 SUNNAR CF
HASSELBLAD JOININ 14 DISTAGON SILVER
HASSELBLAD 150mm 14 SUNNAR SILVEREXC++ £175.00 HASSELBLAD 250mm 15.6 SONNAR SILVEREXC++ £179.00
HASSELBLAD 25011111 15.0 SONWAR SILVER
HASSELBLAD HTS 1.5X TILT AND SHIFT ADAPTORMINT BOXED £2,995.00 HASSELBLAD GPS UNIT FOR H SYSTEMMINT BOXED £399.00
HASSELBLAD GPS UNIT FUR H STSTEM
HASSELBLAD PM90 PRISM FINDER
HASSELBLAD PM30 PHISM PHIDER
HASSELBLAD FMES METERED FRISM FINDER
HASSELBLAD A12 BACK CHROME
HASSELBLAD WINDER CW AND REMOTE
MANIYA 6 BODY REALLY NICE CONDITION
MAMIYA 6 6007 NEALET MICE CONDITION
MAMIYA 645 SUPER WITH AE PRISM 80mm COMPLETE
MAMIYA 150mm f3.5 SEKOR C FOR 645 SUPER etc
MAMIYA M645J COMPLETE WITH 80mm f2.8
MAMIYA 150mm F4.5 "G" WITH HOOD FOR MAMIYA 6 MINT £365.00
MAMIYA 180mm F4.5 SEKOR Z W FOR RZ
MAMIYA 250mm F4.5 LENS FOR RZ
MAMIYA 210mm F4 SEKOR C FOR 645MINT CASED £195.00
MAMIYA 180mm F4.5 SEKOR FOR RBMINT £169.00
MAMIYA 220 BACK FOR RZ 67 MINT- £95.00
PENTAX 200mm F4 F0R PENTAX 67 + FILTER AND HOOD MINT- £199.00
PENTAX 55mm F4 SMC F0R 6X7
PENTAX 55mm F2.8 FOR PENTAX 645MINT BOXED £199.00
ROLLEIFLEX SCHNEIDER 150MM F4.6 MAKRO FOR 6008 MINT- £575.00
YASHICAMAT 124G COMPLETE WITH HOOD + CASE MINT-CASED £375.00
Nikon Auto-Focus & Digital, Lenses Accessories

NIKON F5 BODY REALLY NICE NIKON 10.5 f2.8 "G" IF-ED AF DX FISHEYE. NIKON 28mm f2.8 A/F "D" MINT-BOXED £475.00 ..MINT BOXED £399.00 EXC++ £99.00 NIKON 28mm f2.8 A/F. ...MINT £135.00 NIKON 40mm f2.8 "G" DX AE-S MICRO LENS MINT BOXED £179.00 NIKON 40mm 12.8 °G° DX AP-S WICKO LENS...... NIKON 50mm 11.8 A/F °D" NIKON 60mm 12.8 A/F D MICRO NIKKOR NIKON 85mm 13.5 ED DX AF-S VR MICRO NIKKOR ...MINT BOXED £179.00MINT BOXED £89.00 ...MINT BOXED £299.00 ...MINT+HOOD £345.00 NIKON 105mm f2.8 "G" IF ED AF-S VR MICRO LATESTMINT BOXED £575.00 NIKON 28 - 200mm f3.5/5.6 A/F D EXC++ £125.00 NIKON 35 - 70mm f3.3/4.5 A/F LENS...... NIKON 35 - 135mm f3.5/4.5 A/F + HOOD. FYC++ £49.00EXG++ £49.00MINT-£129.00MINT BOXED £899.00MINT BOXED £1,375.00 NIKON 70 - 200mm f2.8 ED AF-S VR...... NIKON 70 - 200mm f2.8 ED AF-S VR..... NIKON 70 - 300mm f4.5/5.6 "E" ED AF-P VR LATEST.......MINT BOXED £599.00 NIKON 75 - 300mm f4.5/5.6 A/F ZOOM + TRIPOD COLL MINT- £159.00 NIKON 80 - 2001 28 A/F IF-ED A/F-S SILENT WAVE MINT-CASED E95.00 NIKON 80 - 2001 28 A/F IF-ED ZOUM GREAT LENSMINT BOXED E375.00 NIKON 80 - 2001 28 A/F IF-ED A/F-S SILENT WAVE MINT-CASED E595.00 NIKON 80 - 400mm f4.5/5.6 ED AF "D" VR......MINT-BOXED £525.00 NIKON 80 - 400mm f4.5/5.6 "G" ED AF-S VR LATESTMINT BOXED £1,695.00 NIKON 200 - 500mm f5.6 ED AF-S VR LENS LATESTMINT BOXED £1,075.00 . MINT- £195.00 NIKON TC20E II 2X AF-S TELECONVERTER

wanted...

We urgently require your used photographic equipment. We have customers waiting for: Nikon, Canon, Leica, Contax, Bronica, Hasselblad and most other makes of camera lenses, accessories, binoculars and collectables. We will buy for cash from you, or we are happy to sell on your behalf on a commission basis. Best prices paid. We can arrange collection and even call and collect and pay on the spot if necessary anywhere in the UK.

TAMRON 1.4X A/F "D" TELECONVERTER NIKON FITMINT BOXED £69.00
SIGMA 2X EX DG TELECONVERTERMINT £145.00
SIGMA TC2001 ED GLASS LATEST MODEL MINT BOXED AS NEW £225.00
SIGMA 24mm f1.4 DG HSM ART LENS NIKON FITMINT BOXED £485.00
SIGMA 30mm F1.4 EX DC HSM NIKON FIT MINT BOXED AS NEW £199.00
SIGMA 50mm f2.8 EX MACRO D EXC++ £159.00
SIGMA 105mm f2.8 EX APO DG MACRO MINT-BOXED £295.00
SIGMA 10 - 20mm f4/5.6 EX DC HSMMINT BOXED £249.00
SIGMA 15 - 30mm f3.5/4.5 EX DG FULL FRAME MINT- £245.00
SIGMA 50 - 500mm F4.5/6.3 DG HSM OPT/STAB O/S MINT-BOXED £699.00
SIGMA 70 - 300mm f4/5.6 DG MACRO D5300 COMPMINT BOXED £110.00
TOKINA 12 - 24mm F4 IF DX ASPHERICAL AT-X PR0 MINT+HOOD £299.00
TOKINA 16 - 50mm F2.8 ASPHERICAL AT-X PRO DXMINT BOXED £275.00

TOKINA 35mm f2.8 ATX PRO DX MACRO 1:1 LATESTMINT BOXED £295.00

4H5 07 50.

MINT- £699.00

Nikon Manual Focus

TOKINA 300mm f2.8 AT-X SD PRO WITH HOOD.

NIKON F ,PLAIN PRISM WITH 50mm f1.4 & CASE MINT- £695.00
NIKON F2 A BODY FULLY WORKINGEXC+ £199.00
NIKON F2 BODY FULLY WORKINGEXC+ £169.00
NIKON F3 BODYEXC+ £245.00
NIKON F2 BODY BLACK WITH DW2 FINDER MINT- £265.00
NIKON F2 PHOTOMIC BODY CHROME MINT- £275.00
NIKON F PHOTOMIC T WITH 50mm f2 NIKON LENS EXC++ £250.00
NIKON F "APOLLO" PHOTOMIC FTN WITH 50mm f1.4 MINT- £399.00
NIKON FE2 BLACK BODY EXC++ £165.00
NIKKORMAT FTn WITH 50mm f2 NIKON LENS MINT- £175.00
NIKKORMAT FT3 BLACK BODY EXC++ £99.00
NIKKORMAN FT BODY WITH 50mm f2 LENSEXC++CASED £125.00
NIKON 24mm F2.8 AIS
NIKON 35mm f2.8 AI
NIKON 45mm F2.8 GN NIKKOR MINT- £199.00
NIKON 50mm F1.8 AIS SERIES E MINT £69.00
NIKON 50mm F1.8 Al MINT- £89.00
NIKON 50mm f1.4 Al MINT- £159.00
NIKON 50mm f1.2 AIS SUPERB LENSMINT BOXED £399.00
NIKON 85mm F1.4 AIS MINT-CASED £575.00
NIKON 105mm f2.5 AI WITH HOOD MINT- £175.00
NIKON 135mm f3.5 PRE AI LENS WITH HOODMINT £129.00
NIKON 180mm f2.8 AI WITH CAPS EXC++ £299.00
NIKON 200mm F4 AIS MICRO NIKKOREXC+++CASE £295.00
NIKON 200mm F5.6 MEDICAL NIKKOR + POWER PACK MINT BOXED £475.00
NIKON 300mm f4.5 AIS WITH TRIPOD COLLAR MINT- £295.00
NIKON 500mm f8 MIRROR WITH CASE AND ALL FILTERS
NIKON 600mm f5.6 Ai WITH HOOD AND FILTER HOLDERS MINT-CASED £1.295.00
NIKON 1000mm f11 MIRROR LENS WITH CAPS EXC++ £495.00
NIKON 35 - 70mm F3.3/4.5 ZOOM NIKKOR MACRO AIS MINT- £169.00
NIKON 35 - 105mm F3.5/4.5 AIS ZOOM MACR0MINT £175.00
NIKON 35 - 105mm F3.5/4.5 AIS ZOOM MACRO
NIKON 35 - 135 F3.5/4.5 AIS MINT- £149.00
NIKON 35 - 135 F3.5/4.5 AISEXC+ £125.00
NIKON 35 - 200mm f3.5 AISMINT BOXED £199.00
NIKON MD4 GRIP DRIVE FOR F3 MINT- £175.00
NIKON PK13 AUTO EXTENSION RING MINT-BOXED £55.00
NIKON PK12 AUTO EXTENSION RING EXC++ £49.00
NIKON PK11 AUTO EXTENSION RING
NIKON TC 200 CONVERTER
NIKON SB 16 FLASH FOR F3/FM2/FM3/FE/FE2 MINT-CASED £115.00
NIKON SB 16 FLASH FOR F3

Olympus Manual

erjinpao manaan
OLYMPUS 0M1N WITH 50mm f1.8 & CASE MINT- £129.00
OLYMPUS OM1 N BODY MINT- £125.00
OLYMPUS OM1 N BLACK BODY EXC++ £119.00
OLYMPUS OM2N BODY CHROME MINT- £135.00
OLYMPUS 24mm f2.8 ZUIKO + HOOD + CASEMINT £125.00
0LYMPUS 28mm F2.8 ZUIK0 MINT £55.00
0LYMPUS 28mm F3.5 ZUIK0 MINT-CASED £39.00
0LYMPUS 35mm F2.8 ZUIK0 MINT- £69.00
OLYMPUS 50mm F1.8 ZUIK0MINT BOXED £49.00
0LYMPUS 50mm F1.8 ZUIK0 MINT £39.00
0LYMPUS 50mm F3.5 MACR0 MINT- £119.00
0LYMPUS 135mm f2.8 ZUIK0MINT £95.00
0LYMPUS 28 - 48mm F4 ZUIK0EXC++B0XED £69.00
0LYMPUS 35 - 70mm F3.5/4.5 ZUIK0 MINT £75.00
0LYMPUS 35 - 70mm F4 ZUIK0 MINT- £75.00
0LYMPUS 75-150mm F4 ZUIK0MINT £59.00
OLYMPUS EXT TUBE 14mm, 25mm MINT- £55.00
OLYMPUS VARIMAGNI FINDERMINT BOXED £59.00

Visitors are welcome, please phone for an appointment.





online, by phone or in store

Now incorporating



Norwich - Wex Photo Video Unit B, Frenbury Estate, NR6 5DP. Tel: 01603 481933 Open daily from 10am

London - Wex Photo Video 37-39 Commercial Road, E1 1LF. Tel: 02073 801144 Mon - Fri: 8am - 7pm, Saturday: 9am - 6pm



Birmingham - Wex Photo Video

Unit 2, 100 Hagley Road, B16 8LT. Tel: 01213 267636 Mon - Fri: 9am - 5:30pm, Saturday:10am - 4pm Belfast - Calumet Unit 2, Boucher Plaza, BT12 6HR. Tel: 02890 777770 Mon - Fri: 9am - 5:30pm,

Saturday: 10am - 4pm

Edinburah - Wex Photo Video Bonnington Business Centre.

EH5 5HG Tel: 01315 539979 Mon - Fri: 9am - 5:30pm, . Saturday:10am - 4pm

Manchester - Calumet Unit 4. Downing Street M12 6HHTel: 01612 744455 Mon - Fri: 9am - 5:30pm, Saturday: 9am - 4pm

EH5 5HG Tel: 01179 422000 Mon - Fri: 9am - 5:30pm,

Mon - Fri: 9am - 5:30pm,

Saturday: 9am - 4pm

Bristol - Calumet

Saturday: 10am - 4pm Glasgow - Calumet Block 4, Unit 1, Oakbank Industrial Estate G20 7LU. Tel: 01612 744455

Unit 7 Montpelier Central Station Rd

visit wex.co.uk 01603 208761

Call us Mon-Fri 8am-7pm, Sat 9am-6pm, Sun 10am-4pm

30-Day Returns Policy[†]
 Part-Exchange Available
 Used items come with a 12-month warranty^{††}





online, by phone or in store

visit wex.co.uk 1603 2087

Call us Mon-Fri 8am-7pm, Sat 9am-6pm, Sun 10am-4pm

Over 19,000 Products
 Free Delivery on £50 or over**
 30-Day Returns Policy[†]

Follow us on Twitter, Facebook, Instagram and Youtube for all the latest offers, reviews, news and advice!

DSLR Lenses

Canon PRO PARTNER	EF-S 18-135mm f3.5-5.6 IS STM
CANON LENSES	£1519 inc. £220 Cashback* FE 24-70mm f4L IS USM
EF 20mm f2.8 USM	£484
EF 24mm f1.4L II USM	
EF 28mm f1.8 USM	£464 FF 20 200 (2 F F C L IC LICA)
EF 28mm f2.8 IS USM	
EF 35mm f1.4L II USM	£1649 EF-5 55-250mm f2-5.6 IS STIVI
£1429 inc. £220 Cashback*	CATED IN COOR CONFIDENTIAL
EF 35mm f2 IS USM	
EF-S 35mm f2.8 Macro IS STM	
EF 40mm f2.8 STM	
EF 50mm f1.2L USM	£1339 £1099 inc. £150 Cashback*
£1169 inc. £170 Cashback*	EF 100-400mm f4.5-5.6L IS USM II £204
EF 50mm f1.4 USM	£384
EF 50mm f1.8 STM	£119
TS-E 50mm f2.8L Macro	£2199 Nikon
EF-S 60mm f2.8 USM Macro	£439
EF 85mm f1.2L II USM	£1929 NIKON LENSES
£1709 inc. £220 Cashback*	8-15mm f3.5-4.5E ED Fisheye£129
EF 85mm f1.4L IS USM	£1379 10.5mm f2.8 G IF-ED AF DX Fisheye £639
EF 85mm f1.8 USM	£414 14mm f2.8 D AF ED£147
TS-E 90mm f2.8L Macro	£2199 20mm f1.8 G AF-S ED£699
EF 100mm f2.8 USM Macro	£519 24mm f1.4 G AF-S ED £189
£459 inc. £60 Cashback*	24mm f1.8 G AF-S ED£679
EF 100mm f2.8L Macro IS USM	£899 28mm f1.8 G AF-S £599
EF 135mm f4.0 L Macro	£2199 35mm f1.8 G ED AF-S £479
EF 300mm f4.0 L IS USM	£1269 40mm f2.8 G AF-S DX Micro £259
EF-S 10-18mm f4.5-5.6 IS STM	
EF-S 10-22mm f3.5-4.5 USM	
EF 11-24mm f4L USM	£2789 58mm f1.4 G AF-S £145
EF-S 15-85mm f3.5-5.6 IS USM	£689 60mm f2.8 D AF Micro £429
EF 16-35mm f2.8L III USM	£2049 60mm f2.8 G AF-S ED £529
£1799 inc. £250 Cashback*	85mm f1.8 G AF-S £469
EF 16-35mm f4L IS USM	105mm f2.8 G AF-S VR IF ED Micro £779
	135mm f2.0 D AF DC

180mm f2.8 D AF IF-ED	£799
300mm f4.0E AF-S PF ED VR	£1599
500mm f4.0E FL AF-S ED VR	£8999
600mm f4.0E FL AF-S ED VR	
10-24mm f3.5-4.5 G AF-S DX	
16-80mm f2.8-4E ED AF-S DX VR	
16-85mm f3.5-5.6 G ED AF-S DX VR	
17-55mm f2.8 G ED DX AF-S IF	
18-35mm f3.5-4.5G AF-S ED	
18-105mm AF-S DX f3.5-5.6 G ED VR	
18-140mm f3.5-5.6 G ED AF-S DX VR	
18-200mm f3.5-5.6 G AF-S DX VR II	£659
18-300mm f3.5-5.6 ED AF-S VR DX	
24-70mm f2.8 G ED AF-S	
24-70mm f2.8E AF-S ED VR	
24-85mm f3.5-4.5 AF-S G ED VR	
24-120mm f4 G AF-S ED VR	
28-300mm f3.5-5.6 G ED AF-S VR	
70-200mm f2.8E AF-S FL ED VR	
70-300mm f4.5-6.3 G ED DX AF-P VR	£329
70-300mm f4.5-5.6 E ED VR AF-P	£749
80-400mm f4.5-5.6 G ED AF-S VR	£2209
200-500mm f5.6E AF-S ED VR	

SIGMA

SIGMA LENSES - with 3 Year Manufacturer

14mm f1.8 DG HSM	.£1679
20mm f1.4 DG HSM Art	.£699
24mm f1.4 DG HSM	.£649
30mm f1.4 DC HSM	.£359
35mm f1.4 DG HSM	.£599
85mm f1.4 Art DG HSM	.£999
105mm f2.8 APO EX DG OS HSM Macro	.£359
150mm f2.8 EX DG OS HSM Macro	£779
8-16mm f4.5-5.6 DC HSM	£599

10-20mm f3.5 EX DC HSM 12-24mm f4 5-5 6 EX DG HSM II £329

12-2411111 14.3-3.0 LA DO H3141 11	.1045
17-70mm f2.8-4.0 DC OS HSM	.£349
18-250mm f3.5-6.3 DC Macro OS HSM	£349
18-300mm f3.6-6.3 C DC Macro OS HSM	£369
24-35mm f2 DG HSM A	.£759
24-70mm f2.8 DG OS HSM	£1399
50-100mm f1.8 DC HSM Art	£949
70-200mm f2.8 EX DG OS HSM	£819
100-400mm f5-6.3 DG OS HSM	.£699
120-300mm f2.8 OS	£2699
150-600mm f5.0-6.3 S DG OS HSM	£1329
150-600mm f5-6.3 C DG OS HSM	.£789

TAMRON

TAMRON LENSES - with 5 Year Manufacturer

Warranty	
35mm f1.8 SP Di VC USD	
45mm f1.8 SP Di VC USD	£599
85mm f1.8 SP Di VC USD	£749
90mm f2.8 SP Di VC USD Macro	£579
10-24mm f3.5-4.5 Di II LD SP AF ASP IF	£419
15-30mm f2.8 SP Di VC USD	£929
16-300mm f3.5-6.3 Di II VC PZD Macro	£429
18-200mm f3.5-6.3 Di II VC	£189
18-270mm f3.5-6.3 Di II VC PZD	£299
18-400mm f3.5-6.3 Di II VC HLD	£649
24-70mm f2.8 Di VC USD G2	£1249
28-300mm f3.5-6.3 Di VC PZD	£649
70-200mm f2.8 Di VC USD	£999
70-200mm f2.8 Di VC USD G2	£1349
70-300mm f4-5.6 SP Di VC USD	£329
100-400mm f4.5-6.3 Di VC USD	£789
150-600mm f5-6.3 SP Di VC USD	£739
150-600mm f5-6.3 VC USD G2	£1129





**Based on a 4-day delivery service, UK only.

Quick CAS

POLLEIFLE

011

It's SO easy & fast to turn your unwanted photo gear into CASH

We buy more, pay more & smile more!

 Digital DSLRs, Mirrorless & top compact cameras • 35mm SLRs & compacts and Medium Format film cameras Top bags, tripods & accessories Most AF & MF lenses

> QuickQUOTE 020 7467 9912 used@cameraworld.co.uk

> > 020 7636 5005 LONDO 0

01245 255510 CHEL

01438 367619 STEVEN

cameraworld.co.uk

Fameraworld

The Part-Exchange Specialists

Real Shop Real Knowledge Real People Real Cameras www.ffordes.com

Fujifilm X Lenses

14mm F2.8 XFE++ £479 - £499
16-50mm F3.5-5.6 OIS XC Mint- £129
18-135mm F3.5-5.6 LM OIS WR XF E++ £529
18-55mm F2.8-4 R LM OIS XF.E++ / Mint- £299 - £349
18mm F2 XF R E++ £249
23mm F1.4 XF R E++ £589
23mm F1.4 XF R E++ £549
35mm F1.4 XF R E++ £349
50-140mm F2.8 WR OIS XF Mint- £999
50-230mm F4.5-6.7 OIS XC - Black E++ £239
55-200mm F3.5-4.8 OIS XF E++ £429

Olympus 4/3rds Lenses

7-14mm F4 ED Zuiko	E++ £459
9-18mm F4-5.6 ED Zuiko	E+ / Mint £199 - £275
14-42mm F3.5-5.6 ED Zuiko	E+ / E++ £35 - £49
14-54mm F2.8-3.5 Zuiko	E+ £129
18-180mm F3.5-6.3 Zuiko	E++ £179
25mm F2.8 Zuiko	E+ £119
40-150mm F3.5-4.5 Zuiko	
40-150mm F4-5.6 ED Zuiko	
50-200mm F2.8-3.5 SWD	E++ £369
70-300mm F4-5.6 ED Zuiko	
EC14 Tele Converter	
EC20 2x Tele Converter	
EX25 Extension Tube	E++ / Mint- £49 - £59

Olympus Micro 4/3rds Lenses

E++ £499 - £529
E++ £139
Mint- £139
/ E++ £379 - £429
Mint- £429
E++ / Mint- £139
E++ £75 - £79
E++ £45
Mint- £269
Mint- £219
E++ £879 - £899
Mint- £89
E++ £149
Mint- £489 - £499
Mint- £489

Sonv E Lenses

Canon EOS Lenses

8-15mm F4 L Fisheye USM E++ £889
10-22mm F3.5-4.5 EFS E+ / E++ £259 - £279
11-22mm EFM F4-5.6 IS STM E++ £209
11-24mm F4 L USM E++ £2,139
14mm F2.8 L USM II E+ / E++ £849 - £929
15-45mm F3.5-6.3 IS STM EF-M Mint- £149
16-35mm F2.8 L USM E++ £549
16-35mm F4 L IS USME++ / Mint- £639 - £679
17-40mm F4 L USM E+ / E++ £379 - £419
18-135mm F3.5-5.6 IS STM E++ £239
18-200mm F3.5-5.6 IS EFS E+ £239
18-55mm F3.5-5.6 EFS II E++ £49
18-55mm F3.5-5.6 EFS IS E+ £69
180mm F3.5 EF L Macro USM E++ £899
20mm F2.8 USME++ £249 24-105mm F4 L IS USME++ £399 - £449
24-105mm F4 L IS USM E++ £399 - £449
24-70mm F2.8 L USM II E+ / Mint- £1,099 - £1,149
24-70mm F4 L IS USM E+ £549
24-85mm F3.5-4.5 USM E+ £99
24mm F1.4 L USM MKIIE++ / Mint- £989 - £1,049
24mm F3.5 L TSE Mkll E++ £1,189
28-105mm F3.5-4.5 USM E+ £119
28-135mm F3.5-5.6 IS USM Unknown £79
28-80mm F2.8-4 L USM E+ £339
28-80mm F3 5-5 6 FF F++ £49

	8-80mm F3.5-5.6 EFIIE+	
	5-135mm F3.3-4.5 Vario Sonnar E++ 5	
	5mm F1.4 L USM E++ 5	
	0mm F2.8 STM Mint- !	
	0mm F1.4 USM E++ 5	
	0mm F1.8 EF Mk1 E+ 5	
5	0mm F1.8 STM E++	£79
5	5-250mm F4-5.6 EFS ISE+	£79
	Omm F2.8 EFS Macro Mint- :	
	0mm F2.8 Macro USM EFS E++ / Mint- £219 - 5	
	0-200mm F2.8 L IS USM II Mint- £1	
7	0-200mm F4 L IS USM E++ £639 - 5	£689
7	0-200mm f4 L USM E++ £299 - 5	£339
7	0-210mm F3.5-4.5 USM E++	£99
7	0-300mm F4-5.6 IS II USM Mint- !	£359
	0-300mm f4-5.6 IS USM E+ / Mint- £199 - 5	
7	0-300mm F4-5.6 L IS USME+ 5	£679
8	5mm F1.2 L USM E++ 5	£749
8	5mm F1.2 L USM MkII E++ / Mint- £1,099 - £1	,199
9	0mm F2.8 Tilt-Shift Lens E+ / E++ £699 - 5 00-300mm F4.5-5.6 USM E+	£789
1	00-300mm F4.5-5.6 USME+	£79
	00-400mm F4.5-5.6 L IS USM E+ / E++ £599 - 5	
	00mm F2.8 EF Macro Unknown 5	
	00mm F2.8 USM Macro E++ 5	
	35mm F2 L USM E++ 5	
	00-400mm F4 L IS USM with Internal 1.4x Extender Lens E++ £	
	00mm F1.8 L USM Unknown £1	
	00mm F2.8 L USM II E++ £429 - 5	
3	00mm F2.8 L IS USM E+ / E++ £2	,479
3	00mm F2.8 L IS USM MKII E++ £4	,249
	00mm F2.8 L USM Exc :	
	00mm F4 L IS USM E+ 5	
4	00mm F2.8 L USME+ £2	,449
	00mm F4 D0 IS USM E+ / E++ £2,149 - £2	
4	00mm F5.6 L USME+ 5	E639
	00mm f4 L IS USM MKII E+ £5	
5	00mm F4.5 L USM E+ £2	.,149

Sigma - Canon EOS Fit

18-35mm F3.5-4.5 AF	
18-50mm f2.8-4.5 DC OS HSM	E+ £119
20mm F1.8 EX DG	E++ £249
24-60mm F2.8 EX DG	E++ £149
50mm F1.4 EX DG HSM	E++ £219
50mm F2.8 EX DG Macro	E++ £149
70-210mm F3.5-4.5 Apo	E++ £29
150-600mm F5-6.3 DG OS HSM Sport	
150mm F2.8 EX DG Macro HSM	E++ £249
170-500mm F5-6.3 Apo	
180mm F3.5 EX Macro AP0	
300mm F2.8 APO DG HSM	E++ £1,149
400mm F5.6 AF	E+ £99
500mm F7.2 Apo	E+ £149
600mm F8 Reflex	E+ £179
800mm F5.6 APO EX DG HSM	E++ £3,499

Contax SLR Lenses

E++ £349 E++ / Mint- £249 - £279
Unused / New £349 - £399
E++ £449
E++ £249
E++ £129 - £149
E++ £25
E++ / Unused £349 - £649
E+ £599
Unused £2,379
E+ / E++ £149 - £229
E++ £39
E+ £169
E+ £249
E++ / Unused £349 - £549
E+ / E++ £129 - £149
E++ / Unused £159 - £449
E++ £299

Digital Mirrorless

FujiFilm X-Pro2 Body + MHG-XPro	2 GripE++ / Mint- £1,089
X-Pro2 Body Only	E++ £1,199
X-T1 Body + Meike Grip	E++ £439
X-T1 Body + Vertical Grip	E++ £489
X-T1 Body + Vertical Grip	E++ £489 - £499
X-T1 Body Only - Black	E+ £419
X-T10 Black Body Only	E+ £319
X-T20 Body Only - Black	Mint- £649
X-T20 Body Only - Silver	Mint- £649
X100F - Black	E++ / Mint- £1,049
X100E - Silver	F++ £1 049

Olympus Pen-F Black Body + ECG-4 GripE+ £719	
Pen-F Black Body Only E+ / Mint- £669 - £749	
Pen-F Silver Body + ECG-4 Grip E++ £749	
E-M1 Black Body + HLD-7 Grip . E+ / Mint- £469 - £499	
E-M1 Black Body Only E+ / E++ £379 - £439	
E-M1 Silver Body + HLD-7 Grip E++ £479	
E-P2 Black + 14-42mm E++ £139	
OMD E-M5 MKII Body Only - Black Mint- £679	
OMD E-M5 Silver Body OnlyE+ £229	

Panasonic GH5 Body OnlyE++ / Mint- £1,349 - £1,449 GH4 Body + Grip
Sony A7 Body Only. Mint- £639 A7 II Body + VG-C2EM Grip. Mint- £999 A7 II Body Only Mint- £889 A7R II Body Only E++ £1,649 - £1,749 A7S Body Only Ex £849 A7S MkII Body Only E++ / Mint- £1,969 - £2,099

Digital SLR Cameras

A6000 Body Only

A6500 Body Only

NEX5 Body Only.

Canon EOS 1000D Body OnlyE+ £119
EOS 10D Body OnlyAs Seen £49
EOS 1D Mkll Body Only E+ £249 - £279
EOS 1D MkIII Body Only E+ £399
EOS 1DX Body Only Unknown £1,699
EOS 20D Body Only E+ / E++ £79 - £89
EOS 350D Body Only Exc / E++ £49 - £59
EOS 400D + BG-E3 Grip E++ £99
EOS 40D + BG-E2N Grip E+ £139
EOS 500D Body Only
EOS 5D Mkll Body Only E+ / E++ £599 - £689
EOS 5D MKIII Body Only E+ £1,349 - £1,399
EOS 5DS Body + BG-E11 GripMint- £2,249 - £2,259
EOS 5DS Body Only E++ £2,099 - £2,149
EOS 6D Body + BG-E13 Grip E++ £779
EOS 70D Body + BG-E14 Grip E++ £549
EOS 70D Body Only E++ £499
EOS 750D Body Only Mint- £389
EOS 7D MKII Body Only E+ £849
EOS M Body Only Mint- £129
EOS M5 Body Only Mint- £549

Nikon D100 + MB-D100 GripAs Seen £59	
D100 Body Only	
D200 Body Only E+ £129	
D3 Body Only E+ / E++ £749 - £799	
D3300 Body Only E++ £199	
D3S Body OnlyAs Seen £769	
D4 Body Only E+ / E++ £1,849 - £2,189	
D40X Body Only Unknown / E+ £49 - £59	
D4S Body OnlyE++ £3,149 - £3,249	
D500 Body Only E++ £1,449	
D5100 Body OnlyE+ £169	
D5200 Body Only E++ £229	
D60 Body Only Unknown / E++ £49 - £89	
D600 Body Only E++ £649	
D7000 Body Only E+ / E++ £279 - £299	
D70S Body OnlyE+ £59	
D7200 Body Only E+ £629 - £649	
D750 Body Only E+ £949	
D80 Body Only	
D800 Body Only E+ / E++ £999 - £1,049	
D800E Body Only	
D810 Body Only E+ / E++ £1,479 - £1,499	
D90 Body OnlyE+ / E++ £139	
50 body only	

Sony A200 + 18-70mm	E++ £129
A200 Body Only	E++ £129
A3000 Body Only	E++ £99
A33 Body Only	E+ £129
A35 + 18-55mm	E++ £179
A350 + 18-70mm	E+ £159
A55 + 18-55mm	E+ £139
A700 Body Only	E++ £159

Hasselblad V

205TCC body + WLF + Back	E+ £2,499	
500CM Gold Edition	Unused £3,999	
501CM Complete	E++ £1,599 - £1,749	
503CX Complete + PM5 Prism	E+ £1,199	
553ELX Black Body Only	E+ £399	

E+ £299 - £359
E++ £2,399
Exc £849
Exc £449
As Seen £249
As Seen £499
Exc / E++ £349 - £499
E++ £999
E+ £149
Exc / E++ £249 - £399
E++ £349
E+ £399
E+ £149
E+ £239
E+ / E++ £169 - £199
E+ £159
Exc £199
E++ £399

Leica M Bodies

M10 Silver Body Only	E++ £4,850
M (240) Black Body OnlyE-	++ £2,979 - £2,989
M (240) Chrome Body Only E+ / E-	++ £2,949 - £2,989
M Monochrom Black Body Only	E+ £2,399
M-D (typ 262) Black Body Only	Mint- £3,849
M9 Black Body Only Exc /	E+ £1,799 - £1,949
MP 0.72x Ralph Gibson Edition	Mint- £5,900
M7 0.72x Black Body Only	E++ £1,449
M7 0.72x Chrome Body Only	E++ £1,449
M6TTL 0.72x Black Body Only	E++ £1,299

Mamiya 645

.. Mint- £289

...E+ £79

... Mint- £1,049

55-110mm F4.5 N 55mm F2.8 N 75-150mm F4.5 C	E+ £169 E+ £169 E+ £299 E+ £299 E+ £79 E+ £129
	E+ £115
210mm F4 N 300mm F5.6 C AE Prism Finder (FE401)	As Seen / E+ £39 - £69 E+ / E++ £89 - £109

Sony AF Lenses

$\begin{array}{llllllllllllllllllllllllllllllllllll$
55-200mm F4-5.6 DT SAM E++ £49 60mm F2 Di II (if) Macro TamronNew £269

Nikon AF

F5 Body Only E++ £399
F90X + MB10 Grip E+ / E++ £69 - £89
F100 Body + MB15 Grip Exc / E++ £179 - £239
F80 Black Body Only E+ / E++ £39 - £69
F80 Chrome Body Only E+ £49
F60 Chrome Body Only E+ / E++ £19
F50 Black Body Only E+ £15 - £19
F50 Chrome Body Only E+ £15
F65 Chrome Body Only E+ / E++ £29
F65 Quartz Date Chrome Body Only E++ £29
F60 Chrome Body Only E+ / E++ £19
F601 Body Only E+ £29
10-24mm F3.5-4.5 G AFS DX E++ / Mint- £469 - £549
12-24mm F4 G AFS DX ED E++ £399
14mm F2.8 AFD E++ £749
16-35mm F4 G AFS ED VR E++ £729

The Kirk, Wester Balblair, Beauly, Inverness. IV4 7BQ.

PayPal





Prices correct when compiled. E&OE. T: 01463 783850 E: info@ffordes.com

Largest Used Equipment Specialists Since 1960

16-85mm F3.5-5.6 G ED VR AFS DX E++ £259
17-55mm F2.8 G AFS DX IFED E+ £249
18-105mm F3.5-4.5 G AFS ED DX VR . Exc / E++ £89 - £129
18-140mm F3.5-5.6 AF-S G ED VR DX Mint- £259
18-200mm F3.5-5.6 G AFS DX VRII E++ £349
18-55mm F3.5-5.6 G AF-P DX Mint- £79
18-70mm F3.5-4.5 G AFS ED DX Unknown / E+ £39 - £79
24-120mm F3.5-5.6 ED AFD E+ / E++ £129 - £149
24-120mm F4 AFS G ED VR ET / ET / 2120 2140
24-70mm F2.8E AFS VR EDE+ £1,449
24-70mm F3.5-5.6 IX
24-85mm F3.5-4.5 G AFS VR E++ £269
24-05mm F3.5-4.5 G AF 5 VN
28-100mm F3.5-5.6 AFG E+ £39 - £49
28-1001111 F3.5-5.0 AFG E+ £39 - £49 28mm F2.8 AF
28mm F2.8 AFN E+ / E++ £129 - £139
35mm F1.4 G AFS E+ / E++ £799 - £849 35mm F1.8 AFS G FX Mint- £349
35mm F1.8 AFS G FX Mint- £349 35mm F1.8 G AFS DX Mint- £109
35mm F1.8 G AFS DX
35mm F2 AFDE++ / MINT- £169 - £199
40mm F2.8 G AFS DX Micro Mint- £179
50mm F1.8 G AFS Mint- £129
55-200mm F4-5.6 AFS DX G VR As Seen / E++ £49 - £99
55-200mm F4-5.6 G AFS DX VR II Mint- £129
58mm F1.4 G AFS ED E++ £989
70-200mm F2.8 G AFS ED VRII E+ £1,049 - £1,089
70-300mm F4-5.6 ED AFD E+ / E++ £89 - £109
70-300mm F4-5.6 G AFS VR E++ £319
70-300mm F4.5-5.6 AFS IF ED VR E++ £319 - £329
80-200mm F2.8 ED AF E+ £299
80-400mm F4.5-5.6 AFD VR E++ £399 - £429
85mm F1.4 G AFS E+ / Mint- £849 - £899
85mm F1.8 AF-S G E++ £379
105mm F2 AF DC E+ £519
105mm F2.8 AFS G VR Micro E+ / E++ £379 - £429
180mm F2.8 ED AF E+ £249 - £279
180mm F2.8 ED AFD E++ £489
200-400mm F4 G VR AFS IFED E+ / Mint- £1,889 - £2,099
300mm F2.8 G AFS ED VR II E++ £3,479
300mm F2.8 IFED AF E+ £979
300mm F2.8 IFED AF-I E++ £1,089
300mm F2.8 IFED AFS E+ £1,549
300mm F4 AF EDAs Seen £239
400mm F2.8 AFi IFED E++ £2.499
500mm F4 AFS IFED E++ £2,499
500mm F4 G AFS VR IF EDE+ £4,249
500mm F4 P IFED AISExc £799
600mm F4 AFS IFED DII E++ £3.949
ET 1 20,040

Sigma - Nikon AF Fit

4.5mm F2.8 EX DC Fisheye HSM E++ £469
8-16mm F4.5-5.6 DC HSM E++ £369
10-20mm F4-5.6 DC HSM E++ £169
12-24mm F4.5-5.6 EX DG HSM E+ / E++ £249 - £289
14mm F2.8 EX HSM E++ £279
15-30mm F3.5-4.5 EX DG E+ £159
15mm F2.8 EX DG Fisheye Mint- £329
17-35mm F2.8-4 EX HSME+ £129
17-50mm F2.8 EX DC 0S HSM E++ £239
17-70mm F2.8-4 DC OS Macro HSM Contemporary E++ £239
20mm F1.8 EX DG E+ £249
24-105mm F4 DG 0S HSM Mint- £449
24-60mm F2.8 EX DG E++ £239
24-70mm F2.8 IF EX DG HSM E++ £359
50mm F1.4 EX DG E+ / Mint- £219 - £229
50mm F2.8 AF Macro E+ £99
50mm F2.8 EX DG Macro
70mm F2.8 EX DG Macro E++ £179
105mm F2.8 EX DG Macro E++ £159
120-300mm F2.8 EX HSM APO DGE+ £689
180mm F5.6 Apo Macro E+ £169
10011111 F3.0 Apu Walio E++ £109

Pentax AF Lenses

10-17mm F3.5-4.5 DA Fisheye E++ £239	
14mm F2.8 DA ED IF E+ £349	
14mm F2.8 SMC DA E++ £399	
16-45mm F4 DA ED AL E++ £169 - £179	
16-50mm F2.8 A* DA SDME++ / Mint- £429 - £549	
17-28mm F3.5-4.5 Fisheye F E++ £199	
17-70mm F4 DA AL (IF) SDM E++ £239	
18-135mm F3.5-5.6 ED AL (IF) DC WR E++ £199	
28-105mm F3.2-4.5 FA E++ £95	
28-70mm F2.8 SMC AL FA* E+ £549	
28-80mm F3.5-5.6 FA E+ £49	
28-80mm F3.5-5.6 FAJ AL E++ £49	
35mm F2.4 DA AL E++ £79	
35mm F2.8 DA Limited Edition E++ £249	
40mm F2.8 SMC DA XS Mint- £179	
50-200mm F4-5.6 DA EDAs Seen £29	
50-200mm E4-5.6 DA ED WB As Seen / E++ £49 - £79	

55-300mm F4.5-6.3 DA PLM WR	Mint- £289
60-250mm F4 ED (IF) SDM	Mint- £739
70mm F2.4 DA Limited Edition	E++ £349
80-200mm F4.7-5.6 A	E+ £49
80-200mm F4.7-5.6 SMC F	E+ £49
80-320mm F4.5-5.6 SMC FA	Unknown £29
100mm F2.8 D-FA Macro WR	E++ £279
200mm f2.8 DA* ED (IF) SDME++	/ Mint- £599 - £649
300mm F4 DA* ED (IF) SDM	E++ £599
	60-250mm F4 ED (IF) SDM 70mm F2.4 DA Limited Edition 80-200mm F4.7-5.6 A 80-200mm F4.7-5.6 SMC F 80-320mm F4.5-5.6 SMC FA 100mm F2.8 DA*ED (IF) SDME++

Rollei 6000

6008 Pro Body Only	E++ £399
6006 Mk1 Complete	E+ £399
50mm F2.8 PQS Schneider	E+ / Mint- £899 - £989
50mm F4 FLE PQ	
50mm F4 HFT Distagon	E+ / E++ £199 - £299
50mm F4 PQ	E++ £449
50mm F4 PQ EL	Exc £199
75-150mm F4.5 PQ Vario	Exc £949
80mm F2.8 HFT	Exc £149
120mm F4 PQ Macro	E++ £599
120mm F4 PQS Macro	
150mm F4 EL	E++ £449
150mm F4 PQ	
180mm F2.8 PQ	
350mm F5.6 PQ Tele Tessar	Mint- £1,149

Tripod Heads

Gitzo G1177M Centre Ball Head	E++ £49
G1382L /14B Quick Release Plate 1/4-2	20 E++ £15
G1576M Off Centre Ball Head	Exc £69
GC3320 Tripod Holster + Strap	E++ £15
GH1780QR Centre Ball Head QR E	++ £119 - £139
GH1780TQD Centre Ball Head QR	Mint- £119
GH1780TQR Centre Ball Head QR	E++ £99
GH2750 Off Centre Ball Head	
GH2780QR Centre Ball Head	Mint- £159
Graduated Right Angle Bracket G541	
GS3750D Panoramic Disc Head	E+ £89
GS5122LVL Series 3 Systematic Levellin	ng Base E+ £199
Monoball P0 with Quickset Fliplock	E+ £149
Off Centre Ball Head	
Rationelle No 2 P/Tilt Head	E+ £69
Studex 320 Extending Centre Column	E++ £25



BEAT THE PRICE INCREASE



Leica D-LUX 109 Inspired by life Resolution: 12.8 MP Optical zoom: 3.1x Optical Zoom Sensor size: Crop Sensor

£799 + FREE 16GB SD CARD

Sensor size: Full Frame Sensor Lens: Summilux 28mm f/1.7 ASPH

89

Leica Q

Classic Design

Resolution: 24 MP







Leica CL Kit ELMARIT-TL 18mm f/2.8 Mirrorless System 24.2 MP Crop Sensor

+ FREE 32GB SD CARD

£3150 + Half Price Leica CL Grip

Leica M10

24MP Full-Frame CMOS Sensor Leica Maestro II Image Processor 0.73x-Magnification Viewfinder 3.0" 1.04m-Dot LCD

+ FREE Leica Battery



The ORIGINAL commission sale specialists. We also PART EXCHANGE and BUY FOR CASH

WANTED FOR CASH Exclusively... Nikon HIGHEST PRICES PAID

Grays of Westminster are always seeking mint or near-mint examples of Nikon equipment:

Nikon cameras, AF-D Nikkor lenses, AF-S Silent Wave Nikkor lenses, AF Micro-Nikkor lenses, Nikon Speedlights, Nikkor AIS & AI Manual Focus Lenses



VRIGGERSMAR

A *unique* capture system that triggers your camera using motion, sound or light

The TriggerSmart is designed to easily capture images using Sound, Light Intensity Increase, Infra Red Beam Breaking and Movement. A great variety of stills and video cameras can be used, digital as well as film based. It can also trigger flash units and other devices.





For information and to buy: www.robertwhite.co.uk





The TriggerSmart Kit: the control unit MCT-1, IR/LIS receiver, IR transmitter and sound sensor, two mini tripods, one 2° baffle, two sensor connection cables and one camera connection cable. (Some cameras will require a specific adapter cable. See website.)

ONLY £198.00 incl. VAT.

TAKE THE WORRY OUT OF CLEANING YOUR SENSOR WITH VisibleDust FIND THE PROBLEM

Lights and Loupes.

If you can't see the dust and dirt - you can't clean away the dust and dirt. Our products are designed to enable you to identify where and how to clean. We also advise that if you feel your sensor does not need attention after inspection, do nothing!

CLEANING NEEDED IGH I

Dry cleaning. Brushes and blowers with properties that lift dust and other non-oily materials away easily. Versions available for every sensor size regardless of camera brand. A range of blowers from a simple version to fully filtered, anti-static

with dust free air ejection measures are available to suit your needs HEAVIER CLEANING NEEDED

Wet cleaning. Liquids specifically designed and manufactured to remove grease oil, pollen, fingerprints etc whilst still being safe for your precious sensor. When used in conjunction with the correct swab they make light work of removing matter that would otherwise degrade your image. With the current popularity of mirrorless cameras and their potential for the ingress of dirt and foreign bodies due to lack of a mirror, keep these products in your gadget bag ready for use

OUT & ABOUT? TAKE VISIBLE DUST

Convenient kits.

The range of EZ kits bring together everything you need to ensure complete cleaning of your cameras sensor. Kits are available to tackle all of the various cleaning jobs you may have to carry out. They are colour coded BLUE for light cleaning, GREEN for everyday cleaning and RED for heavy cleaning. Kits available in all popular sensor sizes, and as with all VisibleDust products, they are suitable for all camera brands and sensors, with or without anti-aliasing filters.



See the entire range in detail at WWW.VI [0] Tel: (Frazer Allen) 07725 081436 Tel: (Denys Nelson) 07909 227517

For details of your nearest stockist please contact...

RTISAN&ARTIST* made in Japan **Unique Photographic Accessories** Luxury Pure Silk Camera Straps A range of hand made straps made from pure silk by Japanese artisans, to give your camera a distinctive yet functional appearance. Various lengths and colours available. ACAM-312N shown. Vanity Pouches With Top Handles Store and protect your mirrorless camera, lens or accessory from dirt scratches. They can be placed within a larger camera or casual bag, providing protection and guick access to the equipment at all times. Available in 3 different sizes they can be configured to carry two bodies, three lenses or a combination of body and lens. ACAM-60N shown, ACAM-61N & ACAM-63N are alternatives. **Protective Camera Or Lens Wrap** Store and protect your camera or lens from dirt and scratches. This wrap folds neatly around your equipment, the seamless rubber ring then slips over to hold the wrap securely in place Ideal for carrying equipment in rucksacks or other bags not specifically designed for photo equipment. ACAM-80.

Casual Cord Camera Straps

Made by traditional methods with the same care and precision of our silk straps, this new range offers photographers a colourful and comfortable way to carry their cameras. Available in the colourways shown, they are also available in 2 different lengths. ACAM-701 shown, ACAM-706 also available.

Further details and your nearest stockist can be obtained from



Alpha Optical Distribution Limited Tel: (Frazer Allen) 07725 081436 (Denys Nelson) 07909 227517 Email: info@alphaodl.co.uk Product website: www.artisan-n-artist.com



PARKCameras

VISIT OUR WEBSITE - UPDATED DAILY

www.parkcameras.com/ap

OR PHONE US MONDAY - SATURDAY 01444 23 70 60

Experts in photography
Our Unbeatable stock availability
Our Our Detitive low pricing
Our Stock



Prices correct at time of going to press: Prices subject to change: check website for latest prices.

products and news with Park Cameras!

★★★★ RATED 5 STARS ON TRUSTPILOT.COM

mpb.com

Taken by MPB's lan Howorth

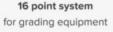
THE WORLD'S BEST MARKETPLACE FOR USED CAMERAS & LENSES

HUNDREDS OF PRODUCTS ADDED EVERY DAY

Q 5 star

customer service







Six month warranty on used products

Super fast payment

for sellers

#MYMPB



Market leading prices when buying or selling



FIVE STAR CUSTOMER SERVICE • TRUE MARKET VALUE WHEN BUYING OR SELLING • SIX MONTH WARRANTY SIMPLE SELLING AND TRADING • FREE COLLECTION • 16 POINT EQUIPMENT GRADING SYSTEM • PRODUCTS ADDED DAILY

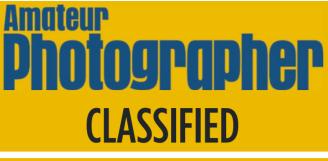




EXPERIENCE BETTER

Buy, sell or trade at www.mpb.com • 0330 808 3271 • @mpbcom

To advertise here, call Bradley Turner: 01252 555374 Email: bradley.turner@timeinc.com



Accessories





Equipment to sell?

Great news! The global market for quality digital and film cameras, lenses and accessories is stronger than ever!

With our worldwide network of customers we're paying the highest prices for Nikon, Canon, Leica, Fuji, Contax, Olympus, Panasonic, Sony, Zeiss, Voigtlander, Konica, Minolta, Sigma, Tamron, Tokina, Hasselblad, Pentax, Bronica, Mamiya and other top-quality brands.

Free Collection

Contact Jonathan Harris for an immediate quote: info@worldwidecameraexchange.co.uk or phone 01277 631353

Same-day Payment

Looking to buy? Please visit our website: www.worldwidecameraexchange.co.uk



Camera Fairs

CAMERA FAIR POTTERS BAR Sunday 25th March, Elm Court Community Centre, Mutton Lane. EN6 3BP. M25 J.24 close to Potters Bar station. Admission Earlybird 9.15am £4. After 10.30am £2. Refreshments. Details Peter Levinson Tel: 020 8205 1518



Holidays & Courses



Wanted

Pelei

IERA COLLECTIONS

Call us: **020 8867 2751** We can come to you (UK & Europe

www.peterloy.com

Bird Of Prey Photography Days

Why not join us on one of our Photography days and experience at our award winning Bird of Prey and Animal Park at Carnaby near Bridlington.

We run our Photography days on certain dates each month throughout the year. Our Photography days and workshops are suitable for complete beginners to seasoned professionals. Our days are quite unique as most of our birds fly without Jesses or tethers and they also like to use the photographers and their equipment as perches. The Birds fly and perch up in a natural woodland setting. Here is just a small selection of the birds you can photograph: Barn Owl, Eagle Owl, Great Grey Owl, Boobook Owl, Ashy faced Barn Owl, Long Eared Owl, Tawny Owl, Little Owl we also have Peregrine Falcon, Lanner Falcon, Buzzard, Kestrel to name a few.

The Cost is Only £60 and that also includes Tea/coffee and refreshments on arrival and throughout the day and we also have a purpose built classroom where you can review your images afterwards. There is two resident Photographers Lee & Gez on hand to assist throughout the day making sure you capture some memorable images from your visit.

We can also offer bespoke dates and discounts for groups maximum 10 people.

For more information and to book go to our website: www.birdofpreyphotographydays.co.uk

Find us on facebook at: www.facebook.com/Photographyexperience Photography Day Gift cards also available a perfect Christmas gift for any photographer.

Bird Of Prey Centre, Covert Lane, Carnaby, Bridlington YO15 3QF Telephone: 01262 673653 Mobile 07502320436

Classic Dealer



SALES & SERVICE - 07811 401 219 sales@camera-house.co.uk www.camera-house.co.uk





The Analysis Roger Hicks considers... 'Unidentified girl', c. 1861-1870, Unknown photographer

lmost certainly, there is nobody alive today who knows who took this picture, or exactly when, or who the little girl is (was). Even if she lived to well over 100, she must be long dead now. So why is it important?

Because, when we look at pictures from the past, it is all too easy to forget that these were people like us. As we are now, so once were they; as they are now, so shall we be. Let's try to go behind the eyes of this little girl – eyes which, if we stare into them, appear to be on the verge of tears.

Her clothes and jewellery suggest that she is in mourning; the necklace and armbands are improbably and rather badly picked out in gold on a tintype. Then we see the picture she holds on her lap. Another tintype: a man in the uniform of a soldier of the American Civil War. Very likely, her father.

We can't keep everything How did she feel when this picture was taken? Was she called away from some game and told to sit still? How did her loss strike her? Whose idea was the picture? Her mother's? Grandmother's? Grandfather's? How old was she when he died? Did she remember him: his scratchy beard, his smell of tobacco, throwing her in the air and catching her? How did he die? Where? When? What did she do after the picture had been taken? Change from her mourning clothes to something everyday? Or sit and read the Bible with a stern aunt? What was she thinking? Put yourself in her place. At her age. In her time.

Then consider her future, not her past. Did she show her



fiancé this picture? The picture of her father that she holds? Did she live to have children and see grandchildren, great-grandchildren? Did she show them this picture?

Later, how was it separated from her family? It's a part of the Liljenquist Family Collection of Civil War Photographs, held by the US Library of Congress. The Liljenquists presumably bought it. Where? When? How? Even these details, if they are not lost already, will be lost in the fullness of time.

This is from the dawn of mass portraiture; indeed, from the dawn of mass consumption. What will become of our own pictures, our own treasures, when we are gone? Unless they were unusually rich, our great-greatgreat grandparents had very little by modern standards. Mostly, they bought things to last, and got rid of them only when they wore out. The occasional photograph, and the family silver, if they had any, were hard-won exceptions. What is an heirloom, any more? We cannot keep everything from the past.

Roger Hicks has been writing about photography since 1981 and has published more than three dozen books on the subject, many in partnership with his wife Frances Schultz (visit his new website at www.rogerandfrances.eu). Every week in this column Roger deconstructs a classic or contemporary photograph. Next week he considers an image by Alexander McIntosh Weir

PARKCameras



VISIT OUR WEBSITE - UPDATED DAILY

www.parkcameras.com/ap

OR PHONE US MONDAY - SATURDAY 01444 23 70 60

PENTAX

The Pentax K-1 Mark II coming soon to Park Cameras!



Rich colours and subtle shades, and a beautiful bokeh and a well-defined sense of depth. When the photographer's inspiration is truly reflected in all these elements, photographs will become more than mere records - they will evolve into truly impressive works of art.

The PENTAX K-1 Mark II has been created as the flagship model that will fulfil this goal. It features a new, advanced image-processing system to deliver the beautiful image quality which all photographers demand. It produces images that are rich in colour and gradation, high in resolution, and superb in bokeh rendition.

13



36.4 EFFECTIVE MEGAPIXELS AA-FILTER FREE DESIGN TO OPTIMIZE RESOLVING POWER

The PENTAX K-1 II features an anti-aliasing filter-free design to optimize image resolving power. This design produces true to-life images by faithfully depicting the fine details of the subject. It retains excellent resolution, even when the image is cropped during shooting, or the captured image is trimmed during processing. It allows you to capture the decisive moment in a sharp, clear image



ADVANCED PIXEL SHIFT RESOLUTION SYSTEM IL FOR SUPER HIGH **RESOLUTION IMAGES**

By taking advantage of the camera's Pixel Shift Resolution System II mechanism, it not only improves image resolving power, but also prevents the generation of false colour. reduces high-sensitivity noise, and greatly improves image quality



EXPAND THE CREATIVE BOUNDARIES

upgrades both image resolution and colour

while drastically reducing noise compared to the PENTAX K-1. It also helps bring the

camera's top sensitivity up to ISO 819,200

grade, super-high-sensitivity photography

(at standard output sensitivity) for high-

reproduction in a high-sensitivity range,

OF HIGH-RESOLUTION DIGITAL SLR

To reproduce lively colours and rich gradations, the PENTAX K-1 Mark II

PHOTOGRAPHY

DEPENDABLE DUSTPROOF. WEATHER-RESISTANT CONSTRUCTION

A combination of the K-1 Mark II's 87 sealing parts and the optional D-BG6 Battery Grip's watertight body prevents the intrusion of water and dust into their interior.



50-200mm f/4-5.6 DA ED WR 55-300mm f/4-5.8 HD DA ED WR

70-200mm f/2.8 HD ED DC AW

55-300mm f/4.5-6.3 HD ED PLM WR£399.00

60-250mm f/4 DA* ED [IF] SDM £1,299.00

150-450mm f/4.5-5.6 ED DC AW £1.949.00

£229.00

£299.00

£2,299.00

PENTAX



18-135mm f/3.5-5.6 ED AL [IF] WR £377.97

18-270mm f/3.5-6.3 smc DA SDM £599.00

24-70mm f/2.8 HD ED SDM WR £1.149.00

28-105mm f/3.5-5.6 ED HD DC WR **£529.00**

PENTAX 645Z

Available from £5,499^{.00}

PENTAX K-MOUNT LENSES	
15mm f/4 HD ED AL Limited	£529.00
21mm f/3.2 HD AL Limited	£529.00
31mm f/1.8 AL Limited	£949.00
35mm f/2.4 smc DA AL	£119.00
43mm f/1.9 smc FA Limited	£499.00
50mm f/1.8 smc DA	£129.00
50mm f/1.4 smc FA	£399.00
70mm f/2.4 HD DA Limited	£349.00

Pentax K-70

In stock at

£569.00'

Body only

)	77mm f/1.8 smc FA Limited	£929.00
)	100mm f/2.8 D-FA Macro WR	£529.00
)	200mm f/2.8 DA* ED [IF] SDM	£749.00
)	300mm f/4 DA* ED [IF] SDM	£1,149.00
)	560mm f/5.6 DA ED AW	£4,799.00
)	10-17mm f/3.5-4.5 ED (IF)	£294.97
)	12-24mm f/4 DA ED AL (IF)	£799.00
)	15-30mm f/2.8 HD ED SDM WR	£1,449.00



All prices include VAT @ 20%. See website for our opening times for both our London and Burgess Hill sto All products are UK stock. E&OE. Please mention "Amateur Photographer" when ordering items from this **Prices correct at time of going to press; Prices subject to change; check website for latest prices.** from this advert

Keep up-to-date with all the latest new products and news with Park Cameras!

£499.00

£429.00

£159.00









Over 100 industry leaders were at the prestigious Amateur Photographer Awards recently to see Nikon scoop the top prize of the night, Product of the Year, for the Nikon D850, which AP's Technical team described as 'the best DSLR ever made'. Learn more at **Nikon.co.uk**

