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3I recently bought a return flight to Milan for £50, which is less than it costs for a peak day return train ticket from Brighton to London. Travelling to Europe has never been cheaper, and the internet makes it easy to find the perfect hotel at a bargain price. This is all great news if you're into street, travel or architectural photography. This week frequent traveller


## I week in photography

Geoff Harris presents some tips on how to make the most of a short break to Europe, to ensure you return with pictures to be proud of. If you'd like to do some editing while you're away James Paterson offers tips on using the Lightroom CC for Mobile app. Finally we talk to photojournalist Patrick Brown about his powerful work on the Rohingya crisis, as part of our new Photo Stories series (page 8). Nigel Atherton, Editor

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## ONLINE PICTURE OF THE WEEK

## Wild Fox by Simon Tassell

Canon EOS-1D X Mark II, 600mm, 1/3200sec at f/5.6, ISO 500

This beautiful and striking image of a young vixen was uploaded to our Twitter page using the hashtag \#appicoftheweek. It was taken by photographer Simon Tassell. He tells us, 'Wildlife photography is an addiction and when the opportunity arose to photograph wild foxes in South Essex courtesy of David Blackwell, I jumped at the chance. I
really wanted to capture an image that conveyed the true character of these wonderful mammals. While sitting in a hide.
I was able to take this image from quite a low perspective as this young vixen ran towards me. The time spent with the foxes was a unique experience and one I hope to enjoy again.'

## Perma_let frofessionalinkuet meor

Win!Each week we choose our favourite picture on Facebook, Instagram, 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 害 finest PermaJet paper*. It is important to bring 䌢 images to life outside the digital sphere, so we encourage everyone to get printing today! Visit www.permajet.com to learn more.

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## NEWS ROUND-UP

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

## Kingston reveals 7-in-1 USB hub

Ideal for users of newer MacBooks without a full-size USB port, the new Nucleum 7-in-1 Type C USB hub features both USB-C and USB-A ports, as well as HDMI and SD/microSD card slots. All seven ports can be used at the same time. The device weighs under 93 g and has an RRP of $£ 59.99$.

Sony sets its sights on the top spot


Sony has revealed its ambitious plans to be the top brand in the overall camera market by the end of 2020 . To do this, Sony says it will expand its lens business and target professional users. In 2017, the company had a 20\% share in the still-camera market, behind camera giants Canon and Nikon.

## Instagram introduces 'mute’ function

A long-requested feature - the ability to mute other users - has finally arrived on the popular social media photography platform Instagram. Previously the only option was to unfollow somebody whose feed you weren't enjoying, but the other party could find out. With mute, you can preserve friendships and relationships without having to endure daily selfies.


## Kodak Alaris releases disposable camera

You may be forgiven for assuming disposable cameras are all but dead in the age of the smartphone. Once a popular fixture at events and weddings, the new Kodak Daylight Single Use Camera comes loaded with ISO 800 film, doesn't have flash and produces 39 exposures. Pick one up for just $£ 7.79$.

## DNY

 256
## PRO Elite migro e

PNY launches largestcapacity microSD card At 512GB, the PNY Elite microSDXC is the highest capacity microSD card on the market. The microSD format is popular in drones and Android smartphones land can be used as a regular SD card with an adapter). With space for up to 100,000 photos, the card boasts 90MB/s transfer speeds.



The12th Landscape
Photographer of the Year contest is open for entries

The competition for the twelfth Take a View Landscape Photographer of the Year is now open for entries. Founded by renowned landscape photographer, Charlie Waite, the competition celebrates UK landscapes only but anyone across the globe can enter.
There are categories for urban views, landscapes with people, close-up details and conceptual landscapes, as well as more classic views - so there is plenty of scope for your imagination. Key supporter and exhibition host Network Rail will once again present the 'Lines in the Landscape' award for the best image of the
contemporary rail network shown within its landscape setting. This evocative image of Ribblehead Viaduct was 'painted' with light using a 1500-lumen torch and was taken by Robert France. It was highly commended in the Network Rail category last year and can be seen on tour at main rail stations nationwide until mid-July.

Entrants have until 7 July to enter the 2018 Awards by submitting their photographs of the British landscape. The prize fund is worth $£ 20,000$, with $£ 10,000$ for the overall winner. Find out more at the website www.take-a-view.co.uk.

## Words \& numbers

I like to photograph anyone before they know what their best angles are Ellen von Unwerth
German photographer


Number of stars captured in first photograph ever taken with NASA's newest planet-hunting satellite


# Fujifilm's mirrorless X-T100 launched 

1
FUJIFILM has officially lifted the - lid on its latest compact system camera, the X-T100. The camera features a 24.2MP sensor CMOS sensor, automatic scene recognition, a three-way tilting touchscreen and Bluetooth connectivity.
Weighing in at just 448g, the X -T100 is designed as an entry-level model for the X-T range, and joins the other current X -T models the X-T2 and the X-T20. Unlike other cameras in the $X$ - $T$ series, the X-T100 doesn't feature the more advanced X -Trans sensor but instead the CMOS utilises a traditional Bayer colour filter, likely to be the same sensor found in the Fujifilm X-A5.
It has an anodised coating, with an
overall retro design, which is available in three colours: Dark Silver, Champagne Gold and Black. As a member of the X -T series, it features three control dials on the top of the camera. The X-T100 features a phase-detection autofocus system, which has a newly developed autofocus algorithm for faster and more precise focusing. There is new Bluetooth low-energy technology included for quick, easy and automatic transfer of your images to a paired smartphone or tablet, using a free app, which is available for Android or iOS.
As standard, the X-T100 will be sold with the small and light electronic zoom lens: the XC
$15-45 \mathrm{~mm}$ f/3.5-5.6 OIS PZ. It is also compatible with the rest of Fujifilm's 26 X-series lenses, which cover focal lengths from 15 mm to 1200 mm ( 35 mm equivalent). On the back of the camera you'll find a three-way tilting, 3.0-inch, 1,040k-dot TFT colour LCD. It is accompanied by a 0.39 -inch, 2,360k-dot OLED colour viewfinder. Other features include the ability to record video at $4 \mathrm{~K}, 11$ filmsimulation options and a manual pop-up flash. Battery life is rated at 430 frames per charge.
The Fujifilm X-T100 will be priced £619.00 (including the $15-45 \mathrm{~mm}$ kit lens). It will be available to buy in late June this year.



## 24hrLDNseeks photographers

- A COLLABORATIVE - ${ }^{-1}$ photography project ' 24 hrLDN ' is aiming to capture a photograph of the capital city London from each hour of a single day. The final project will feature 24 images by 24 photographers and will be displayed as part of the London Photo Show at the Bargehouse Gallery in October this year. This project is an attempt to freeze 24 moments in the story of the city of London. 24 hrLDN is seeking 24 photographers of any level or background. Tutors from the 36exp Photographers' School will help the selected photographers. You can apply to be one of the photographers by visiting Iondonphotoshow. org/24hrldn-project/, and briefly tell the organisers why you think you're right for the project as well as including a link to some of your work.


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# Firmware updates for G9, GH5 and GH5S 

- PANASONIC has ${ }^{-1}$ rolled out a new set of firmware upgrades for its three top-of-the-line compact system cameras The updates bring enhanced performance and usability, including to autofocus performance and sound quality for video shooting.

A new L. Monochrome D \& Grain effect has also been added to the Photo Styles options across all three cameras. The effect captures even darker tones and greater contrast, with grain effects available in different strengths for all monochrome settings.
Live View Boost is added to the G9 and the GH5, meaning the screen and LCD monitor can be displayed brighter than the image recorded to help check the composition when shooting in low light. The GH5 also gets a Night Mode, whereby all the information on the camera screen is displayed in red

so users are not disturbed by white light emission.
All three cameras see improved AF performance - for the GH5 and the G9 this means increased tracking AF performance, while for the GH5S, autofocusing for low-light and low-contrast photo shooting has been improved. In addition, the GH5 and G9 will have up to $20 x$ magnification
available in MF Assist mode. The G9's High Resolution Mode now has an extended aperture range and improved motion correction.
Sound quality has also been enhanced in all three systems by optimising the performance of the internal noisecancelling microphone.
All firmware is free and available to download now.

## Wex to hold two-day London show

W゙
FROM 29 to 30 June, the new Wex Photo Video Show will be taking place at Wex's London flagship store. Expect practical workshops, inspiring expert talks and special guest appearances from some of photography's most prominent names. Visitors will be able to view and try an extensive range of equipment - with a chance to win a prize bundle worth over $£ 3,500$.

More than 40 exhibitors will be showcasing products, including Canon, Nikon, Fujifilm, Sony, Panasonic, and Olympus. Accessory manufacturers such as Billingham, Lee Filters, and Manfrotto will also be exhibiting.
Entrance to the show is free, but attendees need to register for seminars and talks. Visit events.wexphotovideo.com to learn more.


The Wex Photo Video Show will include practical workshops and expert talks

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 June 1981


OH , the sins of the fathers. Last week we had nudes on the floor cavorting with apples, the week before we were treated to a bikini-clad model on a sheepskin rug and this week we have a not-at-all-offensive image of a fenced-in woman, missing a bra. The coverline clanger manages to make things even worse: 'Pictures designed to snare!' She also appears to be on the set of Dr Who or Blake's 7 judging by the hokey sci-fi background. Thankfully things get sensible inside, with an in-depth look at second-generation Minolta AF compacts, and an evocative photo project on rural life in the Lake District. These craggy rustics are probably long gone, and their cottages used as holiday homes by BBC producers from Manchester, but there you go. There's also a piece about choosing between colour and mono, though it isn't an either/or thing - more about which is most suitable for the subject, right?


An in-depth report on Minolta autofocus compacts

# The R Crisis Patrick Brown 

> Patrick Brown tells Nigel Atherton the story behind his World Press Photo awardwinning image and shares some of his powerful work on the wider Rohingya crisis

Following violent attacks on Myanmar's mostly Muslim Rohingya minority by the Burmese military, refugees have been pouring into neighbouring Bangladesh from Myanmar's Rakhine province in their hundreds of thousands since last August. Based in Bangkok, Sheffieldborn photojournalist Patrick Brown was on the scene very quickly.
'I have worked in a lot of trying and difficult areas but I was simply unprepared for what I was about to see,' recalls the multi-award-winning photographer who is currently working for UNICEF. ‘Literally thousands of people pouring over the border from Burma to Bangladesh, and those thousands turned into tens of thousands, and now we have nine hundred thousand people.'
Patrick has been photographing the refugee crisis for many months but the scale of the suffering was brought home to the West recently when a shocking image by Patrick was nominated for World Press Photo Picture of the Year (see right). 'I heard reports of a boat which had just capsized in a storm with refugees on board so we jumped in the car and went down there,' recalls Patrick. 'The Burmese border was sealed off and the military was planting landmines to stop people from crossing. They were shooting, beating and robbing people, so a group of Rohingya had decided to try to circumvent the authorities by sailing right out into the bay. They were navigating around a segment of land called Cox's Bazar to avoid the Bangladeshi coastguard and Burmese
military. So they were going right into the Bay of Bengal, during monsoon season. It was a really horrendous storm that night. The fury of it was like nothing I'd experienced before.'
The boat apparently broke up within 200 metres of the coast, with over 100 people on board, many of them women and children. Soon the bodies started being washed up on the shore. The local fishermen used torches and collected all the bodies they could find. When Patrick arrived he was confronted by a dramatic scene.
'It was dark; there was a heavy thunderstorm; the only part of me that wasn't completely soaked was under my chin. The bodies were all laid out on the ground - women, children... people were weary. When I took that image, it felt like I had been there for a lifetime, whereas in reality it was only half an hour. I didn't take many pictures that night. It was very sad. It really moved me. But you try to emotionally distance yourself from what you're photographing, and make the clearest narrative you can to tell what's happening. The camera is a veil - a filter that you're putting between you and your subjects. You are concentrating on the elements and how to balance them in the frame, to tell the story. It's not until later, when you're editing and choosing the images, that's when it gets more emotionally challenging. That's when you begin to digest what you've seen. When I first took those pictures I thought they were too harsh. But my editor in New York said we needed to tell the world what ethnic cleansing looks like.'

A survivor of the massacre at Tula Toli village (also known as Min Gyi) in Myanmar. Rajuma Begum, 20, witnessed her parents, two sisters and brother killed by the Myanmar Military. She saw her three-month old baby killed, then thrown onto a fire by the Myanmar soldiers. She was then raped, stabbed, and left for dead.

Some of the 3,000 Rohingya refugee children wait for food at the Moynarghona aid distribution centre. It is estimated that $80 \%$ of the Rohingya refugees are children and women, including newborn babies and pregnant women. The influx of Rohingya refugees from northern parts of Myanmar's Rakhine State into Bangladesh restarted following attacks at Myanmar Border Guard Police posts on 25 August last year.



PATRICK'S KIT


Patrick's kit comprises two Canon EOS 5D Mark II bodies with 35mm and 24 mm lenses. 'I like the Mark II chip,' he says, 'as for me it acts a lot like film. I understand its parameters and its temperament.' He shoots in full manualexposure mode and even uses a handheld light meter, taking incident readings from the scene. 'I don’t use the meter on the camera,' he says. 'I want a really true light reading. I only go to aperture or shutter priority if it's something really busy.' Patrick has also recently started using a Fujifilm GFX 50S. 'I didn’t like it at first because of the digital viewfinder, as I'm very much an optical guy. But I just needed to trust what it was doing, and I like it now.


Mohammed Yasin, 8, is from Maungdaw in Myanmar His family built a shelter at Kutupalong makeshift camp in Cox's Bazar. Minors make up at least $60 \%$ of the 430,000 Rohingya who have crossed the border to Bangladesh. Highly traumatised, they arrive malnourished and injured after walking for days to the safety of Bangladesh. Children arriving in the camps have endured long and dangerous journeys.

Bodies of children and other Rohingya refugees are laid out on the ground after their boat, which was filled with passengers fleeing from Myanmar, capsized off the Inani beach near Cox's Bazar, Bangladesh on 28 September, 2017. More than 100 Rohingya were on board the vessel. Seventeen survivors were found, along with 15 bodies of women and children. This image garnered Patrick a World Press Photo of the Year nomination in 2018.


## Patrick Brown

Patrick Brown is the recipient of multiple awards including the 3 P Photographer Award, NPPA Best of Photojournalism Award and World Press Award. His work has appeared in numerous publications and been exhibited at galleries across the world. He has lived in Thailand for 20 years and is represented by Panos Pictures. See more of his work at www.patrickbrownphoto.com.


With the number of new releases from Pentax few and far between, is it reaching the end of the road?

Centax is one of the most iconic brands in photography. Indeed for anyone who started out in the latter part of the last century, it belongs alongside Canon, Nikon, and Olympus as one of the finest makers of 35 mm SLRs. It was responsible for classics such as the inexpensive K1000 on which many photographers first cut their teeth, or at the other end of the scale, the pro-grade LX that remained in production for more than two decades.
Sadly, though, there's another group of contemporaries I could also mention, including Konica, Minolta and Yashica. All were companies that once upon a time made excellent products but who, for one reason or another, ended up leaving the camera business. It's this group that I fear Pentax seems destined to join.
Pentax isn't even a company in its own right any more. It was acquired by Ricoh in 2011, and since July 2013 has been nothing more than a brand name, used mainly for the firm's DSLRs. And while Ricoh has attempted to keep the line alive, in recent years the rate of product releases has slowed to a trickle. In 2017 we saw just one new camera, the KP, and the announcement of two new lenses
(a full-frame $50 \mathrm{~mm} \mathrm{f} / 1.4$ and an APS-C $11-18 \mathrm{~mm} / 2.8$ ) that have yet to see the light of day. For Pentax fans, seeing just one single new product in a calendar year doesn't bode well for the future.
This week I review the top-end Pentax K-1 Mark II (page 40), which replaces the two-year-old K-1. Like its predecessor it's a fantastic camera, but doesn't add much new: just a couple of higher ISO settings and a handheld version of its Pixel Shift Resolution mode. It doesn't gain either Bluetooth or a touchscreen, for example, which were last year's must-have features on other new cameras. This contrasts sharply with the sheer pace of development of competing mirrorless systems, particularly from Sony (which acquired Konica Minolta in 2005). Sadly, it feels like Ricoh has run out of steam.

## New blood

The problem facing Ricoh is that for cameras like the K-1 Mark II to sell well, it needs a healthy user-base of enthusiasts who are committed to the brand and prepared to spend $£ 1,800$ on stepping up to a full-frame body. But Canon and Nikon have had a stranglehold on the entry-level DSLR market for most of the last decade, while the likes of Fujifilm,

Olympus, Panasonic and Sony have siphoned off many other budding enthusiasts to their mirrorless systems. Pentax still has a very loyal following, but it seems not enough new blood.
It would be a real shame to see Pentax disappear altogether. I've really enjoyed using its DSLRs over the past decade, and they've traditionally offered excellent value for money. Unfortunately, though, sometimes making attractive, wellfeatured, value-for-money products isn't in itself enough. But if the K-1 Mark II were to be the end of the line, it would be a fitting last hurrah.

Andy Westlake is currently the Technical Editor of Amateur Photographer. For six and a half years he wrote for Digital Photography Review, writing numerous lens and camera reviews.

Might the K-1 Mark II be the last camera to bear the famous Pentax name?


Do vou 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 $£ 79.99$

## Innext week'sissue

On sale Tuesday 12 June

## Birds of summer

Long days and the breeding season-make the most of bird photography this month


## Taking filight

Michael Topham puts the Nikkor
$180-400 \mathrm{~mm}$ f/4 zoom through its paces

## 30 wildlife accessories

Here are some great accessories to take your wildlife photography up a notch

## Wild things

Create your best wildlife pictures with
these top tips from our five wildlife pros

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## Technique city break masterclass

# Give me abreak 

Heading off on a short city break this summer? Keen traveller Geoff Harris shares some tips for getting the best possible shots in a short space of time

«Batteries and cards
Take plenty of pre-formatted cards, store them in a plastic case to avoid damage, and keep in a traveller's pouch. A battery charger is a must-pack, and an extra battery grip is always handy. Try to copy the day's shots to online storage daily.


Leave time in your schedule for long exposure shots at the blue hour, before sunrise or after sunset

## Geoff Harris



As well as being AP's deputy editor, Geoff is a keen travel photographer who loves city breaks as much as longer-haul trips. In 2016, he reached the finals of the Pink Lady Food Photographer of the Year with a travel image (before joining the staff of AP).

The world has really shrunk over the past couple of decades, and thanks to competition between budget airlines, flying to Rome or Barcelona can be cheaper than getting the train to London, Manchester or Aberdeen. City breaks have never been more popular, and most AP readers will want to take along at least some of their camera gear for photo opportunities. However getting to that wonderfully photogenic European city, or a picturesque British town like Oxford or Durham, is the easy part. A far bigger challenge is taking high-quality shots which will stand the test of time, especially if you're only there for a few days. To give you the best possible chance of success, I'll be sharing some hard-won tips and insights over the next few pages, while also recommending some lightweight camera and lens combos and accessories to ensure you don't bust your luggage allowance, or your back.
Once you've decided where to go for a city break, it's important to be clear about your goals, as well as be realistic about the amount of time you'll have for photography. If you're content with a few nice 'record' pictures, there's obviously going to be less pressure than if you hope to put together a panel for a photographic society/camera-club award, or take images good enough to sell or enter into a travel competition. Sure, you may have quite modest goals and be pleasantly surprised at how well your images turn out, but it's good to think about your motivations in advance.
That decided, you then need to think about who you'll be going with. A solo trip or camera-club jaunt usually means you have carte blanche for photography, but chances are you'll need to compromise if you're going away with

## Filters

By all means take a Big Stopper kit if there is room, but a more compact screw-on lens filter, such as a polariser or variable ND grad, can also be great for deepening blue skies, reducing glare or achieving slow-shutter effects in daylight.

## Tripod

You'll be glad you packed a light, carbon-fibre model for long exposures at the blue hour or sunrise and sunset over the city. We love the MeFOTO RoadTrip, and the new Manfrotto Befree Color is also great for travel lits leg clips are less fiddly than screw-in dividers).
A mini tripod is better than nothing, and don't forget a remote release.

## Good shoes and clothing

Travel photography is physically demanding, particularly in the summer, as it can involve a lot of walking. Don't skimp on footwear or a hat: blisters could mean you miss a killer shot, while getting bad sunburn can be downright dangerous. Pack some warmer clothes for the blue hour, as temperatures can really fall.



1your partner, family or friends. Asking tired travel companions to空hang around in the heat while you try and get just one more shot of the Colosseum with an uncluttered background is likely ${ }_{0}^{2}$ to fray tempers - add young kids to the mix and it can be a nightmare. Then there密can be arguments about where to go, ${ }^{2}$ as not everyone will be interested in schlepping out to 'that bridge on the edge of town which is supposed to be great for sunsets'. As we'll see later, a good way around this is to get up early, while your
travelling companions are still asleep. Rising at stupid o'clock might seem a bit unfair when you're supposedly on a relaxing break, but serious travel photography ain't no holiday (and you can always kip after lunch).

## Careful packing and research

 None of this will be a big revelation to experienced travellers, but the next job is even more important - to think carefully about what you're going to shoot, and what you're going to shoot it with. Unless you'refamiliar with the city, doing some research before you go is absolutely essential on a short trip. As some of the images here will reveal, I was in Rome recently for the first time. Frustratingly, my hotel was out in the suburbs, so I was pretty disoriented when the shuttle bus dropped me off by the Circus Maximus. Because I'd done my research and had a checklist of must-get shots, however, I quickly got my bearings without wasting time trying to find the tourist office for ideas.
Major cities like Rome or Paris will have

## TOP TIPS FOR GREAT SHOTS ON A SHORT BREAK



## Try long exposures

Even in tourist hotspots, taking a long exposure at the blue hour can be very satisfying. Street lights become interesting star bursts and heavy traffic turns into colourful traffic trails. For star bursts try a smaller aperture between $\mathrm{f} / 14$ and $\mathrm{f} / 20$, and a shutter speed between $10-20 \mathrm{sec}$ for traffic trails. A tripod is usually a must.


## If you can't beat'em, ghost'em

Even if you get up early it can be hard to avoid crowds, and sometimes people give more atmosphere to your shots. Setting a slower shutter speed, e.g. below $1 / 15 \mathrm{sec}$, enables you to create motion blur or 'ghost' crowds, which can be a pleasing effect. A Lee Filters Big Stopper can be used to blur people out.


## Exposuremodes and ISO

Manual exposure mode gives fine control over aperture and shutter speed, although Aperture Priority can be easier if you need to shoot quickly in changing light. Select Auto ISO and the camera will take care of the light sensitivity if you suddenly emerge from a dim church into a sunny square, for instance.
been photographed to death, so doing your research also lets you see what other photographers have tended to focus on, giving you the choice of aspiring to the same quality or trying something completely different. There's nothing wrong with ticking off the essential classics, and indeed, many photographers like to do this before trying something different, but you shouldn't run out of time. Remember the old saying 'garbage in, garbage out'. In other words, make an effort to look at what other great photographers have come away with. Turn to Charlie Waite's book on Venice, for example, rather than a lot of oversaturated snaps of St Mark's Square in Google Images. Your hit list should then help you to decide what camera and lenses (e.g. wide or telephoto) to take along.
I confess, I'm a terrible overpacker, and have paid the price in terms of aching muscles. Worse still, weighing yourself down with too much gear can actually put you off from taking photos in situ, particularly in extreme temperatures, and can annoy travelling companions. So, be realistic about what you need to take. See the Kit List on page 12 for some city break essentials, but no matter where you go, it's nearly always a good idea to take along a simple filter like a polariser, a prime lens for portraits (these are often lighter than zooms) and a lightweight travel tripod for creative long exposures in low light. Optional extras, like flashguns or a video harness, might be best left at home, but it comes down to what you intend to shoot. Check and recheck before you leave; you don't want to find out on the plane that


This unique building in Rome's EUR district was shot in very harsh sunlight in the middle of the day

## Making the most of bright light <br> While the blue hour, around sunrise or sunset, is often best for atmospheric city break shots,

 don't despair if your schedule means you have to shoot in the middle of the day. Yes, the strong sunlight can be very 'blasty' and unforgiving, but you can turn this to your advantage if you shoot in black \& white or infrared. The strong shadows you get at midday can add mood and drama to a lot of street photography, for example, while a bright blue sky can look very dramatic against buildings. If you're less confident when it comes to choosing subjects for black \& white photography, try changing to the Monochrome mode if your camera supports it, so you can see if a scene has enough tone and contrast to work well before you take the picture (shoot raw and all the colour information is retained). As for infrared, this is quite a complicated process that needs a specialist conversion, so most people tend to get an older camera converted, as we did here with our Olympus PEN. It can cost several hundred pounds and involves sending your camera away, so an easier option is to buy an infrared filter that blocks out visible light and allows infrared light to reach the camera's sensor. Silver Efex Pro is good for infrared black \& white editing, while Photoshop layers give you surreal colours. Don't fall back on sloppy technique just because you're shooting black \& white; fixing underexposure, for example, can generate noise.

Silhouettes and angles
Major tourist attractions can be busy, so try some interesting angles to capture the unique atmosphere of a place, without accidentally including some gormless ice-cream eater in pink shorts. Dialling down the exposure compensation to create a silhouette can also be a good technique in strong sunlight.


## Food is a great subject

Food photography is popular: you may be able to enter cool competitions like Pink Lady Food Photographer of the Year, and it gives you a real insight into the culture. Street markets can be very colourful subjects, and food sellers are usually relaxed about being photographed (particularly if you buy something from them).


## Watch out for details

Details and close-ups can capture the soul of a place as much as big vistas. Characterful shopfronts, details of local costumes, statues, architectural nuances - they all help you come back with more than just predictable postcard shots. Use differential focus and shallow depth of field to make the details really stand out.


Don't rule out more exotic city breaks: Fez in Morocco is less than three hours from many airports

$\bigcirc$you've left your tripod base plate or battery charger at home.

## The joy of serendipity

Once the city break starts, you'll want to make the most of your available shooting time. As mentioned, getting up at the crack of dawn can be an ideal way to get shots at the blue hour, or in that lovely early-morning light, without having to disturb your companions or battle the ubiquitous selfie-stick mob. Pack for low-light shots the night before.

Even with powerful image stabilisation systems, long-exposure shots in low light nearly always benefit from a tripod, particularly if you go slower than $1 / 15 \mathrm{sec}$. To avoid camera shake as you jab the shutter button, remember to use a remote release, whether cable or Bluetooth, and if all else fails use the camera's self-timer. Reduce the ISO if necessary during long exposures, and if focusing manually in low light, it's more accurate to check this by zooming in to critical parts of the scene with live view, rather than peering through the viewfinder (you can also use focus peaking on mirrorless systems).

Long exposures are also great for 'ghosting' crowds or traffic trails, creative effects which can add character to otherwise done-to-death locations. Prior research will have also told you whether interesting and photogenic special events, like carnivals or processions, are taking place during your stay.
Last but not least, walk, walk and walk

## 'Walking and exploring also opens you up to serendipity: chance discoveries and encounters'

some more. Walking around even the most heavily photographed tourist attraction often enables you to see it from different angles. I remember seeing a photography workshop all lined up on the Rialto bridge in Venice with tripods, taking exactly the same shot. Nothing wrong with this technical lesson, but they all got... exactly the same shot. Walking and exploring also opens you up to serendipity: chance discoveries and encounters that can yield some fantastic pictures. Try and work out your schedule and shot list so you get to spend some quality time in a location, rather than charging around and getting stressed out.
Walking around also means you can interact with the locals. Although this is something less-experienced travel photographers can find difficult, it's often the locals who give you unique pictures. Even if you can't speak the language, don't be afraid to go up to somebody interesting and gesticulate that you'd like a photo. As Martin Parr observed, if you are positive, friendly and don't appear embarrassed, they'll often agree. The worst that can happen is they refuse, and there will always be someone else around that next corner.

# 10 tips for city break shooting 

## Tablet vs laptop

A tablet is usually far less bulky than a laptop and usually cheaper to replace if lost. Cameras with built-in Wi-Fi ensure you can copy the day's images to your tablet back at the hotel, and even edit them with apps like Lightroom CC for Mobile (see page 34).

Hold or cabin baggage?
Try and get your photo gear in your cabin bag rather than your checked-in luggage. Don't risk it getting lost or damaged by careless airport-baggage handlers.

## 2 Check the regulations - about cabin-bag size

Easyjet's maximum size allowance is pretty typical: $56 \times 45 \times 25 \mathrm{~cm}$, including handles and wheels. Any bigger and you might have to put it in the hold, which is risky with fragile lenses.

4

## Get deep pockets

If you are really pushed for space, you can put your camera and best lenses in a small bag for under-seat storage, or in the pocket of a jacket (North Face pockets seem particularly deep). Or wear the camera around your neck.

## 5 Pay for priority booking <br> - Ryanair and Easyjet both allow you to pay

 a bit extra to board first: it's less stressful, and you're usually guaranteed to be able to safely stow your camera gear above your head.
## Rucksack or courier bag?

Once you've arrived, a generous weatherproof courier bag can be more convenient than a bulky rucksack. Your gear is always at hand and it's not a nuisance in crowded places.

## 7 Don't overpack in the day <br> For general daytime shooting, don't take

 the tripod if you don't need it, and try and take just one or two lenses - a wideangle $16-35 \mathrm{~mm}$ or standard $24-105 \mathrm{~mm}$ zoom are ideal. Don't overburden yourself.
## Mini tripods make sense <br> While less versatile than their full-size

 brethren, they are better than nothing and you don't need to worry about forgetting the base plate. I like the Velbon Ex-Mini, which is something of a bargain for $£ 25$.
## 9

## Handy filters

Screw-on polarisers and Variable ND grad filters can be less hassle to carry around than fragile ND grad kits. A UV filter also gives your lens some protection.

## 10 Take a charged-up phone

Phones can be handy for discreet photos, while apps are great for checking sunset and sunrise times, or even controlling your camera.
online, by phone or in store

## Tradein . trade up

to a Full-Frame
FE Lens for your Sony Camera


## It's easy as 1, 2, 3



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Making of ‘Grand Prix de l'ACF' (by Jacques-Henri Lartigue, 1913), 2016

## Reconstructing



Oliver Atwell hears how Jojakim Cortis and Adrian Sonderegger explored the boundaries of documentary photography by restaging iconic images in the form of models


The models were fun to create, but a lot of hard work

$\square$hotography is one of the closest things we have to time travel. Through the dissemination of still images, we can travel back and bear testament to events that occurred long before our conception. That's perhaps the medium's greatest power, and we so often believe that it is far more reliable than human memory. Memories, as neuroscientists are fond of telling us, are not records - they are reconstructions. They are patchy, fallible and open to interpretation and manipulation. But are photographs really any better? This is, of course, an


## 'What happens when we can clearly see that we are being lied to?'

age-old debate. The veracity of documentary photography has been debated from the moment of its inception. More recent years have seen the debate enter the arena of global photography competitions with numerous photographers being accused of either staging or manipulating their images to meet a particular agenda. We're also in the time of 'fake news' where it's becoming more and more difficult to know what's real.
It's timely then that we should find ourselves in the presence of a book featuring the work of photographers Jojakim Cortis and Adrian Sonderegger. Double Take: Reconstructing the History of Photography asks all sorts of questions about how we interact with, and rely on, photography to tell us something about the world. We think of photography as a teller of truths. But what happens when we can clearly see that we are being lied to?

## Brief history of photography

The premise of Double Take is quite simple. It's only when you begin to consider the undertaking and possibilities of the project that its impact really hits you. One day in 2012 (when the duo were struggling to find work), Cortis and Sonderegger heard the news that a photograph had been sold at auction for a record sum. That image was 'Rhein II' by Andreas Gursky, which sold for a mindboggling US\$4.3 million - to this day, the most money paid for a photograph. The photographers, both of whom met while studying at the Zurich University of Arts, marvelled at the news.
'One of us thought it would be funny to copy the photograph, so we started to reconstruct it like you might build a model railway,' Sonderegger recalls. The ultimate irony being that two broke artists would commit to recreating the most expensive photograph in history. They set about the task and even surprised themselves with how convincing the final product was.

[^1]

Making of 'AS11-40-5878' (by Edwin Aldrin, 1969), 2014

## 'The miniature sets and props were built using everyday materials such as paper, glue and tape'

©'At first we didn’t include the area surrounding the scene,' explains Sonderegger, 'but at some point we pulled back and took a shot showing the setting, and after a few days we thought "yes, this is it" - it was absolutely a better image with the surroundings included.' That single image was the first step towards the numerous images that followed.
The breadth of images that make up Double Take is incredible. At its core, the project is a survey of many of the key recorded moments of human history from the past two centuries, though the selection also includes key moments in the history of photography's technological development too. This blending of global history and photographic history emphasises how integral photography has been to recent human events and social progress.
Each of the images reproduced is immediately recognisable. Within the pages of the book you'll find Cortis and Sonderegger's reimaginings of such iconic photographs as 'Five Soldiers Silhouetted at the Battle of Broodseinde' (1917) by Ernest Brooks (see page 19), 'Le Grand Prix A.C.F.' (1913) by Jacques-Henri Lartigue (see page 18), and William Eggleston's famous 1973 shot of a light bulb hanging from a red ceiling. Each of the image titles is prefaced with the words 'Making of...' to highlight the false nature of the shot. There is no doubt that each of these images is a fabrication.

Cortis and Sonderegger aren't trying to fool you. The falsity of the images is the entire point. 'We cheat, but we make it obvious,' laughs Sonderegger. 'If somebody asks us, "how did you create an explosion?", for instance, we normally say, "have a close look at our images and you will find out."

## Building the shots

Every image was painstakingly constructed, taking weeks or sometimes months to build. 'It might look like fun and in the beginning it usually is,' says Sonderegger, 'but it's quite hard work.' If you look closely at each image you can see that each and every element has been remade with laser-focused accuracy. The lighting is perfect and so is the recreation of the camera's vantage point. The miniature sets and props were built using everyday materials such as paper, cardboard, cement, cotton wool, glue, tape, silver foil and model vehicles, but that's not to say it was easy.
'For the moon-landing shot (see above) we created Edwin [Buzz] Aldrin's boot out of wood and used powdered cement as the material,' reveals Sonderegger.
'It looked like the surface of the moon, but the powder is extremely fragile so we had to get it right in one go. We tried it more than 150 times.'
You can actually see many of these materials on display within the shots themselves. Perhaps


Making of ‘Milk Drop Coronet' (by Harold Edgerton, 1957), 2016

the key aspect of each image is not the subject (the reconstructed image) but the fact that the camera is placed a few feet back from the set to reveal the surrounding workshop environment. The floor is littered with detritus. We see the tabletop and frame that enclose the reconstructions and also the meticulously arranged lighting that illuminates each work. Cortis and Sonderegger show everything, reveal every trick, every piece of material used. The effect is that we don't entirely know what we're looking at. We see an iconic photograph but then we also see the frame.
So, is it all fake? A strange hoax? Can we believe what we see? Can we ultimately believe what we see in digital photography at all? It's almost dizzying when you get right down to its core idea. An event in history happened in real threedimensional life; it was then captured as a two-dimensional photograph; then it was remade back into a three-dimensional reconstruction; finally, it was made back into a two-dimensional photograph. Layers upon layers. Questions upon questions.

## People problems

With such high standards, the pair has occasionally struggled to recreate images featuring people, but they are getting braver. 'At the moment we are reconstructing Nick Ut's image "Napalm Girl",' discloses Sonderegger. ‘This image has been on our minds for a while, but we've always avoided it because it's just so complicated. The problem is you have such a serious image that what you're constructing has to look perfect, or it will look ridiculous, and with an image like that it's a no go. If you recreate Nessie [the famous faked shot of the Loch Ness monster] and the landscape doesn't look perfect it's not a problem, but with figures it really matters.'

Figures certainly feature within some of the images but you'll note that in the original photographs those people are often represented, sometimes as silhouettes or from far away. The images consist mainly of objects and buildings such as the crashing Hindenburg or the smoking stacks of the Twin Towers.
Ironically for a project that poses questions about whether or not we can trust digital photography, Cortis and Sonderegger eschewed

This set-up is for
Pennie Smith's photograph 'Paul Simonon at the New York Palladium 21 September 1979'


Double Take: Reconstructing the History of Photography by Jojakim Cortis and Adrian Sonderegger is published by Thames \& Hudson and priced at $£ 24.95$, ISBN 978 0500021224
the use of digital manipulation within the project. Photoshop was certainly used but only to tweak the contrast and, on occasion, to correct the colour. Cortis and Sonderegger were keener on the hands-on skills required to make each image. 'Sometimes people stand in front of our images and ask if they are created in Photoshop,' admits Sonderegger. 'We think we show enough to make them understand that's not the case. For us it's very important that we do it with our hands and not with the computer.'
It certainly would have been much easier to blur the figure jumping over the puddle in their version of Henri Cartier-Bresson's 'Behind the Gare Saint-Lazare', but instead, they vibrated a cut-out figure on a bit of string. That's dedication for you.
The questions raised by the images featured in Double Take are numerous. But Cortis and Sonderegger's work is so engaging, and so thrilling to witness and think about, that it's a real pleasure to use them as a platform for critical questioning. Their images stand as perhaps one of the most original approaches to still life we've seen in a long time.


Foliage is used
to frame the view
across the moat
to Bodiam Castle

# PHOTO ROADSHOW Fairytale fortress 

## Medieval Bodiam Castle is one of Britain's most photogenic ancient monuments, says Justin Minns

Vith its towers, imposing gatehouse, battlements, portcullis and bridgespanned moat, Bodiam Castle is the epitome of a medieval castle a children's fairytale brought to life. The castle was built in 1385 by Sir Edward Dallingridge (once a knight of Edward III) to defend the area against French invasion during the Hundred Years' War.
But following the English Civil War it was partly dismantled and left to fall into ruin, its ivy-covered battlements becoming an early tourist attraction. In 1829 it was bought by John Fuller who partially restored it. It was later inherited by his nephew, before being sold again to George Cubitt (later Lord Ashcombe), and then on to Lord Curzon. In 1925 the building was donated to the National Trust and is one of Britain's most photogenic monuments.

## Justin's top tips

Take advantage of the moat and shoot reflections . of the castle and the surrounding landscape. A circular polariser is useful here for making the most of the reflections, but be careful not to overdo it. Try shooting the reflection and not the castle itself for a different approach.

2 Use side-lighting to capture the shape and 2 texture of the castle, and to add a sense of depth and dimension. The castle itself is a ruin so there are plenty of opportunities for shooting crumbling stonework.Embrace the symmetry of Bodiam Castle by composing your image to centre everything and create a sense of calm and tranquillity.

[^2]
## Shooting advice



## Justin Minns

Justin is a landscape photographer and workshop leader who has been working with the National Trust for several years. His images have been widely recognised in photography competitions including Landscape Photographer of the Year. Visit www.justinminns.co.uk.

## Symmetry

Balance is at the heart of composition. Often that means visually balancing elements, tones or colours within the image to create a feeling of harmony rather than a literal, symmetrical balance. Occasionally though a subject lends itself to using symmetry, and Bodiam Castle is just such a place. To embrace the castle's horizontal and vertical symmetry, shoot straight on and position everything centrally in the frame. Placing the subject in the centre is usually something to avoid as it can result in a static composition, but in this case it reinforces the feeling of calm created by the reflections. The bridge hides some of the reflections, but its diagonal lines add a sense of depth. Position the camera so that the lines of the bridge are balanced, starting from the same position in each corner of the frame. It's possible to level and crop the picture in post-processing, but it's always better to get things spot on in-camera if you can.

## Side light

Photographers love the warm quality of 'golden hour' light, but the direction of light is also important. Side lighting can be used to great effect at Bodiam Castle. Light falling across the castle from one side reveals texture in the stone and the mixture of light and shadow results in a modelling effect on the curved towers, making the castle look more three-dimensional. Low sidelight is the most effective, as it's warmer and the modelling effect is more pronounced. It's not always possible to visit places like Bodiam Castle early or late enough for the best light, but the direction is still important - even when the sun is high in the sky - so it pays to check the position of the sun using websites such as www.suncalc.net prior to visiting. If the sun is high overhead try converting your images to black \& white and take advantage of the high contrast.


## Reflections

Hundreds of years ago the moat at Bodiam Castle served as a defence; today it provides photographers with wonderful reflections. A wideangle lens will make the moat seem wider, and the castle appear isolated in the middle, but keep the camera level as tilting it upwards will make the towers appear to lean in; alternatively, try including some foliage to frame the reflected view - either way, be sure to include the whole reflection.
When photographing reflections on a bright, sunny day, a circular polariser is useful for reducing surface glare from the water, it will also make blue skies and clouds 'pop'. It's easy to overdo it though and end up with deep-blue, almost black, skies. You can reduce the effect by rotating the filter slightly.
For an abstract picture, leave out the subject and just shoot its reflection.


$\triangle$ Panasonic LUMIX DC-G9
The G9 compact system camera delivers ultimate image quality. perfect for all the detail and symmetry of Bodiam Castle.


## Leica DG Vario 8-18mm f/2.8-4 lens

Wide, fast and pin sharp from corner-to-corner, this $8-18 \mathrm{~mm}$ lens is the ideal choice for reflections and symmetrical compositions.


Panasonic

## LUMIX

DMC-LX15 compact camera
A 24-72mm zoom lens and one-inch sensor in a small body make this a great choice for travelling light. The articulated screen helps with getting down low for reflection shots.


## $\triangle$ Circular polariser

An essential filter for cutting glare from reflective surfaces and saturating colours, a polariser is good for bright sunny days. Look for a slim one to avoid vignetting if using it on a wideangle lens.
by Panasonic


## Join Panasonic LUMIX at Bodiam Castle

## Come along between 10-4pm on 23/24 June

AS PART of its long-standing relationship as official photography partner of the National Trust, Panasonic will be holding events around a variety of stunning National Trust locations over the coming months. The team will be at Bodiam Castle on 23 and 24 June.
The castle was built in 1385, and with its curved towers, unusual portcullis, impressive gatehouse, and fish-filled moat it is the stuff of children's picture books. As well as the main attraction, there are smaller stars in the grounds: highly unusual
jet-black ants living in one of the oak trees, and wild bees who have lived on the site for many years.

On the weekend of $23 / 24$ June Panasonic LUMIX will be offering visitors to Bodiam Castle the chance to try out its latest cameras and lenses, and to take advantage of expert advice. Normal entry fees (and photo restrictions) apply - see page 22 for details. To find out more visit www.nationaltrust.org.uk/ bodiam-castle; call 01580830196 or visit www.nationaltrust.org.uk/ panasonic-roadshows.


## How to get there

- By car: 1.5 miles ( 2.2 km ) east, off B2244, 3 miles ( 5.6 km ) south of Hawkhurst. Look out for The Curlew restaurant on the crossroads opposite turning to Bodiam. Three miles ( 5.6 km ) east of A21 at southern end of Hurst Green village, midway between Tunbridge Wells and Hastings. - By bus: 349 Stagecoach from Hastings train station to Hawkhurst, stops opposite the entrance to the main car park. Operates Monday to Saturday. A new Sunday service will operate until further notice - see the Stagecoach website for details: www.stagecoachbus.com.


## National Trust photo competition

Capture nature at its best this summer for the chance to be featured on the cover of the 2019 National Trust Handbook or membership card. The theme is 'Our space to explore' and the closing date is 2 September 2018. For details (including terms and conditions) see www.nationaltrust.org.uk/photography-competition.


Other events coming up

| Lacock Abbey | Wiltshire | 30 June/1 July |
| :--- | :--- | :--- |
| Knole | Kent | $7 / 8$ July |
| Mount Stewart | Northern Ireland | $18 / 19$ August |
| Giant's Causeway | Northern Ireland | $1 / 2$ September |
| Dunham Massey | Cheshire | $8 / 9$ September |



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## LETTER OF THE WEEK

Crystal balls
Tony Bond's letter (Inbox, 19 May) gives an interesting insight into the processes and understanding that goes into the development of a product such as photographic paper. Last year I attended a Permajet print workshop at Clifton Cameras in Dursley, and the Permajet representative talked about the different fibre bases and coatings of various paper types for use with inkjet printers, and how the ink penetrated the coatings into the fibre base. In addition he spoke about the importance of using acid-free paper and boxes for long-term storage because many other products produce gases that degrade prints over time. This gave everyone an insight into the understanding behind the development of modern print papers.
Graham Ashton (Inbox, 19 May) talks about the cost involved in changing to a Sony Alpha 7 III mirrorless system. Having seen that the capabilities of this camera are starting to challenge current DSLRs it would be remiss of Nikon and Canon not to respond with their own mirrorless offerings sooner or later. No doubt they are developing them already and

## Right and proper?

Each week I study the detailed analysis of the latest cameras so expertly provided by Andrew Sydenham. Each one serves as a perfect guide to a potential purchaser. As the owner of a TZ60, I naturally studied the report on the latest offering from Panasonic, the TZ200 (AP 26 May). My camera is four years old and does most of the things that the latest version offers, so l'm not tempted to open the purse strings. One comment in the summary did however worry me, this being: 'The TZ200 won't, for most users, replace a "proper" camera.' I was prompted to examine the definition of 'proper' and noted that among others it is: 'of the required or correct type or form; suitable or appropriate'.

With the results shown from the TZ200, I would call it a 'proper' camera, as indeed I would my TZ60, since for both cameras in the iA mode there is a significant advantage over one of Andrew's proper cameras - they are light and pocketable, hence always with you, an advantage often noted within AP. Having passed three score and ten by a large margin, I abandoned my Nikon F-801 with its attendant bag of zooms, when I found that after a day's outing, the shoulders were complaining; not a problem with my suitable or appropriate TZ , which will under most normal conditions, produce perfect A3 prints. I would therefore call the $T Z$ series 'proper' cameras and could I suggest that AP might have used the term 'more sophisticated' instead of 'proper'

## Mike Rignall

You're right, the TZ200 is a very capable camera in its own right. But this is why I used the word 'proper' in inverted commas: it's shorthand for the kind of sophisticated interchangeable-lens model that most AP readers primarily
use - Andy Westlake, technical editor

## Ray of hope

I'm an AP subscriber and have recently become a grandfather which has rekindled my interest in portrait photography. I was interested in the article regarding the best lighting accessories (Light me up, 19 May) and particularly the Ray Flash Universal Ringflash
adapter. Having researched the website quoted in the article I found that the item could not be purchased directly from the manufacturer. In fact I was unable to find any supplier in the UK of this product, and Amazon has it listed as a discontinued item. I would therefore ask that before recommending equipment in similar articles your researchers ensure that the gear is readily available for purchase.

Keep up the good work.

## Malcolm Gibbs

Before running any group test or round-up in AP we always make sure that any products we list or recommend are available for readers to buy. As you mention the Ray Flash Universal adapter has now been discontinued, but it is still available from some online stockists such as the Flash Centre (www.theflashcentre. com) who are selling the Ray Flash Universal adapter (short neck) RFU-S (Short) version for £99. I also found a couple of examples on eBay, but these are generally more expensive and tend to sell for around $£ 150$. When a product is seemingly unavailable to buy, it's worth typing the full product name into Google and clicking on the shopping link just below the search bar. If that fails there's always eBay or Gumtree to fall back on - Michael Topham, reviews editor

## Wedded bliss

Did Prince Harry's wedding highlight yet again the sizeable and now commonplace dominance of smartphones and, more to the point, raise questions about the worth of millions of hit-and-miss images with only a short life? Good luck to those who were in Windsor. Their pictures probably carry an 'I was there' sentiment, but beyond that it's hard to see other values. Judging by the speed of the procession it was probable that any successful passing shot stood more to chance than planning for its success. Of course, there are exceptions and the fortunate, now richer, photographer, thanks to her shot taken at Christmas of four young members of the Royal Family at Sandringham, proves that luck can also play a part. It seems that we have become a nation of obsessive image


Paul is seeking his VEF Minox camera that was stolen at a camera fair
gatherers, and not necessarily for the right reasons at certain times.

## Richard Wade

Subminiature shock
On 20 May a VEF Minox 03025 subminiature camera was stolen from the MS Hobbies stand at Photographica 2018 sometime between 1-2pm. I suspect this was a targeted theft amongst a box of Minox cameras, as this was the only one at the show, and the only one stolen. There are distinguishing marks apart from the serial number that uniquely identify the camera.
Paul
Sorry to hear about this theft, Paul. If any readers come across it, please contact AP and we will put you in touch with Paul - Geoff Harris, deputy editor

He's been in the raws I read your Panasonic TZ200 review with interest (AP 26 May). I recently looked at the TZ100 as a replacement for my TZ60 (it's had a hard life), but settled on a TZ90. I felt that its flip-out screen and 30x zoom were a fair swap for a slight loss of image quality. This is my fourth or fifth camera from the TZ range. I've always got it with me. I also have a DSLR for taking 'proper' pictures, but don't always have that with me.

I've found that the value
of the TZ90 as a point-shoot-and-sort-it-out-afterwards camera is significantly undermined by the fact it won't produce raw files in Intelligent Auto (iA) mode. The TZ60 wouldn't do this either. So, my questions are: Will the TZ200 produce raw files in iA mode, and if not why do you think that is? And, does the TZ100 have this issue too?
I've often wondered why the TZ range has such a limited minimum aperture ( $f / 8$ ) and your TZ200 review explained that to me, so I hope you can explain this as well. Alan Cox

In fact, both the TZ100 and TZ200 can record raw files in iA mode. I suspect this is because Panasonic considers them to be aimed at more serious photographers than their smaller-sensor siblings, which makes sense given their much higher price point - Andy Westlake, technical editor


Alan wonders whether the TZ200 can produce raw files in iA mode
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# Reader Portfolio 

Spotlight on readers' excellent images and how they captured them


Dolbadarn Castle 1 Christine has used the dark and stormy weather conditions to her advantage and captured a scene full of atmosphere Canon EOS 5D Mk II, $24-105 \mathrm{~mm}, 1 / 13 \mathrm{sec}$ at $f / 16$, ISO 100 , tripod, 0.9ND grad filter

Llyn Padarn 2 With a beautiful focal point and great sky detail, this image has captured a lovely reflection in the water for a wonderfully balanced composition Canon EOS 5D Mk II, $24-105 \mathrm{~mm}$, 1 sec at f/18, ISO 100, tripod, 0.6 ND grad

Christine Smart, Conwy, Wales

0Christine worked in a camera shop for several years before she took an interest in creating her own photographs. It all started when a friend invited her out for the day to shoot some landscapes. Living in Wales offers Christine plenty of stunning scenery to shoot; however she can also be found running about her garden admiring nature with a macro lens.


Penmon Point lighthouse 3 By converting this scene to black \& white and capturing the crashing waves at the right time, Christine has portrayed the sea's stormy, cold conditions perfectly Canon EOS 5D Mk II, $24-105 \mathrm{~mm}, 1 / 25 \mathrm{sec}$ at $f / 16$, ISO 100 , tripod, 0.6ND grad


Garden bee
4 Christine has followed the rule of thirds to create a lovely balanced composition．Timing is perfect．She has focused accurately on the bee，which isn＇t always easy to do when insects and plants are likely to move in the breeze Canon EOS 5D Mk II， $105 \mathrm{~mm}, 1 / 200$ sec at f／2．8，ISO 400

# Martin Scorsese <br> Portrait photographer Harry Borden remembers a brief but fruitful shoot with the legendary film director 

$B$ack in the late 1990s, the British media had extensive access to world-famous people, and I was fortunate to photograph quite a lot of them within a relatively short period. They included Cate Blanchett, Richard Harris, Robin Williams, Richard Branson, Kylie Minogue and Demi Moore.
Twenty years on, it is much more difficult to photograph people of that stature. Publicists have more power over who photographs their clients, and you have to court them if you want to access major stars. Today, if you see a major American star on the cover of $G Q$ magazine, the picture has probably been bought in from America, rather than one that a British photographer has been commissioned to do. I'm glad I shot those portraits when I had the opportunity.
One of the people I did photograph at that time was the American film director Martin Scorsese. In March 1998, he was in London to appear at an event
held by The Guardian. Scorsese was 55 at the time of the shoot and was firmly established as one of the major directors of his era for films such as Taxi Driver, Raging Bull, Casino and The King of Comedy. He's a genius and undoubtedly one of my cinematic heroes.
The Guardian's sister paper, The Observer, had a one-hour slot with him, during which he was to be interviewed by the journalist William Leith. Afterwards I would have about 10 minutes to shoot a portrait. The shoot was going to take place in a suite at the Dorchester Hotel in London. Publicists repeatedly booked The Dorchester for interviews, so I could easily have ended up with lots of people against the same kind of background. Therefore I always took along either a roll of material or my black, white or grey backdrops. They provided a simple and plain alternative to a rather chintzy hotel environment.
Prior to this shoot, I went to Brick Lane in East London, where, at that time, there were a lot of

fabric shops. I used to buy three metres of fabric and use it as a backdrop, which was much cheaper than buying a roll of Colorama paper. On this particular day, I found some sparkly blue material which had colours and textures that I thought might work well with a ringflash.
While the interview was going on, I set up my equipment at the other end of the suite. I had loaded my Hasselblad CM (fitted with a 120 mm lens) with a roll of Tri-X black \& white film, and as Scorsese was saying goodbye to William Leith I took some informal shots of the director. After the shoot, I discounted them but looking back at them now, I think they are interesting pictures.
When Scorsese and I settled into the proper portrait shoot, we got on well. I showed him a small portfolio of my work so he could see the kind of images I produced. He was quite macho; very smart, straight-talking and quick-witted; but friendly and jovial.
In that situation, it was an advantage that I had grown up with a Jewish-American father; he reminded me of my dad and so I didn't feel intimidated. I just asked him what I wanted him to do. Scorsese was apologetic that we had so little time, and I think he would have given me a lot more time if he had been able to spare some.
When he saw the roll of dark blue, sparkly material, he thought it was funny and knowingly said, 'I see you're going for the Vegas look.' His movie Casino, released only a few years earlier, had been based in Vegas so it seemed appropriate.
Sometimes, when I have very little time for a shoot I'm panicked into being more upfront about what I want from a sitter. I was desperately trying to find an impactful picture, and I thought the most striking thing about his appearance was his amazing set of eyebrows. So, on the spur of the moment, I decided

> 'On the spur of the moment, I decided to ask him to wink as it made his eyebrows even more prominent'

The director as directee - Harry asked Scorsese to wink for this striking image
to ask him to wink as it made his eyebrows even more prominent. It's not something I do often, but I have occasionally asked people to wink because it does make a good picture. I shot some with his left eye winking and some with his right, but the main picture shown here worked best.
I only had time to shoot three rolls of film before Scorsese had to go: one roll of black \& white at the end of the interview, then two
rolls of colour; one of him at three-quarter length then a roll of head shots.
The 'wink' picture has subsequently been syndicated all over the world, while the others were hardly published at all. It was recently used on a t-shirt for an event in Amsterdam. I think it's one of the best 'wink' pictures out there, because he's so cool. As told to David Clark


## Harry Borden

Harry is one of the UK's finest portrait photographers and his work has been widely published. He has won prizes at the World Press Photo awards (1997 and 1999), and was awarded an Honorary Fellowship by the RPS in 2014. The National Portrait Gallery collection holds more than 100 of his images. Visit www.harryborden.co.uk.

## Crame of Westminster <br> $\longrightarrow$ Exchusively....Nikon



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## James Paterson

James is as skilled a photo editor as he is a photographer. His work has appeared in countless magazines and books, and in 2014 he was appointed editor of Practical Photoshop magazine. His subjects range from portraits to landscapes, architecture and underwater scenes. For James, Photoshop is more than just a work tool. Visit www.patersonphotos.com.

# Lightroom tips How to edit on the <br>  

The Lightroom CC for Mobile app is ideal for editing images away from your PC. James Paterson shows how


Clever touch gestures
You can press and hold on any image with your finger to see the unedited original version temporarily, then release your finger to see the results of any adjustments you have made. In addition to this, if you have an iPhone with 3D touch then you can vary the size of the brush tool by altering the pressure of your painting finger.

## No phone or computer?

If you don't have access to your own computer, phone or tablet for editing then you can make use of the Lightroom for Web feature, available to all Creative Cloud subscribers. With this you can access all your synced photos from any computer with an internet connection.

## The basics

Lightroom CC for Mobile is an app for IOS and Android devices that lets you capture, organise and edit photos on the go. You can also sync and edit photos from your Lightroom desktop set-up, enabling you to carry your library and editing tools in your pocket.


## 5

## Tap to nudge

If you tap on the parts of any slider on either side of the circular icon you can increase or decrease the amount in small increments, with often a finer degree of control than when dragging the slider. It's similar to the nudge feature in Photoshop and Lightroom desktop, in which the arrow keys are used to nudge settings up or down.


## No need to subscribe

Many of the features in Lightroom Mobile - such as the camera, sharing and some editing tools - are free to use. So you don't necessarily have to be a Creative Cloud subscriber to begin using it. However, subscribers will get the full feature set, plus the advantage of seamless integration with their Lightroom Classic and CC apps.

Lr
Adobe Lightroom CC
Powered by Adobe Photos.
*****



## HDR capture

Lightroom Mobile's capture tool is great for shooting on the go. It lets you record high dynamic range (HDR) photos with your smartphone's camera. It captures and merges three frames, automatically aligning and tone-mapping the image; then it produces a 16-bit raw file with a high dynamic range that offers a wonderful level of tonal detail.

## Q Shoot-through presets <br> When using your device's camera

 with Lightroom's Capture mode, you can choose from several shoot-through effects that are applied to the live feed from the camera; they are accessed by the colour icon. These effects are non-destructive, so you can turn them off later.

## - Geotag your photos

The Capture mode offers a geotag feature that pinpoints where your photos were taken. This is useful if you'd like to tag photos taken with your 'proper' camera, as you can simply whip out your phone and grab a quick snap when shooting, then copy the geotag to your other photos in Lightroom Classic's Map module later.



## 12

 capture mo in JPEG or DNG - Adobe's raw image format. The raw option creates largerfiles, while JPEGs are compressed. If space is a concern (as is often the case with mobile devices) then choose JPEG, but DNG is a better option if you plan to carry out image-enhancing edits.

## . Enhance skies

Found within the Selective tools options, the Graduated Filter is great for improving skies. Just like the desktop tool, drag down from sky to land then decrease exposure, boost contrast, clarity and saturation. The tool also features an eraser option for removing the effect over objects that jut above the horizon line.

## 13

Finger gestures
When viewing your photos in a grid there are a number of useful two-finger gestures. If you pinch inwards from top and bottom you can collapse sets of photos. Tap with two fingers to cycle through image info. And drag inwards or outwards at a diagonal angle when viewing an album to change thumbnail sizes.


## Technique

14Feature-rich camera
The app makes use of your device's camera and offers a degree of control beyond that of default camera apps. Set it to Pro mode and not only can you adjust exposure settings like ISO and shutter speed, but you can also shoot in raw and adjust the white balance setting, too. Raw images are captured in Adobe's DNG format, which offer greater editing headroom over JPEG files, particularly when pulling out highlight or shadow details in post-production.



16 Sync with desktop<br>To sync photos from Lightroom Classic, toggle on the double-arrow sync box to the left of any Collection when in the Library Module. Alternatively, if you've embraced the Lightroom CC cloud-based way of working, all your edits made on your mobile device will sync back to your desktop version.



## 19 Sharing made simple <br> It's easy to share photos with

 your friends, family or clients using the Lightroom Mobile app, by simply tapping the share icon. Another very useful feature is the 'Share Collection' icon, which is accessed by tapping the share icon when you have a collection open. This will allow you to share a set of photos either by sending a person a link to the photos, or via Lightroom for Web.
## 17 Change your focus point <br> The Lightroom Mobile app has a fantastic tool to

 change your focus point to capture sharp and soft areas. Tap the Auto box when in capture mode then use the slider to change your focus point. It's a basic depth of field control that will help to give your phone photography a creative edge
## 18 Geometry corrections

The Upright controls are very good at correcting converging verticals, wonky horizons and perspective distortion. Go to Geometry controls and tap Upright. As well as auto fixes, there's also Guided Upright, which lets you plot lines along horizontals or verticals.


20
Sensei-sational searches Powered by Sensei - Adobe's machine-learning tool - you can search your synced Lightroom CC photos by content even if
they don't have any tags. Sensei recognises the content of the photos for you. It can find your sunsets, seek out specific animals, and even determine whether an image is any good or not!

## True colours

Photographer James Paterson puts cutting-edge Rotolight LEDs to good use and says they offer more control over colour than ever before

 ne of the most useful features of LED lighting is the ability to control colour temperature. Bi-colour LEDs, like the Rotolight AEOS heads used here, allow you to change the colour temperature with a flick of a dial. So when you're shooting on location you can balance your LEDs with the ambient light in a matter of seconds or, if you like, experiment with unusual colour shifts and mixed temperatures.
The Rotolights offer a range from 3,150-6,300K, which goes from warm tungsten hues to cool daylight tones. What's more, they score very highly on the Colour Rendering Index (CRI) scale: a universal rating that measures the accuracy of a light source in comparison with a reference light. A score of $85 \%$ or higher is considered very accurate the Rotolights score $96 \%$.

## Importance of

 colour temperature All light sources have a particular hue, which we can quantify in Kelvin. The scale of visible light goes from warm tones at the low end of the Kelvin scale to cool tones at the higher end. Our eyes subconsciously correct for changes in light colour, but our cameras record whatever colour is emitted. This is why we set a white balance - so that a white or neutral object looks white rather than being tinted by the colour of the light hitting it. If in doubt about which white balance to choose, it's a good idea to shoot raw as it allows you to change the white balance after the fact.
## Balancing and mixing

Colour temperature controls are most often used to balance the artificial light with the ambient light in the scene. So when shooting in daylight we can set
both the lights and our white balance around 6000 K so that everything is in harmony, thereby allowing us to augment the ambient light with our LEDs. Similarly, if shooting indoors under tungsten lighting, we can match up the LEDs by setting the temperature to a warmer 3500K. However, colour temperature control isn't just about neutralising colour casts; it can also be used to create a mood or aesthetic. We have the freedom to warm things up, cool them down or intentionally mix the colour temperatures.

For example, if we shoot our subject inside, lit with a warm temperature like 3500 K and include a window in the background, and with our white balance set for the warm light, then the outdoor scene will be cast in ethereal blues.

## LEDs have the edge

In the flash vs LED debate those in the flash corner will point to the fact that LEDs aren't as powerful. This is true, and it's worth noting that the maximum output of most bi-colour LEDs drops off slightly at either end of the Kelvin range. But as the low-light performance of modern cameras continues to improve, the maximum output becomes less of an issue in many scenarios, so other lighting features come to the fore. And when it comes to colour temperature, LEDs are a clear winner.

Controlling the colour temperature of flash (which is usually around $5,000-6,000 \mathrm{~K}$ ) involves fitting coloured gels


## Lighting set-up

I used a combination of red and blue gels here to light the subject. It's a simple three light set-up. Our key light hitting the face is a Rotolight AEOS fitted with a blue gel, positioned just to the right of the camera and above the face. I had a second Rotolight AEOS fitted with a red gel to the right of the subject, which gave me the vibrant edge lighting that highlights her hair. Finally, I had a smaller Rotolight NEO 2 fitted with an orange gel, positioned behind the model and angled towards the grey backdrop, which gave me the background colour.


## Technique

The gels offer photographers a chance to experiment with new lighting set-ups

Balancing the ambient light source is as easy as turning the dial

- either in front of the flash or over the ambient light sources. By contrast, with LEDs like the Rotolight, balancing the ambient is as simple as turning the dial, and it's much easier to judge the results as you can eyeball the light as you tweak the temperature, or switch on live view to see how it works with your chosen white-balance setting. The Rotolight AEOS also features an innovative HSS flash mode that increases the maximum output by $250 \%$, while still allowing you to alter colour temperature - a first for flash photography.


## Coloured light

As well as bi-colour control Rotolight kits also offer a range of circular coloured gels that let you expand your repertoire of coloured light beyond the Kelvin scale. LEDs never get hot, so these gels can be fitted in front of the bulb. Used in combination with the Kelvin settings these gels give you an expansive palette of colours, whether you want to kiss the edge of your subject with a subtle shade of blue or go for a more vibrant mix, like this portrait here.

## Instant feedback

I wouldn't normally light a face with a combination of pink and blue gels, but the beauty of these lights is that the instant feedback gives you the confidence to try out different lighting techniques. This freestyle lighting would be much trickier and more laborious to achieve with flash. More importantly, there's less reason to stick to the tried-and-tested lighting set-ups. With LEDs we have greater impetus to simply make it up as we go along, which isn't just creatively stimulating, it's also more fun.

## Testbench CAMERA TEST

 CMOS sensor
ISO 100-819,200
5-axis in-body image stabilisation
0.7x viewfinder with near-100\% coverage
Pentax
Rugged construction

- Flexible-tilt rear LCD

K-1 Mark II

## This 36MP full-frame DSLR still has plenty to offer Pentax fans, according to Andy Westlake, but no essential new features



| Data file |  |
| :---: | :---: |
| Sensor | 36.4MP full-frame CMOS |
| Outputsize | $7360 \times 4912$ |
| Focallength mag | 1 x |
| Lens mount | PentaxK |
| Shutter speeds | 1/8000sec-30sec |
| Sensitivity | 150 100-819,200 |
| Exposuremodes | PASM, Sv, TAv, B, X, Auto |
| Metering | 86,000px RGB sensor |
| Exposure comp | +--5EV in 0.3 EV steps |
| Continuous shooting | 4.4fps; 6.4fps in APS-C crop |
| Screen | 3.2in, 1.04k-dot flexible tilt LCD |
| Viewfinder | $0.7 x$ magnification, $100 \%$ coverage |
| AFpoints | 33 point (25 cross-type) |
| Video | Full HD 60p |
| External mic | 3.5 mm stereo |
| Memory card | 2xSD, SDHC, SOXC (UHS-I) |
| Power | D-LI90 Li-ion |
| Battery life | 670 images |
| Dimensions | 136.5x110x83.5mm |
| Weight | 1.010 g |

when the original Pentax K-1 appeared a little over two years ago, it garnered a lot of excitement. Not only was it the first full-frame DSLR to sport the iconic Pentax brand, but at $£ 1,600$ it also offered remarkable value for money. Its 36MP sensor had only previously been seen in substantially more expensive cameras such as the Nikon D810 and Sony Alpha 7R, and it included five-axis in-body image stabilisation and an unusual flexible-tilt rear LCD.

Now, parent company Ricoh has given us a replacement: the Pentax K-1 Mark II. But it's very much an iterative upgrade, with few new features. The main addition is an 'accelerator unit', which works in tandem with the PRIME IV image processor. As a result, the Mark II offers an extended
sensitivity range, which now goes all the way to ISO 819,200 compared to ISO 209,400 on the original. There's also an intriguingsounding version of Pentax's Pixel Shift Resolution mode that works for handheld shooting, and a promise of faster AF with improved subject tracking. But that's the extent of the changes.
Uniquely, existing Pentax K-1 owners can have their cameras upgraded to Mark II standard. For around $£ 450$, the main circuit board can be replaced with the new version, enabling the full set of updated features. The SR label on the front plate will also be replaced with a new 'Il' badge.
On paper, the Mark II still stands up very well in comparison to its most obvious competitors, the Canon EOS 6D Mark II and Nikon D750, both of which cost almost exactly the same. However, the


Sony Alpha 7 III has redefined our expectations of what a sub- $£ 2,000$ camera can offer. Compared to these redoubtable foes, the $\mathrm{K}-1$ Mark II still offers higher resolution and maximum ISO settings, but is this enough?

## Features

At the K -1 Mark ll's core is a 36.4-million-pixel full-frame CMOS sensor, which forgoes an optical low-pass filter to deliver maximum detail. This usually risks imaging artefacts, but Pentax has a unique solution. Enable its AA Simulator mode and the camera can use its in-body IS system to slightly blur the image projected onto the sensor to combat aliasing and moiré, with a choice of strengths. If you're not sure whether you need this anti-aliasing effect, the camera can shoot a set of exposures with and without.

Core features are solid, if unspectacular. The Mark II can shoot at 4.4 fps at full resolution, with a 17 -frame raw buffer; switching to the 15MP APS-C crop mode enables 6.4 fps with a 50 -frame buffer. Metering employs an 86,000 pixel RGB sensor, with multi-segment, centreweighted and spot modes available.
Autofocus is provided by the 33 -point SAFOX 12 module, which includes 25 cross-type points towards the centre of the frame. The focus points cover about half the image width and a third of its height - reasonable for a full-frame SLR but trounced by any mirrorless camera (and most APS-C DSLRs). Switch to live view, and the K-1 Mark II offers contrastdetection AF covering $75 \%$ of the frame width and height.
Shutter speeds range from 30 sec to $1 / 8000 \mathrm{sec}$, with

1/200sec flash sync. The mirror and shutter mechanism are quiet and well damped, and in the usual Pentax fashion, enabling the 2 sec self-timer engages mirror pre-fire to further reduce any risk of blur from mechanical vibrations. Delve into the menus and you'll find a silent electronic shutter, although the camera isn't completely noiseless due to its mechanical aperture operation.
Based around the Pentax K mount, the K-1 Mark II is compatible with a huge range of lenses dating back to 1975. It'll work best with autofocus lenses, of course, but is also perfectly happy with manual-focus KA lenses that have electrical contacts to pass aperture information to the camera. It can even work with purely mechanical K lenses, but only in manual-exposure mode using stop-down metering.

Other features include high-dynamic-range shooting; independent shadow and highlight tonal-range adjustment; incamera lens corrections; a multiple-exposure mode, and an intervalometer with a huge range of programmable options. In-camera raw development is available, and built-in Wi-Fi allows you to copy images to your smart device, or control the camera remotely using the Pentax Image Sync app.
However, it's the in-body IS that delivers most of the K - 1 Mark II's best tricks. Most obviously, it promises sharper images at slow shutter speeds with almost any lens, giving up to five stops of stabilisation. This means it works with lens types that aren't usually stabilised, such as wideangles and fast primes. It'll even work with old, mechanical K-mount lenses: turn the

camera on after changing lenses and it will prompt you to select the focal length.
The Mark II also includes the Pixel Shift Resolution mode seen on many recent Pentax cameras. In its conventional form, this requires the camera to be fixed to a tripod, and makes four exposures while shifting the sensor one pixel between each. This allows it to capture full-colour information at each point in the image, giving visibly higher detail. A Motion Correction option aims to reduce image artefacts with subjects that move between exposures. But brand new is a handheld pixel-shift mode, which I'll examine in detail later.
Other clever features enabled by the stabilisation system include Astrotracer, which works with the built-in GPS unit to move the sensor for capturing sharp long-exposure photographs of star fields. It's also possible to use the IS mechanism to fine-tune your composition when shooting from a tripod. Last but not least, there's a rather brilliant function that can automatically level your images during handheld shooting

## Build and handling

The K-1 Mark II is a brute; at $1,010 \mathrm{~g}$ it's heavier than even the Nikon D850. Its body is narrow but deep, measuring 86 mm from the front of the prism to the back of the LCD. This reflects the need
to house the in-body imagestabilisation unit, along with the screen-articulation mechanism.
Pentax has a reputation for rugged, weather-sealed bodies, and the K-1 Mark II is no different. Its magnesium-alloy body feels rock solid - you can even pick it up by the articulated LCD screen and shake it around, with no ill-effect. The large handgrip is coated with thick, textured rubber and provides a very secure hold.
Almost every available surface is covered with buttons, dials and switches. Unlike other DSLRs, the K-1 Mark II has three dials that you can use for changing exposure settings, rather than two: Ricoh has cottoned on to the fact that you might want quick access to ISO and exposure compensation as well as shutter speed and aperture - an insight that has so far eluded Canon and Nikon. You can configure the front and rear dials to your own preference separately for each exposure mode, then change the function of the top-plate dial on the fly using the adjacent selection dial.
It's just a shame the K-1 Mark II doesn't have a joystick controller for moving the focus point; instead, you're supposed to use the d-pad. The complication is, you also use the d-pad for changing drive mode, white balance, colour mode and LCD brightness, toggling between the functions using a small button above the 'up' key. It's
easy to lose track of which mode the d-pad is in, and inadvertently change settings when you wanted to move the focus point.

Other buttons on the body give direct access to metering and autofocus modes, and there's even one for temporarily turning on raw recording. Yet more functions can be accessed quickly via the Info button, which calls up an on-screen quick menu. Only a couple of buttons are customisable, but that's no problem as it's difficult to think of anything you might assign to them that's not already easily accessible.
This complex control layout takes a bit of getting used to, but it's actually a really quick way of working. It's not for the fainthearted, but if you're stepping up from a high-end Pentax APS-C body such as the K-3 II, most of the interface will be familiar. However, I can't help but feel that Ricoh could benefit from making a simpler full-frame model, too.
A small top-plate LCD shows basic shooting information, with the rear LCD used to display the main settings. One oddity is that if you turn off this screen, then pressing a function button or spinning the top-plate dial won't reactivate it, even temporarily. This means that it's possible to change certain settings such as HDR mode or continuous shooting speed without the camera telling you what you've done.

## Viewfinder and screen

 The K-1 Mark II is unashamedly a traditional DSLR, designed to be used primarily with the optical viewfinder. Fortunately, the finder is very good, with a magnification of 0.7 x and almost $100 \%$ coverage of the scene. The image is reasonably bright, and there's just about enough 'snap' to focus manually with $\mathrm{f} / 2.8$ lenses. What you don't get, of course, is the accurate preview of exposure,
colour, white balance and depth-of-field that's offered by a good electronic viewfinder.
Full exposure information is displayed beneath the focusing screen, and you can overlay electronic level and gridline displays if you want. However, the autofocus points can be difficult to see when you're moving between them, as they're outlined in black. But, like almost anything else on the camera, this behaviour can be changed, and I set the camera to highlight the active AF point in red
Below the viewfinder is the 3.2in LCD, which is mounted on one of the most complicated articulation systems ever devised. The unit is attached to the camera via four metal struts, allowing it to be tilted up, down, left or right. An additional hinge at the top of the support mechanism enables the screen to be set horizontally for waist-level shooting

This flexible-tilt screen is particularly handy when shooting in live view with the camera on a tripod. Unlike the tilt-only screens on the Nikon D850 and Sony Alpha 7 III, it continues to be useful when you're shooting in portrait format, although here the maximum tilt angle up or down is limited, at less than $45^{\circ}$.

Thankfully, the LCD itself is very good and accurately colour calibrated. One neat touch is that you can adjust the brightness between five very different
settings using the down button of the d-pad, with the brightest being useful in strong sunlight, while the darkest won't blind you at night. The screen isn't touch sensitive, though, which these days feels like an anachronism.

## Autofocus

Ricoh has used the same SAFOX 12 autofocus module as the original $\mathrm{K}-1$, which provides 33 focus points grouped towards the centre of the frame, including 25 cross-type points that can detect both horizontal and vertical detail. Flicking a switch on the lens throat selects between auto and manual focus, while pressing a button above it and spinning the control dials selects between single-shot and continuous AF , and auto or manual selection of focus area. You can choose between using just a single point or surrounding points as well, which can be useful when tracking moving subjects.
In principle, the AF is now faster, with improved tracking, but without a K-1 to test side-by-side I couldn't verify any improvement. Suffice to say the Mark II worked well with the $24-70 \mathrm{~mm} \mathrm{f} / 2.8$ lens I had for testing. While it's noticeably slower than rival cameras, it should be fine unless you plan on regularly shooting fast-moving subjects. However, being accustomed to the ability of mirrorless cameras to focus anywhere in the frame, I found the restricted


## Focal points

## The K-1 Mark II's rugged body is positively bristling with advanced features

## Dual SD

Twin SD card slots are found behind a door on the handgrip. You can either record to them sequentially, back up files to both simultaneously, or record raws to one and JPEGs to the other.

## Illumination

Strategically placed LEDs can be used to light up the lens mount, card slots, remote release connector and rear controls, via the top-plate button. This can be a real aid to low-light shooting.


## Battery

The externally charged D-LI90 battery is good for 670 shots per charge, which is relatively low for a DSLR but should still be enough for most purposes

## LCD panel

A small display on the top plate displays shutter speed, aperture, ISO, exposure compensation and battery status. It can be lit up by pressing the nearby button.


Good image quality
is maintained up to
ISO 12,800 at least
Pentax $24-70 \mathrm{~mm} / 2.8$ at 24 mm ,
T/Dosecati/8, 1 S0 12,800

## Handheld pixel-shift

Probably the Mark Il's most intriguing feature is its handheld pixel-shift mode. This is enabled by setting Pixel Shift Resolution function to 'Image Stabilisation On'. The camera will then take four exposures and align them to produce a composite file.
It's clear from the outset that this mode isn't doing the same thing as conventional pixel-shift. For a start, the camera uses the mechanical (rather than electronic) shutter to shoot the four frames, in noticeably quicker succession. But it then spends an inordinate amount of time aligning the exposures and processing the file, locking you out from taking another picture for 30 seconds or more. As with conventional pixel-shift you end up with a raw file that's typically 170MB, compared to 45MB for a single shot, meaning it contains the data from all four exposures. As yet, though, Adobe Camera

Raw doesn't understand how to process it to anything more than a conventional image from the first frame.
In handheld mode, the camera clearly isn't full-colour sampling each pixel. Instead, it's aligning and averaging four conventional image files. But because of the slight differences between each handheld shot, in principle it's able to extract more detail overall. In practice, the sharpness improvement is much less clear-cut compared to the tripod-based pixel-shift modes, although with favourable subjects, it's definitely visible. But l'm not convinced it's significant enough to justify the inconvenience.
Conventional pixel-shift, meanwhile, behaves much the same as on previous Pentax DSLRs. It gives stunning results with static elements, revealing visibly higher detail and colour gradation. However, it's essential to engage motion correction whenever part of the scene may be moving (which in practice means anything shot outdoors), as otherwise you'll get ugly artefacts that offset any advantage of the extra resolution.

AF area coverage that's inherent to full-frame DSLRs to be rather limiting.
Switch to live view and you get a much wider focus area, covering $75 \%$ of the frame height and width. Unfortunately, the contrast-detection autofocus isn't very fast, and is rather prone to hunting. But it's usable for static subjects and is accurate. Live view also provides the most accurate possible manual focus, achieved by pressing the OK button to engage magnified view.

## Performance

As you'd expect from an $£ 1,800$ camera, the Pentax K-1 Mark II is a pretty accomplished performer. It's responsive in almost every aspect of its operation, with only a few exceptions. My biggest irritation is that it takes a second or two to wake up when you half-press the shutter button after auto power-off, which can result in missed shots. Also, if you have instant review enabled for checking images after they've been shot, the camera ignores the control dials until playback has been dismissed, so you can't change settings quickly for a second shot. But if you find this to be a problem, simply turn off instant review.
Metering and auto white balance are both pretty reliable, courtesy of the 86,000px RGB sensor, and in general the K-1 Mark II returns attractive JPEG
files. If you want to pep up its output, there's a good array of JPEG colour modes available. On dull days, though, it tends to underexpose slightly.

One key advantage of the K-1 Mark II over other DSLRs is its in-body image stabilisation. I found this worked well, and using the Pentax $24-70 \mathrm{~mm} / \mathrm{f} 2.8$ I could get consistently sharp shots handheld at shutter speeds as low as $1 / 4$ sec at wideangle, or $1 / 15$ sec at telephoto, equating to around three stops benefit. The big advantage, of course, is that it works with every lens, although unlike optical systems or in-body stabilisation on mirrorless cameras, you don't get the benefit of a stabilised viewfinder with telephoto lenses.
Image quality is excellent, with the 36MP sensor delivering as much detail as you'll see from any camera that costs under $£ 2,000$. Dynamic range is impressive, too. But its additional high ISO settings are completely spurious, giving little more than an unidentifiable mess. I'd be loath to shoot at anything much above ISO 12,800.

Full details of the K-1 update service to Mark II standard can be found at ricoh-imaging.co.uk/en/news-pentaxk1-upgrade-service.html. Owners are advised to contact the service centre first for full details. The update offer runs from 21 May to 30 September 2018.

## Lab results

Andrew Sydenham's lab tests reveal just how the camera performs
Our cameras and lenses are tested using the industrystandard Image Engineering IO-Analyser software. Visit www.image-engineering.de for more details


While the Mark II's image quality isn't obviously changed from the original, it's still very fine, and overall the best you can get for the price. Indeed, with static subjects amenable to pixel-shift mode, the K-1 Mark II will outperform any other full-frame camera, aside from the $£ 3,200$ Sony A7R III. At low ISOs the sensor delivers superb detail and dynamic range, while high-ISO image quality is pretty good, too, with quite acceptable results at ISO 12,800. I'd avoid going higher than this, and found the new ISO 409,600 and ISO 819,200 settings to be completely unusable.

## Resolution

At low ISOs, the K-1 Mark II resolves an impressive Level of detail; our resolution chart shows clean separation of lines at up to $4,600 \mathrm{l} / \mathrm{ph}$. At this point, aliasing becomes apparent, while false detail is rendered at higher frequencies due to the lack of a low-pass filter.

On the right we show details from our resolution chart test pattern (above). Multiply the number beneath the lines by 400 to give the resolution in lines per picture height.


## Noise



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

RAWISO 100

RAWISO51,200


When set to its lowest ISO 100 setting, the K-1 Mark II delivers extremely clean, detailed images that surpass almost anything else at its price point. Noise only starts to become visible beyond ISO 800 when examining images close-up, and detail is still maintained very well at ISO 3200. After this things progressively degrade, with ISO 25,600 losing all fine detail and suffering from reduced colour saturation. By IS0 51,200, files are barely usable and just like the original K -1, higher settings should be avoided. The top two ISOs seem to be little more than a marketing gimmick, giving extremely noisy images in which the subject is barely even recognisable.

RAWISO 3200


RAWISO204,800


RAWISO 12,800


RAWIS0819,200



With the Pentax K-1 Mark II, Ricoh has taken its flagship full-frame DSLR and added a few small improvements. The result turns out to be a minor update, but a timely reminder of the K-1's qualities. I'm sure this camera would be much more highly appreciated if it had a Canon or Nikon badge on the prism.
Indeed, with its rugged body, extensive controls and excellent image quality, the K-1 Mark II can lay claim to being the most capable sub-£2,000 DSLR on the market, unless you specifically need high-speed shooting and rapid autofocus tracking. It would be a great choice for landscape photography, for anyone prepared to cart around a 1 kg body.
However, almost anyone thinking of buying a $£ 1,600$ camera will already be heavily invested in a favoured brand. It makes little sense for Canon or Nikon users to switch systems, especially as the full-frame Pentax lens range is quite limited; for instance there are no lightweight, premium quality $\mathrm{f} / 4$ zooms and relatively few fast primes. Third-party lens support is diminishing, too: it's a sign of the times that Sigma now makes its latest Art primes in Sony E-mount, but not Pentax K.
The K-1 Mark II feels emblematic of the current technological shift from DSLR to mirrorless. Ricoh has failed to update the camera in any significant way, while Sony's latest Alpha 7 III is packed full of major improvements, making it a stunning all-rounder in a much smaller body. Good as the Mark II is, it feels rather left behind by advances elsewhere.
So in reality, the market for the K-1 Mark II is pretty much limited to existing Pentax SLR owners. I don't think it's worth upgrading from the original $\mathrm{K}-1$; there are too few extras to justify the cost. But for anyone who has a collection of K -mount lenses and wants to make the step up from APS-C to full-frame, it's very easy to recommend.

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| VIEWFINDER/LCD | $8 / 10$ |

## Testbench sofTWARE TEST



# Portrait Professional 17 

## Photoshop has given beauty retouching a bad name, but can Portrait Professional make amends for this? Rick McArthur finds out

 ortraits are not the easiest thing to get right. You have to arrange the lighting, find the best and most flattering angles for your subjects and sometimes they'll just be having a 'bad face' day, with awkward spots, pimples, wrinkles or tanning disasters that look impossible to fix.
If you're shooting in a studio with full control over the lighting and background, the services of a make-up artist and plenty of time for experimenting, there's a good argument for saying you should get it right in-camera.
Very often, though, you have to grab shots quickly at weddings, events or social gatherings, and if you're the official photographer you have no excuse for dud results. It's the same when you're taking informal portraits. Whether you're taking part in a portrait workshop or capturing photos of friends on a road trip, there's not much time to get the picture without breaking the flow of the activity.
In such situations, portraiture becomes tricky - when you can't always control the light, there's little choice of backgrounds, and you're dealing with inexperienced subjects who don't know how to pose for the camera.
This is where Portrait Professional comes in. If we lived in a perfect world, your model,
make-up, lighting and background would also be perfect and you wouldn't need a retouching software. But in the real world, that hardly ever happens, and yet your subjects expect you to make them look great. At the same time they still want to be recognisably 'them', and without any obvious facial or soft-focus trickery. And here is where Portrait Professional does such
a terrific job. It uses a dozen subtle adjustments, each barely visible, to produce a truly transformative effect - yet does it in such a way that you might be the only one who knows exactly what was done.

## Features

PortraitPro's enhancements are based around its facial-feature-recognition system. This enables it to identify eyes, nose, mouth, forehead, hair and even the outline of the face. From here, it can enhance each feature individually, often by barely perceptible amounts, to produce an enhanced portrait that's clearly



In stage 1, everything is adjusted but face sculpting. In stage 2, we've added face sculpting via the Standard preset. It looks great, but is this still the same girl?
the same person in the same situation and in the same lighting, but just looking 'better'.

This process might involve subtle 'face sculpting', such as narrowing a jaw, widening the eyes, slimming the nose, perhaps adding the hint of a smile. It sounds like the stuff of Photoshop nightmares, but it's done rather well.
This face sculpting is not mandatory. If you want to preserve the geometry of your subject's face and concentrate solely on skin smoothing and other cosmetic enhancements, you can.

In fact, the Face Sculpt section in the tools panel is only one of nine separate sections. The others are Skin Smoothing, Skin Lighting and Coloring, Makeup, Eye, Mouth \& Nose, Hair, Picture and Background.

## The finer detail

Each of these sections expands to reveal an array of detailed adjustment tools. Typically, there's a Master Fade slider which controls that section's whole effect, and a hierarchy of 'sub-sliders' that let you drill down to the smallest level of detail.
For example, in the Eye section, apart from a host of other settings, you can add differentcoloured contact lenses to change the eye colour, change the brightness and even add your own catchlights using a variety of window and studio-lighting modifier shapes. Oh, and each eye can be adjusted individually.

The scope and detail of the adjustments available could easily prove overpowering. PortraitPro's 'nested' sliders are one solution to this, but there's an even simpler one - presets. You can improve any portrait without having to touch a slider, simply by selecting the Presets panel instead and choosing the look you want.

These presets are themselves organised into categories. The Global category uses all the available tools to achieve a particular look, but there are Face Sculpt, Skin Smoothing, Lighting \& Skin Coloring, Makeup, Eyes, Mouth \& Nose


Here, our model's eyes are wider and we've added blue contact lenses, mascara, eyeliner and eye shadow
\& Hair categories, where the presets just use these specific tools. This means you can cumulatively add presets from these different sections. There's a final Picture category that adds striking colour, black \& white, vignette and toning effects to your portrait.
In the tools panel, there's a third tab called Snapshots, and this is new in PortraitPro 17. When you're making all these detailed adjustments, sometimes you can lose your way and start making the picture worse instead of better. Or you might want to check back with an earlier image state to make sure you're heading in the right direction.
Saving a Snapshot couldn't be simpler. You click the save button, give your new Snapshot a name, and it's saved as a thumbnail rendition in the Snapshot panel.
There's one more feature in PortraitPro 17 that we haven't looked at yet. It's new in this version, and it's the Background section at the bottom of the Controls panel. Here, you can
replace the current background with another one - either one you've shot yourself or one provided with the software. PortraitPro will attempt to mask the background automatically, but there are a range of manual masking tools, too, for enhancing and refining this mask.

## What it's like to use

For a program with such enormous depth and control, Portrait Professional is remarkably simple to use. If you don't want to get involved in all the technicalities, you can stand back, click a few simple options and get an immediate improvement.
It all starts with the facial-features-recognition phase. The outlines won't always be spot on, but this might not affect the result too much. And if you suspect it has, it's an easy matter to drag the control nodes into a more accurate alignment with your subject's features.
So far so easy, and it really doesn't get much more difficult. Over in the tools


Don't like your model's hair colour? Then change it. You can choose from a variety of hair types

panel you can select the Presets panel and browse through categories of 'looks', each of which renders a thumbnail of the image you're working on. When you see one you like, you can click on it to apply those settings.
There is a crossover point where your adjustments stop looking 'invisible' and the skin smoothing and skin tone enhancements start to look more processed, but the presets never go as far as that dreadful 'porcelain doll' look that might have given software like this a bad name in the past.

## Overdoing things

It's also quite difficult to create 'bad' portrait enhancements using the manual controls. The face-sculpting controls are probably most susceptible to misuse, but the sliders produce relatively small changes even across the full range of their adjustment.

Even at full strength, the Eye Widening slider doesn't produce the supersized anime look you might dread, and at the smallest setting your subject's eyes still look quite natural. The Plump Lips slider can perhaps be pushed just a little too far, but the point is that all the

adjustments are controllable and progressive and stop short of unnatural distortion.

PortraitPro can also enhance hair colours and even swap out backgrounds, but this is where the outcome is less certain. If your subject's hair has a strong outline and tonal contrast against their skin and background, Portrait Professional's auto-masking tools can do a great job. Often, though, this is not the case, and here the software will struggle in the same way that even Photoshop would. You may have to resort to painstaking adjustments with the manual masking tools, and this is where things can become timeconsuming and a little less satisfactory. It's the same when swapping out backgrounds. Plain, contrasting backgrounds shouldn't be too hard to swap out, but fussy backgrounds with a similar tone and colour to your subject's hair and clothing will be a lot more difficult. You may sometimes need to give up and accept that it can't be done.
It's not exactly a failing of this software, but one of the intractable problems of image editing: extracting complex, similar-toned objects in pixel-based images.

## Our verdict



AT A time when awareness of the impact of negative body image is growing, and when the public can now spot a Photoshop fail a mile off, retouching tools like this may attract a degree of controversy or suspicion.

But Portrait Professional is very, very good - not just in terms of its overall results, but in treading that fine line between enhancement and idealisation. However, you do need to be able to see where that line is. If you cross it, your subject stops looking like the real-life person you photographed and instead starts to look like a model, and that can be flattering and unflattering at the same time. It's great for professional models whether they are male or female (Portrait Professional is equally good at both), but if it's a private client or someone you know, you probably need to flatter them, not 'fix' them.

We can't blame the software for that. Indeed, it's difficult to see how Portrait Professional's ability to control the degree and type of enhancement can be improved. It does both ends of the spectrum, from gentle enhancement to outright idealisation equally well.

It's not even particularly expensive. The Standard version is the cheapest, normally costing $£ 59.90$ but on offer at $£ 29.99$ at the time of going to press. It offers all the enhancement tools of the other versions, but works only as a standalone program, doesn't support raw files and doesn't do batch processing.

Next up is the Studio version at $£ 99.90$ (currently $£ 49.95$ ). This will work both as a standalone program and a plug-in, and offers support for raw files and different colour spaces.

There is a Studio Max version at $£ 199.90$ (currently £99.95), which adds batch processing, but unless you're likely to want to enhance a whole series of images automatically, the Studio version is the best value. Portrait enhancement is the kind of job you're likely to want to do image by image.
Alternatively, you can simply download the trial version. This is save-disabled and the edited images are watermarked, but it will give you a flavour of what this remarkable program can do.



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# Manfrotto Pro Light FastTrack-8 sling <br> - Water repellent 

## Michael Topham tests a novel sling bag

- $£ 110$ - www.manfrotto.co.uk

THE INCREASED popularity of mirrorless cameras has seen a steady rise in the number of smaller photo bags being made. One of the most intriguing examples to be released of late is Manfrotto's Pro Light FastTrack sling, which is like no other sling bag we've seen before. It's the first of its kind to combine a sling strap with a camera strap and the idea is that it solves the issue of getting your bag's strap and camera strap into a tangle, while making it fast and convenient to access kit and stow it away when on the move or in a hurry. It's an innovative idea, so how exactly does it work?
Just like a normal sling bag there's one thick, well-padded strap that's worn diagonally across the body from which a second thinner, fully adjustable, camera strap branches off. Attached to this camera strap are two buckles. These are designed in such a way that they slide up and down the camera strap, and attach to your camera via short tethers that loop through the camera's strap eyelets. The beauty of the system is that it lets you store the camera in the bag with the strap attached, or if you know you're going to be using the camera frequently, you can leave it to dangle at your side ready to grab and pull up to your eye when a shooting opportunity presents itself. Better still, the camera can be released from the camera strap in seconds should you wish to use it with a tripod, and each buckle has a lock, which offers reassurance that your camera won't accidentally unfasten. It's a clever and well-executed strap arrangement.
The camera compartment happily accommodates a premium mirrorless camera minus a battery grip with a standard lens attached. The side compartment is a useful area for storing a couple of small primes or one larger zoom like the Sony FE $70-200 \mathrm{~mm} \mathrm{f} / 4 \mathrm{G}$ OSS that I managed to cram in. There are a couple of pockets for storing cards and cables too, with the well-padded area behind the main and side compartments being a good place to slot a tablet up to 9.7in in size.

## Verdict

If you're a mirrorless user looking for a convenient sling to throw over your shoulder for day trips or a city break, you won't go far wrong choosing this bag from Manfrotto. It's not the biggest of bags and you do pay a premium for its integrated camera strap, but within a short space of time you realise how good it is for travelling light. Most important of all it's comfortable, well made and has good security measures in place to ensure your kit remains safe.

## At a glance

## At a glance

- $40 \times 22.5 \times 13 \mathrm{~cm}$ (internal dimension)
- $42 \times 24.5 \times 14 \mathrm{~cm}$ lexternal dimension) 0.73 kg


Manfrotto's Pro Light collection is made up of a wide variety of bags to cater for all types of DSLR and mirrorless users. If you're after a bag with more space for camera kit than the Pro Light FastTrack-8 sling offers, the Pro Light RedBee-210 (£149) or Pro Light Bumblebee-130 (£177) are worth a look. If you like the sound of having some additional space for non-camera related items, Manfrotto's Pro Light backpack 3N1-26 (E159) makes a good choice and the larger version of this bag is the Pro Light backpack 3N1-35 (£199).

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Choosing classic lenses for a Nikon DSLR

QI use a Nikon D300S and if truth be told I can't quite justify replacing it at the moment. I really want a D800 but I'm still saving my pennies and it would have to be a second-hand one anyway. But in the meantime I'm setting aside a small budget for some inexpensive old manual focus lenses. Do you have any tips on choosing lenses like these based on my criteria? I really don't want to spend more than $£ 100$ and would like a decent wideangle (around 24 mm ) and a semi-wide, for street photography.

## Dean Jennings

AThe most important thing you need to know is which lenses will work properly with your current D300s and planned D800. Old manual focus Nikon-mount lenses can work, but there are caveats. Lenses produced prior to 1977 may require physical modification as there is a risk of physical damage to your camera. These older lenses are known as 'pre-Al' because Nikon introduced the AI (Automatic
maximum aperture Indexing) system in that year. It's simplest to focus on AI-compatible and later lenses (like AI-S), though even with these you can't use Shutter priority or Program exposure modes, only Aperture priority and Manual modes. In other words, the camera can't control the lens aperture. You will also need to enter some information into a camera menu about the lens you are using if it is a non-CPU lens. Non-CPU lenses have no electrical contacts at the rear of the lens. Of course, don't forget the cropping factor. It's $1.5 x$ the focal length of a full frame lens to compute the equivalent focal length/field of view you will get on your D300S. A 24 mm lens, for example, will have a 36 mm lens field of view on your DX sensor D300S. Don't go for a less bright lens as your D300S focusing screen is not optimised for manual focusing. Stick to $\mathrm{f} / 2.8$ or brighter, like $\mathrm{f} / 2$. You don't need to stick to Nikkor lenses; there are many very good manual focus lenses from Tamron, Tokina, Vivitar and others. There are far too many to discuss here but a good source of information can be found by searching users' own experiences of particular models online.

Dean Jennings is looking for advice on choosing lenses for his Nikon D300S

## Memory cards - rewrite or write once?

QI'm curious to know if, like me, there are others who never reuse memory cards; I buy, fill, then buy another. I always keep a couple spare. If I fill my current card, I start on a spare but immediately open the Amazon app and order a replacement spare. I do the same with USB sticks - copy the card to the USB drive, edit on the USB and then file away. The original card is kept untouched as my master card. Is this unusual? Pixelpuffin (AP forum)

AUse-once memory cards are not new. SanDisk actually launched a line of camera memory cards, called 'Shoot \& Store', in 2004, aimed at helping film photographers move to digital. The cards were competitively priced and designed to be used once and, thereafter, be your primary archive media. It wasn't a great success; few rivals copied it and SanDisk quietly discontinued Shoot \& Store a few years later. With memory card prices so low, relatively speaking, there is some logic in using cards like this, even when shooting big raw files. The cost per image compared to film makes it look like a no-brainer and there are no developing costs. Of course, we don't appreciate memory cards like that any more - they are, intrinsically, reusable. If you use more expensive UHS-II cards, for example, the idea of a use-once strategy becomes even less attractive.


Making a bit of cash selling photos

QI sell my pictures online as a hobby (in the evening and at weekends). I often take a camera with me if I'm going anywhere nice and on occasions get some great pictures out of the trip. However, now l'm starting to make enough from the store that I'm often spending my evenings processing orders and beginning to make actual money from it. It seems it won't be too long until I will be put into a higher tax bracket. Do I need to worry about this, as I only do photography as a hobby and don't make tons of money from it?
L Ellis (AP forum)

AUnfortunately, income is income, so even if you happen to be earning a bit of money because of your hobby, the law requires such an income to be declared. On the other hand, you should be pleased that your work is decent enough to be generating some return. For some, an experience like this eventually results in a change of career to photography. If you are producing a regular income from your hobby, you could turn it into a small business and off-set your expenses against tax. If you have any concerns about tax, talk to an accountant. They will usually offer you a free introductory consultation.

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## Professor Newman on...

 Putting the 'post' in processingBob Newman on knowing the importance of processing as a key stage in the photographic method

0ne of the terminological slip-ups that lcan geterated about is misuse of the term 'post-processing' This is a term borrowed from the film and video industry and, according to Wikipedia, it 'is the process of changing the perceived quality of a video on playback (done after the decoding process)'. I think that the clause in parentheses is key - post-processing is clearly what happens after processing.

Why is this distinction important? It is because 'processing' is a key stage in the photographic method, and learning to get what you want from it is important. The processing phase is when the latent image is transformed into a visible image, and inevitably involves the loss of some information that was contained in that latent image. In film days, you could vary the chemical composition of the developer, its strength, temperature and the length of development, as well as many
other subtle techniques that skilled darkroom technicians mastered. Varying these many different parameters changed the outcome and dictated what you could achieve from that image.

Digital has a great advantage in that the development process is non-destructive, so if you don't like the outcome of what we would now call a 'raw conversion' you can try again, but the aim is the same, to use the development process to provide for the range of outcomes that you want. Once you have discarded information during processing, be it shadow or highlight detail, no amount of post-processing will bring it back.

This is made more difficult because many digital image manipulation tools blur the differences between processing and post-processing. Mostly, the advanced commercial tools do a bit of both. Apparent raw processing tools such as Lightroom perform some functions after they have processed the image, while image
editors such as Photoshop include processing ability. Nonetheless, keeping the distinction clear does help the understanding that allows fine-tuning of technique.

One of the oft-quoted advantages of cameras with a large dynamic range is that they allow the photographer to 'lift the shadows in post'. Unfortunately, 'lifting' shadows during postprocessing is likely to achieve poor results unless the image was processed so as to preserve the detail in those shadows in the first place. If it was processed 'correctly' according to the chosen ISO (of which more later) then it would be likely that most of the shadow information would have been discarded, and no longer be there to 'lift'. Moreover, the desired tone curve, that resulted in lighter shadows, could have been applied in processing; so no postprocessing would be required.

## ISO and processing

 Essentially, the ISO control does two things (it may also do other things, such as changing voltage gain somewhere in the read chain, but that is a matter of manufacturer implementation, rather than the ISO standard). It defines a target exposure, setting what the meter defines as 'correct' exposure, and it defines a processing regime that will result in that exposure being rendered with the lightness required by the ISO standard. Thus, any use of extended dynamic range means a departure from the processing dictated by the ISO setting.clipping, then processed to the desired lightness range. No 'post-processing' involved

Bob Newman is currently Professor of Computer Science at the University of Wolverhampton. He has been working with the design and development of high-technology equipment for 35 years and two of his products have won innovation awards. Bob is also a camera nut and a keen amateur photographer

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| 55 mm F2.8 AIS Micro .............................. E++ £159 | 200 mm F2.5 SMC......................................E+ £349 |
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ack Delano, 1914-1997, is one of my favourite photographers; and fortunately, a great deal of his work is available at the US Library of Congress, because of the work he did for the US Government. This is typical of his portraiture: his son described it as 'one human baring its soul to another.'
Everything in it is of its time: the clothes, the welding gear, the wood-sided wagon with its faded Chicago and North Western Line logo. It is also timeless, though, because it shows all that it needs to show, and no more. Each of the three principal components is cropped by the edge of the frame, with even Mr Evans cropped off at the knees. The last is a real no-no in the eyes of an old-fashioned camera club judge, who might also take exception to the absolute centrality of the figure in the frame. Where are the thirds, the leading lines, the dynamic diagonals? Well, some of them are there if you want to look for them and impose your preconceptions, but they are not needed. Everything flows out from the central figure: he is the reason for the picture.
Better to look at the details. Begin with his direct stare, even if he looks a bit puzzled: why me? Then reflect that Delano chose a low viewpoint, literally looking up to his subject. He is not taking a picture; he is humbly accepting it. Look at the proprietorial arm resting on the trolley for the gas cylinders, and at the welding torch itself draped over his shoulder. Would you normally carry a welding torch like that? I don't know. But it looks natural and unaffected, and in propaganda photography above all, this is what matters. The reinforcing bars on the wagon radiate from his strong right hand and the steps to its roof climb up from his shoulder. The work-polished steel of the wheel of the gas trolley and the lightly rusted cylinder speak of unpretentious and somehow curiously real work.
> 'He chose a low viewpoint, literally looking up to his subject. He is not taking a picture; he is accepting it'


## Learning by looking

Did Delano, only 28 years old at the time, think about all this consciously when he took the picture? Almost certainly not. Like most of us, he probably thought, 'Well, I don't want this in the way, and I don't want too much of that, and if I'm not careful...'
On the other hand, his artistic studies went far beyond photography. His
education at the Pennsylvania Academy of Fine Arts included a four-month European tour on a Cresson Traveling Scholarship where he became increasingly fascinated by depictions of hard-working labourers throughout history. He learned his craft by looking, and later by doing; and if you want to be a photographer, there aren't really many alternatives.

[^4]
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[^0]:    Send uS your picturres if you'd like to see your work published in Amateur Photographer, here's how to send us your images:

[^1]:    Making of 'Five Soldiers Silhouetted at the Battle of Broodseinde' (by Ernest Brooks, 1917), 2013

[^2]:    Photographing NT properties: Visitors to National Trust properties can take pictures out of doors for their own private use. Amateur photography (without flash and use of a tripod) is permitted inside some National Trust properties at the general managers discretion. The National rust does not permit photography at its properties tor any commercial or editoria use without first seeking permission from National rust images. Fees may be

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[^4]:    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 website at www.rogerandfrances.eu). Every week in this column Roger deconstructs a classic or contemporary photograph. Next week he considers an image by James Robertson and Felice Beato

[^5]:    Offer and purchase period: 1st May to 31st July 2018. Terms and conditions apply. Participating products: M.Zuiko Digital lenses: ED 17mm 1:1.2 PRO - £150 cashback, ED $25 \mathrm{~mm} 1: 1.2$ PRO - £150 cashback, ED $45 \mathrm{~mm} 1: 1.2$ PRO - £150 cashback, $25 \mathrm{~mm} 1: 1.8$ - £45 cashback, ED 60mm 1:2.8 MACRO - £65 cashback, ED $9-18 \mathrm{~mm} 1: 4.0-5.6$ - £85 cashback, $75-300 \mathrm{~mm} 1: 4.8-6.7$ II - £85 cashback; OM-D cameras: E-M10 Mark $\|$ - £65 cashback, E-M10 Mark III - £65 cashback, E-M5 Mark $\|$ - $£ 175$ cashback.

