

59 MINUTES OF VIDEO

Future

Digital Camera World

The definitive guide to SLR photography



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PERFECT PORTRAITS

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Forget the Oscars! It's the awards of the year, and what everyone's talking about. Find out what we've picked to be our favourite camera kit of 2017

Welcome to the Spring 2017 issue of Digital Camera

THE art and craft of portraiture is arguably one of the hardest genres of photography to master.

However, it can also be one of the most satisfying when you get it right. So, this month, we've brought together leading experts to share their insider tips and advice to get you up and running. Whether you're shooting pictures of your family, professional headshots, weddings, fashion, lifestyle or candid, we've got you covered. And to get your creative juices flowing, our Hotshots gallery showcases winning images from the Taylor Wessing Portrait Prize.

It's also that time of year when we reflect on the best cameras, lenses and accessories in the Digital Camera Awards. It's been a good year for Fujifilm – find out why when you turn to page 89 for the full list of winners.

I also joined *Digital Camera* readers Tom and Alex in the Brecon Beacons in Wales, for this month's windy Shootout in the middle of Storm Doris! Details on page 58. Do drop us a line of you'd like to take part in one of these fab days.

Enjoy the issue!

Ben

Ben Brain
Editor, Digital Camera



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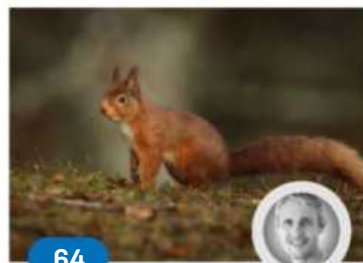
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See page 26

* For new UK subscribers



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Nine all-new tips cards

With nine new tips cards on offer this issue, either add to your collection or start collecting today! These handy wallet sized cards can easily be carried around with you on a shoot and ready to reference in a jiffy if you should need the help! We reveal how to take a portrait with a twist; the fun of playing with perspective; and the importance of being on location for sunrise.

If you have any suggestions for the next load of tips cards we'd love to hear from you. Email us at digitalcamera@futurenet.com with 'Tips cards' in the subject line.



DOWNLOAD THE VIDEO
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Whenever you see these logos on a page in the magazine, you can find related content online



162-PAGE BUYER'S GUIDE

If you're after some new kit this year, you won't want to miss your free *Camera Shopper* ebook, with the best buying advice around. You can download your free *Camera Shopper* PDF ebook via www.bit.ly/shopper16



59 MINUTES OF VIDEO

We've packed this issue full of expert tutorials to help you improve your photo-editing skills. This month Sean McCormack reveals how to add a moody monochrome style to your portraits in Lightroom, and Jon Adams shares the secrets behind the Curves tool. Follow along with their tutorials and get striking results. Watch the videos at www.bit.ly/dc189video



TWO FREE PORTRAIT TUTORIAL EBOOKS

Take your portrait editing and shooting skills to the next level with two free ebooks this issue. Learn the tricks of the trade in *Portrait Retouching Masterclass* and take better family portraits. You'll find both ebooks at the end of this magazine.

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DIGITAL DARKROOM

Image-editing guides for Photoshop and Lightroom: see page 111 for contents



NEW SERIES BY JON ADAMS

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Tool School [Part 1](#): Create convincing depth-of-field and motion blur effects
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Tool School [Part 2](#): Create convincing depth-of-field and motion blur effects
[See page 118](#)



Artist Insight: Make your own 'moving photographs' with the help of Photoshop
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HOTSHOTS

OUR FAVOURITE SHOTS FROM THE TAYLOR WESSING PORTRAIT PRIZE 2016



**ABOUT THE TAYLOR
WESSING PORTRAIT PRIZE**

The National Portrait Gallery's Taylor Wessing Photographic Portrait Prize 2016 is the leading international competition that celebrates the best in contemporary portrait photography. It's on tour until 4th June at Sunderland Museum and Winter Gardens, and from 8th July to 29th October at the Beane House of Art and Knowledge, Canterbury, www.npg.org.uk/photoprize



MARIA _____ KELVIN MURRAY
Inkjet print, May 2016

Kelvin Murray gained a BA (Hons) degree in Psychology from the University of Hull. His commercial clients include British Airways, The Times, Eurostar and the London Olympic Games. He has previously been selected for the Taylor Wessing Photographic Portrait Prize in 2005, 2008, 2009, 2011 and 2014. On first glance we see Maria from *The Sound of Music* playing her guitar against an Austrian mountain range. In fact, the scene is a staged re-imagining of the film musical. Murray photographed an actress, hired for her passing resemblance to Julie Andrews, against Alpine wallpaper in an indoor ski slope in London, dressed in a dirndl costume made especially for the shoot.



SHIMI BEITAR ILLIT TILLY — KOVI KONOWIECKI **THIRD PRIZE**

From the series *Bei Mir Bistu Shein* [To Me You Are Beautiful]; inkjet print, May 2016

Kovi Konowiecki gained a BA in Media Communications at Wake Forest University, Winston-Salem, and is currently undertaking a Fashion Photography MA at the London College of Fashion. His work was selected for inclusion in the *British Journal of Photography's* Portrait of Britain project (2016). The portrait of Shimi, a violinist with a klezmer band, were taken at his home in an Israeli settlement south of Jerusalem, in the mountains of the West Bank. The images come from Konowiecki's ongoing series, which portrays Orthodox Jewish families.



MARTHA — SIAN DAVEY

Two portraits from the series *Martha*; inkjet prints, August 2015 and May 2016

Sian Davey began photographing her daughter Martha when she turned 16 years old. Embedded in the group portraits, Martha is surrounded by friends – a group of teenagers photographed on a riverbank in Devon. Taken over two summers, the images read as a series of discrete vignettes, which together form a composite portrait of Martha and her lifestyle.



JET, IRON MAN BOY — SCOTT THOMAS

From the series *Homeland*; inkjet print, November 2015

In 2016, Scott Thomas' work was selected for the D&AD New Blood and the Brand New - Vision exhibitions, London. The vibrant colours of the young boy's Iron Man costume are pronounced against the misty landscape. His tiny body seems too small for the suit, the purported heroism of its wearer undermined by his diminutive stature. Jet lives in the Tipi Valley, an eco-community in south-west Wales, whose residents are known for an alternative lifestyle that jars with the Hollywood industry the Marvel hero's costume represents.



ZAZIE — CÉCILE BIRT

Inkjet print, February 2016

Cécile Birt gained an MA in English And Modern Languages from Wadham College, Oxford. She worked as a writer and translator in Berlin before concentrating on bringing up her young family. This is the first time her work has been published or exhibited. Birt photographed her daughter Zazie at the family kitchen table as she learned to feed herself, satisfying a maternal desire to capture the fleeting moments of her daughter's childhood. Zazie's furrowed brow and expression of concentration speak of determination and perseverance.



MARIA GRAZIA — FABIO BONI

From the series *Vicino A Noi* [Close To Us];
inkjet prints, March 2016

Fabio Boni is a self-taught photographer specialising in portrait and social photography. His work has been seen in group exhibitions in Italy and in publications including those of the Musei Civici, Reggio Emilia and the Comune di Castelvetro, Modena. Boni's portraits form part of a series commissioned by the Committee of the Italian Red Cross of Reggio Emilia that depicts the volunteers who dedicate their time to helping others. Photographed at the local headquarters in northern Italy, Maria Grazia is posed against an intense and vibrant red background, intended to suggest strength and vigour.



MACLEEN — CAROL ALLEN-STOREY

From the series *The Loneliness of Aids*; digital colour coupler print, November 2015

Carol Allen-Storey's work has been selected for awards and exhibitions including the New York Photography Festival, the Press Photographer's Year and the Taylor Wessing Photographic Portrait Prize in 2009, 2011 and 2013. Commissioned by the Elton John Aids Foundation, this series focuses on children isolated due to their HIV status. Photographed in Uganda, in the small house she shares with her mother, Macleen lies on the floor cradling a doll – a gift she cherishes.



SEYE, MIAH, ELIJAH AND ALEXANDER, REGENT'S PARK — SARAH LEE

Digital colour coupler print, June 2016

Sarah Lee's portraits have been published in magazines including *Guardian Weekend*, *Rolling Stone* and *Observer Food Monthly*, and an exhibition of her work was held at King's Place, London. She was previously included in the Taylor Wessing Photographic Portrait Prize in 2014 and 2015. Lee's group portrait resulted from a moment of serendipity. Walking through Regent's Park in London on a warm Sunday, the photographer saw a family, completely absorbed in each other's actions.

SIGMA

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INFOCUS

Photography news from around the globe



1 REFINED CONTROLS

Like the EOS 80D, the new 77D features two control wheels and a top-plate LCD screen.

2

GO WIRELESS

Wi-Fi, NFC and Bluetooth enable you to control the 77D from a connected smartphone.

3

MAKING MOVIES

The 77D can record Full HD 60p and has an HDR Movie mode.

CANON UPDATES

THREE-LOADER

FIRST LOOK

As Canon celebrates three decades of the EOS system, it's taken the opportunity to introduce a trio of additional EOS cameras: two APS-C DSLRs and new CSC

FIRST on the list of Canon's latest EOS launches (see opposite page also) is the 77D. Positioned between

the new 80D and the 80D, it's pitched as a camera that's "ideal if you're looking to upgrade your kit and refine your skills". Canon's DSLR line-up isn't exactly short of upgrade options: there are already six APS-C DSLRs in the current EOS range before you factor in the two new cameras.

Muddying the waters further, both the 77D and the older (and more expensive) 80D share a similar feature set. Both use

the same 24.2-megapixel CMOS sensor, carry out autofocus duties with the same 45 cross-type AF point system, and feature Canon's excellent Dual Pixel CMOS AF for fast and accurate focus-tracking when recording video and stills in Live View mode.

As the more up-to-date model against the 80D, the 77D brings a few upgrades: it uses Canon's latest Digic 7 processor (the 80D's on Digic 6) for instance, and has a wider sensitivity range, running to ISO 25,600 compared with the 80D's more limited ISO 12,800.

Of course, the premium you pay for the 80D brings some additional refinements in handling and performance over the 77D: an 'intelligent' viewfinder with 100% coverage; better battery life (960 shots vs 600); faster shutter speeds (1/8,000 sec vs 1/4,000 sec) and a weather-sealed body, to name a few.

Also, unlike the 80D, the 77D lacks a headphone port, so if you're planning to refine your movie-recording skills, the older camera may prove the better choice.

www.canon.co.uk;
£830/\$899 (body only)

24.2MP DSLR

THE 'TOOTH IS OUT THERE

Canon's entry-level DSLR offers Bluetooth connectivity

THE Canon 800D is essentially a stripped-back version of the 77D. It shares much of the same technology and features as its more expensive sibling, including a 24.2MP APS-C CMOS sensor, Digic 7 processing, a sensitivity range of ISO 100-25,600 (expandable to ISO 51,200), a 3-inch articulating touchscreen and Bluetooth/Wi-Fi support. What you lose is the level of on-body controls the 77D has: there's just a single control wheel here, no top-plate LCD for monitoring settings and no AF-On button. Still, if an advanced autofocus system, wireless control and a vari-angle touchscreen are on your wish list, you can save yourself some cash and get the 800D.

Alongside the 800D and 77D, Canon is launching a new EF-S 18-55mm f/4-5.6 IS STM lens –



claimed to be the smallest non-retractable DSLR kit lens of its focal range, as well as a £39/\$45 BR-E1 Bluetooth remote control that allows you to operate the camera from a distance of five metres. The BR-E1 is compatible with the PZ-E1 Power Zoom Adaptor, enabling you to remotely adjust the zoom position of the EF-S 18-135mm f/3.5-5.6 IS USM lens. www.canon.co.uk; £779/\$749 (body only)

FIRST LOOK

FOCAL POINT

Rounding up what's new and exciting



Phottix Ares II flash trigger

Phottix's new budget-friendly flash trigger offers a working range of 150 metres, split across 16 channels and four groups.

www.phottix.com; £TBC/\$55



Phottix Taimi digital timer

This is a digital timer and wired remote that comes complete with interchangeable cables for the most popular Canon, Nikon and Sony cameras.

www.phottix.com; £TBC/\$35

NEW LENSES

SUPER SIGMAS

FOUR new desirable lenses are set to join Sigma's Contemporary and Art lines – although it's not known when that'll happen and how much they'll cost. Watch this space... www.sigma-imaging-uk.com



14mm

135mm

14mm f/1.8 DG HSM | Art
135mm f/1.8 DG HSM | Art

A fast 14mm ultra-wide angle and a fast portrait lens, both available for Canon, Nikon and Sigma.



(AT 24mm)

(AT 70mm)

24-70mm f/2.8 DG OS HSM | Art

A fast, stabilised standard zoom lens with a metal barrel, rubber-sealed mount and Hypersonic motor. Fits Canon, Nikon and Sigma cameras.



(AT 100mm)

(AT 400mm)

100-400mm f/5-6.3 DG OS HSM | Contemporary

With this tele-zoom, Sigma has concentrated on ease of handling as well as the optics.

NEW CSC

MIRRORLESS IS MORE

Canon adds a feature-rich body to the EOS M range

YOU wait months for a new 24.2MP APS-C camera from Canon, and three come along at once. The M6 is a new mirrorless body that, like the two new DSLRs, packs Digic 7 and Dual Pixel CMOS AF. It offers a continuous shooting speed of 7 frames per second, or up to 9fps with fixed autofocus. Five-axis video stabilisation has been designed to smooth out the bumps when shooting Full HD 60p video, while Bluetooth allows



you to browse images on your smartphone without taking your camera out of your bag. A new EVF-DC2 electronic viewfinder is also being introduced alongside the camera.

www.canon.co.uk; £729/\$779 (body only)

FIRST LOOK



NATIONAL GEOGRAPHIC AUSTRALIA COLLECTION

This new five-strong range of bags has been inspired by the colours of Australia's natural environment.

www.manfrotto.co.uk; from £60



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© Ami Vitale, United States of America, Shortlist, Professional, Natural World, 2017 Sony World Photography Awards



© Tim Toopie, United Kingdom, Shortlist, Open, Portraits, 2017 Sony World Photography Awards



© Andrés Gallardo Albajar, Spain, Shortlist, Open, Still Life (open), 2017 Sony World Photography Awards

COMPETITION RESULTS

SHORT' TEMPTERS

See the shortlisted entries for this year's Sony World Photography Awards...

A **HEAD** of announcing the overall winners of the competition on 20th April, Sony has revealed the shortlists for the Professional, Open, Youth and Student Focus categories in this year's Sony World Photography Awards. A small selection from 'the world's largest photography competition' can be seen above, but galleries of the shortlisted

(top 10) and commended (top 50) photographers for all categories are available to view on the competition website.

More than 227,596 entries were submitted to this year's Awards, with the overall Photographer of the Year set to pocket a tidy US \$25,000 cash prize.

www.worldphoto.org/sony-world-photography-awards

FOCAL POINT

Rounding up what's new and exciting



Sony SF-G SD card

Sony is laying claim to the world's fastest SD card in the shape of its new SF-G series, which is available in 32GB, 64GB and 128GB capacities. Expect a write speed of up to 299MB/s and a read speed of 300MB/s. www.sony.co.uk; £TBC/\$TBC



Syrp Super Dark Variable ND filter

Syrp's filter is only available in 67mm and 82mm, but handy each comes with two step-up rings to fit other thread diameters. www.syrp.co.nz; From £135/\$169

Sevenoaks Motorised Follow Focus Rig

This shoulder-mounted rig allows film-makers to pull-focus and steady a camera while on the move. Usefully, you can store up to four focus points to return to. www.kenro.co.uk; £456



NEW LENS

HASSEL' OFF AT LAST

HASSELBLAD has confirmed that four XCD lenses are to be released for its X1D mirrorless medium-format camera. (See our review on page 106.) An XCD 120mm f/3.5 macro lens (above) will be the first release in June. Pricing is still to be confirmed.

The new macro lens offers 1:2 reproduction and, like the other XCD lenses, includes an integral central shutter that offers full flash synchronisation up to 1/2,000 second.

The next 12 months will also see the release of a 35-75mm, 65mm and 22mm wide-angle, taking the XCD lens range to seven by the beginning of 2018. www.hasselblad.com



DEAD CAMERAS

I AM NIK-GONE

NIKON has officially canned its DL series of premium compacts. Following their unveiling at the Consumer Electronics Show in January 2016, the three DL cameras were pencilled in for a June 2016 release. But there appears to have been an unfortunate case of development hell, with Nikon citing issues with "the integrated circuit for image processing", leading to an indeterminate delay. Nikon's now taken the decision to pull the plug completely after calculating that the increasing development costs and a slow-down in the market, which was expected to hit sales of the new cameras, would see profitability taking a hit. www.nikon.co.uk

SONY



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4K

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*Among interchangeable-lens digital cameras equipped with a 35mm full-frame image sensor. Information correct as of June 10, 2015.
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BATTERY-POWERED LIGHTING

LIGHT SAVER

Elinchrom's new ELB1200 pack is set to offer bags of portable, weather-resistant power

NO STRANGER to the on-location lighting market, Elinchrom has announced a new weather-resistant unit that will be available mid-2017 for an undisclosed price.

The ELB1200 is the big brother to the company's Quadra/ELB400 unit, offering 1200 Ws power but weighing just 4.3kg with the included Air battery installed. Switching to the HD

battery sees a the number of flashes increase to 400 at full power over the Air battery's 215, with a trade-off of an additional 400g in weight. Recycling times are rated as fast as 1.7 seconds.

There are three dedicated head options – Action, Pro and Hi-Sync – and each is video-friendly, with a quiet fan and 4000 lumen daylight-balanced, dimmable LED modelling lamp. www.elinchrom.com

FIRST LOOK

FOCAL POINT

Rounding up what's new and exciting



Artisan & Artist Easy Slider strap

The signature strap from Japanese brand Artisan & Artist has a rapid adjustment system. This slim model is for CSCs. www.artisan-n-artist.com; £55



Sony XZ Premium

Available from late spring, Sony's high-end smartphone can record slow-motion 720p video clips at an incredible 960fps. www.sonymobile.com; £TBC

Sevenoak Pan Head

The SKECH03 is an electronic, motorised head which comes with a joystick controller for 360° control. www.kenro.co.uk; £328



COMPANY MERGER

WEX CHANGE

THE UK's largest online specialist photographic retailer, Wex Photographic, has been bought by investment firm Aurelius Equity Opportunities for an undisclosed sum. Aurelius already owns Calumet Photographic, which comprises a chain of bricks-and-mortar camera stores as well as an equipment rental business and retail website, and Wex will be merged with Calumet following the deal. Aurelius says that the move demonstrates its "commitment to supporting and scaling our initial investment in Calumet." www.wexphotographic.com

STORAGE SOLUTION

FIRST RAID

Drobo's latest 5C unit comes with USB-C

STORAGE and back-up are two aspects of digital photography whose importance can't be stressed enough.

Raid technology can buy some peace of mind – if one drive fails, you'll have back-ups of your photos, videos and other data on the other drives in the Raid array. Drobo's 5C uses BeyondRaid technology, which is designed to protect against a hard disk crash, as well as being self-healing; if a drive does fail, the 5C will re-layout the data to a protected state. It's a five-bay Direct Attached Storage desktop unit



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PHOTO HISTORY

FOX'S TALE

BODLEIAN Libraries in Oxford has launched an online resource that brings together the complete works of the father of modern photography, William Henry Fox Talbot. Launching with more than 1,000 images, the collection will be added to weekly until all 25,000 known images have been published. <http://foxtalbot.bodleian.ox.ac.uk>



Bodleian Libraries, University of Oxford

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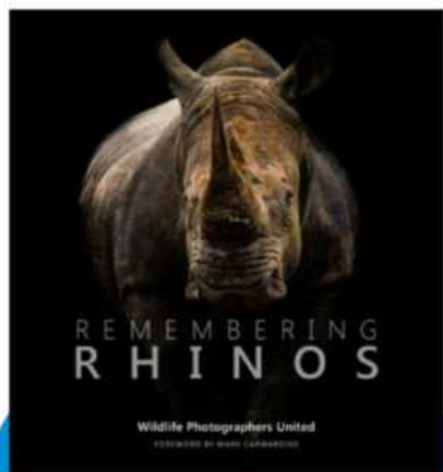


Keith Connelly

COMPETITION

REMEMBERING RHINOS

Submit your best images of wild rhinos for a chance to be featured in a new fund-raising photography book



WIN AND GET PUBLISHED!

See your photo printed alongside some of the world's finest wildlife photographers

REMEMBERING Rhinos isn't a book that's designed to just raise awareness of the five remaining species of rhino – it will raise essential funds for anti-poaching initiatives too. Wildlife photographer Margot Raggett is the driving force behind the idea – and it's a simple one: ask some of the most influential wildlife photographers to contribute an image to a book that will be sold to raise money. Like its predecessor, Remembering Elephants – which has raised more than £130,000 so far – the project is being supported by Born Free Foundation, and a Kickstarter campaign has already guaranteed the funding of the book.

Big hitters from the world of wildlife photography are already on board, with Art Wolfe, Frans Lanting, Britta Jaschinski and Mark Carwardine joined by almost 50 other top pros under the banner of Wildlife Photographers United. And that's where

you come in. Remembering Rhinos, in association with Digital Camera, are announcing the opportunity for a further 10 photographers to join the list.

WHAT TO SUBMIT

In a nutshell: images of rhinos that help to tell a story of their lives. The judges will be looking for pictures of rhinos that have been taken in the wild (shots taken in captivity are ineligible) and which are true to the original scene, with minimal editing and nothing added or taken away from the photo. If your picture shows some aspect of behaviour, all the better.

HOW TO ENTER

You'll need to sign up and upload your pictures at the Remembering Rhinos online competition page (address printed below), where you can also find full terms and conditions. The entry fee for your first image is US \$10, with each subsequent entry

Hilary O'Leary



Margot Raggett



costing US \$5. All funds raised after costs will contribute to anti-poaching initiatives. You'll need to be quick, as the competition closes at 23:59 on Monday, 17th April 2017.

THE PRIZES

The 10 winning photos will be printed in the book alongside those of some of the world's best wildlife photographers. The

images will also be printed in *Digital Camera*. Each winner will receive a copy of Remembering Rhinos and an invitation to the VIP launch in London on Tuesday, 31st October 2017. Prints of the winning images will also appear in a London exhibition to launch Remembering Rhinos and those prints will subsequently be sold to raise further funds for the cause.

Above

Some of the images already lined up to appear in Remembering Rhinos.

THE JUDGES

Meet the competition's expert panel



Ben Brain
Editor of
Digital Camera
magazine



Chris Packham
Naturalist, wildlife
photographer and
broadcaster



Daryl Balfour
Wildlife
photographer
and tour leader



Margot Raggett
Remembering Rhinos
founder and wildlife
photographer



Keith Wilson
Editor of
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PHOTO PROJECTS

*Seven creative challenges
to get stuck into, including
a home-made lightbox*

Tips on how to collaborate

- There are a few considerations to take into account when thinking about a collaboration project. Loïc and Carla both used a 16-35mm lens to take their shots. Although it's not necessary to have exactly the same equipment, it helps when combining images if they look like they were shot from the same physical perspective.
- You also need to consider how you are going to combine your images together. It could be that you use an editing program such as Photoshop. It's best to ensure you both have the same software (and version) before you start, so you can pass the image back and forth!

[PROJECT 1]

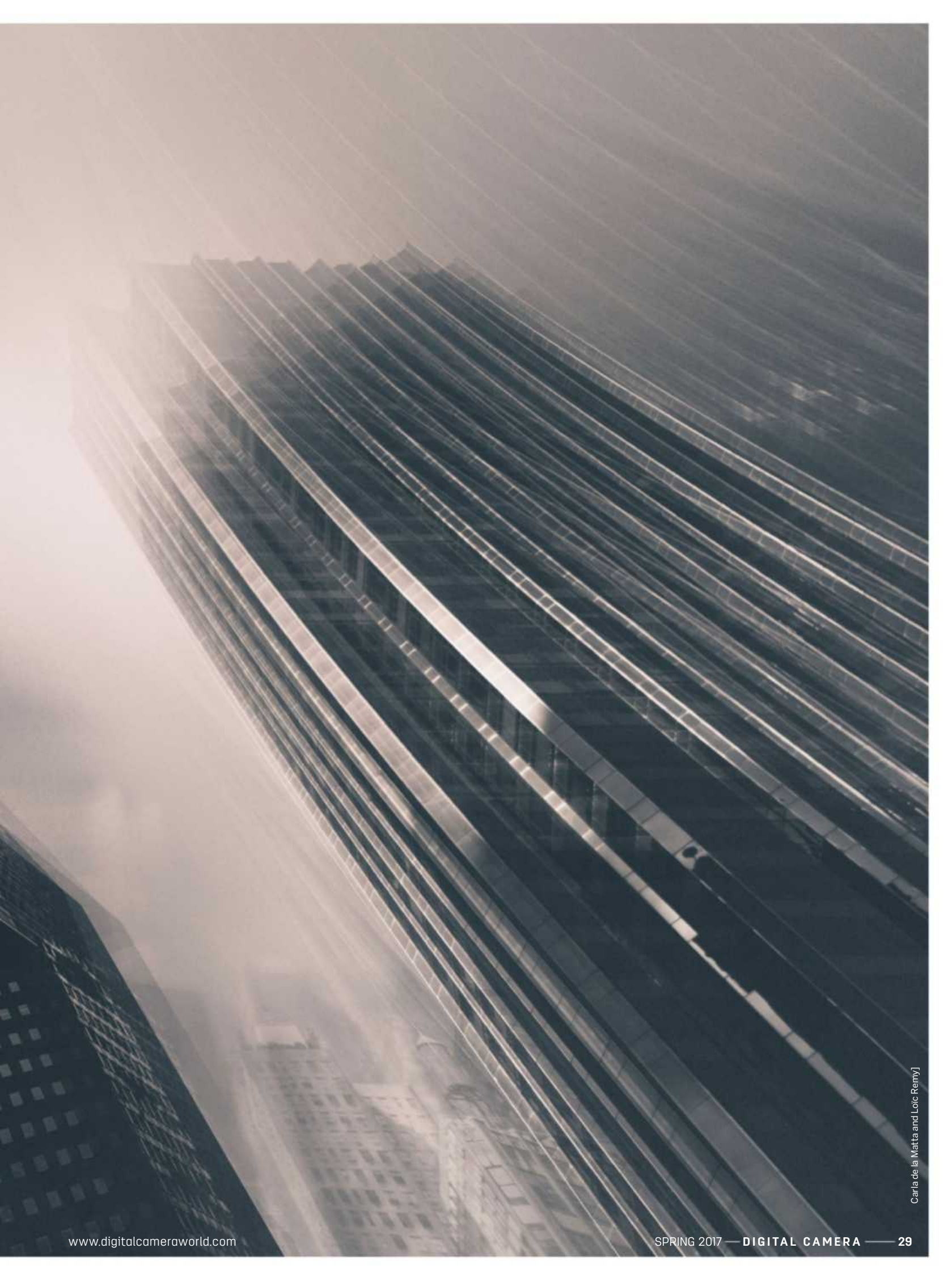
Collaborate When cities meet

*What happens when you take a
photographer from New York and
a photographer from Paris? This!*

CARLA de la Matta from New York and Loïc Remy from Paris have a unique photographic relationship. They combine images of the iconic cities they occupy to create dream-like results. This image, taken from their project *Phantasma*, combines an image taken by Loïc in 2015 of the Pacific Tower in La Defense, Paris, and the International Hotel and Trump Tower in New York City, taken by Carla in 2016.

Loïc and Carla have a clear understanding of what they are both trying to achieve and respect

for each other's creative process. "The main challenges we have encountered are to make our visions converge and to find the time to work on them. As a result, our projects typically take several days or weeks to accomplish," says Carla. "We share our thoughts and brainstorm until an idea excites us and we start working on it. We typically start with one image that can be from either Paris or New York. We then look for the perfect complement for this image." www.carladlm.com, elremphotography.com





[PROJECT 2]

Lens flares Flora at dawn

*Head out in first light to
capture the natural
environment*

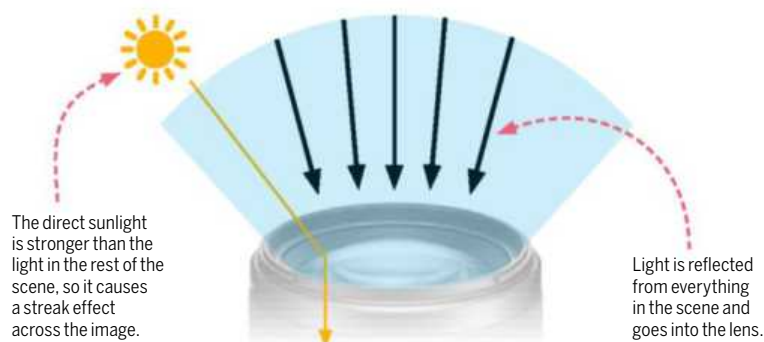
T **THERE'S** no doubt that dawn is the prime time to be out in the natural environment. Just as everything is starting to wake, there's a real calmness that makes the world a pleasure to be a part of.

When you shoot in the first light of the day, use the conditions to your advantage and capture warm, hazy scenes by setting yourself down low in the natural vegetation. Fields of long grasses, like the ones we captured in our example, are the perfect setting for this type of effect.

Although you might consider a lens flare to be a technical flaw, it can be used

more creatively. By shooting directly into the sunlight, a yellow streak of light pours across the image and adds a atmospheric effect that alters the whole scene. Small tricks like this make such a difference to alter the look of something that would otherwise appear somewhat normal-looking.

To blur the background and the near foreground, we used a prime 50mm lens with an aperture setting of f/2.8 and put our main focal point in the middle of the scene. Prime lenses are perfect for this type of set-up, as the aperture settings can go wider than most variable-length lenses, adding to the dreamy effect.



How does lens flare occur?

Lens flare is a flaw caused by a light source that is much brighter than the rest of the scene. Due to the low-light angle of dawn light when you shoot into the sun, it's hard to avoid the effect, but this is not a problem in some instances! The light is very soft at this time of day, so although the effect is still present, it is

more subtle. As the sun gets higher in the sky, the lens flare effect becomes harsher, and you may see spots on your image.

If you want to avoid lens flare or lessen the effect, either use a lens hood or cup your hand around the edge of the lens to block the amount of light entering.

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[PROJECT 3]
**Claire's
DIY Hacks**
**Make a
lightbox**

LIGHTBOXES are useful tools that illuminate your subject from underneath. There's a variety of subjects you can shoot on this useful piece of photographic kit, from flowers to small pieces of jewellery.

Lightboxes vary in price (from £20 upwards), but you can create your own if you follow our few simple steps. You'll need a cardboard box (with lid), greaseproof paper, scissors, tape, a ruler and a pen, plus a household lamp or LED light.



Step 1

On the lid of your cardboard box, use a ruler and mark out an area roughly two inches in from each side. Using scissors, make an hole in one of the corners and carefully cut out the middle section of the box lid so you're left with a gap.



Step 2

Get your greaseproof paper and cut a piece more than large enough to fill the hole. Place the sheet underneath the box lid and mark the gap. You can now trim around the edge of the paper – leave roughly an inch overlay. Tape the greaseproof paper inside the lid. Make it tight so there are no sags or creases.



Step 3

Next, get your light source. In our example, we used a household lamp. Cut a hole in the side of your box that you can open and close and feed the lamp through. Keep an eye on how hot the bulb gets, as this could be a health and safety issue. Now you're ready to get shooting!



Step 4

Turn on your light source and place your object on the greaseproof surface. We set our white balance to Tungsten to compensate for the orange tone in the lamp. You're obviously limited with the size and weight of your object, but if you break the surface, you can simply replace it.



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Quickfire Projects

Close-up creatives

Take a closer look around you and try these fun challenges in just a few minutes each

Miniature effect

IF you have a young child, you will find this project easy to complete in record-breaking time! Grab a toy car and head out into the garden or a park. Find a small mound of earth to place the toy on. Try to include some background interest, as we have done with the trees in the background here.

As you're shooting close-up, you don't need to worry about making the aperture too wide – around f/5 will do. Make sure the toy is the main focal point, and shoot! There you have it: a miniature car effect that looks almost life-sized.



Claire Gillo



Claire Gillo

Rain drops

ON a rainy day, instead of feeling fed up and trapped indoors, use the rain to your advantage. You don't need to get wet to try this project!

Rain drops left on the window create intriguing patterns and are a gem to capture. If you have a macro lens this can be an advantage, but is not necessarily vital. You can get a reasonable close-up if you use a telephoto lens too.

To get the final result, we did a speedy edit of our image in Photoshop, where we boosted the contrast and blue tones in the image for an abstract result.



Claire Gillo

Slow shutter speed

FOR this project, we picked a dandelion seed from the back garden and fastened it with a peg against a plain piece of card. To capture an effect different from the norm, we decided to experiment using a slower shutter speed and blowing the seeds away.

A tripod can help to do this, or you can simply place your camera on a couple of books if you don't have a tripod to hand. To ensure we struck a balance of capturing the movement while keeping some of the detail of the seeds sharp, we used a shutter speed setting of 1/30 sec.

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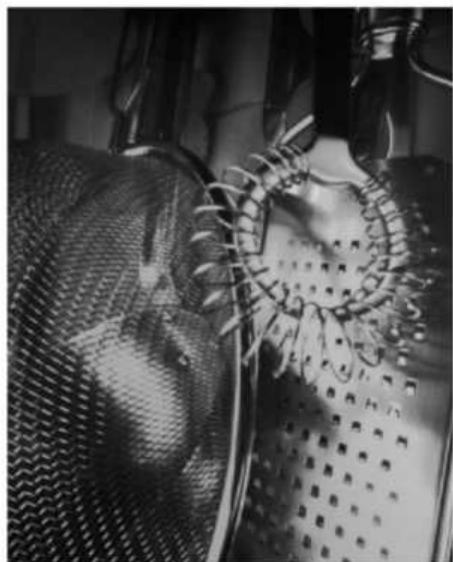
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[PROJECT 5]

Get creative! Analogue antics

Build a makeshift darkroom at home and create cool pinhole images - old school style

T HIS project might seem a little out of place in a magazine called *Digital Camera*, but we think it's too much fun to not include. And with World Pinhole Day looming fast (www.pinholeday.org), what better time to slow down and enjoy the magic of photography when you go on an analogue adventure?

You don't need a bunch of fancy equipment or materials either: a box of photo-sensitive paper, a trio of chemicals, a safe light and a some trays will not set you back

more than about £50. You don't need a dedicated darkroom either: it's pretty easy to quickly convert a normal bathroom into a makeshift darkroom.

Best of all, though, despite being slow and experimental in nature and sometimes damn frustrating, you'll get to play with the fundamental principles of photography and how an image is made. It really is magical watching an image appear in the developer – we're sure this project will help you to become a better digital photographer too!



TURN
OVER FOR
STEPS
2 TO 6

Step 1

We're using an old wooden 5x4 pinhole camera. If you just want to experiment, however, make your own. It's nothing more than a light-tight box or tin with a tiny pinhole to let the light in. Use a needle to make the pinhole in a piece of foil (from a drinks can), and sand it down so it's smooth.



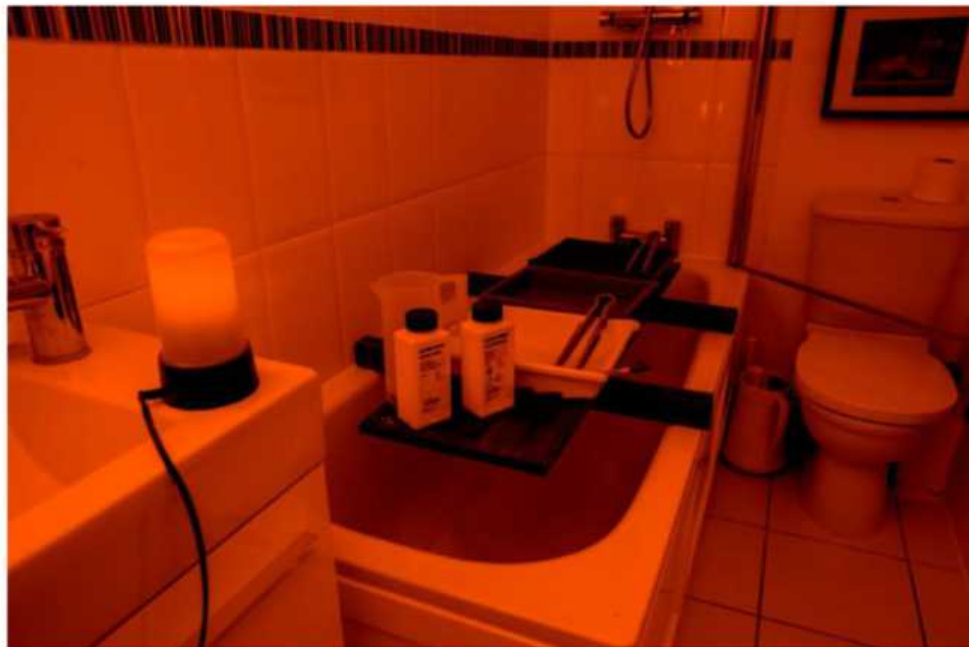
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[PROJECT 5] CONT'D

Step 2

Convert your bathroom into a darkroom. You'll just need some black cloth, card and gaffer tape to black out the windows, and a small red safe-light, which you can pick up for around £20. A wooden board over the bathtub makes an ideal 'wet' bench. It'll need to be big enough to hold three 8x10-inch trays.



Step 3

Load your camera with photo-sensitive paper; Fotospeed (www.fotospeed.com) does a good line in papers (and photo chemicals). Open the box of paper and load it into your camera in the darkroom *using only the red light*.



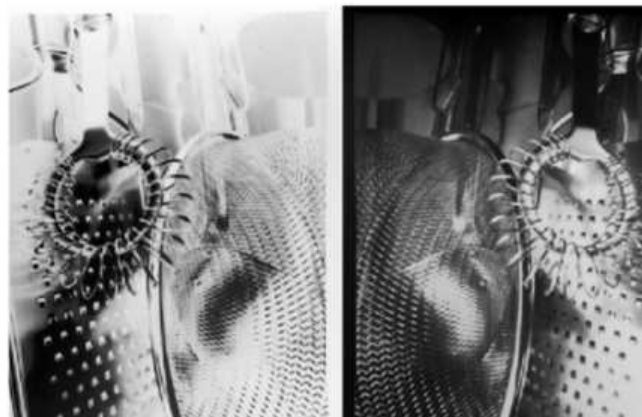
Step 4

Make an exposure. Photo paper is not as sensitive to light as film or a sensor, so your exposure times can be long – sometimes more than an hour. You'll need to be prepared to experiment, and it can be frustrating slow.



Step 5

In the darkroom, open your camera in the red light. Place the paper in the first tray with 'developer' and gently agitate for about two minutes. Move it to the second tray of 'stop bath' for 30 seconds and then to the 'fixer' tray for one minute.



Step 6

You now have a negative image. You can make this a positive image by sandwiching it with another piece of light-sensitive paper and shining a light through, but you may find it easier to photograph the negative and invert it in Photoshop.



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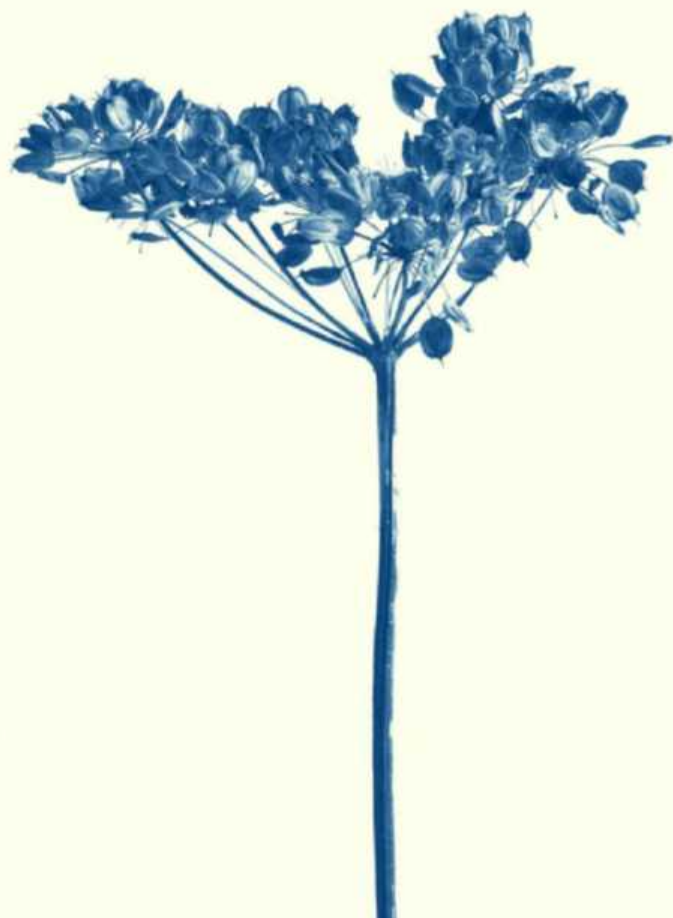
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[PROJECT 6]

Photoshop Project From black to blue

Use Photoshop to give your portraits a retro look

B LUE-TONING comes from the days of analogue film, when you could add a blue tone or a sepia effect to alter the style of your black-and-white image. The process involved a chemical solution in which the print would be submerged, and altered the blacks into blue or brown. These days the same can be done in Photoshop with a few simple steps!

As our starting image we have a simple still-life of a hedgerow plant against a white backdrop. (This is on the disc if you'd like to use it to follow the steps.) Start by turning the white into a more dirty yellow colour, which gives the image a more authentic look. It's these little touches when making edits like this that really help give your images the old-school appeal you want.



Step 1

Open your image in Photoshop. Add a Curves Adjustment Layer. To make the white background yellow, go to the RGB drop-down menu and select Blue from the list. Pull the top-right point on the graph down to add in yellow. Adjust to suit.



Step 2

Add a new layer by clicking the New Layer icon in the Layers panel. Go to Edit > Fill and from the Use menu select the Color option. A pop-out colour picker chart will appear. Select a blue tone, or enter '4f91eb' into the # box to get the same blue as ours.



Step 3

To blend the blue colour over the image and ensure it only remains on the dark parts, adjust the layer's Blend Mode to Soft Light. If you find the blue to be too harsh, you can adjust the opacity of the blue colour layer for a more subtle result.



SHOOT BETTER PORTRAITS

Read our cover story on page 43

[PROJECT 7]

Try this kit Sidelight with flash

An external flashgun enables you to create enticing effects

I **T MAY** seem daunting to think about shooting with anything other than natural light, but there is no need to fear flash! To set up this atmospheric portrait, we put our camera into its Manual mode and set the shutter speed to 1/250 sec. The biggest consideration to take into account when using flashgun is your shutter speed setting. Most flashguns will only sync with a shutter speed of 1/250 sec or slower. Some have faster sync speeds depending on the make, but this is a good rule of thumb to go by.

It's far easier to put your camera into the Manual mode so you can control each setting manually. The final consideration to take into account is where you place your flashgun and the strength at which it's firing. We had ours set to 1/16th.

We selected an ISO setting of 100 to keep the image quality high, then closed the aperture down to f/22. This meant our camera was only exposing for the flash light and not any surrounding ambient light. To keep the background dark, we simply drew the curtains and placed our subject in front.

How it works

By placing the flash to the side and slightly behind your subject, you can create atmospheric lighting where your subject almost appears as if they are emerging from the shadows. To ensure we didn't completely lose detail on the other side of the face, we got our subject to hold a reflector to bounce a bit of light back. If you want your subject's face more in shadow, move the flash further back. Make sure you keep detail and light in the eyes, as these are the key to an intense portrait like this.



1 The flashlight creates a harsh side light that makes the subject almost appear as if they are emerging from the shadows.

2 To keep the background dark, close the aperture setting down to block out the ambient light, so the camera is only exposing for the flash light.
Recommended apertures
f/16-f/22

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PART 1
PORTRAIT BASICS
PAGE 44

PART 2
HEADSHOTS IN DEPTH
PAGE 50

PART 1

THE BASICS OF PORTRAIT SHOTS

Jon Adams offers gear and creative advice

1 THE KIT YOU NEED

Lenses and accessories to lift your people pictures



THE RIGHT FOCAL LENGTH

The best focal lengths to use are those that don't distort facial features. Between 75 and 135mm is ideal on a full-frame SLR (or 50-90mm on an APS-C model). Although you can use any lens, fast lenses with wide apertures are best, as they allow for shallow-focus effects.



REFLECT ON THIS

A fold-up reflector is a wise investment, as it allows light to be bounced back into the subject to control shadows and create catchlights in the eyes. An 80cm 5-in-1 reflector is a good option, as it offers a choice of zip-on surfaces for different creative effects.



OFF-CAMERA FLASH

A flashgun that can be used off-camera and triggered remotely is a great addition to a portrait snapper's kit bag, as you can use it to create directional light indoors or outside. A light stand with a brolly bracket will let you position the flash and give soft, window-style lighting.

2 SET UP YOUR CAMERA

Dial in the settings to style up classic portrait shots

WHEN you shoot with ambient light, you need to ensure your portraits aren't ruined by blur. This can come from camera shake or from subject movement, so your shutter speed needs to be rapid enough to get a sharp shot.

A golden rule is to use a shutter speed of at least 1/125 sec. Set your camera to Aperture Priority, then dial down the aperture setting to the available lowest f-number (f/3.5 on most kit lenses). This will help diffuse the background. Compose your shot and check your shutter speed. If it's too slow, increase the ISO setting until you get 1/125 sec.



3 KEEP IT FORMAL

Capture traditional head-and-shoulders shots that work

FORMAL portraits say, “This is what I look like.” They’re used as a form of visual identity for the subject, and are stripped of any context provided by props or background. A formal shot relies solely on the subject’s expression, and although they’re used in a ‘serious’ way, there are no rules regarding whether the sitter should be straight-faced or smiling.

Eye contact is optional too, but many go for an ‘eyes on’ approach to establish a firm connection between subject and viewer.

Amir Bajrich / Shutterstock



EXPERT PORTRAIT TIP

Formal portraits are all about the subject; backgrounds don’t need to add context or narrative. Keep it simple: a plain, unfussy backdrop like a wall or sheet is all you need.

THE SET-UP... Simple lighting

One light source is all you need for a formal portrait. Soft window lighting gives great results with gentle shadows. If the subject is lit from around 45 degrees, you’ll get a light side and a dark side to the face. A reflector in front of the subject will help shape the light.

ESB Professional / Shutterstock



EYES ON... Make the connection

Direct eye contact between the subject and the lens forms a engaging bond with the viewer that’s hard to break. When you pick your focus point, place the AF target over the closer eye of the subject.

bikeriderlondon / Shutterstock



EYES AWAY... A thoughtful moment

Allowing your subject to look away from the camera gives a formal portrait with a different feel, giving the impression that the subject is occupied with their own thoughts or actions.

Racorn / Shutterstock



GET EXPRESSIVE Keep it on-message

Serious or smiling? Coach your subject into giving expressions that best suit the purpose of your portrait. Some people are natural smilers; others will prefer a half-smile or a more serious face.



EXPERT PORTRAIT TIP

When you devise an environmental portrait, think about using a simple prop or item of clothing that quickly conveys what the subject does.

4 ENVIRONMENTAL PORTRAITS

Introduce your subject's work or hobby as part of the shot

ENVIRONMENTAL portraits are often mistakenly seen as a subject in rural or urban surroundings; in fact, they tell a story of what the person does. A writer, for example, could use a pen or a laptop as a prop, and a cyclist could appear in a studio setting with a bike over her shoulder, or straddling her bike on the road in a more obvious setting.

Think about how to pose your subject and what angle to shoot from. In our example above, we've purposely taken a low angle to make the firefighters appear dominant in the frame. There's lots of scope for creativity with environmental portraits, but the key ingredient to communicate is the job or pastime they indulge in.



Jesse Wild

Use a relevant prop

From a musician's instrument to a painter's brush, the use of a prop that's core to your subject's work or hobby is the easiest way to shoot environmental portraits. You can capture them anywhere, as it's the prop that provides the context relating to what they do.



James Paterson

Background story

If your subject operates in a particular environment, featuring this will create a connection and add weight to the portrait's purpose. When you shoot there, keep it simple, and use an aperture of around f/8 to keep some of the detail.



Claire Gillo

Capture them in action

An action shot of your subject absorbed in their job or hobby immediately establishes the context, and is a great approach for environmental portraits. Your subject will enjoy the shoot and the results too, as it shows them doing something they love.

5 GET CREATIVE WITH PORTRAITS

Introduce a narrative or concept that gives your shot a meaning beyond the subject

A USE THE WRONG LENS FOR THE RIGHT REASON

Harness the power of your optics to create a new look

WHEN we went over lens choices in Tip 1, we urged you to pick focal lengths that wouldn't produce distortion in the subject's features. But when a more unusual look is required, the only rule is that there are no rules!

A wide-angle lens close to the subject will exaggerate the parts of the face closest to the lens, and the wider your focal length, the more extreme the effect will become. This is

not a technique to use on anyone who's concerned about the size of their nose, but the results can be dramatic!

Look down on your subject from a high angle with a wide-angle lens, and you can compose striking portraits with massive eye contact. The effect isn't flattering in the traditional sense, so it's best to share your ideas with the model as you go, so they understand the effect you want to achieve.

Logoboom / Shutterstock



Ben Brain

B UNLEASH YOUR SOFTWARE SKILLS

Get busy in Photoshop for surreal or dream-like people pics

CREATIVE portraits can encompass all kinds of special treatments that show a subject in a new light. By using imaging techniques alongside your camera skills, you can bring your imagination to life. From fantasy pics to surreal images, you can place your subject in unlikely or impossible situations, combine several close-ups into a photo joiner, or even make them fly. Just let your imagination fly...

The best creative portraits rarely just happen in software, though – they're carefully thought through with a specific idea in mind. If you place a subject in a new background, take care to ensure the light sources are matched, so the shadows fall in the same direction in both shots. Also take lots of time over the cut-out process, so there's no halo or visible edge around the subject that gives the game away.

C ENHANCE THE MOOD WITH LIGHTING

Add a splash of colour to create vibrant portraits with flash gels

CREATIVITY can come from any direction when you push the boundaries of portrait images.

By using coloured gels on flashguns, for example, you can create a really slick, moody look. Using opposing colours on two flashguns, such as red/cyan or blue/yellow, will give a strong colour contrast between the two light sources, and placing them on opposite sides of the subject will create

a dramatic effect. If you have just one flashgun, use daylight to light one side of the subject, but set your camera's white balance to the Indoor setting. This will turn your shot blue. If you now use a red or orange gel over a flashgun and place it on the opposite side of the subject, you'll create a two-colour effect with minimal kit. Any translucent material will work: coloured plastic or even sweet wrappers can be used.



6 LIFESTYLE PORTRAITS

Shoot idealised people pics that convey the joy of life

If a lifestyle portrait could speak, it would say, “This is how I really am.”

Most lifestyle shots are carefully managed to give the impression of a natural moment when the subject has been caught off-guard, celebrating the joy of life. Most shots opt for an eyes-off approach: this gives the feel of a

private moment, and suggests the subject isn’t conscious of the camera.

Lifestyle shots hail from fashion photography, and are used in catalogues to display clothing and products in their ideal environment. They sell an idealised look tied in to a style of living, and are so effective that

they have become an important part of the portrait photographer’s arsenal. In essence, they offer the subject the chance to be a fashion model; applied to group shots, they reveal intimate portraits of the people interacting with one another rather than posing for the camera.



Ben Brain

A Pick the right location

RURAL SETTINGS, such as woodland, coastal scenes or urdan views can create a great backdrop for lifestyle shots, and researching suitable spots in your local area will soon yield a good supply.

Take -snaps of locations you like, and note where they are and the time of day they work best. Put these in a ‘Lifestyle Locations’ folder on your hard drive. This will make it easy to take your models there for a shoot when the conditions are right.

It’s a good idea to take an off-camera flashgun and a light stand for lifestyle shots: then you can add a burst of directional lighting if sunlight is lacking or in the wrong place at the location. A reflector can also come in handy for



Ben Brain

B Introduce some movement

CAPTURING a subject on the move enhances the ‘caught in the moment’ feel of a lifestyle shot. With a moving subject, the biggest challenge is getting a sharp result, and the best focusing mode to use is Continuous AF (AI Servo on Canon SLRs).

With this mode enabled, place the AF target point over the face of the subject, and keep it there, tracking them as they move. Track the subject for around a second with the shutter button half-pressed, then fire off a burst of shots, ensuring you keep the AF target in position. Your shutter speed needs to be sufficiently fast to freeze the action, so use at least 1/250 sec. On bright days, this is easy to achieve; in dimmer conditions, you may need to increase ISO.



Get authentic lifestyle shots

GENUINE lifestyle portraits are natural documentary-style shots. Rather than staging pictures and posing your subject, you simply visit your chosen location, and shoot candidly, looking to capture great moments. This editorial style is a great way to capture true portraits of family or friends without a contrived feel.

Ben Brain



HOW TO SHOOT A HEADSHOT

Pro Chris Bailey guides you through the key steps

EXPERT PORTRAIT TIP

It's always a good idea to talk to your subject while you shoot and build a rapport – boost your subject's confidence by complimenting them.



2 GREY CARD

Set the White Balance

THIS little pop-up gadget is a Lastolite Ezybalance Grey Card.

It ensures I get the correct white balance and neutral skin tones in my headshot, even in mixed lighting. Using this card or a similar one, the white balance can easily be set in-camera or back at home with one click in Lightroom.



3 F-STOP!

Consider the aperture

WHICH f-number to use? When it comes to headshots, I am normally pretty close to my subject, so the depth of field can be razor-thin. My 85mm lens can be shot at f/1.8, but using it wide-open so close to my subject could lead to all sorts of problems. To get both of Tom's eyes in focus, I shot this image at f/4; anything lower could have led to Tom's further eye to be out of focus.

EVER wanted to know how to create professional headshots? Here, I will talk you through several lighting techniques, camera tips and location ideas for you to try. First, let me introduce you to my subject, Tom.

Although Tom has some experience in front of a camera, he is not a professional model. As a starting point, I would encourage you to photograph your partners, friends and family to build up your confidence and experiment with different poses and lighting ideas. It might sometimes seem easier to hire a professional model, but you can get some fantastic shots out of 'everyday' people - in fact, they're my favourites to shoot.

Preparing for your shoot

When I first contacted Tom about his headshot session, I made sure he bought along with him a few different

sets of clothes of a neutral colour, and specifically requested they didn't feature any large logos or distracting patterns. Branding or logos can be very distracting in a headshot and draw the attention away from the face. Similarly, when you shoot someone with glasses, ask whether they own a pair with non-reflective lenses they can bring to the shoot, to avoid capturing distracting reflections in their glasses.

As for hair and make-up, lots of us are not lucky enough to have our own stylists on hand, so I normally ask my clients to do their own, but to keep it simple and wear what they would normally. It's also a good idea to ask your client or subject to bring along a hairbrush or alternatively keep a hairbrush in your camera bag, as you never know when it might come in handy.

1 WHAT'S IN MY BAG?

The essentials....

For this shoot I brought along my workhorse: a Canon 5D Mark II paired with my Canon 85mm 1.8 USM lens, a 75cm Lastolite Trigrip Silver/White reflector, a Lastolite Ezybalance Grey Card and a small battery-powered LED light with a basic light stand. On a quiet and overcast Sunday morning, I decided to take Tom out on location in my home town of Frome, Somerset, to demonstrate some of my headshot techniques.





Background

Consider the background and keep it simple for a clean look.

Look interested

Get your subject to lean slightly towards you. Leaning away from the camera can make your subject look apathetic.

Closer eye

Always focus on the eye that's closer to your camera.

Clothing

Consider what your model is wearing and keep the colours neutral.

4 TOP TIPS

From clothing to background...

CHRIS BAILEY'S GUIDE TO LIGHTING A HEADSHOT

You don't need loads of fancy kit and an expensive studio to get professional results, as Chris demonstrates here...



1 DAYLIGHT

Shoot on an overcast day for optimum results

I SHOT these images of Tom on an overcast, cloudy day to demonstrate how diffuse the light can be. An overcast day will produce a more even quality of light, which makes for a more flattering headshot.

Although the sun is behind the clouds and the light looks fairly even, there will always be a better angle to place your subject. Practise by placing your hand out in front of you and looking at your palm. Move around in a circle and study the light on your hand; you will instantly spot where there is no trace of a shadow on your palm. This is the best place to position your subject for the most flattering light.

Here, I placed Tom under a walkway, giving me more control over the light.



2 DAYLIGHT AND REFLECTOR

Use a reflector to bounce some light into the shadows

THIS image is the same as the first, except I have added a 75cm reflector just below Tom's chin. This technique can demonstrate the 'two-light look' outside, with the sun as the primary light source and the reflector as a fill light. A reflector will soften any shadows under the eyes, nose and chin and give the illusion that the eyes are bigger, due to the second catch light in the bottom of his pupils.

Using a reflector is a cheap and great way to really 'open up' your subject's eyes and hit them with a more even light. On a sunny day, it can also come in handy as a diffuser, as harsh sunlight can create unwanted shadows.



3 DAYLIGHT, REFLECTOR AND LED

Add another light source

BY adding a small amount of light from a battery-powered LED light into the mix, I can easily add an accent or kicker light to sculpt Tom's face that little bit further. Adding this accent light will highlight the cheekbone and give the image a more three-dimensional look, setting him apart from the background.

The same technique can be applied as a rim or hair light by moving the LED light directly behind your subject, pointing down on the back of the head and shoulders. An LED torch or an off-camera flashgun would give the same results, and neither option is expensive to pick up.

FOUR DIFFERENT TYPES OF HEADSHOT



CORPORATE

This image was lit inside with a just a 21in beauty dish, positioned just left of Tom's face. I wanted the light to wrap around his face, starting from highlight to shadow, to create a powerful look.



All images: Chris Bailey

ACTOR

This image was shot in front of a simple backdrop with a mixture of daylight, a flashgun and an LED light. I wanted to create lots of atmosphere in this image with some movie-style lighting.



BEAUTY

This image was shot with a 21in beauty dish, which creates a clean, even light source, and a reflector to fill in any shadows under the eyes, nose and chin. This lighting can be referred to as 'clamshell'.



FASHION/EDITORIAL HEADSHOT

This image was also shot inside with a 21in beauty dish positioned around three feet above Tom's face. The resulting shadows above the eyes and under the chin sculpt the face.

IMAGE ANALYSIS

WHY SHOTS WORK

KITE TAKE OFF

NAME: Jamie Hall

LOCATION: Suffolk, UK

KIT: Canon EOS-1D X with EF 17-40mm f/4L USM lens at 24mm, Canon LC-5 remote and a bean bag

EXPOSURE: 1/6,400 sec at f/6.3, ISO 2,000

WEBSITE: www.jamiehallphotography.co.uk



Wide horizons

Bird portraits are usually shot with a telephoto lens, but the wide-angled composition here makes the shot dynamic and unusual. The 24mm focal length was carefully chosen. "I felt any wider would render any birds tiny in the frame," says Jamie.



Stopping time

By choosing a shutter speed of 1/6,400 sec, Jamie effectively froze the red kite's movement. "I set ISO 2,000 which gave me a shutter speed of 1/6,400 at f/6.3," he says. "I felt I had enough depth of field and a fast enough shutter speed to freeze any action."





Careful planning

Jamie's careful planning and patience are what generated this frame-filling and pin-sharp capture. He placed a small worm about 12 inches in front of the camera and pre-focussed on this spot. "To get the bird so centrally and so symmetrically framed was way more than I'd hoped for," he says.

Jamie Hall

SEDUCTIVE COLOUR

NAME:	Joni Niemelä
LOCATION:	Finland
KIT:	Pentax K-3 with reverse-attached SMC Pentax-M 50mm f/1.4 prime lens on a set of extension tubes
EXPOSURE:	1/50 sec at f/5.6, ISO 100
WEBSITE:	www.joniniemela.com



Room to breathe

The composition of the frame is strong and uses surrounding space to isolate the sundew plant. "The subject is isolated, effectively using the high-magnification lens set-up that creates this soft background," says Joni. "It shows the opening and opened glands, and the hairy stem of the subject clearly. There's a red line going back and forth between the upper-left top and the bottom-right of the leaf which leads the eye through."

Focus-stacked

To open the aperture to f/5.6 at such a close proximity and keep the entire subject sharp, Joni took 26 exposures at different focus points and stacked them together at the editing stage to get a wider depth of field. To do this, Joni mounted his camera onto a tripod.



Colour palette

The colours in this image are seductive and draw the viewer in. "There was a strong vision in post-processing to create vivid purples and blues for the image," says Joni. "This is characteristic of *Otherworldly Blues*, the series that this image is part of."



DigitalCamera PHOTO ACTIVE

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SHOOTOUT

58 Editor Ben Brain and two readers head to the Brecon Beacons



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Andrew James has been working hard all month to answer your photo-related questions and rate your images



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ASSIGNMENT

The winners of our recent natural form contest are revealed, and we launch an abandoned building and spaces contest



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Digital Camera SHOOTOUT!

We challenge two Digital Camera readers to take part in our latest photo assignment

WATERFALLS

This issue, **Ben Brain** met two readers in the Brecon Beacons in the middle of a storm. The plan? To photograph the picturesque series of tumbling waterfalls at Blaen-y-Glyn...

READER 1



Tom
Riches

CAMERA: Nikon D810

LOCATION: Torquay, Devon

UNDER the brand of Riches Digital Photography, Tom provides a service shooting events – from weddings and christenings to charity functions and motorsports weekends – in Torquay and the surrounding area . When

he's not earning money from behind a camera, you can find him... still behind a camera, pursuing his passion for landscapes and astro-photography. Tom jumped at the chance to spend some quality time with a couple of like-minded photographers.
www.rdphotos.co.uk

READER 2



Alex
Jacobet

CAMERA: Nikon D600

LOCATION: London

CURRENTLY an audio-visual engineer for Sotheby's London, Alex started getting serious about photography in 2013 when, during his previous career working on a cruise ship, he was scheduled to travel around South America. He thought that the experience

should be well-documented as he didn't think he'd be presented with another opportunity like that.

He wishes he'd known as much about the art of photography then as he does now, but he's a fast learner...

www.500px.com/alexmirceaiacobet

YOU COULD TAKE PART IN OUR NEXT READER SHOOTOUT

Join us and learn new skills! Email digitalcamera@futurenet.com (subject line: Shootout). Please include your address and phone number



CHALLENGE 1

Shoot a portrait of one of the waterfalls



Kit Nikon D810 with 24-70mm f/2.8 lens at 24mm Exposure 2 sec at f/22, ISO 31



Tom

BLAEN-Y-GLYN is regarded as one of the best places to see waterfalls in the Brecon Beacons. We met up at the Upper Blaen-y-Glyn car park and headed downstream, working both individually and in a group. (Top tip: if you're planning a shoot in this area, start at the Lower Blaen-y-Glyn car

park – the walk back with heavy kit at the end of the day is much easier...)

Tom managed to get his camera into some extreme positions, whether it was locking it on a tripod wedged between rocks in the streams, or by simply supporting his Nikon hand-held on the rocks themselves. With this shot, he was unhappy about the position of the distracting tree, but there was little that could be done, short of some heavy-duty cloning work later. In any other season, with the trees in full leaf, it would have been more distracting.

Expert opinion

- The curves created through the foreground and by the hills in the background are lovely.
- The threads of white water in the foreground add energy.
- It's a shame that the whites in the waterfall have blown – blending a range of exposures would have fixed this.

Take your time

Develop a gear-checking routine to ensure you don't return from a shoot with technically imperfect shots. For example, get into the habit of tightening the locks on the legs and head of your tripod once you've framed a shot. If you're using filters, get accustomed to checking them for water drops before you trip the shutter. Small checks like these can make all the difference.





Kit Nikon D600 with 24-70mm f/2.8 lens at 24mm Exposure 25 sec at f/8, ISO 200



Alex

THE cross-country return trip from London to South Wales illustrates the commitment that Alex puts into his photography. Our Shootout coincided with the day that Storm Doris began battering the UK, so it was an edge-of-the-seat drive in the dark for him as well.

Needless to say, Alex got straight to work once we'd arrived, relying on some tried-and-tested approaches for finding a composition. "I consider the best approach for shooting waterfalls is to position yourself so that the stream of water runs along one of the frame's diagonals," he says. "This helps to add depth and dynamism, especially if you can get the camera as close to the water as possible."

Using Zomei Square Z-Pro ND filters on his lens enabled Alex to achieve a slow exposure on a mid-range aperture.

Expert opinion

- Alex has found a great vantage point, with white lines pulling the eye through the frame.
- Arguably, the branch in front of the waterfall is distracting, but it's unavoidable from here.
- Alex's shot has some processing-induced artefacts, although they're not visible at full size.

Dress to impress

Shooting near waterfalls brings its own set of requirements when it comes to kit. Waterproof outerwear is a no-brainer, but make sure you can access dry pockets easily: you'll want to keep plenty of microfibre cloths on you, as it's a constant battle to keep waterfall spray off your lens and filters in windy conditions. A tripod with legs that can be submerged can help you get dramatic low-angle shots – and non-slippery boots are essential for negotiating exposed rocks.



CHALLENGE 2

Bring out the speed of the streams



Kit Nikon D810 with 24-70mm f/2.8 lens at 24mm Exposure 2 sec at f/22, ISO 50



Tom

TOM showed a methodical approach to capturing creative shots like the one he's presented here. His remote release was always to hand and, once his camera was in the right position, he took the necessary steps to get sharp results – hands free of the camera, with the mirror locked up – and carefully

analysing the image on the back of the camera each time. Getting sharp shots can be challenging in these situations: slimy rocks and mud don't make for the surest footings for a tripod.

Motion-blur studies like this work well when there are some stationary details to add contrast; the sharper these are, the more pronounced the effect. Tom's choice of standard zoom was a good one, as it gave him plenty of framing flexibility without having to change lenses and risk exposing the sensor to storm-driven dust and debris.

Expert opinion

- The large foreground expanse is kept interesting by the textures and patterns in the water.
- It would be interesting to see this in black and white, as colour isn't the big draw here.
- We might have been tempted to try an aperture of f/16, to reduce the diffraction effects.

Find a fresh angle

When presented with a feast of fast-flowing water cutting its way through a striking landscape, it's easy to be lulled into focusing on the classic views – especially when time is tight. But, with the 'safe' shots in the bag, set aside some time to focus on finding a way to show the familiar in a fresh way. Ditch the tripod – it'll only root you to the spot – and look for a new angle. Use a long lens, move the camera while using a slow shutter speed, experiment with multiple exposures and more...





Kit Nikon D600 with 24-70mm f/2.8 lens at 27mm Exposure 13 sec at f/22, ISO 50



Alex

THIS was the final waterfall of the day – and it's rather an attractive one, with a well-defined curtain of water and a lush woodland setting.

Light levels were lower here, which made it easier to achieve slow shutter speeds and helped to reduce the level of contrast.

Overcast days are great for this type of photography: the sky acts like a big diffuser, making the difference in exposure between dark areas and brighter ones less extreme. But on this day the sun was in and (occasionally) out, making it more challenging.

Alex considered the lighting to be less than optimal: "In these cases I tend to shoot the scene at various exposures and combine them later," he reveals. "On this day I had to resort to creating an HDR image, although I made every effort to avoid overcooking it."

Expert opinion

- There's a lovely flow to this shot, and Alex has picked out a great spot to shoot from.
- The fresh greens create an inviting image.
- Up close, it looks a little 'digital' in some areas, but at this size it works.

NEXT MONTH

Photographing the coastline of Cornwall

Be ready for anything!

However much you plan, things can go wrong. Alex up-ended on wet rocks, sending his camera flying and shattering one of his Big Stoppers. (He had back-ups.) Meanwhile, Tom locked his keys in the boot of his car, although smashing the rear-quarter window and using some of his work tools to hook the keys proved fruitful!





ANDREW JAMES

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PHOTO ANSWERS

Your tricky photography questions answered!

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Backlit issues

Q I was out with my camera and spotted some beautiful backlit plants, but found the exposures tricky. What was I doing wrong?

Grant Small

A IF something is backlit, the light is coming directly into the camera – so that means the exposure is going to be harder than normal to figure out. If you leave the camera to work it out for itself, the chances are your images will be wrongly exposed. Depending on how strong the light is, its angle and your position, this can either be under- or overexposed. A bit of either is fine for creative reasons, but you want to control the final look of the backlit scene by using exposure compensation.

Typically, I find dialling in some positive exposure compensation is the way to go. In these situations, I am a big fan of using Live View (even though it's sometimes hard to see the screen) and using exposure simulation to review the effect you are getting. It's even better if you can display the histogram at the same time so you can make sure that you are not completely blowing the highlights. You could also try auto exposure bracketing. Take a look at the Layman's Guide on the opposite page for more information on this technique. If you can, put the lens hood on, as this will help prevent flare and think about what is in the background of your shot.

As you are looking for rim lighting around the plant, you want to avoid a lighter background and see if you can find a position against a darker background. The background doesn't need to be black, just a shade or two darker than the lit edges on the subject. If there is a lot of light bouncing around, focusing can also be hard, so often I'll switch the camera to manual focus to avoid the lens hunting.

RIGHT: Control backlit scenes with exposure compensation.





Exposure -1



Normal Exposure



Exposure +1

Bracketing

An easy way to make sure you get the right exposure

What is bracketing?

Bracketing is a simple, methodical technique where you take several different photographs of the same scene; each is exposed slightly differently – both darker and lighter than the 'middle' exposure determined by the camera.

Why would I want to do this?

The scene you are photographing may have a range of tones from dark to light in it. By bracketing your exposures, you can find the

best possible exposure for the scene. In one sense, you are hedging your bets that one exposure you shoot will be right. You can also bracket exposures with a view to merging them together in post-production, so you can create a high-dynamic-range (HDR) image.

Okay, so how do I do it?

Compose your image and set the exposure as determined by the camera. When you have taken the first image, dial in the amount of exposure compensation you want either side of the original exposure. For example, you could shoot the second exposure at -1 and the third at +1. You will now have three exposures to choose from. If you intend to merge the shots as an HDR image, only change the shutter speed and not the aperture.

Sounds slow, is there a quicker way?

Yes, all modern cameras allow you to set an automatic bracketing sequence (AEB). In most cases you can choose the number of images that will be taken and the amount each exposure varies. If you want small exposure changes, use half or one-third stops. If you want a more obvious change, opt for a whole stop each time.

Are there subjects where bracketing is more useful?

Typically you'd use bracketing on more static subjects, like landscapes or still-life. If you want to use it for moving subjects, then use the auto exposure bracketing option instead.

LAYMAN'S
GUIDE

Fast forward

Q I am off on a big adventure soon, and am looking at lenses. Fast lenses are expensive, so do I really need them for my travels?

Karen Whiteman

A I AM not going to say that the expense of a fast lens is an absolute essential for your travels, Karen, but I wouldn't be without my 50mm f/2.8, 85mm f/2.8 and 70-200mm f/2.8. I realise this isn't exactly travelling light – but for me, the advantage of having them with me by far outweighs the hassle of carrying them around.

Out of those three, if I am stuck for space then the 85mm is sometimes left behind,

since the 70-200mm covers that focal length anyway. When I am able to be indulgent, I'll cram all of them into my bag!

They are all fast lenses, and this comes in handy in lots of situations. In low light, when I need to soak up every drop of available light, being able to shoot at f/2.8 is a bonus. But most of all, I just love the diffusion shooting at f/2.8 can give to a background. This is especially useful in urban locations when I want to capture an impression of the environment, but I need to separate the main subject from it.

Take my example image of the woman hailing a taxi in downtown Havana, shot on my 85mm lens at f/2.8. I wanted her to pop out from the background, but the distant cars and building still needed to be evocative of the place..

I'd advise taking the best lenses you can afford – and if that means you can get a fast lens, go for it. I can't see you regretting it.



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QUESTION

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Photo Answers)

Portraits in

Q I took my daughter to a walk-through aquarium recently, and used flash to photograph her with tanks in the background – but the results were terrible. Any suggestions for next time?

Laura Hart

A **YOU'RE** either going to have to try balancing your flash with the available light and avoid bouncing it off the glass, or ditch the flashguns altogether. As you are shooting in a public place I'd suggest losing the flashguns and trying to work with available light. There might not be much, so you need to think about your approach.

For starters, the ISO needs to go up – ISO 800, 1,600 or maybe even 3,200! That's almost unheard of for a lot of photographers, but as cameras improve, so does high-ISO performance – and anyway, a little bit of noise doesn't hurt. You need a shutter speed of at least 1/60 sec: even if you and your daughter are static, the fish in the tanks will be blurred because they are moving.

Get your daughter to look up into whatever available light there is. Big aquariums are often lit from above and angled down to illuminate the water. This means you will get a nice softbox effect on her face if she's looking in the right direction. Then it's just a question of waiting for a few fish to swim into the background. As they tend to swim in a repetitive manner it's not too hard to work out when or where they'll be to complete your composition.



PERFECT PORTRAITS

For more portrait tips, see page 43

Placing people

Q Have you got any advice on placing people in shots because I never know whether to include them or not?

Paul Charter

A **I THINK** having a person in the frame at a strategic point can often help to improve an image. I know that generally landscape photographers like a scene that doesn't have people in it, and I'm often no different. However, the inclusion of a figure or two in the right spot can sometimes make a big difference to the context of the photograph.

If you look in outdoor magazines, a strategically placed person in a wider scene is there to get across scale and importantly place someone in the situation, suggesting 'it could be you'. If I'm shooting in an urban setting, then I think it's even more important that some of my images contain people in them, as people are intrinsically a part of the urban environment. They don't have to dominate a frame but can be used for



scale, simply to plug some gaps in the composition and of course for context.

I'll often wait for a long time to get the right-looking person moving in the right direction – even if they are only a tiny part of the overall composition. If you look at the example shot, the man coming in from the right adds an important human element to the composition. The fact he was dressed in black meant he contrasted well with the colourful background. In other attempts to get this particular shot, I had either too many people crossing over each other or they didn't look balanced enough in the frame. It's just a matter waiting for the right figure to come along. I think you have to pursue this rather fussy approach to get a shot you are happy with.

QUICK Q&A

Red options

Q Where can I photograph red squirrels in the south of the UK?

Tony Hopewell

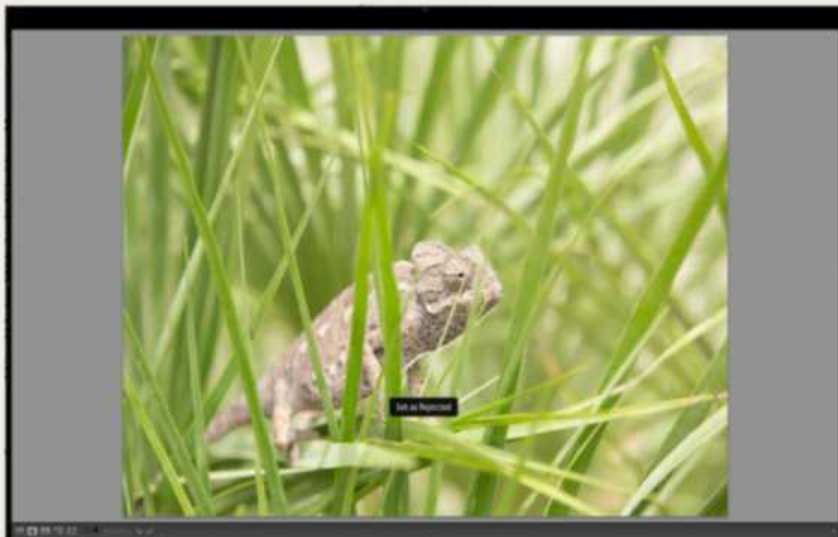


Andrew James

A **THE** native red squirrel is still present on the UK, but in small pockets where the grey squirrel hasn't managed to drive it out. The red is quite a bit smaller than the grey, and makes a lovely subject. If you are lucky you will see reds in parts of Scotland, Cumbria, County Durham, Merseyside, North Yorkshire and North Wales. As you are based in the south, I'd suggest you visit Brownsea Island in Poole Harbour, Dorset. The National Trust runs it and the reds are relatively used to people.



2010 sightings info taken from Red Squirrels Trust Wales www.redsquirrels.info



Save time deleting images in Lightroom

Instead of erasing unwanted files one by one in Lightroom, mark multiple files for deletion and remove them in one go

1 Select unwanted shots
In Lightroom's Library module, methodically go through your photos. View each image full size and compare images side-by-side if necessary. If you are 100% sure that you want to permanently delete an image, press X. At this point the image won't be deleted, but it is flagged for deletion and will become greyed out.



2 Delete the images
When you are ready to delete all the flagged images, go to Photo > Delete Rejected Photos. This pulls up a dialog box that shows how many images you have selected for deletion. You can now permanently delete them or remove them from Lightroom. We are going to permanently delete them so click Delete from Disk.



3 Be careful...
Depending on your set-up, you may get a second dialog box that says the images are stored on a disk that does not support Trash. If so, tick permanently Delete Files again and they will be instantly removed from Lightroom and the location they are stored. This can't be undone, so only do this if you are very sure.



QUICK Q&A

Converting my Tamron

Q I am looking for a 2x teleconverter to extend the reach of my Tamron 70-300mm f/4-5.6 lens. Would I get acceptable results?
Andrew Yabsley

A I'M not sure whether you have the cheaper version or the slightly more expensive VC (vibration compensation) version of the Tamron – but either way, they won't work well with a 2x converter. You'll be losing approximately 2.5 stops with the converter on, so it's highly unlikely the results will be good.

When you are able to upgrade, I'd suggest that you buy a faster telephoto lens that will allow you to use a 2x converter with less impact on quality.



Teleconverters are useful, but they don't suit every lens on the market – it's better to find a fast lens first.

ASK US A QUESTION
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STYLE AND SUBSTANCE

Ambassador Martina Govindraj shares how a change of camera restored her enthusiasm for photography

NAME:	Martina Govindraj
LOCATION:	London, United Kingdom
SUBJECT:	Architecture, urban and underground
EQUIPMENT:	Olympus OM-D E-M1 Mark II, 12-40mm f/2.8 PRO lens
WEBSITE:	www.yeszebra.com , www.olympus.co.uk



ARCHITECTURE, urban and underground pro Martina Govindraj has an uncomplicated approach to imagery.

"I favour clean lines, empty spaces and simplicity. Real life is hectic enough, which is why I look to produce images that aren't busy," she says. Martina is a self-taught photographer, but has always been drawn to visually pleasing design, from furniture to tall buildings. "I usually have an idea of an area or place that I want to explore, then hand over navigation and let my intuition lead the way. I try to capture moments in time that can't be replicated."

Martina started shooting when she was 16, but rediscovered her passion in 2015 when she switched to Olympus' mirrorless system. "I used to have a hefty DSLR which not only weighed me down, but also slowed me down. I was fed up and wanted to do something with a smaller, lighter camera. The E-M10 Mark II ticked all the boxes I required for travel photography – reliable, compact and enjoyable to use."

Martina's Instagram @YesZebra is growing rapidly, and the camera's extra features helped here too. "The wireless connection with my phone made it a perfect companion when I wanted to edit or post a photo to my Instagram."

As a lover of simplicity and stunning design, she found the new camera liberating. "I was thrilled to discover that not only was my new Olympus an object of beauty, but it was also portable, lightweight and discreet."

Restored enthusiasm

Since changing her kit, Martina hasn't looked back. She's excited to add the latest Olympus E-M1 Mark II to her kitbag. "I don't think you can fully appreciate how impressive the continuous autofocus and burst shooting features are until you've got your hands on the camera and seen for yourself. It's simply breathtaking, and you can tell that a lot of thought has gone into the design."

She loves working with the 12-40mm M.ZUIKO ED f/2.8 PRO lens. "The continuous f/2.8 aperture and compact build make it a super lens to shoot with, regardless of distance and lighting conditions. It's versatile and well-balanced, and produces superb image quality."

Beauty of simplicity

Martina's images are superb, graphic and understated. "I allow shots to compose themselves, sometimes waiting for up to an hour for the right person in the right-coloured coat to

walk down the street. I don't think about avoiding clichés, but stay true to my own vision for a shot. Once you start on your journey to be a photographer, you see the world and everything around you in a different way."

Martina doesn't consciously look for creative inspiration, but knows how important it is to have the right mindset and the right tools. "For me, the trick was to give myself some time to see and appreciate what most people consider to be the everyday mundane. That enabled me to develop my photography. There is nothing more deflating than wanting to go out shooting, but feeling weighed down and held back by your kit. I never thought that I'd jump camera brands, but I can't wait to take the E-M1 Mark II on my next trip."





Left: Martina makes full use of Olympus' M.ZUIKO PRO lenses. Her most-used shooting partner is the 12-40mm f/2.8, for its compact build and quality.

Top: 5-Axis Image Stabilisation means the camera is a perfect option for shooting in low-light urban areas, without the need for a bulky tripod.

Above: The OMD E-M1 Mark II is lightweight, yet robust and weatherproof. Its long battery life is perfect when Martina is out travelling.

WHY I SWITCHED TO THE OLYMPUS OM-D E-M1 Mark II

1 DIRECT DIALS
"Being able to adjust the aperture and shutter speed on the tactile large dials is great, and the grip just feels very comfortable in my hand."

2 KEEP IT STEADY
"The image stabilisation is impressive in low light, which is a game-changer for me going forward, as it gives me the freedom to shoot hand-held in urban spaces without a tripod."

3 CHANGE THE ANGLE
"I love the fully articulated touchscreen, as it enables me to get shots from high or low perspectives, which again gives me more freedom to shoot in my own style."

4 SHOOT FOR LONGER
"The bigger battery and the two-hour charge time are great additions, along with the dual SD slots and the options related to them."





ASSIGNMENT

The winners of our '*natural form*' contest – and details of this month's theme...

EVERY ISSUE, we challenge you to take the most creative and arresting shot around a theme, and share it at the online community at Photocrowd (www.photocrowd.com). Here, you'll be able to browse the entries and vote on your favourites. The best entries receive a critique from our judging panel – and one winner receives a special prize!

Your mission in issue 187 was to study the form of nature. We had a range of entries, from wide-angle landscapes to creative close-ups. In the end, our top three winners each caught our attention for different reasons, and used the natural environment to create spectacular results...

This month's photo assignment is abandoned buildings and spaces!
You can find all the details over the page...



1 SIRSENDU GAYEN

This image goes to show the beauty and power nature has, and how the natural process produces perfectly formed organic shapes and patterns. We love the subtle colour palette that ranges from deep blues to warm orange tones, and the final execution of the result has been done to a high standard. The fact that you're unsure exactly what you're looking at draws you further into the image and enables you to enjoy what Mother Nature has designed. Great work that captures our natural theme perfectly.
Kit Nikon D80 with 16mm lens **Exposure** 1/320 sec at f/9, ISO 125



2



3

2 MARCO TAGLIARINO

Well done to Marco, who has managed to capture this atmospheric wide-angle shot of iconic baobab trees. Nothing says natural form in trees more than these iconic plants! We think the low-angle composition and the use of the man-made road helps lead the eye through the scene, creating an intriguing result.
Kit Canon EOS 6D with 16-35mm lens **Exposure** 30 sec at f/11, ISO 400

3 JO STEPHEN

This beautiful and delicate image reveals the flight pattern of a bird. Jo has done an excellent job with the technical execution of this shot. She has managed to track the birds in flight, showing the wing formation while also blurring the background to create an abstract result. The subtle colour tones and the plain background mean the viewer is not distracted by anything other than the formation of the flight!
No shooting details

CROWD VOTE

SAMMY M

Chosen by the voting community at Photocrowd.
Kit Olympus E-420 **Exposure** 1/50 sec at f/3.5, ISO 100



TURN OVER!

This month's assignment is abandoned buildings and spaces

NEW ASSIGNMENT

EXPLORE UNUSED SPACES

Enter our abandoned buildings and spaces photography contest to be in with a chance of winning a brilliant Lowepro backpack

There's something enticing about rundown buildings and abandoned spaces that simply begs them to be photographed! This challenge requires some forward planning and scouting in order to get the best results possible.

Although it's tempting to follow in the footsteps of others and capture what's already been found, imagine the reward in finding your own abandoned space! It could be as simple as heading to the 'never used' shed and documenting the deterioration of time. For this challenge a wide-angle lens could come in handy; a tripod is also a must due to the low-light conditions of most of

these spaces. We're looking forward to seeing what you come up with!

Make sure you have the property owner's permission, and don't take risks in derelict buildings.

**ENTER
TODAY!**

www.photocrowd.com/a/current

Closing date:
20th April 2017

How to enter

Visit www.photocrowd.com/a/current and look for the abandoned buildings and spaces contest. (You need to register, but it's free to join.)

Click Submit An Image to upload your entry. The closing date is 20th April 2017. The creator of the best photo in the judges' opinion will receive a brand-new Lowepro Photo Hatchback BP 250 AW II backpack. The Crowd Vote winner also receives a special prize. The winning images will appear in issue 191.



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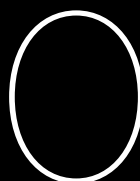
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Lava river; Hawaii
Volcanoes National
Park, Hawaii.



FRANS LANTING

*He's one of the world's most celebrated natural history photographers – but, as **Keith Wilson** discovers, there is more to come from this master visionary*



ONE of the world's most revered nature and wildlife photographers, Frans Lanting has no formal training

in this field. Like his equally famous contemporary, Sebastião Salgado, Lanting is an economist, having completed a master's degree before moving to the United States to study environmental planning. But soon after completing his Atlantic crossing, Lanting began photographing the natural world in earnest, and he never turned back...

When you were younger, what part did photography play in your life?

I was surrounded by nature of a sort when I was growing up in a small town in The Netherlands. It wasn't nature on a grandiose scale like you find in the United States or elsewhere, of course, but I've always been drawn to the natural world.

Picking up a camera was a natural extension, but I didn't do that until my early 20s and I had no clue what I was doing. It took me a while to figure out that I was actually better off being a bit more methodical about it. >



Did you have any mentor in those early days – someone you looked up to or who helped you in some way?

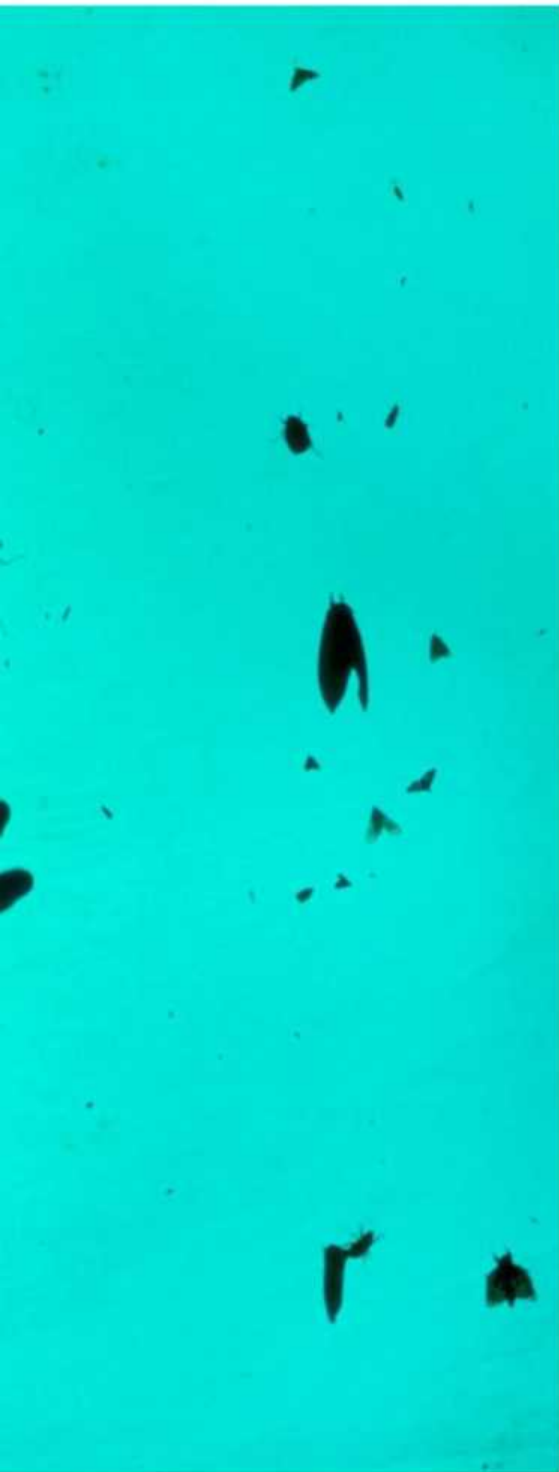
There were a couple of photographers in The Netherlands who were active and quite accomplished, so I sought them out and they took me under their wing. Out of that came my first book, *Visions of the Dutch Landscape*.

But I pretty much did things on my own because there weren't a lot of resources back then. It's unthinkable for photographers today to imagine

a situation where you can't go to the internet to find every answer to every question; where you're not surrounded by millions of images that can inspire you or baffle you. Photography was more of a closed universe back then.

Who were the photographers that inspired you early in your career?

In the UK there was Eric Hosking, who was a real pioneer in bird photography. Most of his portraits look conventional today, but he was ingenious. He brought



a deep understanding of birds to his craft, and that really appealed to me.

There was a whole generation of *National Geographic* photographers who were doing things I thought were unbelievable. Ernst Haas, who wasn't a natural history photographer, published *The Creation*, which became a big influence on how I looked at the world and how I tried to capture it.

Speaking of *National Geographic*, how did your relationship begin?



FRANS LANTING

Nature and wildlife photographer

FRANS Lanting gained worldwide recognition for his *National Geographic* work.

BORN and raised in The Netherlands, Frans Lanting moved to the US in the 1970s.

HIS books include *Jungles*, *Eye to Eye*, *Okavango: Africa's Last Eden*, *Penguin* and *Living Planet*.



Like every photographer, I had fantasies of contributing images to the Society. I moved to the United States in the late 1970s, then started contributing to natural history publications, and I started doing assignment work for bigger magazines like *Life* and *Geo*.

In those days the magazine world was much richer, and there were more possibilities to interact with editors and art directors than there are today. I guess it was a matter of publishing and getting noticed, and once you start doing things that are a little different, editors and art directors start paying attention to your name and to what you do.

You are also known for your books, especially *Jungles* and *Okavango*.

I like to come up with ideas that can help to tell a story. For magazines, this needs to be specific, and it requires an editorial point of view. But sometimes these ideas can grow into something a little bigger or more conceptual. That typically leads to something like a book or an exhibition, or an event. Depending on the scope, it can

Above

Frans made a month-long trip to Antarctica for his 2011 book *Penguin*.

Opposite page, top

Scientist Piotr Naskrecki collects katydids at night in the rainforest; La Selva, Costa Rica.

Opposite page, bottom

Asiatic cheetah caught by camera trap; Naybandan Wildlife Reserve, Iran.



Above — Scarlet macaw in flight; Tambopata National Reserve, Peru.

Right — Antandroy tribesman with fossilised elephant bird egg; Southern Madagascar.

take a couple of months or a couple of years to pull together.

Jungles was a good example of that. It was a look at tropical forests that had been covered many times by other photographers, writers and philosophers, but typically quite literally. We decided instead to look at these forests conceptually, to portray the things that happen in jungles rather than ordering images by location. Whether the images are derived from the Congo or Indonesia, they help to create a mosaic..

Your multimedia show *Life* was a more ambitious undertaking. How does a production like that come to mind, and how long does it take to deliver?

In the case of *Life*, the ambitions grew into an attempt to look for the roots of diversity back in time. Of course, I'm not the first person to



QUICKFIRE Q&A

What has been your proudest or most memorable moment as a photographer?

Oh boy! I don't look at it as a top 10, so I have a hard time answering that question.

OK – what then has been the most embarrassing?

Oh, there's been quite a few of those as well. I've made quite a lot of mistakes. It's hard to think of a particular case but I can generalise it to draw attention to how difficult it was in the era of film capture to do things right, especially when you work on location with no way to see whether you're actually in the zone. Since I've experimented a lot with more creative techniques instead of coming up with more conventional portrayals, that really means that your success rate goes way, way down.



dream about what the Earth looked like when it was much younger. One of my enduring sources of inspiration is David Attenborough. One of his seminal projects, *Life on Earth*, was quite similar. He took a parallel approach to see what he could find that got him a bit closer as a witness to all these phenomenal things that helped shape the Earth as it is today.

We took it in a somewhat different direction. I wanted to make this a lyrical portrayal. Of course, when you

start talking about the evolution of a living planet, it becomes a science story. But as soon as you start reciting science a lot of people's eyes tend to glaze over, so I wanted to make the results more experiential, to lure people onto a journey of discovery, based on a set of images that were stepping stones from the present to the beginnings of time.

If you take that approach you have to be very careful where these stepping stones are, because each of them needs to lead logically to the

Above — Orangutan juvenile swinging; Sepilok Reserve, Sabah, Borneo.



next one. It requires as many decisions about what you do not feature as about what you show. In that sense you compare it to the work of a sculptor: you have to constantly say 'no, no, no' until you end up with the things that are really worth showing and sharing.

Was that the most fearsome assignment you've undertaken?

Well, fearsome in the sense that if you commit yourself to put something on live in front of 2,000 people in a concert hall, there's a lot of things that can go wrong. It was a really interesting experience to become a collaborator in a creative team that includes a composer, a symphonic conductor, an orchestra of 60 people, a visual choreographer and a projection coordinator, so you have to understand a lot more about how other people view your project. It can't just be, 'I want to make my photographs look good': that's just a small part of the equation.

What was your first digital SLR?

I've used Nikon DSLRs for many years, but I also use mirrorless



Frans Lanting is speaking at The Photography Show on 19th and 20th March 2017. For more details, visit www.photographyshow.com



Frans Lanting's latest book *Into Africa* will be published in autumn this year. For more of his work, visit www.lanting.com

cameras because I think that's one of the more interesting branches of the digital photography tree. I also use my smartphone a lot. In fact, I'm working on a project now that combines images made with my phone with music.

But I'm also going back to the beginnings of photography – I was in Antarctica recently for a voyage that was an attempt to get closer to the work of Frank Hurley, Shackleton's expedition photographer. I had the same type of camera that he used, an early-model Kodak folding camera with roll film.

If you had your time over again, is there anything you would have done differently?

I would like to revisit all the places I have photographed over the years and to do it better with cameras that can do so much more.

To other photographers, I would say take risks. If you follow the paths that have been trodden by many other photographers you end up doing the same thing that they did. That is no way to distinguish yourself and to cultivate a personal style.

Above — Flower Hat jelly; Monterey Bay Aquarium, California.

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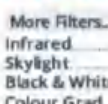
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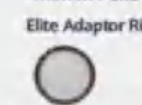
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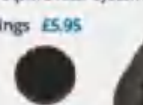
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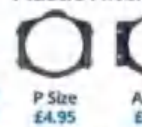
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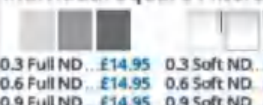
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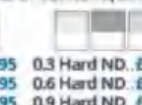
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Canon EOS	Pentax K	£24.95	Micro 4/3	Olympus OM	£29.95
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Canon EOS	Leica M	£24.95	Micro 4/3	Sony Alpha	£34.95
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Canon EOS-M	Leica M	£29.95	Micro 4/3	Con/Yash	£29.95
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Nikon 1	Canon EOS	£44.95	Sony NEX	Pentax K	£29.95
Nikon 1	Pentax K	£29.95	Sony NEX	Leica M	£29.95
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Nikon 1	Con/Yash	£23.95	Sony NEX	M42	£23.95
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THE PERIMETER



QUINTIN LAKE

The weather is against Quintin in the latest stage of his epic journey around the coastline of Britain

THERE'S a great sense of anticipation as I approach the cathedral city of St David's via the clifftop path at night. It's located in a hollow, meaning it's completely obscured until the last minute, spire and all – a ruse to deter the Vikings. There's not a soul in the cathedral grounds next day; the only motion is a line of geese above a distant horizon. The most extraordinary features are the carved oak ceiling and the sense of ancient pilgrimage.

I reach Pen Dal-aderyn, the westernmost point of mainland Wales, with Ramsey Island beyond. There's almost nobody living on the edge here. The built-up parts are a tiny fraction: very often I meet nobody all day. Those out are mostly dog walkers close to car parks. I want the images to be about the architecture of the landscape, so the lack of people reflects what I'm experiencing.

On the brink

Strumble Head lighthouse pulses in the darkness ahead and guides me through the complex terrain like the north star. The concave ground feels disconcertingly



Gann Beach, Pembrokeshire: 3,000km have been walked since the start in St Paul's, London.

like I'm on the brink of a cliff under the torch light. I take it very slowly, reassured by using trekking poles.

It's the coldest night so far. After a 5am start from the tent to make the 34km distance today, I jog on the spot while brushing my teeth to keep warm. The sky is swept with light from the lighthouse, even though it's not visible behind the black headland. As I walk closer, the beam dips in and out of view until it's close enough to illuminate the rocks around me with each flash.

Incredible texture

Gale-force winds throw me about on Pen Dinas, with rain stinging my face. I'm regularly forced to stop and lean on my poles to avoid being blown over. My waterproofs are only giving me nominal



Quintin Lake

THIS MONTH'S ROUTE

Milford Haven to Molygrove



7 days, 109 miles
Cumulative distance: 1,964 miles

protection, and I'm struggling to keep warm. The steep paths are mostly reduced to slippery mud troughs. The combination of factors makes this week the toughest of the last 3,000km.

The strong wind and rain make it almost impossible to take photographs. I try 1/2,500 sec and ISO 4,000, as it's gloomy and I'm being vigorously shaken by the wind. The wind transforms the sea to an incredible texture where the water is picked up and blown like white smoke above the flattened waves.



'Wedding', from the series *The Village*, 1991-93 © Anna Fox. Courtesy James Hyman Photography, London

ANNA FOX

Meet the documentary photographer whose work is full of keen observation, social commentary and wry humour

A NNA Fox is a leading British documentary photographer who came to the forefront in the 1980s.

Influenced by 'new colourist' photographers including Paul Graham, Paul Reas and Martin Parr, Fox produces long-term projects on specific themes. Most of these projects use the documentary style to examine aspects of contemporary society, although some consist of staged or 'constructed' images. She shoots in colour, often uses flash and sometimes combines images and text.

Born in Alton, Hampshire, in 1961, Fox completed a degree in Audio-Visual Studies at the Surrey Institute of Art & Design in 1986. She was shortlisted for the Deutsche Börse Photography

Foundation Prize in 2010 for her series *Cockroach Diary*, which documented a cockroach infestation in a shared flat.

What was her first exhibition?

Her *Work Stations* series was exhibited in 1988 at Camera Work in London, and published in a book. It was a critical look at London office life in the late 1980s.

What other subjects has Fox explored in her work?

Her varied portfolios of work have included *Afterwards*, showing party revellers in the aftermath of overnight raves; *Friendly Fire*, which explored weekend war games; and *Spitting*, studies of puppets from the satirical TV series *Spitting Image*.

Are there any recurring themes?

Village life is a perennial interest, especially events such as village fêtes, Guy Fawkes' Nights and local theatre productions. "It's not simply about recording things before they disappear," she told *The Guardian* in 2010. "There's a lot that isn't being said in programmes like *The Archers*; under the surface, things are a little more sinister."

What books are out?

Monographs include the major retrospective *Anna Fox: Photographs 1983-2007*. More recently she has published *Resort 1* and *2*, with images of holiday-makers at Butlins at Bognor Regis. www.annafox.co.uk

The Photography Show

Anna Fox appears at The Photography Show at the NEC in Birmingham on 19th March at 12 noon, as part of the panel discussion 'Making a Name in Photography'.

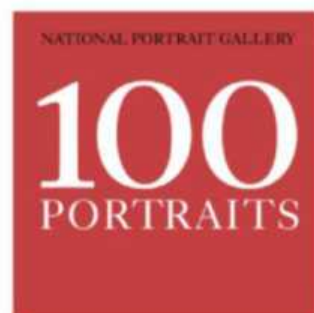
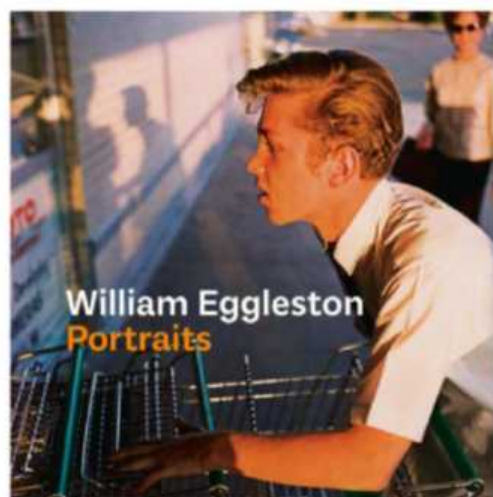
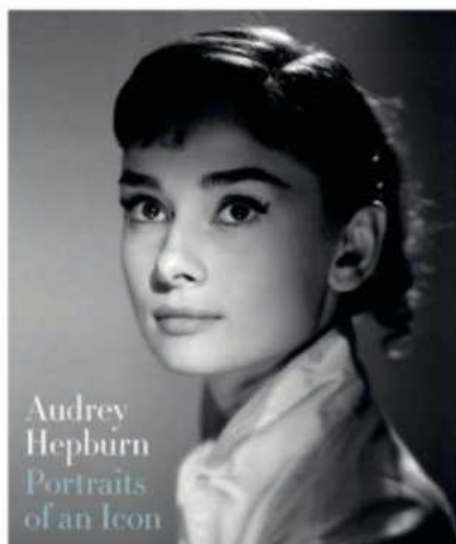
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THE RESULTS ARE IN...

From cameras and lenses to all sorts of accessories, these are the awards everyone is talking about!



102

FUJIFILM X-T20

Our expert review team puts the latest camera from Fujifilm to the test



106

HASSELBLAD X1D

Does this mirrorless medium-format model live up to the hype? We find out...

Reviews you can trust

Digital Camera is brought to you by the UK's most experienced team of photography journalists, which means you can trust everything you read, and compare kit with confidence.

We believe the best way to test a product is to use it as it was intended. Our real-world testing involves taking equipment on a proper shoot – whether outdoors or in the studio – and using it exactly as you would, to let you know if it's fit for purpose.

Scientific data won't tell you everything, but it's a great way to make comparisons and sense-check our real-world conclusions. We have a series of controlled tests for cameras and lenses that deliver objective benchmarks. You can download the high-resolution test images and resolution charts we shoot from www.techradar.com/cameras. This means you can check the quality yourself – and even run your own tests.

Scores explained

Each of our tests scores out of five in one or more sub-categories; then we award an overall mark out of five. *Digital Camera* is 100% independent – and never swayed by advertisers. The tests you read are our genuine, unbiased opinions. Our company has a strict code of conduct on testing – the most rigorous of any photo magazine.



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Good for the price



Very good all round



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Described as the photographer's bible, this 208-page BFP Handbook has hundreds of markets where you can sell your pictures for £££s. It includes magazines, greetings card and calendar publishers, picture libraries, newspapers, book publishers etc.

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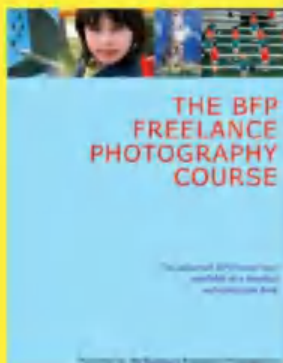


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All for just £54 per annum. Join now and get 14 months membership for the price of 12!



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While the BFP Handbook (above) will show you WHERE to sell your photos, this lavishly illustrated manual will show you HOW to sell them.

It's a practical course with 16 lessons covering everything you need to know to sell your pictures to magazines, greetings cards, calendars, newspapers, books etc. When ordered from the BFP, it comes with a set of tutorials to guide you through the lessons.

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DIGITAL CAMERA AWARDS

2017

THE BEST PHOTO PRODUCTS OF THE YEAR

After careful consideration and some heated debates, we select our gear of the year

We've been treated to some spectacular new cameras, lenses and accessories this year, making it an exceptionally tough task to separate the best from the rest. There are 20 awards on offer, spanning everything from ultimate macro lens to top technical innovation – plus the small matter of our Camera of the Year accolade...

WINNERS

DCA

THE WINNERS ARE ANNOUNCED!

Digital
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OF THE
YEAR



The X-T2 benefits from Fujifilm's expanding range of premium X-mount zoom and prime lenses.

MIRRORLESS CAMERA www.fujifilm.com

Fujifilm X-T2

£1,399/\$1,599

Fujifilm's mirrorless masterpiece comes out on top



It's been another strong year for new camera releases, with compelling contenders for our most coveted award coming from Canon, Nikon and Olympus. But ultimately it's the X-T2 that wins out, thanks to its unbeatable blend of convenient dimensions, excellent ergonomics and stellar performance.

Fujifilm's 24.3MP X-Trans III APS-C sensor provides a noticeable jump in detail compared with the already impressive 16.3MP X-T1. The new sensor delivers terrific

image quality up to ISO 1,600 and acceptable results as high as ISO 25,600.

But it's the X-T2's much-improved autofocus system performance that makes it the most complete all-round camera available today. Where the X-T1 fell short when it came to motion tracking, Fujifilm's new hybrid AF system, consisting of 325 phase and contrast-detection points doesn't just improve on its predecessor: it sets new AF standards for mirrorless cameras in general. Add an

8fps burst rate, and the X-T2 easily keeps up with fast action.

On the outside, the X-T2 retains Fujifilm's premium magnesium alloy and weather-sealed build, along with dedicated ISO, shutter speed and exposure compensation dials. A revised 1.04 million-dot screen with improved articulation adds versatility.

Factor in the X-T2's 4K video ability, its expanding range of first-rate lenses, plus its relatively keen price tag, and you simply won't find a better all-round camera on sale today.

WINNING FEATURES

- Class-leading autofocus that excels with moving subjects
- 24.3MP X-Trans CMOS sensor produces beautiful images
- Top build and handling plus intuitive controls

DIGITAL CAMERA AWARDS

TRIPOD www.benroeu.com

Benro GoPlus Travel FGP28A & B1 Ballhead

£259/\$390

The secret to success is all in the twist

Our winning support may not revolutionise tripod design, but it nails all the essentials and packs in some very useful extra features. It easily converts to a monopod, while in tripod mode the centre column can pivot through 180 degrees so you can get perfect positioning for macro or low-level shots. Four-section legs give a compact 49cm folded length, yet extend to 174cm at maximum

reach while maintaining excellent rigidity. And despite being travel-orientated, the legs and optional beefy ballhead boast a huge 14kg load limit.

WINNING FEATURES

- Flip-down legs keep things ultra-small when packed
- Full 180° pivoting centre column is quick and easy to use



It's a top-performance tripod that's full of neat tricks, yet doesn't cost the earth.

INNOVATION www.fujifilm.com

Fujifilm GFX 50S

£6,199/\$6,499

It gives medium-format the X appeal

Medium-format cameras have traditionally been bulky, slow, and eye-wateringly expensive, but the GFX 50S is a true game-changer for the sector. It commands a price tag that rivals a flagship 35mm DSLR, while 148 x 94 x 91mm dimensions and a body & battery weight of just 825g are more comparable to the specs of a Canon 5DS. Inside, the 51.4MP 43.8 x 32.9mm sensor gives a capture area around

1.7x that of a full-frame sensor and a maximum expanded sensitivity of ISO 102,400. Add Fujifilm's uncompromising build and ergonomics, and this could well be the camera that redefines medium-format as we know it.

WINNING FEATURES

- Compact and light
- Very competitively priced
- 51.4MP detail, with low noise at high ISOs



TELEPHOTO LENS www.fujifilm.com

Fujifilm Fujinon XF100-400mm f/4.5-5.6 R LM OIS WR

£1,499/\$1,899

Top-tier telephoto with great credentials

Yes, it's another Fujifilm victory, but it's well-deserved. Not only is this relatively well priced for a super-telephoto zoom, it's beautifully engineered and a joy to use. Performance is spectacular thanks to five Extra-low Dispersion elements and one Super ED element, which help give stunning sharpness and contrast along with minimal colour fringing. Distortions are essentially non-existent, and there's impressive resistance to ghosting and flare. Super-fast and virtually silent

autofocusing, along with a highly effective five-stop optical stabiliser, secures Fujifilm its third win of the year.

WINNING FEATURES

- It may be an APS-C format lens, but its build quality is a match for that on any full-frame optic
- First-class optical quality
- Excellent autofocus and image stabilisation



MACRO LENS www.tamron.co.uk

Tamron SP 90mm f/2.8 Di VC USD Macro

£579/\$649

Redesigned, revamped and remarkable

Tamron has been on somewhat of a roll recently with its redesigned SP-series lenses – and this 90mm macro is the best of the bunch. A stack of quality elements deliver image quality that's nothing short of sublime, with stunning sharpness up to f/11, no distortion and barely any

fringing. Usability is enhanced by a water-repellent fluorine coating and excellent Vibration Compensation.

WINNING FEATURES

- Fast and accurate Ultrasonic Drive autofocus
- Class-leading image quality
- Enhanced bokeh results



Compared to Tamron's old 90mm macro, this new optic is more refined outside and in. It's a true macro marvel.

MANUAL-FOCUS LENS www.zeiss.com

Zeiss Milvus 2.8/15

£2,330/\$2,700

Open wide and say wow

It may lack autofocus, but that hasn't stopped Zeiss from asking a packet for its latest wide-angle prime. The thing is, though, it's worth every penny. We're talking supreme corner-to-corner sharpness, with high-tech aspherical elements, ultra-low dispersion glass and T* coatings coming together to foil aberrations and practically eliminate barrel distortion

Manual focussing isn't as tricky as you may imagine, as the short focal length gives a decent depth of field, and you're helped out by a precise focus ring, a focus distance scale and depth-of-field markings.

WINNING FEATURES

- Stunning image quality across all measures
- Uncompromising build quality
- Intuitive manual focusing

ACTION CAMERA www.tomtom.com

TomTom Bandit

£199/\$270

An action camera and video editor in one

It takes something special to stand out in the action camera market, and the Bandit delivers just such a killer blow to more established competition with its innovative shake, edit and share feature. There's built-in GPS, too, enabling automatic location tagging of footage, while motion sensors assist automatic editing. TomTom hasn't neglected the basics

either, as the Bandit is capable of 1080p recording at 60fps and 4K at 15fps, and you'll get an impressive three hours recording from the battery.

WINNING FEATURES

- Innovative shake-to-edit video feature
- Polished smartphone app with slick live view feed
- Great video quality backed up by a long-lasting battery

DIGITAL CAMERA AWARDS



HIGH-END COMPACT www.sony.com

Sony RX1R II

£3,449/\$3,898

Small camera, big sensor, and an even bigger price



With the Leica Q challenging Sony's original RX1R as the compact camera king, it was only a matter of time before Sony sought to retake the throne. And what a way to raise the bar: gone is the old 24MP sensor from the first RX1R, replaced by a 42.4MP device pinched straight from the Alpha 7R II compact system camera. The sensor is joined by the world's first variable optical low-pass filter, which is activated depending on the subject you're shooting. This way you get the maximum possible detail resolution with less risk of moiré patterning on fine textures.

Other improvements over the RX1R include 30% faster

AF speeds, the ability to record uncompressed 14-bit raw files, a clever electronic viewfinder that retracts into the camera body, and a hybrid autofocus system with 399 phase-detection autofocus points and 25 contrast-detect points.

It's not that surprising that such top-end tech produces some stunning results. It's almost impossible not to be impressed by the beautifully saturated colours and stunning level of detail the sensor can capture. Real-world shots taken throughout the sensitivity range look fantastic at standard printing sizes, and also hold up well to scrutiny at 100%.

That's not to say that RX1R II is perfect, though. The

compact 113 x 65 x 72mm body simply isn't large enough to house a high-capacity battery, and image reviewing can be laggy because there are so many pixels to process. But these are small niggles with what's otherwise a triumph of performance and packaging.

WINNING FEATURES

- Eye-popping detail from a genuinely pocketable camera
- New retractable 2.36-million-dot electronic viewfinder
- Enhanced autofocus and 5fps burst rate



HIGH-END SLR www.canon.com

Canon EOS 5D Mark IV

£3,499/\$3,499

Canon's pro all-rounder just gets better

There really could only be one winner in this category, as a new-generation 5D will always be something very special.

This fourth incarnation brings a new 30.4MP sensor to the table, along with both a Digic 6 and a Digic 6+ processor, facilitating improved resolution, lower noise and increased dynamic

range. 4K video capture strengthens the 5D's appeal for videographers, and stills shooters will be impressed by the 7fps burst rate and the 61-point AF system with its 41 cross-type sensors. The addition of a touch-sensitive

screen enhances the already outstanding ergonomics.

The 5D Mark IV is a marked improvement over its predecessor and performs admirably in a wide variety of shooting scenarios. It's a pity its price tag is significantly

higher than that of the 5D Mark III, but you'll struggle to find any other faults.

WINNING FEATURES

- 4K video capability
- Touchscreen interface
- Highly advanced AF system



The 3.2-inch display gets a useful resolution boost to 1,620,000 dots; it also boasts full touch control.

WIDE-ANGLE LENS sigma-imaging-uk.com

Sigma 20mm f/1.4 DG HSM Art

£629/\$899

An ultra-wide lens that delivers a real wow factor

Sigma's no-compromise Art-series lenses have scooped multiple awards from this magazine, and this ultra-wide addition with its mighty 94.5° viewing angle further cements the line-up's reputation for excellence.

Inside, it's a large-diameter 59mm double aspherical lens element that enables a short focal length with a wide aperture. Other

glassy attractions include two fluorite-grade FLD elements and a feast of five SLD (Special Low Dispersion) elements. Together they deliver excellent sharpness and contrast across the aperture range, with minimal fringing and vignetting.

Build quality is excellent, as you'd expect from a hefty 950g design. Weather sealing

is sadly absent, but it's more than compensated for by a large, smooth focus ring and a highly effective ultrasonic autofocus system. And when you need to go manual, there's a smooth and precise focus ring.

WINNING FEATURES

- Generates amazing sharpness, even in the corners of the frame
- Excellent build quality with tactile controls
- Combines a wide viewing angle and a large aperture



DIGITAL CAMERA AWARDS

ACCESSORY www.manfrotto.com

Manfrotto X-Pro 3-Way head

£115/\$150

Compact yet controllable, it's the perfect tripod-topper

A shining example of great design, the X-Pro 3-Way head gives you three-way head precision in a form little larger than a regular ball head. Retractable handles are the key, letting the head pack down into a 13.5cm cube almost instantly. Manfrotto has still found space for some fun features, though, like adjustable friction resistance to balance cameras of varying weights. Well-positioned

bubble levels and top build quality add even more appeal.

WINNING FEATURES

- Offers the benefits of three-way head precision, minus the usual size drawback
- Variable horizontal and vertical tilt friction lets you tune the head to suit your camera and lens set-up
- Ergonomically sound two-lever quick-release mount



The QR plate Manfrotto's proprietary design, and it's a pleasure to use.

STORAGE SOLUTION transcend-info.com

Transcend Storejet 25M3 2TB

£100/\$100

Get your photos backed up for less cash

Let's face it, most of us would rather splash our cash on cameras or lenses than storage, but thankfully Transcend has our backs with this bargain portable USB 3.0 hard drive. It may be packing a conventional hard disk, but it's a fraction of the price of an equivalently capacious SSD – and it's still no slouch. The Storejet will shift image files from the drive at a sound 100MB/s, and write them to the disk at an even quicker 132MB/s. Video transfers are faster still at a mighty 140MB/s. All this is wrapped up in

a sizable but tough casing that's shock-resistant to military standards.

WINNING FEATURES

- Low price per gigabyte
- Very fast, considering there's a regular hard disk drive inside
- Not actually that physically large for a shock-resistant portable drive



CAMERAPHONE www.samsung.com

Samsung Galaxy S7

From £589/\$670

Samsung fights off strong rivals

Our recent rundown of the latest and greatest smartphones revealed that Samsung is currently on top for camera quality. Though the Google Pixel XL runs it very close, the S7's feature-rich camera app steals the show.

It packs in raw+JPEG capture and manual focussing, plus control over white balance, shutter speed and ISO sensitivity. Samsung's 12MP sensor is equally impressive, as is the 26mm-equivalent lens and the inclusion of phase detection autofocus.

The Galaxy S7's shots stand out thanks to great detail and consistently accurate colour rendition, while a large f/1.7 aperture and the use of optical image

stabilisation help maintain clean results in low light.

WINNING FEATURES

- Great all-round image quality and camera performance
- Powerful camera app
- Accurate screen preview



ENTHUSIAST SLR www.nikon.com

Nikon D500

£1,729/\$1,997

Nikon's DX flagship exceeds expectations

Aiming with the D500 to take on the Canon EOS 7D Mark II, Nikon hasn't just matched its rival: it's produced a new benchmark in APS-C SLRs. The D500's 20.9MP sensor has a colossal maximum sensitivity of ISO 1,640,000 and can capture 4K video. It's paired with the D5's Expeed 5 image processor, which is potent enough to enable a maximum shooting rate of

10fps for up to 200 14-bit raw files. The D5 also donates its superb 153-point autofocus system, which includes 99 cross-type points.

A metal chassis and extensive weather sealing keep the D500 shooting in

harsh conditions, and you'll stay in control thanks to plenty of direct buttons and dials. All of this comes together to make the D500 an extremely versatile camera. In fact, for the money, this could well be

the best digital SLR Nikon has ever made.

WINNING FEATURES

- Cutting-edge autofocus
- Fast burst rate
- Extensively weather-sealed metal body and pro build



The high-res 2,359k-dot rear screen is touch-sensitive and mounted on a tilting mechanism.

ENTRY-LEVEL CAMERA www.nikon.com

Nikon D3400

£439/\$497

Novice shooters have never had it so good

Not only has Nikon secured top honours at the pinnacle of its DX range, it's got the winner at the entry level. The D3400 has much in common with the popular D3300, carrying over an excellent 24.2MP DX sensor that does without an optical low-pass filter in order to maximise image sharpness. 5fps burst shooting, Full HD video and an 11-point AF system aren't features that'll

drop many jaws, but they're good enough to satisfy beginners. Image quality will still please experienced photographers, as the D3400 generates beautiful results.

But its Nikon's Bluetooth-driven SnapBridge system

that steals the show, maintaining a constant wireless connection to your smart device for effortless image sharing. Nikon's brilliant little 18-55mm AF-P kit lens seals the deal, making the D3400 an accomplished

introduction to the digital SLR world.

WINNING FEATURES

- Superb sensor performance
- Kit lens performs admirably and focuses fast in live view
- SnapBridge image transfer





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The EOS 80D excels at sports, portrait, landscape, street, travel and low light photography - as well as serious movie making. thanks to innovative technologies that help you achieve stunning results in any situation.

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Panasonic GX80



Body only + 12-32mm
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Save 10% on selected lenses with this camera! See web

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24mm f/1.4 Mk II USM	£1,499.00	200mm f/2.8 USM II	£699.00	18-135mm f/3.5-5.6 IS USM	£499.00
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50mm f/1.8 STM	£129.00	10-18mm f/4.0 IS STM	£229.00	70-200mm f/4.0 IS USM	£1,149.00
60mm f/2.8 Macro	£419.00	10-22mm f/4.5-4.5	£499.00	70-200mm f/4.0 IS USM	£699.00
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85mm f/1.4 USM	£349.00	15-85mm f/3.5-5.6 IS	£649.00	70-300mm f/4.0-5.6 IS USM	£499.00
100mm f/2 USM	£429.00	16-35mm f/2.8 II USM	£1,429.00	70-300mm f/4.0-5.6 IS USM	£1,299.00
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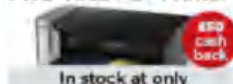
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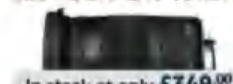
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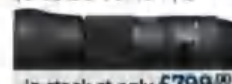
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SOFTWARE www.adobe.com

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Sometimes the obvious choice is the best

Adobe caused a furore when it moved to a subscription system for its software – and it did initially look like a pretty pricey deal. But the price has dropped, the dust has settled and the world has carried on turning on its axis. If you take out an annual subscription today, you can get Photoshop and Lightroom for a very reasonable outlay.

And you do need both programs. Photoshop is

sophisticated but focused. For layers, masks, selections, retouching and complex, multi-step imaging processes, it's impossible to beat, and it manages to present these tools in a remarkably clean, fast and efficient interface.

On the downside, it doesn't offer a library of single-click creative effects or any way of organising a large and growing photo collection. But



that's exactly where Lightroom comes in, providing accessible but powerful photo-editing features and a responsive and flexible catalogue system. The combo is unbeatable.

WINNING FEATURES

- Class-leading features, performance and versatility
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PORTRAIT LENS www.sony.com

Sony FE 85mm f/1.4G Master

£1,599/\$1,798

E-mount owners get portraiture perfection

Sony's new 85mm G Master delivers everything you could hope for in a portrait lens, and more besides. There's smart glass like an XA (eXtreme Aspherical) element and three ED (Extra-low Dispersion) elements. Sony claims the XA element features increased surface precision, which combined with the 11-blade

rounded diaphragm, helps produce sumptuously soft and dreamy bokeh in defocused areas.

Sharpness across the entire frame is very good at f/1.4 – and stunning at f/2.8 and beyond. Sony's Nano AR

coating fends off ghosting and flare, while lateral and longitudinal fringing are both minimal. The focus hold button and de-click aperture ring option are nice bonuses, with the latter working very well when shooting video.



The beautifully built barrel is fully weather-sealed.

WINNING FEATURES

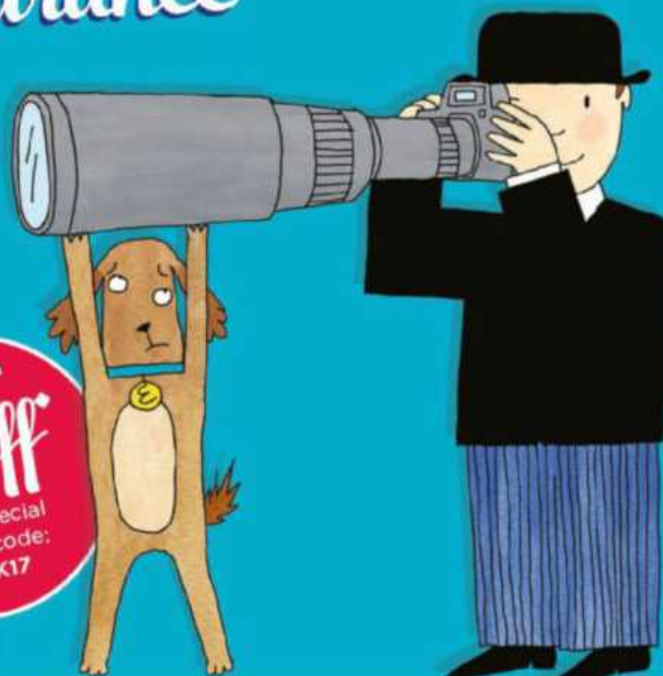
- Incredibly high image sharpness at apertures of f/2.8 and beyond
- Beautiful bokeh from the 11-blade aperture
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<http://www.pixelhk.com>

DRONE www.dji.com

DJI Phantom 4

£1,099/\$1,199

Trick object avoidance helps the Phantom 4 to the win

The easy-to-use Phantom 4 is an ideal choice for anyone who's new to drones. Simply click on the props, fit the battery and power up, and you're ready to fly within a minute or two.

The design is essentially a refinement of the Phantom 3 Professional, with major build quality upgrades and the addition of clever flight aids using new sensors. These include Return to Home,

where the Phantom will do exactly that should it lose control signals. Other helpful extras include auto take-off and landing, and ActiveTrack, where the drone will follow a moving subject automatically. Smart object avoidance systems further help your new toy stay airborne.

The Phantom 4 comes with its own 4K-capable camera which records clear and colourful footage in good lighting. Finally there's DJI's LightBridge technology, which enables a smooth, uninterrupted live view feed direct to your smartphone. It's a great bit of kit.



WINNING FEATURES

- 1/2.3-inch camera sensor and f/2.8 lens capture high-quality footage
- Packed with flight-assisting features for ultimate ease of use in a drone

STUDIO LIGHTING www.elinchrom.com

Elinchrom D-Lite RX 4/4 Softbox To Go kit

£725/\$950

Greater than the sum of its parts

Cleverly designed and beautifully built, this lighting kit packs serious punch for the money. You get a pair of powerful yet compact 400Ws heads that include 150W modelling lamps. Minimum flash power is on the high side, but this translates to a very healthy maximum output. Recycle speeds are fast at under 1.3 seconds, and overall performance is excellent.

Extra features like auto-sensing cooling fans and a wireless RF triggering system are great to have, as are the programmable slave modes for triggering the lights from a flashgun, and the ability to set the step level for easy power adjustments.

Included in the kit are two high-quality 66x66cm square softboxes, which are easy to put together. A single reflector is also supplied, along with

Elinchrom's RF hotshoe trigger for simple communication with the heads' built-in receivers.

WINNING FEATURES

- Potent power and fast recycle times
- Simple to set up, with an intuitive control system
- Small but perfectly formed flash heads



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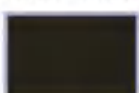
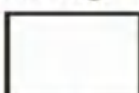


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CSC www.fujifilm.co.uk

Fujifilm X-T20 £800/\$800 (body only)

Love the idea of the Fujifilm X-T2, but can't afford it? Well, now you can get its new little brother...

SPECIFICATIONS

Sensor — 24.3MP APS-C X-Trans CMOS III sensor (23.6 x 15.6mm)
Crop factor — 1.5x
Memory — 1x SD card slot
Viewfinder — OLED EVF, 2,360k dots
Max Video resolution — 4K 3,840 x 2,160
ISO range — 200-12,800, expandable to 100-51,200
Autofocus points — Hybrid phase-detection/contrast AF, 91 AF points, 49 cross-type
Max burst rate — 14fps (electronic shutter), 8fps (mechanical shutter)
LCD screen — Tilting 3-inch touchscreen TFT, 1,040k dots
Shutter speeds — 30-1/4,000 sec, Bulb, T (mechanical), 4-1/32,000 sec (electronic)
Weight — 383g (body only, with battery and memory card)
Dimensions — 118 x 83 x 41mm
Power supply — NP-W126S lithium-ion battery (supplied)



FUJIFILM'S X-mount cameras have truly re-invigorated the enthusiast interchangeable-lens camera market. The quirky X-Pro and the SLR-style X-T1 kicked the whole thing off, with Fujifilm's terrific, almost film-like X-Trans sensor, an excellent range of zoom and prime lenses, rugged build and old-school external controls.

The original 16-megapixel X-Trans sensor was starting to look underpowered in a market dominated by 24MP cameras, so the arrival of the X-Pro 2, X-T2 and now the X-T20 has caused quite a stir.

In effect, the X-T20 replaces the X-T10, but the improvements go far beyond a simple increase in resolution. The new sensor is teamed up with Fujifilm's new X-Processor Pro image processor to deliver faster start-up, better autofocus tracking and improved continuous shooting.

The X-T20 can also shoot 4K video and, thanks to the more powerful processor, it can apply Fujifilm's famed Film Simulation modes to shots at the same time,



1 The X-T20 takes the same X-mount lenses as the X-T2, X-Pro2 and other X-cameras.

2 The rear screen doesn't have the sideways tilt of the X-T2's, but it is touch-sensitive.

3 The EVF is slightly smaller than the X-T2's, but it's a crisp and clear OLED display with 2.36 million dots and little or no visible lag.

4 It's like stepping back in time! The X-T20 has an old-school shutter speed dial and, on most lenses, an aperture control ring on the lens rather than the body.

including the new black-and-white Acros option. The ISO range is also higher than the X-T10's, with a maximum of ISO 12,800, or 51,200 in 'expanded' mode.

Best of all, the X-T20 gets the new autofocus system seen in the X-T2, with 91 AF points (325 in single-point AF mode) covering around 85% of the frame (you don't get that coverage with a digital SLR) and 49 cross-type AF points in a central area, covering around 40% of the frame. Fujifilm's aim is to match the continuous autofocus and subject-tracking capability of the best SLRs; it's taken another big step closer here.

Round the back, Fujifilm has added touch control to the tilting LCD display, and on the top of the camera there's a new Auto lever to quickly switch the camera to full auto mode when there's no time to think about the settings or you're passing it over to someone else to use.

The X-T20 represents a major upgrade over the X-T10. In fact, it's so powerful you may be wondering what the more expensive X-T2 has that this camera doesn't. Well, the X-T2 is



1

Bokeh

The X-T20's 18-55mm kit lens can produce an attractively shallow depth of field at its maximum wide-angle aperture of f/2.8.

2

Detail

The combination of the new 24.3MP sensor and an above-average kit lens can result in beautifully sharp shots, containing bags of detail.

3

Dynamic range

Fujifilm's dynamic range expansion options make it easy to capture good shadow detail without risk of blowing any highlights.

larger and more robust – it's dust-proof, splash-proof and freeze-proof down to -10 degrees Centigrade. It has an ISO dial and a metering mode switch, while the X-T20 relies on menus for these settings; it has a slightly better buffer capacity and – with an optional battery grip – a faster 11fps continuous shooting speed. The X-T2 also has improved video options, a sideways tilting screen (as well as up/down) and twin UHS II card slots. (The X-T20 has a single UHS I card slot.)

If you don't need these features, or don't think they're worth the extra money, the X-T20 is a tempting proposition. It may be the X-T2's little brother, but it still packs plenty of power, and it sacrifices fewer of the X-T2's capabilities than you'd think.

Build and handling

The X-T20 is a likeable little camera that impresses you as soon as you pick it up. It's more compact than an APS-C SLR, with the squared-off edges of an old-fashioned 35mm film SLR. Fujifilm's 18-55mm f/2.8-4.0

kit lens feels a fraction large for the camera when it's fitted, but you shouldn't let that put you off: it's the best match for the X-T20's features and image quality.

The OLED electronic viewfinder is excellent. It's sharp and vibrant and shows no discernible lag, even in dim lighting. The tilting rear screen is good too; while it doesn't have the

sideways tilt of the X-T2, it does have Touch Focus, Touch Focus Area Selection and Touch Shot, if you enable it. If you don't want to use the touchscreen for focus point selection, you can press the 'down' navigation button and move the AF point with the directional controls.

The X-T20's top view highlights the difference between Fujifilm's

Meet the rivals...

The cameras taking on the Fujifilm X-T20...

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Canon EOS M5

£1,050/\$980

Canon's first mirrorless EOS M with a built-in viewfinder looks both expensive and, well, a little dull up against the X-T20.

Reviewed issue 188



Fujifilm X-T1

£800/\$1,300

The arrival of the X-T2 means prices for the X-T1 have fallen – but the X-T20's newer technology makes it a clear winner.

Reviewed issue 151



Olympus OM-D E-M5 Mark II

£750/\$900

The Micro Four Thirds sensor is half the physical size of the Fujifilm's, but the E-M5 is an extremely powerful camera.

Reviewed issue 164





X-mount mirrorless cameras and other SLRs and CSCs. For a start, there's no mode dial. You set the shutter speed using a dial on top of the camera or set it to the A position if you want it to select the shutter speed automatically (Aperture Priority mode). Likewise, you choose the aperture value on the lens, or set this to A if you want the camera to choose it for you (Shutter Priority mode). Or you set both to

So often, when you choose a cheaper model, you feel you're giving away more performance than you want – but that's not the case here

the A position to effectively get Program AE mode.

The aperture setting is where it can get slightly complicated. Only a few of Fujifilm's high-end lenses have aperture rings with f-stop markings. Lesser lenses, like the 18-55mm kit lens, have a simple manual/auto switch: when the lens is set to manual, you turn a ring on the lens to adjust the aperture value, which is shown on the camera's display. Some lenses lack either, and the aperture is set solely by the controls on the camera body.

Fujifilm's dial-based exposure control is a brilliant idea; it's just a shame it's not carried through fully on all of its X-mount lenses.

Still on the top of the camera, there's a drive mode dial on the far left and an EV compensation dial on the far right. This goes up

Above Here we see the X-T20's superb exposure metering system performing faultlessly, backed up by wide dynamic range and faultless auto white balance.

to ± 3 EV but has an additional C position, which allows you to go up to ± 5 EV using the front control dial. These control dials have different functions, depending on the mode you're in. They work pretty well, but their 'click' action for additional functions can be annoying. It is easy to press too hard as you try to turn them, and activate a function you didn't want.

More annoyingly, it's too easy to press the 'up' navigation button on the back of the camera with the base of your thumb as you're handling the camera. This displays the Sync Terminal M Setting screen, which is no doubt useful in the right context, but we were sick of the sight of it by the end of the test.

As good as the dial-based controls are, there are still some settings that need the menus. There are two bracketing settings on the drive mode dial, for example – which is very handy – but you have to dig pretty deep into the menus to change the EV steps for exposure bracketing, which are in the Drive Setting section of the Shooting Setting menu.

The X-T20's state-of-the-art hybrid autofocus system sounds complicated, but actually it isn't. If you want to follow fast-moving objects in continuous shooting mode, your best bet is to use the Zone AF mode and try to keep the AF zone over your subject. Remember to turn the AF mode switch on the front of the camera to C or 'continuous', or the AF will not track your subject.

Despite all those lovely external dials, the X-T20 still relies heavily on its menu system and its 'Q' quick settings screen. It may take a little while to figure out the location of some of the more in-depth controls.

Performance

The X-T20's performance is so good in so many ways that it's hard to fault. The metering system produced great results across different situations; the only time compensation was needed was with intrinsically light or dark subjects – and that's the same for any in-camera metering system.

It's worth mentioning Fujifilm's dynamic range expansion system. You can set this to 100% (no expansion), 200% (1EV expansion) or 400% (2EV expansion); or set it to Auto so that it adjusts the dynamic range automatically. This can be useful in bright or contrasty conditions, and it can be used with the camera's highlight and shadow tone adjustments to control really



With up to 325 focus points covering 85% of the image frame, nailing a precise focal point is a breeze.

bright highlights or dense shadows. This, combined with Fujifilm's attractive Film Simulation modes, means that you can get closer to the perfect 'look' without having to shoot and process raw files.

The most striking film simulations are Velvia, which produces dense, vivid colours, and the new Acros black-and-white mode which seems to deliver deeper, richer tones than the regular monochrome option.

Fujifilm's 18-55mm f2.8-4.0 kit lens is a cut above the average kit lens too, producing great detail, contrast and sharpness. The X-T20 can match any digital SLR or mirrorless rival in its price range for image quality.

The new autofocus system is good too. For single-shot photography, its acquisition speed and accuracy feel as good as a mid-range SLR and it doesn't slow down when you switch from the viewfinder to live view.

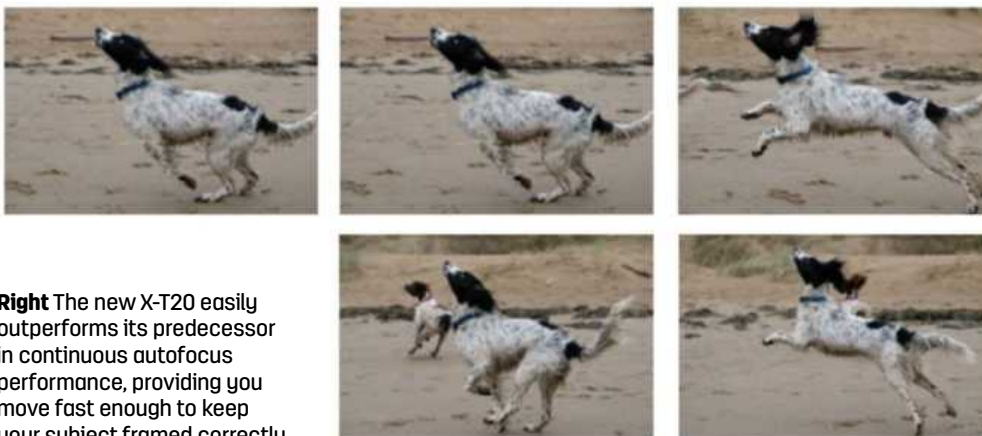
It's pretty impressive with moving subjects, too; although we did get a

few dud shots during our continuous shooting tests, that was more to do with operator error than the camera's AF system. It takes practice to centre a fast-moving subject, and it's easy to blame the camera for unfocused shots when in fact it's the framing that caused the error.

Having said that, the combination of screen blackout and slowdown as the buffer fills can make it difficult to follow subjects towards the end of a burst – it's probably best to stick to JPEGs rather than raw files if you don't know how long you'll need to keep the shutter button pressed.

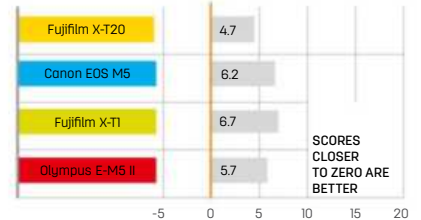
The X-T20 is a really impressive little camera. It uses the same sensor as the more expensive X-T2 and matches most of the bigger camera's features. So often, when you choose a cheaper model, you feel as if you're giving away more performance or control than you want to – but that's not the case with the X-T20.

Rod Lawton



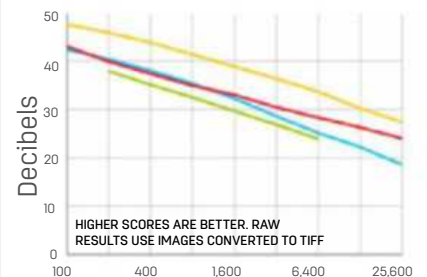
Right The new X-T20 easily outperforms its predecessor in continuous autofocus performance, providing you move fast enough to keep your subject framed correctly.

COLOUR ERROR



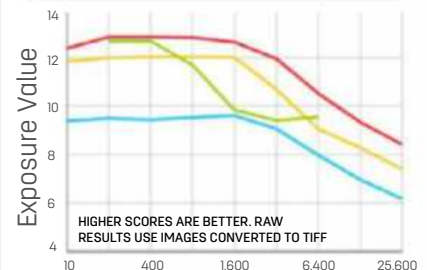
The X-T20 wins narrowly in this comparison, although all of the cameras we tested it against – the Canon EOS M5, Fujifilm X-T1 (now the same price as the X-T20) and Olympus OM-D E-M5 II – are pretty good.

RAW SIGNAL-TO-NOISE RATIO



Again, all four cameras are pretty close for noise control, but the X-T20 is at the front of the pack and marginally better than the 'old' X-T1, despite the increase in resolution.

RAW DYNAMIC RANGE



Another close result. The X-T20's results have not been compromised by the higher resolution – though the smaller sensor of the Olympus delivers some great figures.

WE SAY...

The X-T20 is a very compact camera that, now and again, feels like there are a few too many controls to leave proper space for your hands – but that's a minor quibble in the face of its image quality, features and performance. It's not just a brilliant camera: it's a bit of a bargain too.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★



CSC www.hasselblad.com

Hasselblad X1D-50c

£7,790/\$9,000 (body only)

Find out whether the image quality of this radical new mirrorless camera matches that divine exterior

SPECIFICATIONS

Sensor — 50MP medium-format CMOS sensor (43.8 x 32.9mm)
Focal length conversion on lens — 0.82x
Memory — Two SD card slots
Viewfinder — XGA, 2,600k dots
Max video resolution — Full HD 1,920 x 1,080
ISO range — 100-25,600
Autofocus — Contrast AF, 35-point
Max burst rate — 1.7-2.3fps
Screen — Three-inch touchscreen TFT, 920k dots
Shutter speeds — 60-1/2,000 sec, Bulb, T
Weight — 725g (body with battery and memory card)
Dimensions — 150 x 98 x 71mm
Power supply — Rechargeable lithium-ion battery (supplied)

The bigger sensor means bigger photosites, which should mean less noise and a wider dynamic range



HASSELBLAD is best-known for its professional medium-format camera systems – and their £20K+ price tags – but the X1D is a radical new step. Its mirrorless design means it's a fraction of the size of a regular medium-format camera, and scarcely larger than a 35mm full-frame model. And while it's a long way from cheap, its price puts a Hasselblad within the reach of more professionals and well-heeled enthusiasts.

So what's the big deal about medium-format? It's all about image quality. At 50 million pixels, the X1D seems to have no inherent advantage over Canon's 50MP EOS 5DS, for example – but there's more to it. The bigger sensor means bigger photosites, which should mean less noise and a wider dynamic range – Hasselblad claims up to 14 stops.

The larger sensor also delivers a very different 'look', with a much shallower depth of field for any given effective focal length.

1

The X1D uses a range of XCD autofocus lenses designed for this camera.

2

The rear screen uses large, simple icons and large type to produce an unusually straightforward and visible set of controls.

3

The X1D has an electronic viewfinder; the resolution of 2.6 million dots means it's crisp and clear.

4

The control layout is refreshingly simple. The main mode dial is spring-loaded – press it down to lock it flush with the top plate.



The X1D has an unusual crop factor of 0.82x, so the 45mm f3.5 XCD lens supplied to us for review is equivalent to a 37mm lens on a full-frame SLR.

The design, look and layout of the X1D is also quite unique. This is a contemporary camera, built from milled aluminium to produce a strong and durable body. Round the back is a modern touchscreen display, which is just as clean and minimal.

Hasselblad has launched a series of XCD autofocus lenses for the X1D (although its H System lenses work via an optional adaptor). Each lens has an integral leaf-type shutter – the X1D does not use a focal plane shutter. This means less vibration, plus flash synchronisation right up to the top speed of 1/2,000 sec.

We tested the camera with the 45mm f3.5 XCD and 90mm f3.2 XCD lenses; there's also a 30mm f3.5 XCD lens. Prices range from £1,900 to £3,300 (\$2,300 to \$4,000) – within striking distance of the prices for top-spec full-frame prime lenses.



1

Exposure

The X1D's exposure metering is slightly biased towards retaining highlight detail, but the wide dynamic range allows for shadow recovery.

2

Detail

Unsurprisingly for such a high-megapixel sensor, the X1D is capable of resolving stunning detail, right up to its maximum ISO 25,600 sensitivity.

3

XCD lenses

Introduced alongside the X1D, Hasselblad's new XCD lenses really get the best out of the camera and are sharp from edge to edge.

The X1D is very much a 'raw' camera. The JPEGs it saves are one-quarter size and designed for quick reference or sharing, not for final use. Instead, you use Hasselblad's own Phocus software, or third-party programs like Camera Raw, to process your images.

Build and handling

The X1D may be comparatively small, but it's still a solid and hefty camera. Although the body is impressively light, at well under a kilogram, the lenses are pretty substantial.

The controls are really good. There aren't many of them, but everything you need is there. The mode dial has an interesting action: to lock it, you press against spring pressure until it locks flush with the camera top plate. To change the mode, you press it again to release it and it springs up. It's a neat idea, although perhaps the dial could be a little larger.

The touchscreen interface is clear and responsive, and there is a digital spirit level using a solid circular 'bubble' along horizontal and vertical axes. It's both more intuitive and more responsive than usual.

Two buttons on the top plate offer quick access to focus modes, ISO and white balance, and there's a depth of field preview button on the front. On the back are an exposure lock button and an AF-D button for activating the autofocus, which can also be initiated by half-pressing the shutter release in the normal way.

There are some quirks. Initially, we thought it didn't offer shutter

speeds longer than one second in manual mode. In fact, as you turn the dial it goes from one second to the B and T exposure settings, then into longer exposure times. In Shutter Priority mode, the shutter speeds follow the normal sequence, with the B and T settings at the end.

The battery arrangement is interesting. For a start, there is no door to the battery compartment. >

Meet the rivals...

The cameras taking on the Hasselblad X1D

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Canon EOS 5DS
£2,800/\$3,500
The EOS 5DS's blend of resolution, size and affordability looks unlikely to be beaten any time soon, but it also demands the very best lenses. **Reviewed** issue 167
★★★★★



Pentax 645Z
£7,500/\$7,000
We loved the Pentax 645Z for its SLR-style handling and controls, but prices have stayed high, and the X1D is a strong, premium-quality rival. **Reviewed** issue 156
★★★★★



Sony Alpha 7R II
£2,900/\$2,900
It has a smaller sensor than the X1D, but you could spend the money you save on some of Sony's spectacular new G Master prime and zoom lenses. **Reviewed** issue 169
★★★★★



The medium-format advantage can give close-ups a sumptuously smooth look, thanks to a shallow depth of field.

Instead, the base of the battery sits flush with the base of the camera. When you flick the battery release lever, the battery pops out a short distance – you then have to push the battery against spring pressure to release the catch fully.

This might all sound like change for change's sake, but it seems to echo the X1D's style – fewer parts, less fuss.

Performance

The X1D lacks the speed of a smaller-format SLR or mirrorless camera, but it's still pretty snappy. The start-up time is disappointing, admittedly, taking a few seconds, but the autofocus response isn't bad at all. Sometimes it hunts around a little or even fails to focus completely in low light, but it's no worse than early mirrorless cameras or a Nikon SLR in Live View mode, for example.

This is not really a camera for taking shoot-from-the-hip shots, but more for indulging in considered photography. You can shoot relatively quickly, but the more you rush it, the more frustrated you're likely to get – and the more you risk losing some of the image quality this camera is capable of.

It's not just the megapixels, but the extraordinary clarity and precision of each pixel. Hasselblad says its XCD lenses are optimised to get the best results from its sensor; on the basis of the 90mm and 45mm lenses we tested, it's done that. The X1D's non-anti-aliased sensor gave our resolution test chart some issues with moiré, but our real-world images look razor-sharp, right out to the edges.

The lenses undoubtedly play a part in this. Having used both the 45mm and the 90mm at a range of apertures, we'd have no hesitation in using both of them wide



With no in-body or lens stabilisation, you'll need to hold very steady or use a tripod to get maximum image sharpness in murky conditions.

open – the contrast and edge-to-edge sharpness are almost undiminished, even at full aperture, and this will also emphasise that wonderful shallow depth of field that you get from the large sensor.

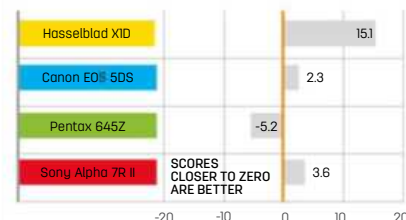
Neither the camera body nor the lenses have stabilisation systems, so if you're shooting hand-held, it's wise to keep the shutter speeds well above the minimum 'safe' levels.

The exposure system seems geared towards highlight preservation, which is ideal in a camera of this class. The auto white balance system did a good job in our tests, and while the X1D didn't do especially well in our colour rendition lab tests, the real-world results looked good, if a little undersaturated.

The point here is that the X1D is designed for raw imaging, and you will modify the exposure and colour settings to your own tastes during processing. The X1D delivers spectacular results, but it demands a fraction more care and time than the average camera.

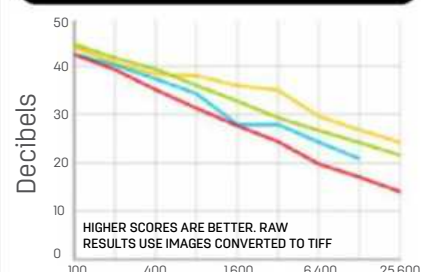
Rod Lawton

COLOUR ERROR



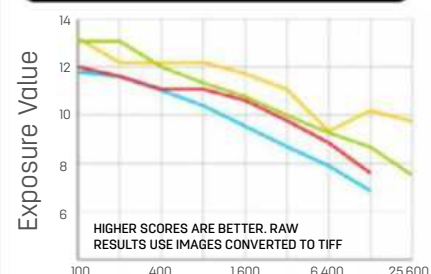
The X1D doesn't come out too well in our colour rendition lab test, but real-world results look good and you will process raw files to your own tastes anyway.

RAW SIGNAL-TO-NOISE RATIO



There's surprisingly little difference in the lab results at lower ISO settings, but at higher sensitivities the two medium-format cameras show a clear advantage.

RAW DYNAMIC RANGE



The larger sensor size gives the Hasselblad and Pentax cameras a dynamic range advantage of about 1EV over the full-frame EOS 5DS and Sony Alpha 7R II.

WE SAY...

The X1D needs to be used at a slightly slower pace than full-frame rivals, but the payback is spectacular image quality and a rewarding shooting experience. The clean design is matched by an equally efficient set of controls, and the two lenses we tested are just as impressive. The Hasselblad X1D has certainly set the bar very high indeed.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★

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exposures using
Curves
See page 112

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PHOTOSHOP MASTERCLASS

112 Learn to balance your exposures
with the power of the Curves tool

DIGITAL DARKROOM

Transform your photos with our easy, effective guides



116

Lightroom Skills

Sean McCormack is back this month to reveal how to add a moody monochromatic style to your portraits. Bring out the character in your people shots by following along with his tutorial



118

Tool School

James Paterson shows you how to get to grips with Photoshop's motion blur and depth of field filters. Follow along with his step-by-step guide, then check out his video tutorials for further tips and tricks



120

Artist Insight

Photoshop expert James Abbott reveals how you can make a cinemagraph. Stun your friends and family with this fun tutorial as you create surreal moving pictures that will blow your mind!



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ADAMS**

*Photographer
and writer*

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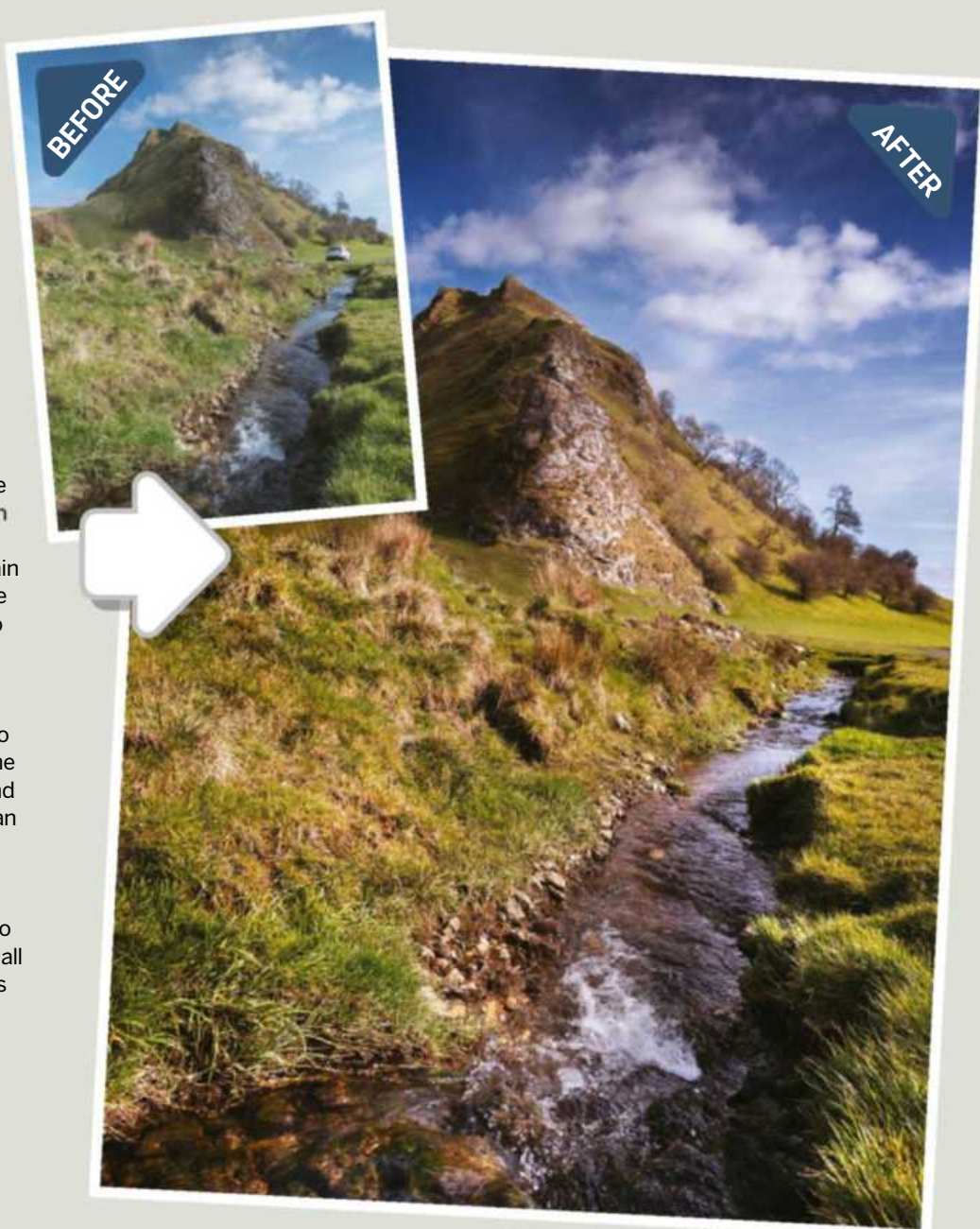
SHOOTING a great landscape gives you a lovely warm glow at the time of capture. You

check the screen and nod to yourself, secure in the knowledge that you've got the shot you wanted. It gives you a real sense of security, because no matter what else happens as the remainder of the day unfolds, you have something to take home.

All too often, though, the great picture you thought you'd captured doesn't look quite so good on your computer's screen. In the example here, the foreground is underexposed, and the shot could be better composed to lead in the viewer. In the background, the car distracts the eye and makes the mountain look quite small in scale. Glancing up, the sky is too pale and needs more drama to successfully crown the shot. Overall, there's a lack of warmth and contrast, which makes the picture less inviting.

All of these issues can be overcome to deliver the shot you wanted. And, with the exception of the compositional tweak and the removal of that annoying car, they can all be addressed using one remarkable Photoshop command – Curves.

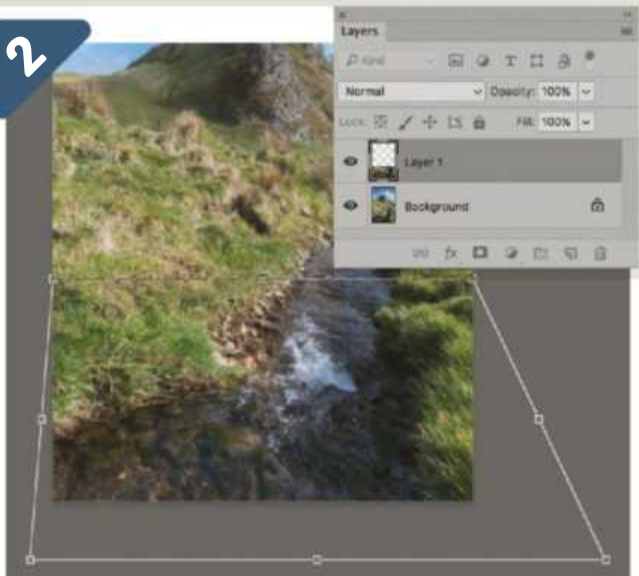
Many photographers shy away from Curves: they appear complex and hard to fathom at first glance. But here I'll cover all you need to know to improve landscapes with ease, adjusting contrast and colour wherever you want. Follow along using the supplied image, then try the techniques on your own pictures – you'll be amazed at the difference.





IMPROVE THE LEAD-IN LINES

Open the provided start image in Photoshop. Before you start work on balancing the exposure, the first thing you need to do is get the image into shape. To do this, select the Rectangular Marquee tool and draw a box over the entire lower third of the image. With the selection made, press Ctrl+J (or Cmd+J in macOS) to punch the selected area into a new layer. Open the Layers panel (Window > Layers) to see this new layer floating above the Background layer.



TRANSFORM THE FOREGROUND

Press Ctrl/Cmd+T to enter Free Transform mode. Holding the Ctrl/Cmd key, drag out the bottom-right corner to recompose the frame and improve the way the foreground works. Do the same with the bottom-left corner, then release the Ctrl/Cmd key and drag down the bottom-middle handle. Make sure that you don't touch the handles along the top of the bounding box, however: these need to match up with the existing shot. Press Return to confirm.



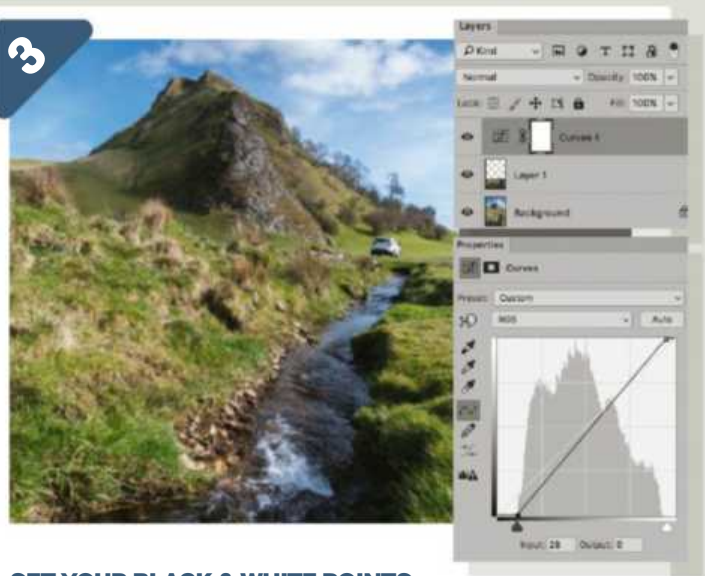
Make an S-curve for great contrast

EXPERT TIP

Get shots looking great

A popular method of applying a contrast boost is to use an S-curve. This allows you to plot a curve that darkens the lower midtones and brightens the upper midtones in one go.

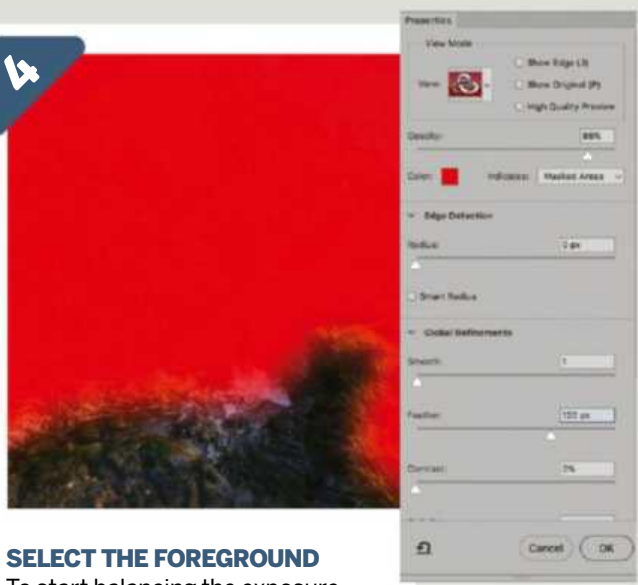
To do it, create a Curves Adjustment Layer and click once on the centre of the line to add an anchor point. Adjust this to set the overall midtone brightness and lock it in place. Now click around a quarter of the way along the line to add a second anchor, and pull the curve down slightly to darken the lower mids. Finally, add a third anchor at the three-quarters mark and push up slightly to brighten the upper mids. Keep your S-curve shallow to avoid overdoing it.



SET YOUR BLACK & WHITE POINTS

Now it's time to establish the overall exposure of the shot by setting the darkest and brightest points. Click on the Adjustment Layer icon and choose Curves from the list: you'll be presented with a diagonal line on a grid. Black is situated at the bottom-left of the grid, and white is at the top-right. To ensure a full range of tones, you don't want any gaps on either side of the graph. If you see some, drag the black point slider inwards to meet the darkest tones on the graph. Do the same for the white point slider, dragging it to the right to meet the very brightest tones.

4



SELECT THE FOREGROUND

To start balancing the exposure, the immediate foreground needs to be brighter. To do this, select the Lasso tool and draw a rough selection around the dark area. Once it's surrounded by marching ants, click **Select And Mask** in the Tool Options bar at the top of the screen, then select the **Overlay** view at the top of the palette so you can clearly see the hard edge around the selection. Increase the **Feather** slider until the edge is nice and soft. (I used 120px here.) This allows the area to blend imperceptibly with the rest of the image after you've adjusted it. Click **OK** to apply.

Set black and white points with a click!

Make Curves quickly

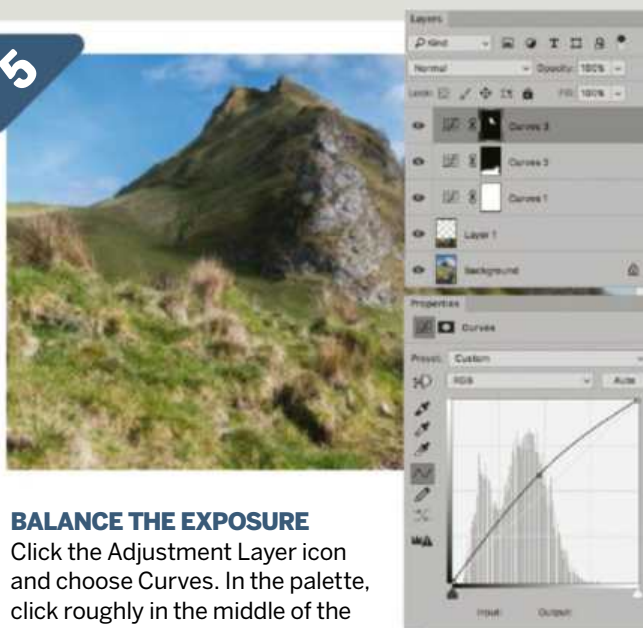
EXPERT
TIP

The eyedropper tools in the Curves palette can be used to set your darkest and brightest points. With Curves open, select the black eyedropper and click on the image on the point you want to become black. Now select the white eyedropper and do the same for the point you want to be white. Unless the point you choose is neutral, this will also affect the colours, so use the grey eyedropper on a black, white or grey tone to rebalance them.

The result can be dramatic, but it's easy to abandon if it goes wrong – just press the **Reset to Adjustment Defaults** icon at the foot of the palette.



5



BALANCE THE EXPOSURE

Click the **Adjustment Layer** icon and choose **Curves**. In the palette, click roughly in the middle of the line and push it up to create a gentle arch. This leaves the black and white points alone, but brightens the midtones. Set your Curves adjustment so the immediate foreground is in balance with the rest of the scene. With this done, use the Lasso tool to make a selection of the cone of rock in the background. Use around 60px of feathering in **Select And Mask**, then create a **Curves Adjustment Layer** and push up the curve to brighten it.

6



CLONE OUT THE DISTRACTIONS

To get rid of the car in the background, create a new layer (**Ctrl/Cmd+Alt+Shift+N**) and select the **Clone Stamp** tool. In the Tool Options bar, select **All Layers** next to **Sample**. Use **Ctrl/Cmd+Plus** to zoom in tight on the distraction, then hold **Alt** and click on a clean area close to the car to set a sample point. Now release **Alt** and paint over the problem. Adjust your brush size with the square brackets keys and keep using different sample points to avoid a tell-tale repeating pattern. Once you have cloned over the car using pixels borrowed from elsewhere, repeatedly click the eye icon alongside the new cloning layer to check your handiwork and ensure you have a perfect finish.

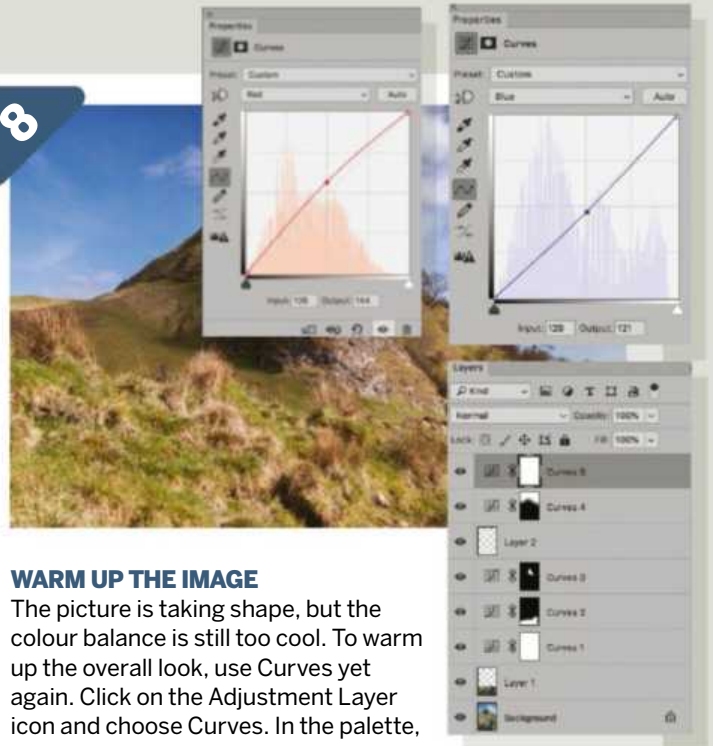
1



DARKEN AND ENRICH THE SKY

To get a more dramatic sky, extra contrast and vibrance is needed, and Curves comes to the rescue once more! Go back to full-screen view by pressing Ctrl/Cmd+0 (zero). Using the Lasso tool, make a rough selection around the entire sky. Feather generously (around 200px), using Select And Mask to soften the edge. Click OK, then create another Curves Adjustment Layer, just as you did with the foreground and the cone of rock. This time, instead of pushing the diagonal line up to brighten the area, pull it downwards a little to create a gently inverted arch shape. This will reduce the midtone brightness in the selected area, and you'll see the sky get darker and more saturated.

8



WARM UP THE IMAGE

The picture is taking shape, but the colour balance is still too cool. To warm up the overall look, use Curves yet again. Click on the Adjustment Layer icon and choose Curves. In the palette, click where it says RGB and select the Red channel from the dropdown list. Push up the line a touch to create a red colour cast. You need to add some yellow to get a warm hue, so click where it now says Red and choose Blue. Yellow is the opposite of blue, so pull the curve down slightly until you have an attractive tint. Clicking the eye icon on and off shows the difference.

9



ADD A CUSTOM VIGNETTE

To hem in the image and focus the viewer's attention on the key ingredients, make an oval-shaped selection with the Lasso tool. Use Select And Mask to feather this until you have a really soft edge, and click OK. At present, the central part of the image is selected; to get the outer part instead, go to Select > Inverse (or press the keyboard shortcut Ctrl/Cmd+Shift+I). Now create another Curves

Adjustment Layer, and pull the line down into a subtle U shape to darken the edges a little.

With the picture complete, go to File > Save As and save the image using the Photoshop (PSD) format. This will preserve all the layers you've created, so if you want to make any tweaks to your Curves in the future, you can double-click on the Adjustment Layer thumbnails and jump straight back into the image-editing process.



SEAN McCORMACK

Photographer and writer

Sean McCormack is a photographer and writer based in Galway in the west of Ireland. He's the author of *The Indispensable Guide to Lightroom CC*. seanmcfoto.com

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WHEN photographers process a female portrait, they often go for a delicate retouch that tries to be as flattering as possible to the subject. This is less often the case with the male portrait, where character reigns supreme. Here we can swap soft, rosy cheeks for laugh lines, scars and wrinkles. Lighting plays a part in the drama – and I'll

look at that in my expert tip – but there are a few tricks in Lightroom processing to take a photo from a well-lit shot to a truly captivating image.

Over the last few years I've shot for a personal project, called *Hirsute*, all based around men's facial hair. This is the processing I used to help bring the images together, featuring a shot of actor Sean T O'Meallaigh.



CONVERT TO MONO

The intention for the photo is to be in black and white. You can use the B&W panel for this, or an alternative way is to decrease Saturation to -100, and increase Contrast to taste (+22 in this case).



HIDE THE CLOTHES

To create a digital bust, you need to hide the clothing. Press M for the Graduated Filter (or click the fourth icon in the toolbar below the Histogram). Set Exposure to -4 and draw out a filter parallel to the beard. Right-click on the pin and choose Duplicate for more effect.



3



IMPROVE THE SKIN TONE

To bring some tone back into the skin, bring the Highlights setting back to -14. This helps give a shade to the skin, and makes sure it can take the effects you're about to apply.

4



BRING OUT THE DETAIL

To bring out the character and detail, bring the Clarity slider right up to 81. It's a high setting, yes, but it really looks great on male portraits.

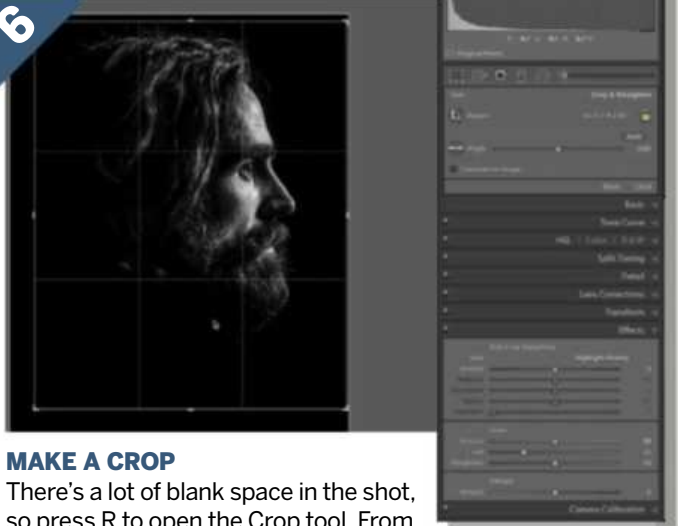
5



FILM GRAIN

To roughen up the photo a little, add Grain. The controls are in the Effects panel. You'll get away with a lot on this image, so even +50 looks great. Press Q and use the brush to remove any spots or areas that distract in the photo.

6



MAKE A CROP

There's a lot of blank space in the shot, so press R to open the Crop tool. From the Aspect menu, choose 4X5/8X10. This creates a crop with the top and bottom cut off this standard SLR image. Move the crop so the face is all included. Done!

Lighting the portrait

A pair of curtains is all you need for a good portrait

While my main image was shot in a studio using one light and a beauty dish with a grid, you can create this look at home using no more than a darkened room with a pair of curtains. Open the curtains just enough to let a sliver of light hit your subject's face. Make sure all other light in the room is off or blocked. Have the subject face directly into the light first, then take a step

towards you (sideways for them) – just enough to get a shadow on the cheek. See? Much easier than you'd expect. You can see here how I've done it with my son. The inset shows the shot with the flash turned off.


EXPERT
TIP



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BEFORE



AFTER

STEP BY STEP CREATE PANNING-BLUR

Mimic the effects of slow-shutter camera panning to add streaks of background blur



SELECT THE CAR

1 Press Ctrl/Cmd+J twice to make two copies of your layer. Grab the Quick Selection tool and paint over the car to select it, then click the Add Mask icon in the Layers panel to convert this to a layer mask. Ctrl/Cmd-click the mask thumbnail in the Layers panel to load the selection, then go to Select > Invert to switch the selection from the car to the backdrop.



BLUR THE BACKDROP

2 Highlight the middle layer, then go to Filter > Blur Gallery > Path Blur. Drag a line along the direction of travel; use the Speed and Taper sliders to control the blur. Click OK then press Ctrl/Cmd+D to deselect. Go to the top layer then Filter > Blur Gallery > Spin Blur. Make two circular spin blur pins to cover each wheel, then click OK.

PHOTOSHOP ANATOMY

OPTIONS BAR

The Focus slider lets you control how sharp the central preserved areas are when using the Tilt-Shift or Iris filters. Ticking High-Quality gives you a slightly better preview, but takes longer to load. Selection Bleed works when you apply a blur filter to an active selection. It takes the areas outside into account when creating the blur. Finally here, Save Mask To Channel creates an alpha channel of the blurred area.



IRIS BLUR

This lets you create a sharp-soft circular area, so it's good for focusing attention on your subject and blurring distractions around the edges of the frame. Like Tilt-Shift, there's a preserved area in the centre, a transitional area beyond this and a fully blurred area outside. Drag the handles to change the size and shape of each portion (Alt-drag the points to make the transitional area asymmetrical).



FIELD BLUR

Field Blur lets you simulate fall-off from sharp to soft details. You position several blur strength points by placing pins. The strength of the blur can be adjusted in the panel to the right, or by hovering over the pin. So you can create gradual fall-off by making two pins, one with zero blur, the other with blur applied. This way the scene will gradually soften, just like it would in-camera.

SPIN AND PATH

Both these filters let you mimic motion-blur effects. Spin Blur lets you create circular blur as if an object is spinning, like a wheel. Path Blur lets you direct the blur along a straight or curved line by adjust the start, end and middle points. It can be set to Basic or Rear Sync Flash. Taper lets you narrow the blur, while End Point Speed changes the amount of blur at the end of the line.



NOISE AND EFFECTS

The problem with blurring parts of an image to mimic depth of field is that you also end up blurring image noise, which would be present had the blur occurred in-camera. The Noise controls let you add noise back into the soft areas, which gives a more natural result. The Effects box lets you change the look of the out-of-focus highlights – the bokeh – for the Field, Iris and Tilt-shift filters.



TILT-SHIFT

Like a tilt-shift lens, this filter lets you create gradual fall-off either side of a sharp, central plane of focus, so it's good for a toy-town effect (see below). Drag the lines to change the width of the sharp or fall-off areas, and use the points to alter the angle. (Hold Shift if you want the angle perfectly horizontal or vertical.)

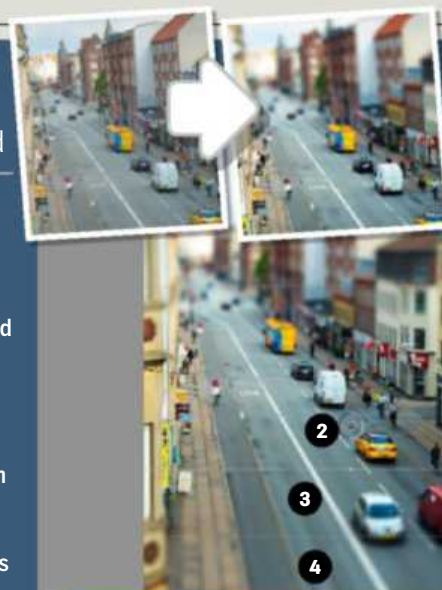
Get the toy-town look

Use the Tilt-Shift filter to make a miniature world

The blur effect we'll add makes it look as if everything is in miniature; this works best on a wide scene shot from above. Make a duplicate of the background layer [1] with Ctrl/Cmd+J. Right-click it and choose Convert To Smart Object, then go to Filter > Blur Gallery > Tilt-Shift. In the dialog, position the sharp area [2] over the ground, then drag the lines to fine-tune the blur

transition area above and below [3] and the blurred areas [4]. Use the pin to adjust the blur strength.

Next, boost the tones. Add a Levels Layer [5] (Layer > New Adjustment Layer) but don't change any settings. Instead change the Blend Mode [6] to Overlay to punch up the saturation and contrast. If it's too strong, use the layer opacity controls [7] to tone the effect down.



EXPERT TIP



JAMES ABBOTT

Photographer
and journalist

James is a journalist and photographer. He's an advanced Photoshop user and has created hundreds of tutorials to help other photographers improve their skills.
jamesaphoto.co.uk

CREATE SURREAL STILLS WITH A HINT OF MOVEMENT



Cinemagraphs are taking the internet by storm – find out how you can make your own 'moving photographs' with the help of Photoshop

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THE idea of shooting video to create a mostly still image may sound contradictory, but it's exactly what you have to do to make a cinemagraph. These seemingly magical images feature a small amount of repetitive movement and, are presented in

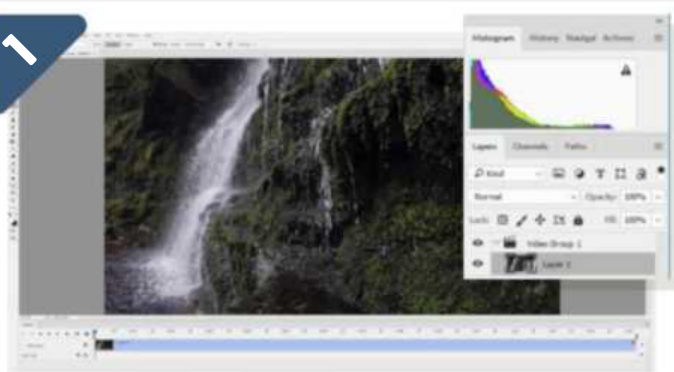
the GIF file format. They're a lot of fun and surprisingly easy to edit in Photoshop.

If you want to have a go at shooting your own cinemagraph footage, shoot around 10 seconds of video. Attach your camera to a tripod to keep it still and use manual exposure. Just make sure that shutter

speed is set to 1/50 sec or slower for smoother footage.

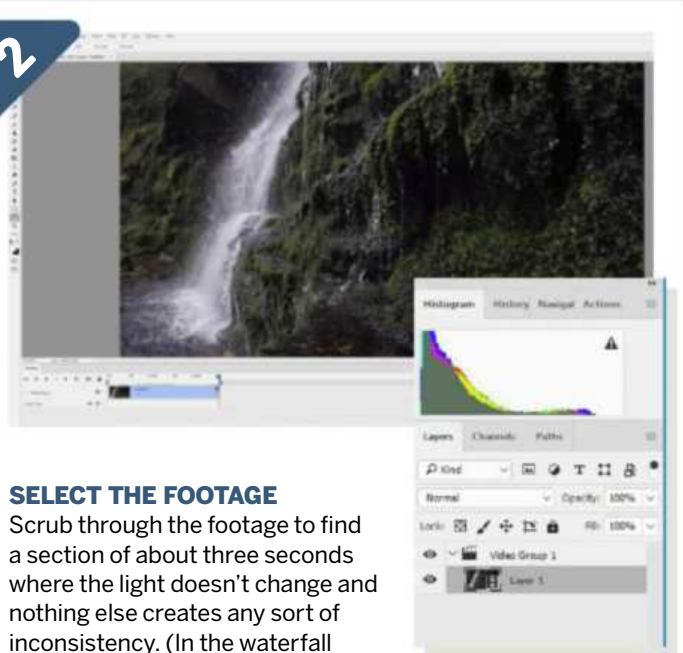
The best footage to use for cinemagraphs is that where there's a strong natural element of stillness, but part of the scene is moving. I've included footage so you can follow the tutorial.

1

**IMPORT THE VIDEO**

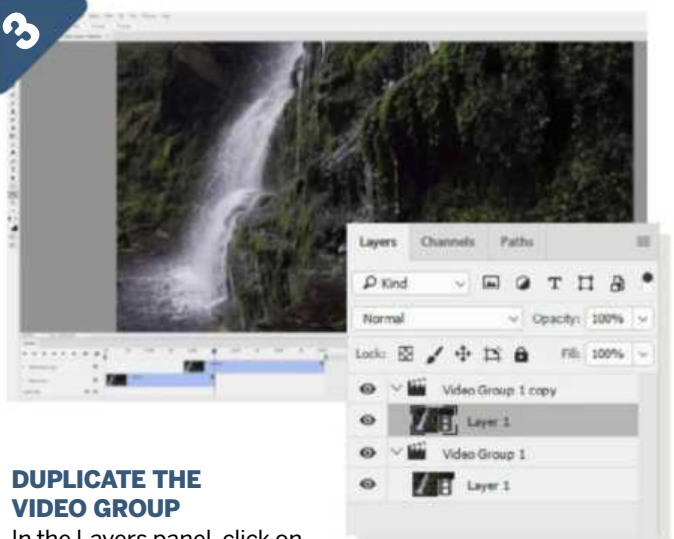
Launch Photoshop and press Ctrl/Cmd+O to activate the Open dialog and select your video file. When it opens in Photoshop, the Timeline panel should open – but if not, open it via the Window menu. Click on the cog on the left of the panel and make sure Loop Playback is ticked, then zoom into the footage so it fills the timeline.

2

**SELECT THE FOOTAGE**

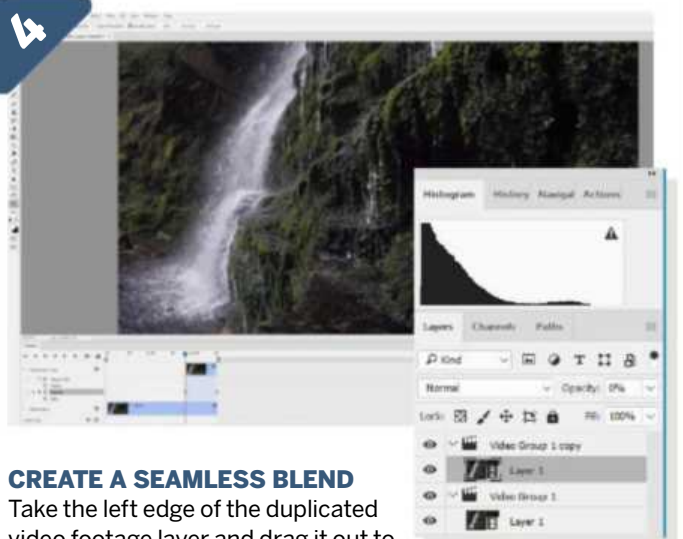
Scrub through the footage to find a section of about three seconds where the light doesn't change and nothing else creates any sort of inconsistency. (In the waterfall footage, for example water hits the camera lens.) Scrub to a point where the footage is perfect, then drag the left and the right edges inwards to shorten it.

3

**DUPLICATE THE VIDEO GROUP**

In the Layers panel, click on the Video Group 1 Folder and press Ctrl/Cmd+J to duplicate it. Click on the new chunk of footage and drag the beginning so it lines up with the end of the original footage below. This will allow you to make sure the copied footage ends on exactly the same frame the original footage begins on.

4

**CREATE A SEAMLESS BLEND**

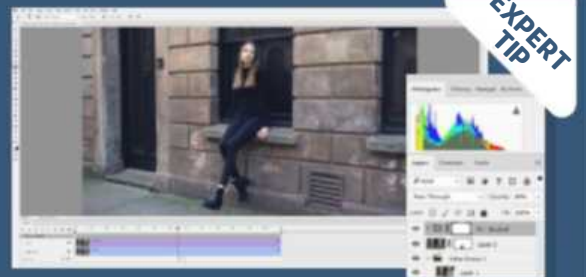
Take the left edge of the duplicated video footage layer and drag it out to the left so it covers about a second of the footage below. Now drag the right-hand edge so it matches the end of the bottom footage. This is how you're going to create a seamless blend that makes the cinemagraph loop perfectly, with no distinct beginning or end.

Working with consistent movement

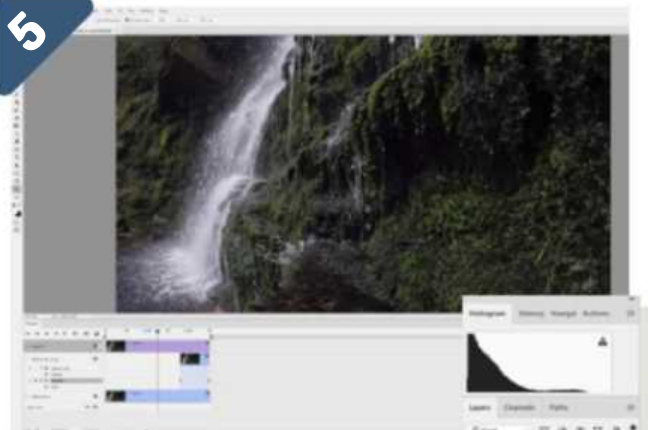
Some video footage needs more precise editing

Some video, like the waterfall footage, will have no clear beginning or end. Other footage will have movement that can be matched up at either end to create a

seamless blend. This is where the beginning of the video can be made identical to the end simply by cutting the footage. For this type of footage, you can omit steps 3 to 5.

**EXPERT TIP**

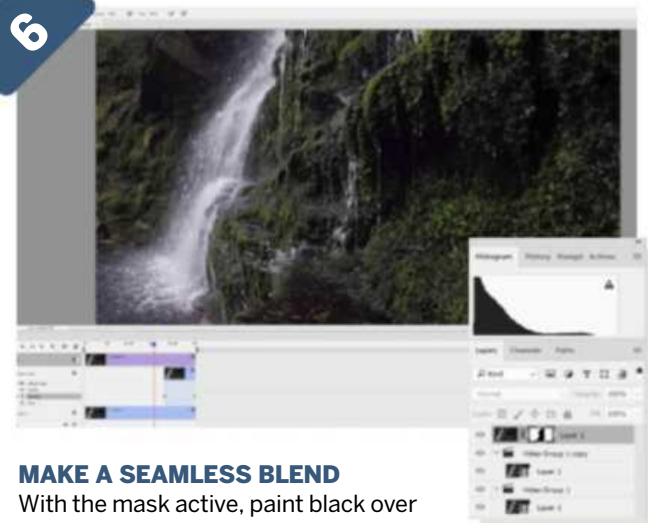
5



MERGE INTO A STILL

Scrub along the footage to find a frame that looks good. In the Layers panel, click the Video Group 1 copy folder at the top of the stack. Now press Ctrl/Cmd+Shift+Alt+E to create a still layer, then click on the Layer Mask icon. Drag the still layer on the timeline in line with the original footage, and trim the end so the durations match.

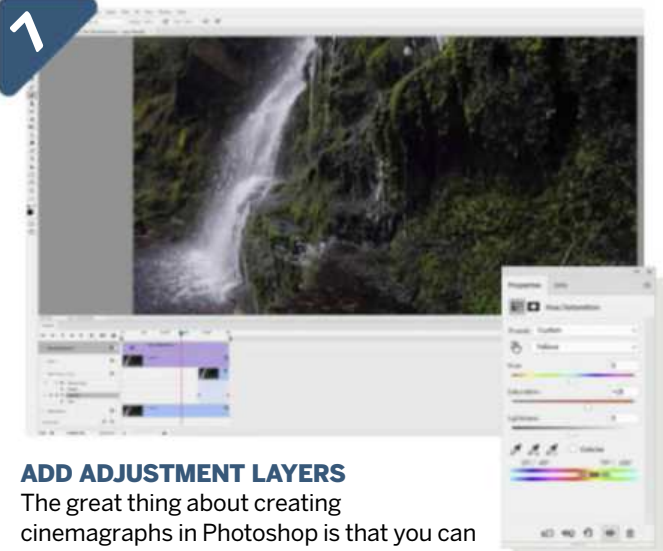
6



MAKE A SEAMLESS BLEND

With the mask active, paint black over the area where you want to reveal movement. If you make a mistake, paint white over the offending area. Scrub the pointer to the beginning of the copied footage, click the arrow next to Video Group 1 copy and select Opacity. Reduce Layer Opacity to 0%, scrub to the end, and set another point with Opacity at 100%.

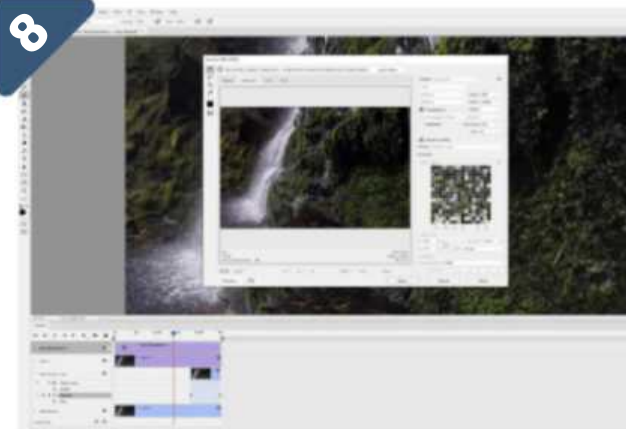
7



ADD ADJUSTMENT LAYERS

The great thing about creating cinemagraphs in Photoshop is that you can apply adjustments to the image. Click on the Create New Fill Or Adjustment Layer icon (the half-white half-black circle at the bottom of the Layers panel) and select Hue/Saturation. Click on Master and select Yellows. Set Saturation to +25 to boost the greens.

8



SAVE A GIF

Hold down Ctrl/Cmd+Shift+Alt+S to open the Save For Web dialog box. Below Preset there's a drop-down menu; click on this and select GIF. Below this there are two more menus; make sure the first is set to Adaptive and the second Diffusion. Set the width of the image to 700px and make sure Looping Options is set to Forever before clicking on Save.

Manage image adjustments

Using Adjustment Layers you can apply almost any effect to cinemagraphs

Photoshop is a powerful tool for editing both images and video. One of the advantages of using Photoshop to create cinemagraphs is that you can apply a range of effects using Adjustment Layers; for instance, you can adjust brightness and contrast, convert to black-and-white, control

saturation and much more. You can even use cloning and healing tools on the still parts of the cinemagraph to remove unwanted elements from the image. You can enjoy almost the same level of control that you get with a still image, so make the most of it and get your cinemagraph looking great.



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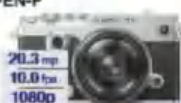
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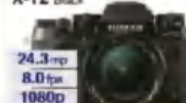


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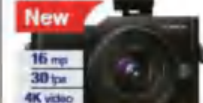


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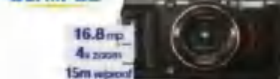
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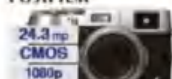


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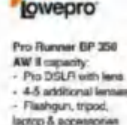
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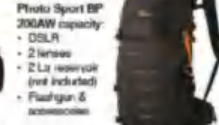


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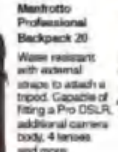
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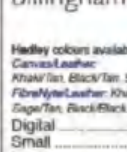
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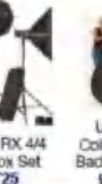
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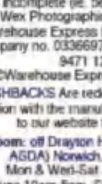
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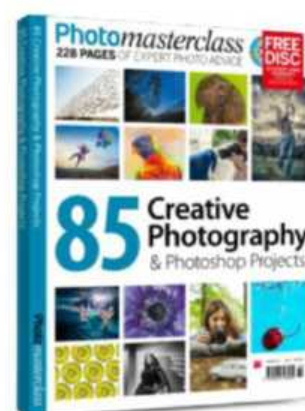


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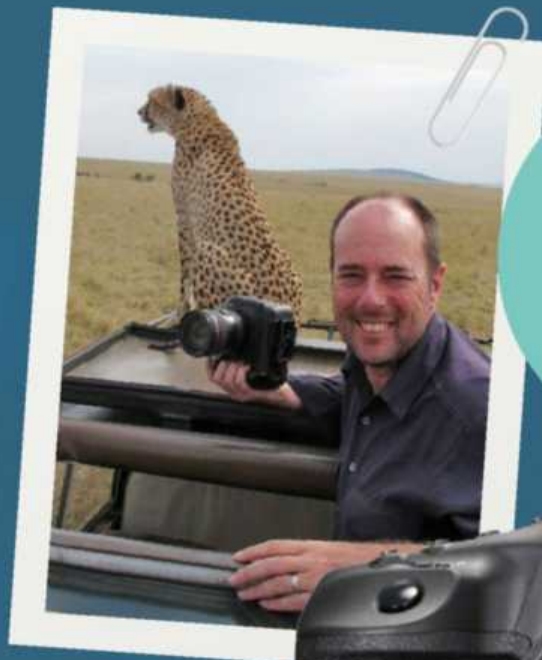
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DESERT ISLAND D-SLR

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W

What's your current mood?

The best way to describe it is up and down: my life is like that at the moment.

Who would you most like to thank for getting you where you are today?

Probably my agent Tim Harris: he's always been there to encourage me.

Why did you turn to photography?

It was a calling. I had no choice, I had to do it.

What did you want to be when you were five years old?

A fighter pilot.

What's the most expensive piece of kit you've ever bought?

A 600mm lens – ouch!

To crop or not to crop?

The picture decides if you need to crop and nothing else.

What's in your kit bag right now?

Two Canon 1D X II and a 5D IV, plus 200-400mm, 100-400mm and 24-70mm f/4 IS lenses.

Proudest moment of your career?

Winning the Gerald Durrell Award with a tiger in the BBC WPOTY.

What was your first camera?

A Canon AE-1 Program.

What food do you take on a shoot?

Chocolate biscuits!

Be honest – what kind of photography are you bad at?

Flowers. All macro. No patience at all!

Tell us a secret you've never told anyone before?

I like romantic comedies!

Who should we interview next?

Andrew James. He's a mega-talented all-round photographer and nice guy.

How would you describe your photography?

Lucky.

Unfulfilled ambition as a photographer?

Winning a major competition, rather than a category or highly commended.

What words of wisdom do you give to aspiring photographers?

Be nice to everyone, no matter who they are, as you never know who will help you in the future.

You've found a time-travel machine. Where do you go?

Back to the 1960s. It was an amazing decade of change!

It's 2020. What are you doing?

Still taking pictures of animals and aircrafts, with a smile on my face.

How would a friend describe you in three words?

Complicated. Moody. Driven.

What three words would you use?

Lucky. Misunderstood. Passionate.

What is your Desert Island D-SLR?

My 1D X II. It does everything I ever wanted, and it's allowed me to really push my horizons.

Andy also runs the cool online learning community and resource FotoBuzz.

www.foto-buzz.com

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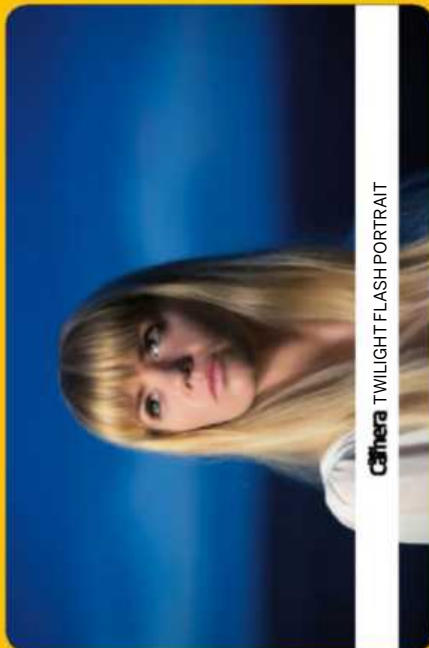
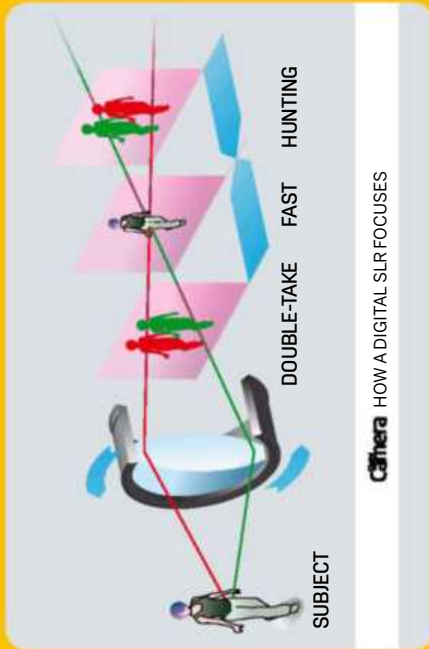
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Camera



PLAY WITH PERSPECTIVE

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Shutter speed	1/250 sec +
ISO	1,600
Focal length	400mm

TO IMPROVE YOUR SHOT...

- Plan your shoot. Check the weather plus the moon position and if it's full.
- Expose for the sky to ensure your model becomes a silhouette.
- Get low to the ground, and line up your subjects to create the effect you want.

TOP TIP: Zoom in to compress the perspective. It's best to use something like a 400mm lens to bring the elements together. Don't go wide!

DCM189

Camera



HOW TTL FLASH WORKS

HOW YOUR D-SLR USES THROUGH-
THE-LENS FLASH TECHNOLOGY

- 1. Quick fire**
When you press the shutter, a pre-flash is fired. The subject and other parts that are illuminated reflect this light into the lens.
- 2. Measuring up**
The light strikes the shutter curtains, which remain closed in front of the camera's sensor. The camera's exposure meter then measures the light reflected by the curtains.
- 3. Controlling the light**
The camera uses this information to determine the flash's power. The shutter curtains now open, and the flash is fired.
- 4. Fine-tuning**
Flash power falls away with distance, but a larger aperture or higher ISO will extend its reach. Try using flash exposure compensation for stronger or more subtle results.

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Camera



HOW A D-SLR FOCUSES

PHASE-DETECTION AF TECHNOLOGY
IS THE KEY TO ACCURATE FOCUS

- 1. Subject**
Pre-focus at a spot close to the subject, to speed up the autofocus acquisition.
 - 2. Double take**
The AF sensor sees two 'out of phase' versions of the image, which need to be aligned with each other.
 - 3. Fast**
The camera knows whether the lens needs to be focused closer or farther away.
 - 4. Hunting**
The focus may hunt backwards and forwards if it can't find the subject.
- Contrast-detection AF**
If your D-SLR is switched to its Live View setting, then it uses contrast-detection AF.

DCM189

Camera



HAVE FUN AT THE FAIR

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/22
Shutter speed	Automatically set
ISO	100

TO IMPROVE YOUR SHOT...

- Wait until twilight, when the sky develops a beautiful blue tint. This happens around 30 minutes after sunset.
- Set your camera up on a tripod so you can capture the movement of the fair using a slow shutter speed setting.
- Time your shots so the fairground ride is moving!

TOP TIP: If your shutter speed setting isn't slow enough, attach a filter.

DCM189

Camera



BE THERE FOR SUNRISE

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Aperture	f/11
Focal length	16-35mm
ISO	100

TO IMPROVE YOUR SHOT...

- Check the weather and sunrise time. Ideally you want clouds in the sky, and a touch of mist can be atmospheric too.
- Get there in good time – ideally an hour before, so you can spend time setting up your kit and refining your composition.
- Use a tripod to avoid camera shake.

TOP TIP: Use the PhotoPills app on your smartphone to help plot where the sun will rise and to aid your composition.

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Camera



TWILIGHT FLASH PORTRAIT

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Aperture	f/8
Shutter speed	1/200 sec
Focal length	200mm

TO IMPROVE YOUR SHOT...

- Use off-camera flash for pro results.
- Set the light to the side of your model to create shadows.
- Expose the scene without the flash, then reduce the setting by one stop to darken the background.

TOP TIP: Turn the White Balance setting to Tungsten to enhance the blue twilight sky. To keep the subject's skin tone warm, add an orange gel over the flash.

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Camera



USE LEADING LINES

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Aperture	f/22
Shutter speed	5 sec
ISO	100

TO IMPROVE YOUR SHOT...

- Head to the coast to find leading lines. Piers and jetties are compositional gifts!
- Blur the water to enhance the scene and transform choppy waves into a silky-smooth surface.
- Shoot in low light or use an ND filter to reduce the shutter speed setting.

TOP TIP: A wide-angle lens helps exaggerate the perspective so that the lines converge towards a distant point.

DCM189

Camera



UNDERWATER PORTRAIT

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Aperture	f/10
Shutter speed	1/200 sec
ISO	160

TO IMPROVE YOUR SHOT...

- Always place your camera in a protective underwater housing.
- Use two external flashguns (also in safe underwater housings) on their manual setting in full power.
- From below, the surface creates beautiful reflections. Shoot at an upwards angle.

TOP TIP: Fogging on the lens can be a problem when you shoot underwater, but a sachet of silica gel will help.

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Camera



PORTRAIT WITH A TWIST

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Shutter Priority
Aperture	Automatically set
Shutter speed	1/10 sec
AF mode	Tracking

TO IMPROVE YOUR SHOT...

- Get your subject to stay perfectly still, then create movement in the background.
- A patterned umbrella behind your model works well, and creates colour streaks when twisted.
- Shoot in the continuous burst mode.

TOP TIP: Mount your camera on a tripod and use its Mirror Lockup function, as camera shake can be an issue at this slow shutter setting.

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[PHOTOSHOP GUIDE]

PORTRAIT RETOUCHING MASTERCLASS

BROUGHT TO YOU BY

Digital
Camera



BOOST THE IRISES

Eyes are the most important part of a portrait. Here's a speedy way to make them stand out...

1 One of the quickest and easiest ways to give eyes extra impact is to boost the contrast and colour in the iris. One tool excels at circular adjustments like this: the Radial Filter. Simply open your image in Camera Raw or Lightroom, or with Photoshop CC's Camera Raw Filter, then grab the Radial Filter from the toolbar. Make an ellipse over the iris and use the Brush to erase

parts if necessary until it precisely covers the iris. Then simply increase the Clarity, Saturation and Exposure until it looks right. **1** While you're at it, darken the edges of the iris too. Hold down Ctrl/Cmd+Alt and drag the pin slightly to make a copy, then lower Exposure to darken the iris. Click the Brush, then erase the centre of the circle so that just the edges of the iris are darkened. **2**

TOP WORKFLOW TIP

Copy adjustment pins

Once you've perfected one iris, simply hold Ctrl/Cmd+Alt and drag the pins across to the other iris to copy them.



TOP WORKFLOW TIP

Use layer masks

Retouching is all about making selective adjustments to soften skin, boost eyes and lift different areas. Layer masks give you this control. After making any edit on a layer, Alt-click the mask icon to hide the effect, then paint white to reveal it wherever you like.

before

SUPER SKIN SOFTENING

If you want skin that looks soft and smooth without turning plastic, there's a simple trick you can use

2 First retouch any marks and blemishes with the Spot Healing brush and Clone Stamp tool. Next, duplicate your layer with Ctrl/Cmd+J (or merge a new layer with Ctrl/Cmd+Shift+Alt+E). Invert the layer with Ctrl/Cmd+I, then go to the Layers panel, set the layer opacity to 50% and the Blend Mode to Linear Light. Right-click the layer and choose Convert to Smart Object, then go to Filter > Other > High Pass. Set an amount that blurs the skin - 9.9px here. Now to bring back texture, go to Filter > Blur Gaussian Blur and set a third of the value used for the High Pass Filter - 3.3px here **1**. Finally, Alt-click the Add Layer Mask icon to hide the effect, then grab a white brush and paint over the skin to reveal it. **2**



TOP WORKFLOW TIP

Control layer opacity

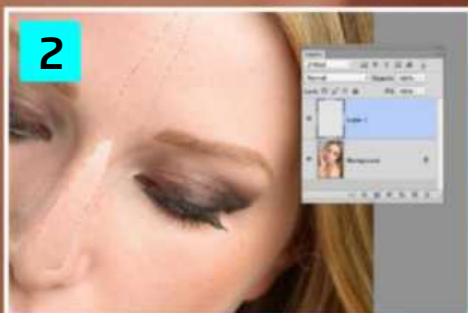
With retouching, using a separate layer for each edit not only makes your workflow non-destructive, it also means you can lower the layer opacity to tone down any over-the-top effects so that your retouching looks natural.

before

1



2



REMOVE HOT SPOTS

Hot spots make subjects look hot, but not in a good way. Getting rid of them is easy...

3

Hot spots are the bright reflected highlights that make faces appear sweaty even when they're not. Ideally, it's best to fix them on the shoot with a little powder, but if you need to remove them later, the challenge is to do so in a way that looks natural. The Patch tool is ideal, because you

can draw rough selections around hot spots, then drag them to a clear area. **1** Use a new empty layer for this, and set the tool to Content-Aware and Sample All Layers in the tool options. Once the area is removed, try lowering the opacity to tone the fix down slightly so the highlight partially shows through. **2**

TOP WORKFLOW TIP

Record an Action

With retouching you'll find that you perform monotonous tasks like sharpening time and again, so it makes perfect sense to record an Action. Open the Action panel, make a new Action, click Record and carry out the job once, then click Stop and you'll never have to do it again.

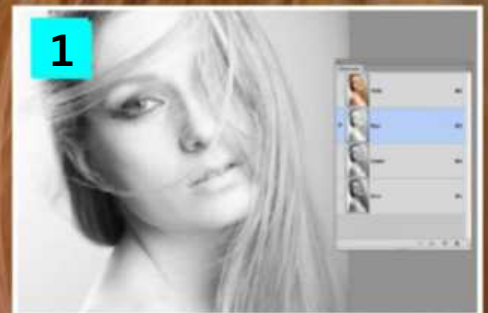


ESSENTIAL PORTRAIT SHARPENING ADVICE

There are many sharpening techniques. Here's a trick that works really well for women...

4 Sharpening on just the red channel is great for portraits, because the red channel contains very little skin texture. So you can sharpen the facial details without losing the softness of the skin. First go to the Channels panel (Window > Channels) and click the Red channel. **1** Next, go to Filter > Sharpen > Unsharp

Mask. The ideal Unsharp Mask settings will vary depending on the resolution of your image, but somewhere around here is a good place to start: Amount 100-130, Radius 1.0-1.4, Threshold 0. **2** Click back on the RGB channel to see the results of your sharpening. You should see lovely crisp details, without over-sharpened skin texture.



TOP WORKFLOW TIP

Blur the burn

After you've finished dodging and burning on your grey layer, go to Filter > Blur > Gaussian Blur and soften the layer slightly so that the brushstrokes blend together.

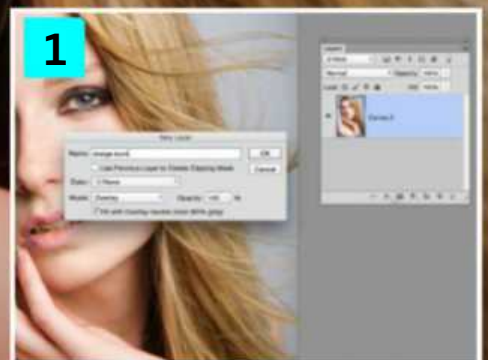
before

DODGE AND BURN THE FACE

A little selective lightening and darkening of the face can really help to add depth

5 There's a simple dodging and burning trick that works for all kinds of images, not just portraits. Hold down Alt and click the Create New Layer icon to bring up the New Layer options. Name the layer 'Dodge and Burn', then set Mode: Overlay and tick the Fill with... box to fill the layer with grey. **1** Click OK and you'll have a new

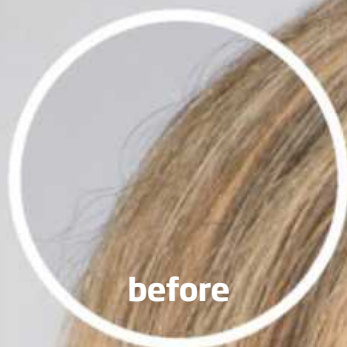
invisible layer. Paint white or black on this layer to lighten or darken. Press B for the Brush tool and 1 to set its opacity to 10%, then paint with black over the darker parts of the face such as below the cheekbones to subtly darken them. Press X and paint white over the lighter parts, such as above the cheekbones, to lighten them. **2**



REMOVING STRAY HAIRS

There's no quick fix when it comes to frizzy hairs

6 The Spot Healing Brush tool is the quickest tool for retouching, but it's a little hit-and-miss when faced with the task of removing stray hairs, because it can leave a smeared edge at the point where the hair meets the head. To make the tool perform much better, you simply need to disconnect the stray hairs at this point. So use either the Clone Stamp or the Healing Brush tool and cut off each stray hair at the base. **1** Once done, you can then switch to the Spot Healing Brush tool and paint to get rid of the majority of the strand. **2** If the background is a single uniform colour, it's often easier just to Alt-click with the Brush tool to sample a colour, then paint over the hairs.



before



1



2

TOP WORKFLOW TIP

Sample All Layers

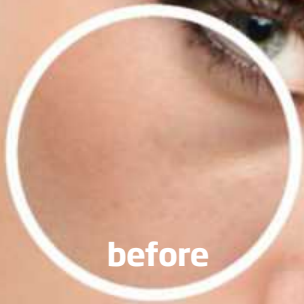
The Spot Healing Brush, Healing Brush and Clone Stamp tool can all be set to Sample All Layers in the tool options, which enables you to work non-destructively on a new empty layer while sampling from all the layers below.

GET RID OF EYE BAGS

Most of us don't get as much sleep as we'd like. It's easy to remove the tell-tale signs...

7

Press Ctrl/Cmd+J to duplicate your background layer, then grab the Patch tool. In the tool options, change to Patch: Normal (rather than Content-Aware). This will retain the texture. Draw a rough selection around the dark patch, leaving a little room around the edges, then drag the selection to a clean area of skin - the forehead usually works. **1** Press Ctrl/Cmd+D, then go to the Layers panel and lower the opacity of the layer until the effect looks more natural. **2** If needs be, switch to the Clone Stamp tool and clone at a low opacity of around 20% to smooth out any rough areas.



before

TOP WORKFLOW TIP

Use a tablet

Tablets come in handy for all kinds of Photoshop work, but especially retouching. A pen is much quicker and more precise than a mouse, and you can programme the tablet's hot keys with all your favourite retouching shortcuts and actions.



[PHOTOGRAPHY GUIDE]

BETTER FAMILY PORTRAITS

Your step-by-step checklist for shooting
fantastic photos of family and friends



BROUGHT TO YOU BY
**Digital
Camera**

1 GETTING STARTED

Different situations require different skills, but you'll use some settings time and again

When you shoot portraits, the sort of image you take — and the settings you need — will largely be down to lighting conditions; specifically whether you're shooting indoors or outdoors, and with or without flash.

Our easy-to-follow, step-by-step flowcharts in this guide cover all of these shooting situations. They all demand slightly different techniques, but there are a few key settings that can be applied on almost any portrait shoot.

The first thing to bear in mind is that you should always try to focus on the eyes, as this is usually the most important part of any portrait. With this in mind, it's usually a good idea to select the autofocus point nearest to your subject's eye manually, rather than let your camera select an AF point selection (and nearest to the closest eye if you're using a wide aperture and their face is at an angle to the camera).

Aperture-wise, if you want a very shallow depth of field — with only the subject's eyes

sharp — you'll obviously need to set as wide an aperture as possible; conversely, if you want more of the subject's face in focus, or if you're shooting more than one person and want them all to be in focus, you'll need to use a narrower aperture.

In either case, aperture is the deciding factor, so it makes sense to choose Aperture Priority mode and then set the aperture.

Once Aperture Priority is set, the challenge is getting a good exposure. If the background is brighter than the subject and you use evaluative metering, the camera will try to expose for the bright background, resulting in the subject being underexposed.

Lighten up

Thankfully, the answer isn't as complicated as you might think: because Caucasian skin is half a stop to a stop lighter than mid-grey, to expose it correctly you simply need to set spot metering, meter off the face (this is automatic if your autofocus point is over the subject) and dial in a half a stop to a stop of positive exposure compensation.

Left to its own devices, your SLR will try to expose skin so that it's a mid-tone, resulting in slight underexposure. Adding some exposure compensation will lighten up the subject's skin tones a touch, resulting in a correct exposure.

“Adding some exposure compensation will lighten up the subject's skin tones”



PORTRAIT ESSENTIALS SETTINGS CHECKLIST

- ◆ Set the AF point manually
- ◆ Use Aperture Priority mode
- ◆ Set a wide aperture to blur everything but the eyes
- ◆ Set a narrow aperture for more detail or group shots
- ◆ Set one-shot drive mode
- ◆ Use spot metering mode
- ◆ Dial in +0.5 to +1 EV

Note: In this guide's step-by-step flowcharts, it's assumed that all these options have been set, unless stated otherwise.

2 USEFUL KIT

Getting great portraits doesn't require any specialist kit, but a few accessories will help

You can shoot strong portraits with any sort of lens, and without anything in the way of accessories, but a few additional bits of kit will definitely improve your hit rate. Some focal lengths are more flattering than others;

a wide maximum aperture will help you achieve better background blur; and a few affordable accessories will enable you to take more control of the lighting to get the effect you're after. Here's a quick overview of the extras that are worth considering.

70-200mm f/2.8 LENS



This is considered a go-to lens by many portrait pros, as its large maximum aperture enables you to shoot handheld without the risk of camera shake in low-light conditions. It also produces beautiful background blur, which helps subjects to really stand out.

REFLECTOR



A reflector is useful for bouncing light into shadows to soften them, for making the most of ambient lighting, for directing the light where you want it, and even for blocking out light when needed. If you're on a tight budget, a sheet of white card will do the job reasonably well.

DIFFUSER



If you have to use flash, be sure to attach a diffuser to soften the light it produces. This will reduce any harsh shadows, resulting in more flattering images. Again, if you're on a budget, you can try fashioning one from a sheet of white card or a plastic milk bottle.

50mm PRIME LENS



Another common lens choice among portrait photographers, 50mm primes typically have very wide maximum apertures. This makes them an ideal choice in low light, or for portraits with an extremely shallow depth of field, where only one eye is in focus.

FLASH



A flash is by no means essential for a portrait shoot – and many portrait pros try to steer clear of them. But they come into their own when you shoot low-light portraits indoors, or if you want to add a subtle burst of fill-light to soften shadows or create a catch-light. So make you have one in your kit bag.

REMOTE FLASH



Another way of reducing the harsh shadows flashguns tend to produce is to use them off-camera. An off-camera flash-cord is one option, but for complete positioning flexibility it's worth investing in a wireless flash trigger and a portable flash stand.

3 KIDS & TODDLERS

Taking portraits of adults is one thing, but children need a slightly different approach

The basic settings we've mentioned work well for adults, but with kids a whole different set of rules applies, especially when capturing candid shots – and if you've ever tried shooting formal portraits of toddlers, you'll be only too aware that candid shots are often the best option!

The problem with kids is that they never sit still long enough to let you capture that carefully crafted composition. In the time it takes to half-press the shutter release and focus, they're a step closer or further away, resulting in out-of-focus images.

Stay on track

The only way around this is to wait until they're still for a moment (this tends to be when they're pre-occupied with a toy or concentrating on something), or to set focus tracking on your camera – that way, when they move, your SLR will automatically try to re-focus. And if you keep it half-pressed, it will refocus continuously. This won't guarantee sharp shots, but at least it will give you a fighting chance.

FIVE TOP TIPS FOR PHOTOGRAPHING KIDS

- 1 Take time to play before getting your camera out
- 2 Show them the images on your LCD to involve them
- 3 Follow them through the viewfinder where possible
- 4 Get down to their eye level for intimate shots
- 5 To get them posing, play a game of Simon Says

It's also a good idea to set continuous drive mode, and to get into the habit of shooting in short bursts – children's expressions are fleeting at best, and often the difference between a grin and a grimace can be measured in milliseconds.

And finally, with portraits of adults you generally have time to select the focus point nearest the subject's eyes. With kids, it's challenging enough getting anything sharp, let alone the eyes, so unless the subject is still for any length of time, selecting the central focus point is often the best option – not least because it tends to be faster to focus, and works better when focus tracking.

“The problem with kids is they never sit still long enough to let you capture that carefully crafted composition”

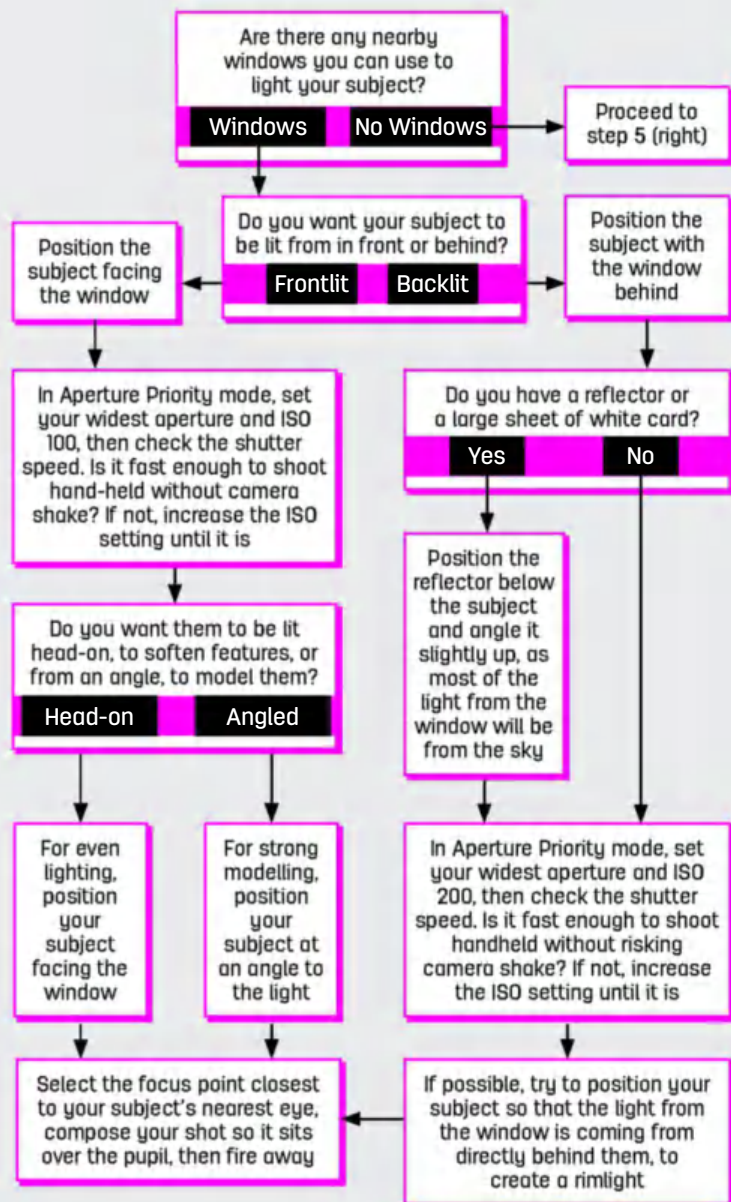


Above Kids move quickly, so focus tracking is essential for ensuring sharp shots

Left Shooting in continuous drive mode will help you to capture a natural laugh, rather than a grimace!

4 SHOOTING INDOORS WITH NATURAL LIGHT

A window and a reflector are all you need to shoot beautifully lit portraits indoors

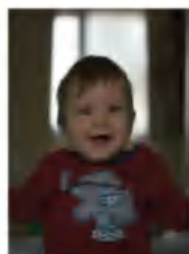
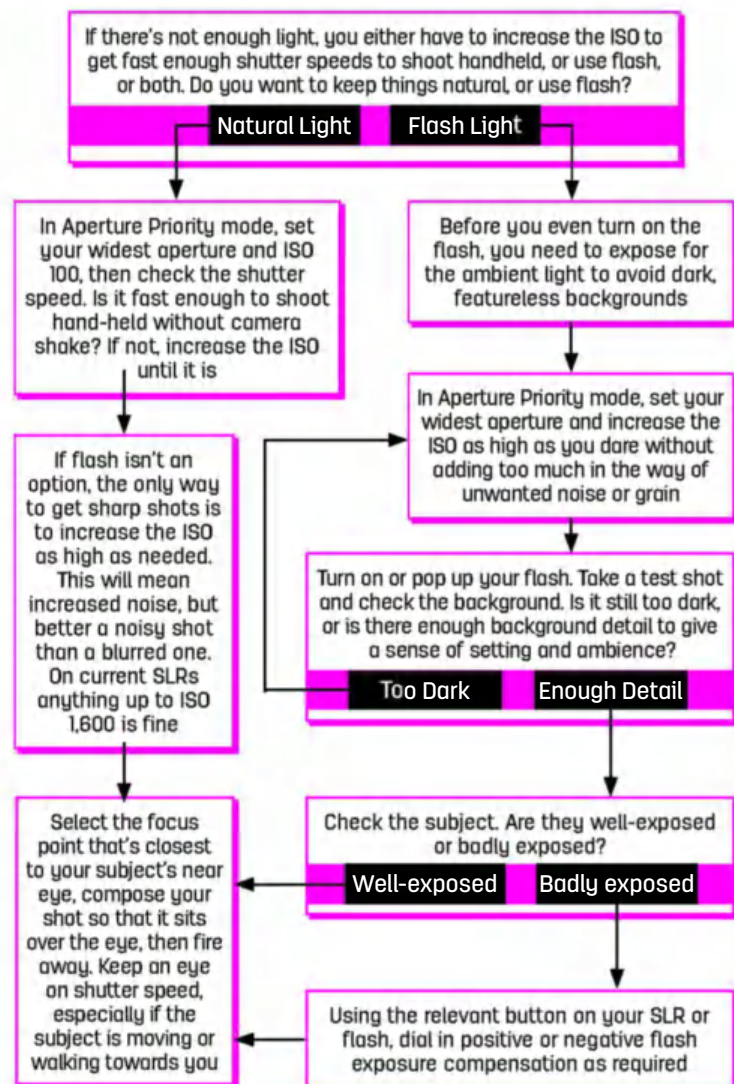


Above Strong backlighting and underexposing by a few stops can be used to create a very striking and graphic profile.

Left On overcast days, windows act like large softboxes, resulting in soft, flattering lighting.

5 SHOOTING INDOORS WITH NATURAL LIGHT

In gloomy interiors, you'll need to combine flash and ambient light



Far left Without a burst of flash, the subject can end up looking much too dark.

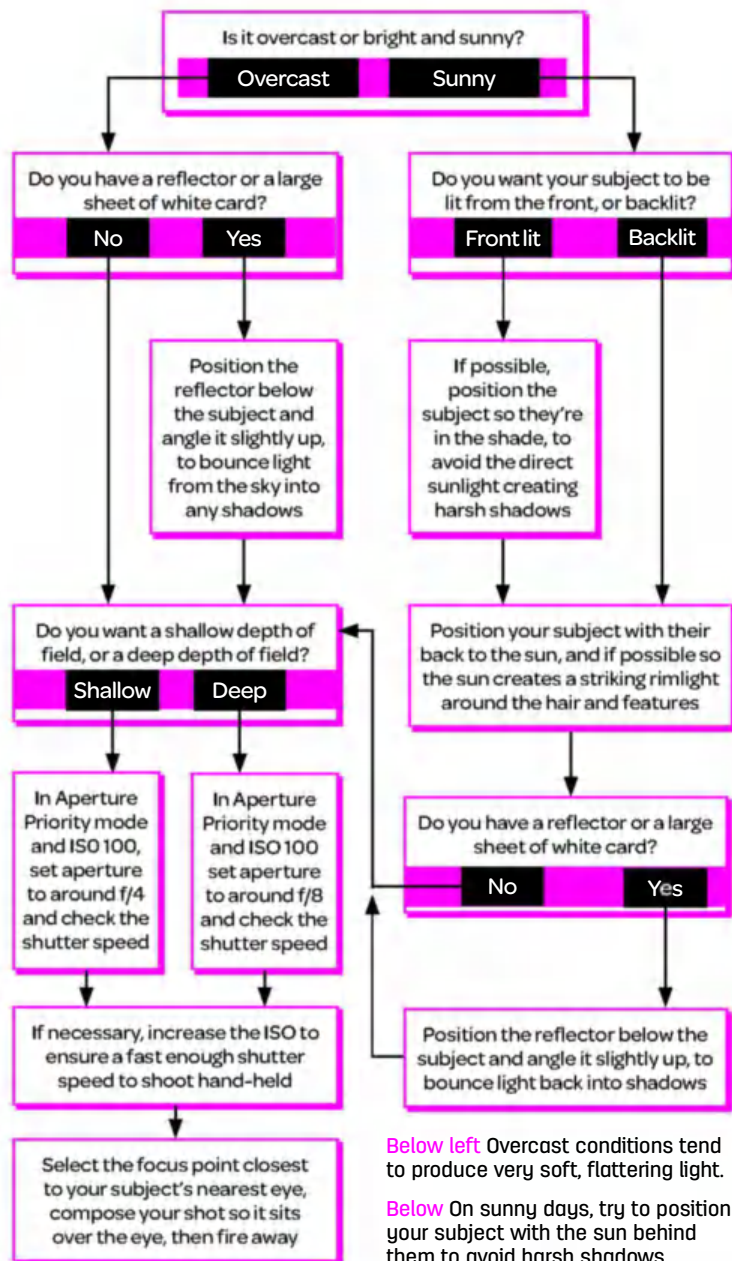
Left Using flash on auto often results in harsh shadows and overly dark backgrounds.

Below Exposing for ambient light first and then adding some fill-flash is much more subtle.



6 SHOOTING OUTDOORS WITH NATURAL LIGHT

Shoot in the shade or with the sun behind your subject to avoid unflattering shadows



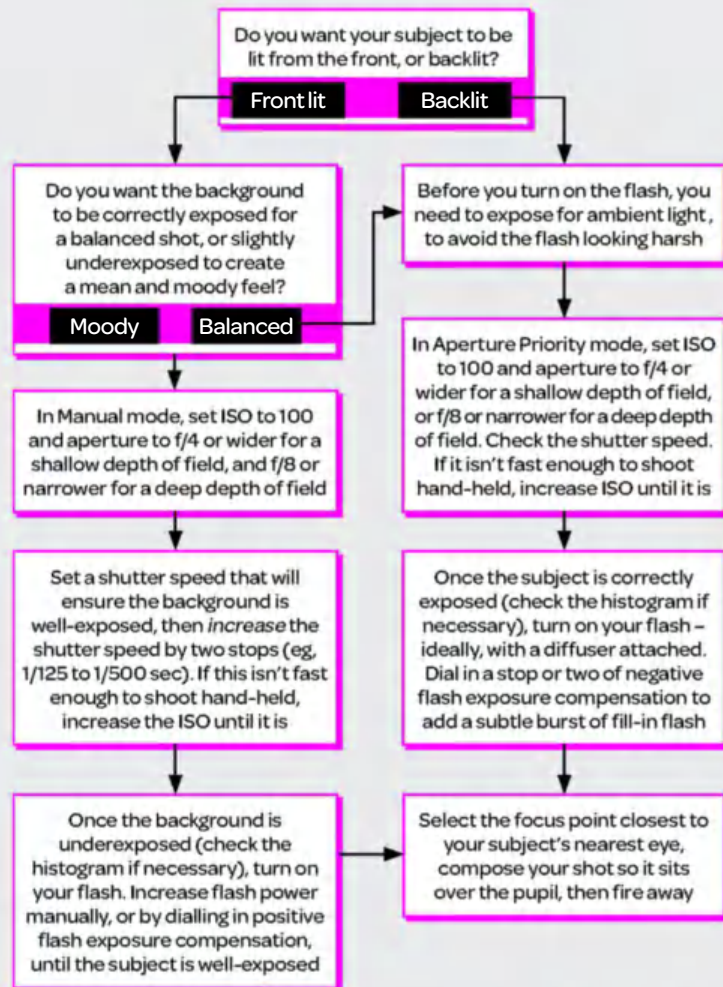
Below left Overcast conditions tend to produce very soft, flattering light.

Below On sunny days, try to position your subject with the sun behind them to avoid harsh shadows.



7 SHOOTING OUTDOORS WITH FLASH

Don't just use flash for indoor portraits – use it to add impact to outdoor shots too

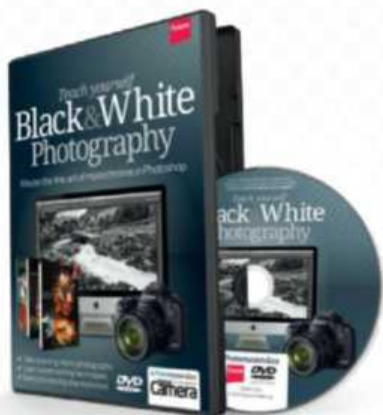


Right Even when shooting outdoors, flash set to auto can often look too harsh.

Far right A subtle burst of fill-flash will result in a more natural-looking shot.

Below Deliberately underexposing the background and adding a burst of flash adds mood.





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