

COLLECT YOUR EXCLUSIVE DIGITAL CAMERA TIP CARDS EVERY MONTH

HOW TO SHOOT... MACRO

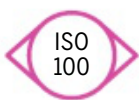
Digital
Camera

OLD TOYS

KIT CHECKLIST...

Camera, tripod, macro lens, toy car/model

FOR YOUR FIRST SHOT, TRY...



TIPS FOR GETTING A GREAT SHOT...

- The closer you are to your subject, the less depth of field you will have. Go for an f-stop of around f/8 to get a good amount of detail. Move your subject away from the background to get beautiful bokeh.
- Take your photos outside in natural light, but avoid bright sunlight.

Future



Get inspired! Check out how Kim Leuenberger takes toy car photography to another level

HOW TO SHOOT... PORTRAITS

Digital
Camera

CAPTURE BEAUTY

KIT CHECKLIST...

Studio lights, clean backdrop, beauty dish

FOR YOUR FIRST SHOT, TRY...



TIPS FOR GETTING A GREAT SHOT...

- Different angles can give totally different looks to your photograph. Try different poses and see which one your model and you like best.
- Light modifiers are especially helpful in a studio. They can give you more dispersed light, making a small light source bigger.

Future



Grab a portable speaker and put some music on to set a good atmosphere for the shoot

HOW TO SHOOT... LANDSCAPES

Digital
Camera

BLUEBELLS

KIT CHECKLIST...

Kit lens, tripod

FOR YOUR FIRST SHOT, TRY...



TIPS FOR GETTING A GREAT SHOT...

- When you're surrounded by a sea of blue flowers, it's easy to forget the need for a subject in your photograph. These trees provide a focal point for the image.
- Think about your angles. To capture the wider bluebell carpets, try shooting from about head height or just below.

David Clapp



When plants are trampled, the bulbs can't produce enough energy to survive, so tread with care

HOW TO SHOOT... NATURE & WILDLIFE

Digital
Camera

HIGH-KEY SHOTS

High-key lighting can turn a horrible photo situation into something more compelling, far more often than you'd think.

Go bright

Work in Aperture Priority and use your camera's spot metering mode to expose your subject. You can now increase exposure compensation for the desired effect.

Background

Find a non-distracting background: that means the background tones should be continuous, without deep shadows.

Slide to the right

On your camera's histogram, your levels should all be leaning to the right.

Shutterstock



This technique is a great way to break out of a photographic rut with a familiar subject

HOW TO SHOOT... BLACK & WHITE

Digital
Camera

STREET

KIT CHECKLIST...

Camera, prime lens

FOR YOUR FIRST SHOT, TRY...



TIPS FOR GETTING A GREAT SHOT...

- Use a fast prime lens and shoot wide-open. Raising your ISO will allow you to crank up your shutter speed and never miss a shot.
- If possible, preview your images on the rear screen in black and white. This will enable you to visualise areas of light.

Getty



It's great returning to the same spot and trying to push yourself to get something new

HOW TO SHOOT... CREATIVE

Digital
Camera

PERSPECTIVE

KIT CHECKLIST...

Camera, wide-angle lens

FOR YOUR FIRST SHOT, TRY...



TIPS FOR GETTING A GREAT SHOT...

- Choice of angle is important here. Try to shoot objects that have a lot of length, and get up close! Even these pelicans look totally different from this angle.
- Wide-angle lenses distort the most towards the corners. Keep your subject near the centre of your frame.

Getty



No matter what the scene is, your image should emphasise the angle and create perspective

HOW TO SHOOT... ACTION

Digital
Camera

WAVES

EIGHT ESSENTIALS YOU NEED

- 1 **Lenses:** Switch between wide and telephoto for a couple of options in frame size.
- 2 **Fast cards:** You'll be shooting many images in burst mode to capture the ultimate shot.
- 3 **Waterproof housing:** Even if you want to shoot from the beach, a housing is essential.
- 4 **Location:** Every country will offer up distinct shooting opportunities.
- 5 **Polarising filter:** A polariser minimises glare and helps to achieve deeper colours.
- 6 **Tripod:** Give yourself the best chance of a sharp image by using a tripod.
- 7 **Light snacks:** Bring fruit and nuts to keep your energy levels up and hunger down.
- 8 **Staying safe:** Start out in some smaller surf and get used to the weight of your kit.

Shutterstock

HOW TO SHOOT... ARCHITECTURE

Digital
Camera

ZOOM IN

We often reach for a wide-angle lens when photographing a building. Zooming in enables you to compose and capture a completely different style of photography.

Plan ahead

Focusing on just a few details within a smaller frame can set your images apart.

Get artistic

Architectural photography has a big place in fine-art photography. As buildings are static structures, you can take your time, plan, experiment and execute well.

Kit

Bring your tripod. You'll likely be using a focal length between 200-400mm.



Bring a friend and challenge each other on who can find the most interesting composition

HOW TO SHOOT... NATURE & WILDLIFE

Digital
Camera

MONOCHROME

No matter what style you are shooting, monochrome images will always bring dramatic impact to your images.

Know when to shoot mono

Try to find scenes that are naturally full of contrast to create the best impact.

Details

Monochrome photos help you to see the textures, lines, patterns, contrasts and tones within an image.

Harsh light

We often avoid harsh sunlight, but once converted to mono, the midday sun can produce a dramatically lit scene.

Christine Sponchia / Pixabay



Aim for clean backgrounds. Keeping things simple will produce amazing results



APERTURE



ISO



SHUTTER SPEED

ON TEST CANON EOS-1D X MARK III • PHOTOBOOKS
PHOTO BACKPACK BUYING GUIDE • NIKON D780



Digital camera World

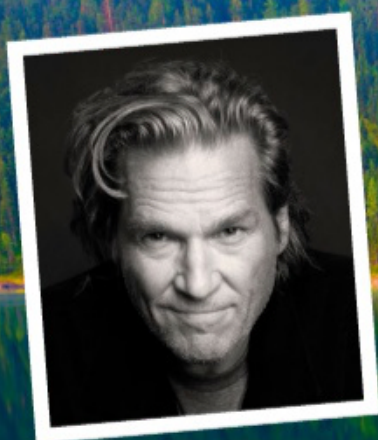
*The world's favorite
photography magazine*

Issue 227 April 2020 • www.digitalcameraworld.com

SHOOT
BETTER
PHOTOS
TODAY!

**UNLEASH THE
POWER OF
RAW!**

✓ Settings ✓ Workflow ✓ Editing
Shoot your best-ever photos today



INTERVIEW

Actor turned
photographer
Jeff Bridges



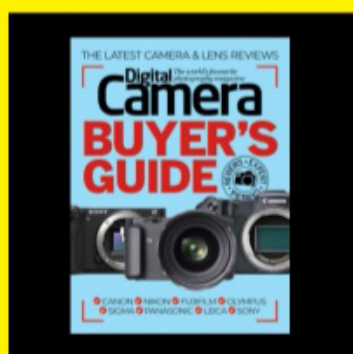
DSLRs ON TEST

Nikon D780
Canon EOS-1D X III

FREE! WITH THIS ISSUE



9 all-new photo
tips cards



190-page photo
gear guide



71 minutes of
video training



20 raw presets
for Photoshop

148
pages of
essential
photo
advice

VERSATILITY MEETS AGILITY



CAPTURE TOMORROW

D780

From fast-moving action to rich 4K HDR video, the new Nikon D780 helps your vision take flight. Its unique combination of autofocus systems offers the best of both worlds. Optical viewfinder shooting gives you fast and accurate AF with flagship tracking capabilities. Whilst live view shooting brings all the advantages of focal-plane phase-detection AF technology, including eye-detection AF and 273 focus points. Combined with shutter speeds from 1/8000 to 900 seconds, and advanced video and time-lapse features, the D780 embodies true versatility.

24.5 MP | ISO 100-51200 | 51-POINT AF | 273-POINT HYBRID AF | 4K UHD, HDR (HLG) VIDEO

For more information visit www.nikon.co.uk



**23,745**Print **19,530** Digital **4,215**

Jan-Dec 2019

A member of the Audit Bureau of Circulations

Future Publishing, Quay House, The Ambury, Bath BA1 1UA
Editorial +44 (0)1225 442244 • www.digitalcameraworld.com
Subscriptions and Customer Services +44 (0)1604 251 045

EditorialEditor **Niall Hampton** niall.hampton@futurenet.comContributing editors **Marcus Hawkins & Claire Gillo**Technique editor **Alistair Campbell**alistair.campbell@futurenet.comArt editor **Roddy Llewellyn** richard.llewellyn@futurenet.comOperations editor **Richard Hill** richard.hill@futurenet.comGroup reviews editor **Rod Lawton** rod.lawton@futurenet.comImaging labs manager **Ben Andrews**ben.andrews@futurenet.comSenior art editor **Rebecca Shaw** rebecca.shaw@futurenet.com**Contributors**

James Abbott, Jon Adams, Benedict Brain, Tim Cornbill,
 Andrew James, Quintin Lake, Cliff Newman, Matthew Richards,
 Sean McCormack, Andy McLaughlin, James Paterson

Cover image Getty Images

Photography Bath Photo Studio

All copyrights and trademarks are recognised and respected

AdvertisingCommercial director **Clare Dove** clare.dove@futurenet.comAdvertising sales manager **Michael Pyatt**michael.pyatt@futurenet.comAccount director **Matt Bailey** matt.bailey@futurenet.comAccount director **George Lucas** george.lucas@futurenet.com

Media packs are available on request

International

Digital Camera is available for licensing. Contact the
 Licensing team to discuss partnership opportunities

Head of print licensing **Rachel Shaw**licensing@futurenet.com**Subscriptions**Email enquiries contact@myfavouritemagazines.co.uk

UK order line & enquiries 0344 848 2852

Overseas order line and enquiries +44 (0) 344 848 2852

Online orders & enquiries www.myfavouritemagazines.co.ukMagazines marketing director **Sharon Todd****Circulation**Head of newstrade **Tim Mathers****Production**Head of production US & UK **Mark Constance**Production project manager **Clare Scott**Advertising production manager **Joanne Crosby**Digital editions controller **Jason Hudson**Production manager **Vivienne Calvert****Management**Brand director **Matt Pierce**Content director **Chris George** chris.george@futurenet.comHead of art & design **Rodney Dive**Chief revenue officer **Zack Sullivan****Printed by**

William Gibbons on behalf of Future

Distributed by

Marketforce, 5 Churchill Place, Canary Wharf, London E14 5HU

www.marketforce.co.uk Tel: 020 3787 9001

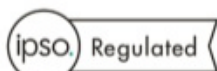
We are committed to only using magazine paper which is
 derived from responsibly managed, certified forestry and
 chlorine-free manufacture. The paper in this magazine was
 sourced and produced from sustainable managed forests,
 conforming to strict environmental and socioeconomic
 standards. The manufacturing paper mill and printer
 hold full FSC and PEFC certification and accreditation.

All contents © 2020 Future Publishing Limited or published
 under licence. All rights reserved. No part of this magazine may

be used, stored, transmitted or reproduced in any way without the prior written
 permission of the publisher. Future Publishing Limited (company number 2008885)
 is registered in England and Wales. Registered office: Quay House, The Ambury,
 Bath BA1 1UA. All information contained in this publication is for information only
 and is, as far as we are aware, correct at the time of going to press. Future cannot
 accept any responsibility for errors or inaccuracies in such information. You are
 advised to contact manufacturers and retailers directly with regard to the price
 of products/services referred to in this publication. Apps and websites mentioned
 in this publication are not under our control. We are not responsible for their
 contents or any other changes or updates to them. This magazine is fully
 independent and not affiliated in any way with the companies mentioned heretofore.

If you submit material to us, you warrant that you own the material and/or have
 the necessary rights/permissions to supply the material and you automatically grant
 Future and its licensees a licence to publish your submission in whole or in part
 in any/all issues and/or editions of publications, in any format published worldwide
 and on associated websites, social media channels and associated products.
 Any material you submit is sent at your own risk and, although every care is taken,
 neither Future nor its employees, agents, subcontractors or licensees shall be liable
 for loss or damage. We assume all unsolicited material is for publication unless
 otherwise stated, and reserve the right to edit, amend, adapt all submissions.

ISSN 1477172 (Digital Camera) 1479001 (Digital Camera World)



Future plc is a public
 company quoted on the
 London Stock Exchange
 (symbol: FUTR)
www.futureplc.com

Chief executive **Zillah Byng-Thorne**
 Non-executive chairman **Richard Huntingford**
 Chief financial officer **Penny Ladkin-Brand**

Tel +44 (0)1225 442 244

Welcome



ring out the best from your captures with our
 essential guide getting the most from raw files
 – James Paterson is on hand with 12 pages of
 expert advice (p42). Shooting in raw is what we

definitely recommend if you try any of the all-new projects
 in Photo Active (p14), while other inspiration this month
 includes the photographic storytelling practised by Alec
 Soth (p8) and the work of the Hollywood actor turned
 photographer Jeff Bridges (p134). Camera College (p56)
 has everything you could ever need
 to know about image stabilisation,
 and you'll find six new image editing
 tutorials, from page 71. Kit reviews
 this issue include in-depth tests of two
 major new DSLRs, the Nikon D780 and
 Canon's EOS-1D X MkIII, plus we reveal
 the best photobooks for presenting
 your images (p130). Enjoy the issue.

Niall Hampton, Editor
niall.hampton@futurenet.com



Save £10/\$10
 on Luminar 4
 with this exclusive
 discount code: **DCW20**
 Order today at
skylum.com

Follow us or get in touch...



[www.facebook.com/
 Digitalcameraworld](http://www.facebook.com/Digitalcameraworld)
 Keep up to date on social media



Instagram:
@digitalcameramag
 Another way to follow us

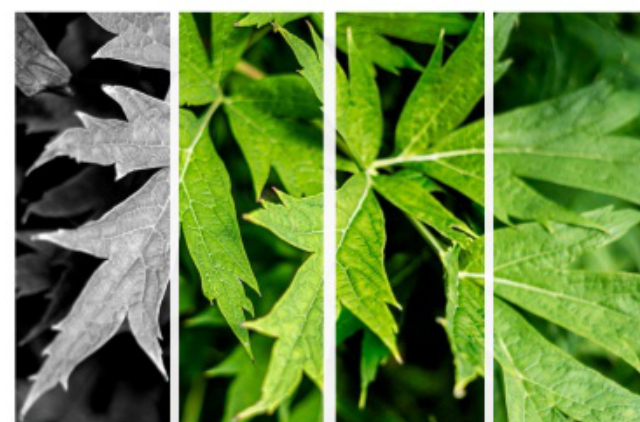


Email:
digitalcamera@futurenet.com
 Please mark the subject clearly

Contents

20
FREE RAW
PRESETS!
to transform
your images

ISSUE 227
APRIL 2020



71

Practical Photoshop _ Techniques for drawing detail out of your photos, plus more image-editing skills



110

Nikon D780 _ This new full-frame DSLR builds on the stellar reputation of the D750. Discover our verdict

Photo skills

- 8 Alec Soth**
Storytelling lessons from the award-winning American photographer
- 14 Photo Active**
Fresh angles on your photography, including artistic reflections, classic headshots and fast-moving food
- 38 The Art of Seeing**
Take travel photos without leaving your home
- 42 Raw photography**
Master shooting and editing the most effective and versatile file format for photography, with James Paterson
- 56 Camera College**
Everything you ever wanted to know about image stabilisation
- 63 Shot of the Month**
Liam Wong's Tokyo vision
- 71 Practical Photoshop**
Image-editing tutorials galore!

Regulars

- 40 Subscription offer**
Two brilliant bookazines, every issue delivered to your door, and big savings
- 64 Hotshots**
Our pick from Team UK's entries into the World Photographic Cup contest
- 92 Shootout**
Two readers try street photography in Portobello Road Market
- 98 Photo Answers**
Your photo problems solved
- 102 Perimeter**
Quintin Lake exits Scotland
- 104 In Focus**
New cameras and more
- 134 Jeff Bridges**
The acting legend shares the best of his on-set photography
- 146 What the f-stop!**
Pit your brains against our expert

Gear & tests

- 110 Nikon D780**
This keenly priced full-frame DSLR has learned a trick from mirrorless models
- 114 Canon EOS-1D X Mk III**
A bundle of new technology awaits in the world's most advanced camera
- 118 Sony E 16-55mm f/2.8 G**
A terrific new standard zoom lens for Sony E-mount mirrorless cameras
- 120 Standard zooms for mirrorless cameras**
Upgrading from your kit lens? Here are options from Olympus, Sony and more
- 128 Mini Test: Editing apps**
Photoshop and rivals on your phone
- 130 Mini Test: Photo books**
For your most treasured photos
- 132 Help Me Buy a... Photo backpack**
Go out with your camera in style

Get 2 great photo bookazines when you subscribe!
Page 40



This month's contributors



8

Alec Soth _ This photographer is acclaimed for fusing classic documentary style with a modern take. In a new masterclass for Magnum Learn, he shares his guidelines for including storytelling elements in your own images



134

Jeff Bridges _ This Hollywood mainstay is compulsively watchable in every film he makes – and he's got a great photography track record, too. As his second collection comes out, he talks to *Digital Camera* about his work

14 Photo Active _ Discover 10 ways bring creative new approaches to your photography this month, including making the most of toy action figures, shooting abstract reflections and staging a fast food shoot in your home



Magnum Photos

Alec Soth
Award-winning photographer

Alec has built an impeccable reputation for his photos, and has now launched a Magnum Learn online masterclass. Discover some of his tips on page 8.



Pepe Castro

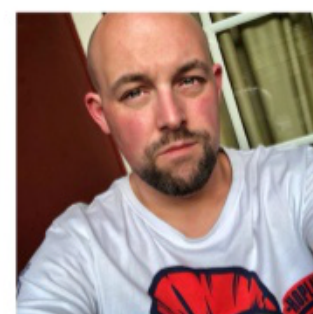
Jeff Bridges
Actor and photographer

Jeff fell in love with panoramic photographs years ago, and shoots photos on-set for every film he appears in. See his work on page 134.



Jamie Bubb
Portrait photographer

One of Jamie's photo projects sees him capturing vehicle owners with their prized possessions. He shares his portrait and car tips on page 34.



Gary Rivers
Action figure photographer

Gary has built on his lifelong love of action figures to create small-scale versions of fan-favourite movies, from *Star Wars* to *Terminator*. Meet him on page 30.



Quintin Lake
Roving photographer

Quintin reaches a milestone in his ambitious photo walk this issue, as he prepares to leave Scotland and return to England. Catch up with him on page 102.



James Paterson
Photographer and journalist

James comes up with fresh image-editing approaches for us every issue. On page 42, he shares his techniques for shooting and editing raw.

Free gifts

Download the disc for this issue via www.bit.ly/dc227disc

NEW-LOOK TIPS CARDS!

- ✓ 9 subjects
- ✓ Techniques
- ✓ Settings
- ✓ Kit list

9 all-new tips cards

Our collectable shooting tips cards enable you to carry handy settings and suggestions around in your kit bag, ready for when you need them. This issue, get wallet-sized advice on the new bluebell season, high-key wildlife photos and capturing beauty.



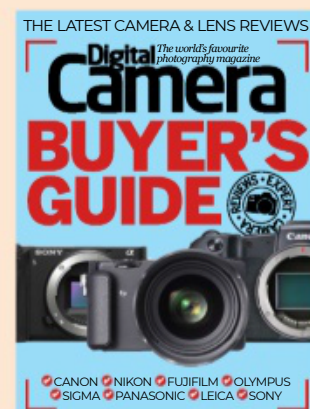
20
FREE RAW
PRESETS!
to transform
your images

20 raw presets

Add these presets to Photoshop CC and transform your photos in seconds. Find them in the Gifts folder on the disc, then see page 72 for Jon Adams' guide.

Camera Shopper ebook

Looking to buy a camera or a lens? There are plenty of reviews of new gear in this issue, but this 176-page PDF guide will give you reviews of even more SLRs, CSCs and lenses. Find the PDF in the Gifts folder on the disc.



PRACTICAL Photoshop®

SENSATIONAL IMAGES MADE SIMPLE!

71
MINUTES
OF VIDEO



SHOULDER BAG ADVICE

How to choose the right bag for you



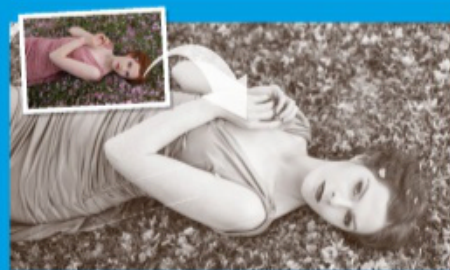
STEP BY STEP

New looks for your photos



TOOL SCHOOL

Explore Photoshop's Filter Gallery



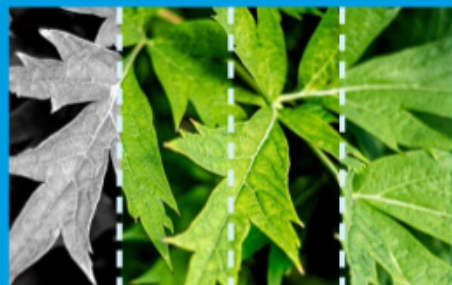
FUNDAMENTALS

Create a vintage effect in Lightroom



Whenever you see this logo, you can find related content on this issue's video disc.

FILE & VIDEO
Download the
disc: www.bit.ly/dc227disc



GET THE LOOK

Four ways to bring out detail



RAW WAR

Two ways to enhance a cityscape



JUST FOR FUN

Turn a portrait into a sketch



Tre Cime di Lavaredo

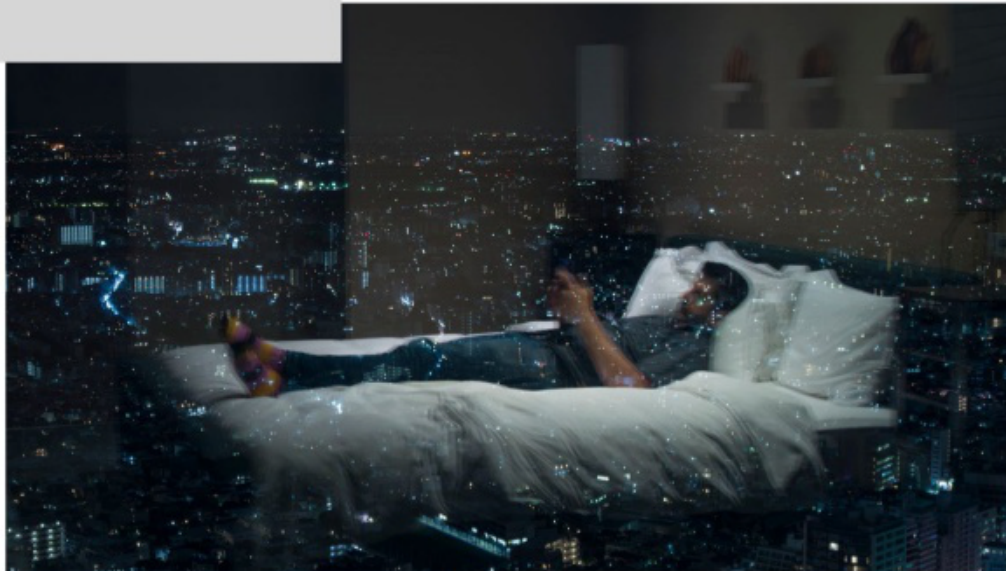
by [Cuma Çevik](#)

I took this photo during my trip to the Dolomites in Tre Cime di Lavaredo in October. I set out to find different compositions on a very windy day. This photo is tough to edit because it was taken at noon in the harsh sunlight. I used the AI Sky Enhancer, Details Enhancer, Matte Look, Mystical, Fog, Orton Effect and Split Toning tools in Luminar to get the moody tones and epic look I wanted.



Cuma Çevik is a professional Turkish photographer and filmmaker based in London. Though Cuma was interested in oil painting, he studied to be a social studies teacher when the art academy proved too costly. It was during university that he took up photography as a creative outlet. Upon graduation, Cuma began traveling the world to shoot stunning outdoor scenes. He was drawn to landscape photography thanks to the rich nature he was surrounded by in the Turkish city of Bolu and has been drawn even closer to landscapes as he's voyaged around the world.

cumacevik.co.uk



© Alec Soth / Magnum Photos



Alec Soth Photographer

Based in Minnesota, Alec has authored over 25 books including *Sleeping by the Mississippi*, *NIAGARA* and *Songbook*, and is a member of Magnum Photos. magnumphotos.com/photographer/alec-soth

W

ith notable works including *Sleeping by the Mississippi*, *Niagara* and *Broken Manual*, the American

photographer Alec Soth is widely celebrated for his distinctive – and often surprising – images. Halfway through the last decade, though, he stepped back from photography and spent a year making sculpture instead.

Fortunately for his followers, this period was only a sabbatical from photography and gave Soth the space and time to recharge and recalibrate. In 2019, he returned with *I Know How Furiously Your Heart is Beating*, a work that stood out from much of his previous output.

This collection of images is inspired by one of Soth's favourite poems (*The Gray Room* by Wallace Stevens) and explores the intimacy of personal space.

A case study about the book and how it was put together is just one element in *Alec Soth: Photographic Storytelling*, the latest course from Magnum Learn, the online learning portal of the Magnum Photos agency.

Storytelling is a vital aspect of photography and, as one of its leading contemporary exponents, Soth is a great choice to helm this course. He offers a range of insights into his creative process and working practices, delivered via interviews and behind-the-scenes case studies.

An eloquent and engaging tutor, Soth doesn't shy away from talking about the setbacks he has faced during his career. And his insightful advice for overcoming them and moving forward is a key takeaway of the course.

When looking at collections of thought-provoking images by leading photographers, it's easy to overlook how much time and effort they had to expend along the way. In the course, Soth explains that it took him around 10 years to find his photographic voice before his breakthrough work, *Sleeping by the Mississippi*. A collection of images inspired by America's second-largest river, which flows from Minnesota to Louisiana, Soth says that *Sleeping by the Mississippi* is a metaphor for wandering: "It's photos along the river, but not necessarily of the river." →



A close-up, profile shot of a man with a beard and mustache, wearing a dark baseball cap with a red logo. He is looking slightly to the left, and his hand is near his chin. The background is blurred, showing another person's ear and part of a face.

Pro in focus: Alec Soth

Meet a master storyteller

Alec Soth is regarded as one of our leading contemporary visual storytellers, and helms the latest online course from Magnum Photos. Niall Hampton finds out more



Alec Soth on location at a county fair in one of the course's three case studies.

Photographic storytelling

Enthusiast and aspiring photographers can learn much from this discipline

Having clear goals in mind before picking up your camera will help overcome any creative block, and will really help your development as a photographer. This is why *Digital Camera* always recommends starting a new year with a particular photo project to engage with over the following months. Photographic storytelling is a key aspect of an established photographer's practice, but enthusiasts can also learn much from it. Alec Soth is a celebrated practitioner of photographic storytelling, but in the beginning he had to figure it out through trial and error, developing projects into more long-form pieces of work. One of the best pieces of advice he offers is to work on more than one thing simultaneously: "Keep balls in the air so you're not over-invested in one area."



Keen to capture a sense of cold giving way to warm as the reader turns the pages, Soth photographed a succession of what he calls "dreamer characters", who had decided to live their lives in different ways to other people. At the start of the book, we meet Peter, who had lived on a houseboat for 25 years, and Charles, dressed in a flight suit and clutching a toy plane in both hands. It's arguably Soth's most famous photograph (*pictured opposite, top right*). Further along, there's Lenny – photographed in his home sitting in his underwear, with his dog for company – who tells Soth he dreams of living to 100.

“

Soth photographed a succession of “dreamer characters” for his first major work, *Sleeping by the Mississippi*

During the course, Soth describes how getting to photograph these subjects was a random process. Driving around, he would see something distinctive or intriguing in a particular area, stop his car and knock on doors. Thanks to Soth's use of an 8x10 large-format camera, the images are replete with fine details, and this really helped when he came to sequence the images afterwards.

Soth followed *Sleeping by the Mississippi* with *NIAGARA*, a body of work that explores love and long-term relationships at this popular honeymoon destination on the US/Canada border. Both books are still available, after recent reprints by the publisher MACK, unlike *Broken Manual*, Soth's next major work. *Broken Manual* was inspired by the story of Eric Rudolph, who bombed the Atlanta Olympics in 1996 and went to ground while being pursued by the FBI. Soth says his first two major works were based on geography, but *Broken Manual* was conceived as a guidebook to escape from society.

With colour and black-and-white images, some grainy and some detailed, and appearing in a disordered sequence, Soth notes that the book lives up to its title: it's a manual that really doesn't work and is a comment on the impossibility of running away. "Part of what *Broken Manual* is all about are the ways in which this fantasy is so impossible to realise; we need other people."

Initially published as a run of 300 copies, *Broken Manual* sold out. As there was never a subsequent print run, it is highly prized by collectors today.

Other key works in the wake of *Broken Manual* included *Songbook*, which followed a collaboration with Brad Zellar, the co-founder with Soth of Little Brown Mushroom, a multimedia enterprise that focuses on visual storytelling. The pair travelled —→



Name	Anna, Kentfield, California, USA, 2017
Work	<i>I Know How Furiously Your Heart is Beating</i> (2019)



Name	Charles, Vasa, Minnesota, USA, 2002
Work	<i>Sleeping by the Mississippi</i> (2004)



Name	Ute's books, Odessa, Ukraine, 2018
Work	<i>I Know How Furiously Your Heart is Beating</i> (2019)



Name	Melissa, Flamingo Inn, Canada, 2005
Work	<i>NIAGARA</i> (2006)

Images © Alec Soth / Magnum Photos



around eight US states, working as a reporter and photographer covering local events, and producing a newsprint publication, the *LBM Dispatches*. This wasn't Soth's first work to appear on newsprint, though; he used it for *The Last Days of W*, which marked the end of George W Bush's presidency in 2008.

Featuring a series of photographs made to document eight years of life in America under President Bush, Soth gathered the images for this alongside his other work, showing the benefits of having more than one photographic project in progress at one time.

Songbook (2015) gave Soth the chance to create a more lyrical version of the *LBM*

Dispatches. Following an extended spell teaching teenagers across the US in his Winnebago Workshops, Soth felt he needed to reflect on the beginnings of his career and took up meditation. He found that this changed his sense of identity as a photographer.

"I have always viewed photography as separation: you're separated [from your subject] by a piece of glass. I didn't want to make pictures anymore that came out of disconnection... I wanted to celebrate the connections between things instead."

After his sabbatical from photography, Soth photographed Anna Halprin, a dancer

and choreographer at her home – "a woman whose art was all about connection" – and although he didn't want to start a new project, this and other images he shot became *I Know How Furiously Your Heart is Beating* (2019).

Lighter in tone than Soth's previous works, the book includes the use of subtle recurring motifs as links between some of the images – birds, in this case – and to emphasise the sense of connection the photographer is striving to capture. With other hallmarks of his photography on display, *I Know How Furiously Your Heart is Beating* is a significant addition to Soth's body of work and leaves his fans curious to discover what he will do next... ●

Advice on visual storytelling from Alec Soth

Alec Soth: Photographic Storytelling consists of 19 themed lessons and case studies. Here are just some examples of the course tutor's many insightful observations and useful advice

1 Look outside photography for inspiration – Soth cites the work of film directors and poets. Poetry is complementary to photography because there are gaps and a lack of information.

2 Acknowledge the things that authentically inspire you: authenticity makes things interesting. "It's good practice to write things down and to [keep a] journal," says Soth.

3 For Soth, photography is the art of editing: "The very act of taking a photograph is leaving something out."

4 Digital cameras may have made photographers more productive, but "all the more reason to spend more time on the editing and sequencing and putting images together in a meaningful way."

5 It's useful to develop some critical distance from your photographs, says Soth, by not starting to edit any new images straight after taking them.

6 Soth suggests printing images out small on a laser printer, then looking at them together, in pairs or batches of five, to establish how they can flow best.

How to sign up for the course

Alec Soth: Photographic Storytelling is the second course to be offered on Magnum Learn, the online learning portal of Magnum Photos. It runs for over four hours and costs \$99. To watch the trailer, and find out how to sign up, go to: learn.magnumphotos.com



OLYMPUS

OM-D
E-M1 Mark III



NO LIMITS. BREAK FREE.

Take your professional photography to new heights and never get weighed down.

The new Olympus E-M1 Mark III is amazingly compact and lightweight and fits perfectly in your hand.

It packs pro-level technology and superior image stabilization – so you're free to go further with your handheld shooting style.

With uncompromising image quality and weathersealed construction, the E-M1 Mark III is your ultimate tool for getting the breathtaking results you want in all conditions – from nature, landscape, and night shots to videos.

Find out more at your local Olympus retailer or go to olympus.co.uk #breakfreewitholympus

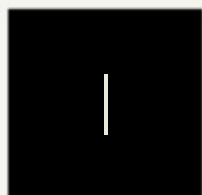
Photo Active

10 things to shoot, edit or create this month, including perfect headshots, fast food and action figures

1 | CREATIVE

Seeing the light

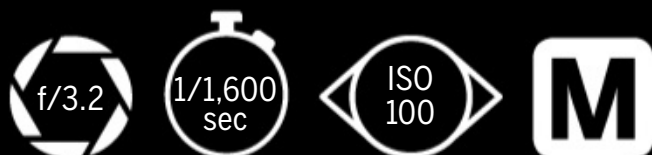
Niamh Cottle shows how you can turn a simple fragment of reflected light into an abstract artwork

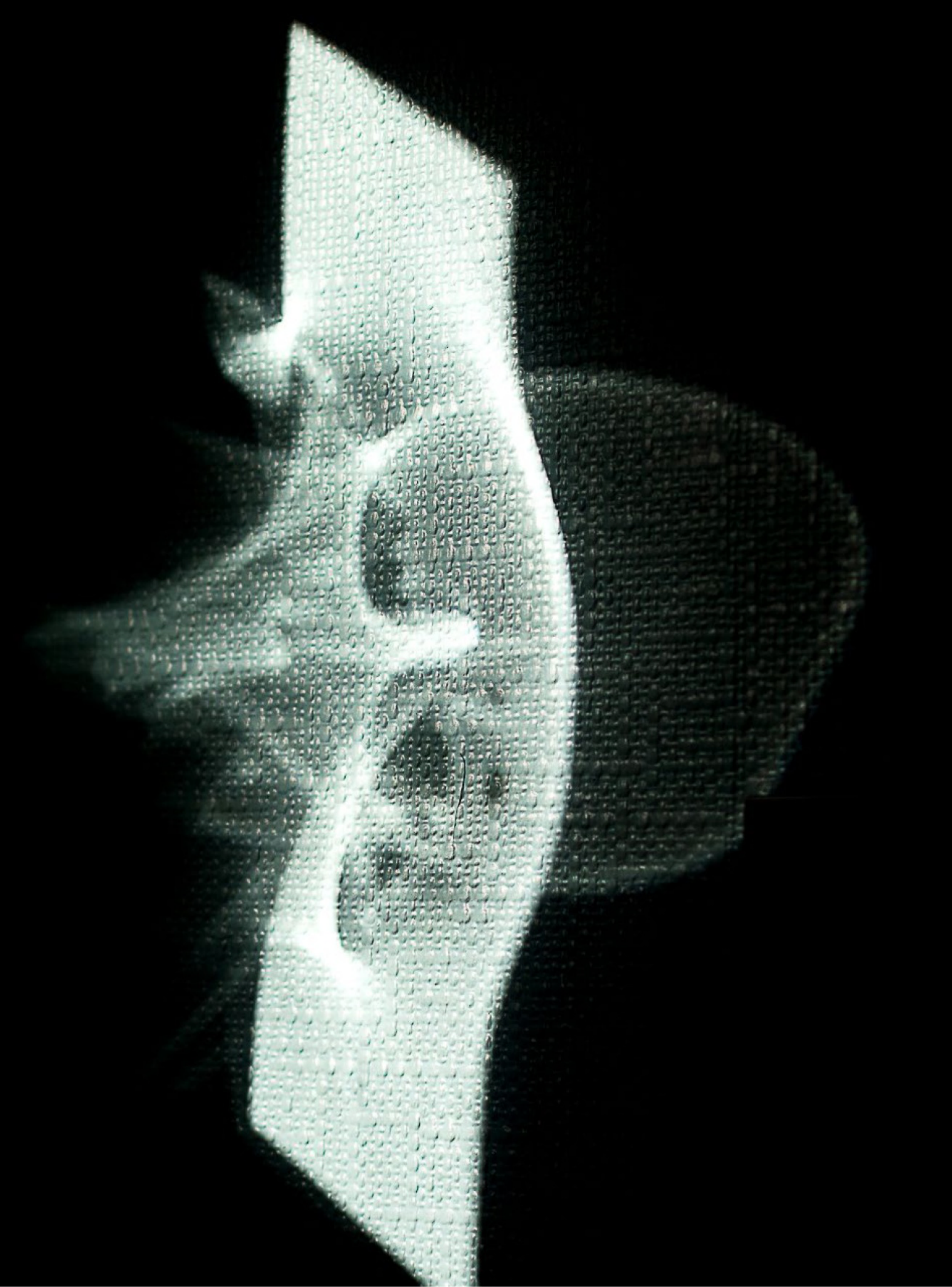


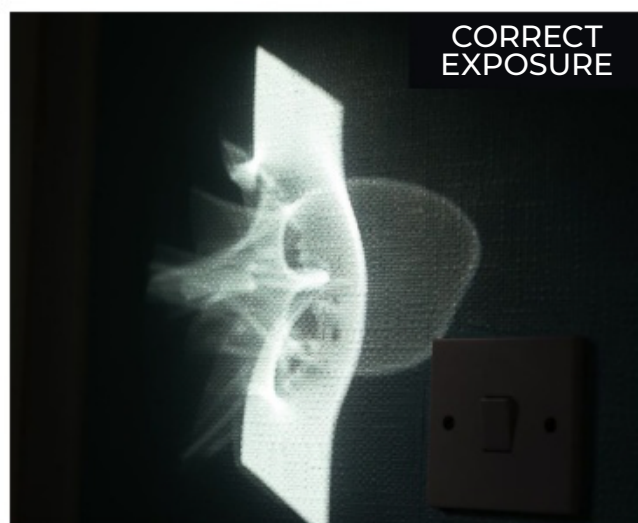
In this project we are going to achieve some distinctive images by capturing reflections that are made by natural light. You'll experiment with abstraction, isolating a reflection to create a different view. Your observational skills and ability to spot opportunities are key tools for taking this kind of photograph.

Using a tripod to steady your camera, you can frame the shot and proceed using your camera's manual mode. You need this full level of control, as this type of shot can easily be overexposed, losing important detail. During editing, we will enhance the image to make sure the background is dark and the light is the main subject.

Niamh Cottle







1

Set up the shot

Find a reflection, which could be inside or outdoors.

Here it's the reflection on the wall to the right. The tripod is key to this technique: it enables you to keep the camera steady while you use Live View mode, so you can work out the exposure you need to highlight the light of the reflection. Using a 50mm lens or similar gives you more flexibility in changing the aperture.

2

Take the shot

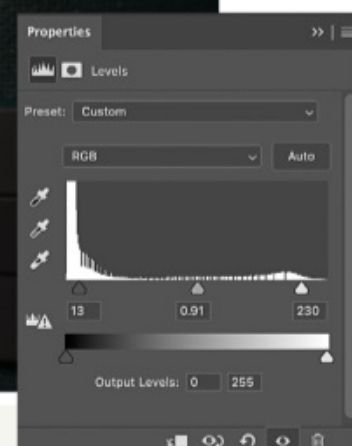
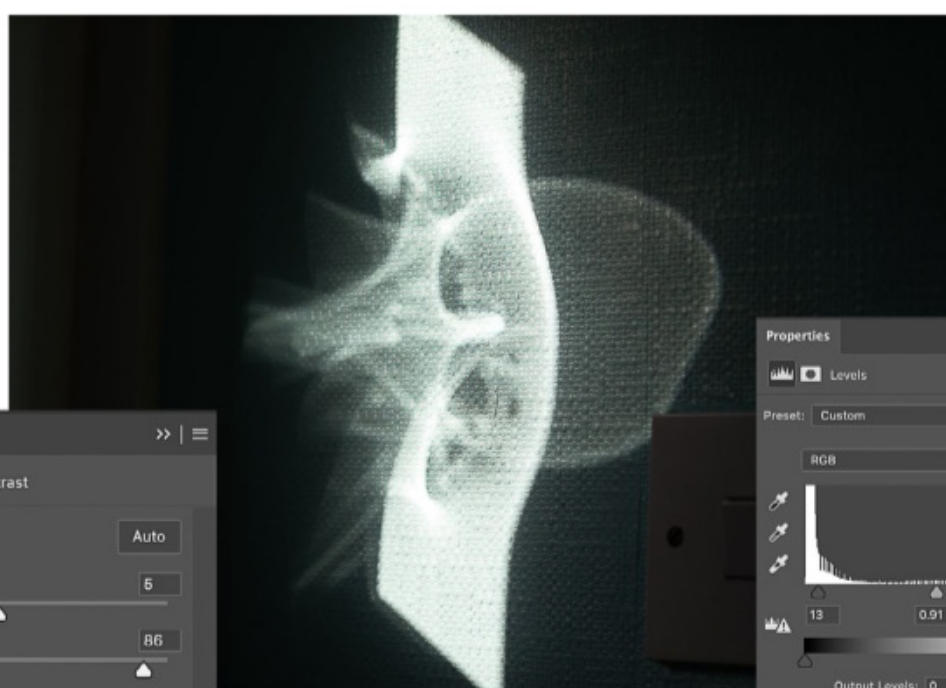
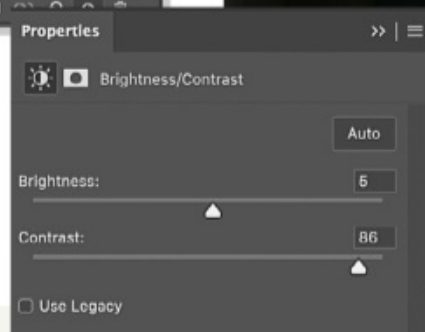
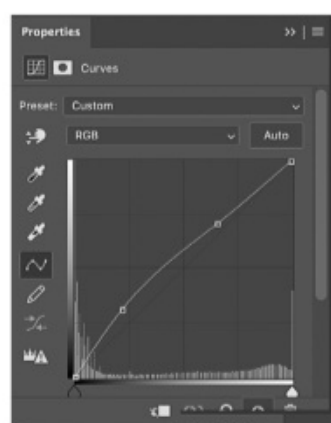
The strength of light can change constantly and affect the reflection you're shooting, so you need to be adaptable with your settings. Your priority is to keep the background as dark as possible, to heighten the contrast between light and dark. This requires a fast shutter speed and a wide aperture. (Try something like 1/1,000 sec at f/2.8 or f/4; you may to raise the ISO setting to achieve this.) You want to get the light as bright as possible without overexposing it and losing detail.



3

Edit the image

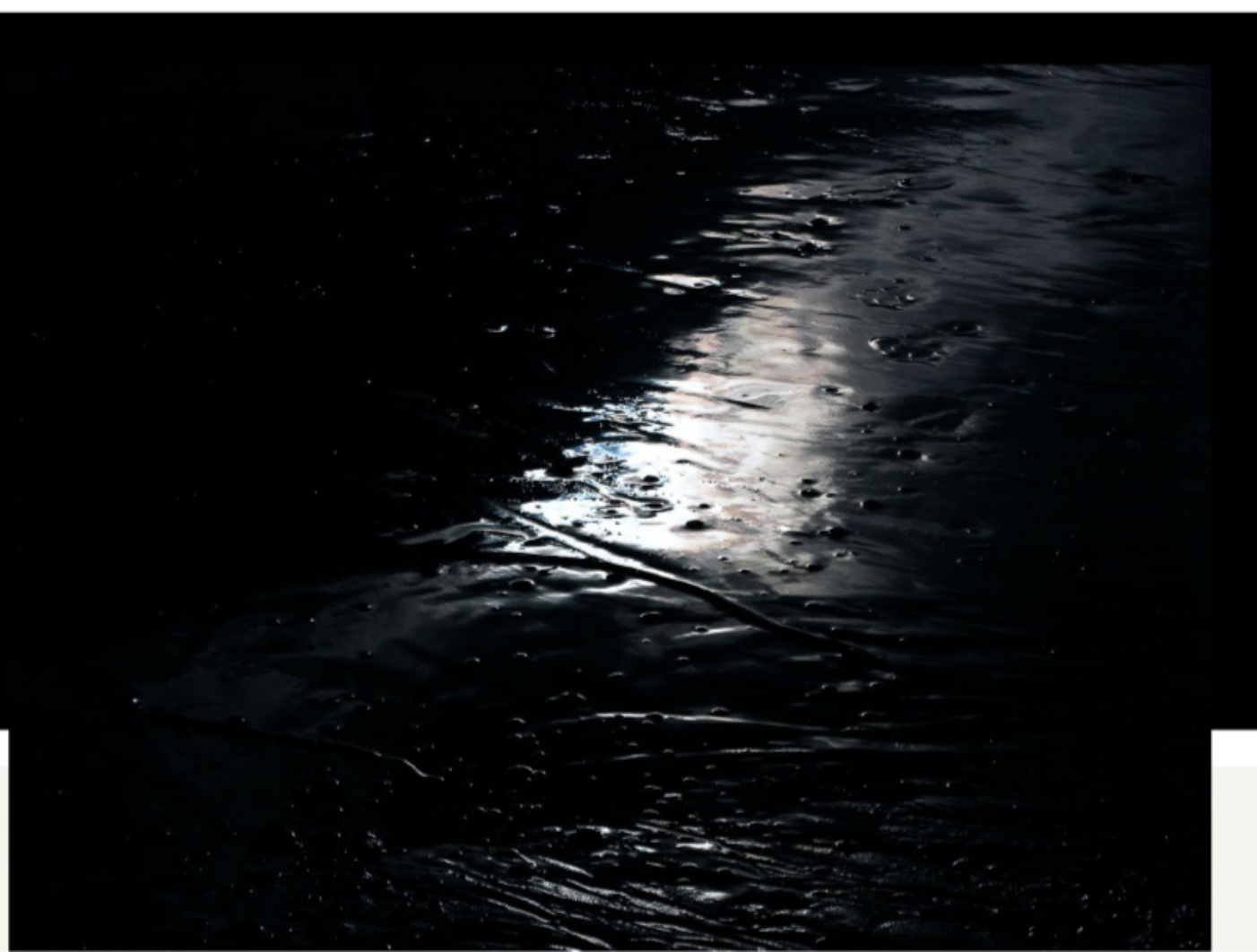
While you're editing your photograph, you need to concentrate on Brightness and Contrast. As you used a wide aperture, the brightness may need to be adjusted slightly, otherwise the detail of the reflection will be lost and overexposed. The contrast needs to increase to make the surrounding black. You could also use Curves or Levels to make these adjustments.



Adapt to your surroundings

This technique can be adapted for different environments. The weather is forever changing, so always be aware of light and its reflections. This outdoors image, highlighting light across a wet beach, was taken with an exposure of 1/1,600 sec at f/22.

Finding abstraction within your scene is a great skill: you're showing a natural subject in a more creative way, asking the viewer to question the subject of the photograph and how the image was created...



The compact, travel friendly design features reverse folding legs, perfect for photographers who travel with mirrorless or DSLR cameras.

Available in two sizes, in carbon fibre or aluminium! All supplied with a removable ball head complete with an Arca-style quick release plate, carry case and spiked feet.



Vist us on stand D101 at

The Photography Show | **The Video Show**

14 - 17 MARCH 2020 THE NEC, BIRMINGHAM

to see the new iFoto
additions!

Learn more at <http://bit.ly/benroifoto>

 @benroletsgo  @benrouk  @benro_uk



2 | CREATIVE

Creative close-ups

As spring approaches, **Claire Gillo** reveals how to shoot fresh-looking macro shots

M

acro photography and flowers are like two peas in a pod! The two together just simply make sense. Flowers are incredibly intricate and detailed when you view them from a close perspective, and the variety of bold bright colours they provide makes them a popular subject.

When it came to setting up this macro flower shot, I used a CD as my background, and set up an external flashgun to light it. (See the tips below for more information.) I put my camera into its manual mode

and dialled the aperture down to f/11. To sync the shutter speed with the flashgun, I set the shutter speed to 1/200 sec, and I kept the ISO low at 100. As I had the flash positioned close to the flower, I balanced the flashgun strength at 1/8 power.

After you take a test shot, it's important to check your histogram to ensure your exposure is reading correctly. For this shot, I wanted to be sure that the highlights in the flower didn't overexpose, as it would wash out the rich orange colour.



1 CD background

You know that pile of redundant CDs you still have stored away, and keep thinking you must get rid of? Hang on to them! They make a fantastic backdrop for close-up shots. If you angle your light source carefully, you can create a rainbow effect from the reflective surface. It's a trial and error approach to get it right, but it's well worth the effort.



2 Lighting

To light this flower and create the rainbow effect from the CD, I used one external flashgun pointing directly at the flower. I used a remote trigger to fire the flash and set the flash strength to 1/8 power in manual mode. When you shoot with flash yourself, using manual mode is by far the easiest method and gives you the most control.



3 Choose the right lens

It helps to use a macro lens with a 1:1 aspect ratio to get super close-up shots – but if you don't have one of these, you could use a reversing ring and switch your standard lens around the other way. Set your camera up on a tripod, and focus manually. If your flower is positioned at an angle to the camera, consider focus stacking for sharper results.



Since 1977, Tenba has been designing tough, expertly crafted bags and cases that provide uncompromising protection to photographers and filmmakers.

To see our collections
visit us on stand D101

The Photography Show | **The Video Show**
14 - 17 MARCH 2020 THE NEC, BIRMINGHAM

Learn more: tenba.com

@TenbaBagsUK @TenbaUK @TenbaUK

3 | PORTRAITS

Master headshots

Alistair Campbell
explains how to get great
results every time for this
classic portrait format

Fundamentally a headshot should be really simple. It's one person, sitting or standing still, and all you need are three or four good photographs. The classic headshot is a photograph of a person's face that usually includes their shoulders.

Model: Rhiane Hacker

1 Clothing

Neutral colours tend to put the focus on the face, which is the ultimate goal. Avoid shirts with collars, logos or patterns, or tops with lots of bright colours. These draw attention to themselves which we do not want – keep things simple and clean!

2 Backgrounds

Traditionally headshots were taken on a solid black or white backdrop, but recently things have moved on. Great backdrops are easy to find. Use colours, find lines, and get a little creative! Use local streets with natural light to produce great results – this will also help keep your equipment costs to an absolute minimum.

3 Lighting

Studio photography can be difficult when you don't have appropriate lights or backgrounds readily available. Shooting in natural light is easy – if you are out on a day where there is harsh light, just head for a shaded area. This will give you an even and consistent exposure, providing a smooth surface of light to complement the skin tones of your willing subject.

4 Camera settings

Use a shallow depth of field to make your subject stand out. Set your f-stop between f/1.4 and f/2.8. Put your focal point on the eyes and double-check the shot afterwards. Make sure that your shutter speed is at least 1/125 sec. Keep your ISO low, especially if the subject has dark hair or clothing, to keep noise out of the darker areas.

5 Relax

If you're relaxed, then the person you are photographing will be relaxed. Chat with them and take photos while you're doing it; if the shoot becomes too formal, that's where problems can arise. Always keep things positive. The first 10 minutes are going to be awkward until you both start to loosen up.

6 Post-processing

If you're shooting headshots for someone, chances are they will be for a pretty specific reason. Find out before the shoot how they need the final images to look. Great headshots should not need too much editing work: it should be a fair representation of that person, not an image heavily airbrushed with a lack of real skin detail or with overprocessed effects like fake lens flares.

CLOTHING ADVICE

Avoid shirts with collars, logos or patterns, or tops with lots of bright colours. These all call attention to themselves, which we do not need! And formal shirts can make your subject look like a corporate manager rather than a creative individual.



Alistair Campbell



A PANAVISION COMPANY



March 2020

leefilters.com

Have a light bulb moment

Claire Gillo shows you how to blend two images to put a scene into a light bulb

Photoshop was designed for exactly this type of job! Creating a surreal effect like this is a fun thing to do. Although it requires a bit of patience and decent observational skills, if you work in separate layers you'll find the job far easier. Working across layers enables you to return to different parts of the image and keep tweaking them until everything is matching perfectly.

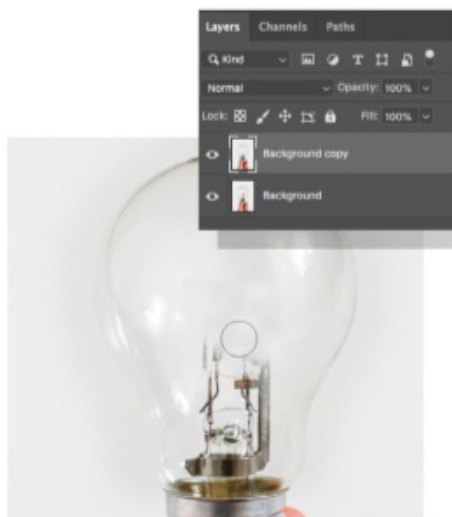
My own start images are on the disc if you want to practise with these, but if you want to use your own shots, find something that has been taken against a white background, as it makes it far easier to blend the two images together (providing your light bulb has also been shot against white).

Before

After

1 Clone

Open the light bulb start image and duplicate the background layer. Go to the Clone Tool and remove the inner part of the light bulb. (Hold Alt/Option and click to select the clone point, and brush over the unwanted part of the light bulb.) While you're doing this, keep as many of the reflections intact within the bulb as you can: you'll need these later.



2 Add the tree

Import your other starting image of the tree over into the light bulb image as a new layer. Reduce the Opacity of the tree layer to 50% and place into position. You may need to adjust the scale of the image (Ctrl/Cmd+ T). Press Return once you're satisfied with the scale and position.



3 Layer Mask

Add a layer mask to the tree layer image. Using a hard black brush on the mask, paint away any parts of the tree image outside the light bulb. Once you have gone carefully around the outside, you can increase the Opacity of the tree layer back to 100% and fine-tune your selection. Next, get a soft brush at 50% Opacity, and paint around the edges of the light bulb to soften.



4 Curves and colour

Click the Adjustment Layer icon in the Layers Panel Curves, then click it again and select Color Balance. Right-click on each of these new Adjustment Layers and select Create Clipping Mask. Any adjustments you make to these layers will now only be applied to the layer below. You can return to tweak the settings on these layers after the next stage.



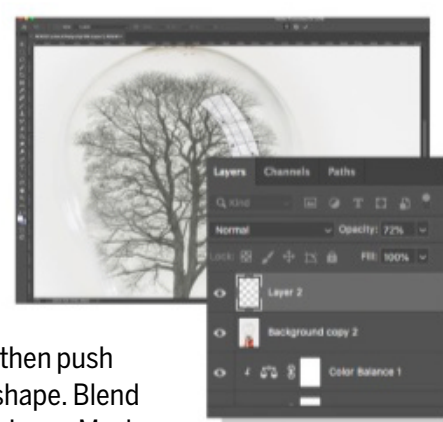
5 Blending Mode

Duplicate your cloned light bulb image at the bottom of the layer stack and drag it to the top. Change this layer's Blending Mode to Screen and Opacity to 35%. This creates the impression that the image is inside the light bulb. At this stage you can return to your Curves Adjustment Layer to darken the image down; use the Color Balance Adjustment Layer to add a hint of yellow to the highlights.



6 Fake reflection

Finally, let's add a fake reflection to the top of the light bulb. Add a new layer and make a small rectangle shape using the Rectangle Marquee Tool. Paint this in with a white brush, then deselect (Ctrl/Cmd+D) the rectangle. Change the Opacity of the layer to 70%. To distort the shape, go to Edit > Transform > Warp, then push and pull the points into a curved sausage shape. Blend the edges of the fake lightstrip by adding a Layer Mask and running a black brush at a reduced Opacity around the edge.



SEE OUR AWARD-WINNING COLLECTIONS AND NEW PRODUCTS AT THE PHOTOGRAPHY SHOW 2020: STAND F61



**The
Photography
Show**

14-17 MARCH 2020 THE NEC, BIRMINGHAM

**The
Video
Show**

 **VANGUARD**
#MakeUpYourOwnMind

5 | FOOD

Fast food

Claire Gillo reveals how to throw food into the frame using flash and a few props from around the home

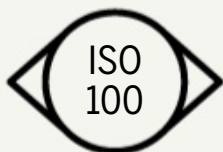
If you enjoy setting up shots in the comfort of your own home, this is the perfect project for you! Not only will it test your technical skills, but it's also a fun creative challenge that will push you to be experimental with your photography.

To try this yourself, you will need:

- A backdrop – this could be a piece of card or a sheet)
- Two flashguns; you can make do with one if you don't have two, but you will need another light source like a lamp to light the backdrop)
- A reflector, or tinfoil wrapped around card if you don't have one
- A diffuser panel; if you don't have one, some greaseproof paper over a cardboard frame will do the trick
- Food and props

I fired my flash units using a remote trigger, but if you don't have one of these, you can use on-camera flash. I fired the flashes through two separate channels, as they were set to different strengths.

Finally, a word of warning: as you are throwing food around, it can get messy, so a cloth and a vacuum cleaner are essential after your shoot!



Claire Gillo



1

The setting

To create the fast food setup, I hung up a grey backdrop, and placed down a colourful table cloth. As a bonus, the circles in the cloth mirrored the cereal hoops! I then positioned a breakfast bowl in the middle of the frame and filled it with cereal. A couple of daffodils were dropped in on one side to bring in colour, and fruit was scattered around as well. Mount your camera onto a tripod and keep tweaking the composition and the positioning of objects in the frame until you're happy.

2

Lights

Next I set up the lights. For this shoot, I used two external flash units and a reflector. It's easier to build your lighting setup one light at a time. That way you can see where the light is falling from each unit, and tweak the positioning for perfect results.

The key light was placed at the front of the setup, and I used a diffuser panel to spread the light more evenly. To light the background behind and remove most of the shadows there, I placed one of the flashguns behind the cereal box. The reflector was placed to the side of this flashgun, to bounce light back in on the backdrop.



3

Camera and flash settings

I put the camera into manual mode and synced the shutter speed to the flash, firing at 1/200 sec. The ISO was set low at 100 and the aperture was f/16. To balance the flash light to the camera settings, I had the front flash on channel A firing at full power, and the flashgun at the back on channel B, at its lowest setting of 1/128 power.





4

Getting the timing right

Achieving the falling cereal was simply a case of me dropping it into the frame, and experimenting with the timing and quantity. I found the best method was to drop a full bowl at once, and to fire the shutter straight after the release. You will have some mistakes and some keepers, so keep trying! To make it easier, shoot two separate exposures of the milk and the cereal. If you have an extra pair of hands, you could try and do them together, but it might be trickier!

Cereal

Milk



5

The final edit

I edited the two images (cereal and milk) together in Photoshop. You need to bring both images over into one document, with the milk layer on top. To cut out the milk, I used the Pen Tool to get accurate results. Simply zoom into the picture and place markers around the falling milk. The Pen Tool will create a new Shape Layer. Once you're happy with your selection, you can move the milk layer above the Shape Layer in the Layers Panel, right-click on the top layer, and select Create Clipping Mask to paste the milk into the shape.

Where the milk had made a splash at the bottom of the bowl, I opted to duplicate the milk layer, add a black Layer Mask and use a white brush to paint back the parts I wanted to reveal. Finally on a merged top layer, I used a grey paint brush at a reduced Opacity (around 20%) to smooth out the background for a flawless result.





Alistair Campbell

6 | LIGHTROOM

Pastel palette

Alistair Campbell explains how to take control of colour in Lightroom

Pastel is defined as a soft and delicate shade of colour. Although it can be used on any type of photo, this particular effect tends to work well on outdoor scenes with grass, sky and clouds. Pastels aren't overly intense or elaborate: they simply add a clean, subtle and nostalgic look.

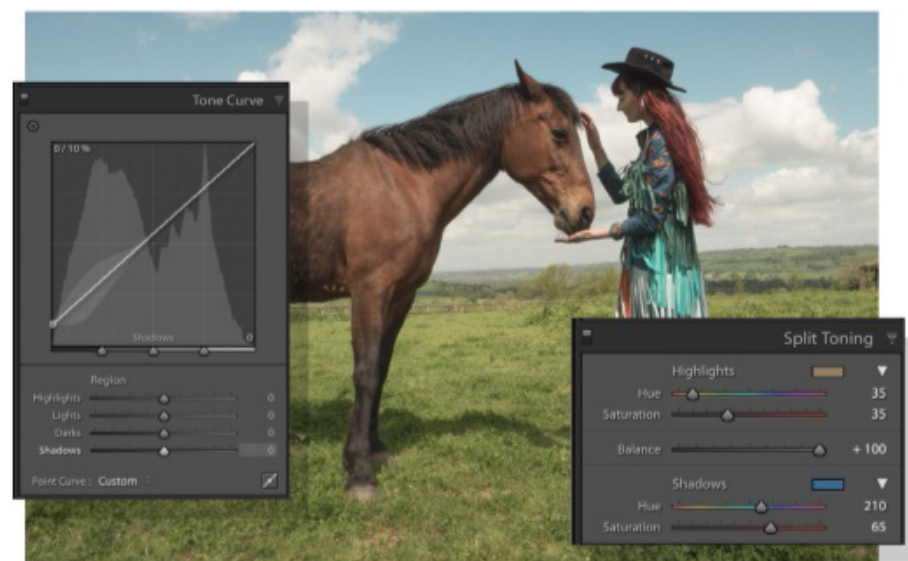
You can easily make a pastel effect in Lightroom. Depending on how you shot your image these settings may vary, but they serve as a good guide to getting a similar effect.



1

Basic adjustments

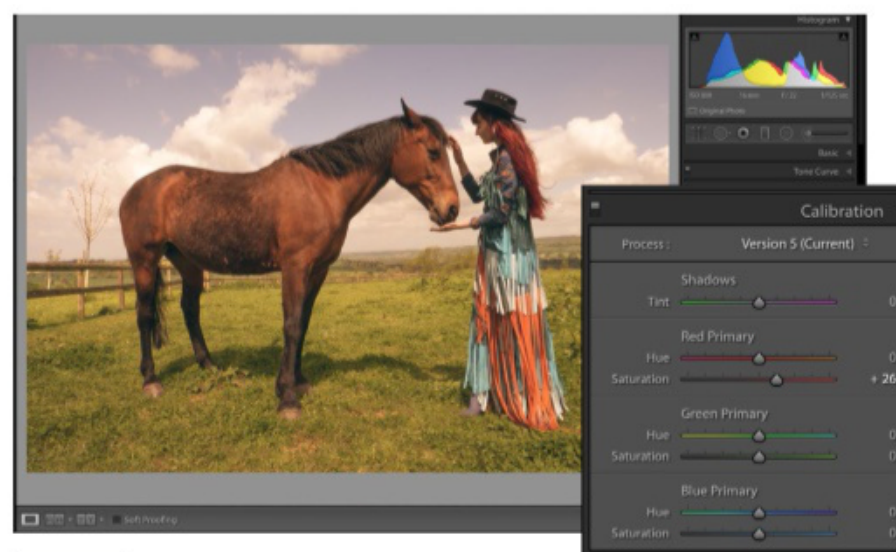
In the Develop Module, open up the Basic Panel. Increase the warmth of your image a little more than you normally would. Set Exposure +0.35, Contrast +10, Shadows +40, Blacks +15 and finally Vibrance +10. Reduce Saturation to -20.



2

Tone Curve and Split Toning

In the Tone Curve Panel, click and drag the bottom anchor point up, until you get a value of 0/9%. Now open the Split Toning Panel. Under Highlights set Hue to 35 and Saturation to 35. Under Shadows, set Hue to 210 and Saturation to 65.



3

Calibration and tweaks

By now you might find that your photo has lost some of its skin tones. Head to the Camera Calibration Panel; under Red Primary, bump up Saturation to +25. If it doesn't look quite right you can open the Hue, Saturation and Luminance Panel. Here we've changed the overall hue of the Blues, Aquas and Greens for our final look.



LANDSCAPE

PHOTOGRAPHER OF THE YEAR

OPEN FOR ENTRIES

ENTER UNTIL 5 APRIL 2020

www.lpoty.co.uk



@uklpoty

Photo Credit: Melvin Nicholson

COMPETITION PARTNERS

THE SUNDAY TIMES
magazine



LIGHT & LAND





7 | TOY PHOTOGRAPHY

A force to be reckoned with

Gary Rivers reveals the techniques behind his action figure recreations of Star Wars and other movies

Gary Rivers came to photography through a lifelong interest in action figures. His Instagram feed is a feast of meticulously staged cinematic shots – some recreating film scenes, some wholly new.

What led you to become a toy photographer?

I had a very active imagination as a child, which still continues today. Some of my earliest memories were receiving *Star Wars* figures for Christmas. From a very young age, I've always loved action figures, and I've never really stopped collecting them.

Then Instagram came along; it was easy to find groups of like-minded people. I initially used the platform to show off my toy collection. I eventually started to see more and more people photographing their figures outside, or posed in a diorama to look like a real scene. When I started, many people were just using their phone cameras and lots of different editing apps to make the toys come alive. And I think that's the whole point of toy photography: to breath life into our toys and to tell a story with them.

Many toy photographers began upgrading to DSLR cameras and I soon craved one myself, as the phone camera was really showing its limitations. After doing a little research, I purchased a Canon 700D with a kit lens, and it took my hobby to the next level.

How do you go about designing and building your sets?

My sets/dioramas are used for the sole purpose of photographing the figures, so I try to think about how I can get the most use out of them, but also keep them practical for shooting. I've mostly created dioramas based on the locations in the *Star Wars* films. My most effective ones are made from simple materials like foam board, filler and paint.

What do you use for your special effects, like lasers and lighting?

I use a mixture of special effects depending on the result I want. If I'm shooting indoors, good lighting is essential, but it doesn't have to be fancy. With a lot of the more sci-fi type shots I do, and since I only use my iPhone for editing my photos, I like to use a variety of apps that can add lens flares or laser beams.

I have used practical effects in the past. Simply throwing dirt with a high shutter speed or burst mode can yield great results.

Do aspiring toy photographers need specialised lenses like macro to begin?

I would say you don't actually need any specialised lenses to begin with. Like I said, I started by using my phone camera. Apart from the kit lens, I did purchase a relatively cheap Canon 50mm f/1.4 lens. The shallow depth of field it provides is fantastic for focusing on the smaller figures.

What inspires you to carry on creating?

Collecting figures is a never-ending hobby. New ones are being released all of the time, and there's such a diverse range to choose from nowadays. They are starting to look very realistic, too.

The toy photography community has grown so much over the past few years, and everyone is so supportive of each other. I've made some lifelong friends through toy photography, and it drives me to continue to be creative every day.

What were the early challenges you faced, and how did you combat them?

When I first started out, I didn't have any lighting, dioramas or photography gear. I was very limited with what I could do – but I still had a big imagination. I used to take



photos of my figures with my phone camera, usually next to a window, where the lighting was good. Then I would use an array of apps to cut out the figure and place them into a more fantastical background.

I would say that an even easier way to get into toy photography is to take them outside, get down to their level, try to avoid objects that ruin the sense of scale, and most of all, have fun doing it!

What were the limitations of a phone that drove you towards getting a DSLR?

The main reason was the ability to have more control over the actual photography. For example, a longer exposure time for shooting in low light, and a shallow depth of field for that lovely bokeh effect that works so well with toy photography.

What lighting do you use?

I have a small selection of cheap lights that all do the trick while shooting indoors – a warmer bulb in a lampshade, and a couple of cheap cooler-toned LED lights. I do have some more expensive Lumecubes, although I would argue that they're unnecessary to get the desired result. I've used printer paper to diffuse lights and even the torch on my phone to add an extra key light in some scenes.

Instagram: @mr_gizmo_

RIGHT: Gary builds his own sets and stages his action figures to create scenes from the movies, including this moment from *Star Wars: A New Hope*.

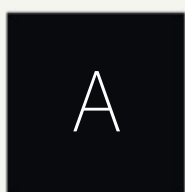


Urban
Photography
Part 6 of 6

8 | URBAN

Impactful composition

Tim Cornbill guides you
through several ways to
compose architectural shots



Architectural photography is all about using the composition to best show the features that make a building worth capturing.

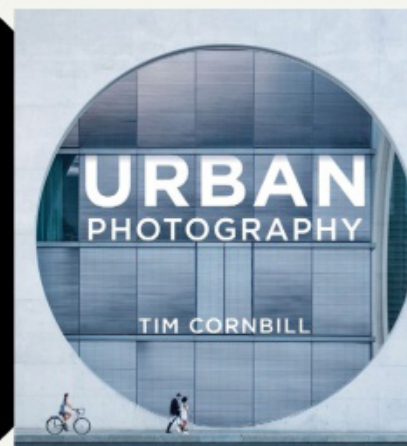
Understanding how to work with balance and geometry is a big part of it; the artistry and style you bring to a shot depend on your vision, as well as factors like time of day and the context.

Every building you stand in, and every piece of public space you occupy, has

been designed by someone. The architect, landscape architect or town planner has spent years thinking about how you experience a space, and how spaces will work in connection with each other. Knowing this, you can begin to decode the buildings that form the urban fabric around you.

Look for clues in buildings. It's no coincidence that the walls of buildings next to each other line up, or that the paving around them is aligned with the

Urban Photography
by Tim Cornbill
is published by Ilex
www.illex.press



Tim's tips and techniques for urban composition

1

Use geometry and shapes

Geometry is a key thing to consider for composition, so look out for strong shapes in architectural elements. It could be a circle, which is a great shape to concentrate in the centre of a photograph, or a solid square. A spiral is always a powerful shape, combining a continuous line for the eye to follow.

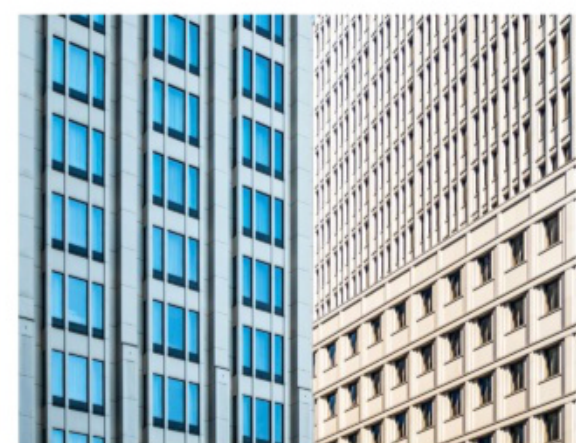
Different shapes bring different associations, which may change according to different contexts. When you find a shape, think about what it signifies to you, and how you can express that association in your photograph.



2

Create leading lines

When you look at most buildings, you instantly notice that they are composed of a series of lines and angles. The leading line principle uses these to draw the viewer's eye through a photograph. It might be a line of columns receding into the distance; clearly defined floorboards leading your eye to one corner of the frame; or street markings that point towards the subject. In a built-up city, getting in close and capturing two buildings with no space in-between can give you a lot of lines to lead the viewer's eye all around the frame.



3

Look for symmetry

Most buildings are designed with a certain degree of symmetry, but this doesn't need to be interpreted in the literal sense when you approach a photograph. Symmetry can be implied simply by having a central line down the centre of the composition. It can also be created more loosely by finding two objects that are similar and positioning them equally from the centre of the frame. Here, by using the gap between two similar buildings, it was possible to add an extra dimension and show something in the distance.



4

Try abstract framing

The empty space in an image can be just as important as the main subject. This approach makes your focal point just a small part of an otherwise empty frame. It doesn't have to be literally empty – abstract surroundings such as a cloudy sky or a blurred background work for this too. By enhancing the negative space in the composition, you define the subject as the positive space, and you can make a more powerful statement about the subject. Minimalist photos can be achieved by creating a composition of clean lines.



columns on the front of a structure. Really think about how the building makes you feel and try to capture that with your photography. The best architectural photographers find interesting compositions through their experience of the space – ones that were not even imagined by the architect.

Here, I'll show a few compositional tricks that are particularly relevant to architectural photography...

www.timcornbillphotography.com

Tim Cornbill



9 | PORTRAITS

Vroom with a view

Jamie Bubb shares his tips for shooting cars and their proud owners

A

t heart, I'm a designer. I grew up drawing Judge Dredd, went to art college, and ended up studying illustration at degree level.

Photography came into my life around 15 years ago, when I was working as a freelance graphic designer and I couldn't find images I needed in stock libraries. So I bought a 4-megapixel compact and started shooting whatever I needed to incorporate into my design work.

Photographing people felt awkward, so I stuck to inanimate objects for the first few years, mostly buildings. As my confidence grew, I became drawn

to portraiture. Cars came onto the scene by accident, as I became interested in the obsessive relationships people have with their vehicles.

I had a client who supplied tyres for vintage cars, I'm no petrolhead, but the beautiful cars rolling in sparked an interest in them as design objects. In 2016-17, I shot an entire series centred around portraiture, involving tractors and motorbikes as well as cars, it was great fun, and it helped me develop lighting techniques which I use in my commercial work to this day, although they continue to evolve.

Once I've decided on the composition, the camera sits on a tripod while I walk

around aiming and popping the flash using a remote shutter control. I underexpose the overall scene by a stop or two, so each image is quite dark, with one specifically lit area. This method gives me total control over which elements will 'pop' in the scene and what stays hidden in the shadows.

The end result is a set of images (as many as 30 separate files) of myself striking weird poses holding a lightbox on a stand, which I layer in Photoshop then manually erase the dark areas. It's great watching the image materialise on the monitor: the delayed gratification reminds me of waiting for film to develop. www.jamiebubb.com

**1**

Choose a location

I prefer to shoot vehicles in their 'natural' environment: there's an honesty and often a challenge in showing where a car lives, works or was made. However, there's also something to be said for finding a location that suits the mood of the brief and somehow relates to the form, colour or style of the vehicle being photographed.

2

Top gear

To get started, all you need are a few essential items: a camera and tripod of course, a remote shutter control, and a flashgun. Having a lightweight extendable stand or pole which you can attach the flash to is helpful, to get the light in hard-to-reach areas – and also to make sure you aren't stood in front of the element you are lighting. Lighting modifiers are an option, too: I like a softbox or octabox with a grid, so I can create directional, controlled light with great shadows.

3

Stay steady

Camera shake can be a problem if you're shooting multiple exposures outdoors and it's windy. Auto-Align in Photoshop can solve this in most cases, though. Try weighing your tripod down with your kit bag, a sandbag or even a rock. Also remember to focus the camera then switch the lens to manual focus, to prevent the camera giving you a set of images with wildly differing focal points.

4

Tell a story

I always look for a story within the image. Too much car photography can be just shiny car porn – and while there's nothing wrong with that, it just doesn't inspire me. We all have our unique opinions and creative voice: if you stay true to that voice, your work will stand out by default.

Jamie Bubb

10 | SHOOTING CHALLENGE

Fabulous food

Capture some tasty
treats and enter our
monthly photo contest

Walk into any restaurant at any time and you'll instantly be presented with a range of stunningly edible delights. Photographing food is a carefully considered art, and it can feel like a very difficult subject to get right at first, although we did lend a guiding hand in February's cover feature (issue 225).

All you need to get some great images of food is an entry level or enthusiast camera, or even a decent cameraphone: just grab whatever works best and start snapping.

The background you photograph food against is just as important as the food itself. Use something that will create a mood or tone, rather than just a blank, white area. Some people use a rustic tablecloth or even some textured wood to place their items on.

Successful food photography is all down to the little details. You might use a shallow depth of field for photographing a large plate, or home in on some smaller elements instead. Spices sprinkled around the dish, for example, can lend a wider impression of the taste of the food you're photographing.

How to enter

To enter your best 'Fabulous Food' image, either email your entry to digitalcamera@futurenet.com, putting 'Fabulous Food' in the subject line; or go to our Facebook page at www.facebook.com/digitalcameraworld, look for the 'Fabulous Food' post, and upload your entry into the feed.

By entering your image into this competition, you confirm that you own the copyright to the image and agree that *Digital Camera* can publish your image in relation to the 'Fabulous Food' competition. Full copyright of the image is still retained by you, and you will be credited as the photographer.

The closing date is 2 April 2020. The winner will receive a copy of the magazine featuring their winning photo. Good luck – we can't wait to what you come up with – and bon appetit, of course...



Future

The Depths Of Winter winner is...

Goran Mashanovich

In issue *Digital Camera* 225, we set you the challenge to capture the depths of winter. Congratulations to Goran, who has done a fantastic job of fulfilling the brief.

We love how Goran has captured a monochromatic-looking scene without having to convert his image to black and white. There are still hints of the colour in the brown grasses and tree trunks, but otherwise you wouldn't have known. There is subtlety to his image, with layers of trees that start as a dark strip in the foreground and fade to a lighter grey in the background. A great image that makes you feel cold and wintery!



Goran Mashanovich



© Photography by Jean Noir www.jeannoir.de

LIT WITH ROTOLIGHT AEOS BY MASTER OF LIGHT JEAN NOIR

**“THE ROTOLIGHTS ARE EASY TO USE AND HANDLE.
THEY’RE PERFECT FOR MY PHOTOGRAPHY”**

DESIGNED FOR PORTRAIT / LOCATION PHOTO & VIDEO • HIGH SPEED SYNC FLASH (1/8000TH), NO RECYCLE TIME
ULTRA-THIN, PORTABLE, LIGHTWEIGHT DESIGN (<1.6KG) • BUILT-IN WIRELESS FLASH RECEIVER (200M/656FT)
INTEGRATED ALUMINIUM HANDLES & 360° BALL HEAD • UNRIVALLED BATTERY PERFORMANCE (150,000 FLASHES)

WWW.ROTOLIGHT.COM

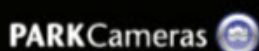
AVAILABLE TO PURCHASE



02078 375 649
theflashcentre.com



01603 486 413
wexphotovideo.com



01444 237 070
parkcameras.com



01753 422 750
rotolight.com

SEE US AT

**The
Photography
Show**

BOOTH C101
MARCH 14TH - 17TH 2020



The art of seeing

Benedict Brain develops his 'camera vision' for a shot taken without leaving home



Benedict Brain
Photographer

Camera: Fujifilm GFX 50R
Lens: Fujifilm GF45mm f/2.8 WR
Exposure: 1/60 sec at f/5, ISO 800

www.benedictbrain.com

A

s you may have noticed, much of the work in this column originates from my global travels. However, taking inspiration from the 18th-century book *A Journey Round my Room* by Xavier de Maistre, I also like to explore the visual possibilities closer to home, even in my home.

I live in an apartment, from which I have a wonderful view of several magnificent silver birch trees. Watching them change throughout the seasons and in a wide range of light and weather conditions is a delight. I also enjoy the pair of doves (I think) that roost in the tree from time to time; while

their large deposits of droppings outside the building are annoying, I have grown fond of my fine feathered friends, and often look out for them.

Naturally, both the tree and the birds have attracted me visually. I'm starting to build a small body of work around the views from my room. The rain, twilight and leafless winter tree drew me to make this image. What a luxury to be shooting 'landscapes' in the middle of winter from the warmth of a heated home.

To capture the essence of the scene, and in particular the rain, I used flash to light the scene. I love the way flash renders a scene when I photograph in the rain. The light

picks up the water droplets and highlights them beautifully. In fact, the camera/flash combination sees the rain in a way that is unique to photography. Raindrops are captured in a fleeting moment of time, mid-air as the flash freezes and lights the watery 'action'. As a consequence, the image takes on an ethereal vibe that I love.

Learning to anticipate how the camera will 'see' is a useful skill to hone. After a time it's possible to develop 'camera vision', and select the right settings and choose the right equipment with a good idea of how the image will look. A good place to start is to constantly ask yourself, "What would it look like if I did this?" – then try it and see! ●

Repeat Winner of the TIPA Award – 2013/2017

‘Best Photo Lab Worldwide’

Awarded by the Editors of 29 International Photography Magazines



WhiteWall Media GmbH, Europaallee 59, 50226 Frechen, Germany © Photo by Yavuz Pancarcken.
All rights reserved. We reserve the right to correct errors.

Transform treasured memories into memorable wall art.

Mounted under acrylic, framed, or as large-format photo prints. Made in Germany by people who love photography. We are the proud recipients of over 100 awards and recommendations! Simply upload your photo and create custom works of art – even from your smartphone.

WhiteWall.co.uk

Stores in London | Berlin | New York | Paris | Vienna | Zurich

 **WHITE WALL**

Subscribe today ...and get two fantastic photo bookazines

Subscribe to Digital Camera from just £12.50 and get these two brilliant bookazines absolutely free...

Great reasons to subscribe now!

✓ Get two fantastic bookazines!

1: Teach Yourself Wildlife Photography

Top tips for garden wildlife, photographing in zoos, bird portraits, bug safaris and lots more

2: Professional Photography Collection

David Bailey, Martin Parr, Steve McCurry and Sir Don McCullin are among the top pros featured in this fantastic volume

✓ Great savings!

Subscribe from only £12.50* and get your issues delivered to your door, plus two fantastic bookazines worth a combined £24.98

✓ Free video disc

Each issue, you'll receive a Video Disc packed with fantastic photo projects to improve your skills

Option 1: Quarterly print subscription, £12.50*

- 3 months of Digital Camera print edition delivered

Option 2: 6-month print subscription, £25

- 6 months of Digital Camera print edition delivered
- Expert PDF handbook
- 20% off entry to The Photography Show

Subscribe before Wednesday 11 March for 2020 admission

Option 3: Annual print and digital bundle, £69

- 13 issues of Digital Camera print edition delivered
- Digital edition for your phone or tablet
- Digital Camera magazine binder
- Expert PDF handbook
- Free entry to The Photography Show

Subscribe before Wednesday 11 March for 2020 admission

**Exclusive! Get an additional
10% OFF your subscription
at The Photography Show!**

Simply present voucher or quote 'Future mag offer'

Birmingham NEC • Hall 5 • 10am-5pm • 14-17 March 2020

10% OFF

+ CHOOSE YOUR SPECIAL GIFT!

Digital
Camera

NPhoto
100% NIKON 100% INDEPENDENT

Digital
Photographer

PhotoPlus
THE CANON MAGAZINE

STAND LOCATION: E32

WWW.PHOTOGRAPHYSHOW.COM

EXCLUSIVE GIFTS SUBJECT TO AVAILABILITY

Cut out and bring along to The Photography Show!

UK subscription offer



Subscribe to Digital Camera and you'll find fascinating insights from photography greats plus top wildlife tips in these brilliant books!

Niall

Niall Hampton
Editor, Digital Camera



Gift
worth
£24.98



FREE
ENTRY TO THE
PHOTOGRAPHY
SHOW WITH
OPTION 3!

Subscribe today at:
myfavouritemagazines.co.uk/dcm/photo20
or call **0344 848 2852** and quote 'Photo 20'

* Terms and Conditions: This offer is only available to new UK subscribers. Gifts are subject to availability. Please allow up to 60 days for the delivery of your gift. In the event of stocks being exhausted we reserve the right to replace with items of similar value. Prices and savings quoted are compared to buying full-priced print subscriptions. You will receive 13 issues in a subscription year. You can write to us or call us to cancel your subscription within 14 days of purchase. Payment is non-refundable after the 14 day cancellation period unless exceptional circumstances apply. UK calls will cost the same as other standard fixed line numbers (starting 01 or 02) or are included as part of any inclusive or free minutes allowances (if offered by your phone tariff). For full terms and conditions please visit: www.bit.ly/magterms. Offer ends 30 April 2020.

UNLEASH THE POWER OF RAW!

Master shooting and editing the best file format for photography, with **James Paterson**

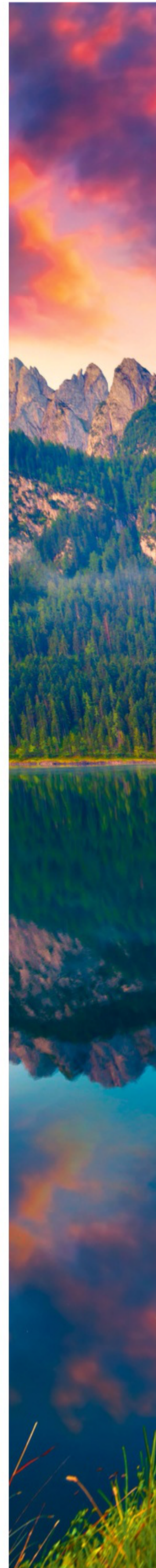
The modern mind has to deal with vast amounts of data. It's estimated that every day we ingest five times more information than we did 25 years ago. Sifting through and channelling that data into what's important and what is not has become one of the big challenges of modern life.

In a sense, information overload is also the main challenge facing the photographer. A raw file contains around five times the data of an equivalent JPEG. So if you're thinking of making the switch from shooting JPEGs to shooting raw, you have to be prepared to sift, channel and manage all that extra data. It requires a slight shift in mindset, but it can also spur you into a more enlightened way of shooting and editing your photos.

Raw expands your options, while JPEG narrows them. Shoot in JPEG quality, and your camera will decide how the image should look, then dump most of the extra information it is capable of recording. Switch to raw, and you retain all the uncompressed 'raw' data. The price you pay for this is the extra time spent managing and processing raw files, and the extra money spent storing them.

Shooting in raw brings with it a level of commitment that we wouldn't recommend for the casual snapper. But for those of us who want to take complete control over the look of our photos, raw is by far the better option. Here we'll explore the benefits of shooting in raw, and how to craft that extra data into perfectly prepared photos. From shooting to editing and exporting, we'll guide you through the complete workflow. →

CONTENTS



1

Graduated tones

Heavy editing of JPEGs will lead to an unsightly banding effect in areas of gradation, where light tones transition to darker tones. This is unlikely to happen with raw.

CASE STUDY #1: Landscapes

Raw's expanded dynamic range boosts outdoor photography

2

Highlights and shadows

Raws hold more detail in the highlights and shadows, which is good for shooting landscapes, as it can often be a challenge to record detail in the brightest and darkest parts of the frame.

3

White balance

With raws, you can set the white balance after the fact, so you don't need to worry about getting it absolutely perfect in-camera: you're free to fine-tune it later on.

4

Detail control

You can pull greater detail out of raw files as there's more headroom for editing. Unlike JPEGs processed in-camera, you have ultimate control over the strength of sharpening.

RAW FILE TYPES

DSLRs, mirrorless cameras, some compacts and even some smartphones have the ability to shoot in raw. Each camera maker has its own proprietary file format, although each can be treated in the same way while editing.

MANUFACTURER	RAW FORMAT
Canon	CR2, CR3
Fujifilm	RAF
Leica	RWL, DNG
Nikon	NEF
Olympus	ORF
Panasonic	RAW
Pentax	PEF
Sony	ARW

Why shoot raw files?

Perhaps the biggest reason to make the switch to raw is for the wider dynamic range – the scale of tones in a photo, from the very brightest point to the darkest. In high-contrast scenes, such as a landscape at sunset, the difference between these two points can be vast. A JPEG has a narrower dynamic range than a raw file, and

therefore contains less detail at the tonal extremes. There will be times as a photographer when you need to access extra detail – perhaps to rescue an exposure mistake or to tease out detail – and this is where JPEGs fall short.

The other big reason to shoot raw is for the extra colour information, which gives you the option to change the white balance after shooting. This means you don't necessarily need

to spend time perfecting white balance in-camera: you're free to set it later.

Both these factors can come into play when you need to get set up for a shot quickly, as not having to think about white balance or a perfect exposure can save you a few crucial moments. The raw safety net allows for greater freedom when you take the shot, and more latitude to fix problems if your camera settings go awry.

1 Raws withstand heavy editing

Astro photographs like this will rarely look like the finished article straight out-of-camera: they usually require heavy editing to enhance the delicate details. Raws can withstand far heavier editing than JPEGs, which are more likely to break up and posterise.

2 Preserving delicate colours

In basic terms, JPEGs achieve their small file sizes by compressing colour information. For example, if 15 pixels each have a different tint of a similar colour they might be reduced to three coloured blocks of five pixels during compression. The extra colour information contained in a raw file can be crucial in astrophotography.



RAW vs JPEG

It's the hottest debate in digital photography...



Your camera's raw quality gives you a higher quality image and a vastly wider colour range, which gives greater headroom for editing.

- ✓ The wider dynamic range of a raw file means you can tease detail out of shadows or highlights and rescue under- or over-exposed photos.
- ✓ Both white balance and colour space can be changed after the fact, so you have more control over the colours in your images, and more leeway for correcting colour casts.
- ✓ An 8-bit JPEG holds 256 levels of luminosity per colour channel. A raw is usually 12 or 14-bit, giving either 4,096 or 16,384 levels of luminosity. This means smoother gradations and less chance of banding.
- ✓ Raws can't be accidentally saved over, and any edits are reversible, so a raw file is an impregnable record of your image as it was taken.

Smaller in file size, easier to send or store, and recognised by pretty much every digital screen on the planet, JPEG is the convenient choice.

- ✓ JPEGs are around five times smaller than raws, so you can fit many more on your memory card or your hard drive. They're quicker to transfer and less costly to store.
- ✓ JPEGs are compatible with almost every screen and device that is capable of displaying images. By contrast, raws can only be viewed in dedicated software.
- ✓ Its smaller file size means JPEGs write to a memory card quicker than raw, so you can shoot continuously in your camera's rapid fire mode for longer without filling up the buffer.
- ✓ If you're working to a deadline, JPEGs are available as soon as they're taken, ready to send to an impatient news editor or an awaiting bride.

ARE YOU READY FOR RAW FILES?

Here's the gear you need to establish an effective raw workflow



Memory cards

Larger memory cards – 32GB and upwards – are a must for the raw shooter. A healthy write speed of 90MB/sec or more is helpful, too, as raws take longer to write to the card.

CASE STUDY #2: Astrophotography

Raw helps you tease out detail
and colour in night skies

3

Extra detail

When you shoot stars, the night sky can initially look rather dim, but raws hold a lot of information that isn't immediately apparent. By increasing clarity and sharpening, the stars will stand out from the sky.

4

Correct colour shifts

When details like the core of the Milky Way here are enhanced, it can sometimes lead to colour shifts. With raws you have far more colour information to work with, so it's easier to control and correct unnatural shifts.

5

Pulling detail out of shadows

The extra data in a raw means you can claw back dark details that look unrecoverable at first glance, making it easier to balance out a night sky with a detailed foreground. You can use selective tonal tools like Lightroom's Adjustment Brush to tease out the hidden details.

Raw software

Raws are useless without dedicated raw software to process them. Your camera will come with a raw processor, but many choose more advanced options like Lightroom or Camera Raw.



Long term hardware

There's no getting round it: storing raws eats up hard drive space. You'll need to invest in an external hard drive with at least a couple of terabytes of space, or consider solutions like NAS drives and online storage.

WHY DOES JPEG LOOK BETTER STRAIGHT OUT OF CAMERA?



JPEGs often look initially better than raws because they are enhanced, sharpened and saturated in-camera to give you something approaching the finished image. As such, they're meant for those who are happy to let their camera make decisions for them on how their images should look.



Raws, as the name suggests, are unprocessed images. They can initially look rather flat, especially when placed side-to-side with a JPEG counterpart. But the flatness is intentional: it's a starting point. Camera makers know raw shooters want to make their own decisions about the look of their images.

Fixing your photos: choose raw

If camera settings go wrong and your exposure comes out wrong, shooting in raw provides a crucial safety net, as these tests show...

Recovering overexposure

The extra dynamic range a raw file holds over a JPEG means that blown-out highlights can still be rescued, as the cloud details in the sky here demonstrate. Recovering the JPEG has led to an unsightly colour shift and flat tones in the mountains. The recovered raw, while not perfect, is still vastly better.

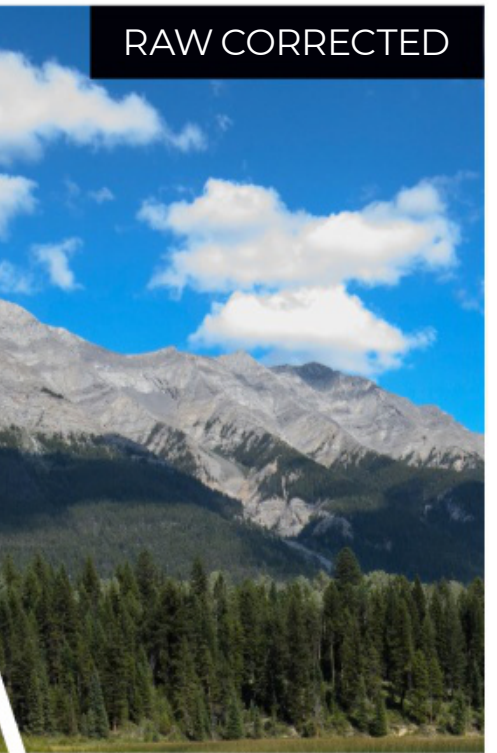
Before



JPEG CORRECTED



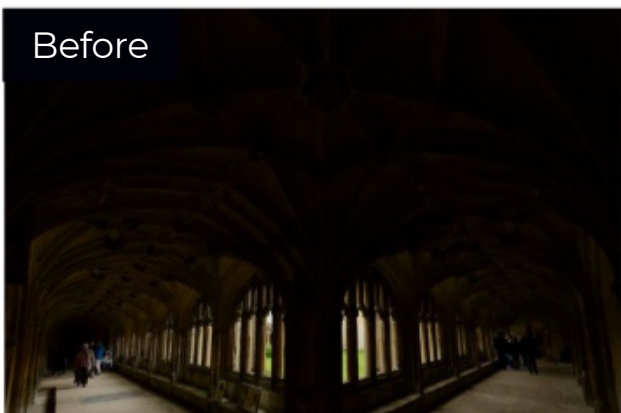
RAW CORRECTED



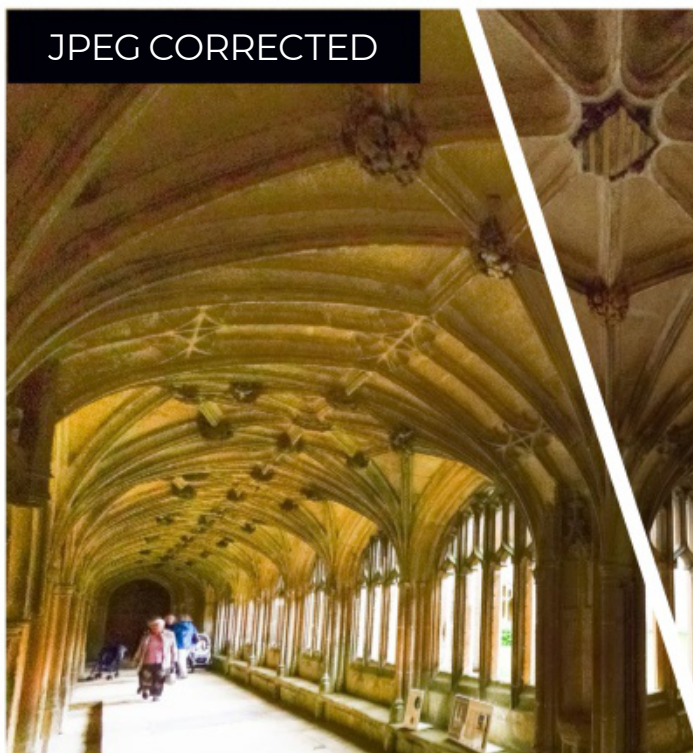
Recovering underexposure

Shadow detail can usually be teased out to a greater extent than highlight detail. Even areas that initially look pitch-black can often yield astonishing detail. In this image (shot at ISO 1,600) the recovered shadows in both the raw and JPEG are very noisy, but the detail and colour held in the raw is far superior.

Before



JPEG CORRECTED



RAW CORRECTED



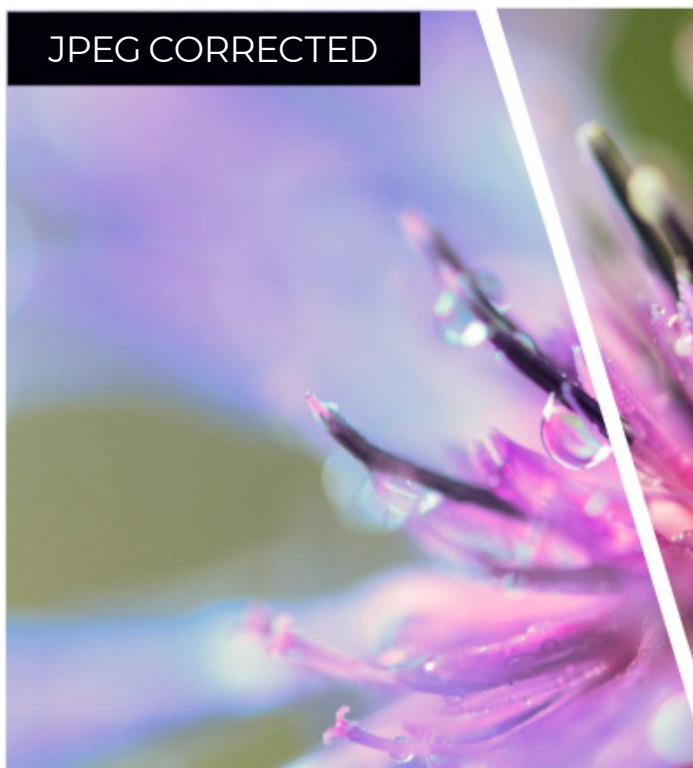
Colour fixes

Colour casts and white balance faults are easily fixed in raws, as you're able to choose a different white balance preset or fine-tune the temperature and tint of the image. Here, a mistakenly applied Tungsten white balance is easily corrected in the raw; the JPEG is harder to fix, resulting in unnatural highlights.

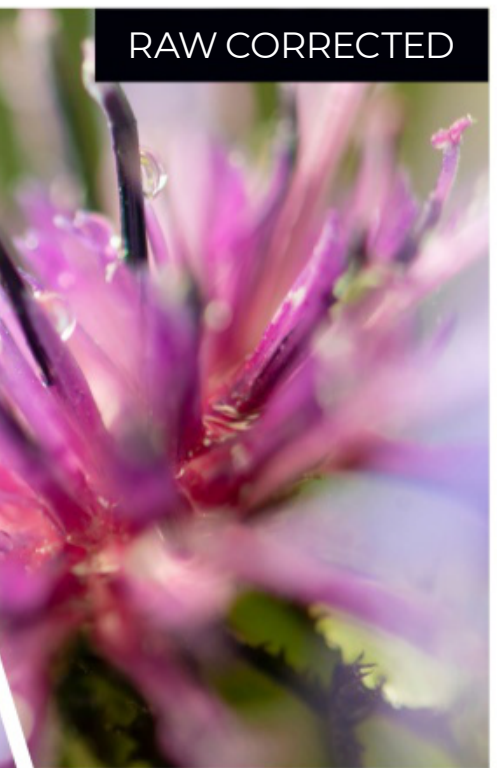
Before



JPEG CORRECTED



RAW CORRECTED



Eternal Spring of the Mind by Elena Paraskeva



AFFINITY
Photo

The fastest, smoothest, most powerful professional photo editor for macOS, Windows and iPad

Find us on the **Affinity Photo Live Stage (J11)** at **The Photography Show**

Experience the new way to edit photos with a **10 day free trial**: affinity.serif.com/photo

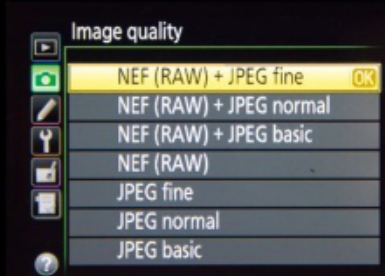


APPLE DESIGN
AWARD WINNERS

Editors' Choice



worldwide customer rating



RAW + JPEG

If you like the quality of raw and the convenience of JPEG, why not capture both formats at once? This way, if you are happy with the look of the JPEG, you needn't bother editing the raw, but it's there if you need it.

CAMERA BUFFERS

After you press the shutter button, your camera needs to save the image on your memory card. This can take a split-second for a JPEG, but slightly longer for a raw. If you take another shot before the first has finished writing, then it is temporarily stored in the camera buffer. Shoot a third, and it joins the queue. So if you shoot rapid-fire image sequences, you need to ensure the buffer writes quickly. Memory cards with fast write speeds (at least a Class 10 or 100MB per second) are a must.

CASE STUDY #3: Action shots

When you shoot fast movement, JPEG can sometimes be the better choice



1 Fast-paced action

An action sequence is one of the few times where shooting in JPEG might give you an advantage over raw, as you'll often want to shoot sequences in your camera's continuous high-speed mode.

2 Raws take longer

Let's say your camera can capture six frames per second. It'll be capable of firing off either six JPEGs or six raws per second, but the raws are larger files, so your camera buffer will fill up quicker.

3 Buffer problems

If the buffer fills up, you'll have to wait for the images to write to your memory card. (A faster card write speed can help here.) As such, shooting in raw might mean missing a crucial moment in the action sequence.

THREE STEPS TO THE PERFECT RAW SHOT



1 Don't get hung up on white balance

It's good practice to set the white balance before taking the shot, but lots of photographers are happy to shoot in raw with Auto White Balance enabled. This way the camera chooses the white balance – but you can always change it later if it results in a colour cast.



2 Don't trust the histogram

The histogram maps out image tones. If the graph intersects the sides before reaching 'sea level', it can mean clipped highlights or shadows. But the back-of-camera histogram is based on a JPEG, not the raw file, so clipped pixels may still be recoverable. It's the same with exposure warning 'blinkies'.



3 Expose to the right

This shooting method involves capturing the most amount of light without clipping the highlights, so the tones in your camera histogram are biased towards the right. You can adjust the image afterwards if it is overly bright. By using this technique, the shadows will be less noisy.



Naturetrek

Wildlife Photography Holidays Worldwide

AFRICA | ASIA | AUSTRALASIA | EUROPE | THE AMERICAS

Naturetrek is the UK's leading wildlife holiday specialist offering:

- Escorted wildlife photography tours to destinations worldwide
- Expert guidance from award-winning photographers
- Wildlife cruises on exclusive Naturetrek charters
- Tailormade wildlife holidays crafted by experts
- Top naturalist guides, top wildlife holidays
- Unrivalled expertise built over 34 years
- The best wildlife holidays available
- All at unbeatable prices



BEST SAFARI, WILDLIFE AND
NATURE HOLIDAY COMPANY



Visit us on
Facebook



Nearly £1M donated for conservation and carbon off-setting purposes



For our brochure, or more information, call our wildlife travel experts

01962 733051

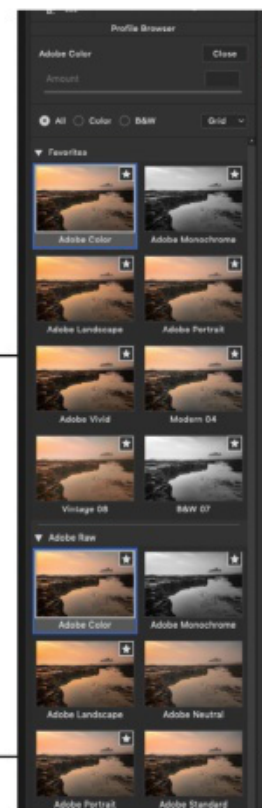
www.naturetrek.co.uk

Naturetrek, Mingledown Barn, Wolf's Lane, Chawton, Alton, Hampshire GU34 3HJ

Camera Raw explained

PROFILE BROWSER

This offers a range of excellent starting points for your raw photos, such as Adobe Landscape and Adobe Portrait. The Camera Matching set mirrors the picture style options on your camera model.



Raw photography means extra effort processing images. For simple edits, this might only take a few moments – but when it comes to screen time, raw often means more.

If you know you'll need to work on your image later, however, raw brings a finer level of quality. JPEGs might look fine straight-out-of-camera, but once you begin to perform edits – a boost in contrast, say, or a change to the brightness or an increase in saturation – the cracks may soon start to show. Banding can occur in tonal gradations, and artifacts may be amplified.

Think of it this way: when you edit a JPEG, you're working up an image that has effectively been worked up once before by your camera, which will have already made decisions on contrast, colour, saturation and sharpening for you, then discarded all of the excess data. So you'd be making more changes on top of the enhancements that were made for you.

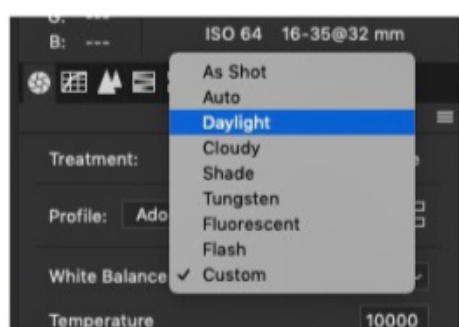
By contrast, a raw contains all of the fresh image data that your camera is able to record, which gives you greater editing headroom.

There are several excellent raw processors out there. One of the most powerful yet user-friendly is Photoshop's Camera Raw (or the near-identical Develop Module within Lightroom). Here are some of the key raw tools on offer...



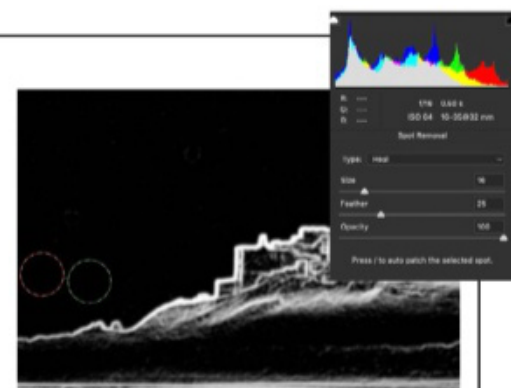
WHITE BALANCE PRESETS

This allows you to choose a different white balance preset after the fact. You can also use the Temperature and Tint sliders in Camera Raw to fine-tune white balance, either to correct a colour cast or to add a creative shift.



SPOT REMOVAL TOOL

The Spot Removal Tool enables you to quickly fix small blemishes or sensor marks. Tick Visualise Spots for a handy black-and-white view. If you have a recurring sensor mark, you can fix it on one image, then sync the edit to an entire image set to correct them all.

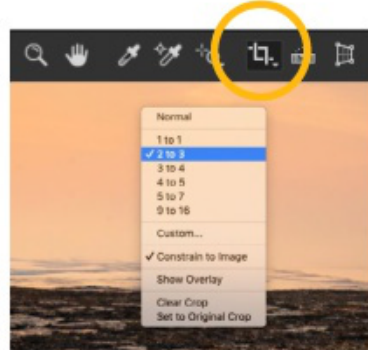


BASIC PANEL

This is the place to begin making enhancements to tone and colour. Start at the top, and work your way down the sliders. Many work in combination with the Alt/Option key to give you a greyscale view.

**CROP TOOL**

It's best to make your crops to your raw image, as they remain non-destructive, and you can always go back later to undo the crop. Right-click with the Crop Tool for various common aspect ratios.



EXPLORE LOCAL ADJUSTMENTS

Raws can hold a surprising amount of hidden detail. The local adjustment tools in Camera Raw (or Lightroom) let you tease out that detail. Simply define an area with a tool, then use the tonal sliders to alter it.

Adjustment Brush

Perhaps the best tonal tool in Camera Raw, the Adjustment Brush lets you paint over an area to isolate it, then change only that area.

**Graduated Filter**

This lets you make transitional tonal changes. For example, you can darken part of a frame in the same way as a lens-mounted neutral-density grad – useful for balancing out a sky.

**Radial Filter**

This is like the Graduated Filter, but it creates circular rather than linear transitions. Drag a circle over part of the image, then use the tonal sliders to alter the area outside or inside of the circle.

**BEFORE/AFTER VIEWS**

Raw editing is often about exercising judgment. Camera Raw gives you a variety of handy split-screen before/after views, which are helpful for judging the effect of a slider or tonal change.

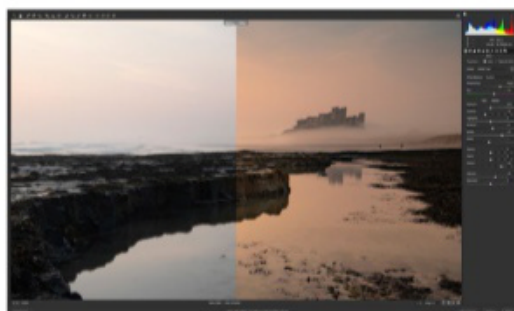




Image processing

How to unlock all that plentiful data in your raws for detail-rich images

There's a reason why raws are sometimes called 'digital negatives'. Like an old film negative, a raw is a pristine version of your photo as your camera captured it. Impossible to save over or accidentally crop, it's an impenetrable data file that can only ever be added to with other tiny bits of 'sidecar' data. This extra data sits alongside the original data, and defines how the file should look when opened in Camera Raw, Lightroom or your chosen raw editor.

This method of photo editing is sometimes called 'parametric editing'. Rather than altering the pixels that make up the image, you instead alter a set of parameters – saved

in that tiny sidecar file – that affect how the image is presented. The beauty of parametric editing is that every single change you make is completely non-destructive. You can tweak a setting, change a crop or alter the look of the image at any time. What's more, you can copy edits from one image to another – or an entire set – with ease.

Image editing is rarely a straightforward journey from A to B. Raw brings creative freedom to that journey, as you're able to try out different treatments or retrace your steps whenever you choose. With parametric editing, the journey can take as many diversions as you like before you settle on the destination.

THINGS TO CONSIDER

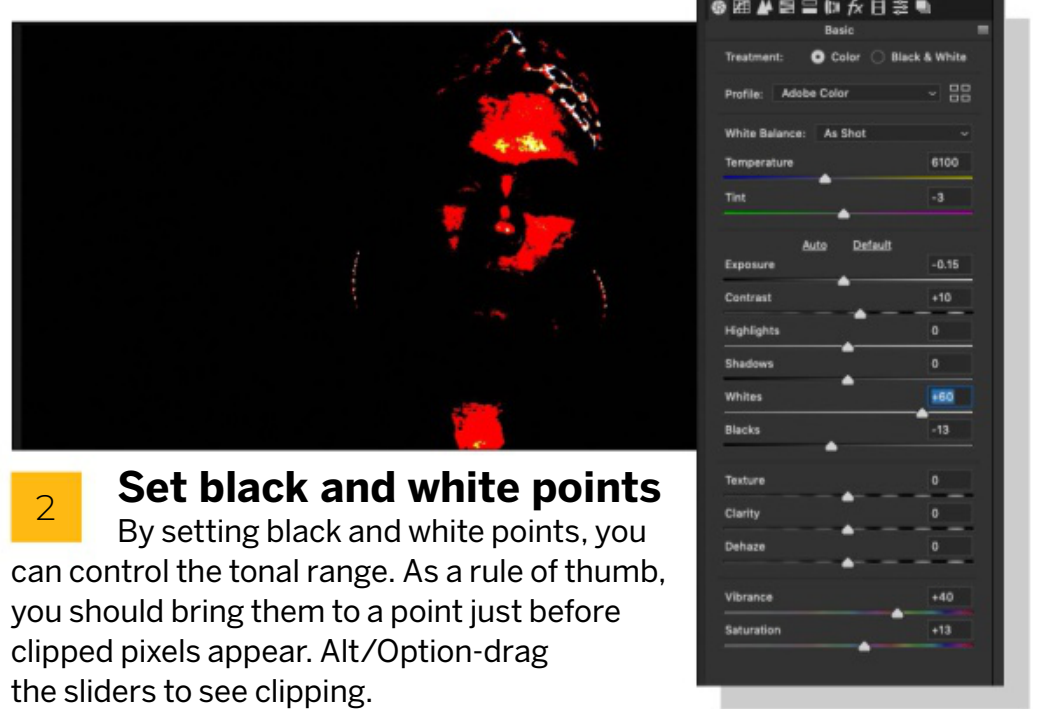
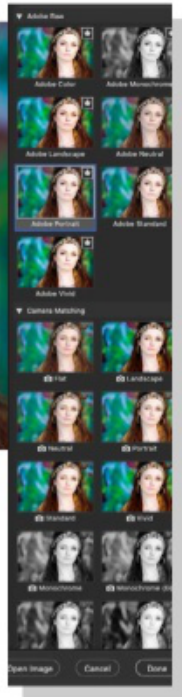
- ✓ When you edit a raw file in Camera Raw, the changes are saved as a tiny '.xmp' file alongside the original image.
- ✓ If you use Lightroom or another catalogue-based raw editor, raw edits are saved in the catalogue.
- ✓ Consider converting your image to Adobe's universal DNG raw format. DNGs are slightly smaller in file size and don't need sidecar files.

The Photoshop raw workflow

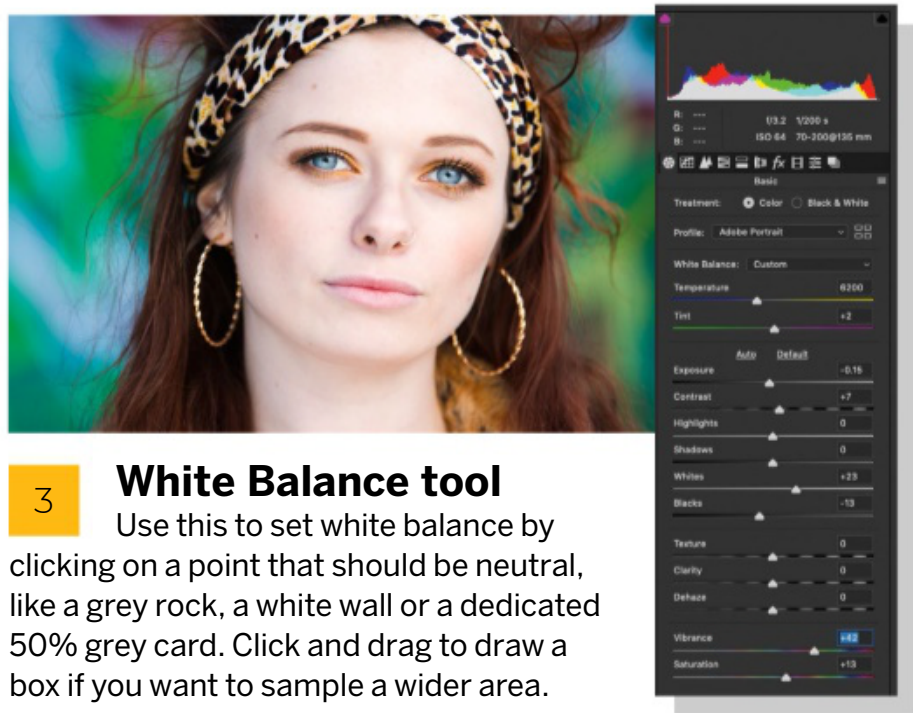
Get to grips with key raw image editing techniques



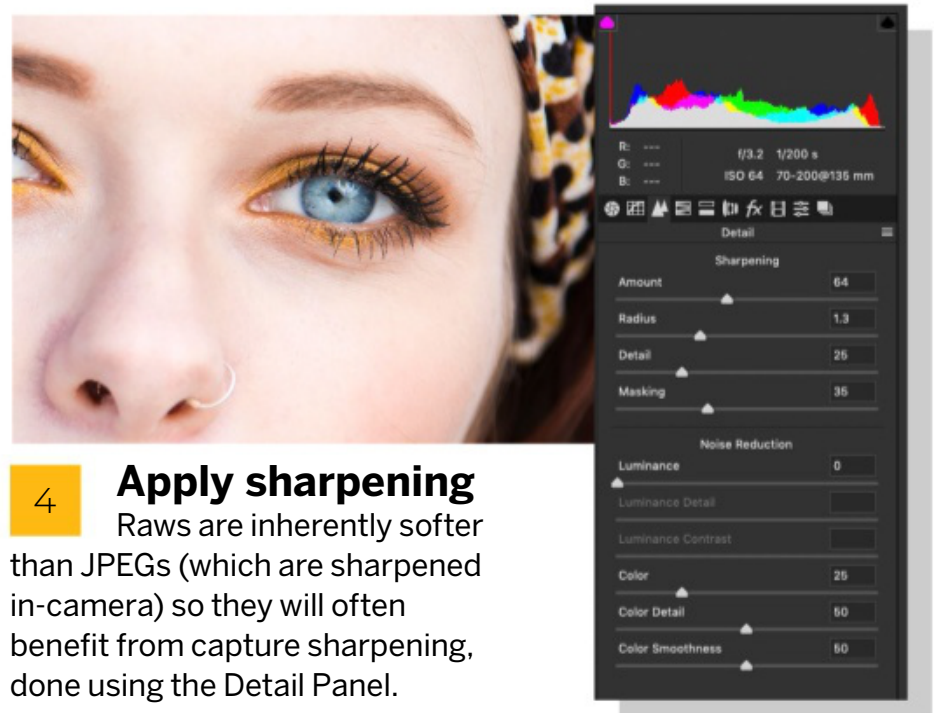
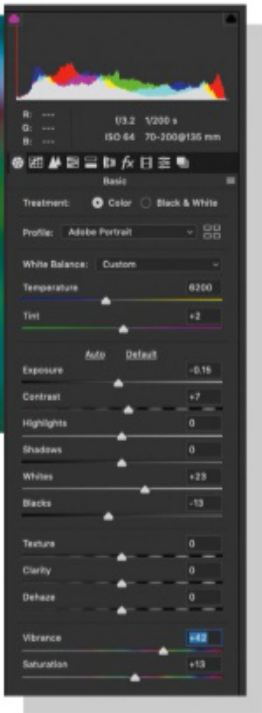
1 Choose a profile
The Profile Browser is often the best place to begin editing your raw. The profiles in the Adobe Raw set have been optimised for different subjects – here the Portrait profile improves the skin tones.



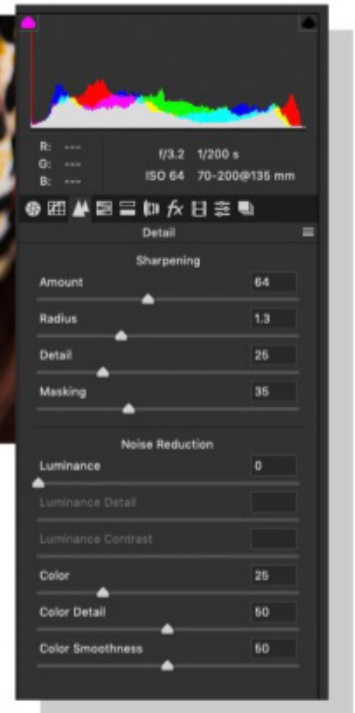
2 Set black and white points
By setting black and white points, you can control the tonal range. As a rule of thumb, you should bring them to a point just before clipped pixels appear. Alt/Option-drag the sliders to see clipping.



3 White Balance tool
Use this to set white balance by clicking on a point that should be neutral, like a grey rock, a white wall or a dedicated 50% grey card. Click and drag to draw a box if you want to sample a wider area.



4 Apply sharpening
Raws are inherently softer than JPEGs (which are sharpened in-camera) so they will often benefit from capture sharpening, done using the Detail Panel.

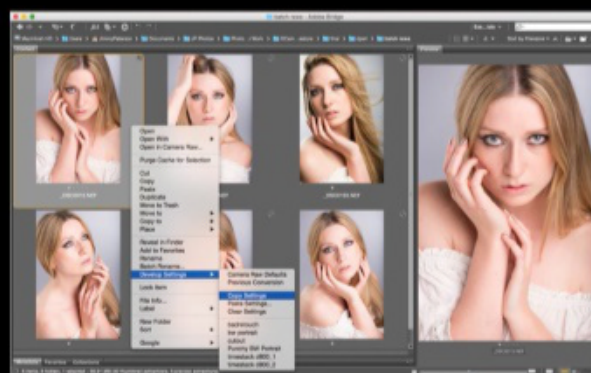


BATCH-PROCESS YOUR SHOTS

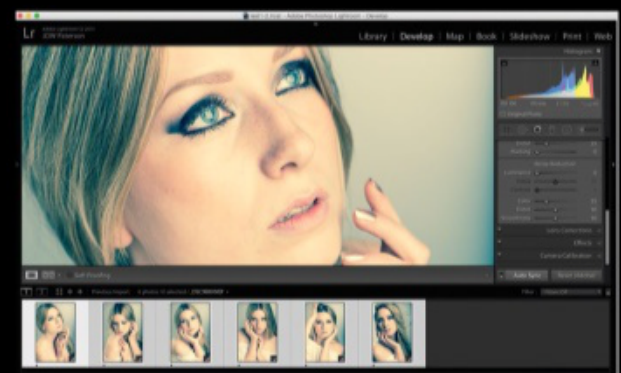
How to edit an entire set of raw photos at once



IN CAMERA RAW...
Select several photos in Bridge, then right-click them and choose Open In Camera Raw. Now either highlight them all in the filmstrip (Ctrl/Cmd+A) and begin editing to alter the entire set; or edit one photo, then select the rest and go to the top-left menu to choose Sync Settings.



IN BRIDGE...
After editing a single photo in Camera Raw, you can copy the edits to other photos in Bridge. Simply right-click the edited image and choose Develop Settings > Copy Settings. Then select several photos, right-click them and choose Develop Settings > Paste Settings.



IN LIGHTROOM CLASSIC...
Make changes to a single image using the Develop Module, then simply select other photos and click the Sync button in the bottom-right. You could also use the Presets Panel to save presets of your favourite treatments, so you can apply them to other images with a single click.



CASE STUDY #4: Monochrome landscapes

How to improve
your black-and-
white images

1

Fine-tune the conversion

Colour can be very important for black-and-whites. When you convert an image to mono, you can control the brightness of different colour ranges with the Black and White sliders in Camera Raw or Lightroom. Here it lets us lift the trees to reveal extra detail in an area that initially lacked contrast.

2

Boost the contrast

Black-and-whites can initially look a little flat. A boost in contrast with Curves can be very effective. Plotting an S-shaped curve line lightens the highlights and darkens the shadows, resulting in more contrast. The more pronounced the S, the greater the contrast.

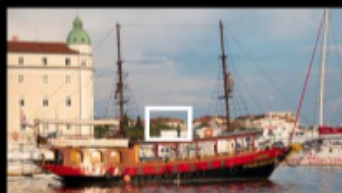
3

Dodge and burn

Black-and-whites can hold up to greater dodging (lightening an area) and burning (darkening an area) than colour photos. Here we've used the Camera Raw Adjustment Brush to darken the sky and lift the water, before painting in extra Contrast and Clarity over the rocks and trees.

JPEG IMAGE COMPRESSION: How bad is it really?

Developed by the Joint Photographic Expert Group, JPEG utilises a



'lossy' compression algorithm. Each time a JPEG file is opened, the image data is uncompressed. Close it, and the data is compressed down. It's one of the reasons why JPEGs have such helpfully small file sizes – but there can be long-term side effects...



1

Saved once

In this experiment we opened a JPEG in Photoshop then saved the file, using the highest quality setting. Saving the file degrades it. When saved over once or twice, the change isn't noticeable...



2

Saved 10 times

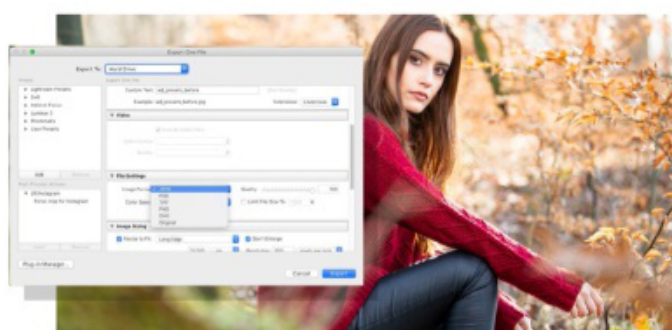
When opened, saved and closed 10 times over, the cracks in our JPEG are starting to show. Banding is beginning to appear in the sky, and the quality loss is becoming noticeable.

Export your images

Once your raw is ready to show to the world, you'll need to select the right settings

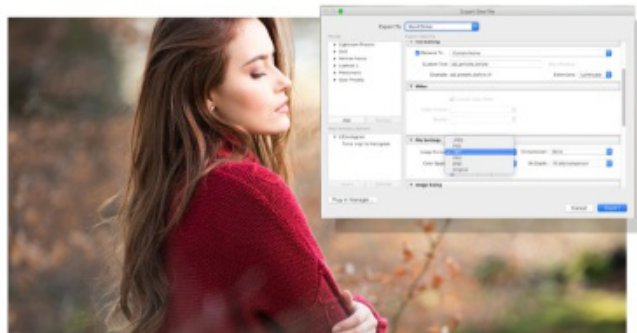
In its original format, a raw file is rarely any use to anybody but yourself. So after perfecting the look of the image in your raw processor, the next stage is to output the

file in another format. We've spent much of this feature trashing JPEGs, but the format is perfectly fine for outputted photos, because you can go back to the raw for further edits, then save as a JPEG again. TIFF is a higher-quality option.



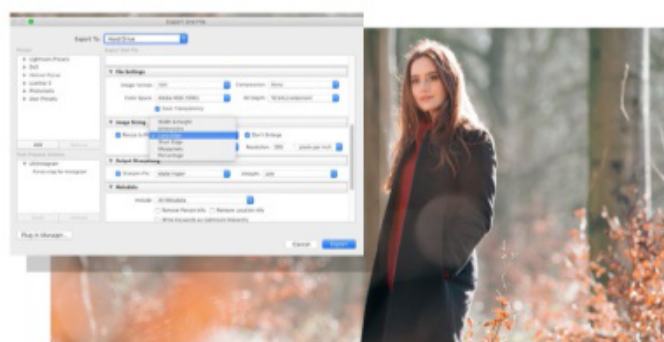
OUTPUT AS A JPEG

8-bit JPEGs can hold 16.7 million colours, while the eye can perceive around 7-10 million (and screens are mostly 8-bit), S JPEG is a perfectly fine format for outputting your images. Saving as a JPEG at this point will give you a small file size, which is perfect for posting online.



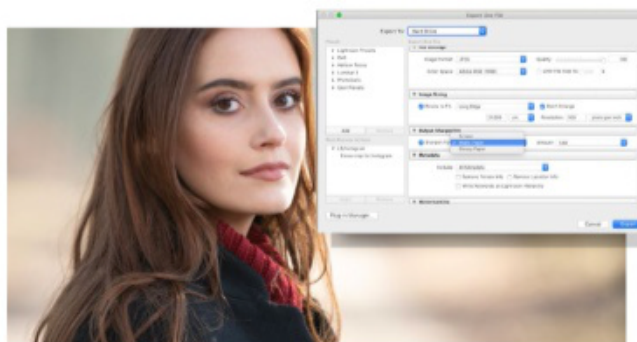
OUTPUT AS A TIFF

TIFF is a better choice for printing (as long as your chosen printer allows for the format), because it's a 16-bit lossless format that won't degrade through repeated compression. TIFFs are larger in file size than JPEGs, but they're the better choice if you need maximum quality.



SET A RESOLUTION

You might also want to set a resolution for your image while outputting, especially if you intend to print the image. The standard resolution for printing is 300 pixels per inch, so for a 10 x 8-inch print, the image size should be 3,000 x 2,400px.



OUTPUT SHARPENING

After choosing a resolution, you can apply output sharpening that is tailored to the size of the image and the intended output. In Camera Raw, you'll find the option in the Save dialog, while in Lightroom it's in the Export dialog (File > Export).



3

Saved 50 times

After opening, saving and closing the JPEG 50 times, the image quality is irreparably damaged. It's rare that a JPEG would be opened and closed this much, but it shows how the loss in quality builds up.



4

Saved 100 times

At 100 saves, the sky is ravaged by posterisation, although fine details like the writing and patterns on the boats are less degraded, because of the way JPEGs compress their data.

RAW EDITING SOFTWARE

There are plenty of choices for raw editing, from industry standards like Camera Raw and Lightroom to intriguing upstarts like Luminar. Here are some of our favourites...



Photoshop CC

£9.98/\$9.99 per month

Photoshop processes raws through its Camera Raw filter, which is one of the best in the business. After editing the raw, you can open it into Photoshop and make use of the separate class-leading set of tools within.



Lightroom Classic

£9.98/\$9.99 per month

The desktop version of Lightroom offers the Develop Module for raw editing. With intuitive tools and a wealth of workflow options, it's the most popular choice among raw photographers for a reason.



Affinity Photo

£48.99/\$49.99

This cut-price Photoshop competitor has an impressive array of tools. The raw features aren't as refined as Adobe's offerings, but there's a wealth of image-editing controls, including layers and tone-mapping.



Capture One

£20/\$20 per month

This is a superb raw editor for pros and enthusiasts, with advanced workflow options and a catalogue feature similar to Lightroom, plus class-leading raw processing and a Sessions mode for commercial shooting.



Luminar 4

£81/\$89

This filter-heavy offering from Skylum has a few mind-blowing tools, like the AI Sky Replacement feature. It's an excellent editor with a gentle learning curve, and works as a Lightroom plugin or standalone.



DxO PhotoLab

£112/\$129

Renowned for its database of lens corrections, this raw editor will automatically correct your photos and offers a great selection of tonal tools.

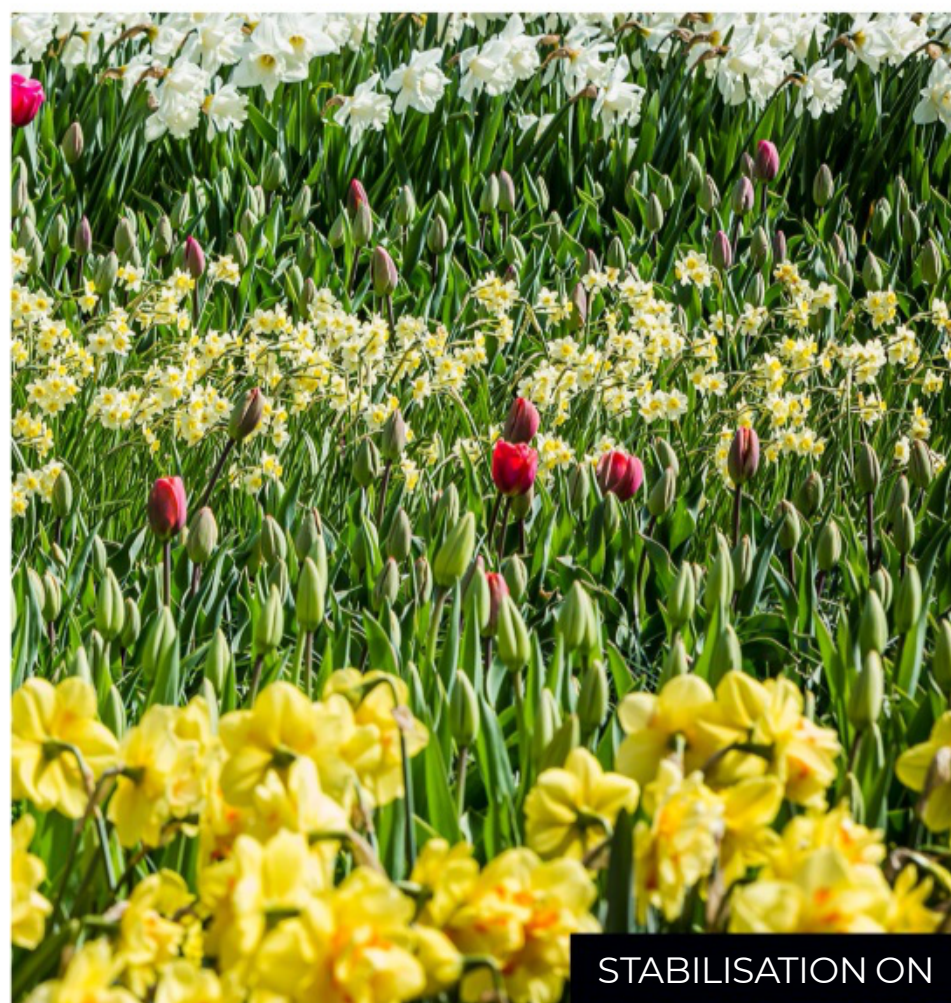
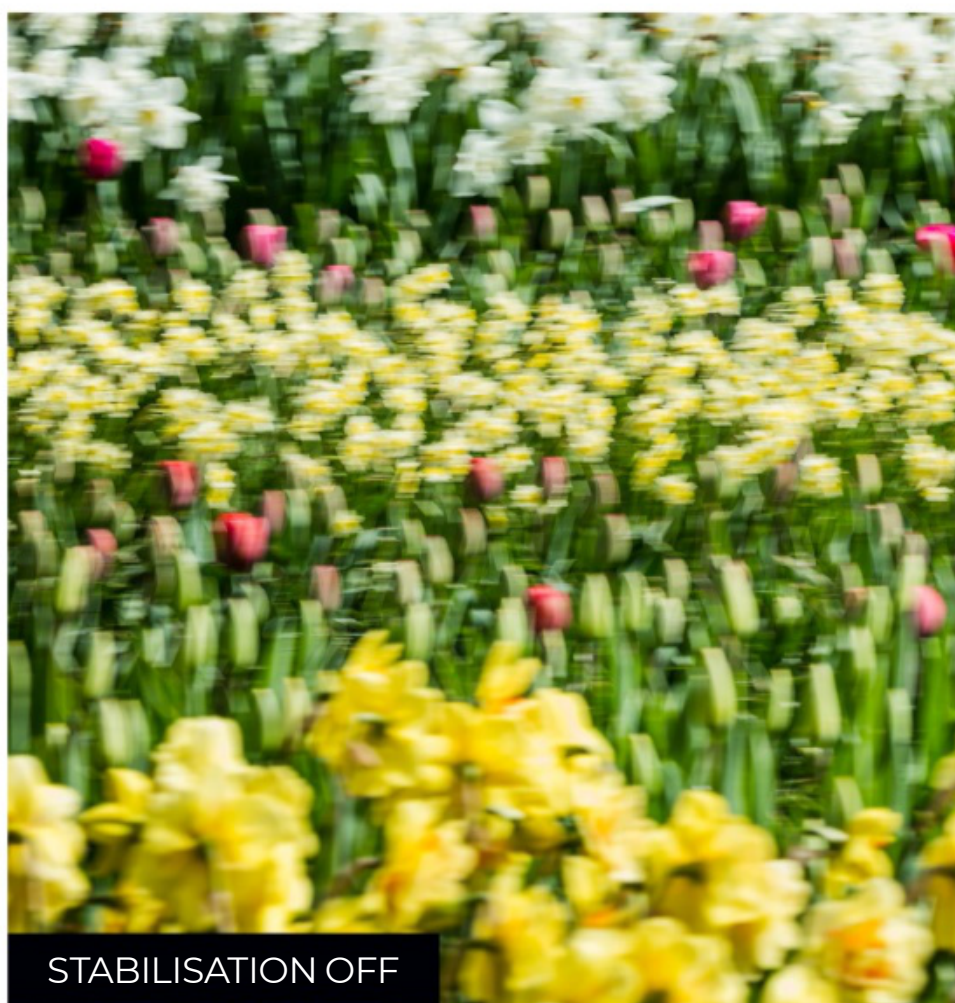
Camera College

The complete guide to modern photography



Marcus Hawkins

Photographer and writer Marcus is a former editor of *Digital Camera*



A telephoto lens was used to 'compress' the layers of this scene, but the shutter speed (1/160 sec) was too slow to use the 400mm lens handheld, resulting in extensive camera shake. Activating image stabilisation helped to steady the image, though.

What is image stabilisation all about?

The vibrations caused by a shaking camera can rob an image of its sharpness, but an image-stabilised lens or camera can bring back the bite to your shot. Here we explore the different options on offer

■ The photographic rule of thumb for taking sharp shots without the aid of a tripod is that the shutter speed should be no slower than the effective focal length of the lens. So, a 200mm lens shouldn't be handheld at speeds slower than 1/200 second, and a 20mm lens should give you sharp results at speeds of 1/20 sec or faster.

Obviously, your mileage may vary when it comes to this rule. Some lenses are too big and bulky to be handheld for any length of time, and the conditions you're shooting in play a part, too.

Image stabilisation can save the day, however. With image stabilisation activated, you may be able to take sharp

pictures with a 200mm lens at speeds down to 1/13 sec, and a 20mm lens at speeds as slow as 0.8 sec – as long as the subject isn't moving, and your handholding technique is impeccable, of course!

Image stabilisation can be broadly broken down into three categories: in-lens, in-camera, and electronic. The lens-based

system is usually referred to as 'optical' image stabilisation, and lenses that feature the technology typically carry an acronym, such as IS (Image Stabiliser), OS (Optical Stabiliser) or VR (Vibration Reduction). Each lens manufacturer uses their own naming convention, but the principle is the same: ➔

How in-body stabilisation works

What does 'five-axis' stabilisation actually mean, and what are the advantages and disadvantages?

In a camera with IBIS, the sensor 'floats', with electromagnets being used to adjust its position when vibrations are detected. Sony, Panasonic and Olympus have been at the forefront of IBIS development, but Nikon and Canon have traditionally used lens-based stabilisation; after all, in the days of film it was more practical

to move a group of lens elements than move a roll of 35mm in the camera. Canon's new EOS R5 and Nikon's Z cameras do feature IBIS, though.

High-end IBIS systems offer what's known as five-axis stabilisation, meaning they can correct for vibrations in five directions: vertical and horizontal shifts, and pitch, yaw and roll. Some

cameras can only achieve this with the help of specific lenses. For example, the Nikon Z 6 offers five-axis in-camera Vibration Reduction (VR) with all Nikon Z-mount lenses along with F-mount lenses that are equipped with VR, but only supports three-axis VR for F-mount lenses that don't have built-in stabilisation.



Pros and cons

IBIS is convenient, but does it have any drawbacks?



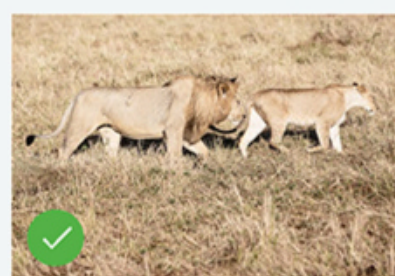
Pro: Use 'any' lens

Although there may be some restrictions, IBIS can stabilise virtually any lens that doesn't have any form of stabilisation.



Pro: Performance boost

Some IBIS can be enhanced by stabilised lenses; the Olympus E-M1 Mark III is said to offer 7.5 stops of stability with Pro lenses.



Pro: It's quiet

You can hear lens-based IS at work, and it may be picked up by a camera's built-in mics when recording video. Not with IBIS.



Con: Not great for teles

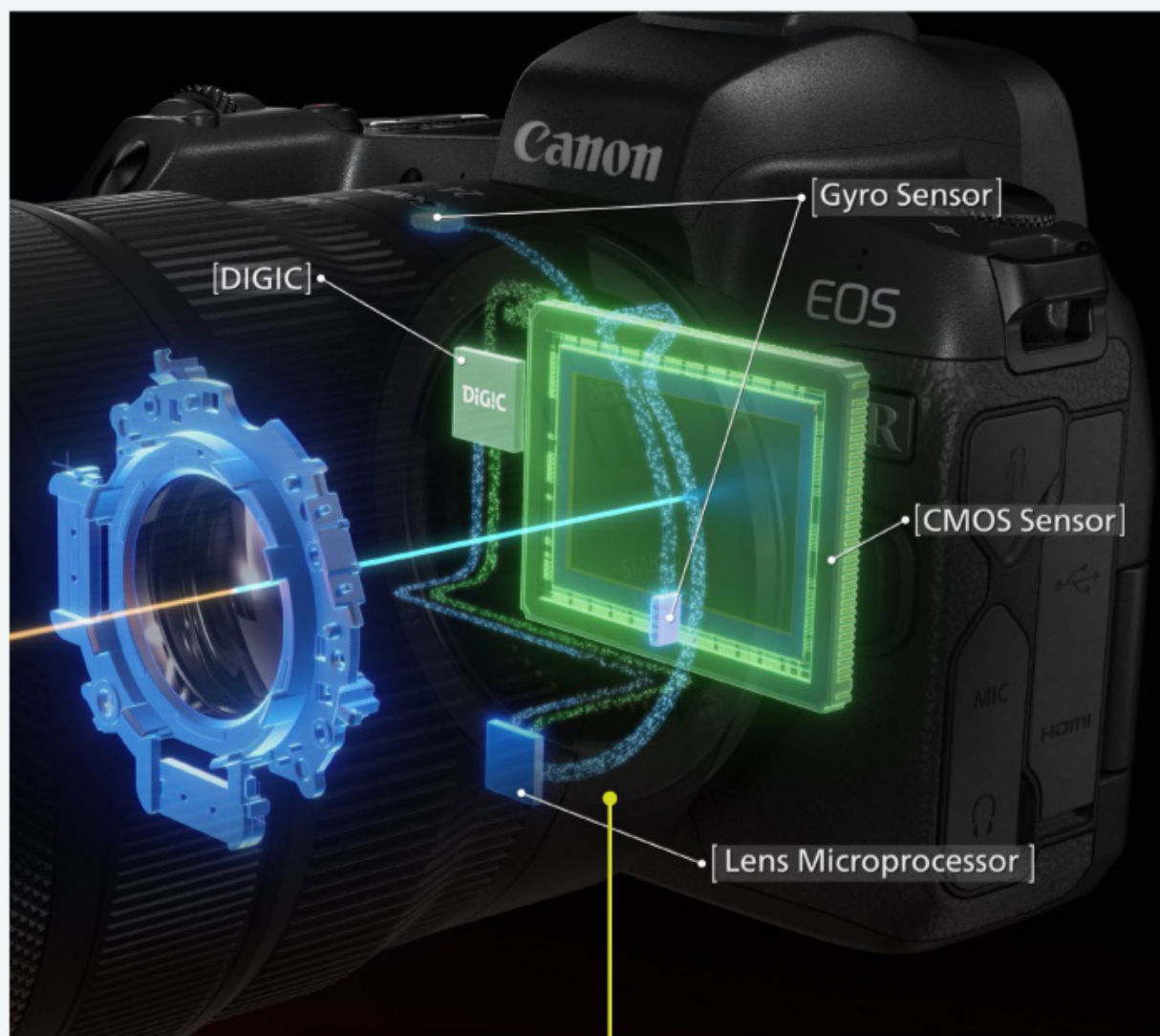
The longer the focal length of the lens, the harder it is for IBIS to stabilise camera shake. Short lenses work fine, though.

How a lens stabiliser works

It adds weight and cost to a lens, but a built-in stabilising unit offers the potential for more a more sophisticated level of shake reduction

Lenses that offer built-in image stabilisation have a floating group of elements within the lens barrel that are shifted in the opposite direction to detected vibrations. Gyroscopic sensors continuously measure the angle and speed of the vibrations, feeding this data back to the lens's onboard microcomputer, which then calculates how much the stabilisation elements need to be adjusted.

Of course, all this functionality adds complexity to the lens design, and this can have a detrimental effect on the size, weight and cost – and potentially image quality, too. That being said, there are some notable advantages of having a dedicated image stabilisation unit in individual lenses. The performance can be tailored to specific focal lengths, for example, and achieving a stable image outside of the camera means that the effect is visible in the optical viewfinder of a DSLR – something that isn't possible with sensor-based stabilisation. Having a jerk-free display means that it's both easier to compose shots and for the camera's autofocus system to keep objects in focus, although it can take a little while to grow accustomed to the 'floaty' viewfinder image that you get when image stabilisation is active.



Sensors

Canon's RF 24-70mm f/2.8L IS USM features two gyro sensors that detect camera shake, and a microcomputer that drives the stabilisation unit. This lens also features Dual Sensing IS, where the camera's processor takes over and crunches data from both the gyros and the camera's imaging sensor, for more accurate control over stabilisation.

to physically move a floating group of elements within the lens in order to counteract the movement of the camera.

Today's lens-based stabilisers usually give you around four or five 'stops' of shake compensation. This means that the system can allow you to shoot at a shutter speed that's four or five stops slower than recommended for a given exposure, and still get sharp handheld results. This is great news if you find yourself shooting in relatively low light without a tripod, or when you want to use a smaller aperture to increase the depth of field – two situations where you may end up with soft pictures because the resulting shutter speed would be too slow. Of course, image stabilisation is only good for reducing the blur caused

by fairly small camera movements, and has no effect on motion blur caused by the movement of the subject; to cure that problem, you'll still need to use a relatively fast shutter speed.

In-camera stabilisation, also known as 'sensor shift' or IBIS (In-body Image Stabilisation), achieves a similar result by moving the image sensor inside the camera. This is typically achieved with electromagnets and a floating sensor, with some cameras offering five-axis adjustments to cancel out both horizontal and vertical shift, horizontal pan (yaw), vertical tilt (pan) and rotational movements of the camera. IBIS only makes practical sense in a mirrorless camera, as you are able to monitor the effects of the



Image stabilisation can be broadly broken down into three categories: in-lens, in-camera, and electronic

Which mode?

Many lenses feature more than one stabilisation option

Image stabilisation used to be found where it was seen to have the biggest benefit – heavy, high-magnification telephoto lenses – but now it's included in everything from kit lenses to macro lenses. It is rare to find it built into fast lenses – those that have very wide maximum apertures, such as f/1.4 and f/1.8 – but attach one of these to a compatible camera that features IBIS, and you get a tempting combination of both a large aperture and stabilisation when you need it.

One advantage that lens stabilisers have over IBIS is that they can be switched on or off using a physical switch rather than having to dip into a menu. Although some lenses have a simple on/off setting, this doesn't necessarily mean that the stabilisation is either fully on or off; the lens may use 'intelligent' stabilisation that can detect if you are panning the camera to follow a moving subject, and it will stop trying to correct movement in that direction.

Other lenses have a mode switch where you have to set either the standard stabilisation or the panning mode. Some lenses have an additional option, such as a Sport mode, which is typically designed to give a viewfinder image that's easier on the eye when you're shooting active subjects.



On or off?

Some lenses automatically shift back and forth between standard and panning mode when stabilisation is on.



Panning correction

With this Canon lens, Mode 2 only corrects movement in one axis – ideal when you're panning the camera.

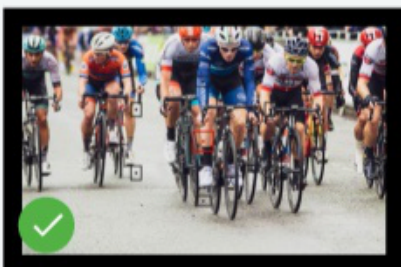


Action correction

The third option is usually a mode that's optimised for easier framing of fast, erratic action in the viewfinder. In some lenses, the full stabilisation may not kick in until you take a picture, saving on battery life.

Pros and cons

What are the main advantages and disadvantages of a lens-based optical stabiliser?



Pro: Visible effect

You can see the effect of lens-based image stabilisation in a DSLR's optical viewfinder, as well as a mirrorless camera's EVF.



Pro: More control

As you can see at the top of the page, you tend to get more control over the IS performance in a lens-based system.



Con: Slow lenses

Stabilised lenses usually have slower maximum apertures, which can result in restrictions on shutter speeds.



Con: Cost

Lenses with IS units tend to cost more than their non-stabilised counterparts and, due to the extra elements inside, are heavier.

What is electronic stabilisation?

If you're shooting video, you might benefit from reducing the shakes digitally

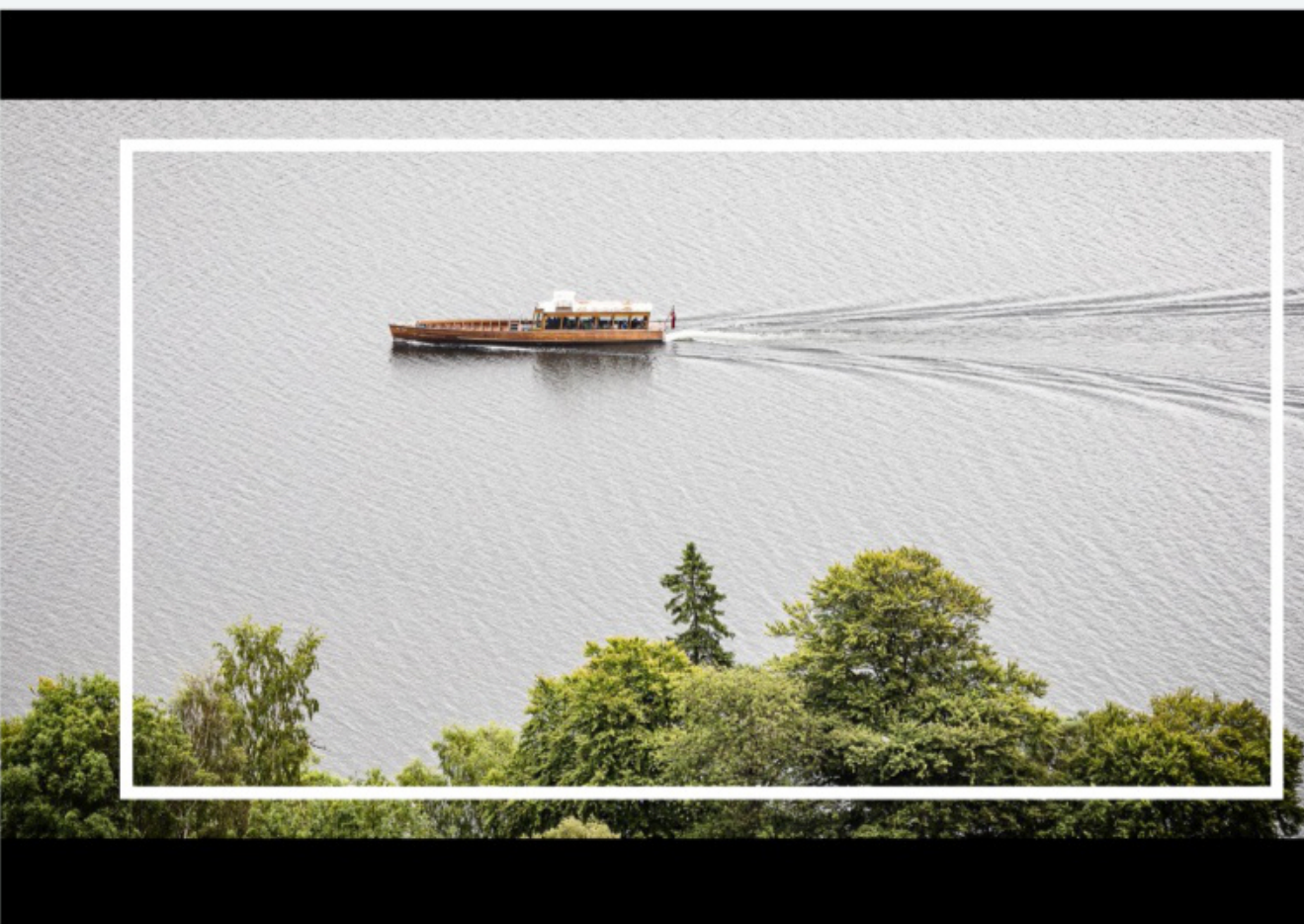
Electronic image stabilisation is where vibrations are counteracted using software rather than physically moving internal parts of the lens or camera. It's typically used for movie recording rather than stills shooting, as the process requires the sacrifice of some pixels – something that's relatively straightforward when today's ultra-

high-resolution cameras actually have too many pixels for movies. It also doesn't generate any audible noise, unlike lens stabilisation.

Achieving electronic stabilisation requires the image to be digitally cropped a little, with the spare pixels allowing each frame to be repositioned and aligned on the sensor in order to keep the footage

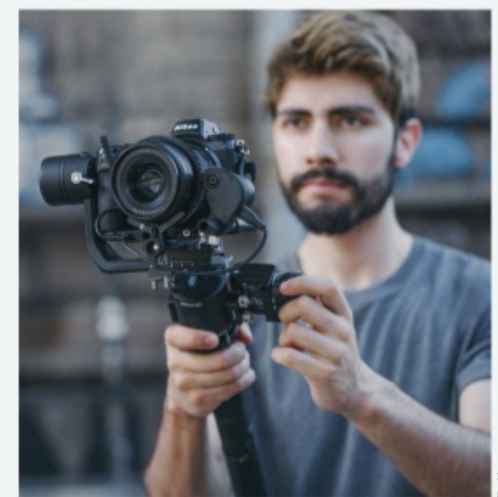
stable. This technique can also be used during the post-production of movies, where the resolution of clips can be reduced in order to reframe the shot.

The drawbacks to stabilising the image digitally are that you have to consider your initial framing carefully and you lose some image quality, although the benefit of stable footage usually outweighs this.



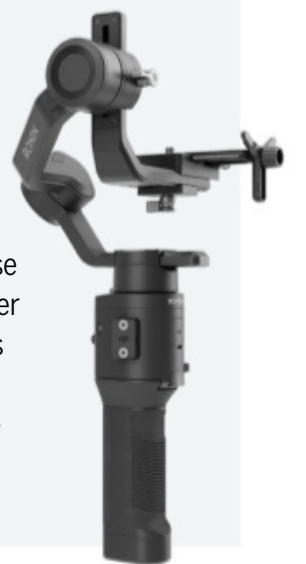
Cropped image

With electronic stabilisation technology, the image ends up being cropped to achieve the steady image – sometimes quite substantially if you're doing stabilising in 'post' – so it's more widely used in video.



Gimbals

If you're serious about shooting video, you'll probably reach for a gimbal, such as the DJI Ronin SC (above), instead of using any form of in-camera stabilisation. These devices provide a smoother form of stabilisation that's better if you're making large movements with the camera rather than trying to keep it stock still.



shake reduction in the camera's electronic viewfinder. The chief advantage of IBIS is that it offers the potential for stabilising the image produced by a lens that doesn't have a built-in stabiliser. Non-stabilised lenses are generally less complex, less heavy and less expensive than their stabilised counterparts. What's more, only the camera body would need to be upgraded to take advantage of any new advancements in stabilisation, compared with the cost that comes with having to upgrade a whole set of stabilised lenses over time.

If IBIS has a drawback, it is that it is the general all-rounder of the stabilisation world. Unlike a lens-based system, where the stabiliser can be optimised for a specific focal length or zoom range, IBIS is pretty

much a 'one size fits all' solution. Longer lenses require more substantial correction than shorter ones, for example, and a lens-based system performs better in this regard – there's a reason why Sony, which uses IBIS in many of its cameras, still includes stabilisers in its telephoto lenses. Some camera manufacturers use a combination of image-stabilised lenses and IBIS to achieve an enhanced level of camera shake compensation.

Finally, there's electronic stabilisation. Often used for movie recording, this doesn't require any moving parts, but uses spare pixels on the camera's sensor to keep the image in the same position as the camera moves. As a result, there is inevitably some loss of resolution and image quality.



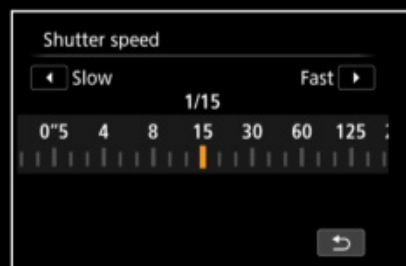
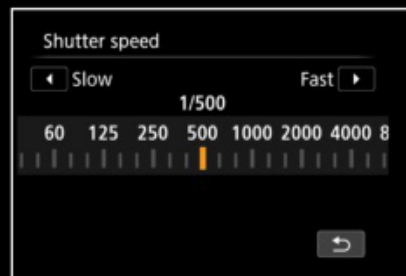
Longer lenses require more substantial correction than shorter ones, for example, and a lens-based system performs better

Camera skills Using stops

What a stabiliser's rating actually means

Image stabilisers are rated in stops, which is a measure of exposure. One stop is equivalent to the shutter speed being either doubled or halved. So going from 1/30 sec to 1/60 sec is one stop faster, and going from 1/30 sec to 1/15 sec is one stop slower.

When a lens or camera says it offers up to five stops of stabilisation, this means the effect (on camera shake) is equivalent to using a shutter speed five stops faster than is set on the camera. The rule of thumb for sharp handheld shots is that the shutter speed should be no slower than the focal length of the lens – so 1/500 sec for a



500mm lens. With a five-stop stabiliser, in theory that could drop to 1/15 sec with similar results to using 1/500 sec. We say 'in theory' because it can be hard to keep a big 500mm lens still at this speed.

Camera skills Close-ups

Don't rely on stabilisation for macro work

Although macro lenses often include image stabilisation, its effect actually decreases the closer that the lens gets to the subject. As a result, for 1:1 work it's usually better to use the camera on a tripod.

Besides, the chances are you'll switch to manual focusing when shooting extreme close-ups, in which case keeping the camera locked in position will allow you to focus the lens with greater precision.



Reduced effect Image stabilisation can reduce shakes with a macro lens, but the effect drops off as you move in

When to switch it on (or off)

Why it's sometimes good to give IS a rest

There are many situations where stabilisation really makes a difference between a sharp shot and a soft one. It also gives you more options when it comes to exposure, allowing you to combine an optimum aperture, shutter speed and ISO that might otherwise give blurred results. There are a few times, however, where it may be better to switch it off altogether...

1 Low light

As light levels drop, you're going to encounter slower shutter speeds. If you don't want to (or you can't) open the aperture or increase the ISO, image stabilisation can enable you to shoot for longer.



2 Depth of field

If you want to use a small aperture to increase the depth of field – such as when you're shooting a landscape – then you'll lose light. Image stabilisation can compensate for this, so turn it on.



3 Tripod work

Some stabilisation systems can detect when the camera is on a tripod and will stop working. Others can't do this, so switch it off to be safe, otherwise you could actually end up with blurred shots!



4 More power

Image stabilisation draws its power from the camera battery, so if you're really running short of juice, it may be better to switch off the image stabilisation system (along with other battery hogs, such as Wi-Fi and autofocus).



SIGMA

A large-aperture, wide-angle F1.4 lens that delivers groundbreaking resolution and image quality. A true flagship of artistic expression. Take your photographic creativity to a new level.

A Art **35mm F1.4 DG HSM**

Petal type lens hood and padded case included.

Available for Sigma, Canon, Nikon, Sony and Pentax AF cameras.

Made in Japan



Mount Conversion Service

Change your mind? Change your mount.
Mount Conversion Service. Only by SIGMA.





Liam Wong

Shot of the month

Enter a neon dreamscape with Liam Wong

new love for photography with his videogame aesthetic.

Developing and sharing his work on social media, Liam gathered over a million views, which led to *TO:KY:OO* becoming the largest crowdfunded book in the UK, raising over £140,000 on the Thames & Hudson platform Volume. The book has been a real labour of love for Liam: he art-directed it himself and oversaw the meticulous production process. Fittingly, *Metal Gear Solid* creator Hideo Kojima provides the foreword.

The photo above, taken at Tokyo's iconic Shibuya Crossing, was one of Liam's first where he played with colour and mood, and is typical of the book's neon-soaked sensibility. "I want to take real moments and transform them into something surreal, to make the viewer question the reality shown in each photograph," he says. ●

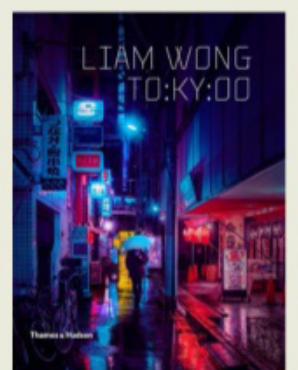
R

ight now, Liam Wong is probably better-known in the video game community than he is in photographic circles – although that may change fast. He was hired

as Ubisoft Montreal's youngest art director in 2013, where he defined the look for the smash-hit title *Far Cry 4* and other Ubisoft releases.

During a 2014 press tour for *Far Cry 4*, Liam visited Tokyo for the first time and found himself inspired by the city's style and architecture. After saving up for his first DSLR, he returned to the city the following year to learn as he shot. A chance encounter in a bookshop with legendary concept artist Syd Mead's *Kronolog* showed Liam the potential of synthesising his

TO:KY:OO by Liam Wong is published by Thames & Hudson, £35/\$50. thamesandhudson.com



Liam Wong
Photographer

Title: 'Neon Noir' / 23:50:20

Location: Tokyo, Japan

Date: 2015

www.liamwong.com



Hotshots

Team UK picks from the World Photographic Cup



i

ILLUSTRATION/DIGITAL ART**Tony Moore, Omagh****A Quiet Night In**

Tony shot this image in County Tyrone, Northern Ireland. Originally commissioned by a couple who wanted a photo of their new conservatory to hang on the wall, it's a composite image where Tony makes good use of luminosity masks.

The World Photographic Cup was founded in 2013 by The Federation of European Photographers and the Professional Photographers of America. Its goal is to unite photographers in a spirit of friendship and cooperation.
www.worldphotographiccup.org



WPC
 WORLD PHOTOGRAPHIC CUP





Camera	Canon EOS-1D X Mark II
Lens	EF 24-70mm f/2.8L II USM
Exposure	1/250 sec at f/8, ISO 320

i

2020 FINALIST

WEDDING

Sanjay Jogia, London

American Beauty

Sanjay showcases the amazing effort that goes into the hair, makeup, Indian Henna art and decor at an Indian wedding. Here he combines all of these disciplines into one carefully crafted photograph.



Camera	Olympus OM-D E-M1 Mark II
Lens	Olympus M.Zuiko 17mm f/1.2
Exposure	1/5,000 sec at f/1.2, ISO 64

i

REPORTAGE/PHOTOJOURNALISM

Tommy Reynolds, Chatham

Ethiopia Forgotten Souls

“The women of this tribe originally wore these lip plates to disfigure themselves during the war, so they wouldn’t be sent away. Now they’re worn as a sign of beauty. This young lady took her lip plate out and offered to sell it to me...”



Camera	Canon EOS 5D Mark III
Lens	EF 24-70mm f/2.8L USM
Exposure	1/100 sec at f/14, ISO 100

i

COMMERCIAL
Richard Bradbury, London
Guinness Burning Man

Richard managed to shoot off just three frames before the fire extinguishers were deployed. Multiple takes were not an option.



Camera	Fujifilm X-Pro 2
Lens	XF 56mm F1.2 R
Exposure	1/2400 sec, ISO 200, F/4

i

WEDDING
Scott Johnson, Chelmsford
Raindrops

“This image is born out of trust: trust in me that I suggested an image in the rain, and trust from her that I’d be able to create an image of her that she’d love, even though you can’t see her face.”

Camera	Canon EOS 5D Mark III
Lens	EF 70-200mm f/4L IS USM
Exposure	1/1,600 sec at f/5.6, ISO 1,250

i

2020 FINALIST

NATURE

**Chris Chambers,
Castleford**

Kingfisher





The
Photography
Show

CO-LOCATED WITH

The
Video
Show

14-17 MARCH 2020, THE NEC BIRMINGHAM

CAPTURE A FRESH PERSPECTIVE

The event for everyone passionate about photography and moving image

Cutting edge gear | **Live demos** | Learn new skills and techniques
Legendary photographers and filmmakers | Expert guidance

20% OFF tickets with Digital Camera, use code DCAMTPS20

PHOTOGRAPHYSHOW.COM

EVENT SUPPORTED BY

Digital
Camera

Free entry passes available for Professional Photographers^{**}

*Discount code applies to standard adult tickets only and cannot be used in conjunction with any other promotion.
Group discounts are available - please email thephotographyshow@futurenet.com for details. Discount codes expire at midnight on 11 March 2020. **Subject to specific criteria

PRACTICAL Photoshop®

SENSATIONAL IMAGES MADE SIMPLE!



Content director

Chris George

Welcome to
our guide to the
digital darkroom!

**15 PAGES
OF EXPERT
ADVICE!**



**20
FREE RAW
PRESETS!**
to transform
your images



72

Step by step

Use your free raw presets to transform images instantly

This month



74

Tool School: Filter Gallery

Explore a photo feast of colourful looks and eye-catching patterns



76

Fundamentals: Vintage effects

Recreate the iconic wet-plate look in Lightroom Classic



78

Get the Look: Make details pop

Four techniques that accentuate detail using unexpected approaches



81

Raw War: Classic architecture

Two image-editing experts solve a battle between foreground and background



86

Just for Fun: From photo to sketch

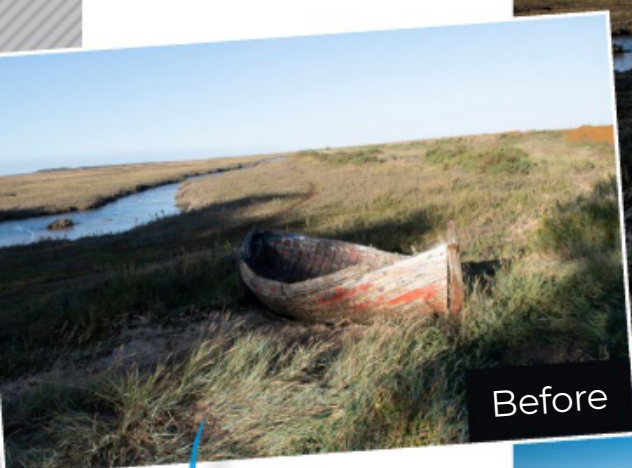
Use Blending Modes and blur effects to create a pencil sketch look



PLUS

71 minutes of video, and more!

Follow our Photoshop tutorials, plus advice on buying shoulder bags



Before



After



Get a great new look with your free raw presets

Speed up your raw workflow and get the picture style you want in one click with our custom-made files for Camera Raw

**20 FREE
RAW
PRESETS**
on your
disc



FILE & VIDEO

Download the disc: www.bit.ly/dc227disc



Jon Adams

Jon is a professional photographer and writer. He also provides one-to-one and small-group tuition in both digital SLR and Photoshop image-editing skills.

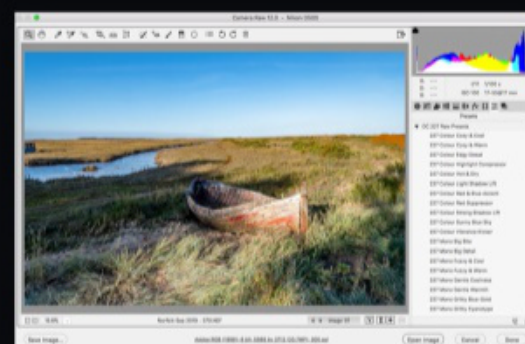
Raw files are a special kind of file format that come straight from the camera's imaging chip, and are not subjected to any in-camera processing. In a JPEG, which is the other common file format cameras use, all the building blocks that make up an image – like colour, contrast and sharpness – are 'fixed' when you take the shot; but in a raw, they're floating values, and can be adjusted later to change the look of the photo.

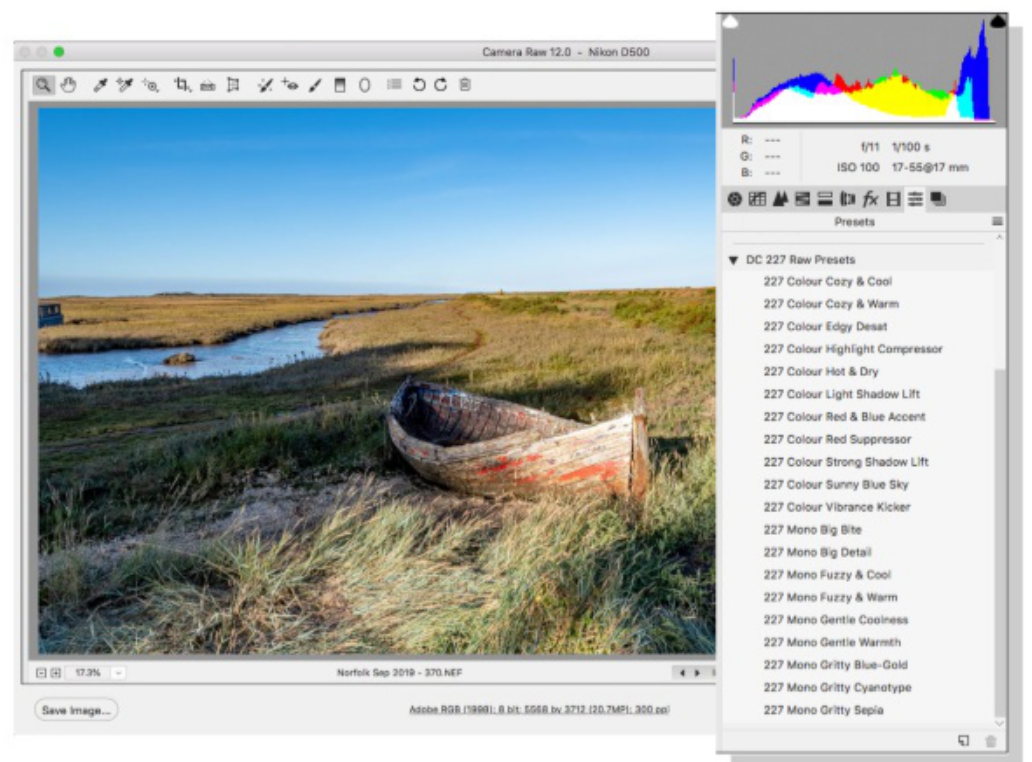
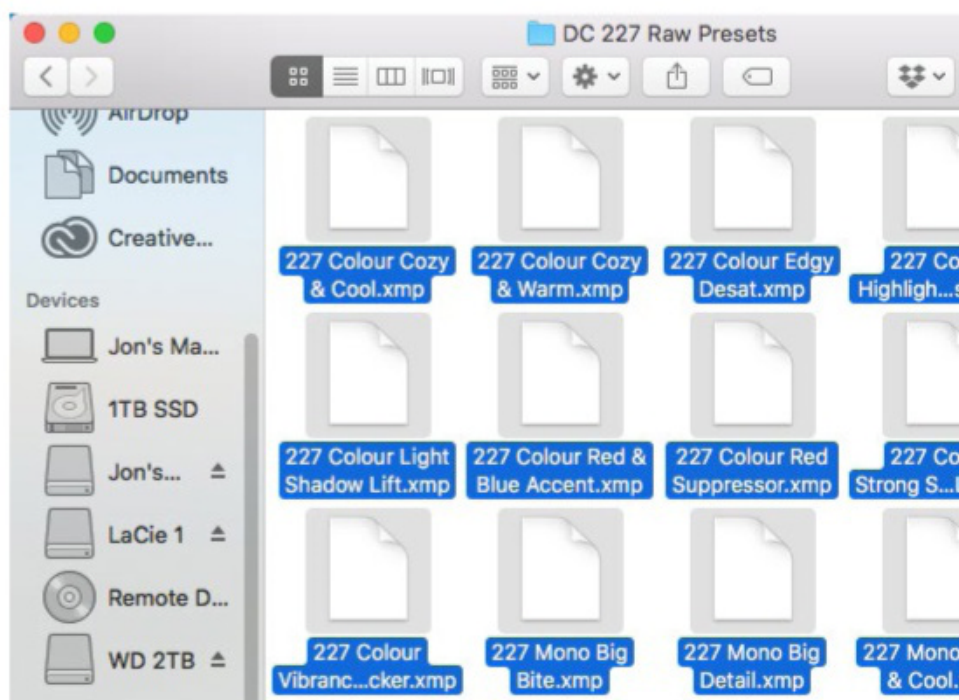
Raw converters like Camera Raw or Lightroom allow you to adjust all the core values that create the look of a picture – but with hundreds of sliders, settings and tools, and a near-infinite array of possible outcomes, it's not always easy to know where to start!

Presets offer a great solution to the agony of choice that a raw converter presents. Not only are they extremely quick to use when you want fast results, but they also serve up an inspiring range of options for new ideas. Any image can be presented in different ways; presets let you quickly run through a wide array of visual styles to find a look you want to pursue.

About your Raw Preset Pack

The 20 presets in the Raw Preset Pack have been created specially to help you see your photos in a new light. Once you've installed them into Photoshop's Camera Raw plugin, just roll your mouse over the different presets in Camera Raw, and each time you'll see a preview of your image with its new visual styling. To apply the preset you like to the image, one click is all it takes.





1

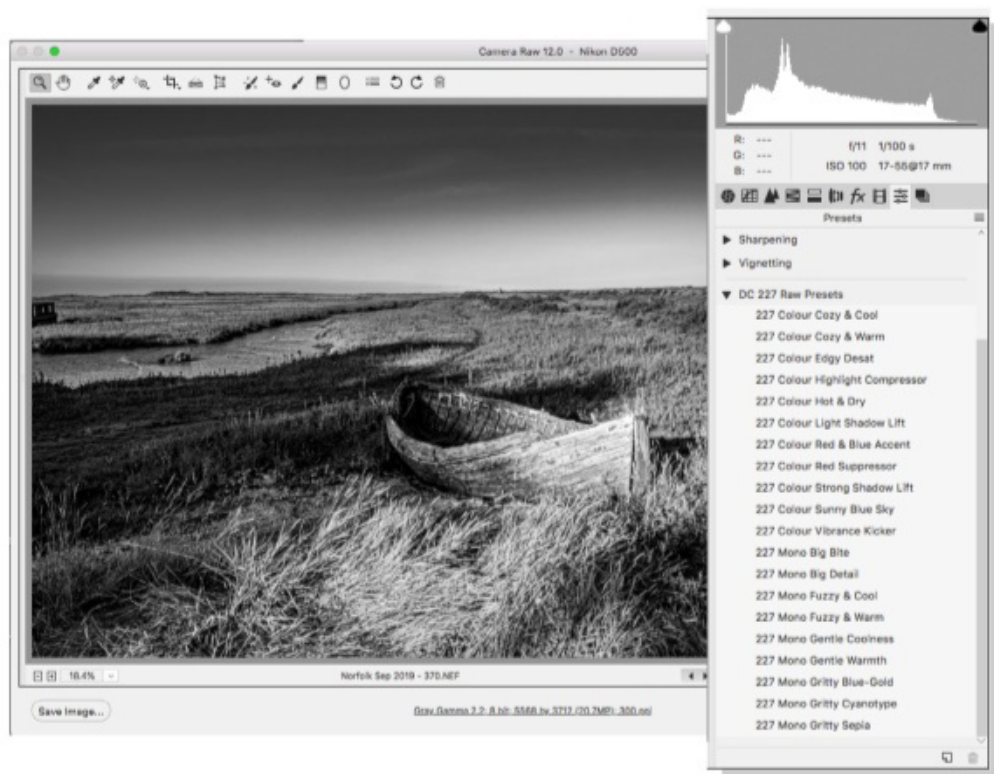
Reveal & open the correct folder

Copy the Raw Preset Pack from the disc to your computer. To access the right Settings folders on your computer, you need to turn on the Show Hidden Files option. To do this on a Mac, click Go in the Finder menu bar, then hold down Alt or Option and select Library. The full path is /Users/UserName/Library/Application Support/Adobe/CameraRaw/Settings. In Windows 10, open File Explorer, then select View > Options > Change Folder And Search Options. Pick the View tab; in Advanced Settings, select Show Hidden Files. The full path is C:\Users\UserName\AppData\Roaming\Adobe\CameraRaw\Settings.

2

Install your raw presets

Select all the .XMP files within the Raw Preset Pack folder, then drag and drop (or copy and paste) them into the Settings folder you went to in the first step. Once they are in place, right-click on any raw file (or use Boat.nef from this issue's disc) and choose Open With > Adobe Photoshop CC. This will fire up Camera Raw and load the raw file into it. In the Control Panel, click the Presets tab (Cmd/Ctrl+Alt/Option+9), and you'll see your new raw presets at the bottom of the Presets list in the DC 227 Style Presets folder. Click the arrow next to it to expand the folder and see the contents.



3

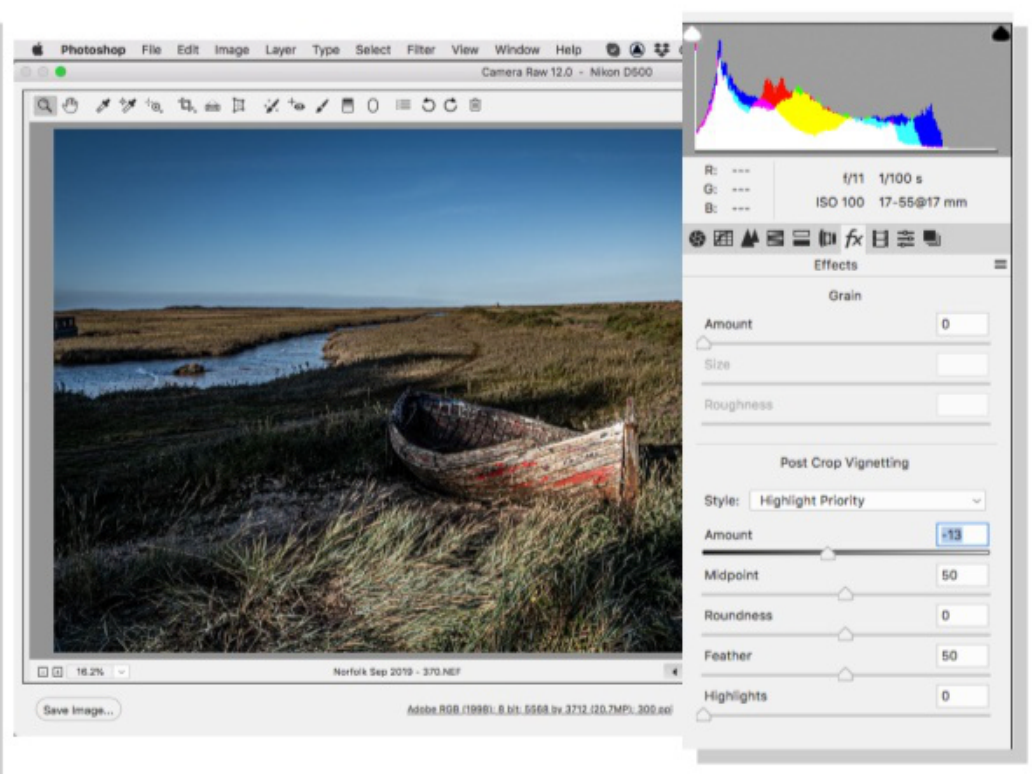
Preview your preset styles

Roll the mouse cursor over each of the presets, and you'll see an instant preview of how your image looks. There's a mixture of colour and mono presets in the collection, so have a quick look at all of them to see which works well with your picture. To apply the raw settings creating the preview, just click directly on a preset's name. Nothing is fixed at any point, so if you change your mind and want to apply another, just click on that instead! Once you've got a visual style you like, you can adjust any of the raw settings to fine-tune the result. To do this, click on any of the tabs at the top of the panel, then tweak the sliders to alter the effects.

4

Customise the presets your way

Once you have the look you want, click Open Image at the bottom of Camera Raw to load the image into Photoshop. If you want to make another change to the raw, however, you can make your adjustments without any impact on the preset itself. Here I've used the Colour Edgy Desat preset, but wanted to customise the look. To do this, I clicked on the Basic tab and took Exposure to -1.00, then took Shadows to +100 and Highlights to -100 to expand the tones. To darken the edges, I then clicked the FX tab and, under Post Crop Vignetting, took Amount to -13. When you're done, click on Open Image, and save your newly styled pic.



Before



After



FILE & VIDEO

Download the
disc: [www.bit.ly/
dc227disc](http://www.bit.ly/dc227disc)

Get creative with the Filter Gallery

Master the control centre for a variety of colourful looks and eye-catching patterns



James Paterson

With over a decade as a writer and photographer behind him, James knows exactly which Photoshop and Lightroom tools and techniques matter most.

The Filter Gallery is a creative hub for an abundance of effects in Photoshop. If you're looking for a different look or a fun treatment, you'll find plenty of vibrant options here that let you take your image in all kinds of interesting directions.

Broadly speaking, these are creative effects filters rather than the more pragmatic filters found in the Blur Gallery or the Liquify Filter. They can be used, for example, to give your image a pencil sketch look, a painterly finish or a pattern-like texture.

However, its versatility can also be a negative. All the filters in the Filter Gallery work by altering pixels using universal algorithms, so the effect isn't tailored towards the content of the image, but rather the make-up of the pixel values. As such, a filter effect, while fun, can sometimes seem tacky or generic. One way you can combat this is by combining several filters into one, as I've done here by using the Cutout, Texturizer and Diffuse Glow filters in combination.

Your image needs to be in 8-bit format before you open it in the Filter Gallery so, if necessary, go to Image > Mode > 8-Bit to alter the bit-depth.



Selective filtering

One way to make your filter effects stand out from the crowd is to apply different effects to different areas of the image. This is easily done by using layers and masks. After converting a layer to a Smart Object (see opposite) and applying a filter, you'll see a Smart Filter mask thumbnail appear in the layer. You can highlight this mask and paint with black to hide the effect over parts of the image. What's more, you could also duplicate the layer and change the filter settings, then select part of the image (try Select > Subject) and add a Layer Mask to make the filter work selectively.

1

Filter thumbnails

Go to Filter > Filter Gallery to start. The column here lists all the filters available to you, divided into sets. Several filters here will sample from your current foreground and background colours to create an effect, including all the Sketch filters (except Chrome) and the Diffuse Glow filter. As such, for these you'd need to choose the colours beforehand.

2

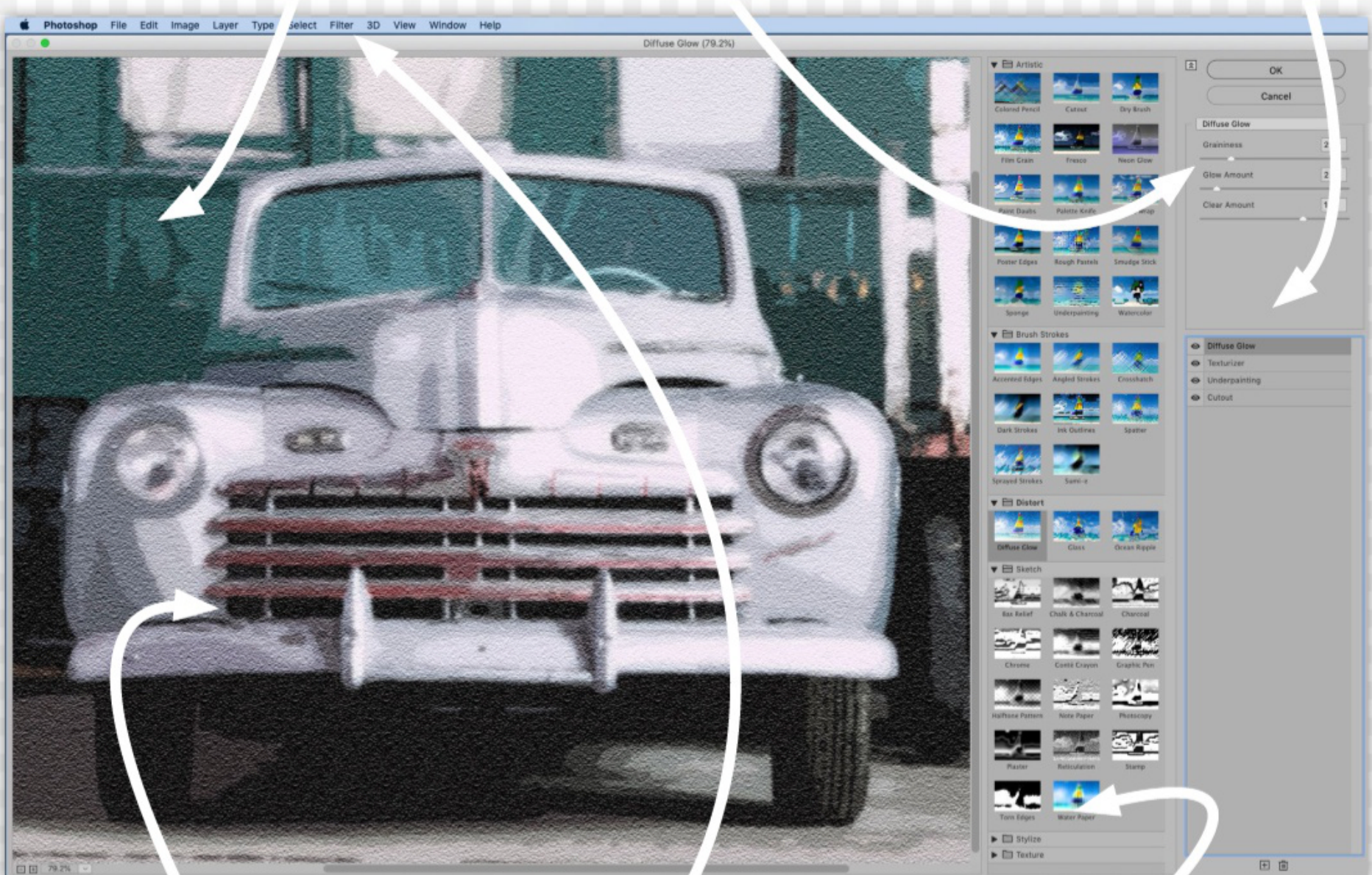
Filter Settings

After choosing a filter, the next step is to use the context-sensitive settings to fine-tune parameters and control the strength of the effect. With Diffuse Glow here, you can set the strength of the glow and the amount of grain. To reset the sliders to their starting values hold Alt/Option and the Cancel button switches to Reset. (This handy shortcut works for all dialog boxes in Photoshop.)

3

Combine filters

This box lets you combine several filters into one effect. After applying your first filter, click the plus icon at the bottom to add a second, then choose another filter. You can add multiple filters to craft a unique look for your image. The order of the filters in the list is important. The top filter is applied first, then the one below and so on. You can drag the filters up or down the list to change the position.



4

Preview box

The Preview box gives you a chance to assess the effect as you work through the filters and settings to fine-tune the image. You can press Ctrl/Cmd and plus or minus to zoom in or out, or press Ctrl/Cmd+0 to fit the image to the preview box. A progress bar in the bottom-left corner tells you how long the command needs to process a change. High-res images or involved effects can be slow to update.

5

Convert for Smart Filters

Before you enter the Filter Gallery it's worth going to the Filter menu at the top here to choose Convert To Smart Filters (or right-click your layer in the Layers Panel and choose Convert To Smart Object). By making the layer a smart object, any filters you add to it will show as Smart Filters beneath the layer name. You can double-click the filters to change the settings at any time, so nothing is set in stone.

6

My favourite filters

There are lots of filters to play with, and we all have our favourites. One of the best is the Diffuse Glow filter, which blows out highlights and lets you add a grainy finish. It's great for black and whites. Texturizer lets you add different textures, control the strength and even change the angle of light falling on the texture. Halftone Pattern is another fun one to try, as are Graphic Pen and Glowing Edges.



Create vintage effects

Give your photos the distinctive wet-plate look in minutes



Sean McCormack

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



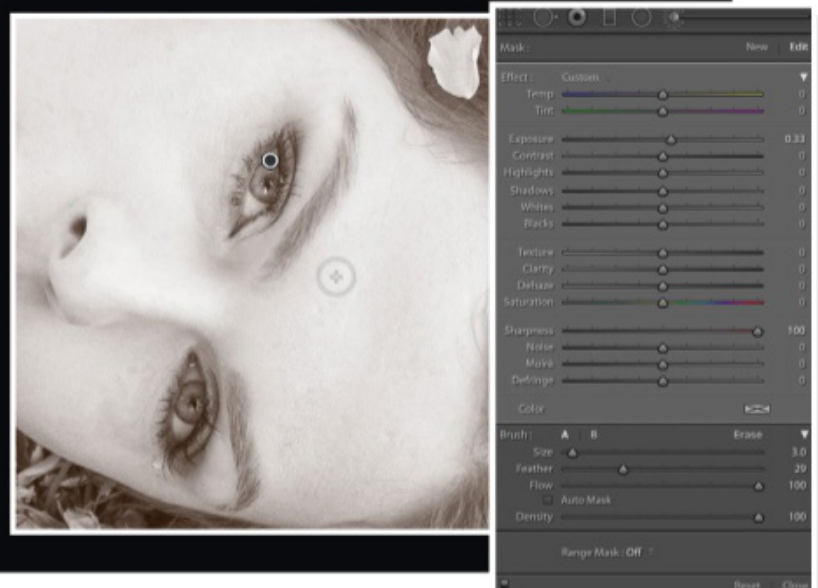
FILE & VIDEO
Download the
disc: www.bit.ly/dc227disc

Some time ago, I did a class on wet-plate photography. Wet-plate was the main form of photo creation in the American Civil War era, often practised by photographers in travelling wagons, pulled by horses. In this process, you create the plate, shoot the photo, and develop it within five minutes, before the plate dries. It requires either a long exposure or huge amounts of light.

There are some notable qualities to the wet-plate look. They're black and white, based on the silver halide chemistry of the day. They're prone to breakdown from sunlight, so they fade. This can also yellow them. If you don't apply a varnish, they're also prone to scratches. The plates have to be mounted in the dark slide, so the corners are often not exposed. With portraits, the eyes often have a very intense, sharp, look to them. Here we'll apply all of these elements in Lightroom...

Intense eyes

To really nail the wet-plate look, you can sharpen the eyes. Using the Brush Tool, double-click Effect to reset the sliders. (Click New to retain your settings if you're coming from the final step.) Set Sharpness to 100, and paint just the eyes and lashes. Set the brush Exposure to +0.33 to lighten them as well.





1

Basic tweaks

First you'll need to fix any exposure errors, like the underexposure here caused by rapidly changing light. To correct it, this photo has had Exposure set to +0.90. To open up the range, Shadows have been set to +50, with Highlights set to -37.

While you're in the Basic Panel, turn Saturation down to -100, to create the black-and-white look. If you prefer, you can set the Treatment to Black and White, or choose a B&W profile by clicking on the Profile Browser icon (the four rectangles).



2

Age the photo

To create the aging effect, you can go to the Tone Curve. There are two elements here: first the fading, then the colour. You're using the Point Curve for this, so click on the tiny Point Curve icon in the bottom-right of the panel. Drag your leftmost point up to create the fade. To boost contrast, create a point about one third of the way in and pull down. About one third in from the right, create another curve point and raise it.

The browning effect is a mix of red and yellow. From the Red Curve, raise the leftmost point. From the Blue Channel, move the leftmost point towards the right a little.



3

Add the corner tabs

To get the corner tabs, choose the Graduated Filter. Drag a small filter on one of your corners. Keep the outer lines close to the centre line. You can hold the Alt or Option key to have the centre line stay fixed while the outer lines move. Set the filter Exposure to taste. It's +1.70 here.

Right-click on the pin and choose Duplicate. Drag the new pin to another corner. You may need to widen the filter to get hold of the rotate cursor. To swap the direction of the filter, Alt or Option-drag an outer line over the centre line. Repeat for all corners.



4

Add some scratches

To get the scratched look on your photo, go to the Brush Tool under the Histogram. Set Size as small as you can. The trick to getting lighter or deeper scratches is to use the Density slider. Set it to 32, and set Exposure to about 1.6, or to taste. Quickly swipe the mouse or pen across to create your scratches.

Vary the Density amount to get deeper effects. Use your Erase brush to get rid of sections where the scratch looks messy. You can opt to click New at the top to create different sets of looks to re-use later.



Before

FILE & VIDEO

Download the
disc: [www.bit.ly/
dc227disc](http://www.bit.ly/dc227disc)



1

Use mono

Click on the Create New Fill Or Adjustment Layer icon at the bottom of the Layers Panel – it's the half-black half-white circle – and select Black & White. Since the image is predominantly made up of yellows and greens, we'll focus on these sliders. Set Yellows to 140 and Greens to -40, then close the dialogue box. The image will be too light after this change, so create a Levels Adjustment Layer and set the Black point below the histogram to 40.

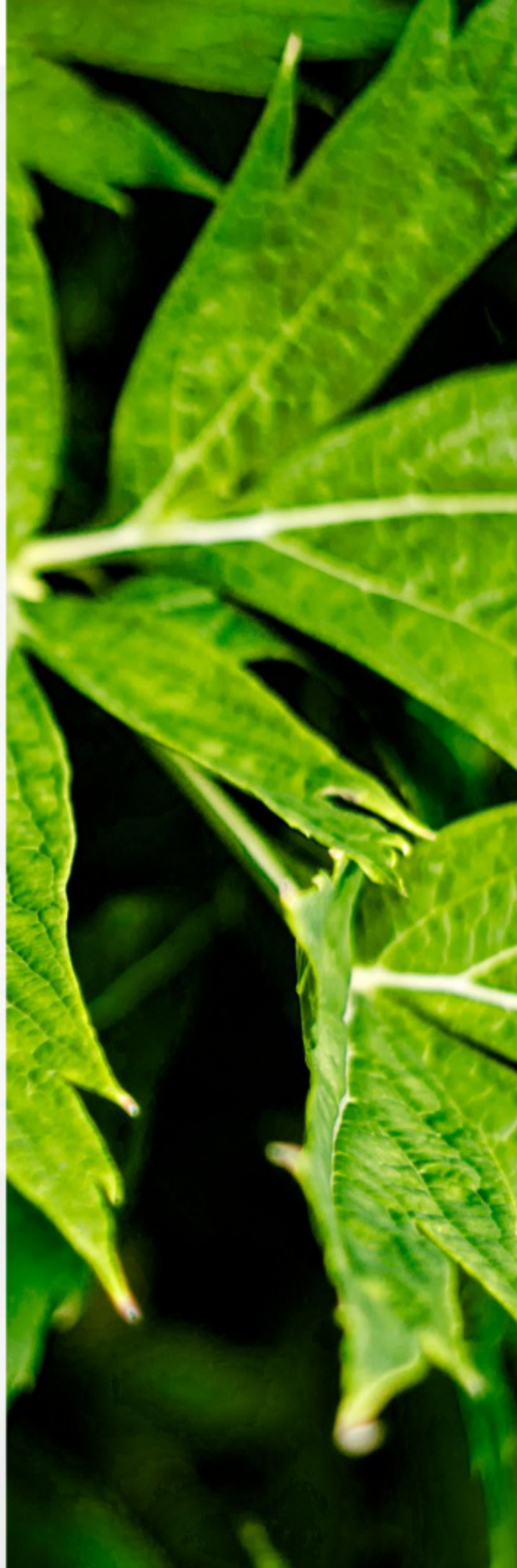
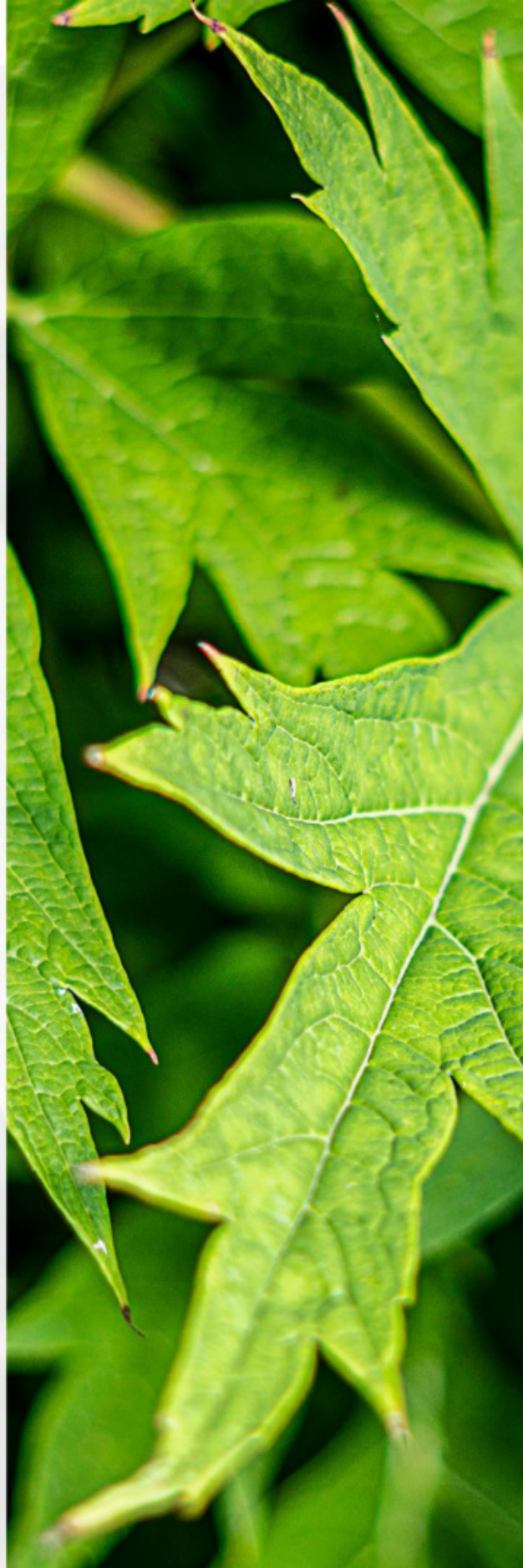
**James Abbott**

James is a professional photographer who specialises in landscape and portraits. He's an advanced Photoshop user and has created hundreds of tutorials.

Even with the best lenses in the world, capable of resolving the most detail possible in high-resolution cameras, there are still ways you can improve the appearance of detail in your images. I'm not talking about absolute sharpness, but rather the use of colour-based enhancements to emphasise and accentuate the appearance of fine detail.

The most obvious way you can increase detail is to sharpen images, but the problem here is that you can only sharpen an image so much before you begin to introduce artefacts and other forms of image degradation. It may sound contradictory, but there is only so much sharpening you can apply to any image, so to enhance detail and really make it stand out, you need to take some more novel approaches.

Here are four techniques that make detail and texture pop out of images without the associated problems of oversharpening. Give them a try today!



2

Focus on the details

With the Background Layer selected, press Ctrl/Cmd+J to duplicate it. Go to Filter > Camera Raw Filter; after the dialog box opens, set Texture to +50 and Clarity to +40 before clicking OK. When the filter closes, press Ctrl/Cmd+J to duplicate the enhanced layer, then go to Filter > Other > High Pass and set Radius to 7.0 Pixels. Click OK, then change the Blending Mode of the layer from Normal to Overlay to make it transparent.

3

Colour luminosity

Create a Black & White Adjustment Layer and increase Yellows to 115 and reduce Greens to -135. The image will be too dark after these changes, so close down the dialog box and create a Curves Adjustment Layer. Click in the centre of the curve, and drag up and to the left to lighten. If you accidentally place a point you don't need, simply click on it and drag away from the curve to delete it. Once you've finished, close the dialog box.

4

Apply a bleach bypass

Create a Levels Adjustment Layer and change the white point to 200. Close the dialog box and change the layer's Blending Mode to Multiply. Next, create a Black & White Adjustment Layer and increase Yellows to 100 before closing the dialog and setting the layer Opacity to 40%. Create a Curves Adjustment Layer, lighten the image and close the dialog. Finally, Shift-click on the Levels Layer and hold down Ctrl/Cmd+G, then set the Opacity of the Group to 50%.

Urban Access "Slings both ways"

sling over left or right shoulder

thinkTANK

THE CHOICE OF WORKING PROFESSIONALS

Urban Access SLING 8



Urban Access SLING 10



Authorised UK & Ireland retailers:
www.snapperstuff.com/retailers

snapperstuff.com

distributor for: ThinkTankPhoto & MindShift Gear

Photographic Backgrounds

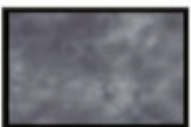
Hard wearing • Low crease • Washable



PLAIN

8' x 8' . £15
 8' x 12' £24 PLUS P&P
 8' x 16' £29

10 COLOURS INC BLACK, WHITE & CHROMA COLOURS



CLOUDED

8' x 8' . £27 PLUS P&P
 8' x 12' £44

20 COLOURS. SPECIAL OFFER : 8 x 12 CLOUDED - 2 FOR £80 OR 3 FOR £115

01457 764140 for free colour brochure or visit

www.colourscape.co.uk

ADVERTISE HERE

Do you want to advertise in the definitive guide to SLR & CSC photography?

CALL NOW ON 01225 442244



Recycle your magazine and seven days later
 it could come back as your newspaper.

www.recyclenow.com

recycle

The possibilities are endless.

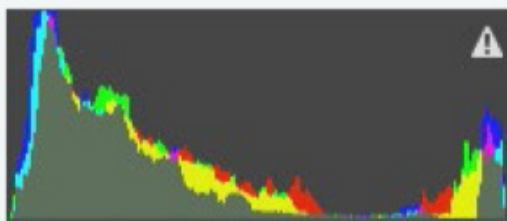
RAW WAR

ONE RAW FILE. TWO ARTISTS. FREE REIGN

Every month two of our resident Photoshop experts are challenged to interpret one raw file in any way they see fit. Over the following pages, they reveal their rationale and show how you can achieve their look...

The original by Alistair Campbell

Alistair shot the world-famous Duomo in Florence on a Fujifilm X-T2, using a 16-55mm lens at its longest focal length. The exposure was 1/4,000 sec at f/2.8, ISO 640. The shallow depth of field helps to draw attention to the cathedral dome, but there's still competition between the foreground and background, which both our experts want to address.



FILE & VIDEO

Download the disc: www.bit.ly/dc227disc

ORIGINAL RAW FILE



James Paterson

After over a decade as a photographer and writer, James knows which Photoshop tools matter most.

Raw warrior 1 wants to create...
A colourful cityscape



Jon Adams

Jon is a professional photographer and writer. He also provides one-to-one and group tuition.

Raw warrior 2 wants to create...
A subtle shot with a clear focus



Warrior 1

James Paterson



Florence's famous Duomo is one of those sights that looks great from any angle. I especially like glimpsed views like this, which show how it's nestled in the heart of a historic city. My edits here are geared towards enhancing the tones and drawing the eye in towards the largest brick dome in the world. After the initial image toning steps in Camera Raw, I'm using Photoshop's excellent Blur Gallery to add a shallow-depth-of-field effect, blurring out the foreground details and street buildings so that the focus is on the distant basilica.

1 Camera profiles

Whenever I edit Fujifilm raws, I like to experiment with the raw profiles that call upon famous Fuji film stocks, like Provia and Velvia. These can be found within the Camera Raw Profile Browser under Camera Matching. (The profiles here differ depending on the camera used.)

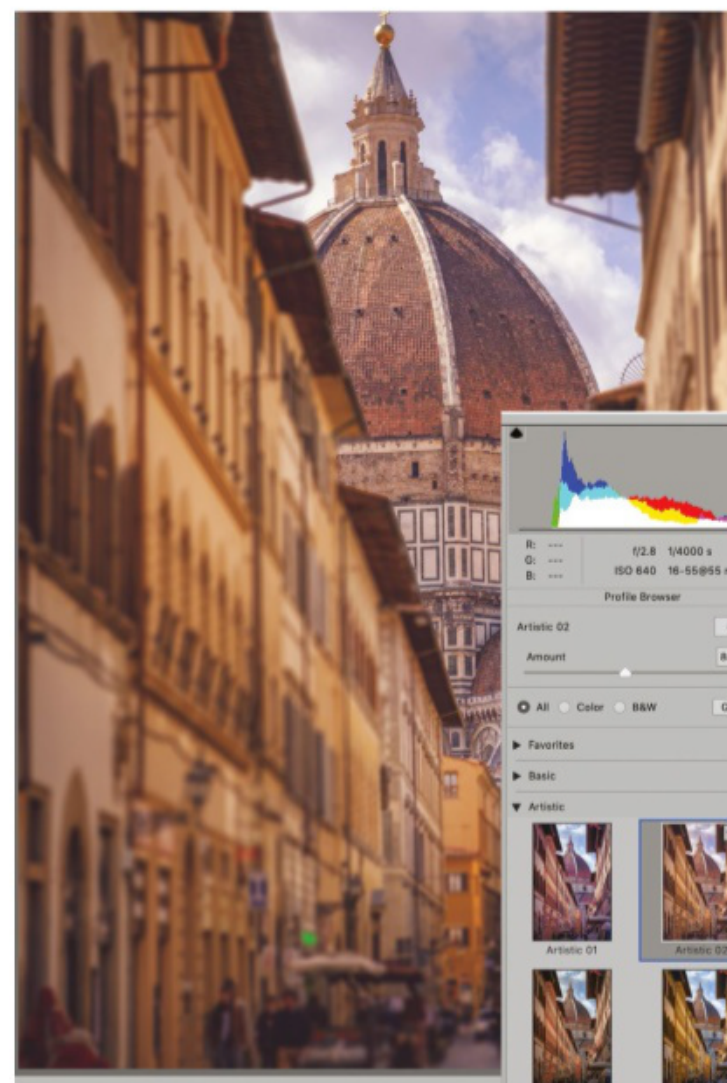
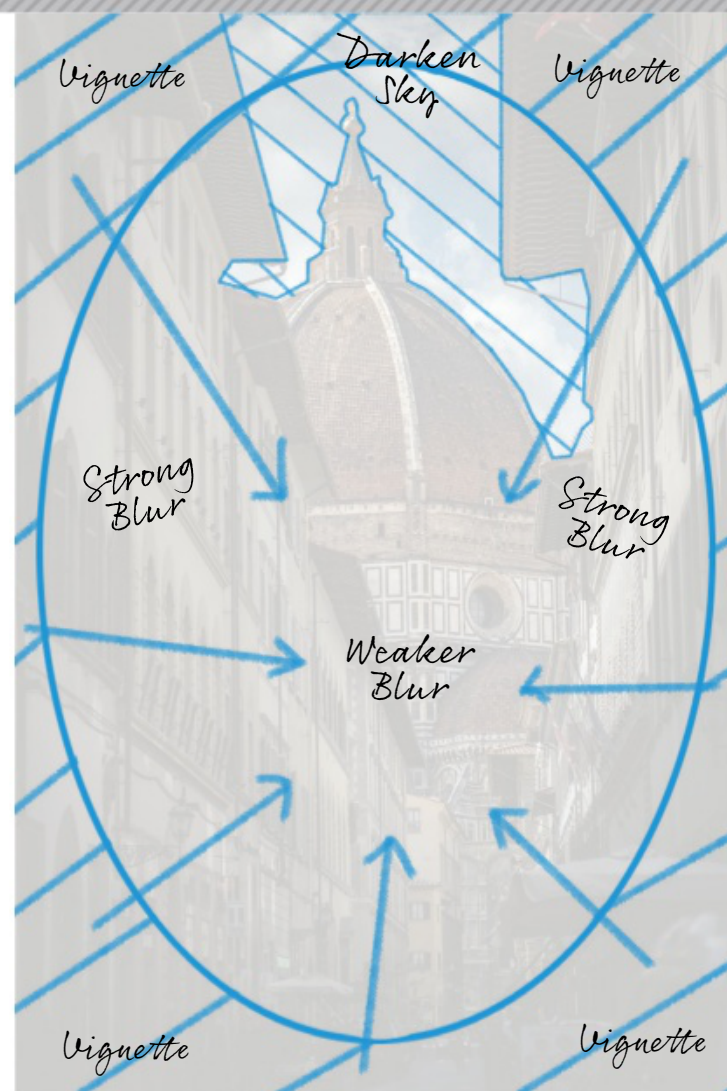
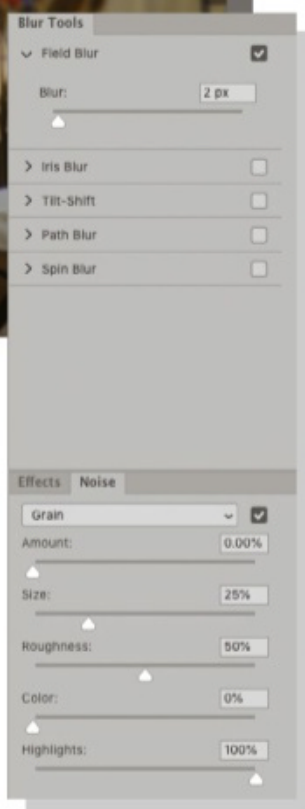
After choosing Velvia, I switch to the Adjustment Brush and paint over the sky (making sure Auto-Tone is ticked in the Adjustment Brush settings so that the brush seeks out the edges of the sky). I dial down Exposure and Highlights to pull a little more detail out of the clouds. Now I'm ready to switch to Photoshop.



2 Blur the foreground

I want to blur out the details in the foreground to draw attention to the basilica. To begin, I duplicate my layer (Ctrl/Cmd+J), then use the Quick Selection Tool to select the cathedral and sky. Once done, I add a Layer Mask.

With the cathedral isolated, I highlight the bottom layer and apply Field Blur (Filter > Blur Gallery > Field Blur). This lets you create fall-off in focus by adding pins across the image, then setting different blur strengths for each. I blur the street and side buildings, for a shallow-focus effect that gradually becomes sharper as it recedes into the distance.



3 Vignetting and colour adjustments

Blurring is one way to draw the eye to the important areas of the image: another way is to add a subtle vignette. So I make a duplicate of all layers with Ctrl/Cmd+Shift+Alt+E, then go to Filter > Camera Raw Filter.

In here, I use the Radial Filter to darken the edges of the frame, then apply the Artistic 2 Profile to give the image a warmer feel. I find it often helps to sell an effect like this if you round things off with a few final tweaks to the tone and colours.



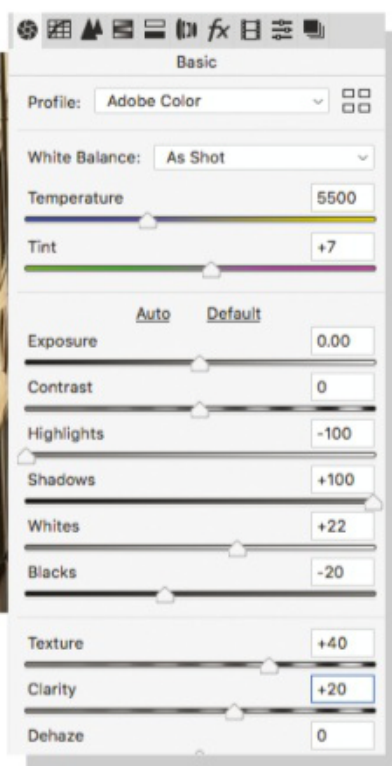
Warrior 2

Jon Adams



This is an interesting angle on the Florence Duomo. We have multiple lead-in lines from the buildings on either side of the street, drawing us into the base of the main subject. From there, the eye is carried up to the dome, and comes to rest on the lantern and copper ball at the top of the frame. There's nothing I'd change about the crop, but the shot is packed with detail, so I'll look to accentuate this to make the most of it.

I'll then push the contrast up, to add lots of weight and mood to the picture, and add a strong vignette to darken the perimeter, to really focus attention on the dome. Finally, I'd think about losing some of the warmth and saturation from the foreground buildings, so the colours don't fight the cathedral for attention.



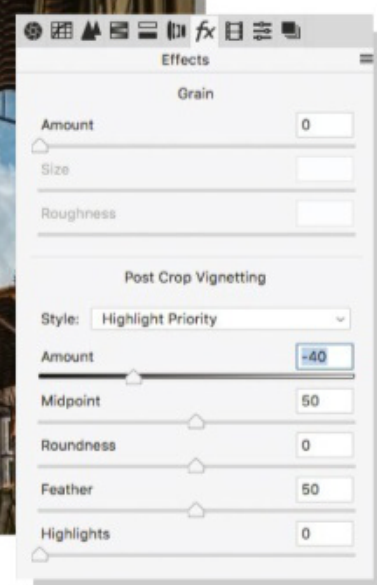
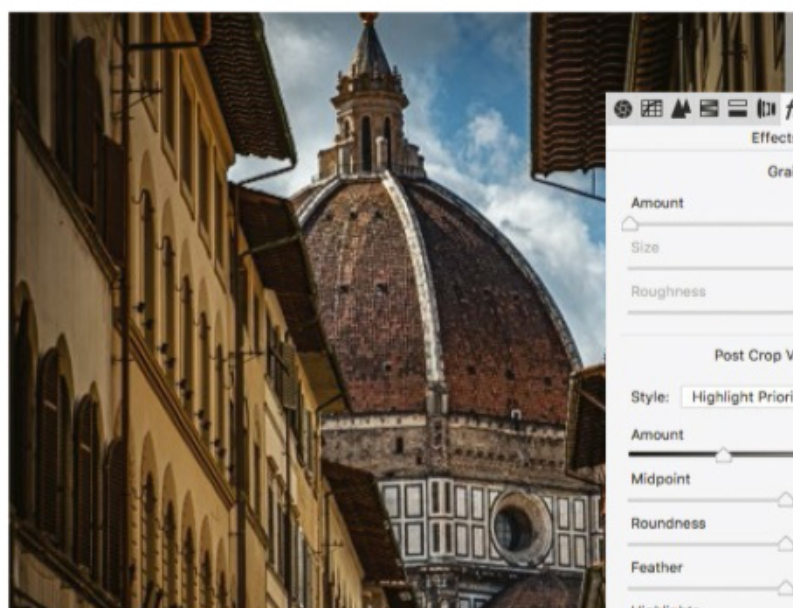
1

Enhance detail

In Camera Raw, I reduce Highlights to -100 to compress the brightest tones and bring back the sky detail. To reveal the detail in the darker parts, I increase Shadows to +100.

This brings out extra definition in all the lines of the foreground buildings, but makes the scene a little washed out. To compensate for this, I ramp up the very darkest tones by moving Blacks to the left. At a value of -20, the scene looks more balanced, but the brightest tones are still a bit grey. To fix this, I push Whites to the right, settling on an amount of +22.

To enhance the detail, I push Texture to +40 and Clarity to +20. These sliders increase the micro-contrast in midtones, so give the appearance of a sharper image with more defined edges.



2

Push contrast and add a vignette to boost mood

I want to boost contrast to add weight and mood – but instead of using the Contrast slider, I use Dehaze. Although its name suggests it's for mist-removal duties, it acts just like an aggressive contrast control, and it makes a big difference very quickly. I push Dehaze to +40: this works well with the enhanced detail to give rather Gothic results!

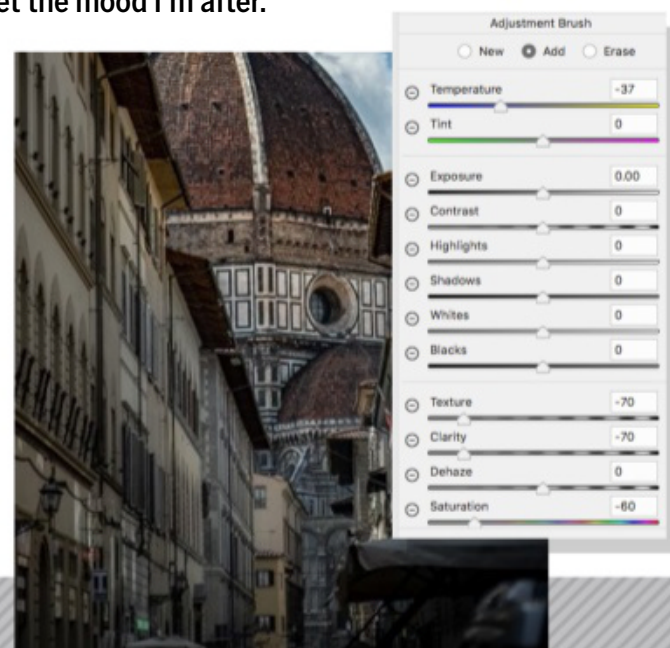
To set off the darker tonality and highlight the dome in the centre, I click on the FX tab and adjust the Amount slider under Post Crop Vignetting. I want a really dark perimeter to tone down the buildings and force attention towards the dome, so I use a very strong setting of -40. This would be far too much for most images, but here it works effectively to get the mood I'm after.

3

De-emphasise the foreground buildings

The warm yellows of the facades lining the street are making the foreground buildings dominate the actual subject. To lessen their impact, I paint over them with the Adjustment Brush, taking care to avoid the sky and the cathedral. To make sure I can see the area I've covered, I tick the Mask box to see where I've been with the Adjustment Brush.

With the area painted, I pull Texture and Clarity down to around -70 to reduce the definition and sharpness, then take down Saturation to -60 to lose some colour. It still feels a little too warm and distracting, so to really cool it off, I reduce Temperature to -35. This adds some blue, neutralising the yellow tones.





Create a pencil sketch from any photo

Use Blending Modes and blur to make this effect

Stripping a photo down to its basic ingredients of line and form is a fun technique, and this recipe makes the process quick and easy. You can use any picture as a starting point, but the best results will come from shots that are fairly evenly lit and not too contrast-heavy.

I've picked a high-key portrait – they work really well as sketches – but whatever you choose, start off with a shot that's around 30 x 20cm at 300ppi. The resolution of the image affects the filters we'll be using. If your shot is bigger than this, go to Image > Image Size, tick Resample, and set these dimensions.

With your shot in Photoshop CC, open the Layers Panel (Window > Layers). Make a copy of the Background Layer by pressing Ctrl/Cmd+J, then click on the Adjustment Layer icon and select Black & White from the popup menu. Now click on Layer 1, click where it says Normal, and select Colour Dodge from the list of Blending Modes. Press Ctrl/Cmd+I to invert the image. It'll disappear, but go to Filter > Blur > Gaussian Blur and increase Radius to 40-60px until a sketchy rendition comes through.

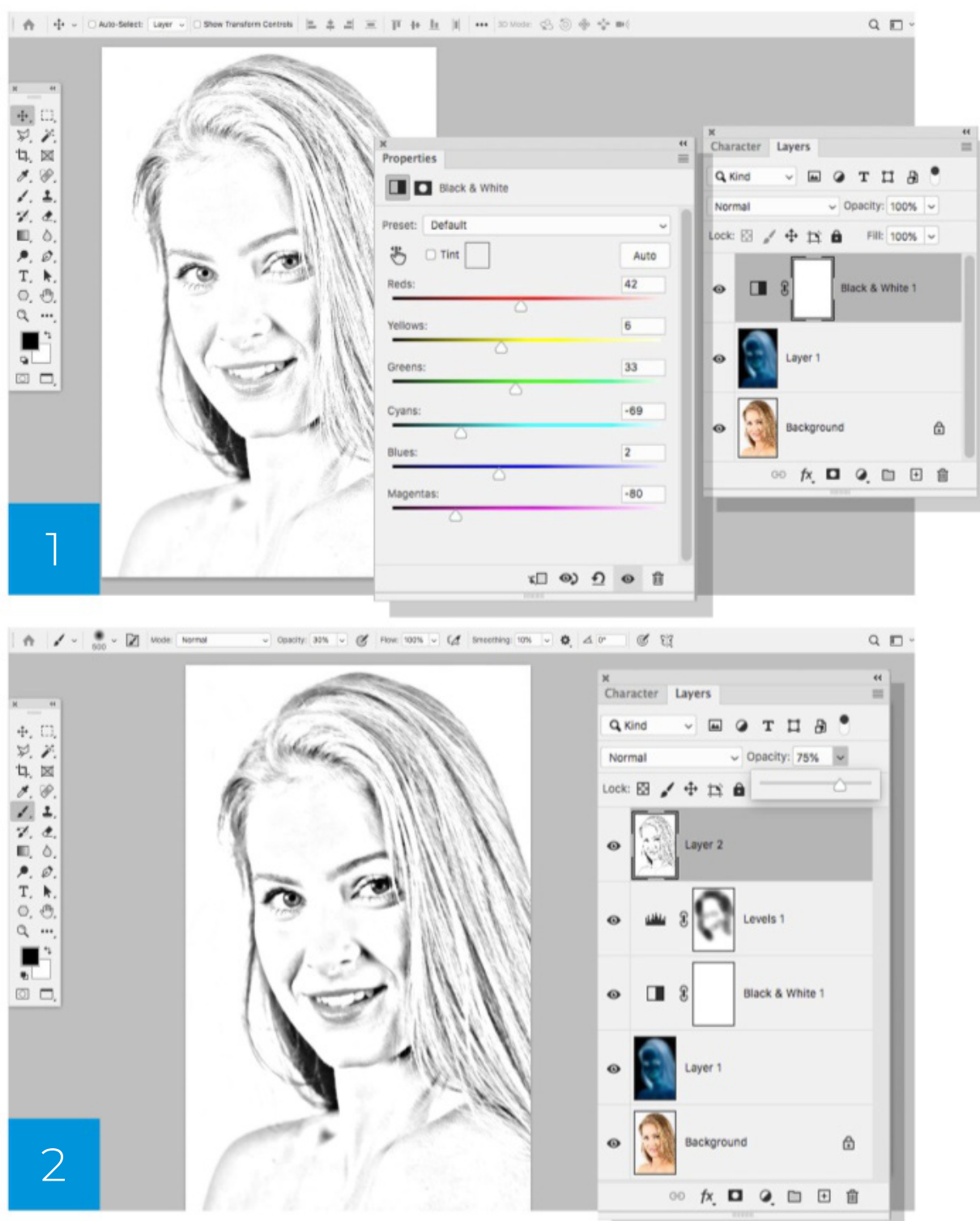
To adjust the tones, click on the B&W Adjustment Layer and move the colour sliders to bring out the detail. **1** Don't make it too contrast-heavy, though: just concentrate on getting a nice balance.

To beef up the pencil effect, click on the Adjustment Layer icon, choose Levels, and move Shadows to the right. Some darker areas may become too heavy: to lighten them, grab the Brush Tool and set Opacity in the Options bar to around 30%. Make sure black is the foreground colour and paint over the deepest shadows. This will add black to the Levels Adjustment Layer's mask, and reduce the bolder contrast.

Now press Ctrl/Cmd+Alt+Shift+E to merge all the layers into a new one at the top of the stack. Go to Filter > Filter Gallery... Under Brush Strokes, select Angled Strokes with settings of 50, 20 and 3. Click OK. In the Layers Panel, adjust the Opacity slider on this top layer until the blend looks just right. **2** *Jon Adams*

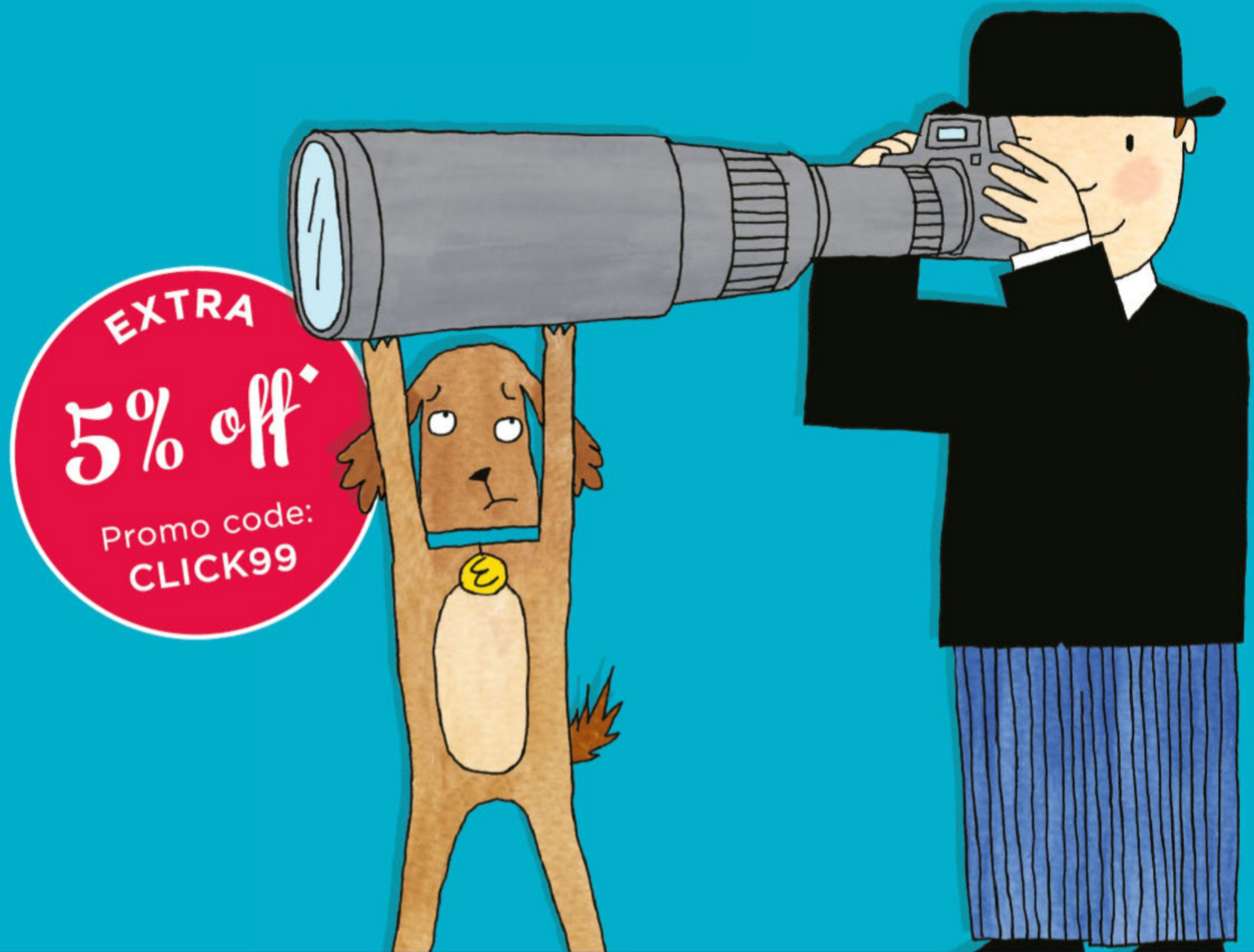


FILE & VIDEO
Download the
disc: [www.bit.ly/
dc227disc](http://www.bit.ly/dc227disc)





Camera Insurance with 25% discount*!



Interested? Visit theinsuranceemporium.co.uk/DC99
or call 03300 244 062 today!



Entertainment & Leisure Insurance Services Limited is an appointed representative of The Equine and Livestock Insurance Company Limited. The Insurance Emporium is a trading name of The Equine and Livestock Insurance Company Limited (registered in England and Wales no. 294940) which is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority no. 202748. *The 25% discount is an Introductory Discount and is available for the first 12 premium payments on lunar and calendar monthly policies or one premium payment on annual policies. *Offer ends 31/12/20 and is only redeemable on monthly policies and not where premiums are paid annually.

Before



Perfect skies with AI Sky Replacement in Luminar 4

When nature doesn't give you the sky you want, Luminar can!

How to get
a copy of
Skylum
Luminar 4

If you don't have Luminar 4 already, you can download a free 14-day trial from the Skylum website. It's available in both macOS and Windows versions and as all the features are fully functional, you can follow this tutorial yourself. If you decide to go ahead and buy Luminar 4, you can use the exclusive discount code **DCW20** to save £10/\$10 on the full purchase price.

skylum.com



The AI Sky Replacement filter is one of the major new tools in Luminar 4 and has been enhanced in version 4.1. It does a job that photographers have been doing manually for a very long time, and it does it so effectively that it almost feels like cheating.

You can replace skies in Photoshop and other image editors, of course, but it often requires a good deal of skill, patience and expertise. If you have a nice, uncomplicated horizon line it's not too difficult, but if you have a highly detailed treeline or city skyline, with lots of fine edges, gaps and 'holes', making a perfect selection can be so time-consuming that eventually it's easier to give up.

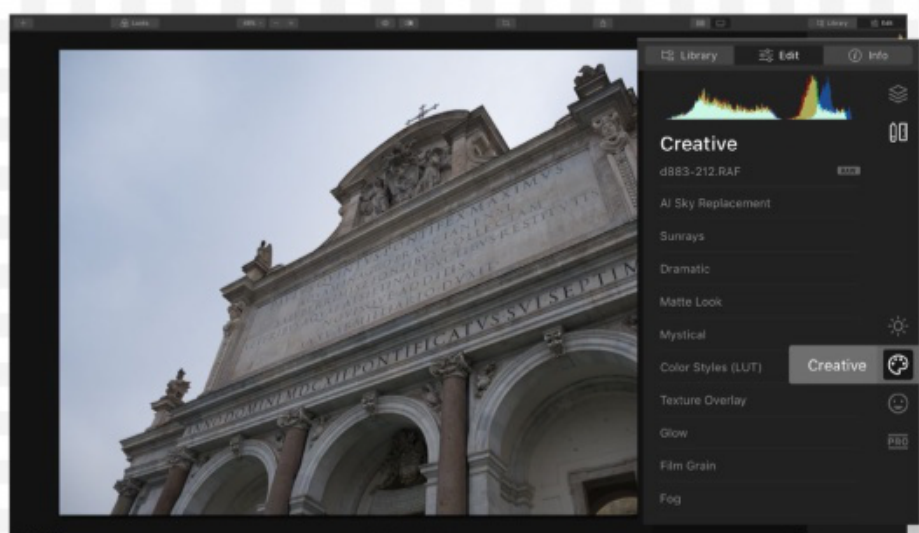
Luminar's AI Sky Replacement tool changes that complicated process.

It can automatically identify and separate the sky area in your original image. This is impressive enough, but it can also mask the sky area so effectively that it's actually quite difficult to find any faults in the selection. AI Sky Replacement follows even the most detailed treelines perfectly and finds the gaps between trees that a regular Magic Wand tool would miss. There are sliders for fine-tuning the results to make the masking even better, but you usually don't need them.

To make replacement skies look how you want them to, so they truly feel like part of the shot, you need to pay attention to the lighting, the colours and the exposure. We'll show how this process works, and how a few simple tricks and techniques can make a big difference to the final result.

How to replace a sky in five simple steps

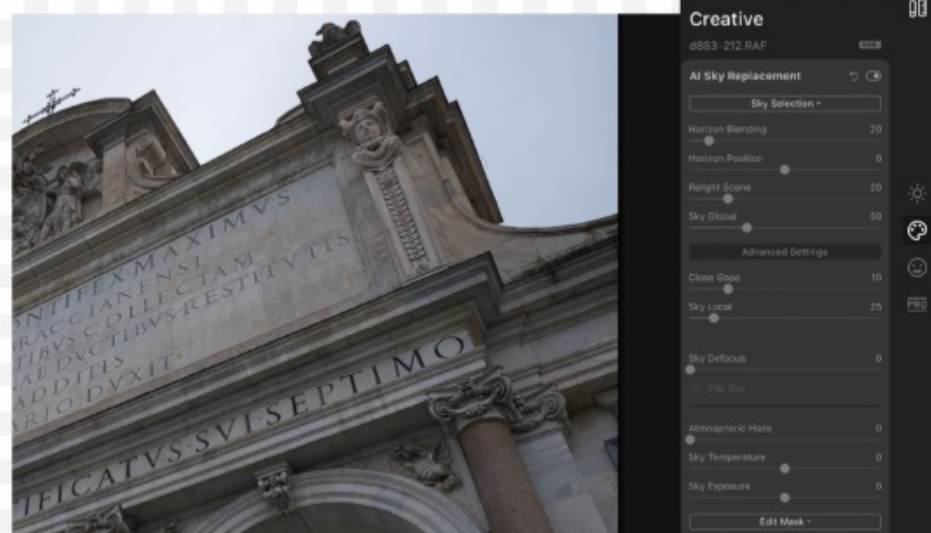
Turn a regular daytime photo into a surreal nightscape



1

The Luminar layout

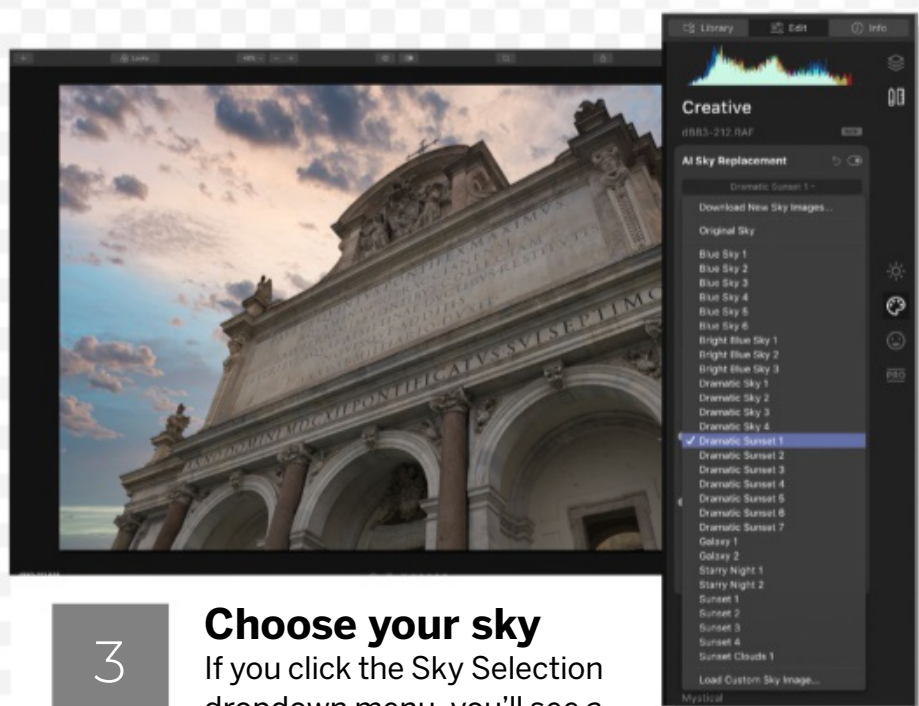
First, select Luminar's Edit panel. This shows a set of four icons for the four main filter panels, over on the far right of the screen: Essentials, Creative, Portrait and Professional. If you've used Luminar 3 or earlier versions, these are equivalent to the old Luminar preset workspaces. The AI Sky Replacement filter lives in the Creative section.



2

AI Sky Replacement panel

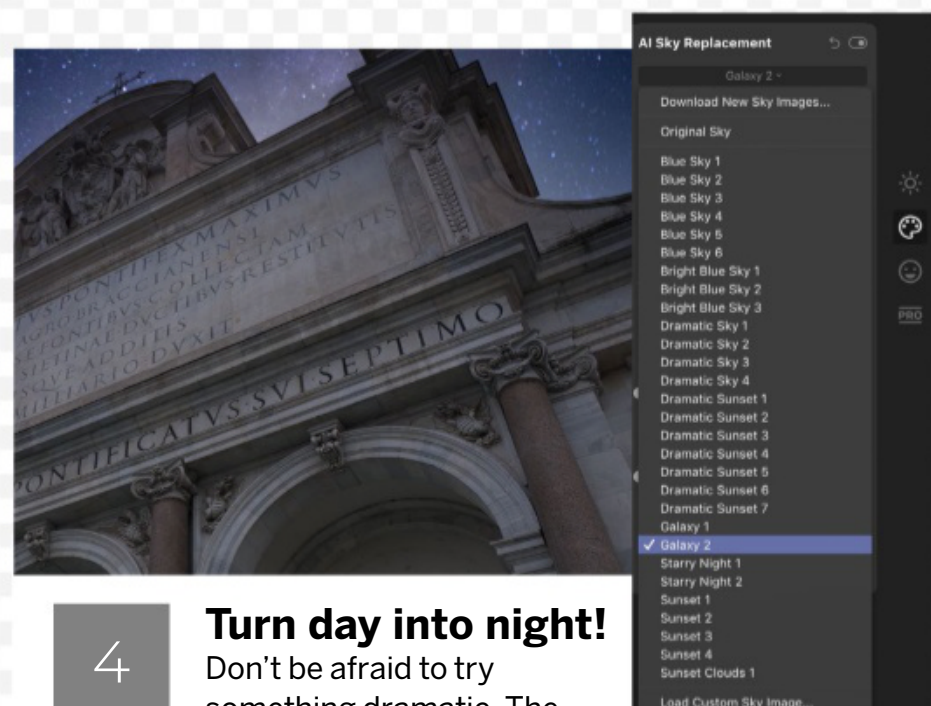
The AI Sky Replacement panel has three sections. Use Sky Selection to choose a new sky and make basic adjustments. Advanced Settings shows additional options for refining your results. You won't need Advanced Settings on every image – the results are usually really good right from the start – but they can help you get a better blend.



3

Choose your sky

If you click the Sky Selection dropdown menu, you'll see a long list of replacement skies that come with Luminar 4. Just pick a sky and see what it looks like. At first, the novelty of having a new sky added perfectly to your photo can distract you from the details, but it is important to find a sky that harmonises with your photo.



4

Turn day into night!

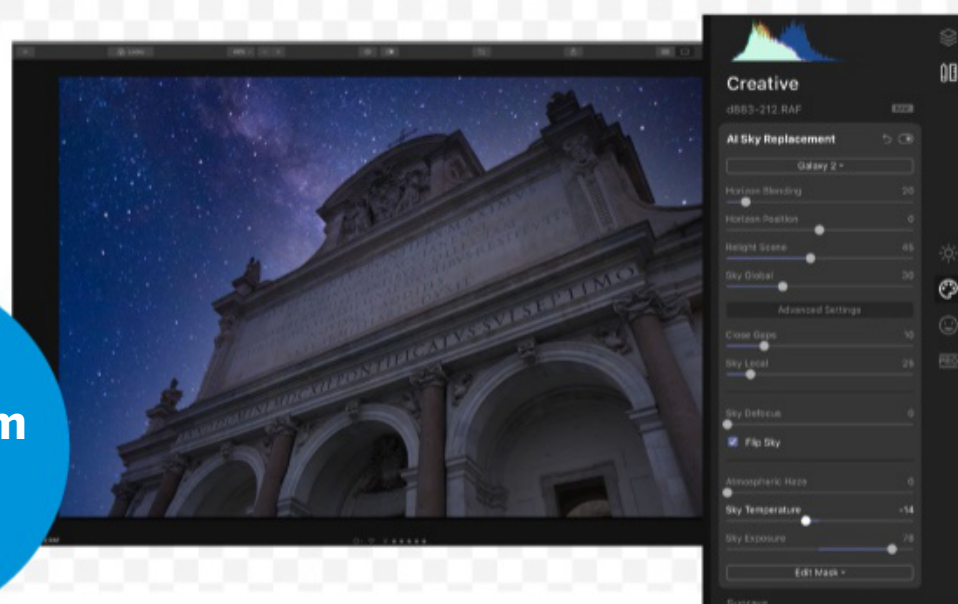
Don't be afraid to try something dramatic. The 'Galaxy' and 'Starry Night' skies in Luminar 4 are amazing, and they can work really well with regular daytime photos. Here we're going to use the 'Galaxy 2' sky to turn a dull overcast travel shot into a glittering night time scene. It looks pretty good already...

5

Finishing touches

This is where the sliders in the AI Sky Replacement panel can help. One of the most useful is the Relight Scene slider: this progressively applies the replacement sky's tones and colours to the rest of the image to produce a much more natural blend. We didn't quite like the way the 'galaxy' was hidden behind the temple, so we used the Flip checkbox to flip the sky over. Finally, we increased the Sky Exposure to make the image brighter.

Go to
[skylum.com](https://www.skylum.com)
to find
out more



The AI Sky Replacement panel

Your guided tour of the tools you can use to swap out your skies

1 Choose a sky
Luminar 4 can add any sky you like, but try to choose one that harmonises with the scene. You choose the sky you want to use from this dropdown menu, but you can also insert a sky image you've shot yourself.

2 Horizon Blending
If the join at the horizon looks unnatural, you can soften it with the Horizon Blending slider, just one of a number of tools for making sky replacements look more natural.

3 Relight Scene
The original photo had a cooler tone than the sky we used, so we used the Relight Scene slider: this gradually shifts the tones and colours of your original photo to match those of the sky you've added.

4 Advanced Settings
You may not need the Advanced Settings section at all, but it's here if you need it, and it can be handy. We've used some of the Advanced Settings options to give the sky a darker, warmer tone and a little atmospheric haze to blend it into the photo.

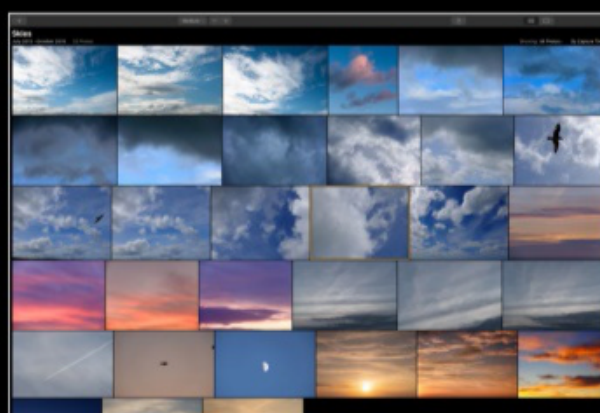


5 Sky Defocus
Sky Defocus slider is handy for close-ups or portraits with blurred backgrounds. We haven't used the Flip Sky option below, but it can be used to flip skies horizontally for better positioning.

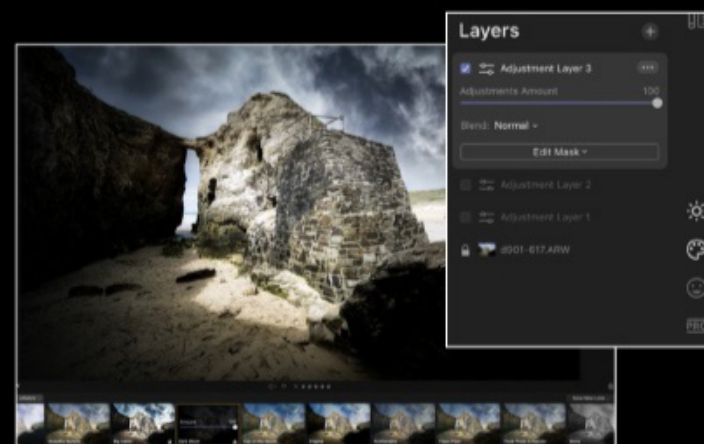
6 Edit Mask
This picture works well without a mask adjustment, but these can be useful for subtler blends. If you want to make the sky paler near the horizon, use the Edit Mask button and add a gradient mask.

Five great tips for enhancing skies with AI Sky Replacement

Sometimes you can get lucky and find a replacement sky that blends with your image perfectly first time out. Often, though, you need to spend a little time getting exactly the right sky and combining it with a few tweaks and adjustments. Here are a few ideas for getting your sky replacements to come out exactly as you imagined them – and you can do them all very easily in Luminar.



1 Collect pictures of skies
Luminar 4.1 comes with a wide selection of skies you can drop straight into your images, but it's just as easy to add your own – so start taking photos of skies you like and save them.



2 Add Looks to layers
Sometimes you need a little something to bring your new sky and your image together visually, and Looks are a great way to do it. Add an Adjustment Layer and choose a Look that complements your picture.

Three great Sky Replacement examples

Here are more Sky Replacement experiments we did in Luminar 4

Black-and-white

Sometimes black-and-white is the perfect medium for dramatic skies. We created this photo by using a dramatic sky of our own, then adding a new Adjustment Layer (see our tips below) to apply a ready-made Luminar black-and-white Look. You can use other adjustments freely alongside the AI Sky Replacement tool.



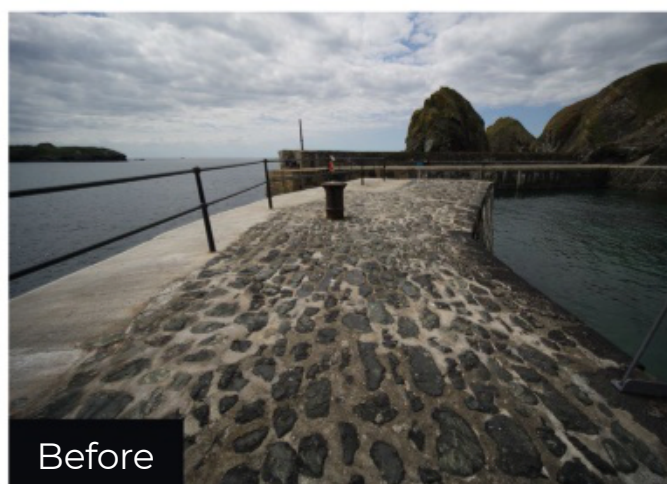
Before



After

Sunset

This sunset effect was created using one of Luminar's 'Sunset' replacement skies, with the Relight Scene slider turned up to maximum to spread the yellow glow across the image. We added a vignette to exaggerate the lighting, and applied Luminar's Sun Rays filter to produce the appearance of rays from the setting sun.



Before

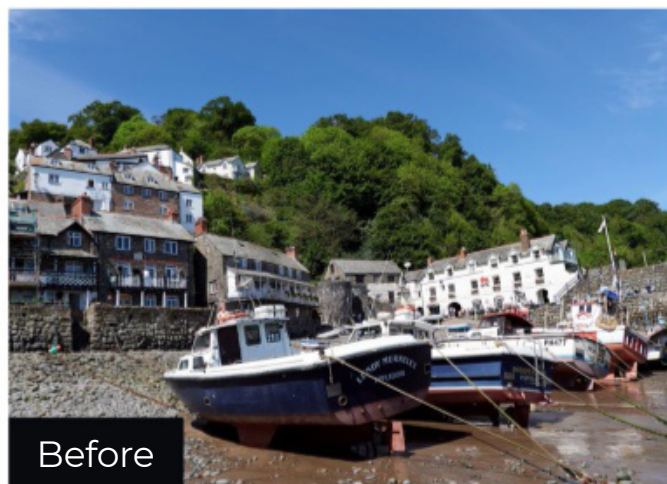


After

Save £10/\$10
on Luminar 4
with this exclusive
discount code:
DCW20
Order today at
skylum.com

Stormy skies

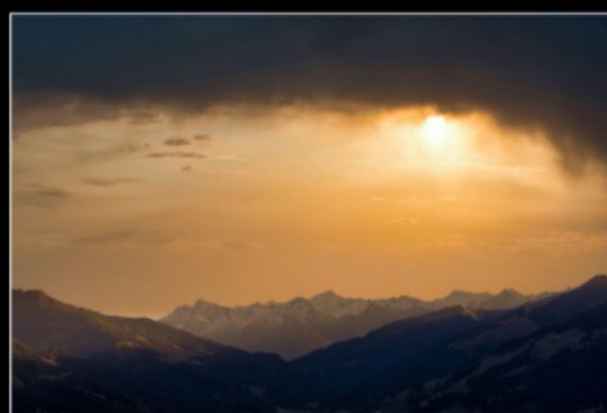
From a photographic point of view, flat blue skies can be almost as boring as dull grey overcast, so we decided to replace the blue sky in this scene with a more stormy version. The new sky needed a subtler gradation towards the horizon, so we used the Edit Mask button in the AI Sky Replacement filter panel (see the tips below).



Before



After



3

Match the lighting

Pay attention to the lighting in the original scene, then try to find a sky that matches it.

Here, the position of the sun in the sky matches the way the light is falling on the landscape below.

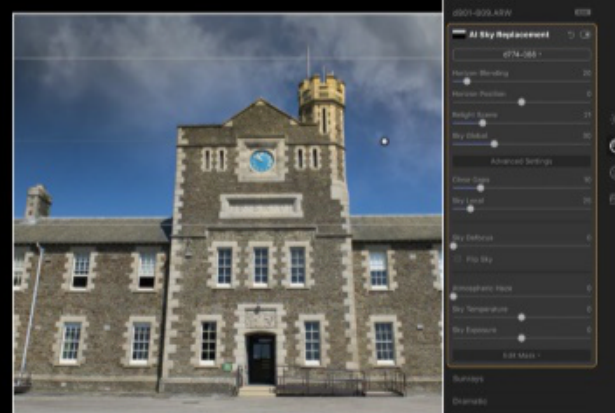


4

Add a vignette

If you're adding a dark sky to a bright scene, it can be hard to balance the brightness.

One quick and easy solution is to apply a vignette, as the edge-darkening effect helps draw the image together.



5

Blend with a gradient

In nature, skies have a lighter tone near the horizon, and a replacement sky won't always have that.

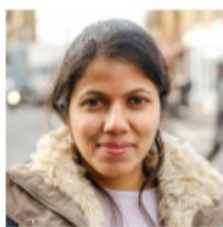
Click the Edit Mask button to add a gradient mask that blends in the replacement sky more gradually.



Portobello Market, London

Shootout

Two readers join **Niall Hampton** for a walk along London's famous Portobello Road Market. But did they grab a bargain or two while trying to bag some great images?



Reader 1

Vidya Rada

Camera: Nikon D750

Location: West London

Vidya works in the software industry; she's particularly interested in street and food photography, and enjoys going on photo walks with friends. She has always enjoyed taking photos around London, and other places she visits with her husband. Using a Nikon D750 with a Nikkor AF-S 50mm F/1.8G lens gives Vidya all the basic functionality required to capture street scenes as well as photographs of food – especially the bokeh she can achieve with this small but versatile setup.

Instagram: @vidyarada



Reader 2

Imran Mirza

Camera: Canon EOS R

Location: North London

Having bought his first DSLR in 2009, Imran has recently been getting to grips with his new Canon EOS R – the brand's first full-frame mirrorless camera – and he's really enjoying it. Imran likes to shoot travel photography, but has a particular interest in street photography. Although he's relatively new to the medium, Imran has already sold some of his images online and once photographed an ex-Vogue model he met on holiday. Imran says he would love to turn his hobby into a career.

Instagram @originalbob; www.originalbobphotos.co.uk

Join us and learn new skills! Keep an eye on our Facebook page for Shootout invitations.
www.facebook.com/digitalcameraworld





Challenge 1

Capture a typical Portobello Road street scene

Camera	Nikon D750
Lens	Nikkor AF-S 50mm f/1.8G
Exposure	1/200 sec at f/3.2, ISO 100



Challenge 1

Vidya Rada

Having decided to tackle Portobello Road Market from its top end, we walked across from our rendezvous at Ladbroke Grove Underground station. Shooting in the middle of a working week, hordes of market-goers weren't going to pose a problem for us, but there were still plenty of tourists and casual shoppers taking in this popular and quirky spot.

Some of them would shortly go on to model for us, alongside local residents who were largely unfussed by our participants flitting around and scoping potential shots. From the start, Imran and Vidya each adopted a different approach. Vidya was happy to trust her 50mm fixed focal length, while Imran went for a little more versatility with his 24-105mm zoom. It wasn't long before both were capturing some pleasing street photography. One thing that struck us was just how polite and accommodating the general public and the market traders were. It seemed that they were all friendly and

happy to appear in a photo or two. "This shot seems to reflect the mood of the market, where everyone seems so busy with their activities," says Vidya. "Maybe I should have tried this when there were more people."

Expert opinion

There's a lot happening in this image, and nearly all of it falls across a central band: the flower seller, the motorbike, the man walking and, finally, the photographer on the right. They're all oblivious to each other, and are part of Portobello Road's charm.

Be friendly, and ask for permission

If you're just starting out in street photography, one of the most daunting aspects is approaching people. Most of the time, people will ask you what the picture will be used for and then agree, but be prepared to be turned down occasionally. Always be polite and friendly, though, and avoid firing off shots from a distance.





Camera	Canon EOS R
Lens	RF 24-105mm f/4L IS USM
Exposure	1/500 sec at f/16, ISO 800



Challenge 1 Imran Mirza

One problem that manifested itself early on was being able to compose a shot without an empty road or a line of white vans parked at the kerb. So

what better solution than an iconic London black cab showing up right on cue and filling the empty space? After all, street photography is all about various elements coming together at a given moment.

"I didn't notice the taxi until the very last second, but thankfully it all worked out," says Imran. "I would have liked it to have been a bit closer, so you could see more

of the curve of the road behind, but overall I'm pretty pleased with the end result."

Expert opinion

Another great street scene with a lot to enjoy – the flags, taxi, people and shop canopies draw this entire image together and leave you wanting to keep looking.

Get on the right level

Whether you're shooting inanimate objects, animals or even children, it's often a good idea to get down to their level. A low viewpoint draws people into the scenes and usually leads to a shallow depth of field, which helps to separate the subject from the background and is much more flattering. Here, Imran had spotted some flowers for sale in an old watering can – one of many random things you'll find for sale while walking down this busy and vibrant road.



Challenge 2

Shoot a portrait that captures the spirit of Portobello Road



Challenge 2
Vidya Rada

We asked our participants to shoot images corresponding to three themes, but the results from the first two were the most successful.

For the portrait challenge, Vidya came across this happy face soon after arriving at the market, so knew it would be her first subject. Having approached Marcia to get her permission, Vidya could then think about how she wanted to frame the shot.

“The market is a very lively place and offers a wide variety of street photography scenes,” she recalls. “I really enjoyed the day – it was fun and challenging at the same time.”

Expert opinion

It’s hard not to feel instantly happy when you look at this photograph. Vidya has perfectly captured the spirit and sunny disposition of this market trader as she sells natural soaps and oils by her stall. It’s a posed image, but feels really natural.



Camera Canon EOS 5D Mark III
Exposure 1/500 sec at f/4, ISO 320

Camera	Nikon D750
Lens	Nikkor AF-S 50mm f/1.8G
Exposure	1/400 sec at f/4, ISO 100

Match mood in mono

Vidya may not have initially envisaged a black-and-white image but we converted it and think it really works. “I liked the light and shadows in this scene,” she says. “My eyes were also drawn by the mysterious-looking person. I think it could have been a better picture without the tree in the foreground, though.”





Challenge 2 Imran Mirza

A

fter some refreshments and a quick review of the images taken so far, we carried on to the junction with Westbourne Grove.

As we arrived, a shop owner started to talk to a stall holder about passers-by not respecting the 'No Photo' sign in their window. We had complied with the sign, but it was a reminder that you can't take everything for granted in these times of 'peak photo'.

Turning around and heading back up Portobello Road, the mild temperature and sunshine had combined to coax some pubgoers onto the street, and Imran soon spotted this man and his dog relaxing over a pint.

"I was drawn to this chap, as I thought he had an interesting face and the pair of them would make a good subject," says Imran. "He was more than happy to pose for a few shots – if his dog had sat still and looked at the camera, then it would have been perfect!"

So all in all, was it a good day out for Imran? "Having lived in London most of my life, it was great to go somewhere I'd never been before and take some pictures," he says. "Although we were set some informal challenges for the day, it added focus to the shoot and meant we had to think about which shots we were taking and why."

Expert opinion

The dominant colour palette of blue and grey works really well in this image, as do the warmth of the dog's coat and the wooden furniture. The opposing colours of the interior lights behind the subject combine well to help freeze a brief moment in time of someone's day on Portobello Road.



Camera	Canon EOS R & EF-EOS R adapter
Lens	Canon EF 50mm f/1.8 STM
Exposure	1/500 sec at f/3.2, ISO 800

Strong features

When you've been taking photos for a while, you'll soon identify people who will make great portraits – strong or distinguishing features are what to look for. It's also courteous to let your subjects see the image, and Imran was only too happy to oblige.



Photo Answers



Andrew James

Andrew is a highly-experienced writer and photographer – if you have a problem, he is here to help.

Befuddled by burst rates? Gone loco over a lens?
Send your technique and camera questions
to **digitalcamera@futurenet.com**



Editing JPEGs in Lightroom is easy, but you won't enjoy as much flexibility as you're used to with raw files.

JPEG panic

Q I use Lightroom to develop my raws, but the other day I accidentally shot a whole day with my camera set to JPEG instead of raw. Can I still process them in Lightroom, or am I stuck with the JPEGs as they are?

Andy Cooper

A For starters, don't panic: we've all done this at some time or another, and a Large JPEG setting will give you a quality file that can still be taken further. You can load the JPEGs into Lightroom just as you would the raws, and use all the sliders as you would for a raw file.

The difference, of course, is that the amount of post-processing you can do is limited, because a compressed JPEG file retains less information than a raw file. But, as long as you haven't badly overexposed or underexposed your images, you will be able to further enhance your JPEGs by improving colour vibrance or contrast globally as well as making localised adjustments using Lightroom's editing brushes.

Unfortunately, if your JPEGs files are very over- or underexposed, you will find the amount of detail you can recover can be seriously compromised. I'm hopeful that you were careful with your exposure, Andy, and therefore this isn't an issue. The amount of White Balance adjustment you can make is also affected, but you can still warm up or cool down your photo with the WB slider.

I'd always recommend shooting raw over JPEG – but as long as you weren't lazy with your exposure, there is no real reason to think the entire shoot is wasted. There are some advantages to shooting JPEGs: they'll be quicker to transfer from card to computer, and take up less storage room too. But before you do anything else, make sure you set your camera back to raw!

Tech Check

'Fast' lenses

1

What is a fast lens?

The term 'fast' has nothing to do with the how quick the lens is at focusing or whether it's used for action photography. In this sense, the word refers to the maximum aperture that lens can shoot at. A typical 'fast' lens will have an aperture of f/1.4, f/1.8 or f/2.8; this allows a lot of light in so that faster shutter speeds are possible, hence the phrase 'fast lens'.

2

When would a fast lens be useful?

Thanks to their wide maximum apertures, fast lenses are great in low-light situations, enabling you to get faster shutter speeds even in relatively dark conditions. They are also great for subjects like

portraiture, where limited sharpness can be used creatively, to make sure the subject is nicely separated from the background.

3

How do I know if my lens is fast?

All lenses have their aperture range written on them, so if you're not sure just look and see whether you can read any of the wide apertures (f/1.4 to f/2.8) printed on yours. If you can't find a label on the lens, select Aperture Priority and run through the available apertures.

4

Are there any disadvantages to a fast lens?

In terms of performance and creativity, fast

lenses are really useful and a desirable thing to have in your camera bag. The biggest disadvantage is that they are expensive to buy, and they are also heavier to carry. Fast lenses are more often fixed-focal-length lenses, known as primes, but some zoom lenses are also fast through their range.

A 'fast' lens is one that enables you to set a wide aperture – ideal for portraits, for example.



Wild about backgrounds

Q I am really starting to get into wildlife photography, but I'm struggling to make my subjects stand out from the background. Can you give me any advice on how to do this?

Tina Morris

A I could probably write a book on this, Tina, but there are lots of simple things you can think about when you are out in the field.

In one sense, it's as simple as thinking about the relationship between your subject and the environment they are in. If you are shooting with a telephoto lens and able to get low, you can try to separate subject and background through

depth of field. The further away your background is, the more it will fall out of focus, and the diffusion will create a natural frame for the subject. If you are shooting from a higher position (standing) and shooting down on a smaller subject, the ground is your backdrop, and because it's close behind the animal, it can still be relatively sharp. Other things to consider include looking for darker backgrounds to place a bright subject against – and vice versa, of course.

My shot of a flamingo is a perfect example of what I am talking about here. I've been able to isolate the main subject by photographing it from a very low viewpoint so the background is a long way away. I've also used a long lens set to an aperture of f/4 to limit depth of field, while the contrast of the brighter feathers illuminated in the evening light against the darker backdrop means the subject really pops out. You won't necessarily be able to adopt all these techniques in every image, but one or two of them each time will certainly make a difference.

A combination of techniques makes it simple to separate wildlife from their habitat.



Photo Answers

Bloomin' lovely

Q I am a gardener, and want to shoot the flowers in my garden as they bloom this year. What is the best lens to use, and are there any other tips you can give me?

Susie Drew

A I wouldn't say that there is a single best lens for photographing flowers, as different focal lengths will give you a variety of options and approaches. A macro lens is obviously great if you want to get in really close to photograph flower details or insects on petals. However, focal lengths from 50mm right up to 300mm can have their moment.

I often find myself shooting garden flowers at 200mm, which gives me a good working distance and is comfortable to handhold. Shooting at wide apertures such as f/2.8 or f/4 provides the arty look I prefer, and generally allows for faster shutter speeds, so there is less chance of slight wind movement ruining the shot.

The fact you are growing your own subjects will give you an advantage, Susie. It pays to photograph a flower almost as soon as it's opened, because it will be

perfect, and you'll need to do less post-production later to clean up your shot.

Take care when it comes to selecting backgrounds. Look for complementary colours to set your main subject against. If you're shooting with a large aperture for a small depth of field, take great care with your focusing. I always avoid windy days, too, as it makes focusing a nightmare. I prefer cloudy days for easier exposure, but sometimes directional light can help to spotlight a flower and give your photo a different feel.

Sound solutions

Q I tried to use my DSLR to shoot some video clips. The sound quality is awful: I can hear the lens trying to focus, as well as the whistle of the wind. What do I need to improve the sound?

Keith Spencer

A The actual quality of most built-in microphones is actually not too bad, but they do have a tendency to pick up on handling and operational sounds, such as the AF

shifting in and out. Some wind noise can be prevented by using a Micromuff – a little muffler designed to sit over the camera's mic – but to really take your sound to the next level, you need to get a separate microphone that plugs into the camera's mic socket.

The most popular type are shotgun microphones, so-called because they record a very narrow area of sound right in front of the mic. There are versions to suit most budgets. Lavalier mics clip onto a shirt so are useful if you want to interview someone you're filming or talk to the camera yourself. They come in wired or unwired versions.

You should also get into the habit of plugging in a pair of earphones and monitoring the sound while filming: you might be able to make a simple positional adjustment to avoid the annoyance of wind whistle and crackle on the built-in mic.



An external microphone gives you far superior audio recording quality compared with your camera's built-in mic, and needn't cost much.



Go macro if you want to shoot flowers, although other lenses can capture great shots, too.

Image Rescue

How to save a classic overexposed reflection photo

This water reflection shot has been overexposed by a stop or so, but because it's a raw file, there's a good chance I can get some detail back using Lightroom. To start, let's crop the photo a small amount just to tighten up the composition, paying close attention to the corners **1**. Now I can work on the reflection **2** by taking the Highlights slider back to -100, then nipping the Exposure slider back to -30. The colours will still look flat, but I'll sort that later.

In the HSL Panel, I choose Luminance and individually darken the Orange, Green and Blue sliders to balance the overall exposure and then switch to Saturation



and boost each of those same three colour channels **3**. It will still lack a little bit of punch across the whole image, but using



the Tone Curve I can improve that, by choosing Medium Contrast from the Point Curve dropdown menu **4**.

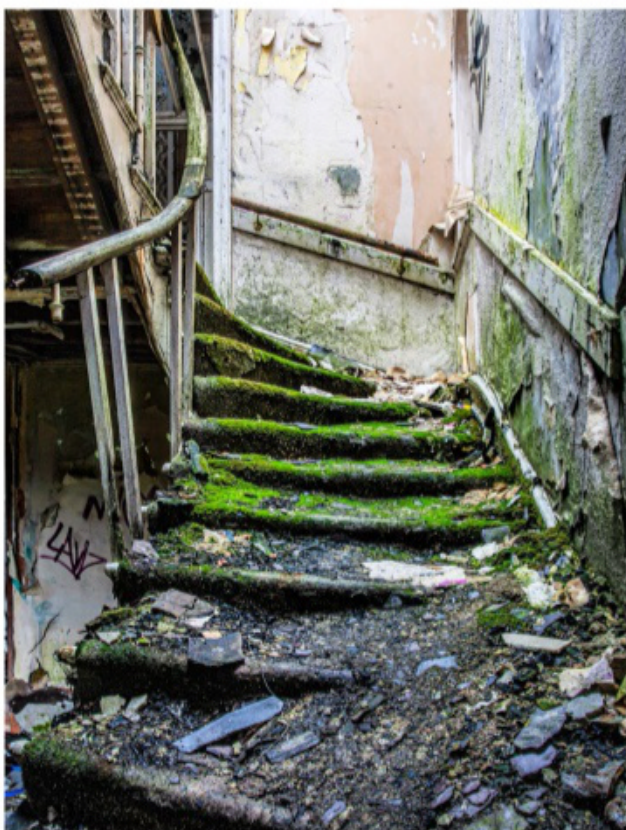
Dereliction duty

Q I have access to a derelict building. Any tips for capturing all the detail?

Teddy Moss

A First of all, take care: old buildings can be dangerous. Take a tripod, as derelict buildings can be quite dark, and you may need to use longer exposures and higher ISOs.

To get all the detail you want, try an HDR approach. Shoot using your autobracketing feature, and shoot three shots at -2, 0 and +2 EVs. This will allow you to make a detail-packed HDR file in Lightroom or Camera Raw.



Long memory

Q How long should a memory card last?

Jody Weir

A Most memory cards are surprisingly robust and can withstand general wear and tear – even immersion in water if you dry them out carefully. I have cards that have been going for years without any issues, even if they look a bit weathered on the outside. SD cards need a bit more care than more robust formats like

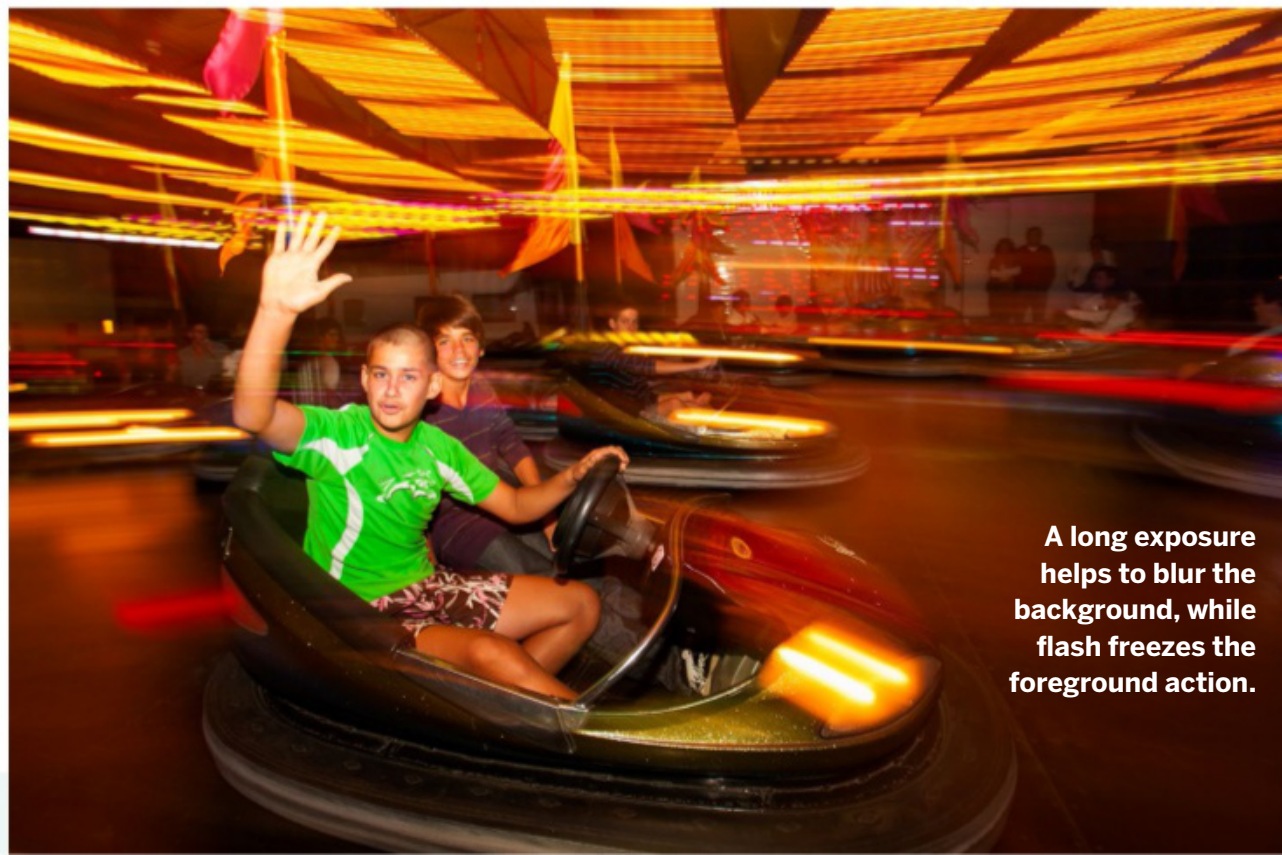
CompactFlash, as they're lighter in build and their contacts are exposed, but both formats should serve you well over a long period of time. To extend their life, keep them stored in a suitable container or wallet while you're travelling, so they don't roll about loose in your bag.

Slow flash

Q What's the point of a technique like slow-sync flash, and when would you use it?

Ron Houseman

A Slow-sync flash allows you to combine a burst of flash with a long exposure, so you can capture low ambient light with action-freezing flash. It can create quite a dynamic sense of movement in your photo. This photo was taken at 1/10 sec using rear-curtain flash.



A long exposure helps to blur the background, while flash freezes the foreground action.



My last day in Scotland was full of drama from dawn to dusk, with a full moon, storm winds and clear skies. The spring tide at Eyemouth is renowned for its massive waves. Still, it was the sidelight illuminating the central crest, in contrast to the dark houses behind, that made this shot especially enjoyable. I used a shutter speed of 1/8,000 sec to freeze each droplet of water.

taking a photo of an arch of twigs on the beach.” “I doubt it: looks like someone having fun,” I reply.” “Well, as long as it’s kids playing, and not the Arts Council or anything that we have to pay for. Still, the dog does like to pee on it.” Later, while trying to find a path to Gullane Point, I manage to fall into an electric fence while trying to push the wires down with my sticks. I get three bolts before I untangle myself. The sparks are dramatic in the darkness. On the upside, I don’t feel tired any more.

The English border must be getting close: the castles are enormous, and their histories are bloody. I have four hours of night hiking tonight towards an almost-full moon. Occasional seal calls emanate from the blackness. There’s a biting wind, a clear starry sky and huge seacliffs that catch the silvery light. Tonight, at St Abbs Head, will be the last time I can enjoy the Scottish access laws and pitch my tent where I choose.

My last day in Scotland is defined by the sunny-then-stormy weather and friendly encounters with a photographer from Edinburgh and being invited out of the wind for a cuppa at St Abbs Lifeboat Station. I’ve always felt like a foreigner in Scotland, but I’ve always been treated as a friend.

As the sun sets, a full moon rises over the North Sea while I progress along high moonlit cliffs towards England. After many hours of night hiking, the torch picks out a modest sign by the edge of a field, which reads “The English Border”. I enter the gate and turn around to smile at the much larger “Welcome to Alba” sign. It’s been 195 days of walking since I last saw a notice like this, at Gretna Green in the west.

The footpath ahead is hemmed in between a corridor of barbed wire. I’m in a different nation now. ●

Perimeter

Quintin Lake prepares a fond farewell to the Scottish leg of his epic tour



Quintin Lake

Roving photographer

Quintin is on a multi-year photo walk, circumnavigating the whole of the UK coast.

www.theperimeter.uk

This month’s route

Edinburgh to Berwick-Upon-Tweed

7 days, 90 miles. Total: 5,622 miles



Like Prague or Oxford, Edinburgh is so attractive that it’s hard to take a photo with any authorship – but it’s

a joy to try in the four days I’m here. The creative challenge comes when cities are designed with consideration: the views, silhouettes and spatial relationships have been conceived so all one can do with the camera is portray the ideas of others, either more or less strongly. The city also hosts enough cashmere and tweed shops to stuff a whale-sized haggis.

“Are we paying for this?” a dog walker asks me at Portobello as I’m

M15 Filter Holder System

Independent Magnetic Filters and Insert filter system



Red-Diamond Filter

Adapter Ring

Holder

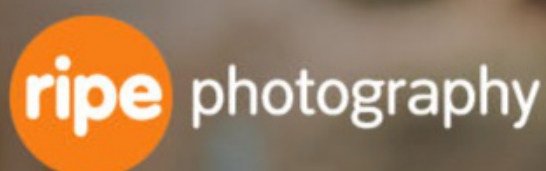
Magnetic Filter

Haida

The Photography Show | The Video Show

From 10:00 - 17:00 March 14 - 17, 2020
Hall 5, NEC, North Ave, Marston Green, Birmingham B40 1NT

Booth A41



★ Trustpilot ★★★★★ 'Excellent'

Specialist camera insurance for enthusiasts and professionals

- ✓ **Accidental Damage** – We'll repair or replace your cracked lenses & broken kit
- ✓ **New & Second Hand** – We'll repair or replace on a New for Old or Indemnity basis
- ✓ **EU & Worldwide cover** – Cover yourself and your equipment, wherever you are

Get up to
30%*
off today

Want to know more?

Visit www.ripeinsurance.co.uk/photography/DC320
or call FREEPHONE 0800 997 8002 (Quote DC320)

In Focus

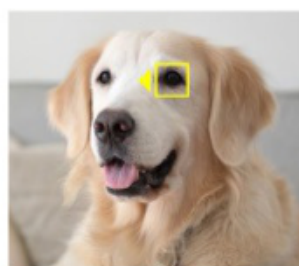
The latest photography news from around the globe

Focal point

Rounding up what's new and exciting



52 Assignments: Instagram out now
Drone expert and DC contributor Adam Juniper has penned an excellent guide to how to get the most out of a platform that's becoming ever-more important for photographers. ilexinstant.com; £13/\$18



Animal magic comes to Nikon Z6 & Z7 cameras
Firmware update v3 allows the AF system to recognise the eyes and faces of dogs and cats, giving their owners more time to frame images creatively. Plus, subject-tracking AF has been improved. nikon.co.uk; free



Last chance to enter the AOP Awards 2020
Entries for the Association of Photographers Open and Emerging Talent awards close on 2 April, so act now to have the chance of industry creatives discovering your work. aopawards.com

1 EOS R5

Canon's latest full-frame mirrorless model will get IBIS and a "step-change" in performance over the EOS R.



2 TWIN CARD SLOTS

Double the provision on the EOS R, this will please pros who can't afford to miss a shot through card failure.

EOS R family to expand

Canon announces the development of a pro-spec full-frame mirrorless model and commits to 17 lenses by the end of 2020, including a new travel-friendly telephoto

Eighteen months after making its first step into the full-frame mirrorless market with the EOS R, the world's number one camera manufacturer has announced the pro-spec EOS R5.

In some ways, this is the camera many Canon aficionados wished the brand had unveiled in 2018. While capable, the EOS R was also compromised, so the EOS R5 really doesn't hold back in the specification stakes. Its sensor size hasn't been revealed, but the R5 gets in-body stabilisation and twin card slots. Canon promises a "step-change" in performance, with 12fps via the mechanical shutter

and 20fps when using the electronic one. And videographers will be as pleased as stills shooters, as the EOS R5 will be able to capture 8K footage.

The family of compatible RF-mount lenses has grown, too, with the addition of the RF 24-105mm f/4-7.1 IS STM – a smaller, lighter and more affordable kit lens. This will be a good fit for the smallest model in the nascent EOS R line-up, the EOS RP. Weighing just 395g and measuring 89 x 77mm, this new optic is still sturdy and well-built.

www.canon.com

**Canon EOS R5, £TBC/\$TBC;
RF 24-105mm f/4-7.1 IS STM,
£460/\$400**

3 RF 24-105mm

The RF 24-105mm f/4-7.1 IS STM joins the family of RF-Mount lenses in April. It's light in weight but of sturdy build.





Canon 850D

New DSLR pitched at enthusiasts has the tech smarts to interest sport, wildlife and portrait shooters

Canon hasn't overlooked its enthusiast audience, though... The EOS 850D (EOS Rebel T8i in the US) supersedes the 800D (Rebel T7i), and is a versatile 24MP APS-C sensor camera, powered by the brand's latest speedy tech and featuring 4K video capability. While the new model retains the same 45-point autofocus system as the one it replaces, it also benefits from some performance

bumps, including 7fps shooting (up from 6fps) and a newer Digic 8 image processor. Intelligent Tracking (iTR) automatic focus is good news for sport and wildlife shooters, while automatic face detection (via the optical viewfinder) and Eye Detection AF with tracking (in Live View) will please anyone who enjoys shooting portraits.

www.canon.com
£819/\$750 (body only)



Vanguard sticks

VEO 2X Travel Tripod Collection

This new 4-in-1 travel tripod kit can be switched from a tripod to a monopod in seconds... and also transformed from a ball head to a pan head. This makes the VEO 2X a flexible solution for both stills or video shooters, who will also welcome its portability and low weight – it starts from just 1.1kg (2.5lbs) – and 12kg maximum load. Choose between aluminium or carbon fibre, and three different leg diameters.

vanguardworld.co.uk; from £149/\$149



New Fujifilm CSC

Street shooters will love the X100V

With a plethora of improvements, the latest Fujifilm X100 can be thought of as a slimmer, lighter and more affordable fixed-lens alternative to its bigger brother, the XPro-3. The tactile controls of the X100 are a throwback to more traditional camera design, but there's up-to-the-minute tech inside the casing. A back-illuminated 26.1-megapixel APS-C sensor is allied to an X-Trans processor for superlative still image quality, plus 4K video capture at 30fps. A new 23mm f/2 lens, a tilting touchscreen and AF improvements also feature.

fujifilm.com; £1,299/\$1,399 (body only)



image.canon

Replacement for Canon Image Gateway will cope with pro workflows and goes live soon

Canon Europe recently announced a free service to enable photographers and videographers to transfer their files directly from Wi-Fi-enabled Canon cameras to web services and devices. Available from early April, image.canon will also include free cloud storage that will work automatically from Canon cameras released this year (with manual transfer for models released prior to that). The brand promises that image.canon can manage everything from family snaps to a professional workflow. The new service replaces Canon Image Gateway, which goes offline in March.

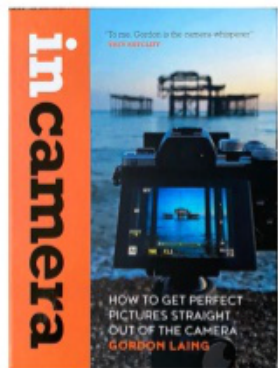
canon.co.uk; free

Focal point

Rounding up what's new and exciting



New Canon printer for smartphone shooters
The Selphy Square QX10 can produce 20 prints for around 70p (75 cents) when used with XS20L printing packs. Images are transferred over Wi-Fi and output using dye sub printing. canon.com; printer, £140/\$150; refill packs, £15/\$15



Get it right in camera – the definitive guide
Discover how to spend less time hunched over a screen... *In Camera* by Gordon Laing, released in this new edition, is packed with hints and tips for how to get great images straight from your camera. ilexinstant.com; £20/\$20



New telephoto zoom for Pentax K-Mount DSLRs
Weighing in at just 819g, the Pentax-D FA 70-210mm F4ED SDM WR is also compact, with an extension-free design. The new lens has 20 elements in 14 groups, with a nine-blade round-shaped diaphragm for pleasing bokeh. ricoh-imaging.co.uk; £1,199/\$1,097



Nikon D6

New flagship camera for an Olympic year

The Japanese manufacturer has released the specification for its latest flagship model. Targeting professional photographers, the new DSLR will have improved autofocus, 14fps burst shooting support for

CFexpress capture cards and LAN connection. Plus, astro photographers will love the new camera's ability to shoot at a shutter speed of 900 seconds – that's a full 15 minutes. nikon.com; £TBC/\$TBC

1 NIKON D6 & F/2.8E ED VR
Pictured with a Nikkor F/2.8E ED VR, the D6 is sure to be a staple at the summer Olympic Games in Tokyo.



More Z lenses

New prime and compact telephoto boost Nikon's mirrorless system

Nikon's optical labs have certainly been busy of late, with news of more glass for the fêted mirrorless Z system. The Z 20mm f/1.8 S (£1,049/\$1,047) is the latest prime lens to join Nikkor's high-performance S-line and promises superb edge-to-edge sharpness and excellent low-light performance. Compact enough to fit into small kit bags, the new Z 24-200mm f/4-6.3 VR (£849/\$897) will be an ideal telephoto zoom for travel photography. nikon.com

Koudelka: Shooting Holy Land

A clarification on our recent Koudelka interview

Regarding the article on Josef Koudelka in our March 2020 issue, that coincided with the release of the new cut of the documentary film *Koudelka: Shooting Holy Land*.

Following discussion with the film's production company we would like to clarify that the article was not an interview initiated or conducted by *Digital Camera*, as the the magazine's cover and article headers suggested. It was made possible thanks to access that our writer was given by the film's marketing agency to the new cut's bonus content, which was transcribed and edited by our writer in a way that may have misrepresented the

spoken questions and answers as they appeared in the original video material. Unfortunately the use of this content's transcripts, as published in the article, was not coordinated with nor agreed on with the film's production company. We regret any inconvenience and distress which might have resulted from this misunderstanding. Any readers wishing to watch the original video footage can find it in the bonus content featured on the new cut of *Koudelka: Shooting Holy Land*. This is available on DVD and Blu-ray, and can be streamed via Vimeo. Find out more at www.koudelka-film.com





OM-D E-M1 Mark III

Update to pro-spec CSC gets new image sensor and a slew of features from the E-M1 X

Proving that great things do come in small packages, Olympus recently updated its compact but pro-spec OM-D E-M1. The Mark III retains the 20.4MP sensor of the Mark II, but gets a new TruePix IX image sensor which allows a selection

of attractive features to be ported over from Olympus's flagship E-M1 X. These include seven stops of image stabilisation, a selection of autofocus improvements and 4K/C4K video capture up to 30 frames per second. olympus.co.uk; **£1,599/\$1,799 (body only)**

M.Zuiko 12-45mm Pro

New compact zoom

Olympus has also released a new zoom lens for its M.Zuiko Pro range. The 12-45mm f/4 is compact and lightweight, and weather-sealed for shooting in demanding situations. Optical performance is promised to be superb throughout the zoom range, with precise and high-speed AF courtesy of a small and low-weight focusing lens. The new lens will be available from the end of March. olympus.co.uk; **£599/\$649**



Focal point

Rounding up what's new and exciting



Print images or lose them, says Eyewitness

A new campaign is calling for photographers to print out their images before losing them forever. Eyewitness, founded by Fabrizia Costa, argues that our long-term memory is flawed, so our most treasured images can easily slip away. To find out more about Eyewitness, and join the campaign, go to: eye-witness.org

[IRIX]

Prime lenses

for your Canon, Nikon, Pentax DSLR



irixlens.com

★ Trustpilot ★★★★★

Iconic



**You can't
buy iconic new.**

A true icon earns its status. A powerhouse when launched, the M9 was the world's smallest, full-frame digital system camera - proving that small can truly pack a big punch. See our current stock of this Icon at www.mpb.com

Buy. Sell. Trade. Change gear.



KitZone

New gear, buying tips and the world's toughest tests



110

Nikon D780 _ The best of DSLR and mirrorless in one camera



132

Help Me Buy _ How to choose what you need in a camera backpack



120

Group Test: Standard zooms _ Eight optics for mirrorless models



130

Mini Test: Photo books _ Compile your most prized photos



M

irrorless cameras, and particularly the full-frame models, have dominated the conversation in the camera-buying community over the

last couple of years. But a couple of full-frame cameras we test this issue might mark the point where the DSLR reasserts itself in the minds of camera buyers.

First off is the Nikon D780, which looks the same as the popular D750 but has one crucial difference among the many improvements on its predecessor. The convention is that mirrorless cameras

have fast on-sensor Live View autofocus, while DSLRs are more sluggish. Canon has challenged this perception in several recent DSLR models; now Nikon is addressing it too in the D780, making the choice between DSLR and mirrorless more nuanced.

Then there's Canon's new high-end pro model, the EOS-1D Mark III. This is no simple updating of a respected camera: it's a radical upgrade, with a new image file format to take on JPEG, a new memory card standard, a new controller and a new autofocus technology. It's one of the most exciting models we'll see this year. **Rod Lawton**

Plus

114 Canon EOS-1D X Mark III

118 Sony E 16-55mm f/2.8 G

128 Mini Test: Photo editing apps

The awards bestowed by the *Digital Camera* lab...



Given to the top product in a group test



For products that receive five stars overall



Given to products that offer superb value for money

Ratings explained

★★★★★ Best in class
★★★★☆ Excellent
★★★☆☆ Good
★★☆☆☆ So-so
★☆☆☆☆ Poor

All products reviewed in KitZone are tested independently by photographers with years of experience, using lab and real-world testing

DSLR Nikon D780



1

Unlike most mirrorless cameras, which are all angles and edges, the D780 has a smoothly contoured body, with soft-feel materials and a comfortable grip.

2

Nikon claims an amazing 2,260-shot battery life, though we'd expect this to drop with a lot of Live View use.

Nikon D780

£2,199/\$2,299

The last hurrah for the DSLR, or a sign of things to come?

www.nikon.co.uk

Specifications

Sensor: 24.4MP back-illuminated full-frame CMOS

Image processor: Expeed 6

Autofocus: 51-point phase detect (viewfinder), 273-point hybrid phase detect (Live View)

ISO range: 100-51,200 (exp 50-204,800)

Max image size: 6,048 x 4,024

Metering modes: 180k RGB sensor, Matrix, center weighted, spot, highlight weighted

Video: 4K UHD, 30/25/24p

Viewfinder: Optical pentaprism, 0.7x magnification, 100% coverage

Screen: 3.2-inch, 2,359k-dot tilting touchscreen

Memory card: 2 x SD/SDHC/SDXC (UHS II)

Max burst: Up to 7fps (viewfinder), 12fps (live view)

Size: 144 x 116 x 76mm

Weight: 840g (including battery and memory card)

The launch of the Nikon D780 will reignite a long-running debate about mirrorless versus DSLR cameras. It might even blur the boundaries.

Like last year's Canon EOS 90D, the Nikon D780 is staging a counter-attack against the advancing hordes of mirrorless cameras. It takes crucial mirrorless technology from Nikon's Z 6 to produce a kind of hybrid camera that offers the best of both worlds: an optical through-the-lens viewfinder, but the high-performance Live View AF and video features of a mirrorless.

Traditionally, DSLRs offer optical viewing but compromised (slow) Live View autofocus. Mirrorless cameras

offer fast, hybrid on-sensor phase-detection AF but compromise with an electronic viewfinder (although many see it as an advantage, not a compromise).

However, there's been no technical reason why DSLRs shouldn't have the same on-sensor Live View AF features as mirrorless cameras, and now it's happening. Canon has been using its phase-detection on-sensor Dual Pixel CMOS AF system in its DSLRs for some time, and Nikon has now done the same with the D780.

The D780 is the first Nikon DSLR to adopt this approach, but it seems unlikely to be the last. It's a more upmarket alternative to Nikon's popular D750, sharing the same



3

The D780's control layout will be instantly familiar to existing Nikon DSLR owners.

4

The D780 combines an optical viewfinder with mirrorless-style on-sensor phase detection AF in Live View.

5

The D780's twin-dial control setup (there's another dial on the front) is fast and efficient in use.

7

The mode dial has a central locking button and a release mode dial directly underneath.

6

The touchscreen display is very sharp and clear, with an impressive 2,359k-dot resolution.

8

You can buy the D780 body only, or with the Nikkor AF-S 24-120mm f/4 VR – a great match.



7

8

24-megapixel resolution, but now with fast Live View autofocus, 4K video, continuous shooting up to 12fps and improved processing.

We understand the D750 will continue at a much lower price point for stills photographers who don't need 4K video or fast live view AF. So the D750 becomes Nikon's cheapest full-frame DSLR; the D780 can be seen as a more advanced enthusiast/semi-pro camera; and the only two cameras above it are the high-resolution Nikon D850 and the super-fast Nikon D6.

Key features

The Nikon D780 is designed for both stills and movies. By today's standards, its 24-megapixel resolution is baseline spec for a full-frame

camera, but it does promise a good level of detail rendition combined with better high-ISO performance than you'd expect from a higher-resolution camera. It also keeps the cost down for enthusiast photographers.

The D780 has the same 180k RGB metering and scene recognition system as the more expensive D850. It also uses Nikon's tried-and-tested 51-point phase-detection AF sensor; when you use the Live View mode, it swaps to the 273-point on-sensor phase detect AF system of the Nikon Z 6. This is more sophisticated – and a lot faster – than the simple contrast AF system in the D750.

The Live View experience is made even better with the high-resolution tilting 2,359k-dot LCD monitor, with touch shutter release and AF point selection. This also offers wider 90% horizontal and vertical coverage than the viewfinder AF system, which uses a separate, dedicated sensor.

The D780 is unexpectedly good at continuous shooting. It can hit a good, though unremarkable, 7fps



The D780 delivers pleasing colour rendition in its JPEGs; for those who shoot raw, Adobe has already updated its Creative Cloud software to support the new camera.

in viewfinder shooting, but this leaps to 12fps in Live View – which also has a silent shooting option.

The video capabilities are impressive too, including uncropped 4K UHD at 30/25/24fps, 60/50fps in DX mode and up to 120fps for Full HD; but while the D780 does offer eye AF for stills, this doesn't extend to video. You get Nikon's N-Log option with up to 12-stop dynamic range and →

DSLR Nikon D780



The D780 captures 4K video and has both microphone and headphone connection sockets.

We used the D780's auto white balance throughout our tests, and it handled different conditions really well.

10-bit capture, and you can capture HLG HDR footage to an external recorder via the HDMI port. There's an external mic socket, as you'd expect, and a headphone socket.

Other features include a focus shifting mode for macro shots with extended depth of field, and the ability to 'scan' 35mm film via Nikon's EX-2 digitising adapter and a Micro-Nikkor lens (both sold separately).

The ISO range is 100-51,200, expandable to ISO 50-204,800, and the D780 has an extended shutter speed range from 1/8,000 sec to

900 sec (excellent for long exposure fans). The D780 has dual UHS-II SD/SDHC/SDXC memory card slots, which is a nice surprise, and an extremely impressive 2,260-shot battery life, though we expect this would drop substantially with extensive use of Live View.

Build and handling

DSLRs are bigger and bulkier than mirrorless cameras, and full-frame DSLRs are the biggest of the lot. That sounds like a disadvantage, but actually it can be refreshing to

use a camera body built to the same scale as today's full-frame zoom lenses. We tested the D780 with the Nikkor AF-S 24-120mm f/4 VR and the AF-S 16-35mm f/4 VR. These are both lenses that enthusiasts and pros will want to use, and both are weighty, medium-sized lenses that feel a good match for the D780 body.

We were also lucky enough to test the camera for several days in Iceland, where its size and heft were welcome while shooting and making adjustments in the extreme cold, wearing gloves.

That's not to say the D780 is quite perfect. The four-way D-pad on the back could do with being bigger, and while it works faultlessly, it has a slightly imprecise action. It's surrounded by a useful lock lever designed to prevent accidental adjustments, but which is itself flicked a little too easily by accident.

Also, although it has the on-sensor AF system of a mirrorless camera and the same Live View performance, the D780 does not offer the seamless, automatic transition between viewfinder and rear screen shooting that a mirrorless camera does. On a mirrorless camera, an eye sensor detects when you put the camera to your eye or take it away again, and switches displays instantly. On the D780, you have to press the Live View button, and the camera's 'ker-chunk' as it locks up the mirror is a reminder that it's making a mechanical internal adjustment.

Users of other camera brands sometimes remark that Nikon control layouts are different to others and take a little learning. That's true to an extent, but the D780's buttons and dials will be instantly familiar to anyone who's used Nikon DSLRs in the past. While the camera may look a little fussy at first, you very quickly

Rival cameras



Nikon D750
£1,179/\$1,499

The D750 is showing its age compared with the D780, but for regular stills photography, there's not that much between them.

Reviewed: issue 158



Canon EOS 6D Mk II
£1,479/\$1,599

The Canon 6D Mark II is cheaper than the D780 and has a vari-angle screen, but the D780 has a classier feel and 4K video.

Reviewed: issue 194



Sony Alpha 7 Mk III
£1,999/\$1,999

The Alpha 7 III is still the most accessible, versatile and affordable of all of Sony's full-frame mirrorless camera models.

Reviewed: issue 203





The exposure system does seem to favour highlights: this shot needed a little brightening.

adapt to its layout, and it does offer fast and efficient external controls.

The rear screen has a tilting mechanism rather than a vari-angle pivot, but that's fine for horizontal shots and keeps the screen on the same optical axis as the lens. The screen is larger than usual at 3.2 inches across the diagonal, with a high 2,359k-dot resolution, and the Touch AF and Touch Shutter modes work well: you tap to select the focus point, or to focus and shoot in a single action.

Performance

Most of our test shots were outdoor landscapes or close-ups, and both of the D780's AF systems proved fast and efficient. This is an important difference – with a mirrorless camera, the AF system is the same for both viewfinder and Live View shooting. With the D780 you need to adjust to two different AF systems with two different sets of characteristics.

Our Iceland expedition offered up some amazing subject matter, but it also provided some serious exposure headaches, thanks to the extremes of ice and snow and near-black lava beaches. Most shots taken with the default Matrix metering needed some kind of editing later, but that was mostly a reflection of the very difficult subject matter.

Even taking that into account, it does seem as if the D780's Matrix metering is biased towards highlights rather than midtones. You're less likely to get highlight blowout, but more likely to have to make tonal adjustments in software later. We also had a few shots that were underexposed for no obvious reason.

The D780 might have the Z 6's sensor technology, but it doesn't have its in-body stabilisation. The



We got to try out the D780 for a *Game of Thrones*-style photo shoot.

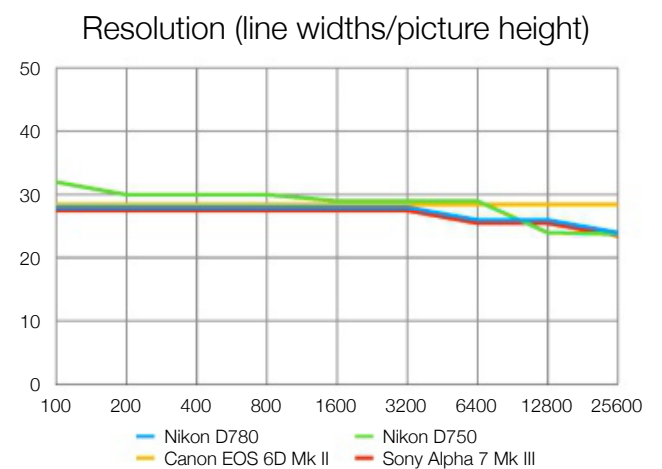
lens-based VR in many Nikkor F mount lenses is effective for stills photography, but did not do much to stabilise the footage in our handheld video tests. For video we think this is a camera best used with a tripod or a stabilising gimbal, when the video quality becomes very good.

The 7fps continuous viewfinder shooting and 12fps in Live View is pretty impressive, but the buffer capacity of 68 lossless compressed 14-bit raw files or 100 JPEGs is more impressive still. It's not billed as a camera for shooting sports, but the D780 is pretty well equipped for a camera in this class.

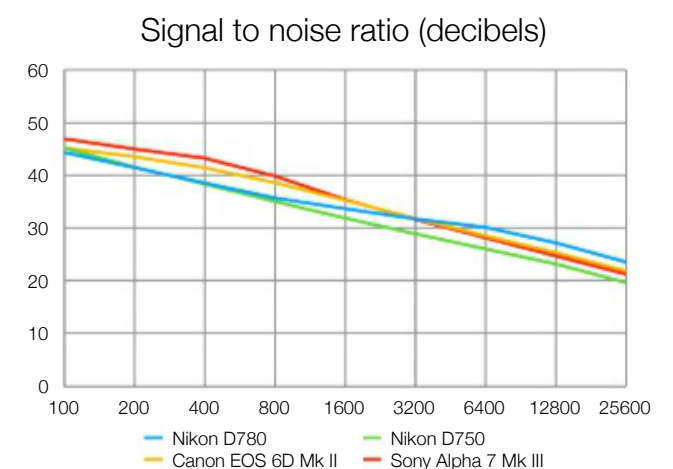
It also has an impressive 2,260-shot battery life, although we assume this figure is based around viewfinder shooting, and that continuous Live View shooting would drain the batteries a lot faster. The Nikon Z 6, for example, has a battery life of just 380 shots. **Rod Lawton**

Nikon D780 DSLR

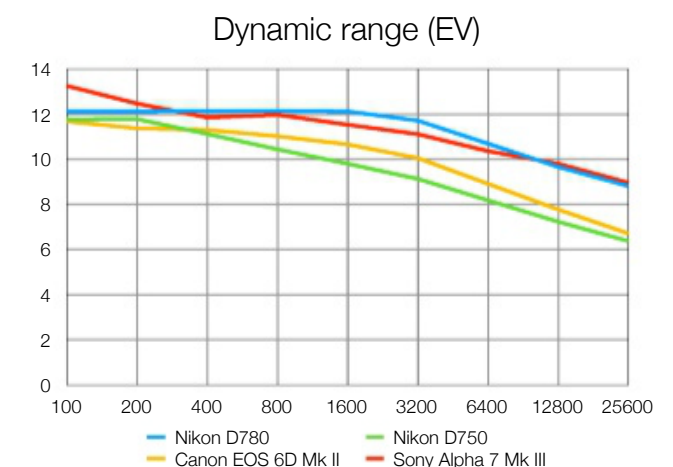
Lab tests



With peak resolution of 2,800 line widths/picture height, the Nikon D780's resolving power is exactly as we'd expect for a full-frame 24-megapixel camera.



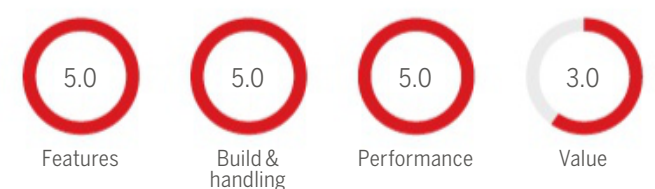
The D780 is slightly noisier than the Canon and Sony cameras at low to medium ISO settings, but it offers the best high-ISO performance of this group.



The Nikon D780 shows a marked improvement over the older D750, and narrowly beats the Sony A7 III, a camera with particularly good dynamic range.

Digital Camera verdict

5.0 ★★★★★ A best-in-class product



There are no fireworks with the Nikon D780, no radical new technologies. It's simply an excellent evolution of a great camera design.

DSLR Canon EOS-1D X Mark III



1

The 20.1MP image sensor offers fewer megapixels than the Sony A9 II or even the 1D X Mark II. Canon claims that 20MP is the sweet spot for optical performance and that this 20.1MP sensor produces sharpness and resolution equal to a pro 24.2MP sensor.

2

The camera can record raw and MP4 video simultaneously to dual CFexpress cards. These are a revelation for shooting, with a buffer capable of capturing bursts of up to 1,000 raw images.

Canon EOS-1D X Mark III

£6,499/\$6,499

Meet the world's most advanced camera

www.canon.co.uk

Sensor: 20.1MP full-frame CMOS sensor

Image processors: Digic X

AF points: Optical viewfinder – phase detection using AF-dedicated sensor, 191 points (155 cross-type); Live View – Dual Pixel CMOS AF, 3,869 points

ISO range: 100-102,400 (exp 50-819,200)

Max image size: 5,472 x 3,648

Metering modes: Evaluative, partial, spot, center spot, AF point-linked spot, multi-spot, center weighted average

Video: 4K at 23.98, 24, 25, 29.97, 50, 59.94fps; 1080p at 23.98, 24, 25, 29.97, 50, 59.94, 120fps

Viewfinder: Pentaprism, 100% coverage, 0.76x magnification, 20mm eyepoint

Memory card: 2 x CFexpress 1.0 Type B

LCD: 3.2-inch fixed touchscreen, 2.1million dots
Max burst: Optical viewfinder 16fps mechanical shutter/Live View 20fps mechanical or electronic shutter

Size: 158 x 168 x 83mm

Weight: 1,250g (body only)



The Canon EOS-1D X Mark III has a lot to live up to – and a real fight on its hands to defend its throne. While the

world of sports photography is still dominated by DSLRs (with 70% of pros at last year's Rugby World Cup using Canon DSLRs), mirrorless cameras have now come so far that Sony's latest effort, the Sony A9 II, is a far superior photographic tool to the Canon EOS-1D X Mark II.

So Canon had to pull something special out of the bag with its new flagship DSLR. This hybrid DSLR/mirrorless camera ushers in a number of industry-standard features and technologies, from a new image

format and a new memory standard to an innovative control input that will almost certainly become the norm for cameras that shoot action.

Key features

While the 1D X Mark III is brimming with the latest technology, it's built around one fundamental piece of throwback hardware: an optical viewfinder, with which it can shoot 16 frames per second (mechanical shutter) in conjunction with a dedicated Digic 8 processor, with 191 AF points (155 of which are cross-type).

However, when switched to Live View, the camera can shoot 20 frames per second (mechanical



3

The Menu, Info, Q, play, magnify, delete and 'key' buttons light up at the touch of a button. If only every camera could do this!

4

The rear LCD is a touchscreen, but it doesn't tilt in any direction.

5

No need to worry about the weather: every joint has O-rings. Even the tripod socket has one.

6

While the body feels almost exactly the same in layout, the magnesium alloy chassis has been re-engineered, with some changed internal components meaning that it is structurally more sound, yet lighter than the Mark II.



Deep Learning AF enables the camera to perform remarkable head tracking, even when the subject's face is obscured.

"Holding the camera is like hugging an old friend"

Performance

While some might scoff at the Canon EOS-1D X Mark III only having a 20.1MP sensor, the proof is in the pictures. While we can empirically say that they're not quite as sharp as those produced by a 24MP sensor, they're certainly more than sharp enough. And the beefy dynamic range and ISO results in images with a lot of play in them – even in the JPEGs, but especially in the HEIF files. (Remember that, for pro use, JPEG is far more important than raw, as it is the currency of agency shooting.) →



or electronic shutter) using the full 20.1 million-pixel readout of the image sensor, combined with the new Digic X processor and an enormous 3,869 Dual Pixel CMOS AF points.

Digic X is a whole new family of processors for Canon cameras. In the case of the 1D X Mark III, the processor is 380 times faster than the Mark II at computational processing and 3.1 times faster at image processing.

This plays a big part in the 1D X Mark III's most talked-about party trick: Deep Learning AF. Canon fed the algorithm with millions of reference images, enabling it to learn how to recognise human figures, and to prioritise the human head, regardless of whether the face is looking the other way or obscured by goggles or helmets. The result is an AF that knows the head is the primary point of focus.

The 1D X Mark III also adds HEIF support to its raw and JPEG shooting.

The format has been around for a while, but this is the first time it is supported by a traditional camera. HEIF offers superior fidelity to 8-bit JPEGs, and you can capture images with four times the amount of data in the same file size.

Build & handling

The EOS-1D X Mark III looks virtually identical to the Mark II – and, indeed, to most 1-series cameras ever produced. Holding the camera is like hugging an old friend.

That said, its new Smart Controller is the future of AF point selection. Traditional joysticks give you tactile and granular control, but they're slow and clunky if you want to move your AF point across the frame. The Smart Controller, by contrast, moves your AF point as fast as you move your thumb. The idea will no doubt be adopted by the entire camera industry before long.

DSLR Canon EOS-1D X Mark III



Face AF is possible through the optical viewfinder, but full Eye AF is unleashed when you shoot in Live View.

The 4K video is crisp and clean, and we're so happy that Canon has finally cracked the full-frame cropping problem. Obviously the lack of image stabilisation is a significant factor when it comes to video, but this is hardly a run-and-gun vlogging camera. Mounted in a tripod, and combined with electronic stabilisation (which introduces a crop) if you must, the video seems pretty pristine.

Shooting video reveals the strength of the new Deep Learning AF, which really does make a difference. When filming cars zipping round a track, for example, you can see the speed of focus acquisition – and the camera knew to prioritise the drivers' helmets rather than the car bodies. What's more, the new Case A (for Auto) AI Servo mode will faithfully find and

follow the fronts of cars. It's pretty darned clever technology.

Canon has its own reasons for not rolling out IBIS yet, and is still proclaiming that lens-based IS is superior. That may well be true. But when you're using a huge L-series lens that isn't stabilised, or trying to record video with a giant hunk of glass mounted and trying to get a cool angle using a screen that doesn't tilt, you really do wish for such things.

The EOS-1D X Mark III is every bit the professional powerhouse you would expect it to be. Unlike other Canon products, however, this one doesn't hold back, and it introduces some serious next-generation technology that will fundamentally improve your shooting experience, your images and your workflow. **James Artaius**

Rival cameras



Canon EOS-1D X Mk II

£4,899/\$5,499

The predecessor is still a formidable sports camera, despite its age. There is a technological gulf between the old and new, however.

Reviewed: Issue 180



Nikon D5

£5,199/\$5,499

The Nikon D5 is showing its age: while it's no less capable for its advanced years, the 1D X Mark III outclasses it in nearly every respect.

Reviewed: Issue 179



Sony Alpha 9 Mk II

£4,699/\$4,499

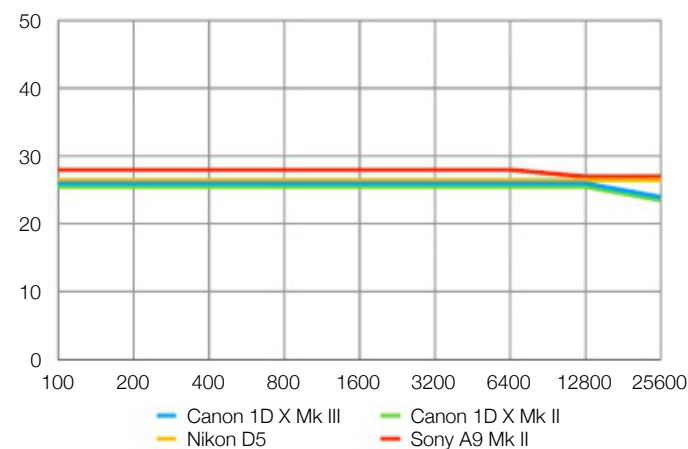
Sony's new flagship is every bit as proficient as the 1D X Mark III – it comes down to whether you want DSLR speed or mirrorless convenience.

Reviewed: bit.ly/dcwa9ii



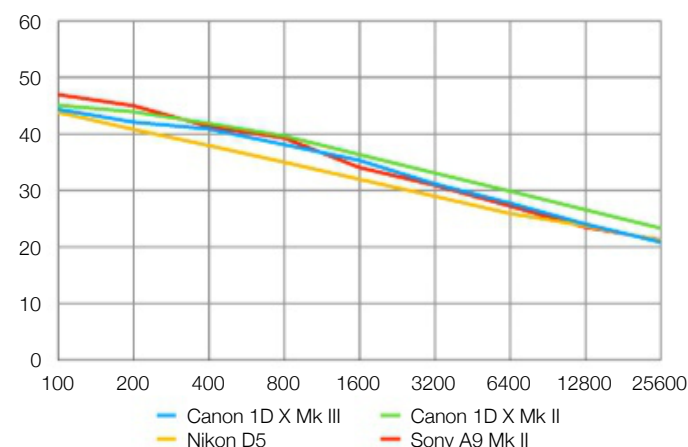
Lab tests

Resolution (line widths/picture height)



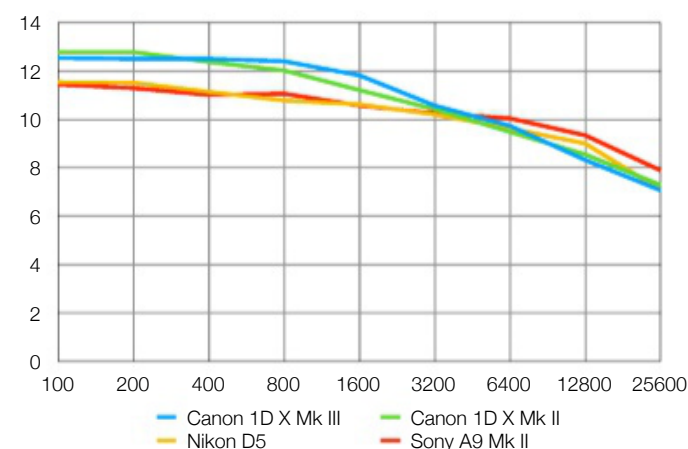
The 1D X Mk III produces very sharp shots, but no amount of processing trickery can make a 20.1MP sensor equal a top-flight 24.2MP full-frame sensor.

Signal to noise ratio (decibels)



The 1D X III is marginally beaten by its predecessor. This could be symptomatic of Canon's drive towards image sharpness causing grain and noise.

Dynamic range (EV)



The 1D X Mark II was already a stellar performer when it comes to dynamic range, so we're not surprised that the new Mark III performs very similarly.

Digital Camera verdict

5.0 ★★★★★ A best-in-class product



The EOS-1D X Mark III does so much that no other camera can – it's a genuine glimpse into the future of digital photography.

cameraWORLD

Part-Exchange | Interest Free Finance | Free Delivery | 2 Year Warranty | UK Stock ★ Trustpilot ★★★★★

Trade-in
your old camera gear with us at

The
Photography
Show 14-17TH MARCH

Bring along your old gear and we will give you
a top price right on the spot!



We Buy



We Sell



We Trade

Book now and receive **20% off** standard
single day tickets with code

CWTPS20

www.photographyshow.com

CameraWorld.co.uk

Chelmsford: 01245 255510

High Chelmer Shopping Centre, Chelmsford,
Essex, CM1 1XB. chelmer@cameraworld.co.uk

London: 0207 636 5005

72 Wells Street, London, W1T 3QF
sales@cameraworld.co.uk

Stevenage: 01438 367619

The Old Post Office, 13 High Street, Stevenage,
SG1 3BG stevenage@cameraworld.co.uk

E. & O. E. Goods and delivery services subject to stock and availability. Prices subject to change. 2 year warranty applies to new cameras and lenses over £300.

*Free collection is only available on quotes over £300

Zoom lens Sony E 16-55mm f/2.8 G



Mount: Sony E (APS-C)
Lens construction: 17 elements, 12 groups
Angle of view: 83-29 degrees
Diaphragm blades: 9
Minimum aperture: f/22
Minimum focusing distance: 0.33m
Maximum magnification ratio: 0.2x
Filter size: 67mm
Dimensions: 73 x 100mm
Weight: 494g

Sony E 16-55mm f/2.8 G

£1,199/\$1,299

The new standard for APS-C Sony cameras

www.sony.co.uk

Discerning full-frame shooters generally opt for a 24-70mm f/2.8 lens as their go-to zoom for general shooting. That's great for Sony A7 and A9 cameras, but what if you have an APS-C format A6000 series body? The new Sony E 16-55mm f/2.8 G is an almost exact equivalent, with an effective 24-82.5mm zoom range and the same f/2.8 constant aperture rating.

It's designed to give owners of one of the Sony A6000-series of mirrorless cameras a high-quality kit lens option. Just like the Sony E 70-350mm f/4.5-6.3 G OSS, which was released at the same time, the Sony E 16-55mm f/2.8 G helps to fill out a lens range that had lacked any real choice for those who don't want unnecessarily bulky lenses that are designed for use with full-frame cameras.

Performance

Autofocus performance is excellent in terms of both speed and accuracy. Sharpness across the whole image frame is epic, even when shooting wide-open at f/2.8, throughout the shorter half of the zoom range. It remains excellent at longer zoom settings, although corner-sharpness drops off a little.

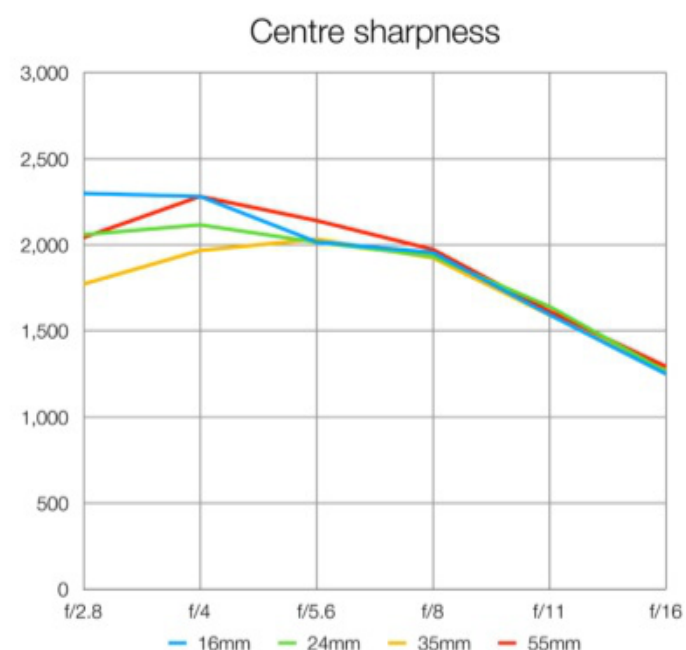
Contrast and colour rendition are superb, while resistance to ghosting and flare is very good indeed. The quality of bokeh is very pleasant when shooting wide-open.

The lens lacks optical stabilisation, which can be an issue for handheld shooting on all current A6000-series cameras apart from the top-end A6600, the only one to feature in-body stabilisation. Our only other criticism is that barrel distortion is very heavy at the short end of the zoom range. It's automatically corrected in the latest cameras, where distortion correction can't actually be switched off for this lens. **Matthew Richards**

1 Contrast is enhanced by Nano AR Coating, which is effective in combating ghosting and flare.

2 There are 17 elements arranged in 12 groups, including two AA (Advanced Aspherical) elements, two further aspherical elements and three ED (Extra-low Dispersion) elements.

3 Although fairly light, the lens feels solid, and has a good scattering of weather seals.



Sharpness

Centre-frame sharpness is excellent at all focal lengths, even when shooting at f/2.8. Only at f/16 and narrower does sharpness fall off.

Fringing Short 0.1 Long 0.33

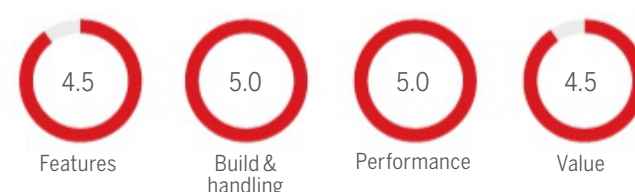
Fringing is only noticeable at 16mm and at larger apertures – and this is with in-camera correction switched off.

Distortion Short -8.54 Long 1.97

There's significant and very obvious barrel distortion at 16mm, though by 24mm it's already reduced to an acceptable degree.

Verdict

5.0 ★★★★★
A best-in-class product



A top-quality, fast standard zoom for APS-C format Sony cameras has been a long time coming. This new 16-55mm f/2.8 G ticks all the right boxes.



london
camera
exchange

The UK's
largest
independent
photographic
retailer



We Buy Cameras

*And of course, as our name suggests,
you can always trade-in!*

Find out what your equipment is worth

We buy secondhand cameras, lenses and most other selected photographic equipment

www.LCEgroup.co.uk/WeBuyCameras/



Come and visit us at:
The Photography Show

The Video Show

14-17 MARCH 2020 THE NEC, BIRMINGHAM

WE ARE ON STAND E61 on the main aisle at the heart of the show

**STAND
E61**

BRANCHES NATIONWIDE

BATH - 01225 462234
BRISTOL (BALDWIN ST) - 0117 929 1935
BRISTOL (BROADMEAD) - 0117 927 6185
CHELTENHAM - 01242 519 851
CHESTER - 01244 326531
COLCHESTER - 01206 573444
CHICHESTER - 01243 531536
DERBY - 01332 348644

EXETER - 01392 279024
GLOUCESTER - 01452 304513
GUILDFORD - 01483 504040
HEREFORD - 01432 272655
LEAMINGTON - 01926 886166
LINCOLN - 01522 514131
LONDON (STRAND) - 0207 3790200
MANCHESTER - 0161 834 7500

NEWCASTLE - 0191 213 0060
NORWICH - 01603 612537
NOTTINGHAM - 0115 941 7486
PLYMOUTH - 01752 664894
PORTSMOUTH - 023 9283 9933
READING - 0118 9592149
SALISBURY - 01722 335436
SOUTHAMPTON (CIVIC TR) - 023 8033 1720

SOUTHAMPTON (HIGH ST) - 023 8022 1597
TAUNTON - 01823 259955
WINCHESTER - 01962 866203
WORCESTER - 01905 22314

OPENING TIMES:
Monday—Saturday 9am—5:30pm
Selected stores open Sunday - please check for details.

UK MAIL ORDER: Next day delivery available from all LCE branches. Free postage on all orders over £50. E. & O. E. Prices quoted include VAT @ 20%.

Prices subject to change. Goods subject to availability.

SEARCH OUR USED
EQUIPMENT AT:

www.LCEgroup.co.uk



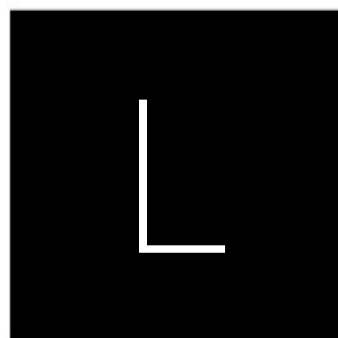
HUGE RANGE AVAILABLE
TO SEARCH TODAY!





Standard zooms for mirrorless

Is your 'kit' lens good enough, or should you go for something more fancy?



ast issue, we tested the most popular standard zoom lenses for Canon and Nikon DSLRs, which are bundled with DSLR bodies to form complete camera kits. We

compared them with more exotic options, which are available if you buy your standard zoom separately.

This month, it's round two, as we compare kit and upgrade zooms for Fujifilm, Olympus and Panasonic crop-sensor cameras, as well as for Sony full-frame E-mount models.

Kit lenses for crop-sensor mirrorless cameras often have a retractable design, making them particularly compact for stowing away, adding to the svelte attraction of this type of camera. Upgrade zooms tend to be larger and heavier, but usually have a constant aperture rating that's generally about two f/stops faster at the long end of the zoom range. That's great for gaining a tighter depth of field, as well as fast shutter speeds under dull lighting. They also tend to have better build quality and classier glass. **Matthew Richards**

The contenders

1 Fujifilm	Fujinon XC15-45mm f/3.5-5.6 OIS PZ	£229/\$299
2 Fujifilm	Fujinon XF16-55mm f/2.8 R LM WR	£949/\$1,199
3 Olympus	M.Zuiko Digital ED 14-42mm f/3.5-5.6 EZ Pancake	£255/\$224
4 Olympus	M.Zuiko Digital ED 12-40mm f/2.8 Pro	£699/\$849
5 Panasonic	Lumix G Vario 12-32mm f/3.5-5.6 Asph Mega OIS	£259/\$317
6 Panasonic	Lumix G Leica DG 12-60mm f/2.8-4 Asph Power OIS	£799/\$898
7 Sony	FE 28-70mm f/3.5-5.6 OSS	£395/\$398
8 Sony	FE 24-70mm f/2.8 G Master	£1,799/\$2,198

Group Test Standard zooms



Fujinon XC15-45mm f/3.5-5.6 OIS PZ £229/\$299

Power to the people

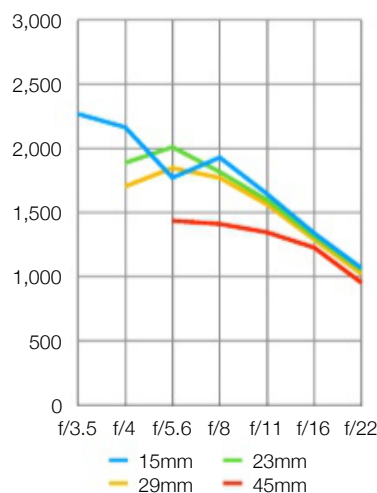
Available in black or silver, this Fujifilm kit lens isn't as tiny or featherweight as its Micro Four Thirds counterparts on test, but still boasts a space-saving retractable design. Like the competing Olympus EZ kit lens, the Fujinon has a motorised zoom mechanism. The lens automatically extends and retracts when you switch the camera on and off. Fast and slow zoom speeds are available, depending on how much you twist the zoom ring. It's useful for video capture, but less than ideal for very precise adjustments while you're shooting stills.

Performance

The minimum focus distance is unusually short at the wide-angle end of the zoom range. The electronically coupled focus ring works smoothly, and the stepping motor autofocus system is quick and quiet. Image quality is very good overall.

Sharpness

Centre-sharpness is strong in the short half of the zoom range, but drops off.



Fringing

Short **2.11** Long **1.39**
Colour fringing can be slightly noticeable at the short end.

Distortion

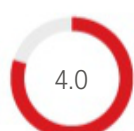
Short **-0.75** Long **-0.41**
After in-camera corrections, there's only minimal barreling.

Digital Camera verdict

Remarkably small and light for an APS-C format standard zoom, this kit lens delivers pleasing images. The motorised 'power zoom' is a mixed blessing, though.

4.0 ★★★★★

Excellent



Features



Build & handling



Performance



Value



Fujinon XF16-55mm f/2.8 R LM WR £949/\$1,199

A couple of steps up the ladder

At four times the price of the 15-45mm, the constant-aperture 16-55mm f/2.8 zoom is the pick of the crop for anyone upgrading from their kit lens. Sure, it doesn't feature optical stabilisation, but it does have a tough weather-sealed build, a rapid 'linear motor' autofocus system, a constant f/2.8 aperture and a control ring. It also gives a significantly wider maximum viewing angle than Fujifilm's 18-55mm lens (another upgrade possibility), equivalent to 24mm rather than 27mm in full-frame terms.

Performance

Three aspherical and three ED elements help to boost image quality, while dual HT-EBC and Nano-GI coatings do a great job of minimising ghosting and flare. Two f-stops faster than the 15-45mm kit lens at the long end of the zoom range, it gives a tighter depth of field.

Sharpness

There's a dip in wide-open sharpness at mid-zoom settings, but overall it's good.



Fringing

Short **2.37** Long **1.09**
Fringing is slightly lower than in the Fujinon 15-45mm.

Distortion

Short **-0.66** Long **0.31**
There's almost no distortion; vignetting is also minimal.

Digital Camera verdict

It's fairly big and heavy for an APS-C format lens but build quality, handling and image quality are all epic, as you'd expect from one of Fujifilm's 'red badge' best-of-breed lenses.

4.5 ★★★★★

Outstanding



Features



Build & handling



Performance



Value



Olympus

M.Zuiko Digital ED 14-42mm f/3.5-5.6 EZ Pancake

£255/\$224

A pancake that doesn't fall flat

This 'pancake' zoom from Olympus follows the same basic script as the Fujinon 15-45mm kit lens on test.

It's available in black or silver and has a retractable design with a motorised zoom mechanism. However, it's even smaller and lighter than the Fujinon.

The speed of the zoom motor increases if you twist the zoom ring further, but precise adjustments for stills capture can be tricky. Build quality is good: surprisingly for such a lightweight kit lens, the mounting plate is made from metal rather than plastic.

Performance

Upmarket optics include three aspherical elements, one aspherical ED element and a Super HR (High Refractive index) element, along with Olympus's A Zero coating. Outright sharpness is a little mediocre, but image quality on the whole is good for a lens this small.

Sharpness

Sharpness drops off towards the edges when you use wide apertures in the short half.



Fringing

Short 1.41 Long 0.52
Minimal fringing at the short end vanishes at the long end.

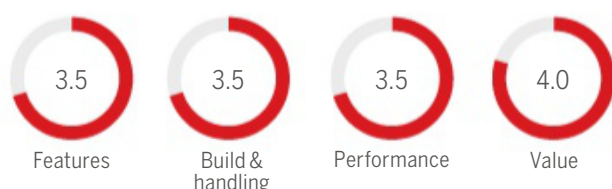
Distortion

Short -1.67 Long -0.21
After in-camera corrections, it's a distortion-free lens.

Digital Camera verdict

Adding to the slimline, travel-friendly credentials of Olympus Micro Four Thirds cameras, this is a neat lens that takes up next to no room at all when it's retracted.

3.5 ★★★★★ Very good



Standard zooms **Group Test**



Digital
Camera
BEST FOR
OLYMPUS

Olympus

M.Zuiko Digital ED 12-40mm f/2.8 Pro

£699/\$849

Boasts a constant aperture

Coming in at three times the price of the Olympus pancake zoom and four times the weight, this is very much the pro-grade big brother for Micro Four Thirds cameras. Indeed, the constant f/2.8 aperture rating makes this lens two f-stops faster than the Olympus pancake zoom at the long end of the zoom range.

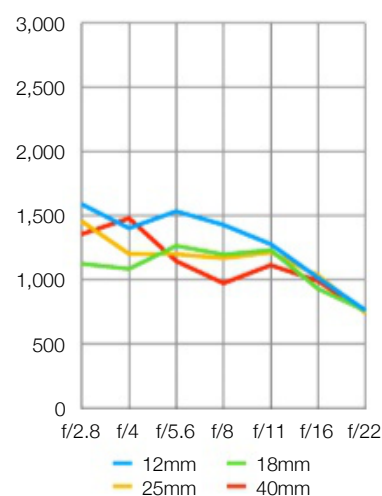
The weather-sealed build quality is excellent, while handling luxuries include a physical focus distance scale and a neat customisable Lens-Function button.

Performance

Optical highlights include two aspherical, one dual-surface aspherical, one ED aspherical, two ED and two HR elements, along with A Zero coating. Sharpness and contrast proved excellent in our real-world testing, although lab results weren't overly inspiring.

Sharpness

Results for sharpness don't look particularly good, but the lens performs beautifully.



Fringing

Short 0.3 Long 0.53
There's no fringing to be seen after in-camera corrections.

Distortion

Short 0.04 Long 0.2
Distortions are kept firmly at bay with auto corrections.

Digital Camera verdict

Lab test results don't tell the full story: this lens was an excellent performer throughout all of our 'real-world' procedures, and delivers pictorially gorgeous results.

4.5 ★★★★★ Outstanding



Group Test Standard zooms



Panasonic Lumix G Vario 12-32mm f/3.5-5.6 Asph Mega OIS £259/\$317

A variation on a kit theme

Like the Fujifilm and Olympus kit lenses on test, this one comes in silver or black and has a retractable design. It collapses to pretty much the same diminutive size as the Olympus. It's even lighter, at an unfeasible 70g in weight, yet adding a three-stop optical stabiliser that's lacking in the Olympus.

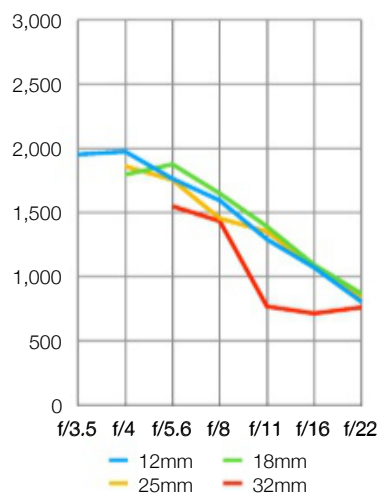
The Panasonic has a manual rather than motorised zoom mechanism. You have to manually extend the lens for use when you switch on the camera and it's not so convenient for movie capture, but offers greater zooming precision for stills.

Performance

There's no manual focus ring, but autofocus is quick, ultra-quiet and very reliable. Image quality is good for such a tiny lens but, as usual, the widest available aperture of f/5.6 at the long end of the zoom range can be a challenge.

Sharpness

It's very good across most of the zoom range, only dropping off at the longest setting.



Fringing

Short **0.4** Long **0.73**
There's virtually no colour fringing to be seen.

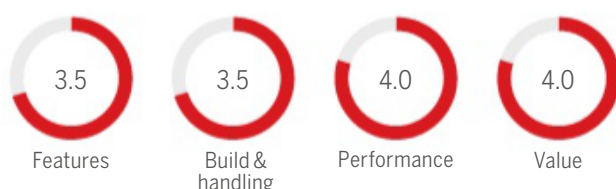
Distortion

Short **-2.01** Long **-0.12**
There's only a little barrel distortion at 12mm.

Digital Camera verdict

Incredibly small and light, yet with optical stabilisation and generous wide-angle coverage, this is a great lens for travel and everyday shooting on MFT cameras.

4.0 ★★★★★ Excellent



Digital
Camera
**BEST FOR
PANASONIC**

Panasonic Lumix G Leica DG Vario-Elmarit 12-60mm f/2.8-4 Asph Power OIS £799/\$898

No constant aperture, more zoom

Compared with Panasonic's retractable kit lens on test, this one costs about three times the price and is a much more hands-on affair. Whereas the smaller lens lacks any control switches or even a manual focus ring, this one has AF/MF and stabiliser on/off switches for instant control, plus a smooth-action, electronically coupled focus ring. It doesn't have a retractable design, and is somewhat larger and heavier, at 68 x 86mm and 320g, but still entirely manageable.

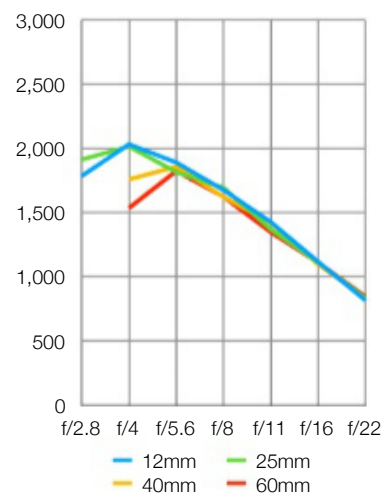
Unlike all the other upgrade zooms on test, this lens doesn't have a constant-aperture design that enables the widest aperture of f/2.8 throughout the zoom range.

Performance

Thanks to the inclusion of four aspherical and two ED elements, plus a three-stop stabiliser, image quality is highly impressive in all respects.

Sharpness

It's sharper than Panasonic's 12-32mm and delivers a much greater zoom range.



Fringing

Short **1.12** Long **0.43**
Short fringing is slightly higher than in the 12-32mm lens.

Distortion

Short **-1.79** Long **0.04**
Auto corrections means you get very little distortion.

Digital Camera verdict

The jumbo zoom range and effective optical stabiliser are two of the biggest attractions in this lens, making up for the aperture shrinking from f/2.8 to f/4 at the long end.

4.5 ★★★★★ Outstanding





Sony

FE 28-70mm f/3.5-5.6 OSS

£395/\$398

A modest FE standard zoom

This lens is a popular kit lens option with A7-series bodies. It's pretty compact and light for a full-frame compatible standard zoom lens, at 73 x 83mm and 295g, despite lacking a retractable design. It also includes a three-stop optical stabiliser, which comes in very useful on older-generation A7 bodies that lack in-camera stabilisation.

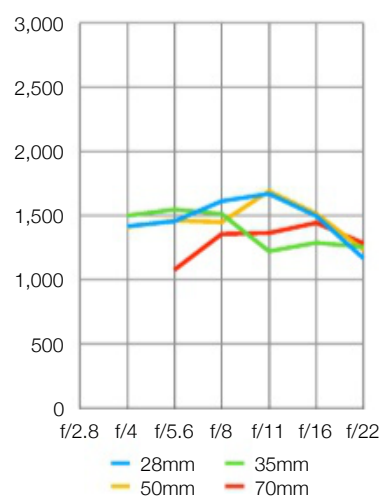
Build quality feels good overall, and it has a dust/moisture resistant design, although without a rubber ring around the metal mounting plate.

Performance

Three aspherical elements and one ED element help to boost image quality and the seven-blade diaphragm is fairly well-rounded. Outright sharpness is disappointing, though, making it a bit of a mismatch with any of Sony's full-frame cameras that bump up the megapixel count.

Sharpness

Sharpness isn't too bad at the centre, but disappointing towards the edges.



Fringing

Short **0.48** Long **2.71**
Fringing is well-controlled across most of the range.

Distortion

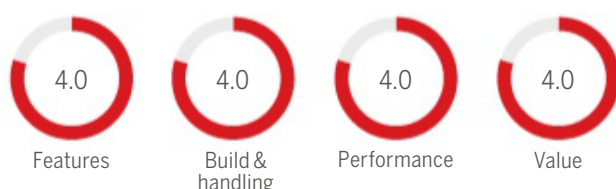
Short **-2.35** Long **3.46**
Barreling at the short end gives way to pincushion.

Digital Camera verdict

This lens is fairly small, light and inexpensive for a full-frame compatible standard zoom, but it lacks the quality to make the most of Sony's recent mirrorless cameras.

4.0 ★★★★★

Excellent



Sony

FE 24-70mm f/2.8 G Master

£1,799/\$2,198



A big lens in every way

This G Master lens is as good as it gets for an own-brand Sony standard zoom. And so it should be, costing about five times the price of the 28-70mm kit lens. It's not massively bigger or heavier than the Fujifilm f/2.8 lens on test, despite the Sony being designed for full-frame rather than APS-C format cameras.

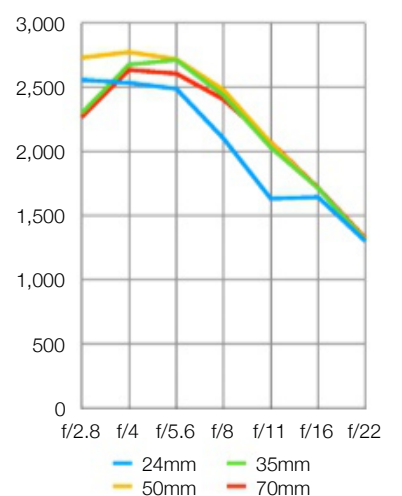
The weather-sealed construction feels sturdy, and switches are featured for AF/MF and a focus hold. There's no optical stabiliser, but newer Sony full-frame cameras have in-body stabilisation instead.

Performance

Sharpness and contrast are fabulous, aided by the inclusion of one extreme aspherical, two regular aspherical, one Super ED, and one regular ED element in the optical path. Nano AR coating is also on hand to fend off ghosting and flare.

Sharpness

Even wide-open, sharpness is simply phenomenal throughout the zoom range.



Fringing

Short **1.6** Long **0.29**
Very little fringing at 24mm; less at mid to long settings.

Distortion

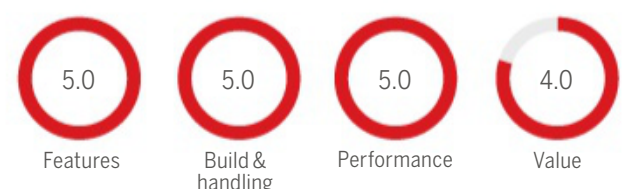
Short **-1.83** Long **2.31**
Uncorrected, there's modest barreling at 24mm.

Digital Camera verdict

A stellar performer, this lens is much more expensive than any other standard zoom on test, but you get what you pay for. It's the best own-brand Sony standard zoom.

5.0 ★★★★★

Outstanding



Group Test Standard zooms

Sony is the master of all

The quality of its FE 24-70mm f/2.8 G Master gives it top billing



Sony has served up some scintillating full-frame mirrorless cameras over the last few years, but the 28-70mm kit lens fails to get the most out of them. By contrast, the 24-70mm G Master lens delivers superb sharpness, along with particularly beautiful bokeh for a standard zoom. The flipside is that the G Master is very pricey. (Now launching in

Sony E-mount fit, the Sigma 24-70mm f/2.8 DG DN Art promises to be a real money-saver at around half the price.) The kit lenses from Fujifilm and Olympus both feature a retractable design with a motorised zoom mechanism. They also both deliver decent performance but the more upmarket Fujifilm XF16-55mm f/2.8 and Olympus 12-40mm f/2.8 Pro represent significant upgrades in handling and

image quality, as well as a desirable constant f/2.8 aperture rating. The same goes for the Panasonic 12-60mm f/2.8-4 OIS over the 12-32mm kit lens: you get upgraded to a massive zoom range complete with the retention of optical stabilisation and superb image quality. In a nutshell, the upgrade lenses are well worth the extra outlay.

How the lenses compare

								
	Fujinon XC15-45mm f/3.5-5.6 OIS PZ	Fujinon XF16-55mm f/2.8 R LM WR	M.Zuiko Digital ED 14-42mm f/3.5-5.6 EZ	M.Zuiko Digital ED 12-40mm f/2.8 Pro	Panasonic 12-32mm f/3.5-5.6 Asph Mega OIS	Panasonic Leica G 12-60mm f/2.8-4 Asph Power OIS	Sony FE 28-70mm f/3.5-5.6 OSS	Sony FE 24-70mm f/2.8 G Master
Contact	www.fujifilm.co.uk	www.fujifilm.co.uk	www.olympus.co.uk	www.olympus.co.uk	www.panasonic.com/uk	www.panasonic.com/uk	www.sony.co.uk	www.sony.co.uk
Street price (UK, USA)	£229/\$299	£949/\$1,199	£255/\$224	£699/\$849	£259/\$317	£799/\$898	£395/\$398	£1,799/\$2,198
Full-frame compatible	No	No	No	No	No	No	Yes	Yes
Equivalent focal length	22.5-67.5mm	24-82.5mm	28-84mm	24-80mm	24-64mm	24-120mm	42-105mm	36-105mm
Elements/groups	10 / 9	17 / 12	8 / 7	14 / 9	8 / 7	14 / 12	9 / 8	18 / 13
Diaphragm	7 blades	9 blades	5 blades	7 blades	7 blades	9 blades	7 blades	9 blades
Optical stabiliser	3-stop	None	None	None	3-stop	3-stop	3-stop	None
Zoom type	Powered	Manual	Powered	Manual	Manual	Manual	Manual	Manual
Autofocus type	Stepping motor	Stepping motor	Stepping motor	Stepping motor	Stepping motor	Stepping motor	Stepping motor	Stepping motor
Focus ring coupling	Electronic	Electronic	Electronic	Electronic	None (AF only)	Electronic	Electronic	Electronic
Min focus distance	0.13-0.35m	0.3-0.4m	0.2m	0.2m	0.2-0.3m	0.2-0.24m	0.3-0.45m	0.38m
Max reproduction ratio	0.24x	0.16x	0.23x	0.3x	0.13x	0.3x	0.19x	0.24x
Focus distance scale	No	No	No	No	No	No	No	No
Retractable	Yes	No	Yes	No	Yes	No	No	No
Filter size	52mm	77mm	37mm	62mm	37mm	62mm	55mm	82mm
Supplied accessories	None	Hood, wrap	None	Hood, pouch	None	Hood, pouch	Hood	Hood, pouch
Dimensions (dia x length)	63 x 44mm	84 x 106mm	61 x 23mm	70 x 84mm	56 x 24mm	68 x 86mm	73 x 83mm	88 x 136mm
Weight	135g	655g	93g	382g	70g	320g	295g	886g

Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build & handling	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Performance	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

Professional Repair Services

Camera, Lens & Lighting Equipment

- ✓ New Manchester service desk
- ✓ Free estimates
- ✓ Professional sensor cleaning
- ✓ Fast turnaround times
- ✓ Collection/Delivery available

Manchester Service Desk
Manchester, M12 6HH
020 7582 3294
Mon - Fri | 8 - 5

FIXATION
www.fixationuk.com

London Workshop
London, SE11 5RD
020 7582 3294
Mon - Thu | 8 - 5.30 | Fri 4.30



Canon

Profoto

AquaTech

SONY

TAMRON

bowens

Fixation is an authorised service centre for

Photo editing apps

These mobile apps might be more than just a desktop substitute... they might even be better



Affinity Photo for iPad

£19.99/\$19.99

<http://affinity.serif.com>

Platform: iPad | **Presets library:** No
Layers: Yes | **Editing tools:** Yes
Desktop software synchronisation: Yes

Affinity Photo for iPad duplicates the features and tools of the desktop edition remarkably well. The app is sold for a single one-off price (no subscription or in-app purchases), and you can synchronise files with the desktop version via Apple's iCloud, Dropbox or Google Drive. It's a similar system to Adobe's, but uses third-party cloud services you can choose yourself, with no esoteric new file formats.

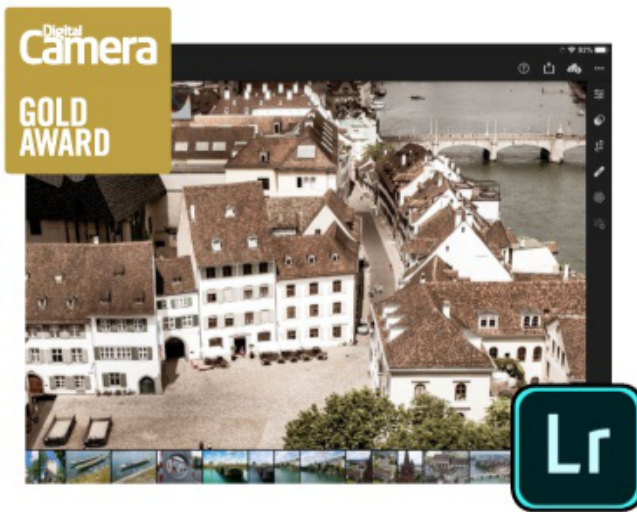
The list of tools includes dodge and burn tools, inpainting (object removal), blurring, sharpening, extensive selection tools (lasso, magic wand, pen tool), selection refinements and no fewer than 22 different adjustment layers. Affinity Photo for iPad supports unlimited text, vector, pixel and image layers and offers panorama stitching, HDR and tone mapping and focus stacking. It also supports 8-bit and 16-bit RGB, CMYK, greyscale and Lab colour spaces. It's far more powerful and fully featured than Photoshop for iPad.

It has been well-optimised for touch control, but the depth of the toolset inevitably means it will take a bit of learning and acclimatisation. This is not an instant effects tool for novices, but an extremely powerful mobile photo editor.

PROS The most powerful photo editor you can get for the iPad

CONS You have to buy it outright; it's quite a technical program, best suited to experts

Verdict ★★★★★



Lightroom Mobile

Free as a standalone tool or as part of a Lightroom subscription

www.adobe.com

Platform: iPad, iPhone, Android | **Presets library:** Yes | **Layers:** No | **Editing tools:** Yes
Desktop software synchronisation: Yes

This mobile version of Adobe Lightroom CC runs on iOS and Android tablets and phones. It can be used as a free app, but only delivers its full potential and synchronising capabilities with an Adobe Photography or Lightroom subscription plan.

Lightroom Mobile is a close match for the Lightroom CC desktop software, both in terms of how it looks and the editing tools available. What complicates things here is that there are two desktop editions. Lightroom Classic CC is the one most photographers know, but Lightroom Mobile is more closely attuned with the Lightroom CC web-first version, which is more limited in its toolset but offers fully cloud-based storage.

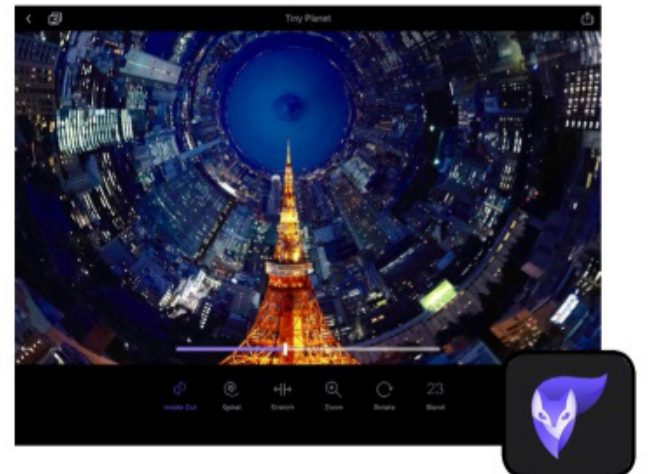
You can apply curves adjustments, recover shadows and highlights, edit colours, add clarity and dehaze effects, correct perspective distortion, remove spots and blemishes, apply custom profiles and presets, and even make local adjustments via gradient, radial gradient and brush tools.

On top of all of that, there's a built-in camera mode which offers controls (and raw support) that your device's own camera app won't have.

PROS Powerful; free (up to a point); easy to use; offers a great camera mode

CONS You need a Creative Cloud subscription to get the full benefit

Verdict ★★★★★



Photofox Pro

From £64.99/\$79.99 or subscription

www.photofoxapp.com

Platform: iPad, iPhone | **Presets library:** Yes | **Layers:** Yes | **Editing tools:** Yes | **Desktop software synchronisation:** No

Photofox is an iOS-only app that is free to download but comes with in-app purchases. You can use basic features without restriction, but attempting to use premium features brings up a prompt to choose a one-month subscription (£7.99), a more cost-effective 12-month subscription (£35.99), or an outright purchase (£64.99).

If you've ever wanted to turn your photos into digital art, but not known where to start, this is the app you need. You can add instant film-look filters; carry out regular exposure, sharpening, colour adjustments and object removal; combine images in layers; add lighting effects and picture frames; create a variety of 'sketch' looks; turn regular images into 'tiny planets'; and a whole lot more.

And if this is all too much to take in, there's a QuickArt mode with ready-made montages, sketch effects, duotones and 'surreal skies' to try out.

Not everyone is impressed. Photofox's monetisation model has drawn a good deal of criticism from previous users, and the constant prompts to upgrade from the free version get tiresome. Our advice would be to spend a little time with the free version or a single month's subscription to help you decide.

PROS Dazzling array of effects, tools, filters and photo-editing ideas that even novices can try

CONS Relatively expensive purchase cost; annoying upgrade nagging

Verdict ★★★★★

Five things to look out for

1

Some apps partner with desktop versions; others are solely for mobile use, although you can share images.

2

Few decent apps are free. Some need an in-app purchase to unlock tools; some have a one-off price.

3

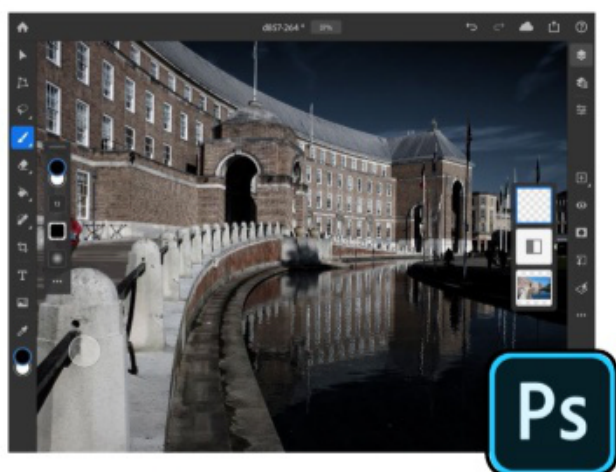
Looking for inspiration? Many mobile apps come with a range of preset effects that can be extremely good.

4

Do you need in-depth curves, layers and more? Many mobile apps can do this, but it may not be as fluent.

5

Most apps will work directly with your device's camera roll; Adobe's apps may also work with Lightroom.



Photoshop for iPad

Free with Creative Cloud plans that include Photoshop
www.adobe.com

Platform: iPad | **Presets library:** No | **Layers:** Yes | **Editing tools:** Coming | **Desktop software synchronisation:** Yes

Photoshop for iPad is a mobile version of the desktop application. It enables you to work on your Photoshop files on your regular computer *and* your iPad, and have changes seamlessly synchronised across both via Adobe's cloud storage system.

It's a free part of the Adobe Creative Cloud software subscription ecosystem: if you have a plan that includes Photoshop, you can use Photoshop for iPad as part of your subscription.

Adobe has concentrated on retouching and compositing tools in this early version, which does not yet have the full feature set of the desktop version. Features like curves adjustments, Refine Edge selection enhancements, canvas rotation and Lightroom integration are still to come, although an update is imminent. Even as it stands, this is still an effective tool for Photoshop artists and photographers on the move.

Photoshop for iPad does not work directly with Adobe's Creative Cloud File system, but instead uses a new Cloud document format stored in a different location in your Creative Cloud account. This offers a seamless editing experience with Photoshop but not (yet) Lightroom.

PROS Effective editing tools in a very usable interface; free for Photoshop subscribers

CONS iPad only; relies on Adobe's cloud-based storage and synchronisation services

Verdict ★★★★★



Photoshop Express

Free
www.adobe.com

Platform: iPad, iPhone, Android | **Presets library:** Yes | **Layers:** Yes | **Editing tools:** Yes | **Desktop software synchronisation:** No

Photoshop Express is a free app that shares the Photoshop brand name, but is not really connected to it, or other Adobe Creative Cloud plans. It's free to download, but has features marked as 'premium' and 'free for a limited time'. The App Store lists premium subscription prices, but there is no upgrade option in the app, so the situation is confusing.

There is no desktop version of Photoshop Express, and it does not interface directly with Photoshop or Lightroom. If you have a Lightroom subscription, however, you can access your Lightroom photos from within the app.

The interface displays a strip of preset effects categories across the bottom of the screen. When you tap a category, the button expands to the right to show the preset effects available. Below this is a row of icons for applying more image effects; cropping your image (with common presets for social sharing); selective adjustments with auto object selection, object and blemish removal tools, text and sticker overlays; and advanced Photoshop effects (you'll need to connect to Photoshop).

This is not a tool for power users, but it is a rich source of inspiration for smartphone photographers and social media sharers.

PROS Huge range of effects, filters, adjustments and ideas; free

CONS A bit of an outlier in the Creative Cloud ecosystem, with hints of future subscription fees

Verdict ★★★★★



Snapseed

Free
Apple App Store / Google Play

Platform: iPad, iPhone, Android | **Presets library:** Yes | **Layers:** Yes | **Editing tools:** Yes | **Desktop software synchronisation:** No

Snapseed is a photo effects and editing tool that you can download and use for free. There is no subscription charge and there are no in-app purchases. It can synchronise with Google Photos, but will also work with Apple Photos on iOS devices. Snapseed has an unusual interface based on filters, which can be used individually or combined, and has powerful image enhancement tools, too.

There are no fewer than 29 different tools and filters that offer everything from curves, white balance and perspective correction to selective enhancements, healing, grainy film and vintage effects. You can use these filters individually or combine them to create your own custom 'looks', which you can save for re-use.

The deeper you dig into Snapseed's filters and options, the more potential you discover. You can use it to add instant impact for your Instagram feed, or to create carefully crafted black-and-white fine art.

Snapseed originally came from Nik Software. Google's history with Nik software has not been good – it discontinued the excellent Snapseed desktop app and shuffled off the Nik Collection. Let's hope the Snapseed app has a happier future.

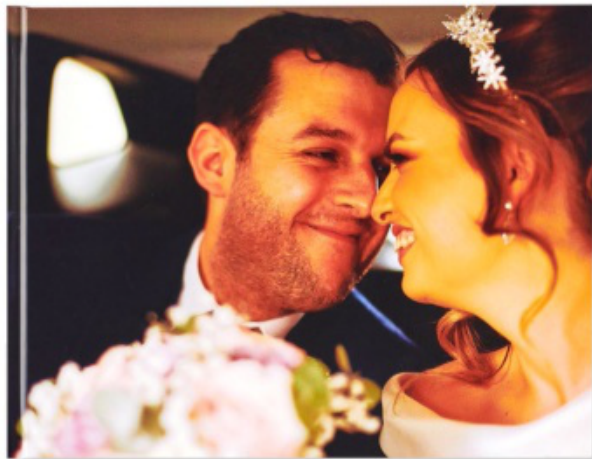
PROS Innovative and powerful with some great effects; free, without fees or subscriptions

CONS Mobile only, with no equivalent desktop app; development has gone quiet

Verdict ★★★★★

Photo books

We compare six online photo book printers to see which offers the best product and service



Bob Books

£29.99, 26 pages
www.bobbooks.co.uk

Bob Books offers four different options for creating your photo book. We tried the Bob Designer Software and the Online Book Creator. It took us a little while to wrap our heads around the design system, but we grew to really like it. You simply add as many images as you want on the page, then choose from a variety of different layouts to get the most aesthetically pleasing page. If you're not sure, a 'Suggest a layout' button does it for you.

A common theme across many of the photo books we've reviewed is oversaturation of the front cover image, but Bob Books was the worst culprit. Our original photo was graded with warm oranges; however the final cover print had an eye-popping tangerine vibe. We later discovered that this may have been caused by Bob Books' automatic image enhancement feature. This can be disabled before submitting your order.

We were very pleased with the quality paper used, the colour accuracy of the prints inside, and the cover's smooth, flaw-free presentation.

PROS Good quality; thick paper; plenty of design tool options

CONS Very over-saturated front cover; design tool is a little complicated at first

Verdict ★★★★★



Cewe Photoworld

£24.99, 26 pages
www.cewe-photoworld.com

Unlike some photo book providers, Cewe requires you to download an app to design and order your book, but we found the software quick and the creation process simple to navigate. You can edit text easily and choose from a wide range of fonts and sizes, while Cewe's tool for automatically arranging your images is one of the cleverest we've used.

The finished book is also one of the best on test, impressing us with the crispness of its cover image. Compared with rival books, Cewe Photoworld's contains noticeably more detail. While the cover image's colour accuracy wasn't quite perfect, it was much better than most.

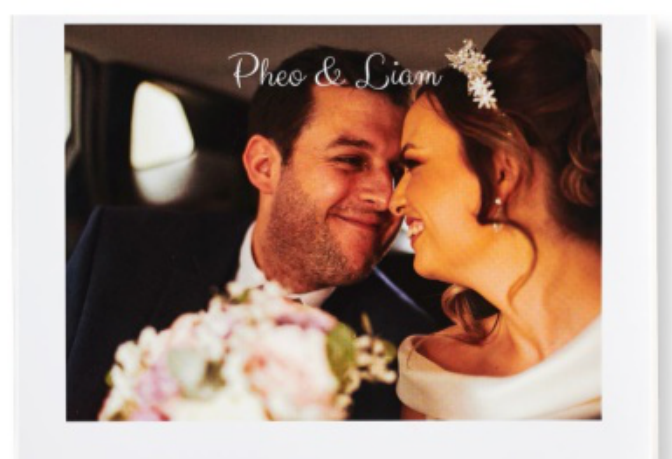
Inside, we found the paper stock very good and the images were printed sharply and accurately. It's worth noting that the sharpness of the printing does mean that high-ISO image noise is much more likely to be visible, and we also found the printed images to be slightly dark.

Our Square photo book was the cheapest out of all the books we ordered (although it was also the smallest), but the results are class-leading.

PROS Accurate colour reproduction; sharp printing; good overall book quality

CONS Only ships to UK; photos ran a little dark

Verdict ★★★★★



Mimeo Photos

£24.99, 20 pages
www.mimeophotos.com

Mimeo Photos is a third-party Apple Photos app extension for macOS, allowing you to create a project for printing. It's worth noting that you can't actually buy a photo book from the Mimeo Photos website, and the service is only available on macOS.

There are over 50 theme options, including well-known Apple favourites, and you can customise layouts and backgrounds for your own personal touch. Once we'd downloaded the app extension, the software itself was easy to use.

We ordered a hardcover book, which arrived with an attractive dust jacket that added a touch of elegance. The cover image is also printed on the actual hardcover of the book. The saturation seems to have been pushed up, as skin tones on both the dust jacket and the hardcover turned out to be a luminescent orange. This is a common problem across the books on test.

The photos inside were beautifully printed, with good sharpness and colour accuracy, and none of the fuzziness experienced in cheaper books.

PROS Great overall quality; sharp printing; dust jacket included

CONS Only accessible on macOS; over-saturation of colours on cover

Verdict ★★★★★



Five things to look out for

1

Glossy paper helps boost colour and contrast, but a matte finish can be better at hiding fingerprints.

2

For uploading your shots, just stick with high-resolution, high-quality JPEGs and you can't go far wrong.

3

Web-based book creators bring speed and simplicity, while apps can offer more exacting customisation.

4

Edge-to-edge printing maximises a photo's impact, but the borderless look will slightly crop your shot.

5

A lay-flat binding avoids images disappearing where pages meet the spine, and the book stays open by itself.



Mixbook

£31.76, 27 pages
www.mixbook.com

Mixbook is one of the most prolific photo book services around, and often offers discounts. Its design software is easy to use – you don't have to download anything, as it's all done in your web browser. There are nearly 400 fully customisable templates, backgrounds and stickers to choose from.

Mixbook photo books come in semi-gloss and pearl paper finishes, and there's an ultra-thick premium paper for its lay-flat page option. We chose to design a 27-page 8.5 x 8.5in Classic Square Glossy Hardcover photo book.

When our photo book arrived, we did have a few issues with the quality of the front cover. There was some fringing on the edges of the image and the logo when inspected at close quarters. The cover image colours were also inaccurate, with warm oranges taking on a redder, more muddy tone. At least the images printed inside the book were true-to-colour.

An affordable way to collect your favourite photos in one place, Mixbook is a great option.

PROS Affordable pricing; fast shipping; easy online design process

CONS Fringing on cover; cover image colours could be more faithful

Verdict ★★★★★



Photobox

£36.99, 26 pages (plus £3.49 shipping)
www.photobox.com

Designing our Photobox photo book was pleasingly simple, with the online creator tool working seamlessly. Like many photo book providers, Photobox purports to be able to design your photo book for you. While this automated feature isn't perfect, it does group images fairly intelligently.

We were fairly pleased with our chosen A4 Landscape photo book. The shipping was fast, and the packaging was the best of all the books on test. The colour accuracy on both the cover image and the photos inside was also pretty decent, but on close inspection, neither the cover shot nor the images inside were quite as sharp as we would have liked. In addition, each end of the book's spine had a few small creases present – which, while nothing major, were not present on the other photo books here.

While our photo book from Photobox was perfectly adequate, we didn't quite feel it was worth the full price, though Photobox does frequently run discount offers.

PROS Simple design tool; lots of designing options; it can design the book for you

CONS Undiscounted price is expensive for the quality you get; minor creases on book spine

Verdict ★★★★★



Snapfish

£29.99, 20 pages
www.snapfish.co.uk

Snapfish's online book creator software is very similar to Photobox's and functions well. You can choose a variety of designs, backgrounds, embellishments and borders to adorn your photo book and create a distinctive look.

We went for Snapfish's A4 Landscape photo book, and first impressions were positive when we received the finished product. Although the images could have been slightly sharper, colour accuracy was good throughout the book. However, the colour on the cover was quite heavily saturated, if not quite to the same extent as some of the other books we received. In addition, we did notice that the cover of the Snapfish book was wonky, with the two pieces of cardboard slightly askew.

Overall, we were happy with our Snapfish photo book. It's one of the better photo book manufacturers in terms of value for money, especially if you take advantage of one of the periodic sales that Snapfish runs.

PROS Fairly accurate colour reproduction; good discount deals often available

CONS The cover was slightly wonky; overall print quality could have been better

Verdict ★★★★★



Help me buy a...

Photo backpack

The ideal companion for active outward-bound shooters

Camera kits tend to grow over time. Once you've added a few lenses, a flashgun or two and some other accessories, you're unlikely to be able to shoehorn everything into a shoulder bag. You might find yourself cherry-picking which bits of kit to take out, with the inevitable frustration that you won't have the thing you need, just when you need it.

A photo backpack gives you much more room for manoeuvre, while helping to spread the load across both shoulders. It provides a more comfortable and secure carrying experience. Many backpacks add versatility by including separate pockets for personal items, a separate area for a laptop or tablet, and a tripod holder. Some go further still, splitting the main compartment into two sections. You'll then have space for travel essentials.

1 Full photo or split

Most photo-oriented backpacks fall into one of two categories. First there's the 'full photo' backpack, in which the main compartment is dedicated solely to camera

kit. This is ideal for larger outfits, typically including one or two camera bodies, several lenses and a flashgun or two.

The main alternative is a split photo/daypack. Popular for trekking, travel or just a grand day out, these generally have a lower compartment for a smaller collection of photo gear, and an upper compartment for travel items.

2 Divide and conquer

For cossetting your kit, it's important to tailor the photo compartment so that it's a perfect fit. With this in mind, pretty much all photo backpacks on the market have internal dividers. With these, you can customise the interior quickly and easily, to give each item its own snug spot. You'll also be able to easily adapt the interior, for example, when you stow a camera body with different sizes of lens attached.

3 Adjustable harness

A medium-to-large backpack that's packed full of photo gear, plus maybe a laptop in a separate compartment, can weigh more than 10kg. A vital aspect of comfort and security is that you can adjust the harness

to perfectly fit your body. As such, all photo backpacks have adjustable shoulder straps that tend to be well-padded, especially in larger bags.

The surface of the backpack that rests against your back should be ventilated, with good padding, particularly in the lumbar area. Extras often include an adjustable sternum strap, which fastens across your chest and stops the main straps slipping off your shoulders, as well as an adjustable waist strap.

4 A right carry-on

If you plan to use your photo backpack as a carry-on item when flying, it's important to check size and weight restrictions with your airline. Size restrictions do vary a little, and weight restrictions vary a lot. It can be as little as 11kg or less. Some airlines have no official weight limit, merely stipulating that you must be able to lift the bag unaided into an overhead compartment.

5 Whatever the weather

The vast majority of photo backpacks are shower-resistant, with the main material being ripstop nylon. Weather-resistant zips are also often featured for added environmental protection. You'll also generally get an 'all weather' rainproof cover, either sewn into the bag so you can easily pull it out from a hidden pocket and stretch it over the backpack, or supplied as a separate additional item.

6 A bit on the side

Most backpacks have additional pockets and compartments, for storing tablets, laptops, filters, batteries and memory cards, plus daily essentials like car keys and a phone. Even so, you can still run out of room. Many photo backpacks have loops sewn onto the exterior, for securely fastening add-on pouches for additional lenses, flashguns and other accessories.

Good, better, best

Here are three of our top-rated photo backpacks

**Manfrotto Pro Light
3N1-36 PL**
£119/\$223

A clever design makes this backpack equally adept at storing camera kit, video gear or a drone. There's also a 15-inch laptop compartment.



**Lowepro ProTactic BP 350
AW II**
£149/\$162

Fairly slimline, this Lowepro backpack is nevertheless super-tough, and can squeeze a lot in. The removable waist strap can be used as a utility belt.



Tenba Axis 24L
£199/\$229

The mid-sized option in a range of three, the Axis 24L can stow one or two cameras with as many as eight lenses, plus a 17-inch laptop and accessories.



What to look for in a photo backpack

Get the features to suit how you shoot



Laptop sleeve

You'll often find that a photo backpack has a dedicated compartment or sleeve for storing a tablet or laptop, or both. Some are made to accommodate 13-, 15- or 17-inch laptops, so it's best to check the size before you buy.

Extra storage

Typical of many photo backpacks, this one has loops on the front or sides, which you can use for fastening add-on pouches for extra lenses and other accessories. Most also feature a tripod fastening system.



Tailor-made

The shoulder straps are height- and length-adjustable. The ventilated harness also features an adjustable sternum strap and a padded adjustable waist strap. You can be sure the backpack will stay in place, even while traversing tricky terrain.

Front or rear opening

For added security, the main opening for some photo backpacks is at the rear. You therefore need to lay the bag down on its front and open the rear zipper for the main compartment.



Multi-access points

As well as rear-opening for the whole of the main compartment, this Tenba Axis bag features top and side access points, for easily grabbing two cameras with attached lenses.



Organiser pocket

Many backpacks feature additional compartments and an organiser pocket, ideal for stowing all your daily essentials or additional photo gadgets and accessories, and for keeping everything secure.



All-weather cover

An all-weather cover to keep out anything from fine dust to torrential rain is often supplied as a separate item, or as a pull-out cover that's sewn into the bag and pulls out from a hidden flap or pocket.



INTERVIEW



Jeff Bridges

Actor and photographer

Jeff Bridges was born in California in 1949, the son of actors Lloyd and Dorothy Bridges. He began his career as an actor as a two-year-old child. His first major motion picture role was in the 1971 movie *The Last Picture Show*, for which he received an Academy Award nomination for Best Supporting Actor. Since then he has had six more Academy Award nominations, and won a Best Actor Oscar for his 2009 performance as an aging country singer in *Crazy Heart*.

He has been taking photographs on film sets since the early 1980s. Since shooting the movie *Starman* in 1984, Bridges has produced a 'scrapbook' of his on-set images for the cast and crew involved in each film he has starred in.

The first book of his photography, *Pictures*, was published in 2003, and his photographs have been regularly exhibited around the world.

www.jeffbridges.com



Jeff Bridges

Actor Jeff Bridges has a passion for on-set photography with his Widelux camera. **Steve Fairclough** speaks to him about his latest book



Jeff Bridges

It's just after 9pm in the UK when I get put through to Jeff Bridges, who is at his offices in Los Angeles. The familiar drawl of 'The Dude' (his character from *The Big Lebowski*) says, "Hey Steve," and we start a conversation about how this

Academy Award-winning actor has a deep love for still images, as well as moving images.

Bridges' fascination for photography dates back to his teenage years. Like many who go on to become professional photographers,

he started playing with his father's camera. Not long after that, he saw a Widelux camera in action when a photographer came to his high school, armed with one of these swing-lens panoramic cameras, to shoot the class picture. The Widelux format had gone to the back of Bridges' mind until his wedding day in 1977, when the photographer used a Widelux to shoot the happy event. After seeing the wedding pictures, Bridges admits he was "hooked"; since the mid-1980s he has shot on-set panorama-format images for

Above: Jeff Bridges, *True Grit*, 2010.

Right: Jayne Taini, Stuart Balm, Norm O'Neill, Dawn Didawick, Brad William Henke, *The Amateurs*, 2005.



each of the films he has been involved in. In 2003, the first book of his on-set photographs, *Pictures*, was published; in late 2019, this was followed up by the publication of *Pictures: Volume Two*.

The new tome gives a unique insider's viewpoint to the machinations of the movie industry in the 21st century, as seen through the lens of a true Hollywood legend. Bridges takes you behind the scenes of motion pictures such as *True Grit*, *Crazy Heart*, *Tron: Legacy*, *Seabiscuit* and *Hell or High Water*

with photographs that are technically adroit, revealing and full of humour. So, without further ado, here's his photographic story...

When you were younger, did you have an interest in photography, and how did it come about?

When I was 15 or so, I kind of took my father's 35mm Nikon camera and would shoot pictures of my friends and so forth. I made a little darkroom in my bathroom and got an enlarger, and did all that kind of stuff. So I got into it around that age.

I never enjoyed developing negatives, even though it's probably the most important part of the whole process. Printing was the part I loved. Even now, seeing a proof sheet for the first time is like opening a gift: enjoying what the camera saw, noting what worked and what didn't, feeling the moment of the picture again. Then – it's funny – the Widlux came into my

“Seeing a proof sheet for the first time is like opening a gift: enjoying what the camera saw... feeling the moment of the picture again”



Jeff Bridges

life almost around that same time, when I was in high school. I heard that there was going to be a photographer who would take our class picture, and he had this funny camera with a panning lens. If you ran around real fast, you could be in the picture twice. So, sure enough, he came and I thought, hey, it was true – they did that. You could run around and beat it [the speed of the lens].

Then I kind of forgot about the camera, and when I got married, the photographer Mark Hanauer came and shot our wedding, and he had a Widelux. I saw those prints and I was just knocked out. It seemed like it was a kind of a cross between a movie camera and a still camera; it captured time in a wonderful way. So I kind of got hooked.

Then, a little later on, as a wedding gift, my wife Sue gave me a Widelux, and that's primarily the camera I've used ever since – and we've been married for over 42 years now.

Had your interest in photography taken a complete back seat before seeing that Widelux in use at your wedding?

Well, when my acting career took off, photography took a back seat for several years. I got back into it seriously in 1976

Below: Jodelle Ferland and director Terry Gilliam, *Tideland*, 2005.





Above: Maggie Gyllenhaal, *Crazy Heart*, 2009.

Below: Jodelle Ferland, *Tragedia/Comedia, Tideland*, 2005.

when I worked on the remake of *King Kong*. My character, Jack Prescott, was a palaeontologist, and he carried a motor-driven Nikon wherever he went. In preparing for the role, I started taking pictures again.

When did you start shooting with the Widelux on movie sets?

In 1984, when I was doing *Starman*, [the actress] Karen Allen saw some of my Widelux shots and suggested that we combine them with the unit photographer's [Sid Baldwin] to make a book for the cast and crew. Karen's brainstorm marked the beginning of a series of privately published albums. These have been given in appreciation to the casts and crews I've worked with over the years. The photographs celebrate our times together, and my *Pictures* books are selections from these albums.

Do you like or admire the work of any other photographers?

One of my photo heroes would be [Jacques-Henri] Lartigue. He might have used a panning shutter as well on his cameras – his photographs look like he might have. I loved the way he worked, a little like snapshots back in those days when most photography was quite formal and stiff. He really captured the life

and what it was like to be alive in those times. That's kind of what I aspire to in my shots... To let people see what's it's like, right in the centre of making movies in the 20th and 21st centuries.

Obviously you have great access to movie sets. Do you like to mix it up and have some posed shots, but also try to be inconspicuous and not make it obvious that you're taking a picture?

Yeah, well, absolutely. I do both. The thing I think you're referring to [with regards to posed shots] is this series of 'tragedy and comedy' images that I take of the actors doing the classic Greek tragedia/comedia masks. I like it for a number of reasons. One reason is kind of a demonstration of how willing actors are to be fools and to play, as it's kind of a playful thing to do.

It's fun to organise that and, again, it's a great example of the Widelux and how it can show two separate times simultaneously... and the whole tragedy and comedy thing of how as human beings we're so capable and willing to do both of those. That's a thing that I've got to work out with the actor who does that – we'll have rehearsals and stuff to get that image. But then, you're right, at other times I like to be more candid and be like a 'fly on the wall' kind of thing.

Do you find the Widelux quite a forgiving camera to work with?

Yeah, I think so. I mean, for my money, I really have kind of a love affair with the camera. I think it sees more like the [human] eye, you know, and it almost has peripheral vision. It's very much like the movie screen format, so I like that aspect of it.

The Widelux is a fickle mistress. Its viewfinder isn't accurate, there's no manual focus on it; you're focusing just with depth of field. I sometimes use it as a landscape camera but, most often, I like to get as close as I can to my subject, which is a yard away or something like that. A little above my arm, [that] kind of thing. So, with that, I often shoot at f/11 at 1/15th of





Jeff Bridges

a second with ISO 3,200; sometimes I'll push that to 6,400 because the light in a studio is usually so dim. The movie sets get dimmer and dimmer with the sensitivity of the [movie] cameras they're using now. I find that you get a little bit more [in a frame] than what you see in the viewfinder, that kind of thing.

Is everything you shoot in black and white?

I've shot in colour, but I think I really enjoy black-and-white, especially when you get the kind of richness that Dual Graphics got [Dual Graphics scanned and printed Jeff's images]. I'm really happy with the way the printing of the images came out [in the book]. I think they're just great. I think it's [my use of black-and-white] from my youth to being in the darkroom, and being more familiar with that. Then I think it calls upon the viewer to add their layer of reality, and colour kind of distracts in a way – well, sometimes it can.

There's beautiful colour photography as well but it certainly isn't as meaningful as black-and-white. There's something about black-and-white, man, that I love, even in the movies. If you look at a [Stanley] Kubrick movie – *Doctor Strangelove* or any of those – and you see those rich blacks... wow, I love that.

When preparing the book, were you hands-on in the edit – picking the pictures and going through your archive?

Yeah, very much so.

You must have built up quite a big archive...

Oh, man, I'll say. This [the book] is the tip of the iceberg of this stuff. It was fun to go through... But the edit, as you know, is the tough part. It takes a lot of time to figure out. I thought Jana Anderson did a great job of the book's design and how it feels looking through it. I'm pretty pleased with it.

Was there anything you were surprised by when you went through the archives? Was there

something you'd forgotten about, or a shot that popped out that you'd forgotten you'd taken?

I'm trying to think. There were a couple of shots that Jana brought to my attention and I'm trying to think which they are. I don't have the entire book in front of me but I said, "Oh I like that, Jana. Cool."

Out of all the movie sets you've been on, was there one that was the most fun to shoot on?

Hmmm. None really pops out in that way. I wouldn't say there's one. They're all kind of the same in that way as far as enjoyment and images. There are always such interesting images on sets.

Your images all seem to be very intimate – do you have a feeling that that's the case?

Yeah, very much so. Yeah. I like to do that and bring who's looking at it in and really feel that intimacy.

Above: Meryl Streep, Tragedia/Comedia, *The Giver*, 2014.

Below: Jack Nation, *Crazy Heart*, 2009.

"I think black-and-white calls upon the viewer to add their layer of reality, and colour kind of distracts in a way"





Jeff Bridges

Above: Widgeon Slough, Pinecone Burke Provincial Park, British Columbia, *Seventh Son*, 2014.

If you were trying to explain the book to somebody who is thinking of buying it, how would you explain it?

I would say that this actor guy, he made these pictures in this book and they're really good. They're kind of like the everyday life of working in the movies and what it's like, and what it looks like. It's a really beautiful thing [laughs very loudly].

You were honoured in 2013 by the International Center of Photography for your photography. How did you feel about that?

It's great to get an award from guys who do what you do and appreciate your work. There's nothing better than that; it's great.

The proceeds from the book are going to charity – can you explain a little more about the charity?

All of the proceeds go to the Motion Picture and Television Fund, which is really an incredible organisation that the industry has created. It's really about taking care of their own, financially and health-wise. That's from the directors, actors, grips, electricians... all those people. It's a wonderful organisation, and it feels totally [right] that that's where the proceeds should really go from this book because, I tell ya, I look at it personally as just

giving back to an industry that's given me so much joy, pleasure and a living.

Is there anything else you'd like to say about the book?

I've just got to get the book out there and let people see it.

Do you have any other plans for your archive of photographs?

I have an archive. I've got a show that's been travelling in Europe for a while, called *Lebowski and Other Big Shots* – that's on my site if you go there, and on the menu go to 'photography'. That travels, and I'll probably get an exhibition of this book too that will be travelling around.

Do you know if that's likely to come to Europe?

Well, there's currently one in Europe...

Finally, what's next for you?

I will be doing a show for FX [channel] called *The Old Man*. I'm looking forward to [that coming out]. I'm really enjoying working with the folks so far in preparation [for it].

Pictures, Volume Two is published by powerHouse Books (ISBN: 978-1-57687-936-8), with an RRP of £41.99.

To find out more, go to www.powerhousebooks.com



“They’re kind of like the everyday life of working in the movies and what it’s like, and what it looks like”

Next month...

9 TIPS CARDS

All-new series –
collect the set!

GEAR TESTS

Canon EOS Ra
Olympus OM-D
E-M1 Mark III

Microphone Mini Test

Group Test:
Macro lenses

Camera holster Mini Test

10 WAYS TO CAPTURE SPRING!

How to make the most of a season
bursting with photo opportunities

PLUS!

10 all-new
photo projects
Camera College
Photoshop
editing tutorials

ON SALE Friday 3 April

•Contents subject to change

• Over 20,000 Products • Free Delivery** • We can deliver on Saturday or Sunday†

Canon Lenses

RF 35mm f1.8 IS Macro STM	£519
RF 50mm f1.2 L USM	£2329
RF 15-35mm f2.8L IS USM	£2329
RF 24-70mm f2.8 L IS USM	£2329
RF 24-240mm f4-6.3 IS USM	£845
RF 28-70mm f2 L USM	£3049
EF 24mm f1.4 L II USM	£1419
EF-S 24mm f2.8 STM	£142
EF 35mm f1.4 L II USM	£1628
EF-S 35mm f2.8 Macro IS STM	£369
TS-E 50mm f2.8L Macro	£2199
EF 85mm f1.4L IS USM	£1369
EF 400mm f2.8 L IS III USM	£10999
EF 400mm f4 DO IS II USM	£6059
EF 600mm f4L IS III	£12999
EF 11-24mm f4 L USM	£2789
EF 16-35mm f2.8L III USM	£1849
EF 16-35mm f4 L IS USM	£949
EF 18-55mm f4-5.6 IS STM	£214
EF-S 18-135mm f3.5-5.6 IS STM	£381
EF 24-70mm f2.8L II USM	£1677
EF 24-70mm f4 L IS USM	£799
EF 24-105mm f3.5-5.6 IS STM	£359
EF 24-105 f4 L IS II	£998
EF 70-200mm f2.8 L IS III USM	£1939
EF 70-200mm f4 L USM II	£1299
EF 70-300mm f4-5.6 L IS USM	£1199
EF 100-400mm f4.5-5.6 L IS II USM	£1999

Canon | PRO PARTNER

EOS R



EOS R From **£2149**

EOS R body £2149
EOS R + 24-105mm £2999

Canon | PRO PARTNER

EOS RP



EOS RP Body **£1299**

EOS RP body £1299
EOS RP + 24-105mm £2064

Canon | PRO PARTNER

EOS-1D X Mk III



EOS-1D X Mk III **£6499**

EOS-1D X Mk III body £6499
EOS 1D X Mk II body £4899

Canon | PRO PARTNER

EOS 6D Mark II



EOS 6D Mk II From **£1349**

EOS 6D Mk II body £1349

Canon | PRO PARTNER

EOS 5D Mk IV



EOS 5D Mk IV **£2799**

EOS 5D Mk IV body £2799

Canon | PRO PARTNER

EOS 90D



EOS 90D **£1149**

EOS 90D body £1149
EOS 90D + 18-135mm £1499
EOS 90D + 18-55mm £1299

Nikon
Z6

24.5 mp
12 fps
Full Frame

Z6 From **£1699**

Z6 + 24-70mm £2099
Z7 body £2599
Z7 + 24-70mm £2999

D6



D6 **£6299**

Z50 body £849
Z50 + 16-50mm £989
Z50 + 16-50mm + 50-250mm £1129

D780



D780 **£2199**

D780 body £2199
D780 + 24-120mm £2619
D850 body £2499

Nikon Lenses

50mm f1.8 G AF-S	£199
60mm f2.8 G AF-S ED Micro	£579
85mm f1.8 G AF-S	£449
105mm f2.8 G AF-S IF ED	£799
16-35mm f4 G AF-S ED VR	£1029
Z 24-70mm f2.8 S	£1999
24-70mm f2.8 G AF-S ED	£1399
70-200mm f2.8E AF-S FL ED VR	£1999
200-500mm f5.6E ED VR AF-S	£1199
Z 35mm f1.8 S	£759
Z 50mm f1.8 S	£539
Z 85mm f1.8 S	£709
Z 14-30mm f4 S	£1169

FUJIFILM

X-T3



X-T3 From **£1199**

X-T3 + 18-55mm £1549
X-T3 + 18-55mm + 55-200mm £1899
X-E3 + 18-55mm £759

X-Pro3



X-Pro3 From **£1699**

X-T30 body £699
X-T30 + 18-45mm £749
X-T30 + 18-45mm + 55-200mm lens £1399
X-Pro2 body £799

Fujifilm Lenses

16mm f2.8	£349
23mm f1.4	£799
50mm f2	£399
56mm f1.2 APD XF	£1049
80mm f2.8	£1149
15-45mm f3.5-5.6	£229
16-55mm f2.8	£999
16-80mm f4	£769
50-140mm f2.8	£1299
55-200mm f3.5-4.8	£629
100-400mm f4.5-5.6	£1599
XF 35mm f2 R WR	£349
XF 23mm f2 R WR	£399

SONY

A7R Mk IV



A7R Mk IV **£3499**

A9 II body £4399
A9 body £2999
A7R III body £2499
A7R II body £1599

A7 Mk III



A7 Mk III From **£1699**

A6400 + 16-50mm £899
A6600 body £1399
A6100 body £699
A6000 body £429

Sony E-Mount Lenses

35mm f1.4 T	£1349
50mm f1.8 G	£179
55mm f1.8	£699
85mm f1.8	£599
90mm f2.8 G OSS	£879
12-24mm f4 G	£1449
16-35mm f4 T	£1049
24-70mm f2.8 G	£1799
24-105mm f4 G	£1060
28-135mm f4 G	£1999
70-200mm f4 G	£1149
18-105mm f4 G	£429
18-135mm f3.5-5.6	£499
100-400mm f4.5-5.6 G Master	£2399

OLYMPUS

OM-D E-M5 III



OM-D E-M5 III **£1049**

OM-D E-M5 III body £1049
OM-D E-M5 III + 12-40mm £1599

OM-D E-M1 III



OM-D E-M1 III From **£1599**

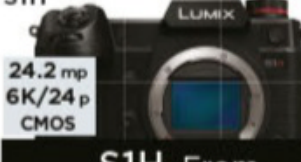
OM-D E-M1 III + 12-40mm £2199
OM-D E-M1 III + 12-100mm £2499
OM-D E-M1 II + 12-40mm £1799
OM-D E-M1 II + 12-100mm £2099

Olympus Lenses

8mm f1.8 PRO	£749
12mm f2.0	£649
12mm f2.0 ED	£649
17mm f1.8	£399
25mm f1.2 Pro	£1099
25mm f1.8 ED	£349
30mm f3.5	£249
45mm f1.2 Pro	£1099
45mm f1.8	£249
75mm f1.8 ED	£829
300mm f4 IS PRO	£1739
9-14mm f2.8 Pro	£1099
9-18mm f4.0-5.6 ED	£399
12-40mm f2.8 Pro	£849
12-100mm f4.0 Pro	£999
12-200mm f3.5-6.3	£729
14-150mm f4-5.6	£549
40-150mm f2.8 Pro	£1099
75-300mm f4.8-6.7 II ED	£449

LUMIX

S1H



S1H From **£3599**

S1 body £1999
S1R body £2799
GH5S body £1699
GH5 body £1299
GH5 + 12-60mm f3.5-5.6 £1449
G80 + 12-60mm £699

G9



DC-G9 From **£999**

G9 body £999
G9 + 12-60mm £1499
GX80 + 12-32mm £379
G7 + 12-60mm £529
GX9 + 12-60mm £474

Micro 4/3 Lenses

15mm f1.7 Leica	£449
25mm f1.4	£427
45mm f2.8 Leica	£599
50mm f1.4	£2299
200mm f2.8 Leica	£2184
8-18mm f2.8-4	£849
10-25mm f1.7 Leica	£1799
12-35mm f2.8	£799
12-60mm f2.8-4	£799
35-100mm f2.8	£799
45-175mm f4-5.6	£338
50-200mm f2.8-4	£1499
70-200mm f4	£1749
100-300mm f4-5.6	£487

L-Mount Lenses

S Pro 50mm f1.4	£2299
S Pro 70-200mm f4	£1749

Norwich
NR6 5DPBirmingham
B16 8LTBelfast
BT12 6HRBristol
BS6 5EELondon
E1 1LFEdinburgh
EH5 5HGManchester
M12 6HHGlasgow
G20 7LU

01603 208769

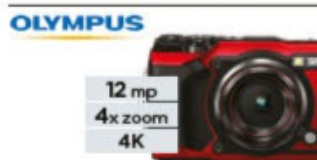
Call us Mon-Fri 8am-7pm,
Sat 9am-6pm,
Sun 10am-4pm• 30-Day Returns[†] • Part-Exchange • 12-month warranty on Used^{††} • Camera set-up service[§] •

Digital Compact Cameras

Canon | PRO

PowerShot G5 X Mk II
£849PowerShot G7 X Mk III
£699PowerShot G9 X Mk II
£369

PowerShot SX70 HS.....£499
PowerShot G3 X.....£779
PowerShot G1 X III.....£999
PowerShot G5 X.....£579
PowerShot G7 X II.....£489
PowerShot SX620 HS.....£179
PowerShot SX730 HS.....£289
PowerShot SX740 HS.....£899

Coolpix W300
£399Coolpix P1000
£899Coolpix P900
£459Coolpix A900
£319Coolpix B500
£219

Tough TG-6 £419



Ricoh WG-60 £230



GR III £799

Theta V
£349Cyber-Shot RX100 VII
£1049

Cyber-Shot RX100 III.....£499
Cyber-Shot RX100 IV.....£549
Cyber-Shot RX100 VI.....£899
Cyber-Shot RX10 IV.....£1699
Cyber-Shot RX10 III.....£1199
Cyber-Shot RX1R II.....£2999
Cyber-Shot HX90V.....£299

Lumix FZ2000
£699Lumix LX100 II
£759

Lumix LX100.....£449
Lumix LX15.....£399
Lumix FZ82.....£249
Lumix FZ330.....£360
Lumix FZ1000.....£499
Lumix TZ80.....£236
Lumix TZ90.....£279
Lumix TZ100.....£399

FUJIFILM

X100V £1299
X100F £899

Memory Cards & Readers

SanDisk



SanDisk Extreme
150MB/s UHS-I
64GB.....£32.95
128GB.....£59.95
256GB.....£119.95

SanDisk Extreme
PRO 170MB/s UHS-I
64GB.....£36.95
128GB.....£64.95
256GB.....£149

SanDisk Extreme PRO
300MB/s UHS-II
64GB.....£69
128GB.....£129
256GB.....£249

For more Memory Cards visit
wex.co.uk/memory-cards

SONY

G Series: 299MB/s SDHC
32GB.....£69
64GB.....£129
128GB.....£249
M Series: 260MB/s SDHC
32GB.....£39
64GB.....£59
128GB.....£104

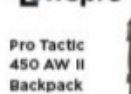
G Series XQD: 440MB/s
32GB.....£119
64GB.....£179
TOUGH: 299MB/s UHS-II
32GB.....£79.95
64GB.....£154
128GB.....£299.95

Canon | PRO

Pixma
Pro 100SPIXMA Pro 100S.....£359
PIXMA Pro 10S.....£479

Photo Bags & Rucksacks

lowepro

Pro Tactic
450 AW II
BackpackFlipside
300 AW II

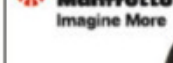
Pro Tactic II:
BP 350 AW II.....£149
BP 450 AW II.....£189

Flipside:
300 AW II.....£84
400 AW II.....£109

thinkTANK

Think Tank
Airport
International

Airport:
International V3.0 £349
Take off V2.0.....£359
Security V3.0.....£319

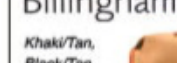
Manfrotto
Imagine MorePro Light
RedBee 310

Pro Light RedBee
RedBee-110.....£89
RedBee-310.....£119

Reloader
Switch-55

Roller Bags
Reloader Switch-55.....£249
Reloader Spin-55.....£249

Billingham

Khaki/Tan,
Black/Tan,
Black/Black,
Sage/Tan.

Small Pro.....£199
Small.....£159
Large.....£175
Pro Original.....£199
Hadley One.....£265

Tripods & Heads

Manfrotto
Imagine MoreManfrotto
Befree GT Carbon

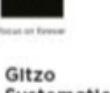
Manfrotto Befree GT
Travel Tripods:
Aluminium.....£144
Carbon Fibre.....£299

MT055XPRO3



Aluminium:
MT055XPRO3.....£144
Carbon Fibre:
MT055XPRO3.....£299
MT055XPRO4.....£299

GITZO

Gitzo
Systematic
Tripod
Series 5 6S G

Systematic Tripods:
Series 3 3S L.....£629
Series 5 3S L.....£729
Series 5 6S G.....£999

Gitzo Fluid
Head Gimbal

Gitzo Fluid Head Gimbal:
.....£299

JOBY

Gorillapod
500

Gorillapod 500.....£27.95
Gorillapod Kit 1K.....£39
Gorillapod Kit 3K.....£62.95
Gorillapod Kit 5K.....£129

Lighting & Accessories

Canon | PRO

470EX-AI
£399

Nikon

SB-5000
£569Manfrotto
Imagine MoreLumimuse
LED Lights
From £44.95

Lastolite

Ezybox
Speed-Lite 2
£54

SERNIC

L-308X
£199

PocketWizard

Plus III Set
£255Compact
Light StandCompact
Light Stand
£49Bowens
Background
Support KitBackground
Support Kit
£129D-Lite RX 4/4
Softbox SetD-Lite RX 4/4
Softbox Set
£725Urban
Collapsible
BackgroundCollapsible
Background
£174

Gorillapod:
Gorillapod 500.....£27.95
Gorillapod Kit 1K.....£39
Gorillapod Kit 3K.....£62.95
Gorillapod Kit 5K.....£129

T&Cs: All prices incl. VAT at 20%. Prices correct at time of going to press. Free Delivery** available on orders over £50 (based on a 4 day delivery service). For orders under £50 the charge is £2.99** (based on a 4 day delivery service). For Next Working Day Delivery our charges are £4.99**. *Saturday deliveries are charged at a rate of £7.95**. **Sunday deliveries are charged at a rate of £8.95**. (**Deliveries of very heavy items, N.I., remote areas of Scotland & Ch. Isles may be subject to extra charges.) E. & O.E. Prices subject to change. Goods subject to availability. Live Chat operates between 9:30am-6pm Mon-Fri and may not be available during peak periods. *Subject to goods being returned as new and in the original packaging. Where returns are accepted in other instances, they may be subject to a restocking charge. **Applies to products sold in full working condition. Not applicable to items specifically described as "IN" or incomplete (ie. being sold for spares only). \$To qualify you must have purchased a camera from us within the last 30 days. Wex Photo Video is a trading name of Calumet Photographic Limited (Company Registration no. 00425579) and Warehouse Express Limited (Company Registration no. 03366976). ©Warehouse Express Limited 2019.

*CASHBACKS Are redeemed via product registration with the manufacturer. Please refer to our website for details.

Mifsuds Photographic Ltd. Est. 1954.

Family Run Pro Dealership With Friendly, Knowledgeable Staff.

www.mifsuds.com **01803 852400** info@mifsuds.com

27-29, Bolton Street, Brixham, Devon. TQ5 9BZ.

Opening hours: - **Mon/Sat ~ 9 till 4, Sun ~ 10 till 1.**



CANON NEW STOCK NEW! EOS 1DX MKIII

- 20.1 Megapixel full-frame imaging sensor
- Outstanding image quality delivered by the DIGIC X image processor
- Equipped with 'deep-learning' autofocus
- Take fast and intuitive control over the AF point selection with the smart controller
- Generous dynamic range and high ISO sensitivity of 100-102,400
- Dual Pixel CMOS AF facilitates expert focusing with high speeds for photo and offers smoothness for video
- Supports real-time and lag-free up to 20fps continuous shooting in live view mode
- 5.5K RAW Video recording capability producing excellent video quality
- Enjoy filmmaking at 4K/60p
- Comes with Gigabit Ethernet and built-in Wi-Fi and Bluetooth for fast connectivity wherever you are
- Works well with all EF lenses except for EF-S lenses
- Uses Rechargeable Li-Ion Battery LP-E19 (supplied) or LP-E4N
- Dual CFexpress fast-speed card slots that can be individually assigned to either photos or videos
- Compatible with WFT-E9 to improve wireless connectivity with 5GHz 802.11ac Wi-Fi

Body Only

£6499

PART EXCHANGE WELCOME

Simply email your equipment details to us at -
info@mifsuds.com - we will do the rest!

CANON AUTOFOCUS CAMERAS, LENSES, FLASH, ACCESSORIES ETC USED

Used Canon

1DX MKII body
5D MKIV body
mint box

£3397 **£1997/2197**

CANON DIGITAL AF USED	
1DX MKII body Mint box	£3397
7D MKII body Mint box	£1097
7D MKII body box	£997
7D body	£399
6D body	£599
5D MKIV body box	£1997/2197
5D MKIII body box	£899/1299
5D MKII body	£599
5D MKI body	£299
80D body box	£699
70D body box	£449
60D body box	£399
50D body	£249
600D body	£249
450D body	£99

Used Canon

300mm F2.8 IS USM LII

£2997/3499

EOS 5 body	£89
EOS 3000/300 body each	£49
EOS 50E body	£49
EOS 500N/1000f body each	£39
EOS 1000/1000fn body each	£39
PB-E2 drive fits EOS 1/3	£99
CANON AF LENSES USED	
10-18 F4.5/5.6 AFS box	£179
10-22 F3.5/4.5 USM EFS	£299
14 F2.8 L USM MKII	£1149
16-35 F2.8 USM L	£599
16-35 F4 IS USM L M- box	£699
17-40 F4 L USM box	£479
17-85 F4/5.6 IS USM	£149
18-55 F3.5/5.6 IS EFS	£99
18-135 F3.5/5.6 EFS	£299

Used Canon

400mm F2.8 IS USM LII
500mm F4 IS USM LII

£5999 **£4997/5997**

100-400 F4.5/5.6 LII IS	£1199
24-70 F2.8 USM L box	£699
24-70 F4 L IS USM box	£499
24-105 F4 L IS	£499
28-135 F3.5/5.6 IS USM	£199
40 F2.8 STM	£139
50 F1.4 USM box	£249
50 F1.8 STM box	£89
70-200 F2.8 IS USM LII	£1099
70-200 F2.8 IS USM box	£799
70-200 F4 L IS USM	£699
70-200 F4 L USM	£449
70-300 F4.5/5.6 IS USM	£299
80-200 F4.5/5.6	£49
100 F2.8 IS USM L M-	£599
100 F2.8 USM macro	£319

For the best selection of used equipment in the West Country please visit us in-store or see our website... www.mifsuds.com

ANY PRICES SHOWN INCLUDE VAT AND U.K. MAINLAND DELIVERY. Correct 27/01/2020. E&OE.
Family Run Pro Dealership With Friendly, Knowledgeable Staff.

NIKON AUTOFOCUS CAMERAS, LENSES, FLASH, ACCESSORIES ETC USED

Used Nikon D500 body
D850 body box
Mint- box



£2197 **£1199**

Used Nikon 16-35mm
85mm F1.4 AFS
F4 AFS VR box



£897 **£799**

Used Nikon 70-200mm
24-70mm F2.8
F2.8 AFS VR II
AFS box



£897 **£1199**

NIKON DIGITAL AF USED

D5 body box (XQD).....	£3997
D3X body box.....	£897
D850 body box.....	£1997/2197
D800 body box.....	£699/799
D600 body.....	£599
D500 body Mint- box.....	£1199
D300 body box.....	£199
D100 body.....	£79
D7200 body.....	£599
D7100 body.....	£449
D7000 body.....	£299
D5500 body.....	£299
D5100 body box.....	£249
D3500 body + 18-55.....	£249

NIKON FILM AF USED

D3000 body.....	£139
MBD-15 grip box (7000 ser).....	£129
MBD-14 grip box (600 ser).....	£99
MBD-10 grip (D300/700).....	£79
MBD-100 (D100) box.....	£49

NIKON AF LENSES USED

F5 body.....	£599
F4 body.....	£299
F601 body.....	£149
F75/F70 body each.....	£49
F80/F801 body each.....	£49
10.5 F2.8 DX box.....	£399
16-35 F4 AFS VR box.....	£799
16-85 F3.5/5.6 AFS DX VR.....	£249

18-35 F3.5/4.5 AFS M- box.....	£549
18-35 F3.5/4.5 AFD.....	£349
18-105 F3.5/5.6 VR DX AFS.....	£199
18-140 F3.5/5.6 VR DX AFS.....	£249
24-70 F2.8 AFS box.....	£897
24-85 F3.5/4.5 AFS VR.....	£299
24-120 F4 AFS.....	£699
28-105 F3.5/4.5 AFD.....	£149
35 F1.8 DX AFS.....	£149
50 F1.4 AFS G.....	£299
50 F1.4 AFD Mint- box.....	£199
50 F1.8 AFD box.....	£99
55-200 F4.5/5.6 AFS DX.....	£99
70-200 F2.8 AFS VR II.....	£1199
70-200 F4 AFS VR box.....	£899

70-300 F4.5/5.6 AFS VR.....	£299
70-300 F4.5/6 G non VR.....	£79
80-400 F4.5/5.6 AFD.....	£499
85 F1.4 AFS.....	£897
105 F2.8 AFS VR macro.....	£499
200-500 F5.6 E VR.....	£997
300 F4 AFS box.....	£699
TC17EII M- box.....	£279
TC20EIII.....	£299
TC20E.....	£149

SIGMA NAF USED

8-16 F4.5/5.6 DC HSM.....	£379
12-24 F4.5/5.6 EX DG HSM.....	£399
18-35 F1.8 DC box.....	£499

24-70 F2.8 EX DG HSM.....	£449
70-200 F2.8 DG OS box.....	£599
70-200 F2.8 EX DG.....	£399
105 F2.8 EX DG OS macro.....	£279
150-600 F5.6/6.3 DG OS.....	£997
Sport box.....	£649
150-600 F5.6/6.3 cont M- box.....	£649
1.4x EX DG converter.....	£149

KENKO/TOKINA NAF USED

TOK 11-16 F2.8 ATX Pro II.....	£349
TOK 12-24 F4 ATX Pro.....	£299
Kenko ext tube set DG.....	£99

TAMRON NAF USED

24-70 F2.8 VC G USD GII.....	£799
M- box.....	£799

28-300 F3.5/6.3.....	£149
35 F1.8 VC USD M- box.....	£499
70-300 F4.5/6 VC.....	£219
70-300 F4.5/6 Di.....	£79
85 F1.8 VC USD M- box.....	£549
100-400 F4.5/6.3 Di VC USD.....	£549

FLASH / ACCESSORIES USED

SB-600.....	£99
SB-700.....	£169
SB-5000.....	£399
DR-6 angle finder box.....	£169
DR-5 angle finder box.....	£169
MC-36A remote.....	£69
MC-30 remote.....	£30

WWW.MIFSUDS.COM

FUJI, MINOLTA/SONY, OLYMPUS, PANASONIC ETC. USED

Used Sony A7R
MK IV
body



£2697

Used Sony A6500 body box
A6300 body box



£699 **£599**

Used Sony 200-600mm
F5.6/6.3
G OSS
Mint box



£1599

FUJI DIGITAL USED

X-Pro 2 body Mint box.....	£699
X-T1 body black box.....	£299
X-T10 body black box.....	£179
X-M1 body silver.....	£99
15-45 F3.5/5.6 XC.....	£169
18-55 F2.8/4 XF.....	£399
18-135 F3.5/5.6 WR.....	£499
27 F2.8 box.....	£249
50-230 F4.5/6.7 OIS XC.....	£199
55-200 F3.5/4.8 XR.....	£499
Samyang 50 F1.4 UMC box.....	£199
EF-42 flash.....	£119
VG-XT3 grip fit X-T3 box.....	£169
VG-XT2 grip fit X-T2 box.....	£99

MINOLTA/SONY DIGITAL USED

Sony A7R MKIV body box.....	£2697
Sony A7S body box.....	£599

70-210 F4 Beer Can.....	£99
75-300 F4.5/5.6.....	£79
100-300 F4.5/5.6.....	£99
RC1000S cord.....	£29
RC1000L cord.....	£29
Angle finder VN.....	£69
5400HS flash.....	£49
3600HSD flash.....	£49

SONY NEX USED

FE 18-135 F3.5/5.6 OSS.....	£549
FE 50 F1.8.....	£159
FE 55 F1.8 ZA.....	£499
FE 200-600 F5.6/6.3 G OSS.....	£1599
Mint box.....	£1599
Zeiss Loxia 21 F2.8 MF.....	£799

SONY A SERIES LENSES USED

18-70 F3.5/5.6.....	£89
24-105 F3.5/4.5 D.....	£149

SIGMA MIN/SONY AF USED

10-20 F4/5.6 EX DC box.....	£199
70-300 F4.5/5.6 DG OS.....	£169
1.4x EX converter.....	£99
TAM 10-24 F3.5/4.5 Dill.....	£239
TAM 16-300 F3.5/6.3 PZD.....	£329
Teleplus 1.4x conv.....	£69
Teleplus 2x conv.....	£79
Kenko 1.4x Pro 300DG.....	£149

OLYMPUS MICRO 4/3 USED

OMD-EM1 MKII M.....	£997
OMD-E1 body box.....	£449
OMD E-M5 body MKII box.....	£449
OMD E-M10 MKIII body.....	£499
OMD E-M10 MKII body.....	£299
7-14 F2.8 Pro.....	£699
8 F1.8 fisheye.....	£499
9-18 F4/5.6 box.....	£349

12-50 F3.5/6.3.....	£149
14-42 F3.5/5.6 II.....	£99
14-150 F4/5.6 MKII M- box.....	£349
17 F2.8.....	£169
30 F3.5 macro M.....	£169
40-150 F4/5.6 ED MSC.....	£149
HLD-9 grip EM1 MKII.....	£179
Mint box.....	£69

PANASONIC DIGITAL USED

G1 body.....	£99
G10 body.....	£149
GX7 body silver.....	£299
LX5 compact.....	£99
14-42 F3.5/5.6.....	£149
14-140 F4/5.8.....	£349
25 F1.4 box.....	£379
25 F1.7 box.....	£199

100-300 F4/5.6 box.....	£299
BGC9E G9 grip.....	£149
LVF1 viewfinder (fit G1).....	£79

PENTAX DIGITAL USED

K5 body.....	£299
K200 body.....	£149
10-17 F3.5/4.5 fisheye.....	£239
16-45 F4 box.....	£199
HLD-7 grip for E1.....	£69
18-135 F3.5/5.6 WR.....	£269
18-250 F3.5/6.3.....	£199
28-105 F3.5/5.6 ED DC WR.....	£399
35 F2.4 DA AL.....	£99
50 F1.4 FA.....	£199
50-200 F4/5.6 ED DA.....	£99
55-300 F4/5.8 DAL.....	£199

SIGMA PENTAX AF USED

17-70 F2.8 DC HSM box.....	£249
----------------------------	------

BRONICA, FUJI, HASSELBLAD, MAMIYA, PENTAX ETC. MEDIUM FORMAT USED

BRONICA 645 USED

ETRSI body.....	£249
ETRS body.....	£149
40 F4 PE.....	£399
50 F2.8 PE.....	£399
75 F2.8 PE.....	£199
150 F3.5 PE.....	£199
150 F3.5 E.....	£99
200 F4.5 PE.....	£199
E14 ext tube.....	£49
2x converter PE.....	£169
ETRSI RFH.....	£99
Polaroid back.....	£49

Plain prism.....	£99
All prism.....	£249
AEII prism.....	£149
WLF.....	£99
Speed grip.....	£59
Tripod adapter E.....	£39
El winder.....	£99

BRONICA 6x6 USED

SQAi 120 back.....	£149
SQA 120 back.....	£99
SQAe prism box.....	£149
Polaroid back S.....	£99
2x converter PS.....	£179

HASSELBLAD 6x6 USED

50 F4 CF FLE.....	£699
80 F2.8 CF.....	£699
A12 chrome late.....	£199
NPC Polaroid back.....	£49
PME3 prism.....	£299
45 degree prism early.....	£99

MAMIYA 645 MF USED

55-110 F4.5 N.....	£299
80 F4 C macro.....	£299
150 F2.8 A box.....	£299

150 F2.8 N.....	£149
210 F4 box.....	£199
Teleplus 2x converter.....	£39
WLF (M645 1000 ser) early.....	£149
120 back.....	£99
120 insert.....	£20
Ext tube each.....	£29

PENTAX 645 MF USED

80-160 F4.5.....	£349
120 F4 macro.....	£299
200 F4.....	£199
1.4x converter.....	£169
2x converter.....	£169

REF converter box.....	£129
------------------------	------

PENTAX 6x7 USED

1.4x converter.....	£199
2x converter.....	£199

MAMIYA RB USED

RB Pro S body.....	£199
--------------------	------

WLF..... £99

MAMIYA RZ USED

RZ Pro II + 110 F2.8 W.....	£1199
+ RFH + WLF.....	£1199
RZ Pro 120 RFH.....	£149
180 F4.5.....	£299

WWW.MIFSUDS.COM

WANTED
Hasselblad 503,
500CM etc
Rollei TLR kits
Fuji rangefinder ie
GW and GSW

CANON, MINOLTA, NIKON, OLYMPUS, PENTAX, ACCESSORIES ETC. MANUAL FOCUS USED

CANON FD USED

A1 body.....	£169
T70 body.....	£69
AE1P body black.....	£169
35-70 F4.....	£69
35-105 F3.5 box.....	£149
50 F1.8.....	£59
50 F2.....	£49
50 F3.5 macro.....	£99
70-200 F4.....	£79
100 F4 macro.....	£99
500 F8.....	£299
25mm/50mm ext tube each.....	£29
2x extender B.....	£49
Auto bellows box.....	£149

MINOLTA AF USED

800Si body.....	£69
-----------------	-----

7X1 body.....	£69
Dynax 3 body.....	£29
7000i body.....	£29
300Si body.....	£29
500Si Super body.....	£29
505Si Super body.....	£29

MINOLTA MD USED

X700 body.....	£99
X300 body chrome.....	£79
X300s body black.....	£79
XGM body chrome.....	£79
50 F1.7.....	£49
50 F2.....	£49
70-200 F4.....	£99
Auto ext tube set.....	£49

NIKON MF USED

FM2N body chrome box.....	£399
---------------------------	------

OLYMPUS OM USED

OM-1N body chrome.....	£299
OM-1N body black.....	£199
OM-1 body chrome.....	£249
OM-2N body chrome.....	£199
OM-2 body chrome.....	£199
OM-10 chrome body.....	£79
24 F2.8.....	£179
35-70 F4.....	£99
35-105 F3.5/4.5 box.....	£149
50 F1.4.....	£129
50 F1.8.....	£69
135 F2.8.....	£149
200 F4.....	£199
7/14/25 ext tube each.....	£20
14, 25 auto ext tube each.....	£29
80-135 tube.....	£99

Auto bellows box.....	£199
-----------------------	------

OPTICAL USED

Leica APO Televid 77.....	£699
---------------------------	------

PENTAX AF USED

MXZ50 body.....	£39
SFXN body.....	£39

PENTAX MF USED

LX + FA1 prism box.....	£499
P30 body.....	£69
50 F1.4 PK.....	£149
50 F1.7 PK.....	£69
50 F2 PKA.....	£69
50 F2 PK.....	£49
75-150 F4 PK.....	£99
80-200 F4.5.....	£69
Auto bellows box.....	£149

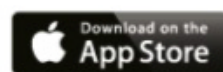
WANTED
Minolta
Dynax 9
Nikon MF
Pentax
LX kits

Back issues

Read any issue by downloading our digital editions



Available on



The digital advantage

Your digital magazines can travel with you – even if you delete them, they're free to re-download at any time.

Subscribe today by visiting
www.myfavouritemagazines.co.uk/photo

Available on the following:

Apple iPad, iPhone or iPod Touch

Get the free Digital Camera app for your iPad or iPhone at www.bit.ly/DC_app (UK) or www.bit.ly/DCW_app (the rest of the world), then browse through our back issues or buy a subscription using the app.

Android, PC or Mac

Zinio:
www.bit.ly/DCW_Zinio
Google Play:
www.bit.ly/DCW_GoogleP

Other options

Digital Camera is available for Kobo, Kindle, Nook and more. It can also be found on the all-you-can read Readly magazine app.

Binders for your print issues

Prefer print? Keep your mags together with our binder, which neatly holds a year's worth of issues. We also sell back issues...

www.myfavouritemagazines.co.uk/photo



ON SALE NOW

Professional Photography 25

Todd Hido, Cindy Sherman, Peter Steinhauer and Brian Griffin. Plus: war photography aesthetics debated, and creativity meets sustainability

www.myfavouritemagazines.co.uk/photo





Issue 226 Mar 2020

ShGendicit omnihit ut autatus ut veliastestis sumentem et fugitam quibus, sum dus, el mos de con essi doluptae comni blanderios volorru mquatem re corem saperit, ut lant. It, quia aut exerepudam fugia di cor as es et fugiti que



Issue 225 Feb 2020

Shoot food: fun and tasty techniques to transform your photography / Group Test: budget prime lenses / Nikon Z 50 / Camera College / Simon Roberts interview / Free software: Luminar 3 (Windows/macOS; offer ends 30 April 2020)



Issue 224 Jan 2020

22 creative photography tips for 2020 / Group Test: cameras for vlogging / Chasing storms with Eric Meola / Nine-reader Photo Walk challenge / Practical Photoshop / Camera College / 69 minutes of video



Issue 223 Dec 2019

Shoot super seascapes with Verity Milligan / Group Test: 85mm portrait lenses / Reader photo challenge / Camera College / Practical Photoshop / Christie Goodwin interview / 77 minutes of video / Starburst effects kit



Issue 222 Nov 2019

New ways to shoot landscapes / Group Test: 35mm street prime lenses / Stephen Wilkes' day to night photos / Reader photo challenge / Camera College / Practical Photoshop / 75 minutes of video



Issue 221 Oct 2019

50 ways to shoot autumn: tips for landscapes, wildlife and more / Outdoor photo tips from Charlie Waite / Lighting kits on test / Ami Vitale interview / Seascape masterclass / Free software: Skylum PhotoLemur 3 (offer ends 31 Dec 2019)



Issue 220 Sept 2019

Shoot super night skies with astrophotography tips from Ollie Taylor / DSLR vs mirrorless: full-frame camera Group Test / Cityscape masterclass with Ron Timehin / David Yarrow interview / Macro reader challenge



Issue 219 Aug 2019

Master natural lighting with Tara Stratton's wedding photography masterclass / Tips for shooting in the summer / Discover the best lenses for stargazing / Olympus TG-6 / Star Trail Creation kit tutorial / 76 minutes of video training



Issue 218 July 2019

Martin Parr guest-edits this issue! / Street photography tips from Magnum Photos / Martin Parr's seaside scenes / Robin Friend interview / Travel tripods on test / Travel compacts / Panasonic S1 / Focal length basics / 77 minutes of video training



Issue 217 June 2019

Break the rules! 10 ways to defy convention and take more creative images / Travel superzoom lenses on test / Tim Flach interview / Canon EOS 250D / Download Skylum Creative Color Looks presets for Lightroom (Offer ends 31/8)



Teach Yourself Astrophotography

Astrophotography can seem daunting at first, but the photographic possibilities it offers are as vast as the sky at night. Discover professional tips and tricks, and the gear you need to take your art to another level.



101 Amazing Photos to Take

Widen your photographic horizons and learn to shoot spectacular awe-inspiring imagery with tips and advice. Develop your skills, hone your creativity and master landscapes, portraiture, macro and more! 180 pages



What the f-stop?

How much do you really know about photography? Test yourself to the max every issue with our tricky trivia quiz!



1 What is the crop factor of a Fujifilm GFX medium-format camera, like the 50R above?

- A 2x
- B 1.5x
- C 1.6x
- D 0.79x

2 “Shake it, shake it, shake it, shake it, shake it, shake it, shake it, shake it, shake it like a Polaroid picture”. Which hip hop group sang this in 2003?

- A Wu-Tang Clan
- B Beastie Boys
- C OutKast
- D Salt n Pepa

3 Which of these is not a type of Lee Filters ND filter?

- A Big Stopper
- B Little Stopper
- C Baby Stopper
- D Super Stopper

4 How many pins are used to connect a CompactFlash memory card?

- A 16
- B 32
- C 48
- D 50



5 Which of these is a make of handheld flash meter?

- A Sekonda
- B Sekonic
- C Sekiro
- D Skoda

6 Which is the odd one out from this quartet?

- A Geared
- B Ball
- C Gimbal
- D Spiked

7 What is the standard diameter of the screw used to attach DSLRs and mirrorless cameras to a tripod?

- A 3/16 inch
- B 1/4 inch
- C 5/16 inch
- D 3/8 inch



8 What is the standard scale for measuring colour temperature?

- A Fahrenheit
- B Kelvin
- C Celsius
- D Centigrade



9 Which of Paul McCartney's daughters is a professional photographer?

- A Heather
- B Stella
- C Beatrice
- D Mary



Keystone / Stringer

10 Which famous portrait photographer frequently asked his subjects to jump while he took their pictures, as in this shot of comedienne Hattie Jacques?

- A Philippe Halsman
- B Brassai
- C Patrick Lichfield
- D Rankin

How did you do?

10 points You're a photo mastermind!
8-9 points Fantastic, you're a brainiac
6-7 points Really good score
4-5 points Respectable, but no cigar
2-3 points We'll keep your score secret
0-1 points Epic fail

ANSWERS 1D,2C,3C,4D,5B,6D,7B,8B,9D,10A



The Latest New Products & Special Offers available from Park Cameras!

Nikon D780

The rules are, there are no rules

24.5
MEGA
PIXELS

7 fps

3.2"

4K



NEW
& IN STOCK

Body Only

£2,199.00

+ 24-120mm

£2,619.00

Trade-in your existing camera and benefit from a **£170 BONUS!**

Spread the cost with our finance options.
Learn more in store or online at parkcameras.com.

Olympus E-M1 Mark III

No limits. Break free

20.4
MEGA
PIXELS

15 fps

3.0"

4K



NEW
& IN STOCK

Body Only

£1,599.00

+ 12-40mm PRO

£2,199.00

+ 12-100mm PRO

£2,499.00

Spread the cost with our finance options.
Learn more in store or online at parkcameras.com.

Nikon D850

Body Only



In stock at only
£2,499.00

Spread the cost with our finance options. See web.

Nikon Z 7

+ 24-70mm f/4 S



In stock at only
£2,999.00

See website for money saving options with lenses

Nikon 20mm

f/1.8 S - Z SERIES



NEW!

Expected March '20
£1,049.00

See website to learn more & place a pre-order

Olympus TOUGH TG-6



In stock at only
£419.00

Available in Black or Red designs - see website

Olympus OM-D E-M1 II

Body Only



In stock at only
£1,199.00

See website for money saving options with lenses

Olympus OM-D E-M1X

Body Only



In stock at only
£2,199.00

Spread the cost with our finance options. See web.

THE BEST JUST GOT BETTER

Canon EOS-1D X Mark III

The EOS-1D X Mark III has been radically upgraded for superb performance, not only offering a blistering 16fps frame rate with the optical viewfinder but also 20fps using either the mechanical or electronic shutter in live view mode with full AE and AF. All in a magnesium alloy weather-sealed body.



NEW & COMING SOON!

Body Only

£6,499.00

Benefit from 12 months 0% Finance when purchasing the Canon EOS-1D X Mark III.

Learn more at www.parkcameras.com/eos-1dx-iii

GoPro HERO 8 Black Action Camera



FREE GIFT!

In stock at only
£329.00

FREE Battery + Charger worth £49.99. See web.

DJI Mavic Mini Drone



In stock at only
£369.00

Learn more in store or at www.parkcameras.com

Epson SureColor SC-P600 A3+ Printer



In stock at only
£449.00

For spare ink and paper, see our website.

Canon EOS M6 Mark II

Body only



In stock at only
£869.00

Spread the cost with our finance options. See web.

Canon EOS RP

Body only



In stock at only
£1,124.00*

Offer available until 12.03.20. See website.

Canon EOS 5D Mark IV

Body only



In stock at only
£2,549.00*

Offer available until 12.03.20. See website.

Joby GorillaPod 3K PRO Kit Mini-Tripod



In stock at only
£99.00

Ideal for Premium Mirrorless Cameras

Manfrotto 190go! Aluminum 4-Section Tripod



MT190GOA4

In stock at only
£139.00

See in store or online for even more Tripods!

Manfrotto 055 Carbon fibre 4-Section Tripod



MT055CXPRO4

In stock at only
£299.00

See in store or online for even more Tripods!

SONY



α 9 II

THE CHOICE OF PROFESSIONALS



Francis Bompard

Professional Sport
Photographer

"20 FPS GIVES YOU THE PERFECT MOMENTS"

Ski racing is a very fast sport and you need a high-speed camera to get as many frames as possible.

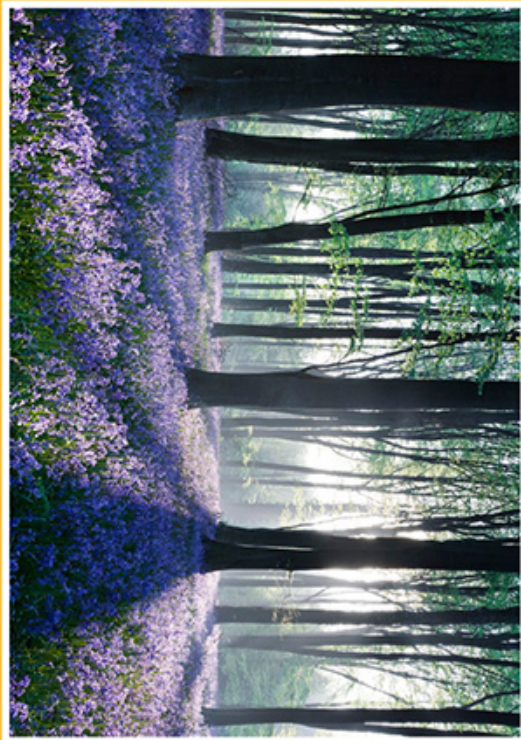
I use my α 9 II with the new 600mm f/4 G Master and the combination of the fast frame rate and quick motors in the lens makes this pairing just incredible!

I can even shoot in blind places - where the skier isn't in the shot, and when they appear, the camera instantly picks up on the subject and tracks them perfectly; the results are always tack sharp, even at 20 FPS.

I always say the best shot I've taken is the one I'll take tomorrow. I'm very happy knowing my Sony Alpha kit will be helping me achieve that.

Discover the full story at www.sony.co.uk/alphauniverse

LANDSCAPES
BLUEBELLS



PORTRAITS
CAPTURE BEAUTY



MACRO
OLD TOYS



GET CREATIVE
PERSPECTIVE



BLACK & WHITE
STREET



NATURE & WILDLIFE
HIGH-KEY SHOTS



NATURE & WILDLIFE
MONOCHROME



ARCHITECTURE
ZOOM IN



ACTION
WAVES

