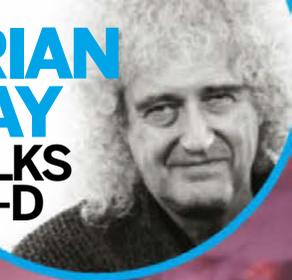


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Issue 188

UNLOCK STUNNING NATURAL COLOUR

Get the maximum impact
in your landscapes



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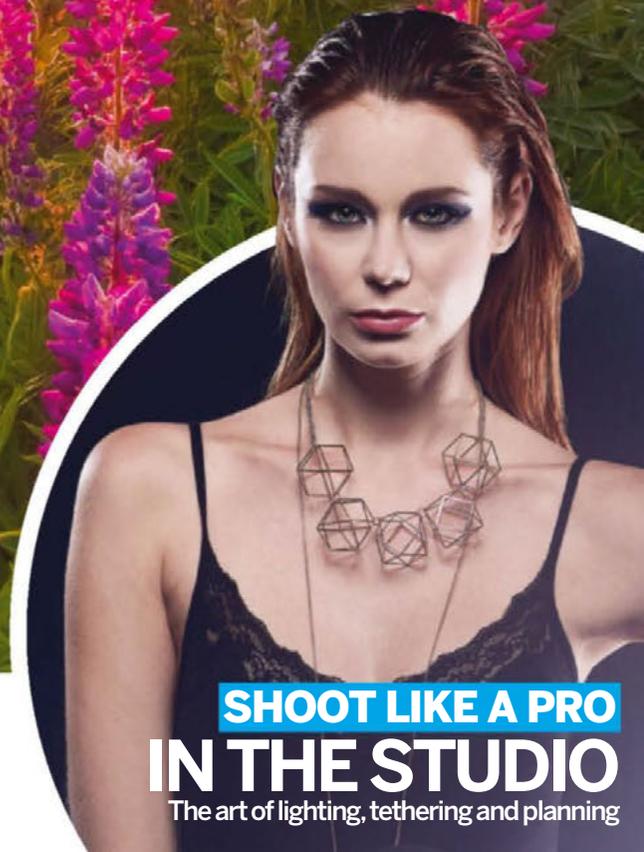
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At the heart of the image



© Alexis Coram

“Our main feature looks at finding the balance between getting the maximum impact and not going too far ”



A very warm welcome to the latest issue of *Digital Photographer*. Ever since the arrival of colour imaging, photographers have sought to achieve the hues that they feel best represent their vision. In our main feature this issue, which starts on p28 of the

magazine, we've taken a look at how you can achieve stunning natural colour in your own photography.

Of course, with so many filters and editing tools at our disposal, the definition of what natural colour is varies from person to person, but our feature looks at finding the balance between getting the maximum impact and not going too far.

Elsewhere this issue, we've got a guide to using a studio environment in the most professional way possible. You'll find it on p38 of the magazine.

Meanwhile, on p48, our guide to working with wide apertures will help you to get the very best results when you're capturing images with a shallow depth of field. Of course, our eclectic mix of career guides, product reviews and industry news will help to steer you in the right direction.

Oh, and our pro column this month has been written by none other than Queen guitarist Brian May! Turn to p114 to read it. Until next issue, enjoy your photography – we hope to see your work at dphotographer.co.uk.

Matt Bennett, Editor
matthew.bennett@futurenet.com

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Website: dphotographer.co.uk

Rebecca is the magazine's Reviews Editor, but when she is not looking after

the magazine's kit section, she also contributes to our techniques features. This issue, she's taken a look at how to unlock stunning natural colour in your landscapes. Head over to p28 to read her tips and advice.



EWEN BELL
Website: ewenbell.com

Professional photographer Ewen Bell is an expert when it

comes to capturing images with a wide aperture for beautifully shallow depth of field. Starting on p48 of the magazine, he's put together his guide to the techniques involved in getting the best possible results.



LIAM MARSH
Website: liammarsh.com

Macro photography is a fascinating genre and one that's great fun to explore, with

a wealth of possibilities. In this month's shoot and edit tutorial, Liam Marsh explores the ins and outs of capturing an incredible image of an insect in his step-by-step guide. Head to p62 of the magazine to read it.



MATT GOLOWCZYNSKI
Website: mattgolowczynski.com

Matt Golowczynski is among the industry's leading experts on photography-related

kit, and in this issue he's pitted four macro lenses against each other. Turn to p92 of the magazine to find out what his conclusions were in this issue's group test. He's also responsible for both the camera reviews in this issue.



LAUREN SCOTT
Website: laurenscott.info

If you work in a creative industry, you'll know that things are constantly

changing. This issue, photographer and writer Lauren Scott has put together a guide to staying on top of trends in photography, starting on p82. She also answers questions about making yourself more employable on p86.



DOUBLE EXPOSURE
Website: dephotographic.com

Mark Scadding and Will Paltridge are the founders of Double Exposure

Photographic, and in this issue they've put together a guide to getting the very best from the studio environment. Their feature covers everything from working to a brief to tethering, and it's packed full of tips. Turn to p38 to read it.

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© Elena Marfimon Munoz (thanks to English Heritage)



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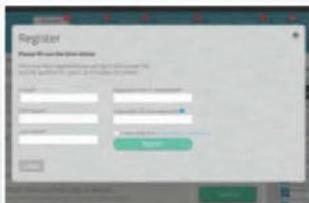


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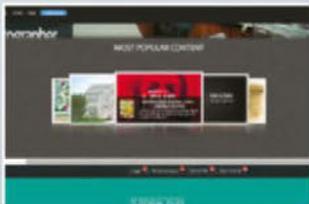
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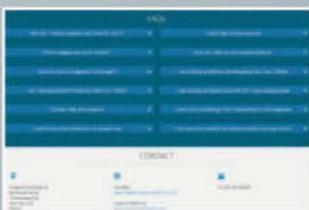
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The Gallery

Some of the best images from our website

2x © Olivier Gros

Olivier Gros



DP Gallery address:

oliviergros

Image title:

Rebirth

What camera, lens and settings did you use to capture this stunning shot?

The shoot was made with a Canon EOS 5D Mark II at 50mm; the exposure was 1/128sec at f9 and ISO 200.

How did you decide on the composition?

I wanted to make a composition that represents the freedom of women – the rebirth.

What do you like most about the image?

I like the harmony of colours.

Did you do much post-processing?

I did a lot of post-processing. All of the background is digital.

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Ray Wise



DP Gallery address:

raywise

Image title:

Road to Nowhere

"I was in-between venues touring Arizona and Utah when sudden strong rain hit – it only lasted a few minutes, but the sky was oozing with emotion before and after. I got this shot of a road that actually does go to nowhere, a dead end. It's a plain and empty shot, but the contrast of sky against the tarmac works quite well."

2x © Ray Wise

Grzegorz Pazdyga



DP Gallery address:

macrofun

Image title:

Ladybird

"The photo was made in my home studio using my favourite lens. I used artificial lighting consisting of three LED lamps. Behind the scene was a container with moss. I am constantly prepared when weather conditions are not conducive to shooting under natural conditions. Asparagus was sprayed with water as a background to give the bokeh character."

2x © Grzegorz Pazdyga





Vincent James



DP Gallery address:

Vincent James

Image title:

Heavenly Panther

"It's easy to get mesmerized by Panther Creek Falls and become obsessed with capturing its full epicness. I had been to this amazing waterfall tucked away in the southern Washington State wilderness a few times before. But on this visit, I decided to zoom in a little bit for more detail and focus on the various lovely pathways of water flow."

2x © Vincent James



Joshua Meszaros



DP Gallery address:

Josh

Image title:

Stephanie

“Stephanie is a natural and very beautiful woman. This shot is a teasing shot because you know she bares all, but you still can’t see anything.”

2x © Joshua Meszaros

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STORY BEHIND THE STILL



Photographer: Michael Hudson

Website: www.hudsonfineart.com

Location: Ty Canol Woods in Pembrokeshire

Type of commission: Personal work

Shot details: Infrared-converted Canon EOS 5D Mark II, with a 16-35mm lens at 32mm; 1/80sec at f7.1, ISO 100

About the shot: Photographer Michael Hudson has been named the winner in the International Garden Photographer of the Year Black & White category (see igpoty.com). "I'm honoured," he says. "I've been shooting black and white for years so it's always been a favourite of mine, and to have won with an image of a beautiful tree in remote Wales makes it all the more special."

Hudson had nearly given up on capturing this image, as he explains. "I was on holiday with my family in the area and I had read about the wood, but it was hard to find on the map. I had just about given up hope of finding it when I realised it was a field away from where we were staying. I had an idea for the type of shot I was looking for. I'd made images of trees from a similar angle – looking up the trunk at the full branches with a wide-angle lens – but each one is different. What I like about this one is the moss-covered branches and trunk, and the bright backlighting.

"I used to shoot a lot of infrared film many years ago, which was tricky and temperamental to work with, but if you got it right, the results were beautiful. I've hired an infrared converted camera a couple of times, and I really like the look the infrared camera gives me. I always convert infrared to black and white in post-processing, as I don't usually like the effects it has on the colours.

"I like the full feeling of the image, the way the tree fills the frame. And because it's an infrared image, the leaves don't dominate the picture; instead, the branches do. It's a simple image, but there's a lot of detail in it at the same time. I also like how the branches, covered in moss, have a very old, weathered look."

Right

Ancient Oak Tree

"As a raw infrared image, it needed a fair amount of processing," says Michael Hudson. "First I converted it to black and white, then I boosted Contrast and Clarity, to give sharpness to the details. I brought back some detail in the highlights, but not too much as I like the backlit feel"





THE BEST OF DRAMATIC LANDSCAPES

The winners of our latest contest with Photocrowd and Lexar have been revealed

In our most recent contest in association with Photocrowd, we challenged you to submit your best images of dramatic landscapes. After sifting through over a massive 3,122 impressive images, the winners have been selected.

The expert winner receives a 128GB 1066x CompactFlash card and the CFR1 Workflow Reader, and the crowd's favourite will win a 128GB 1000x SD card and the SR2 Workflow reader. Well done to our winners!

1ST PLACE WINNER Lonely

Photographer: António Bernardino Coelho

Our comments: This is a colourful, dramatic landscape that captured our attention quickly. António has skilfully timed the capture with a bolt of lightning that adds to the dramatic feel of the shot. The colour palette captured is lovely – the purples, blues, oranges and yellows complement each other beautifully. We really love the simplicity of the composition as a whole, meaning that all of the attention is focused on the breathtaking and powerful sky.



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This month we want to see your best mono images featuring bold patterns and striking shapes. Enter now at www.photocrowd.com/photo-competitions/black-and-white-patterns-and-shapes-blackandwhite-photo-contest-1365

The contest closes on 26 June 2017.





2ND PLACE
Magic Mountains

Photographer: Eric Gessmann

Our comments: This image is the true definition of a dramatic landscape. The natural formation of the mountains is utterly spine-tingling, and the composition ensures that they are the central focus of the image. The soft texture captured in the clouds contrasts beautifully against the rough texture in the rock. The bold splashes of green created by beams of sunlight through broken cloud really help to draw focus to the image.



3RD PLACE
Low Tide

Photographer: Ariam Franco

Our comments: This image is completely different to the top two images: the overall palette is a lot darker and there's a much moodier feel. Ariam has used a long exposure to capture an ethereal, almost otherworldly image. The lead-in lines pull the viewer deep into the image towards the white ghost-like water and on to the light on the horizon. We really love the deep purple hues against the white of the water and the dark tones of the rock.

1ST PLACE CROWD VOTED **Last Light** **Photographer:** Eric Esterle





Above
Build and handling

The Alpha 9 feels comfortable and intuitive in the hand, with intelligently placed dials and buttons

Below
Designed for speed

The camera is extremely impressive in the focusing department, and capturing action is straightforward

Hands-on first look SONY A9

Sony has introduced a new full-frame mirrorless camera in the Alpha range – our Reviews Editor put it to the test at the launch

 Sony has recently announced a new full-frame mirrorless camera, with the world's first full-frame stacked back-illuminated, 24.2-megapixel CMOS sensor.

The Alpha 9 houses a new generation Bionz X processor and has the capability of shooting at up to 20 frames per second with no blackout. We had a short hands-on shooting time with the new camera and were extremely impressed by its speed and ability to focus quickly: we were able to capture and freeze action with very little effort and the results we got were great. We found that having no blackout in the viewfinder while shooting was really beneficial, and meant that we didn't miss even a second of the action.

Sony seems to have placed quite a lot of emphasis on the focusing capabilities of the A9. There's a multi-selector joystick on the back of the camera, making it easier to easily shift focus within the frame by pressing it up, down, left or right when photographing in Zone, Flexible Spot or Expanded Flexible Spot focus area modes; while touch focusing on the rear LCD screen enables selection of a suitable focus point. It has an impressive 693

focal plane phase detection AF points, covering approximately 93% of the frame, with 60 AF/AE tracking calculations per second. We are really looking forward to pushing the focusing capabilities further when we get the chance to give the Alpha 9 a complete test.

Other highlights include five-axis in-body image stabilisation; a maximum shutter speed of 1/32,000 second; a high-resolution, high-luminance Quad-VGA OLED Tru-Finder with approximately 3,686k dots; and a silent, vibration-free, anti-distortion electronic shutter.

The ISO range on offer is 100-51200, which is expandable to 50-204800. We tried the camera in a controlled lighting environment, so it will be interesting to test it in low and changeable light to find out how it copes.

The A9 includes separate drive mode and focus mode dials – a first for Sony E-mount cameras – and an AF-ON button that can be pressed to activate autofocus when capturing still images or movies. In hand, the camera felt very intuitive and the buttons and dials were well laid out.

The Alpha 9 will be available from June 2017, priced at approximately £4,500.



DJI and Hasselblad introduce 100MP drone system

An impressive pairing will take aerial shooting to new heights

 DJI and Hasselblad are pooling their resources to offer a complete drone system capable of capturing 100-megapixel aerial shots. DJI's M600 Pro drone and Ronin-MX gimbal and Hasselblad's H6D 100c camera combine to create a precise and detailed aerial imaging device that should be perfect for professional drone users.

The DJI M600 Pro drone is an advanced and adaptable six-rotor flight platform equipped with the powerful Lightbridge 2 transmission system, a dustproof propulsion system and six Intelligent Flight Batteries. The M600 Pro can be guided by the D-RTK GNSS navigation

system, which can withstand strong magnetic interference to provide precise centimetre-level 3D positioning.

The Hasselblad H6D-100c camera has a large 53.4 mm x 40.0 mm sensor that offers outstanding detail, colour reproduction and tonal range, even in poor lighting conditions. The M600/Ronin-MX/H6D-100c platform is the latest product collaboration since DJI assumed a stake in Hasselblad in late 2015, allowing the companies to explore fruitful collaborations through their advanced technology.

The system will be released in the third quarter of 2017, at a price to be announced later.



Canon launches 'Live for the story'

The manufacturer has announced a new brand proposition for the consumer and professional imaging business

 Canon has announced plans to shift the branding of the company for a younger audience and become more relevant to today's world. The idea of 'Live for the story' is to encourage people to use their images as storytelling devices, recording special moments and their everyday memories, no matter what they are, while telling a story.

There are no products in the new adverts; no stunning sunsets or perfectly staged wedding shots, with the goal that it will make consumers stop and think about the actual story and start considering Canon as part of their everyday lives.

Lee Boniface, Canon senior director – CIG Marketing, explains: " 'Live for the story' is

an industry-defining approach developed to completely change the way that people view Canon. The shift sees Canon cement itself as a storytelling brand, ensuring that every output from its entire ecosystem and product portfolio helps consumers to tell their story."

As part of the launch Canon is looking for someone to travel the world, identifying 365 global stories. The social campaign, called '365 Days of Summer', will be led by famous storyteller Zoë Kravitz. Fans are being encouraged to share their stories of summer using the hashtag #LiveForTheStory to be in with a chance of winning.

To find out more about this potentially game-changing campaign, head to www.canon.co.uk

In other news...

More snippets of photo news from around the world



HÄHNEL LAUNCHES NEW HIGH-SPEED FLASHGUN

The Modus 600RT is powered by one of the company's most popular batteries – a powerful Extreme Li-Ion, which should enable the flashgun to beat the speed of AA-powered units. This new flashgun has a guide number of 60, and each unit will handle over 550 shots, with a fast recycling time of just 1.5 seconds. The Modus 600RT will be available for Canon, Sony and Nikon. See www.hahnel.ie



VENUS OPTICS ANNOUNCE WIDEST MFT LENS

The Laowa 7.5mm f2 MFT lens is claimed to be the world's widest lens for Micro Four Thirds cameras. It features a 110-degree angle of view and an f2 aperture. A light 200g weight opens up a new opportunity to shoot ultra-wide-angle footage with gimbals and drones. The Laowa 7.5mm f2 MFT is available to pre-order at www.venuslens.net



NEPTUNE CONVERTIBLE LENS

Lomography has announced its latest Kickstarter campaign, for the new Neptune Convertible Art Lens System. This single-lens system includes three interchangeable prime lenses at different focal lengths – Thalassa 3.5/35mm, Despina 2.8/50mm and Proteus 4/80mm. The lenses have a seamless iris diaphragm aperture mechanism for producing sharp photos and a selection of special drop-in aperture plates for a rich bokeh effects. Head to www.lomography.com/kickstarter to find out more.

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SHOWCASE

The British Life Photography Awards





With the call for entries now open, we take a look at some of the highlights from the previous awards

The British Life Photography Awards is intended to showcase photography that visually encapsulates something of the essence of British life. Across ten categories – Rural Life, Street Life, Portraiture, Urban Life, Life at Work, Brits on Holiday, British Weather, Historic Britain, Documentary Series and Young British Life Photographer – the range of subjects included within the awards is truly diverse, with almost nothing that's entirely off-limits. In effect, it could be anything from a portrait to a landscape; a street capture to an architectural study.

Really, the only criterion is for the images to say something about what it's like to live, work, study or travel in Britain – something that others can identify with and potentially relate to. Achieving this through the medium of photography in a creative and effective way is the big challenge.

The overall winner of the title of 'British Life Photographer' will receive Sony products worth approximately £7,000, while the winner of each category will receive a Sony camera. Winners and commended entrants will have their work on display at the Royal Albert Hall and be included in a book. To inspire you, here's a look at some of the highlights from the last awards. For more information on the awards, the prizes on offer and how to enter, please visit www.blpawards.com

Left

Elena Marimon Munoz

OVERALL WINNER

Title: Past Present

Location: Stonehenge, Wiltshire



The shot: "The picture shows the sunrise in Stonehenge during the summer solstice festival. By the time the sun started to rise above the stones, hundreds, if not thousands, of people had gathered inside the stone circle, phones and cameras up in the air ready to record the magical moment. My initial idea was to try to photograph the sunrise rather than the photographers, but I thought it was funny the way I had to look into other people's cameras in order to see the sunrise and decided to capture that instead. My DSLR camera had run out of battery charge during the night and for this picture I ended up using a small compact camera I was (luckily!) also carrying."

2x © Elena Marimon Munoz

With thanks to English Heritage



Left

Daniel Lewis

HIGHLY COMMENDED
in the Portraiture category

Title: Jonathan Mercer, Wood Engraver
Location: Chiswick, London



The shot: "Jonathan was a dream subject for me, as a participant of my 'Open House' series, focusing on London artists in their home studios. Not only does he have an amazing face, but his studio was a treasure trove of detailed trinkets that he had created by hand with immense talent, skill and patience. I usually work quickly. This took 30 minutes, and seemed effortless, as Jonathan was very at home in his studio."

"The overall composition was dictated somewhat by the narrow space of his garden studio, so I kept it right, leaving enough of the room around him to indicate the niche of art in which he worked. I used my Nikon D4 and a 35mm lens with available light."

Opposite-top

Nick Isden

WINNER
of the Urban Life category

Title: Morning Fog Over Tower Bridge
Location: London



The shot: "One morning I woke up and noticed the sunlight trying to cut through a thick fog over London, so I made my way down to the river to try and capture it with an iconic landmark lurking in the background. I quickly picked up my lightweight Fujifilm X100S and made my way towards the Thames to start snapping away."

"I managed to take around 30 shots before the fog dispersed, and this one with the commuters walking by was my favourite. I shot this handheld in colour and converted to black and white in post to desaturate and add some contrast."

Opposite-bottom

Sam Mellish

WINNER
of the Street Life category

Title: East London Street Art
Location: Holywell Lane, East London



The shot: "Cities provide us with great opportunities to capture classic street photography moments, and East London is no exception. Walking the back streets of Shoreditch with a lovely Leica M type 240, I came across Holywell Lane, infamous for graffiti and urban art. Seeing a team of street artists creating a new wall feature, I shot a few frames, pleased with the results and happily went on my way."

"There is a lot going on in the picture; in many ways it's synchronised in movement. What I really like is the symmetry between the artists in relation to the characters they are painting. I was delighted to win the Street Life category for the British Life Photography Awards with this single image."

2x © Daniel Lewis

This year's judges

● **Dr Michael Pritchard, FRPS**
Director-General,
Royal Photographic Society

● **Jason Keene**
Area Sales Manager Photo,
Sony Europe

● **David Levenson**
Photographer

● **Chris George**
Group Editor-in-Chief,
Digital Photographer

● **Lucy Ford**
Picture Editor,
Country Life

**The closing date for entries
is 2 September 2017.**



2x © Nick Isden



2x © Sam Mellish

SHOWCASE



2x © Anthony Oliver

Left

Anthony Oliver

HIGHLY COMMENDED
in the British Weather category

Title: Salisbury Cathedral In The Storm

Location: Salisbury, Wiltshire



The shot: "This image was taken during a night of severe thunderstorms. It's an image I had envisaged for some time, but it required a long time for the correct weather. I manually focused the camera on Salisbury Cathedral's spire and set an aperture of f11 with the ISO at 200."

"Just before midnight, a fierce electrical storm developed. I proceeded to take a series of one-minute exposures, using the lightning flashes to expose the images. If there were no significant lightning flashes, I closed the shutter at the end and started again."

Middle

Fred Wilkinson

HIGHLY COMMENDED
in the Street Life category

Title: Zebra In London

Location: Salisbury, Wiltshire



The shot: "Of all the photographic genres, I find street photography the most appealing. I love to capture the human condition in all its guises. For me the most important aspects are alertness and anticipation, as well as an intuitive instinct to capture 'the decisive moment', as Cartier-Bresson so aptly described it."

"This particular image was captured from the glass atrium of St Martin-in-the-Fields, London. The scenario seemed almost surreal – a half-human, half-zebra figure walking an empty street, yet so close to the hustle and bustle of Trafalgar Square."



2x © Fred Wilkinson

Bottom

Jacek Obloj

HIGHLY COMMENDED
in the Street Life category

Title: Ganesh Festival

Location: Clacton-on-Sea



The shot: "This picture shows the South Indian religious festival in Clacton-on-Sea in England. This annual event is organised by the London Ganesh temple and attracts a large crowd of people from southeast England."

"I captured a moment when a man dressed as an entertainer mixes with some local onlookers, curious to see what is going on. This picture is part of my ongoing project exploring the South Indian community in East London which I have been doing for a couple of years."

Opposite-bottom

Chrissie Westgate

HIGHLY COMMENDED
in the Portraiture category

Title: Waiting

Location: Colchester, Essex



The shot: "This image is from a body of work called 'Forgetting my Memory'. The images illustrate the frustration, loneliness and hopelessness of dementia. The focus was on my lovely Aunt Ivy, whose independence had sadly diminished, and it had become necessary for her to be cared for in a residential home. The images in this body of work are a glimpse of my visits, what I experienced and observed as my dear Aunt Ivy negotiated a solitary and frightening journey – one she didn't choose."



2x © Jacek Obloj



2x © Paul Anthony Wilson



2x © Christie Westgate

Above
Paul Anthony Wilson
 HIGHLY COMMENDED
 in the Rural Life category

Title: Burning The Heather
Location: North Yorkshire Moors



The shot: "I have been a photographer for about 25 years firstly working as a freelancer, but am now based in Whitby, North Yorkshire. With my partner Lynne, I own The Victorian Image, a well known old-time photo studio. My passion for photography extends to several genres, but anything of interest is fair game.

"Travelling towards Middlesbrough on the North Yorkshire moors, I noticed huge plumes of smoke billowing into the air. It turned out to be controlled heather burning. [It provides] good grazing for sheep and an ideal habitat for wild birds. I placed the 'beater' in the bottom corner to provide scale and show the enormity of the scene.

"The British Life Photography Awards were just down my street, and the Rural Life section perfect for one of my 'documentary landscapes', where the content isn't just about the visual aesthetic but has other important connotations – in this instance the sustainability of the heather on the moors. I was over the moon to find another four images [of mine] had been featured in the book and exhibition."

TECHNIQUES

UNLOCK STUNNING NATURAL

COLOUR

Get the maximum impact in your landscapes while retaining a natural look and feel

Colour is a constant presence, and many photographers strive to capture the multitude of hues our eyes are able to see. Colour photography can be more difficult than black and white because there are so many variables to consider: so many variations of colour and so many compositional implications and hurdles that including colour in your frame will cause.

The human eye is able to see a certain range, or gamut, of colours. However, there is a completely different gamut that your camera is able to see, and a different one again that you are able to print – the range

gets smaller the further through the process you go. This is why it is so important that you take the time to understand the colours that you are shooting and how to get the most out of them.

Over the next few pages, you'll learn how the nature and quality of light, as well as the time of day, affects the colour you are able to capture. You'll find out what part the weather plays in your colour photography, and discover the importance of capturing complementary and harmonising colours for the most striking and impactful imagery. Of course, you'll also learn how to edit your photos to produce the most punchy yet natural colour images.

Above
Keep it real
The sun creates stunning colourful effects on the landscape that, when captured correctly, will create a strikingly beautiful capture

© Daniel Holmes

INTERPRET THE LIGHT

Discover how this essential element influences the colours that you can capture

Light plays a huge role in the colour that we see, and the colours that we capture in our imagery. Light intensity and the colour of the light itself are the main factors to consider. As the sun moves in the sky, the nature, quality and intensity of the light also changes, which affects how we perceive the colour in a scene.

“As night changes into day, the colour evolves from cold dark blues through to warm sunrise colours, and then into cooler blues as the sun rises above the horizon,”

explains landscape and events photographer Daniel Holmes (danholmesphoto.com).

“Midday colours are a bit overwhelmed by the harsh light beaming straight down from the sun.

“The process reverses itself as the sun goes down and the atmosphere filters out many of those scattered light rays, leaving blues, reds, oranges and yellows. The break of day and night provide the most pleasing and dramatic colour. This is when the atmosphere filters out many of the shorter blue rays of light, leaving cleaner and more saturated primary colours.

“The quality of colour is also affected by the direction of the light. As one turns in a circle, the most pleasing combination of colours and shadows are found by looking perpendicular to the sun; the least interesting by looking

directly away from the sun; and the most dramatic by looking directly at the sun.”

The colour of the light in your scene will also affect how the colours look in the capture. Light is measured in colour temperature, with a low colour temperature producing a more yellow quality of light and a high colour temperature producing a bluer light. Low colour temperatures will generally warm the colours in the scene, and a high colour

temperature will cool them. When the colour temperature is higher, the contrast is also reduced, so there is less of a difference in the colours of highlights and shadows than with an image shot at a lower colour temperature.

“Green is green all day long, but our perception of the colour of a patch of grass will be different at noon than it is at sunset,” says

landscape and nature photographer Alexis Coram (500px.com/alexiscoram).

“As a result, the camera needs a point of reference to understand the light changes to interpret the colour as we see it – this is where white balance comes in.

“The best test to understand how colour changes is to photograph the same scene at multiple times of the day. One scene never looks the same twice, which is what makes photography so powerful.”

USE A POLARISER

Many photographers choose to use a polariser to combat the high-contrast situations that the harsh midday sun can create. However, this can often make the sky look unrealistically dark and too blue, so keep an eye on this if you do use them.

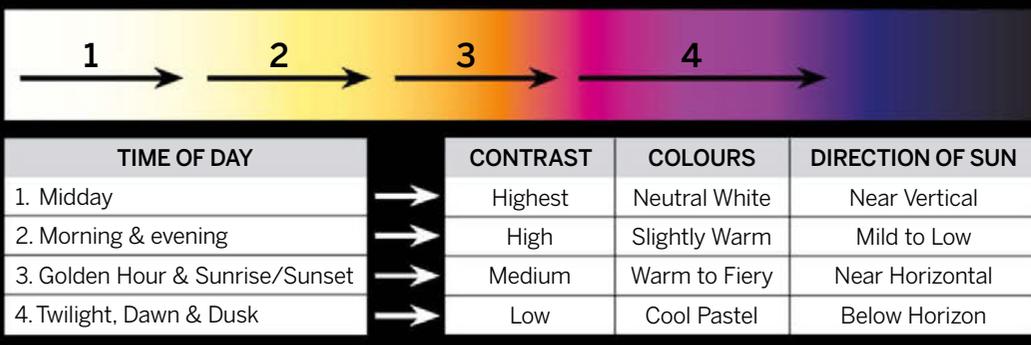


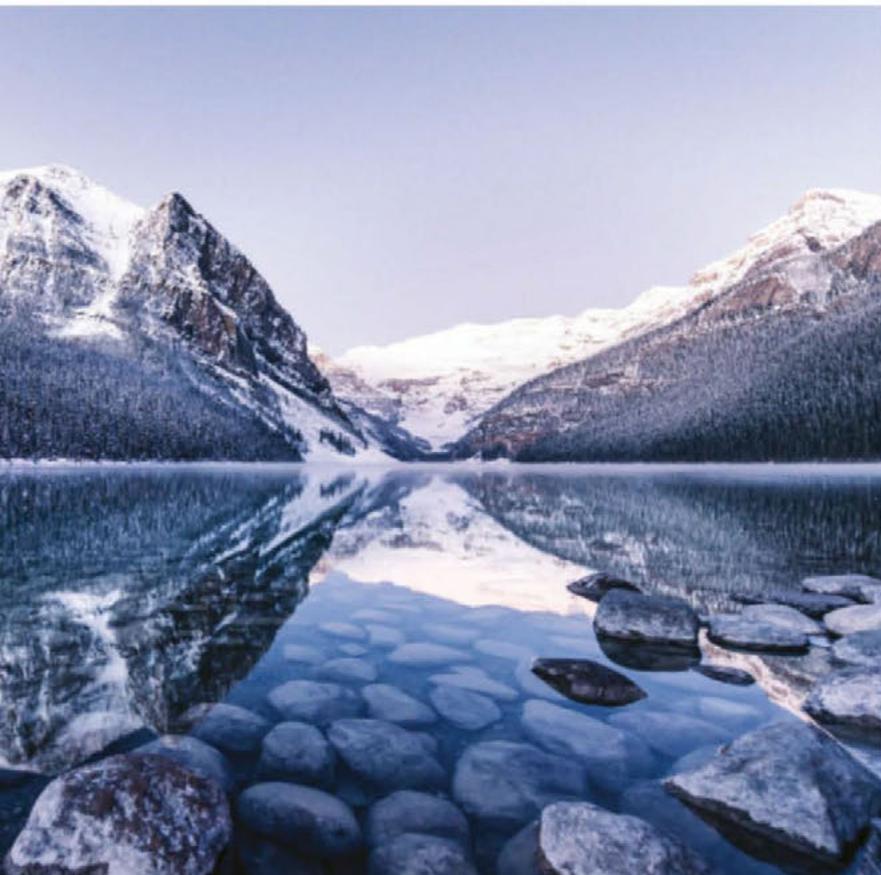
Consider temperature

How colour changes during the day

The colour of light changes throughout the day, as does the level of contrast and angle of light; all of these play a huge role in the colour you capture in your imagery. For example, at noon, when the light is at its highest point in the sky and the contrast is at its highest, the colours

will be the most washed-out due to the glare. Photographers often favour the light during the ‘golden hour’, because the contrast is neither high nor low; the light will be coming from the side, which will accentuate texture; and the colour will be beautifully warm and rich.





How kit affects colour

Discover how tone can differ between various camera sensors and lenses

Photographers often discuss the colour variations that can be seen between different cameras. When film was used, the main variables that affected the colour captured were the film and lens. However, now the camera, sensor and processor probably play the biggest part. This is perhaps best illustrated by comparing Nikon and Canon products. Their cameras use different sensors, which means that they will see the light differently and send different information to the processor.

Some lenses produce brighter, more colourful images than others – Canon's lenses have a reputation for producing vivid, contrasty images and Nikon's lenses lean towards more neutral colours. The lens you choose can affect the contrast you capture – and when there is more contrast present in a scene, the colour will appear more saturated.



Top

Pre-dawn

Just before the sun rises above the horizon, the light is often a mix of pastel blues and yellows, and often pinks

Middle-left

Sunrise

As the sun comes over the horizon, colours become more intense and the contrast rises. The angled light creates attractive shadows

Middle-right

Sunset

An advantage at sunset is the ability to set your camera and tripod up in relatively bright light, but the air can be less clear than at sunrise

Left

The blue hour

Contrast is very low during the blue hour, and the subjects captured will generally take on a cool blue tint

Look for backlight

When the sun is lower in the sky, magical effects are available

Backlight can have two effects on trees. You can either meter for only the light to create silhouettes, which will remove the colour from your subject and focus on the colour of the light; or you can use it to create an ethereal translucent effect. Light beams will shine through the leaves and create an almost see-through effect, which will also tint the light slightly.



Above

Beams of light

Here the trees shape the light beams, with some parts silhouetting them and others making patches of colour

© Alexis Coram

TECHNIQUES

CLOUDS

The clouds really enhance and add texture to the colour in this stormy shot

THE LIGHT

The sun setting in the distance pulls the viewer right into the image, and the orange really stands out against the dark tones on the left

WORK WITH THE WEATHER

Understand how the conditions can affect colour

The weather can dramatically influence the colour in a scene. The weather conditions will primarily affect the spread of light, but also the apparent contrast in the scene and the colour temperature of the light.

The characteristics of clouds and their relationship with the light can have a huge impact on the colours you are able to capture. The combination of the time of day and the type and extent of cloud cover will have an influence. Diffused sunlight through a densely overcast sky will generally result in a cooler, more even light, which means that textures will appear more subtle and reflections on smooth surfaces will be more diffused. Often the colour of this softer light is influenced by bounced light. This means that the green of trees and other foliage is often bounced onto the ground, into shadows and other elements, creating a green tint across parts of the image.

Stormy clouds can produce extremely high-contrast light: the rain clears the air of dust and haze, giving a far more dramatic effect. Colours captured at sunset in this kind of weather are more dramatic and punchy, because the sky will often be darker than the land. Clouds are essential for creating

a striking landscape: they add texture and interest to the sky, and help to reflect and carry the colour produced by the light.

"Light is strictly related to weather conditions," explains Marco Saracco (fotografietorino.it).

"Clouds, air clarity, sun and moon positions, and of course the season heavily influence the colours of the scene. For instance, some of the most dramatic sunsets happen when there are low, scattered clouds in the sky, which reflect and spread the sunlight and create marvellous orange-pink-red tones. Or the dense, dark grey-coloured threatening clouds that announce an intense storm can give the scene a very moody atmosphere when they occur at sunset."

"Cloud is a natural filter," adds Alexis Coram. "It can flood a scene with glorious soft light that brings out deep tones without the glaring highlights of the sun, or it can cut out too much natural light and make a scene look flat and dull. Rain can mess up a day of shooting entirely or, if you're very patient, it can bring glorious dark clouds, discrete breaks of light that make parts of the landscape sparkle in rich contrasty colour, and best of all, rainbows."

"A dry, windy day can be uncomfortable, but that hot dusty day will provide high contrast,

Capture rainbows

Alexis Coram reveals how to shoot a spectrum of colour

"It depends greatly on the light whether I will even attempt to capture a rainbow or if I'll just sit back and enjoy it. If I decide the distraction is worthy, I focus on speed: there's nothing worse than letting a magical rainbow slip through your fingers.

"The polariser is a great tool to bring out the depth of colour, particularly if the sun is bright, but I won't stop to put one on my lens if it's not already there. I'll often underexpose to capture more depth in the colours. Sometimes shooting in HDR mode is preferable because it means making fewer decisions in the moment, allowing me to pick the best exposure later on."



© Alexis Coram



BEAMS OF LIGHT

The gaps in the clouds have allowed beams of light to hit the green grass, highlighting and emphasising the colour

INTERESTING CLOUDS

The stormy clouds on the right have taken on an interesting blue colour; this stands out beautifully against the lighter coloured clouds on the left

© Alexis Coram

deep shadows and warm golden tones, with nice potential for dramatic backlighting,” explains Daniel Holmes. “A fresh, clear, day after a rainstorm, with puffy clouds in a deep blue sky, can be exhilarating. Moist air after a storm gives bright saturated colours with deep blues, bright whites and vibrant colours. It is uplifting and pleasing. A wet, grey morning can be moody and quiet. Colours will be muted, with cool blue tones and low contrast.

“High overcast skies can provide some of my favourite colours. The light will be diffused, leaving some shadows, with nice contrast and surprisingly vibrant colours. I have been very pleasantly surprised with midday overcast light during times when I would not have thought to take out my camera.

“Approaching storms can provide some of the most dramatic light, colour and emotion – especially at sunrise or sunset. The light can be rich, with deep blues, bright reds, yellows and oranges. If one is fortunate, the sun will break out and ignite the sky with colours.”

Set a white balance

A look at how this factor influences the colour you capture

The human brain handles colour differently to your camera – we are able to identify white tones no matter what the lighting conditions are, but your camera needs help.

A lot of photographers leave their camera on Auto White Balance – but when you are in difficult or mixed lighting situations, a custom white balance may be needed. If you are unsure which setting to use, shoot in RAW, as you will be able to completely change the white balance post-capture.



MIDDAY LIGHT

The light at this time of day is often too harsh to produce interesting colours, however the thick cloud cover here combined with the colour in the distance has created a very punchy assortment of hues

© Daniel Holmes

CAPTURE COLOUR IN HARMONY

Learn how complementary tones will help strengthen your composition

An impressive and professional-looking image will contain harmonising and complementary colours that have been thought about and considered carefully. The way you compose with colour will also have an impact on how successful your final capture is.

Seeking out complementary colours and including them in your imagery will help you strengthen the overall impact of your shots. Humans are programmed to react positively to complementary colours as they are pleasing to the eye – similar to our reaction to symmetrical shapes. Different colours trigger different colour receptors in our eyes that send signals to our brain, which creates different feelings. Sometimes complementary colours are soothing; sometimes they are powerful.

Complementary colours sit opposite each other on the colour wheel and are a blend of two primary colours. They create a natural contrast, which means there is less need for heavy editing later, and they help to increase the visual impact of your image. Orange is the complementary colour of blue, purple complements yellow, and red complements green; seeking out these colour combinations will really boost your colour photography.

Because complementary colours are opposites, they help to add impact and contrast – highly contrasting images help to pull the viewer in. “Impact is usually made by contrast and oppositions,” says travel photographer Christophe Faugere (500px.com/zx-6r). “When you think about contrast, you think of luminosity contrast; but there are other forms of contrast, like softness versus sharpness, or colour contrast. In architecture photography, it’s always interesting to shoot details that have opposite colours.

“When shooting landscapes, the colour contrast is often the same: warm sun versus blue shadows. When shooting sunsets, I like to compose my image with the sun to one side and the beginning of the night on the opposite. I emphasise the yellow on one side with a vertical graduated yellow filter, and the same with the blue on the other side.”

Taking control of your camera’s white balance is important when you shoot complementary colours. Mixed lighting situations can often create complementary colours, particularly at sunset. Parts of the

Understand colour and mood

Discover how different tones can change the feel of your imagery

Colours are split into first order, second order and third order colours. The first order colours, also known as primary colours, are blue, yellow and red. They are referred to as first order colours because

they are the basis of all other colours. Second order colours are created by a mix of two first order colours and fill the gaps between the primary colours in the colour wheel.



© Alexis Corani



© Marco Saracco

● **Blue and green** The colour blue envelops us on a daily basis – it is the colour of the sky and is reflected in bodies of water. It is inviting as well as calming and conveys feelings of restfulness and serenity. Similarly, green is very stable and is probably the most balanced colour.

● **Yellow and orange** Yellow is the brightest colour and the most attention-grabbing – think of high-visibility clothing. It is also a very positive colour, and will evoke feelings of happiness. Both yellow and orange are the colours of the sun, so are associated with ideas of life and vitality.

● **Red and purple** Red is more intense than other primary colours; it is often best used sparingly unless dominance and impact is your goal. Red can mean both anger and passion as well as romance. Purple is also associated with romance, as well as royalty and wealth.



© Daniel Holmes

scene will appear warmer than the elements that fall in the shadows, which will be illuminated by light reflected from the blue sky, making those areas cooler. If you correct the white balance for the blue in the shadows, you'll lose the cool hues and destroy the complementary colour scheme.

"Colour is a compositional element which works with all the other elements like S-curves, diagonals, leading lines and balance to create the photograph," says Daniel Holmes. "If they work well together, the photograph will have impact; if they clash, the photograph won't."

"Colour can help draw the eye to the subject, add emotion, increase tension, or give feelings of calmness. A picture of just beautiful colour doesn't make a strong photograph, but combined with a strong subject in a strong composition, it will be dramatic. A nice thing about photographing landscapes is that colours in nature tend to harmonise. Earth tones of browns, greens and yellows work with the blues, oranges and reds of sunset skies."

Below
Natural hues
Nature has a habit of delivering pleasing colour palettes: you just have to find them

Below-right
Venice
Here the blue tops of the gondolas complement the soft peach in the sky and water

Bottom-right
Sky on fire
In this capture the bright blue sky beautifully complements the bright yellow hues

Expose for colour

Discover how to nail the exposure of your most colourful captures

When you shoot landscapes and nature, or just any colourful image with green present, it is often recommended that you take an exposure reading for the green elements

then underexpose the shot by two thirds of a stop. In most cases, this simple technique will result in a pleasantly exposed and detailed capture.



OVEREXPOSED

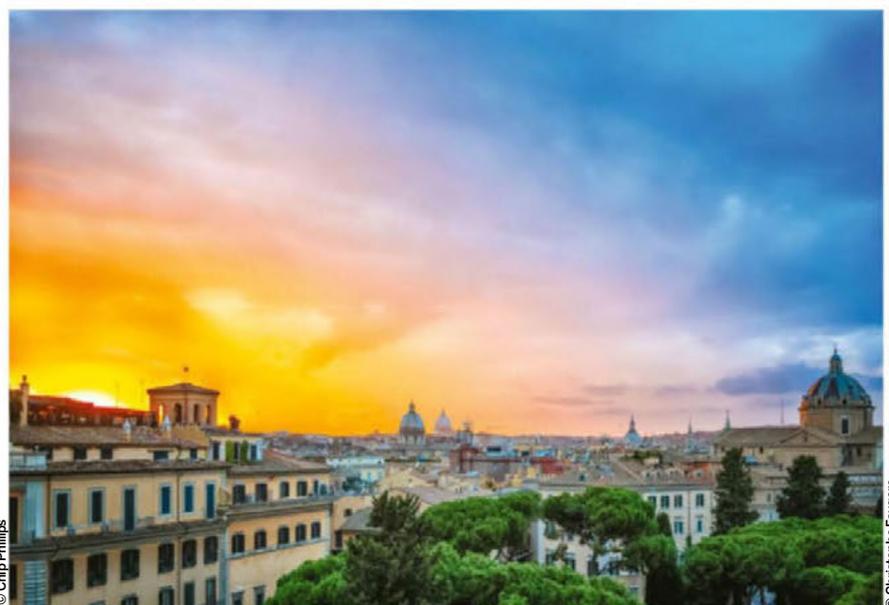
The green and violet tones in the overexposed capture are a little washed out and not very punchy

UNDEREXPOSED

The underexposed capture shows off far more of the detail; the tones are deeper and the purple is vibrant

EVEN

The evenly exposed shot is uninteresting, and the colours are OK but not very vibrant



© Christophe Faugere

© Christophe Faugere

© Chip Phillips

EDIT FOR COLOUR PERFECTION

Optimise your editing process so the colours you produce remain realistic

It is important when you are editing your shots that you don't take the colours too far and make your imagery look badly overprocessed and false – a bright and vibrant image is one thing, but you will lose all impact and intrigue if it is overdone and unrealistic. A good way to monitor the changes you are making is to frequently switch back to the original unedited shot to check exactly how far you have taken it.

When it comes to colour, it can be very tempting to just pump up the saturation of all the colours without too much thought and consideration – but this is usually where photographers fall down. It will make your greens greener and your reds redder, but probably not in the most realistic way. It is better to take a more measured approach, carefully considering exactly which colours you want to give more prominence to.

In Lightroom or Adobe Camera Raw, consider using the Vibrance slider instead of Saturation for a slightly more realistic enhancement of colour. Instead of just increasing the saturation of every colour, Vibrance intelligently increases the colours that are less saturated more than those that are already saturated. This means that the colours in the final image should look far more realistic – unless you take it too far, of course.

“If the image has been shot under the right light conditions, there is no need for great adjustments during editing,” explains Marco Saracco. “Usually I proceed with a very basic digital processing of my RAWs, with the goal of making the scene as close as possible to the one I saw when I took the picture. I also apply some subtle regulation, such as dodging and burning, or some little changes to the white balance, to make the overall image more appealing and enhance the mood; but I never alter the original completely.”

“In a way, the editing process begins before I click the shutter,” explains Daniel Holmes. “When the potential for dramatic light and colour presents itself, I'll start looking for elements to put into the photograph: a centre of interest, compositional elements, an interesting mid-ground and background. This can happen quickly and can be a lot of fun! As the light gets stronger, the colours become more brilliant, shadows become deeper, and contrast becomes more dramatic. Those

strong and vibrant colours are what I want to pull into the photograph.

"I'll shoot various exposures to make sure that I capture the colours and information that I'll need when editing. I have my LCD set to show strong colours and contrast, which is fairly close to the way my edited photographs will look.

"I use a custom preset in Lightroom, which applies universal colour correction to each file. I work with Exposure, Highlights, Shadows, Whites, and Blacks; add a touch of Vibrance, just a bit of Saturation; apply High Contrast; and then work with Luminance and Saturation on individual colours. I don't

like to overuse the Saturation slider, as it is very easy to over-saturate and lose any sense of realism.

"I'll then take the photo into Photoshop for some additional work on contrast, spot cleaning, blending, and local adjustments. When shooting in very high-contrast situations, I'll shoot multiple exposures and hand-blend them in Photoshop."

"I believe that the appetite for colour in photography and the definition of 'natural' is very subjective," says Alexis Coram. "The artistry and emotion of photography is what appeals to me the most, and I think rules limit

our ability and freedom to create. Each of my photographs represents an experience and a series of choices that go into creating a visual rendition of a unique moment in my life.

"What I strive for as I edit is to go back to that moment, understand how I felt, what I saw and how I saw it, and to bring that back to life. Sometimes this means toning colours and contrast down; other times it means boosting them up. The constant is that the end product always depicts the way I saw the world at the time, and that's my ultimate goal."

DP

CALIBRATION

Before you think about editing your imagery, it's important that you calibrate your kit to ensure that the colours that you see on your computer screen are accurate. The lighting in the environment that you are editing in can also have a huge impact.

Below
Check back

As the final step, turn off each of the adjustment layers so that you can see the original image and identify that you haven't taken it into the realms of improbability and that it still looks acceptably natural

Retain a natural look Follow these simple editing steps to carefully boost the colour in your images



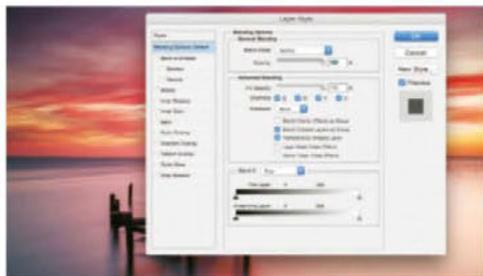
1 Do a Curves adjustment Go to Layer>New Adjustment Layer>Curves and make a slight S-curve to boost the contrast while bringing out the shadows and highlights.



2 Adjust the brightness Add a Brightness/Contrast Adjustment layer to tweak the colour. Increase both sliders slightly – we increased Contrast to 10 and Brightness to 13.



3 Add a Photo Filter Add warmth and depth with a Photo Filter. Go to Layers>New Adjustment Layer>Photo Filter. Click the Filter drop-down menu and select Sepia.



4 Adjust the Opacity To make the effect a little more subtle, double-click the Photo Filter layer to alter the Layer style and change the Opacity to 45%.



5 Add Saturation Create a Hue/Saturation adjustment layer. Instead of adjusting everything at once, choose individual colours. We increased Yellow, Cyan, Blue and Magenta.



Shoot like a pro IN THE STUDIO

Discover how to establish the best possible working practices

Many photographers long to establish their own studio, or have a space that they can use to explore their photography. However, getting the very best from a studio environment is not a straightforward process that will magically transform your photography.

There are many considerations that need to be taken into account if you are to truly get the best from the studio, and these encompass everything from how you work with clients through to the lighting kit that you equip yourself with.

Over the next few pages, the team from Double Exposure Photographic (dephotographic.com) will give you an insight into how they use their studio to capture professional portrait and product images for a wide range of clients.

Everything from working to a brief through to the post-production process is covered here, and you'll discover a whole host of tips to help you understand how to make a studio work for you in the most professional way possible.

Right

Dark fashion with filter

This is a dark and moody fashion portrait. We used a Lee filter to add some haziness to the bottom-right of the frame. It was a fairly experimental approach to create an atmospheric look

All images © Double Exposure Photographic



Work to a brief

The best way to achieve the images that your clients want is to work together with a plan

Working at a commercial level requires lots of thought, organisation and skill that ultimately shapes your photography. Photographic projects can be broken down into three parts: preparation, shooting, and post-production. All are important.

The more prepared you are, the better and easier parts two and three will be – and that means having a brief. Being prepared for anything in life stands you in good stead, and as photographers we're often trying to capture an image that's in someone else's head, which is especially difficult to do if you haven't put a plan in place to communicate those ideas. On a logistical level, if a client wants 100 products shot front-on and half of them need an additional angle, you need a clear way to communicate this.

Briefs come in many shapes and sizes. Most of the time we're happy to work with any clear instructions that the client sends us – that said, it's important to get a written brief if possible,

so you can refer back to it. Often with product photography, this can comprise a spreadsheet and an explanation in an email. With portraits or style photography, it can be a mood board. Better briefs go further than how something needs to look: it's also important to know how the images will be used. If you shoot a dozen images in a square format and the client's website banners are letterbox-shaped, you've spent time shooting essentially useless images.

It is vital that you get a brief from the client: it helps everyone visualise the end result. Ask a lot of questions at the start and you're on your way. A good brief will also let you prepare the correct equipment – you may need to freeze motion or make some video, so if you were expecting a fairly standard stills shoot, you're potentially not going to achieve the image the client needs. You know your kit and working practices better than anyone, don't get caught out: make sure you can align the expectations of your client with your deliverables!

COLOUR CORRECTING FILTERS

If you are adding light to an environment, it's likely that you'll have a mixture of colour temperatures fighting each other. Colour-correcting filters from a company like Lee Filters are very useful to have in your kit bag to counter this. Some LED lights allows you to change the colour temperature with the twist of a knob.

Opposite
HCP Jetset

Creative photography projects can be the most difficult to pin down, but can also be the most rewarding. Some clients want full control; others are happy to leave you to it. Ideally you want clear direction from them, and then put your spin on it – after all, they came to you!

Opposite-inset
Working brief

The more information that is provided to you, the more likely you are to hit the bullseye. Print the brief and any useful emails out, then use them! It will be especially useful if more than one person is working on the project, and can act as a solid road map at the post-production stage

Five lighting options Get the kit to cover any brief



FRESNEL LAMP

This light has a glass lens in the front that softens the overall look, but lets you control the spread of light.

STUDIO FLASH HEAD (PACK SYSTEM)

This type of head works with a power generator or 'pack'. You control the light's output and options from the pack.

FLASH HEAD (MONOBLOC)

This type of flash head plugs into the mains, as shown by the dials on the side. This example also lets you plug into a battery pack for wireless outdoor location shooting.

CONTINUOUS HMI LIGHT

This continuous light is HMI rather than Tungsten or LED. It is daylight-balanced to complement ambient daylight.

FLASHGUN
Super-portable, the humble flashgun is incredibly portable and remains very popular for location shoots.





Trigger wirelessly

Free yourself up from the traditional sync cable

Wireless triggering is useful in so many scenarios. On the most basic level it saves another trailing lead – but more importantly, it gives you freedom. You don't have to be too close to any of your lights: you can trigger them up high or far away, outside or in other rooms – it gives you creative control over your lighting. There are so many options on the market nowadays, and you can pick up a set of transmitters and receivers fairly cheaply. Do your research and make sure you get a set with the functionality you need.



Above Wireless wizardry

Pocket Wizard has positioned itself at the top end of the market for wireless triggering. You need to consider the range, channel options, compatibility with your camera and sync capability when you're looking for the right triggers for the photography you do – if you need to freeze motion, for example



Below Large industrial product shoot

Wireless triggering is perfect for larger lighting setups: it's reliable and keeps the studio space tidy

TECHNIQUES

Right

Quirky portrait on pink

Great images require work: they rely on planning, thought and communication, especially images that have an unusual style or concept. You need time to source the right bits and pieces, so ensure the model is on board, and capable of achieving the look you need



Consider the atmosphere

Create the right type of environment for creativity

A good professional atmosphere is most likely to yield good results. If the model is late and you've forgotten a prop, there is no way the shoot will be 100%.

If the brief is good and everyone knows what they are doing, you will achieve, so don't rush. Talk to the model before shooting to get a good rapport going.

Be ready for anything

A photo studio has to be a practical space that allows you to adapt to any shooting situation

Studios can be very reflective of the work that you do, but in essence good studios will have a lot of similarities. The first thing that comes to mind is 'usable clear white space' – but what does that really mean?

Once you have your brief, the project becomes all about problem-solving: "How do I turn this idea into an image?", "What background do I need?" and "What lighting will let me achieve what I need to do?" This is all easy to tackle if you have a clear and organised space in which to build your setup and lighting.

Being organised and having a home for everything that lives in your studio is a very good way of working. If it's not in use, it gets put away: that way everyone knows where it is when it's needed again, and it means the space is clear. Racking or shelving and wall brackets can make a studio space very efficient! Some

practicalities to think about are things like storage and accessibility. Storage is fairly straightforward in a lot of ways: you need your cameras and lighting, and the cases go into another room or onto racking. Sometimes

you'll have your clients products for a while, so is there somewhere for them to temporarily live?

If you get into set-building, do you have the space for the project? In terms of health and safety, one of the main considerations is electricity; high-powered lighting is a risk, along with the trailing leads.

Your studio will give others an impression of you. At all times you must be professional, make people

feel welcome, and have a clear area for them to sit – it can be a nice touch to offer them tea or coffee. Although shooting is normal for you, a day out of the office might be unusual for your client, so make it a positive experience!

KEEP THE ENERGY UP

If the shoot you're doing is going to take all day, order some lunch in, and take a break. Provide refreshments, and be as accommodating as possible to keep the energy and mood of the shoot up.

Essential modifiers

Every studio needs these to give your lighting variety and interest

● **Beauty dish** If you're serious about great studio portraiture, get a beauty dish. The light is reflected back and out, producing a good balance between hard and soft light. It's punchy yet flattering.

● **Gridded reflector** If you want to show off texture, get a simple reflector that will take a honeycomb grid. Hard light isn't appropriate for everything, but if you want to add some contrast to an image, it's worth exploring.

● **Softbox** Soft light is flattering and often looks natural. You may want a lot of direction in your lighting, possibly from a harder source; fill light from a softbox will bring out detail without distracting.



COLORAMA

Having a healthy choice of Colorama in your studio will make you very flexible. Hold this up on a background support system or on wall brackets.

PAINTED MDF

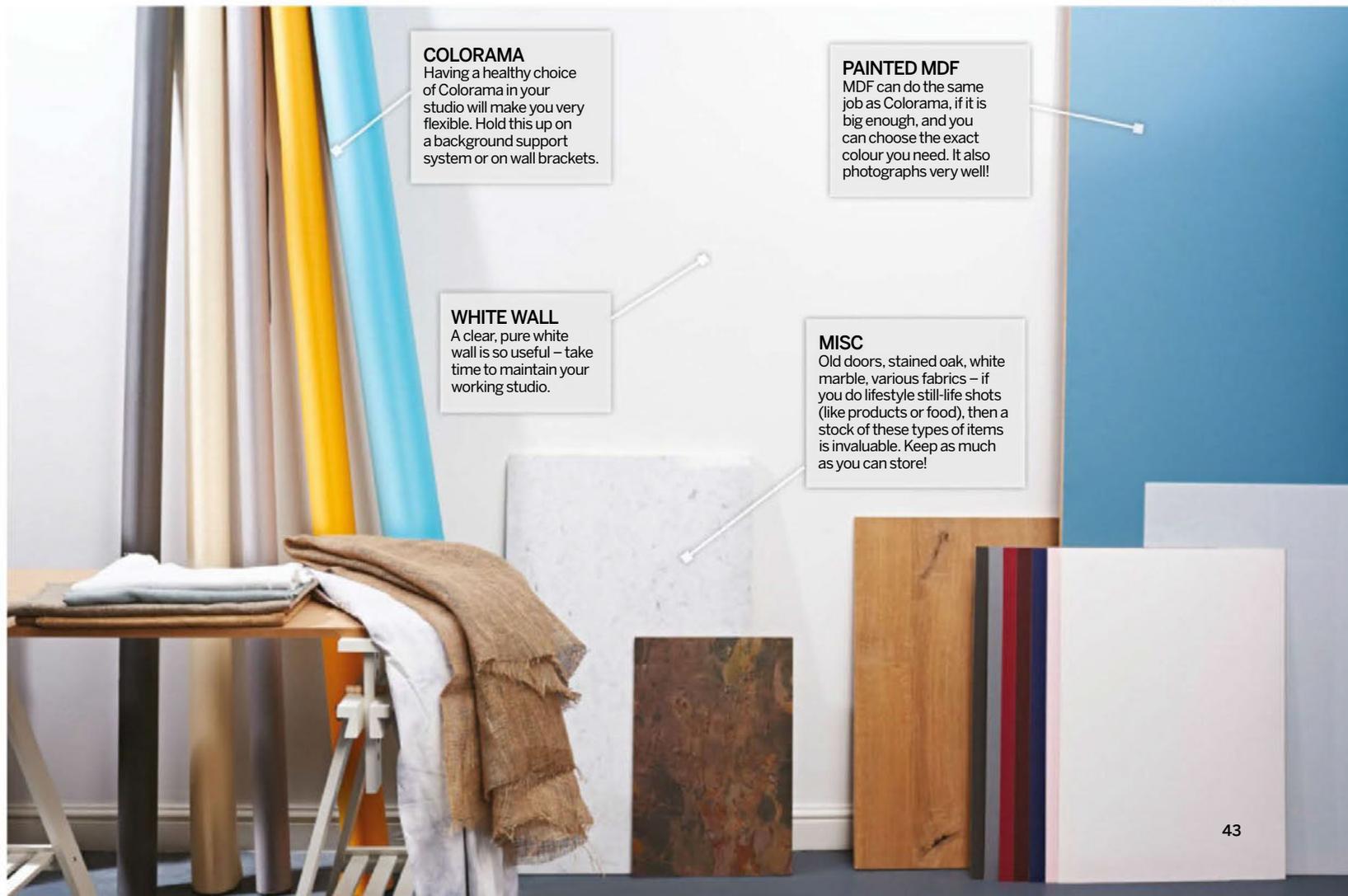
MDF can do the same job as Colorama, if it is big enough, and you can choose the exact colour you need. It also photographs very well!

WHITE WALL

A clear, pure white wall is so useful – take time to maintain your working studio.

MISC

Old doors, stained oak, white marble, various fabrics – if you do lifestyle still-life shots (like products or food), then a stock of these types of items is invaluable. Keep as much as you can store!



Tether for SUCCESS

Tethering lets you see more of what you're shooting, allowing you to make critical decisions on the fly

For professional photo shoots, gathering around your camera to look at the shots you've been taking on the tiny screen at the back just doesn't cut it. Shooting with a camera tethered to a computer is not a new thing: photographers have been doing it since the dawn of digital.

Working with a program such as Capture One gives you so much control over your images and the shoot as a whole: you can see each image better, meaning that you can make accurate decisions on framing and exposure. Additionally, you're shooting to your computer's hard drive, which in turn means you don't have to worry about memory cards and the process of uploading the shots later. Another benefit is the ability to apply settings in real time, which again means you don't have to do it later.

You can shoot to specific crop ratios so that you can be sure the image is fit for print or editorial guidelines. Getting 'sign-off' from the client while you're shooting can also be hugely beneficial, again saving time and making them as happy as they can be by viewing the RAW results immediately.

All of those benefits still exist if you're working on location: you just potentially have a few more considerations. Portability is one. A laptop will be fine if you're not moving around too much, but you must consider battery life – if you're not near power, you may need a battery pack that can run your laptop. If that's not a viable option and you need to be more portable, look into wireless tethering. These products typically comprise a small router that emits a Wi-Fi network, just like at home. Join that network on your phone or tablet with a downloaded app, and your camera's images appear on the device.

Opposite
Drew Allen

If you're not shooting an experienced model, sometimes you need to be patient before they come out of themselves for 'the shot'

Right
Simon Pirie Benches

Shooting large products needs consideration. Tethering allows you to see how objects sit together. It also lets you tweak the lighting more effectively

Which format?

Understand image file types so you can give your client exactly what they want

Image formats can seem a little confusing, but they really don't have to be. For the most part our workflow only uses RAW, TIFF and JPEG. We shoot in RAW for the best possible quality; export TIFFs from Capture One, which then get worked on in Photoshop; then we save as JPEGs to send to the client. Sometimes clients request PSDs or PNGs; these are all options in your normal editing software, so it's easy to save file variants from the finished TIFF file and send them off.



Above
Bridge

Bridge is an incredibly useful program. It works with Photoshop for organisation and batch-processing files. Almost all the formatting options you need are here





THE MIGHTY JERKSTOPPER

Tether Tools has built a company around solutions for tethering issues. Its orange tethering cables have become synonymous with pro studios. As an add-on it invented the Jerkstopper, a small accessory that hooks your cable to your camera to stop the cable getting ripped out!

Software options

There are plenty of choices on the market for you to consider

CAPTURE ONE

Capture One is made by Phase One, and is the most popular tethering software among professional photographers. Its RAW conversion capabilities are excellent, and you have a seemingly never-ending amount of control over your imagery.



LIGHTROOM

Lightroom is brought to you by Adobe, the maker of Photoshop. The two programs complement each other well, making them very attractive as a package. Lightroom is also a powerful cataloguing tool, making it easy to store and find your old images.



CAMRANGER

The CamRanger allows you to wirelessly tether. It's useful on location, where you can view the images on an iPad without a hard-wired connection to the camera. You'll be saving to a memory card rather than your computer's hard drive, but it is still very useful.





Finish the job

Post-production plays a vital role in your final images

Post-production can mean a lot of things. Some images will require clipping and spot retouching, others just tonal adjustments. With portraiture, have a conversation with your client about retouching – how natural or airbrushed do they want their images to look? In terms of product photography, dust and dirt is your everyday nightmare; each image you shoot will at least need some minimal spot retouching in Photoshop.

The first thing you can do to minimise this process is to clean the thing you are shooting! Keep cloths and various cleaning materials in the studio: you'll likely be given dirty or scratched items to shoot, so they may as well be the best they can be before exposing them to your sensor! An air compressor or handheld 'hurricane blower' are also great additions to

the studio – you can give whatever you're shooting a quick blast of air before the final shot to clear any settled dust.

Throughout your workflow, aim to maintain the integrity of the image as much as possible. Starting with your camera, you should shoot RAW, and shoot it right: the more adjustments you have to make later, the more those pixels will degrade. Export TIFFs or PSDs – the file sizes are large, but you'll retain more information as you progress. If you're looking to enhance your shot, it's completely up to how you like to work, but tonal changes (exposure, contrast, white balance) are better done in the first instance in your tethering software, like Capture One or Lightroom. Photoshop is great at everything else, like spot retouching, clipping paths, airbrushing and sharpening – do these next. Bridge is a useful accomplice: it organises your workflow, and has lots of batch options that will save you time, such as renaming and saving as different file types.

If post-production really isn't your speciality, consider outsourcing. It's half the job now – and although there's plenty of advice online, sometimes the right thing is to bring in the right expertise to take care of it while you keep shooting.

Share the workload

Balancing shooting photos with post-production

Post-production can be quite a personal thing. Your tastes might shape how your photography looks, meaning you're reluctant to let others do it. However, most photographers get into photography because they like shooting – not because they enjoy Photoshop. If this is the case, then it might be worth considering outsourcing some or all of your post-production work, or even taking on an in-house retoucher.

If you're very busy and you're shooting every day, you may struggle to fit the post in, making it a good opportunity to look at spreading the workload. Ultimately, think of your clients: what do they want the images to look like, and when do they need them?

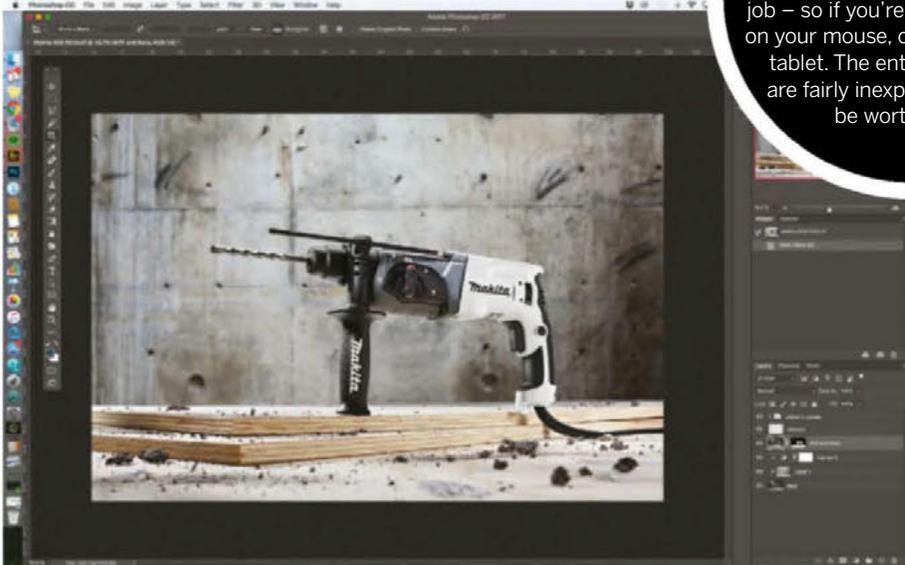
Top Makita SDS

To shoot this Makita drill, we made a mini set in our studio. The brief was to convey an industrial feel, so the materials needed to reflect that. Ultimately the brick wall we put in place was too dark and the detail of the brick texture wasn't the most attractive, so we dropped a lighter, smoother (but still industrial) image behind the still in post-production

DP



UNEDITED



Deliver the work

You've done the job – now you need to get it to the client

Technology means that images can be sent and received quicker than ever before.

Cloud systems such as Dropbox and WeTransfer are fantastic: you simply upload what you want to send, and your client gets an email with a link that allows them to download their images straight to their computer.

It's also a nice touch to present the work for them in a format they can see instantly: this can be via a PDF that you attach to an email, or an upload of JPEG images to a website that allows them to see an online gallery.

USE A GRAPHICS TABLET
Graphics tablets are fantastic. They are the right tools for the job – so if you're still clicking away on your mouse, consider a Wacom tablet. The entry-level models are fairly inexpensive so could be worth trying!



Make it easier on yourself

Avoid unnecessary retouching work with a clean studio

If you've ever been frustrated about having to retouch someone's fingerprint off of a product or removing lots of dust from something, you'll know that a bit of time spent cleaning before you shoot is well worth the effort! Having a clean space or area for whatever you're shooting helps you to get organised in terms of cleaning and shooting, so it's worth prepping an area before you start.

It's also worth considering what you do in your studio day to day. Dust is unavoidable, but if you can avoid messy, dust-making activities, you'll save yourself a headache.

Right
Black cosmetic products

Cosmetic products and other small plastic items are particularly susceptible to dust, dirt and scratches (photographically speaking) – they just show up more! However, it's important that they look clean by the end of the project





WORK WITH WIDE APERTURES

Shallow depth of field demands a little more effort to control, but offers a powerful tool for advanced compositions

Working with wide-open apertures pushes you to think more carefully about your composition, and demands fine control over your camera. Mastering the silky effects of a soft background and rich bokeh means trusting your autofocus system and learning to drive it with intent. The right choice of lens for your photography is the starting point – and for this style of work, faster is definitely better.

Dropping your f-stop just a little won't reveal a big impact: you need to push out to very wide apertures to see the full effect. If you don't have a lens that goes out to f2 or faster, it's worth renting one for a weekend to experiment more fully. The difference between f4 and f2.8 is not always apparent, but

shooting at f2 or wider will make a dramatic difference to your shots.

The great joy of using a wide aperture is the ability to create clarity from the chaos. A scene that would be too busy or complex otherwise can be tamed with the use of shallow depth of field. Portraits, still-life, macro and even landscapes can be explored with the core idea that 'less is more'.

Shallow focus allows you to keep lots of layers and lots of elements in a composition, but still offer a sharp and strong subject.

Above
First Light

Subtle textures of the Flinders Ranges in South Australia, captured with the aperture wide open to harness sunlight and detail within the same composition

TECHNIQUES

VIGNETTING

Your style can embrace the additional vignette from shooting wide-open, or fix it in processing.

PRIME SUBJECT

Emphasis is brought to the hero of your composition while other elements are defocused.

DEPTH AND DISTANCE

You gain more depth of field when you shoot a subject from further away.

LAYERS

Add depth to your scene by shooting through a foreground with a wide aperture.

CHOOSE A LENS

Your choice of focal length will determine the shallow depth of field you get to play with

The longer your focal length, the less depth of field you have to play with. This is why you can still get a soft background when shooting wildlife on a 400mm lens at f8, yet f8 on a 24mm lens can get you everything sharp from two metres away to infinity.

When you want shallow depth of field on a wide-angle lens, you have to push the f-stop very wide indeed, and often bring your subject closer to get the background softer. This is why 24mm f1.4 prime lenses are so popular.

At f1.4, you can shoot street photography but still pull the focus onto a specific subject within a scene. Selective use of depth of field becomes a powerful tool for composition, directing the viewer to what matters most.

Even landscape photography can be explored through a wide-open aperture. Instead of holding all the foreground detail with a generous f-stop, you can use that

shallow depth of field to 'shoot through' your foreground. Elements in the immediate foreground can be melted into bokeh, adding a layer that frames the scene beyond.

50mm is the sweet spot for wide aperture creativity. It's a flexible perspective, and no other focal length can boast such affordable fast lenses. An f1.8 50mm lens is modest to walk around with, yet can handle everything from landscapes, to street scenes, or from still-life to portraits. You can move in close for tight compositions that emphasise a discerning depth of field, or step back a little from your portraits and push the background into bokeh.

Telephotos are often essential for wildlife work – you can't always get as close to a puffin as you would like. Once you start shooting around 400mm, however, even an f6.3 lens will give you some lovely bokeh. Going wide-open on a super telephoto doesn't need f2 to get a great result.

SENSOR SIZE

The smaller the sensor, the greater the depth of field it will produce. On a Micro Four-Thirds system such as a Lumix GH5 shooting with a 25mm f1.4, the depth of field looks more like a 50mm f2 on a DSLR.

Prime versus zoom

Zoom lenses are designed to offer maximum convenience, but allow less potential wide-open

Zoom lenses are the outcome of a genuine engineering challenge, attempting to balance image quality with flexibility. It's hard to design an affordable lens that can shoot with very wide apertures and still deliver a useful zoom range. Until recently, most wide-angle zooms have been constrained to the f2.8 mark, and even those have been expensive. Sigma recently released an f1.8 18-35mm zoom in its Art Series, which gives smaller APS-C cameras access to very shallow depth of field and the flexibility of a wide-angle zoom.



Left
Sigma 20mm f1.4 Art Series
The curved front element and fixed lens hood are a little inconvenient, but there isn't a wider AF lens for shooting at f1.4 on your DSLR



SOFT SUNLIGHT
Shooting directly into the sun is much softer and less distracting at low f-stops.

WIDE AND WIDER
A fast wide-angle lens combines a shallow depth of field with a generous field of view.

FAST FOCUS
Precise autofocus control is required to accurately hit the subject amidst multiple layers.

FULLY FRAMED
Full-frame DSLRs capture a shallower depth of field compared with smaller systems.

Get creative Three approaches to try with wide-open apertures



● **Intimate attention**
Wide-angle lenses offer an intimate feel when combined with wide apertures. The camera is more deeply present in the moment, not merely eavesdropping from a distance.



● **Portraits and still-life**
A 50mm focal length is the sweet spot for portraits. Shooting wide at f2 becomes a creative tool to highlight your subject within a complex and busy scene.



● **Wildlife focus**
A 200mm telephoto at f2.8 offers an effective tool to isolate wildlife and throw a soft focus across foreground and background. The longer the telephoto, the more dramatic the bokeh.

TECHNIQUES

FOCUS WITH CARE

You need to control precisely what stays sharp wide open

Control of your autofocus system is critical as you step towards a wide-open aperture. If you miss your target, you lose all value in the composition. Instead of letting the camera automatically select focus points across the grid, you need to take full control and tell the camera where you want the focus to land.

This means turning off the focus grid and setting a single point of focus to work with. It also means trusting the performance of your camera to grab a focus lock, sometimes in difficult situations. Getting to know how your camera responds to low contrast or backlit scenes is part of the learning curve.

Once you have set the camera to use a single focus point, you have two techniques to choose between. One is to push the active focus point around the frame as you compose, locking onto the desired plane of focus in the composition. This can be slow, and you may not always have a focus point exactly where you want it.

A more flexible and responsive technique is to stick with the centre focus point, but use the focus lock on your shutter or rear of camera. Select a part of the subject in your desired plane of focus, lock the autofocus and then re-frame the scene to suit your composition. As long as you don't move backwards or forwards during



LOCK AND FRAME

Use your autofocus lock to pinpoint the subject, then reframe before committing the shot.

SINGLE FOCUS POINT

Disable your focus grid and work with a single focus point, or the smallest point available.

CONTINUOUS BURSTS

Employ the continuous shooting mode on your camera so that each press of the shutter yields four or five frames. This helps you to vary the plane of focus slightly as you lean in or out.

the re-framing, you stand a good chance of hitting your subject even if it's not in the centre of the composition.

When you work in the studio, you may have a more controlled environment, and a more

stable subject to compose. Manual focus has some appeal in this situation. By shooting and reviewing your images in real time, ideally on a larger screen tethered to the camera, you can make fine adjustments to the focus and ensure perfection.

Focus on eyes

When you look at another person, it is the eyes that matter most

We are naturally drawn to the eyes of people and animals, and this applies to their portraits as well. The eyes are usually the most critical and engaging part of a composition, so it is essential to keep the nearest eye as sharp as possible. Use the eyes as the point for locking focus. The nose, hair, shoulders and anything else in the shot can be soft, but not that nearest eye. Even a subtle mis-focus can detract from the impact of an image.



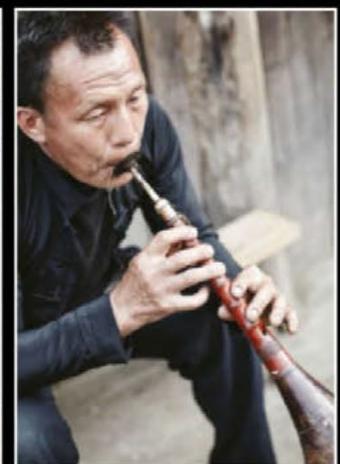
● Fingers sharp

Where you direct the focus will direct your audience to what's important. This frame makes the hands the story instead of the musician.



● Eyes sharp

Focusing on the nearer eye yields a well-defined portrait. There's still enough information to show the plane of focus where both the eyes and other details are sharp.



● Perspective in focus

By rethinking your perspective on the subject, you can pick a plane of focus where both the eyes and other details are sharp.



LIGHT SPACE
A shallow depth of field can bring character to a scene where harsh light dominates.

SOFT FOREGROUND
Keeping soft elements in the foreground enhances the composition.



Plan your composition

Change your tactics to control how much of a scene is sharp

● **Just one**
Highlighting a single person amongst a group is a natural composition when working with a shallow depth of field.

● **Lined up**
To get more than one person to pop, you have to line them up inside your plane of focus. This takes practice so plan on deleting a lot of shots, and shoot plenty of extra frames.

Enhance the effect

Putting a little space between your subject and the background will enhance your shallow depth-of-field result



● **Busy scene**
Shooting at f2 allows the subject to pop out, but a little more space between her and the wine-wall would make it stronger.



● **Room to shoot**
Moving the subject away from the background allows the wide aperture to soften the background.

Consider your distance

Wide apertures work best when your subject is close at hand

The further away your subject is, the more depth of field you get. If you shoot a subject an inch from the lens, your depth of field will be tiny compared with the same lens shooting a subject a metre away.



● Both these shots are taken at f2, but standing right up to the bushes reduces the depth of field to little more than a leaf.



● Stepping back to shoot the bigger scene at the same f-stop gives much greater depth of field, and we get the whole bush sharp.

SHOOT STILL LIFE

The sweet spot for food photography is a 50mm lens opened to f2

Food photography and other variations on still-life imagery benefit from a fast 50mm lens. If you shoot with a wide-angle lens, it becomes difficult to avoid perspective distortion, while even a modest telephoto of 100mm can compress and flatten a scene too much. 50mm is where the work gets done, and the sweet spot for most commercial work is around the f2 or f2.8 mark.

The reason for shooting still-life scenes wide open is to bring attention to a primary subject within the scene. If everything else falls away into soft focus, your primary subject will really stand out and grab attention. Our eyes will keep coming back to that part of the frame where the subject is sharp.

What happens in the soft focus areas is still important, however. Just because something in the background is outside the plane of focus doesn't mean you can't recognise it. When you style a still-life scene for photography, there may be many props used that will be out of focus, yet they still inform and complement the primary subject.

How soft your background becomes will depend on the f-stop, what angle you shoot across the subject, and the overall scale of the scene. Pushing the aperture to f2 or even wider will evoke the strongest bokeh. At some point the background becomes a creative element instead of being informative to the primary subject, which can be an appealing aesthetic.

The angle you shoot will effect the depth-of-field effect too. The closer you approach shooting at 90 degrees to the scene, the flatter your perspective, and the less drama you get from your chosen aperture. 45 degrees is a good starting point to experiment with.

There are some excellent 50mm lenses that shoot wide open at f1.4, but how often is that useful? The further you step back from a scene, the more tempting it can be to push the aperture fully wide. Shooting a single dish at the f1.4 mark, for example, can be too shallow and not yield enough sharpness to satisfy; but a bigger scene where the entire table is the shot can work at f1.4 if you want one dish out of many to pop in the frame.



● f8

The elements that aren't sharp in the frame are only a little bit soft and remain discernible. There's little excitement in how the tray of muffins has turned out.



● f4

The background is now much softer, directing us towards the muffins, but the middle row of muffins needs to pop a little more to really focus the attention.



● f2

Our target row of muffins is dramatically sharper than those in front or behind. Note that a section of textile beneath the muffins is also inside the plane of focus.

LAYERS

A shallow depth of field allows you to bring elements into a frame you might usually try to keep out. Layers that turn soft in the foreground or background become bonus features of compositions when you work wide open. It's a shift in how to think about composition – to try including elements instead of avoiding them.

Into the light

Direct sunlight hitting the lens can be tamed with a wide aperture, converting those harsh flares into a more gentle effect

Every lens has its own flare character, but shooting wide-open will give you the softest rendition of that effect. Mixing lens flare with direct sun pouring into the frame can meld the two together. Letting the background fall into soft focus can complement a backlit scene overpowered by the light.

● **Full flare**

At the narrow aperture of f8, there is some starburst evident across the horizon, and some well-defined flaring cuts across the landscape.

● **Soft Flare**

The sun reverts to a glow that spreads into the scene, throwing an flare arc across the frame. The shallow depth of field makes our human interest dominant in the story.



FULL FLARE



SOFT FLARE

Solve issues

A shallow depth of field requires a new way of thinking about your settings

PROBLEM	MISSED FOCUS You have trouble getting the critical elements inside the plane of focus. Too often the camera picks the wrong object in my composition to focus on.	CHANGING FOCUS Even though you have picked a single focus point, the camera still doesn't hold and lock on it. It moves as you reframe the image.	FOCUS HUNTING Having reverted to a single focus point, you have trouble getting a focus lock at all. The lens hunts instead of locking when you shoot into the sun.	MISSED FOCUS IN MACRO You struggle to get the right details in the plane of focus when shooting macro. It's always out by just a little bit.	CONSISTENT BACK-FOCUS The viewfinder confirms that you have a lock on the right subject, but when you review the images on the computer, they are consistently focused behind the subject instead.
	SOLUTION	SINGLE POINT Set your autofocus to use one defined focus point, instead of the entire grid. If you are with a mirrorless camera rather than a DSLR, try to define the smallest possible focus point so you can drive it more accurately.	SINGLE AUTOFOCUS Switch off your continuous autofocus. Either revert to using the rear-focus button and disable the autofocus on the shutter button, or just adopt the single autofocus mode, which lets you select focus with a half press before reframing and committing the shot.	CONTRAST EDGES When you work with precise autofocus, you need to make sure you hit a point of contrast. This can be difficult if you are shooting into sunlight, so make sure you look for contrast-rich edges that help the camera to focus.	LOCK AND PUSH Use continuous shooting to capture multiple frames. Get a focus lock first, then gently push the camera through a modest range while shooting. Delete all but that one frame that landed your focus plane just right.

EDIT WIDE APERTURES

Keep your adjustment layers feathered for softness and you'll have plenty of latitude for fine-tuning the RAW files

Shooting wide-open gives you a very fine plane of focus, but often the line between sharp and soft is a broad one. The focus within your frame can shift gradually from a rich bokeh to razor-sharp detail. Defining the point where the depth of field starts and ends can be arbitrary.

This means that when you process your RAW image, it's important to ensure your adjustment layers are equally gentle. Brushes and gradients should be strongly feathered to conceal the evidence of your changes. Whenever the shift of detail and light is broad and gradual, a gradient layer can give you a smoother effect than painting with a brush.

The softer the focus is in the background or foreground elements, the easier it is to creatively manipulate the mood of the image.

You can darken edges for drama, counter the vignetting for balance, or apply a warm and over-exposed gradient to wash out a background where the sun bursts into frame. Strongly backlit scenes often benefit from a boost of shadow detail in the foreground.

Opposite-inset

Novice Monk in Bhutan (before)

The RAW file presents a wide range of exposure zones that will test the dynamic range of the camera. One hotspot in particular detracts from the composition

Opposite

Novice Monk in Bhutan (after)

The final image is gently balanced and the angled light across the frame adds to the story, with the eyeline of the novice monk directed across the scene and into the light

Below-left

Blue-Tongued Skink

Capturing the eyes is as important with wildlife as it is with people. You don't have to miss the sharp plane by much to spoil the shot

Below-right

Landscape Textures

The foreground is so important in landscape compositions. When nature doesn't provide enough to satisfy, pull through some soft focus to adapt a simple bit of flora to add colour and depth

Bottom-left

Middle Fields

Pull out a piece of the landscape without losing the context of the scene. A shallow depth of field lets you hold onto the big picture while bringing all the attention to one strong element in the scene

Bottom-right

Flower Power

Pulling clarity out of chaos is the biggest trick wide apertures can give you. A simple flower can get lost within a jungle of flora, until you impose an f2 perspective and melt away the distractions



SHOOT MORE THAN ONCE
 Never assume you got it right the first time. Even if you like what you see when reviewing the back of the camera, go back in and reshoot the scene a few more times just in case you missed the most critical detail in the plane of focus. Reassess the focus each time you reshoot.



1 Apply your baseline Set the mood by setting your contrast, exposure, saturation and shadow detail. Reducing saturation and adding a little contrast helps to bring the sharpness out in the focal plane, without blowing out detail in colour-rich elements.



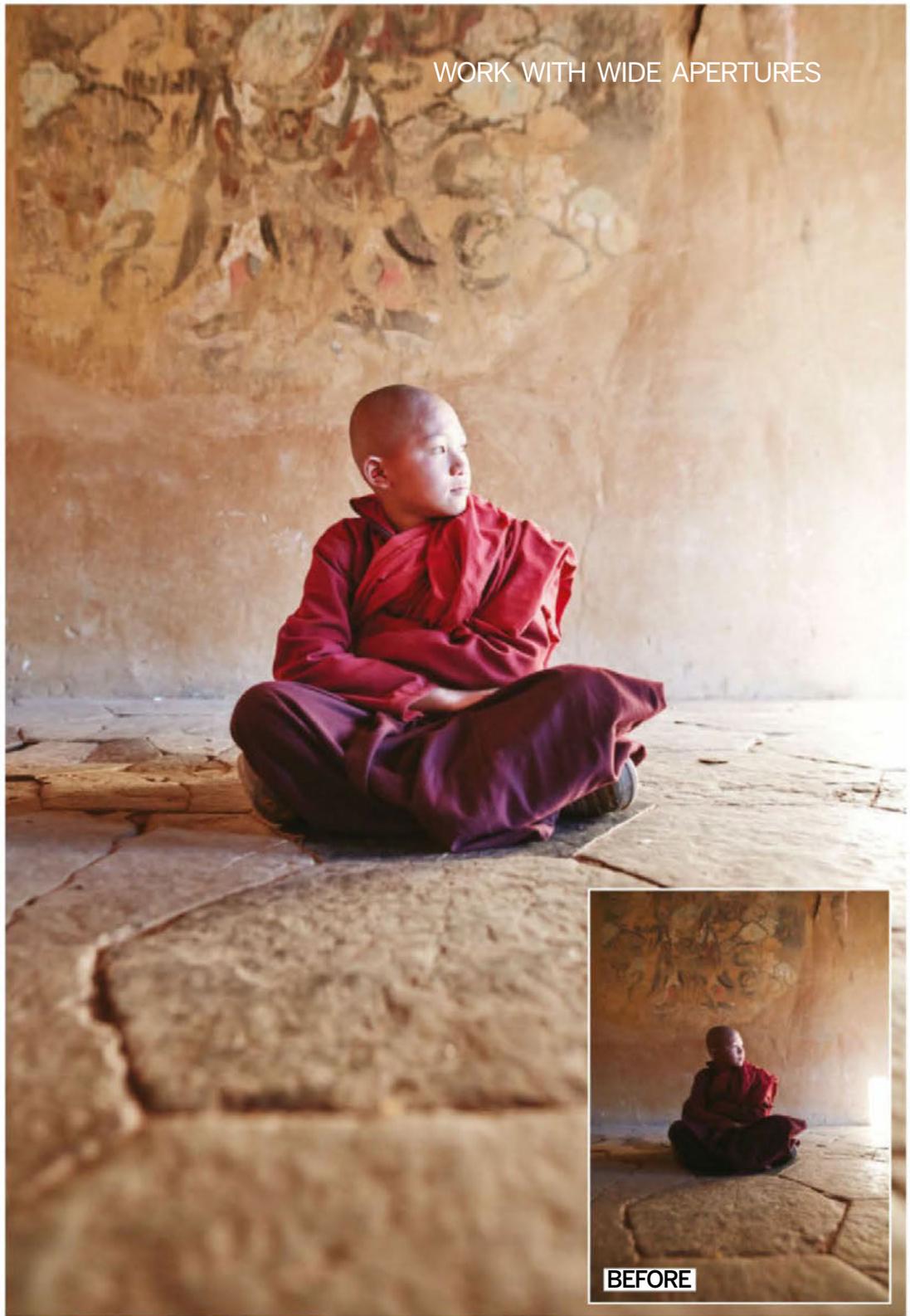
2 Clone and heal With a very soft cloning tool selected, you can easily tidy up unwanted objects in the background. In this image a block of light is grabbing attention on the right-hand side, so clone in parts of the wall and floor to diminish its impact.



3 Tune the primary subject Add an adjustment layer to your primary subject and adjust the exposure to give sufficient prominence. If you add a little exposure to compensate for a backlit scene, retain definition with extra Contrast or Clarity.



4 Check the focus Zoom into the critical part of the frame and make sure your RAW file is sharp where it needs to be sharp. Ideally you will have multiples of the same scene, so that you can simply pick the RAW file that best nails the eye detail.



5 Watch the highlights Highlight blowouts are less critical in the soft parts of the frame, but problematic in areas where the subject is sharp. Using the High Dynamic Range controls applied to an adjustment layer, restore detail where needed.



6 Remove marks Any small blemishes on the skin or on clothing will be more pronounced when there's a limited amount of sharp detail in the frame. Use the Spot Removal tool to quickly tidy up distracting or untidy marks.

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Key features

Discover some of the innovation on offer from the N8



1 Counterbalance system

The N8 has a revolutionary NITRO gas piston mechanism. This provides all the high functionality you expect from a pro-oriented video head, with a guaranteed continuous counterbalance for camera systems weighing up to a generous 8kg.



2 Fluid drag system The N8 incorporates a variable Fluid Drag System for smooth and judder-free movements as you're recording, with tactile controls for both pan and tilt. These let you make precise adjustments to the ideal level of resistance, so you can create professional-looking movement in your videos without the need for accessories.



3 Easy to work with A 75mm flat base and the commonly used 3/8in thread ensure versatility and compatibility with a range of tripods, sliders, cranes and jibs. A side-lock mechanism, meanwhile, allows you to quickly and securely click your camera in from above, without needing to slide it in as on many other models – perfect when you need to set up quickly.



Manfrotto Nitrotech N8

We take a look at the benefits of this new professional video head

Manfrotto's extensive tripod range has already established itself as the first port of call for enthusiasts and professionals working across stills and video recording. Now, with its latest Nitrotech piston technology, the manufacturer has raised the bar for those seeking the utmost precision and control over their shooting.

The new Nitrotech N8 video head is the first product in a brand-new series from Manfrotto, and represents the result of extensive testing and research by the company. Thanks to its ability to be extensively customised, the Nitrotech N8 video head suits image and video makers at all levels, whether they're working in the studio or out on location.

With the benefit of Manfrotto's Easy Link system, for example, you can easily mount a range of accessories through a compatible arm. Videographers can use this to quickly set up a monitor or LED panel, and with the further benefit of anti-rotation support, you can be sure whatever you attach stays precisely wherever you position it.

Even right down to the smaller details, Manfrotto has paid plenty of attention to make accurate positioning and control as convenient as possible. The sliding plate, for example, boasts metric measurements for careful fine-

tuning, while the bubble level incorporated into the head is illuminated to help you set up accurately in all manner of conditions.

Despite its capabilities and high-quality craftsmanship, the head weighs just 2.2kg and measures 14.8cm high, making it light and portable enough to take anywhere with you. The counterbalance adjustment knob also boasts a retractable design for portability, with a familiar bulbous design and rubberised finish to let you get an excellent grip for adjustment.

Furthermore, with a red piston mechanism and a number of further details around key areas, the model has been designed with its key functionality highlighted, all the while adhering to the classic, unmistakable Manfrotto styling.

Whether you just want to take advantage of the new Nitrotech N8 video head, or you want a complete setup, Manfrotto has something for you. The Nitrotech N8 video head is available as a standalone option; in addition, four kits with a variety of legs are available, ranging from single-leg aluminium models to twin-leg carbon fibre alternatives.

Best of all, the Manfrotto Nitrotech N8 video head is available now. For more information, head to the Manfrotto website at www.manfrotto.co.uk







Creative macro photography

Shoot and edit incredible images of insects with this advanced technique



In this tutorial, you'll discover how to take a tiny waterborne insect and photograph it suspended inside a drop of water. You'll learn how precise camera control and lighting can have a big impact when photographing small subjects.

Macro photography can be a challenge: very short working conditions, limited depth of field and the need to get critical focus are all obstacles between you and great images. That's all before you take into account the challenges of working with a moving subject.

In the next few pages, you will learn how the use of camera positioning alongside the use of equipment like a macro-focusing rail can greatly help you overcome these obstacles.

Then you'll learn some lighting techniques that can increase detail and improve the definition of your subject, with the use of just a couple of flashguns. Not only that, but you'll see how it's possible to capture your subject in a creative and engaging way while also revealing something about its nature.

Finally, taking the images into Photoshop, you'll learn how to add that final layer of polish and transform the final photograph.

Left

A drop of water

To create this photograph, we took a freshwater invertebrate no more than 10mm long and suspended it inside a drop of water. Being so small, it's unable to break the surface tension.

What you'll need

- High-magnification macro lens
- Rigid camera stand
- Lighting stand
- Super clamp
- Tripod head
- Macro focusing rail
- Two flashguns plus trigger
- Diffusion material
- Plane of glass
- Petri dish and pipette

Shooting steps

1 The initial setup The first step is **1** to assemble the equipment. You want everything locked down and secured before you bring in your fragile subject. A rigid setup will reduce vibrations, making focusing easier and reducing camera shake. Make sure that all the controls are easily accessible in anticipation of the next steps.

2 Add the subject Now you want **2** to carefully bring in your subject. Using a pipette you can transfer the insect, without harm, onto a petri dish positioned underneath the camera. This way you also create the water droplet that makes up the rest of the image.

3 Focus the camera With Live View engaged, focus your image using the macro focusing plate to raise or lower the camera. With this top-down view of your subject, you should be able to get most of it in focus in a single shot. The priority for focusing should always be the eyes.

4 Set the backlight You want **4** the flash power set high enough that light wraps around the black card, and picks out the edge and fine details in our subject. This outlines not only your subject but also that of the water droplet that it sits in.

5 Set the fill light At this stage **5** you should have the outline of your subject defined by the backlight. Now set the power of the top light to just lightly fill the shadow and reveal the broader aspects of your insect. You don't want this light set so high that it washes out your subject, though.

6 Take the necessary shots You are now ready to start taking your photographs. You are not looking for the perfect shot here. Instead your aim is to take enough photographs so that collectively you have captured the entire subject. Stray limbs and dirt can all be corrected later in the editing.



The setup

GENERAL SETUP

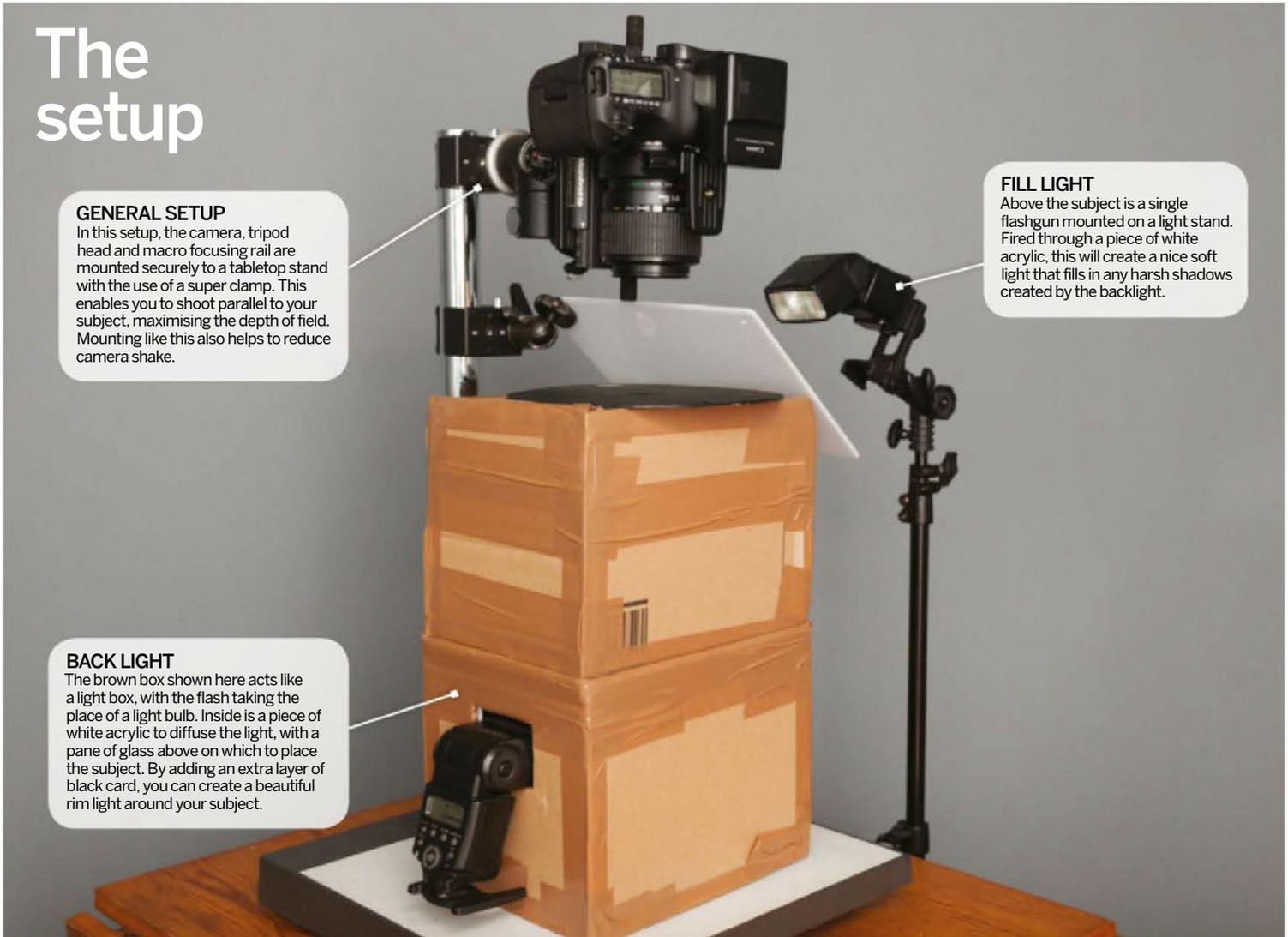
In this setup, the camera, tripod head and macro focusing rail are mounted securely to a tabletop stand with the use of a super clamp. This enables you to shoot parallel to your subject, maximising the depth of field. Mounting like this also helps to reduce camera shake.

FILL LIGHT

Above the subject is a single flashgun mounted on a light stand. Fired through a piece of white acrylic, this will create a nice soft light that fills in any harsh shadows created by the backlight.

BACK LIGHT

The brown box shown here acts like a light box, with the flash taking the place of a light bulb. Inside is a piece of white acrylic to diffuse the light, with a pane of glass above on which to place the subject. By adding an extra layer of black card, you can create a beautiful rim light around your subject.



Macro focusing plate

The smart way to achieve precise small-scale focus

An invaluable piece of equipment in this setup is the macro focusing plate, sometimes referred to as a micro positioning plate. This simple tool allows precise forward and back movement of the camera.

By changing the camera's position instead of relying on the focus ring of the lens, you can maintain the angle of view and therefore the framing of your subject. This makes it much easier to blend together multiple images. This also gives you the option to change the focus between shots and stack the resulting images to increase the depth of field.



Editing steps

1 Image selection and levels
 In Lightroom, select the images you want to use in your final composition and apply basic exposure adjustments. If necessary, you can use pieces taken from multiple images to create one final photograph.

2 Remove dirt and dust Next, open the images in Photoshop and start removing the dust and dirt. A Curves adjustment layer with the white level brought right down will allow you to see the many marks that will need removing from the shadow areas.

3 Separate out the layers
 By separating the image out into different layers, you can work on each part independently, before bringing them back together at the end as one perfect shot.

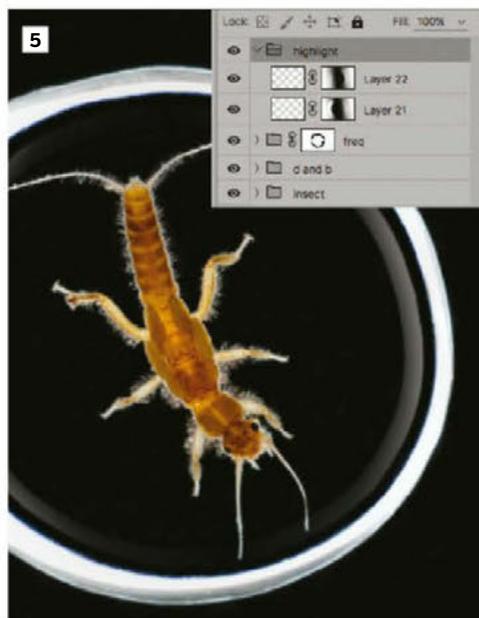
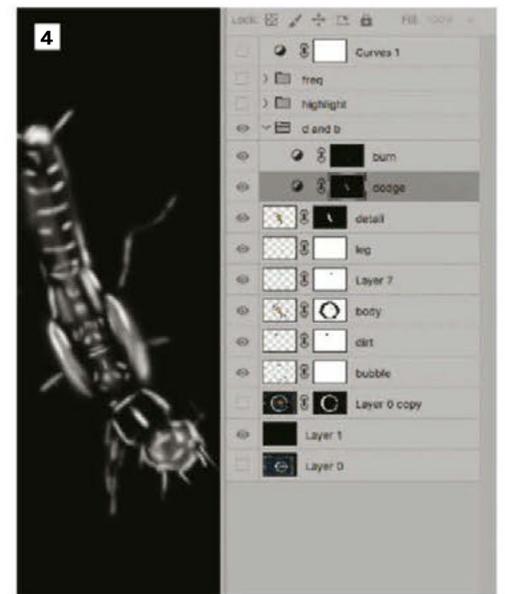
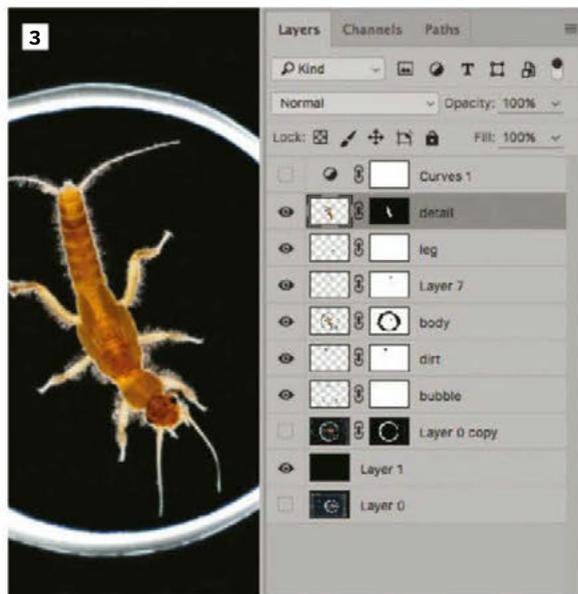
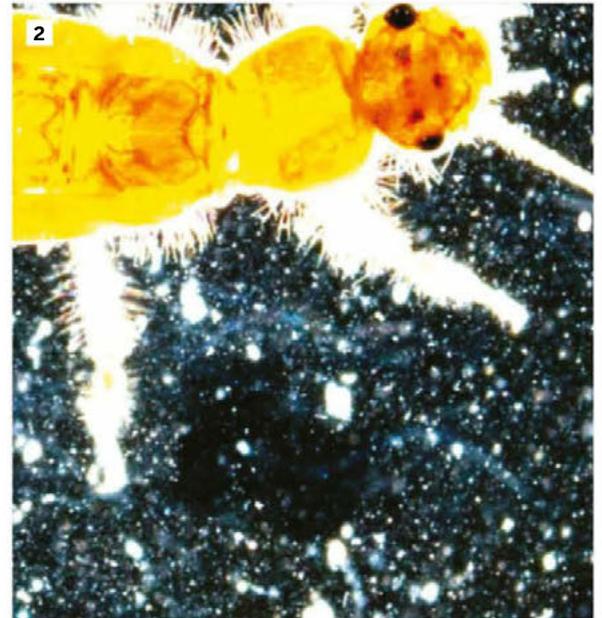
4 Dodge and burn Using dodge and burn allows you to perfect the lighting on your subject. Working on small areas, you can improve local contrast, increasing the apparent sharpness and highlighting important details.

5 Add a highlight You can improve the appearance of the water droplet by creating a simple highlight. This is achieved by adding a white fill layer, shaped and blended to fit the interior of the water droplet.

6 Sharpen and finish To finish, zoom out and check your final image. This is the time to correct colour and composition. Finally, apply sharpening to your insect layer before flattening the image and exporting.

Opposite
Perfected in post

In the edit, you can transform this photograph into something that would be almost impossible to do in a single shot, but still looks believable.



BEFORE



AFTER



Compose from low angles

Adopting a different perspective is a relatively straightforward way of adding extra interest

 One of the biggest crimes that any photographer can commit is taking an image from head height. Why? Well, because this is the view that we're all used to seeing, day in, day out. To really engage with a viewer, a new perspective should be sought.

Going high usually involves some climbing or the use of an expensive drone, but there's a much simpler and effective way to show a new composition of a subject. By placing the camera at ground level and shooting upwards, you can shift perspectives, creating an intriguing photo. Small flowers, for example, suddenly appear to tower above the ground. This compositional trick requires the bare minimum of kit: a tripod and (if you own one) a wide-angle lens.

This project can be perfected further by adding some advanced skills into the mix. Using pro techniques will make setting up your composition easier, and our tips will reduce the risk of any shake or blur appearing in

the frame, which is essential when you shoot a close-up image of this nature.

Before you start, take a few moments to protect your kit. You'll be working close to the ground, so take along a mat or plastic bag to kneel on and shield your gear from any mud.



Above
The easy approach

Captured at just below head height, the carpet of bluebells lacks impact and any sense of composition or shooting style.



FINAL IMAGE

High impact from a low view
By lowering the viewpoint and making best use of the wide-angle lens, the scene has been transformed into a 'Land of the Giants' world.

All images © Matty Graham



1 Dial in your settings Select Aperture Priority to control the depth of field while the camera handles the shutter speed. Select f4 to keep the subject sharp while blurring the background.



2 Activate Mirror Lock-up When an image is taken, the mirror inside the camera can actually cause vibrations, leading to blur. Reduce this risk by activating the Mirror Lock-up function in your menu options.



3 Shoot in RAW Including ground and sky in your shot can lead to exposure problems, with the sky too light or the ground too dark. By shooting in RAW instead of JPEG, you'll have more chance of rescuing detail in software.



4 Set up your tripod Even by spreading its legs, your tripod will likely struggle to afford you an ultra-low viewpoint. The solution is to invert the centre column. Now you can set up the camera just millimetres off the ground.



5 Focus accurately With settings dialled in, it's time to focus up. With close-up subjects, it can pay to switch to Live View and manual focus, turning the focus ring on the lens until the subject looks sharp on-screen.



6 Include top-half interest With a low-view image, the top half of the frame can often feel empty. Adjust your composition to include the sun, but avoid flare by using a lens hood or shielding the lens with your hand.

Nikon perfect partners

Discover how Nikon ambassador Leon Neal captures his incredible images with the Nikon D5 and the NIKKOR 24-70mm f2.8E ED VR lens



Press photographer Leon Neal finds himself in fast-paced, dangerous and demanding situations in his professional work.

He's hugely reliant on having the right camera kit with him – but more than that, he needs to have a camera and lens that perform when he needs them to, in combination.

Switching between different lenses in photojournalism and press-related work isn't always an option, so it's vital that the camera and lens Neal chooses are truly perfect partners. "I've been based in London for nearly 15 years now, working for various newspapers

and agencies covering a huge range of events, from royal weddings to the Libyan revolution with nearly everything you could imagine in-between", he explains. "At the end of 2016, I moved from my previous employer to the news team of Getty Images in London and, as such, find myself covering a lot of events around the capital. As it's such a globally important city, it produces headlines around the world in every

area, be it sport, fashion, politics, crime, or entertainment to name a few.

"As I have to expect the unexpected, it pays to have a versatile lens to hand, on a body that can handle whatever I throw at it. That's why my go-to combination is the Nikon D5 and the NIKKOR 24-70mm f2.8E ED VR lens. The combination of incredible low-light capabilities, weather-sealed components and bulletproof build quality means that it's

IDEAL FOR...

The Nikon D5 and the NIKKOR 24-70mm f2.8E ED VR lens are perfect partners for press photography, providing speed, durability, resolution and flexibility that can be relied upon in challenging conditions.

Discover the D5 and the 24-70mm f2.8E ED VR lens

TOUCHSCREEN

The Nikon D5 boasts a touch-sensitive rear LCD screen for easier control of things such as key focusing settings, and is the first camera of its kind to provide this capability

INCREDIBLE AUTOFOCUS

The D5's autofocus performance is among the very best available on the market today, with 153 AF points and a -4EV sensitivity for low-light performance of the highest standard

CONSTANT MAXIMUM APERTURE

The f2.8 maximum aperture provides suitably shallow depth of field and exposure performance across the entire range of focal lengths

IDEAL FOCAL LENGTHS

The wide focal length of 24mm at one end of the zoom to the short telephoto options at the longer end offer great versatility

BIG BUFFER

The D5 can capture 200 frames at 12fps, so offers the sort of lightning-fast shooting potential that can be a huge benefit in situations where the action is happening quickly





a very safe bet that I can get the right image of whatever I find myself facing.

"The astounding ISO range of the D5 allows me to shoot in the early hours of the morning or in the middle of the night with a fast shutter speed and no noise. Combine this with the Vibration Reduction system built into the lens and I can guarantee sharp, movement-free images. Meanwhile, the Live View feature on the D5 allows me to work from unusual angles and locations that I'd previously have broken my neck (or at least ruined my clothes) trying

to get to. I've been able to play with many combinations of prime lenses and different bodies, but this dream team is the pair I always return to.

"There aren't many areas of photography that put the gear in the line of fire of celebratory champagne, incoming bullets, airborne rocks from rioters and the British weather, but that's what is expected of it. The cameras and lenses need to work when and how you want them, every time. Thankfully, with Nikon, it just does."

Improve your skills

Discover new techniques with the help of Nikon School

On 28 July 2017, you can learn how to master The Art of Image Composition at the Nikon School in London. For further details of the course and information on how to book your place, please visit nikon.co.uk/training

Shoot stunning photojournalism with Nikon



1 Weather-sealed

The D5 boasts an incredibly rugged, weather-sealed construction that enables professional press photographers to keep on working in crowded environments or wet conditions, without having to be overly concerned about their kit's durability.



2 ISO range

The sensitivity range offered by the Nikon D5 is simply vast, taking in everything from ISO 100 to 102400 – with particularly impressive image quality in the high-sensitivity range between ISO 3200 and 12800, making it ideal for press images in difficult light conditions.



3 Live View

The D5's Live View functionality enables Leon Neal to capture images in situations that would otherwise be very tricky or awkward to shoot in, with the ability to select focus in a precise fashion via the touchscreen of particular benefit.



4 Vibration Reduction

The 24-70mm lens boasts VR to enable sharper shots to be taken in exactly the sort of challenging conditions press photographers often find themselves having to shoot in, and there's also Nano Crystal Coating to reduce issues with lens flare.

Also consider...

The D5 is a serious bit of kit and obviously aimed at working professionals. As such, it may be that it represents a greater investment than you are willing to make. In that case, you might want to take a look at the Nikon D500. Here are some of its standout features.

SHUTTER BLIND

Unusually for a camera of its type, the D500 features a shutter blind that can be closed for longer exposures

STUNNING BUILD

Despite being more affordably priced than the Nikon D5, the D500 offers a body based around magnesium alloy, with buttons and dials that are weather-sealed

SIMILAR DESIGN

Like the D5, the D500 lacks a built-in flash and has a sleek, professional look across the top plate



WEIGHT

At just 760g body only, the camera is significantly lighter than the D5, which is a much chunkier proposition

Expand your system

Leon Neal reveals the other essentials he carries



WT6 transmitters

"These are permanently attached to both of my D5 cameras, as I never know if I'll be having to transmit live from a breaking news story", explains Leon Neal. "The small size and convenience is a huge advantage in unpredictable environments."



24mm f1.4 lens

"This is a great lens for features, allowing me to take in the whole scene while shooting in lower light conditions. The smooth separation provided by the shallow depth of field lends the results a real definition that gives pictures that extra edge."



300mm f4 lens

"This is groundbreaking in its size and weight, allowing me to carry a long telephoto lens in my backpack on a daily basis. Physically similar in size to the 24-70mm lens, the 300mm f4 lens has really opened up the options for longer-range imagery."

Organise Layers

Make better use of what is arguably Photoshop's most powerful panel

 The biggest feature of Photoshop is undeniably its Layers panel. With layers at hand, you're able to create, design and combine images to a level of precision and customisation that would be otherwise be impossible. In this tutorial, you'll discover the core functions of Photoshop's Layers panel, including tips on organising your layers into groups, colour-coding them for reference, and controlling how they interact with each other to create seamless blends.

We'll look at how to create a simple two-image composition using selections and masks, with adjustment layers and clipping masks to manage and control how the layers perform. By a process of careful layer management, you can work with layered Photoshop composites with little concern. It's the blending of light that makes a composition believable, so adjustment layers are vital to achieve visual harmony.

Right

The right stock

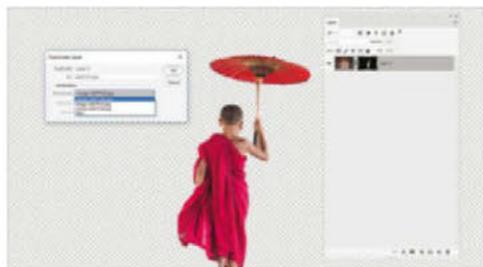
Pick two images that work together in terms of perspective and lighting



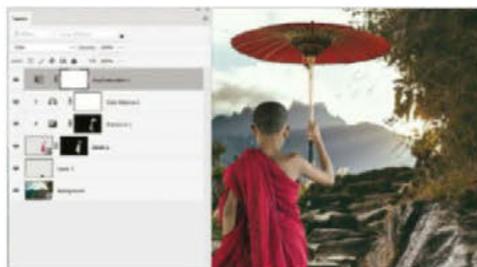
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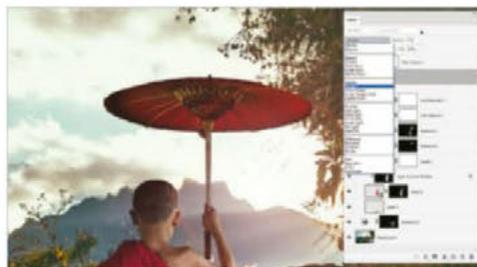
1 Select and transfer Select a subject using a layer mask: the Brush tool set to black gives more accuracy. Open an image and go to Layer>Duplicate. Select the image from the New drop-down to transfer the subject over.



2 Clip adjustment layers To blend two layers, use Exposure, Color Balance and Hue/Saturation adjustment layers. Clip the adjustments to the subject layer beneath by going to Layer>Create Clipping Mask.



3 Group layers Keep your Layers panels tidy by pressing Cmd/Ctrl+G to place selected layers into a Group. Rename the Group by double-clicking on its name, to make it easier to identify its contents.



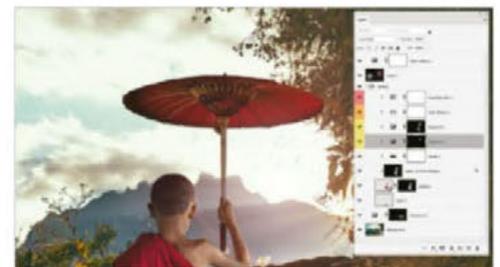
4 Quick blend change Blend two layers by changing the blend mode from Normal to Screen, for example. The shortcut to cycle through the options is Shift +/- . Try the Multiply blend mode for a different look.



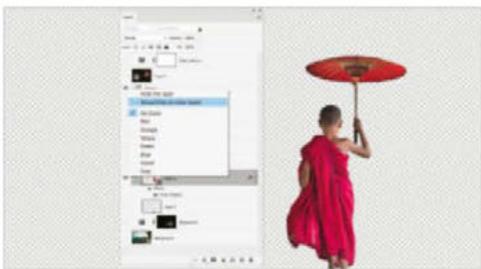
AFTER

Layers at work

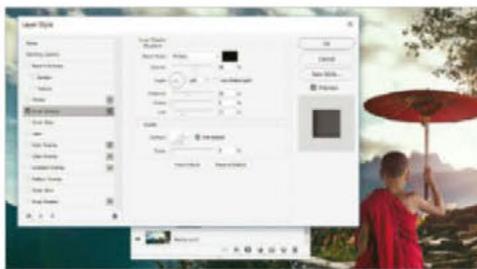
This is the final result of combining layers with adjustments and blending options to create a new composition – all while keeping the Layers panel looking tidy



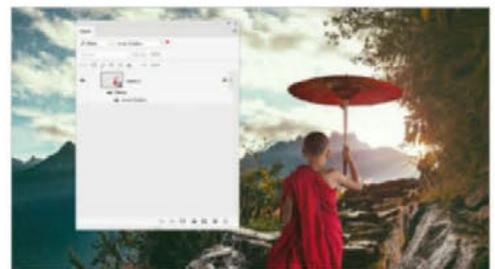
5 Colour-code for reference Photoshop lets you colour-code your layers – useful for busy compositions. Right-click a layer and pick a colour from the drop-down menu. This makes finding similar layers quicker.



6 Control visibility Quickly hide multiple layers by clicking and running the mouse over the eye symbols in the Layers panel. Right-click and select Show/Hide All Other Layers to leave one layer visible.



7 Blending options To apply an Inner Shadow to a layer, double-click the layer to open the Blending Options menu. Inside, select Inner Shadow and set Distance and Size to help blend separate layers into the background.



8 Search for a layer If you have Photoshop CC, you can use the search field in the Layers panel to locate layers. For example, select Effect and Inner Shadow, and only the layers with that style in them will appear.

Correct chromatic aberration in Lightroom

Learn to use the basic and automated import features to fix these common problems



Chromatic aberration, or 'fringing' as it's often known, is a natural defect of any lens; some suffer from it more than others. It's the distortion, or more precisely refraction, of light as it passes through a lens and onto the camera's sensor. The resulting effect is a slight defocusing of the detail in an image; although it's only slight, when you zoom in close, you'll be able to see chromatic aberration quite clearly.

We've called upon software such as Lightroom to reduce the appearance of chromatic aberration and, if we're lucky, to remove it entirely from this image. In this tutorial, we'll demonstrate Lightroom's Develop module and the functions involved with tackling chromatic aberration. You can set up Lightroom to auto-apply corrections

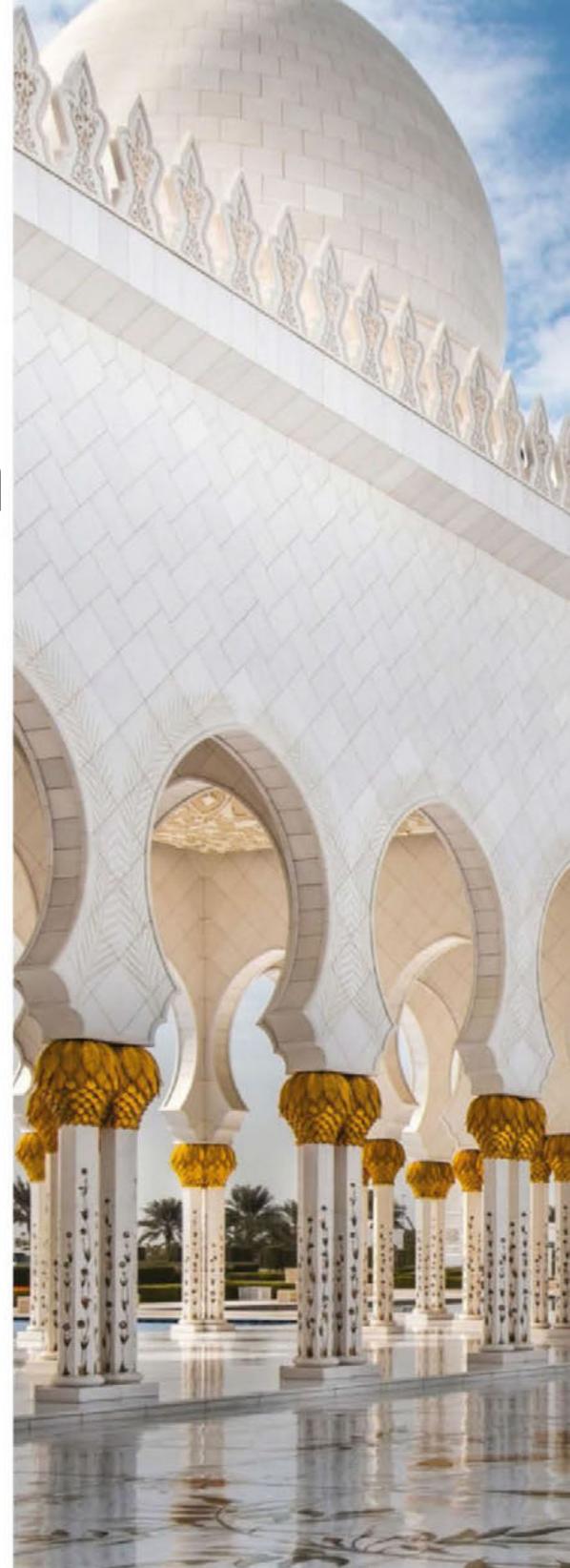
upon import, making the whole process almost happen behind the scenes every time you use a given lens.



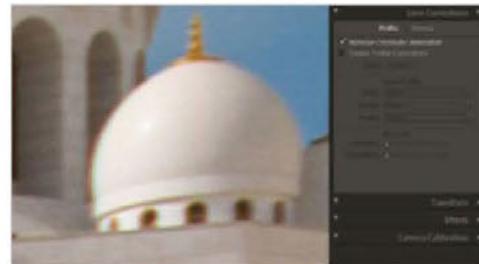
© Pixabay.com (615415)

Above Light distortion

Chromatic aberration appears commonly around image edges, between areas of contrast and detail



1 Assess the aberration Inside Lightroom's Develop module, head to the Lens Corrections section and locate the Defringe options. Before adapting any of the settings, zoom into your image (to 3:1 or more).



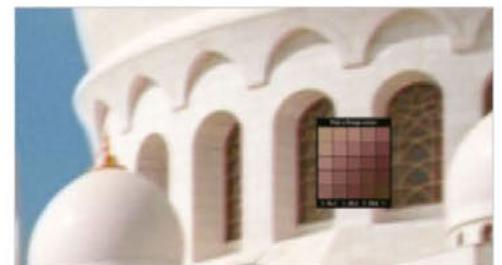
2 Apply profile corrections Under the Profile tab is an option called Remove Chromatic Aberration, which applies a correction based on a lens profile. This works well, though not always accurately.



3 Make manual adjustments Click on the Manual tab and take the two Amount sliders under Defringe to halfway. These will correct both purple and green aberration. You may only need to adjust one slider.



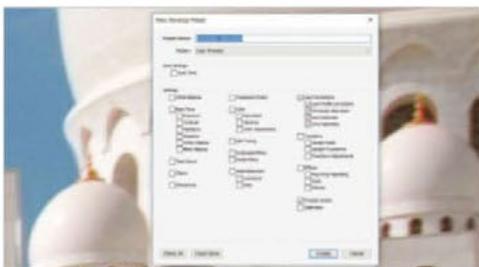
4 Expanding colour range If fringing is still visible, expand Green Hue and Purple Hue to include more blue and yellow tints, as well as green hues. This will allow for a more accurate correction.



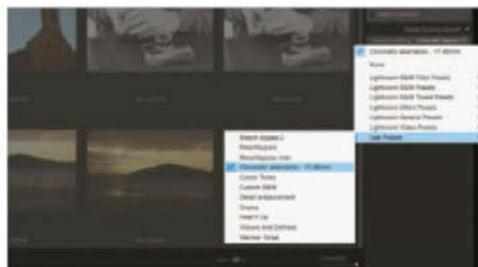
5 Eyedrop colour If there is still colour around edge detail, use the eyedropper in the Defringe panel to pick out specific colours of aberration by clicking on them. This method can sometimes produce the best results.



On close inspection...
Chromatic aberration is corrected between areas of contrast, which is best seen close-up at 200-300% magnification



6 Make a preset Click the '+' symbol inside the Preset tab to be able to apply these corrections during import. Tick only the Lens Corrections options and give your new preset a name. Click Create to save this preset.



7 Apply a preset across imports To apply the preset on import, go to File>Photos & Video. Inside the Import screen, locate the Develop Settings under Apply During Import and select your user preset from this list.



8 Efficient processing technique When you click Import, the effects will be applied to the selected images. Make correction presets for each lens in your kit, so that you can speed up the editing process in Lightroom.

Edit with Exposure X2

Get to grips with this plug-in to create traditional photo effects



Alien Skin's Exposure X2 plug-in introduces layers and brushes to its existing feature set. The addition of layers lets you easily apply effects in a non-destructive way, and gives you the ability to blend multiple effects into one image. The adjustments on hand within Exposure means customisation and personalisation are the principles of using the plug-in. With masking options and lens correction adjustments already included in the last edition, it's no wonder this plug-in makes the whole process accessible to beginners and intermediate users.

This tutorial will look at processing one image using two presets, and embellishing the results with borders and textures for a creative effect that's easy to create over any image. Create this as a preset and save your bespoke

effects for future use. From applying bokeh effects to infrared, the possibilities are endless.

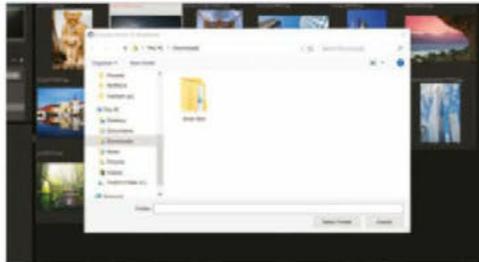


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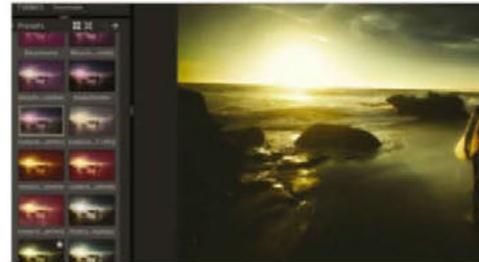
Right

Direct imports

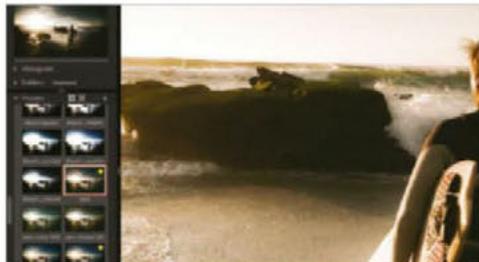
Import JPEGs and RAW images into Exposure from a memory card or from your hard drive



1 Add folders Locate the image you want to work on by heading to the Folders tab. You may need to add a folder to the list by clicking on the plus symbol. Exposure will display RAW and JPEG files.



2 Scope out the presets The Presets tab down the left gives access to a range of one-click effects. These are categorised into Color and B&W. Roll over any of these to see a quick preview of how it affects your image.



3 Stack multiple effects For a bespoke effect, head to the Layers panel and click Add Layer. Cycle through the presets to add another effect, and control the Opacity setting at the top of the panel.



4 A better blend To adjust the effects, load up the masking controls by clicking on the white or grey box in the Layers panel. Adjust the brush Size and Flow and paint away parts of the layer where required.



AFTER

Variety of effects

Exposure X2 consists of colour and black-and-white preset filters that range from traditional film styles to modern digital forms



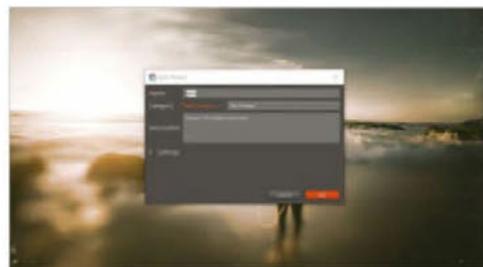
5 Key adjustments Adjustments to exposure, contrast, highlights and shadows can be made using the Basic panel. Head to the Detail tab to improve sharpness and reduce noise using the Detail sliders.



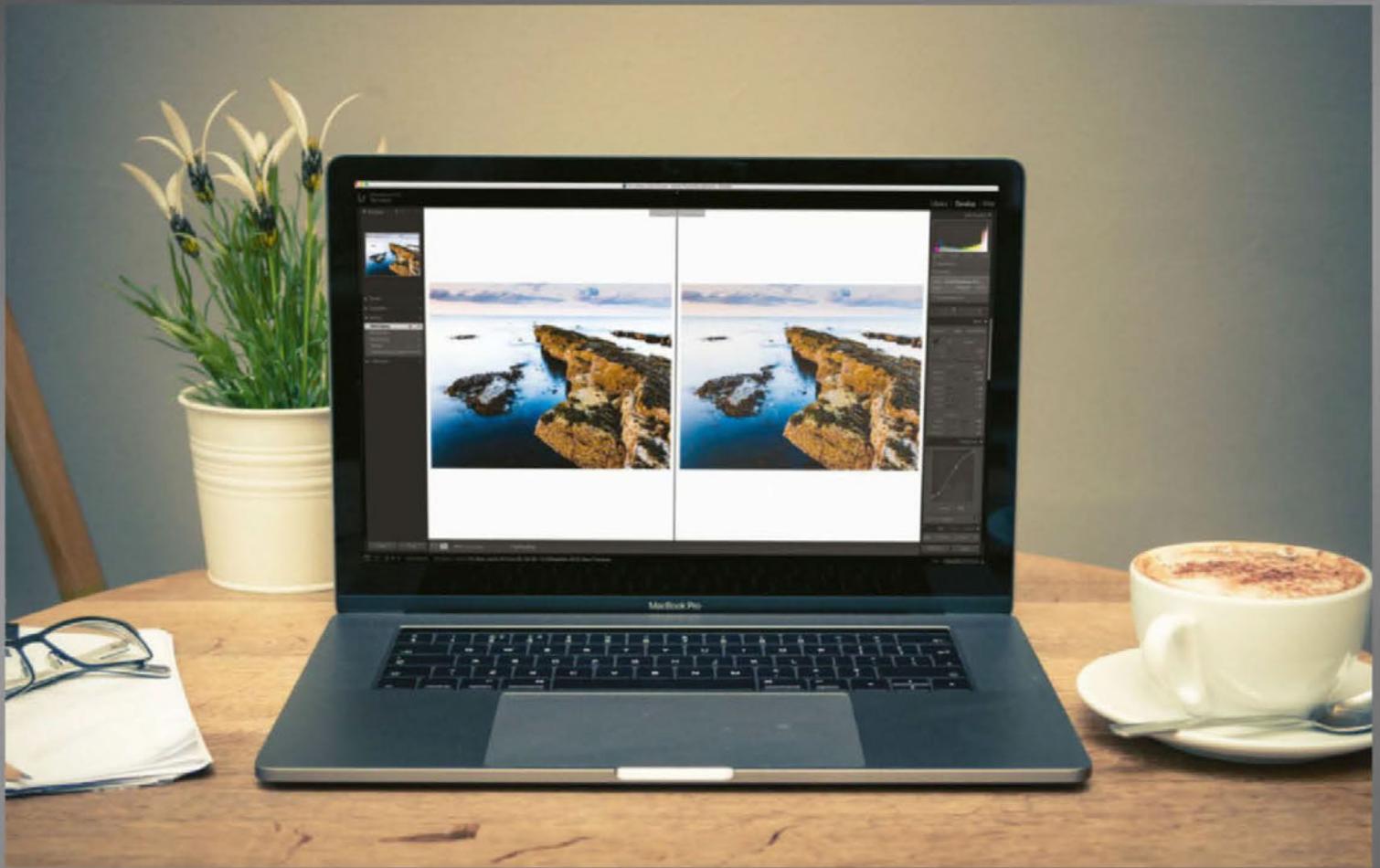
6 Texture and frame effects Head to the Overlays tab to add borders, light effects and textures to recreate the look of film. Use Zoom to resize the border, and use the arrows to randomise and change its position.



7 Stylish bokeh The Bokeh panel provides blur effects and lens distortions. Choose the Focus Region, then select your lens from the Presets drop-down. Adapt the bokeh's position using the on-screen guidelines.



8 Save out presets To export your image, go to File>Export. Set your file naming convention and file type, for example JPEG. Save out the effect as a preset by clicking the plus symbol in the Presets panel.



PROOF PRINTS IN LIGHTROOM

Get the most from this application's potential for home printing, with its range of useful options

01 Make a proof copy
When you soft-proof in Lightroom, create a proof copy of your image: this will allow you to make edits to a separate version, perfecting it for printing without affecting the original. If you are going to print on multiple papers, create multiple copies for perfect matching.

02 Profiling
When soft-proofing, be sure to select the correct paper you'll be printing on from the dropdown menu: this will apply the gamut of the paper to your proof, for a more accurate edit. Be sure to check and change this for every image you print if you are working with different papers.

03 Colour gamut
The colour gamut is the range of colours your printer can produce. When soft-proofing, Lightroom's histogram

shows an icon in the top right: when selected, this will enable you to see if you have any colours in your image that lie outside the gamut your printer is capable of.

04 Perceptual or relative?
Perceptual and relative modes in editing are important for the colours of your images in print. Perceptual changes will edit the entire colour of the image, while relative applies to single colours lying outside the printable gamut, to bring them back within range. Perceptual is often the better choice to maintain colour consistency.

05 Simulate paper and ink
Within the soft-proofing mode you can select the checkbox for simulating ink and paper. Lightroom will simulate the look of the paper, working from your profile, as well as the colour of the inks to give you an impression of the final print.

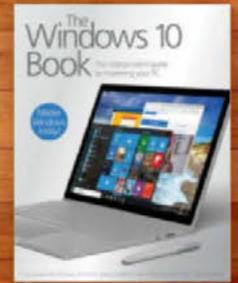
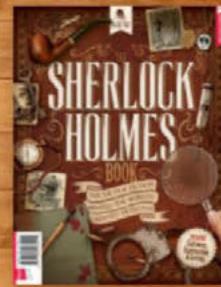
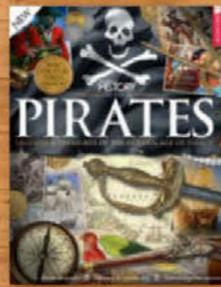
LIGHTROOM CC AND PHOTOSHOP CC BUNDLE

Great software is just as important as the best hardware. Adobe's Creative Cloud Photography plan combines Lightroom CC and Photoshop CC in one bundle, offering a truly capable suite for editing and printing, and for building an effective workflow. At £10.10 a month, it's a great deal.



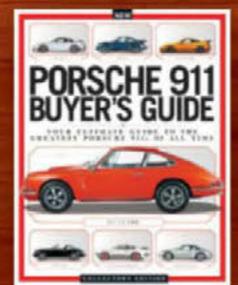
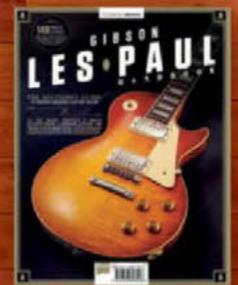
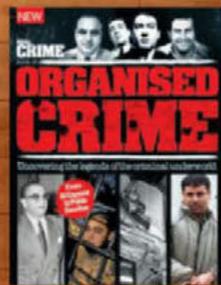
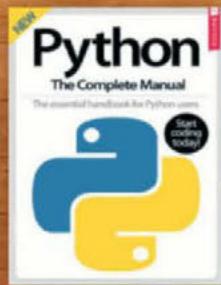
Maintain profiles

Before you start working with soft-proofing, for the best results it's important to make sure your profiles are up to date, both for your printer and your screen. Having these profiled accurately will mean the on-screen impressions of the prints will be far more true to life, enabling faster workflow and less waste of ink and paper. You'll need to profile for all the papers you want to use, as well as multiple printers if you use them.



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Stay on top of trends

Photography can be a fickle occupation. Discover a few simple ways to keep up to date with changing styles and fashions

In a world that never seems to stand still, staying abreast of what's happening on the wider creative scene is vital for your photography career. You might not be photographing for stock or fashion, but trends come and go in any genre. If you miss them or start to lag behind what's most popular, you could see your work being taken on by those who are staying up to date.

Whether you loathe or love new ways of working, it's important to make sure you know the recent developments in your industry. The most successful photographers – particularly in the realm of lifestyle and stock – are those who can recognise current trends and predict the types of shots that their clients or photo buyers will be looking for. Even if you don't follow the visual styles directly, you'll still gain an understanding of the photography market and know how your own portfolio fits in.

So, short of building a time machine to peer into the future, how can you determine what might be the next big thing? Over the next few pages you'll discover some of the best methods for keeping up with the latest leanings in photography. Here are a few simple ways for you to spot trends, stay ahead of the curve and make headway with your shoots and sales.

While not every photographer needs to fit in to be successful, keeping in the loop is still key. Lifestyle photographer Annie Tao (annietaophotography.com) doesn't like to follow trends, but still thinks it's important to be aware of them. "As a photographer, you are not only an artist, but also a business owner," she says. "It's your job as a business owner to know your market and industry trends – whether you decide to follow those trends is entirely separate.

"The more you know about what other photographers are doing in your field and what people are buying, then you know how to address that. It's just smart business."

Tao remembers one trend where newborn photographers would put newborns in jars and unlikely positions. "Though it was adorable when done correctly, this wasn't my style of photography, as I like telling stories with my images. Knowing this was what some people wanted, though, I was more aware of the market and could better decipher my ideal clients through the large population of families

having babies." While wedding photographer Brett Harkness (brettharknessphotography.com) acknowledges you shouldn't let your style stand still, he also admits that fitting in is a hard concept to get right. "You need to find the balance between being satisfied with what you're doing, and the need to be better. There's a battle between actually liking your imagery and the need to push yourself creatively to new places," he says.

In the vast expanse of the internet – and beyond – how do you know what's actually in demand? The beauty of trends is that they document and reflect the world around us. By opening your eyes to society and culture in general, you can start to understand what's 'cool' without a huge amount of effort. Staying up to date needn't be a chore, but something you can weave into your everyday life. Pick up a newspaper when you're on the train, watch the news, and scrutinise the latest magazines. Ask yourself what we, as a society, are involved with at the moment.

James Allsworth is a Contributor Relations Manager at the stock photo company Alamy, and knows first-hand that successful photographers immerse themselves in their craft. "There are countless resources out there, from hardware and software to on-trend imagery lists," he says. "Go to your local newsagent, view some popular web pages, look at print advertising or head to a bookshop and just have a look at what's being used. You'll soon get a feel for what's popular, and you'll get an idea of where your imagery can fit in.

"Connect with other photographers and buyers and get involved in photography conversations via social media, blogs and online forums. You do need to do your homework to a certain extent in order to be successful."

For Annie Tao, the easiest way to keep up with the times is by reading. "Part of my everyday routine is catching up on industry news. I do this both with photography publications and blogs," she shares. Asking herself questions also helps to stimulate research. "What's the latest technological advancement? What is the new lens that is coming out? How is one camera body update different than the last version? What do industry experts say about the latest gear?"

Add designated photo websites onto the

Advice from Alamy

Tips from Contributor Relations Manager James Allsworth



Where can professionals look on Alamy for subject and style guidance?

Our social pages are really useful. We post a whole variety of things, from inspiring imagery and picture needs (which we compile from customer searches) to links from around the web that our photographers will be interested in.

Our Stock Photo blog is also a great resource for photographers. We regularly post articles on current trends with tips, guides and insider info. Thousands of photographers use this to get inspired, entertained and educated!

What are the biggest trends you're seeing at the moment?

One of the most important trends you should tap into as a photographer is producing authentic-looking imagery. This requirement has been around for a while now, so it's hard to call it a trend as such, more of something to always keep at the front of your creative vision.

Many picture buyers want to see high-quality imagery of real-looking people doing real things. The days of stock shoots involving couples running down the beach in oversized linen clothing are gone. Candid, real imagery is king.

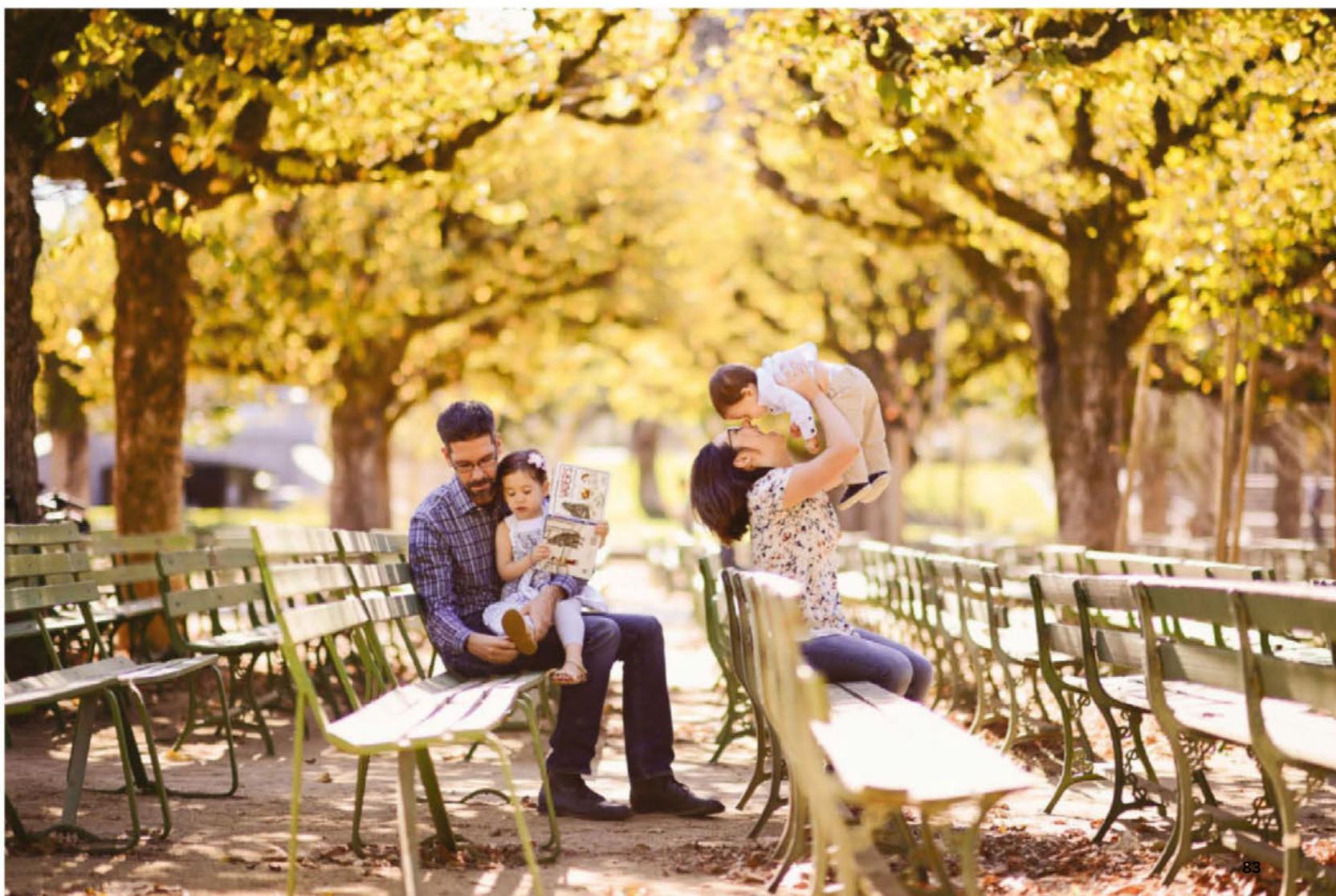


Above

Blogs are a great way to glean insights into what's selling. Alamy's own Stock Photo blog section contains plenty of tips and advice

Right
Get the stats
Many platforms such as Alamy will share search data with you, so you can get a solid idea of what paying customers are looking for

Below
In the edit
Remember that the way you edit also plays a part in the visual trend of an image. Look out for common colour schemes, shades and filters, such as those used in advertising and on Instagram



GO PRO



Above

Meet others

"People usually look for external training courses by myself or others as a way of pushing themselves to places they might not have considered," says Brett Harkness

Inset

Use directories

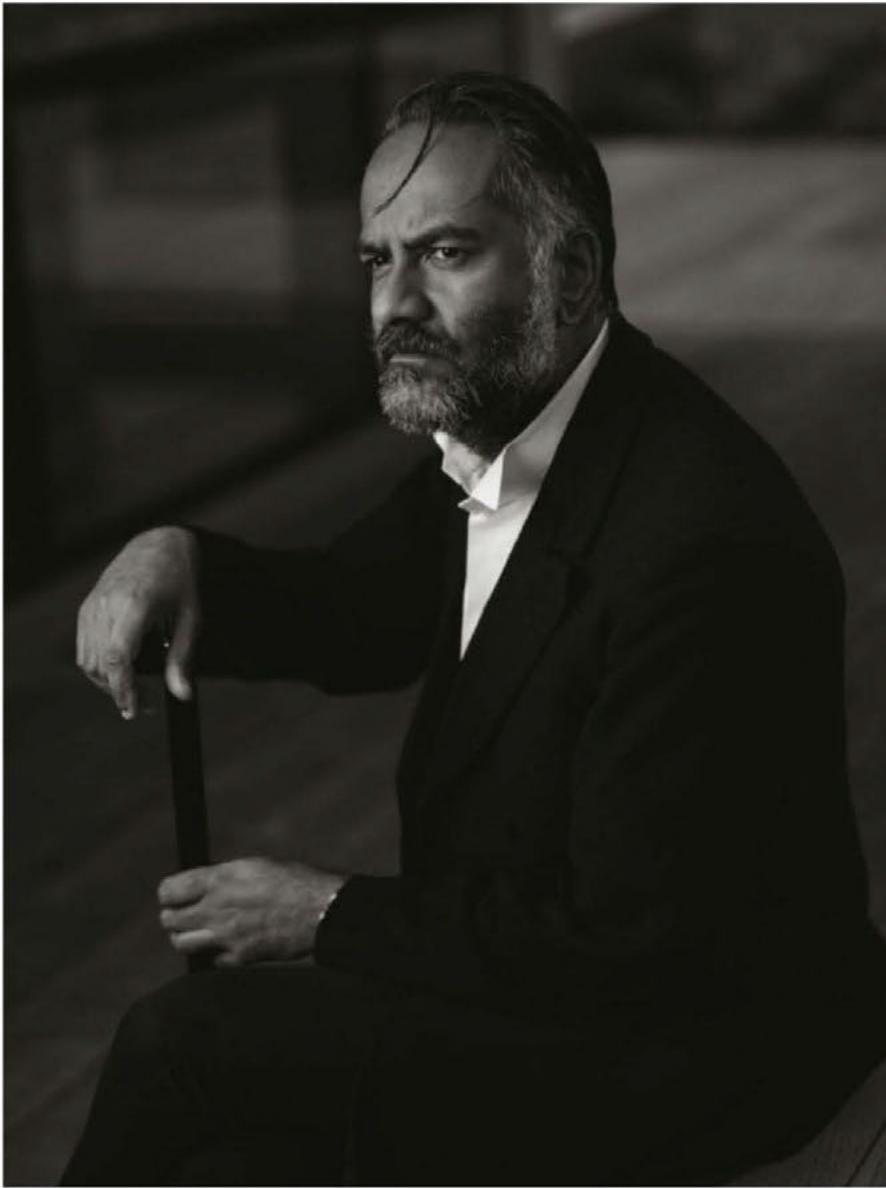
Browse the work of pro photographers in all genres, not just your own. "The Fearless Photographers website (fearlessphotographers.com) is a great source of inspiration for wedding photographers," says Harkness

Right

Don't compromise

"It's equally important to be your own trend," says Harkness. "My clients book me not because I am in trend but because I shoot the way I shoot, whether it's in vogue or not"





Right
Look inwards
 You need to track the trends of your own business as well as of others. Keep a note of your most popular images – those that have received the most positive feedback, ratings or sales

bookmark bar of your web browser or phone, and make it a habit to check in every so often and see what's new. Alternatively, use an RSS reader such as Feedly (www.feedly.com) to create an RSS feed and keep track of your favourite resources automatically. An RSS (Really Simple Syndication) feed will effectively tell a website to let you know every time it adds a new article, so you never miss out, but don't waste time tracking sites manually.

Talking to other professional photographers is an obvious and organic source of inspiration, but one that's often forgotten about in an increasingly digital age. "This can be through meetings, classes, conferences," Tao says. Sometimes the latest industry trend reads wonderfully, but isn't as practical in a real photoshoot situation. "Hearing what gear other photographers use and what techniques they use is a better way of knowing the real industry trends in my opinion." Attending both local and national trade shows also provides the opportunity to get real-life feedback from your customers and competitors.

Reading blogs is a quick, free and easy way to spot new fashions, provided you're looking in the right place. "I'm not a fashion photographer, but clothing is always important when photographing people," Tao says.

"My favourite way of honing in on what looks good in a group is from fashion blogs and magazines. I guide my clients on how to coordinate their outfits without looking 'matchy-matchy'. To look current without being overly trendy, you have to be coordinated, which could be something as simple as weaving a couple of colours throughout everyone's outfit. Or, it could be playing off the colours and style of one small accessory, like a scarf."

Fashion plays a part of any group photo, whether you're photographing a group of friends, models, or family members. It becomes even more vital in commercial photography, where images need to convey a feeling or create trust in the product or service.

If you set out to notice trends as part of your everyday life, you'll soon find that it becomes subconscious. Brett Harkness explores ad campaigns from commercial photographers, but also uses his down-time to discover new ideas. "When I'm watching movies, I like to take note of how things are lit and try and deconstruct it," he says. Unsurprisingly, social media is another indispensable tool. "You only have to flick through Facebook or Instagram for 20 minutes to see what everyone is doing. YouTube can also be a great way of learning

Identify trends

It's easier than you might think if you take the right approach

• Read

Devour journals and newspaper articles. Having a grasp of what's going on in the wider world – from politics to television shows – is invaluable.

• Follow others

Social media platforms like Instagram are a winner for identifying recurring themes, such as interiors and colour schemes or foods and fashions. Follow relevant photographers, brands and personalities.

• Use online tools

Check out the recommendations on stock websites. Community sites like 500px have directories that you can search through in terms of audience popularity, and what editors have picked.

• Network

Nothing will open your eyes as much as meeting others in your field. Go to conferences, trade shows or even galleries, and force yourself to discuss industry developments with at least one other attendee.

• Scour blogs

Blogs might vary in quality, but they're always a valuable source of information. If you start to see similar styles or subjects across many sites, you'll know you've spotted a trend.

new tricks and techniques and seeing what the world's photographers are up to. It's important to not put all of your eggs in one search basket. Look further afield to a variety of countries."

Changes in the marketplace can actually make it easier to sell work, not harder. Basically, if you're looking to make money from your photography, you have to shoot what your paying patrons want. "If you're not up to date with what's trending, both in the sense of what imagery is wanted and what technology you need to produce it, then you're going to fall behind those photographers that do," says James Allsworth.

Crazes come and go, so don't lose your own unique style in the process. "Take all of this research and mould it into a style that can become you," Brett Harkness advises. "Copy elements, sure, but then look to take it somewhere else that makes the imagery stand out as your own. There has to be a time that you are content with what you're producing – even if it's for a little while."

DP

Career advice

Writer and photographer Lauren Scott explores the ways to make yourself more employable in a competitive market

Advertise your skills

I recently finished a long autumn fashion shoot and at the end I had to send over the images to another retoucher for processing. I know that I could have edited the images myself quickly and to a high standard. Should I offer this option to clients in the future?
Dan Rowlings

Many photographers have a whole host of fantastic 'extra' skills, but they don't list them on their website or mention them in person. If you're great at retouching, let clients know, and show them relevant examples of your work. If they know they aren't going to have the hassle of sourcing a retoucher as well as a photographer, often you'll become a much more attractive candidate. That being said, they might prefer to use their own staff, who'll know the specific house style better than you will.

Bear in mind that it isn't always enough just to say you're good at something – clients might want tangible proof. If you're a whizz with Photoshop, for example, becoming an Adobe Certified Expert proves you know the product inside and out and can put your expertise to use. Likewise, if you use LinkedIn, add specific skills to your profile – it looks even better if you can get endorsed for them. Ongoing learning is important for your employability, but also for your own development.



Above
Photography courses and accreditations, like the ones Adobe offers, are a good way to get validated for your professional abilities

Seek feedback

I'm a part-time commercial photographer, and have worked with a few local companies to shoot images that promote their business – events, food for menus and team shots. I really want to accumulate some more regular work, but without a large portfolio and a well-known name, I'm not sure larger businesses will trust my photography skills. How can I convince potential clients that I'll do a professional job?
Jo Crawley

When you buy a new product online, how often does a positive customer review sway your purchase? Probably quite regularly. In today's saturated photography market, testimonials from your past clients can work in a very similar way. Testimonials give customers some encouragement and reassurance that you'll do a good job, which makes them more likely to part with their cash and hire you over someone else.

The first thing to do is reach out to your past and current clients – probably the ones you've got the best working relationship with – and ask them if they could provide you with a few descriptive sentences. It might seem vain fishing for praise, but it'll aid your credibility in the long run. Testimonials are more than just reviews of your talent: they help clients to find out if your skills will be a good match for them.



Above
A good way to assure new clients of your abilities is by getting endorsement and testimonials from past and present customers

Find a niche

Over the years I've shot many different types and styles of commissions, depending on what a client has been looking for. I feel like I don't have a defined style, and that this is making it harder to find work. Should I find a niche? If so, how can I narrow my image-making down?
Allie Waring

Allie Waring



Above
Commissioning editors and art buyers want to have a good idea of what they're getting before they pay for it

There are many good reasons to find a niche and stick with it. For a start, you'll probably find it liberating when you realise you don't have to master every kind of photography. It also becomes easier to excel when your efforts are focused on one style – a style that you truly enjoy – and you should find it easier to get work when your approach is more specialised.

So how do you narrow down your niche when you've been working in so many different ways? Ask yourself what you're particularly good at shooting, as well as what you enjoy the most. From a practical perspective, consider how well a chosen niche pays, and whether it requires a significant kit investment. It's hard to advise you in more detail without knowing a little more about the genres you've shot, so trust your instincts.

If you really can't decide which direction to take, go old-school and write down a list of the pros and cons of each. And then, when you've made the final decision, really embrace it. Tailor your website and branding accordingly, so that when new clients land on your page, they'll know exactly what it is you're about, and what you can offer them.

Pro insight

Freelance editorial and commercial photographer Gareth Iwan Jones shares his advice for winning regular commissions



3x © Gareth Iwan Jones

What's your personal approach to being more employable?

I try and be proactive both behind the scenes and also within an ongoing commission. Clients like photographers who go the extra mile to make sure things run smoothly and that the best results are achieved. You are providing a service, albeit a creative one, so always be as professional and dependable as possible. I get the impression from talking with clients that there are a lot of photographers who are a bit fast and loose with this side of the job. Get good at planning and spotting potential hiccups before they happen.

How do you make yourself more attractive to clients?

In the first instance, consistently producing strong work will make you attractive to a potential client, but professionalism, good communication and being accommodating and agreeable are of equal importance. You could be the best photographer in the world, but if you're hard to work with, clients are not going to see you as an attractive option.

Do you think having a particular niche is important to landing commissions?

Absolutely, although it can be frustrating, especially early on in one's career. Specialise in doing one thing extremely well – there are thousands of photographers who can do most types of photography reasonably well. It's a competitive world, and you need to stand out.

www.garethiwanjones.com

Right-top

"As a freelance photographer, you are running a small business. Understand the aspects of the work beyond taking pictures," says Gareth Iwan Jones

Right

"Shoot as much personal work as possible and put your best work in front of the relevant people." Jones advises





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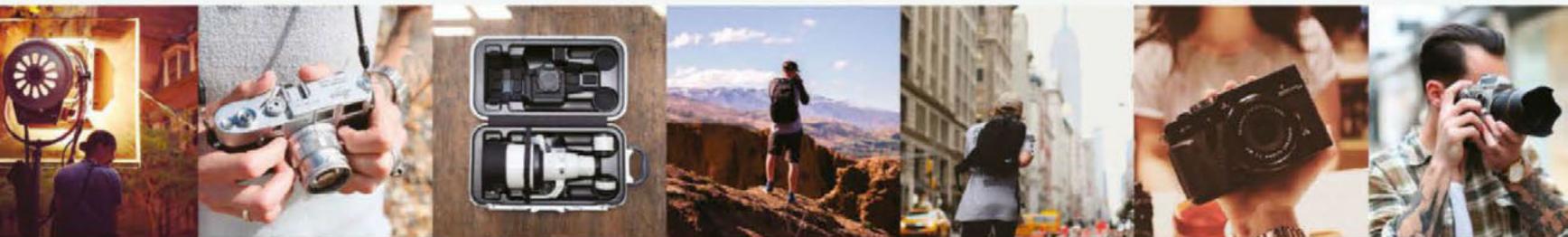


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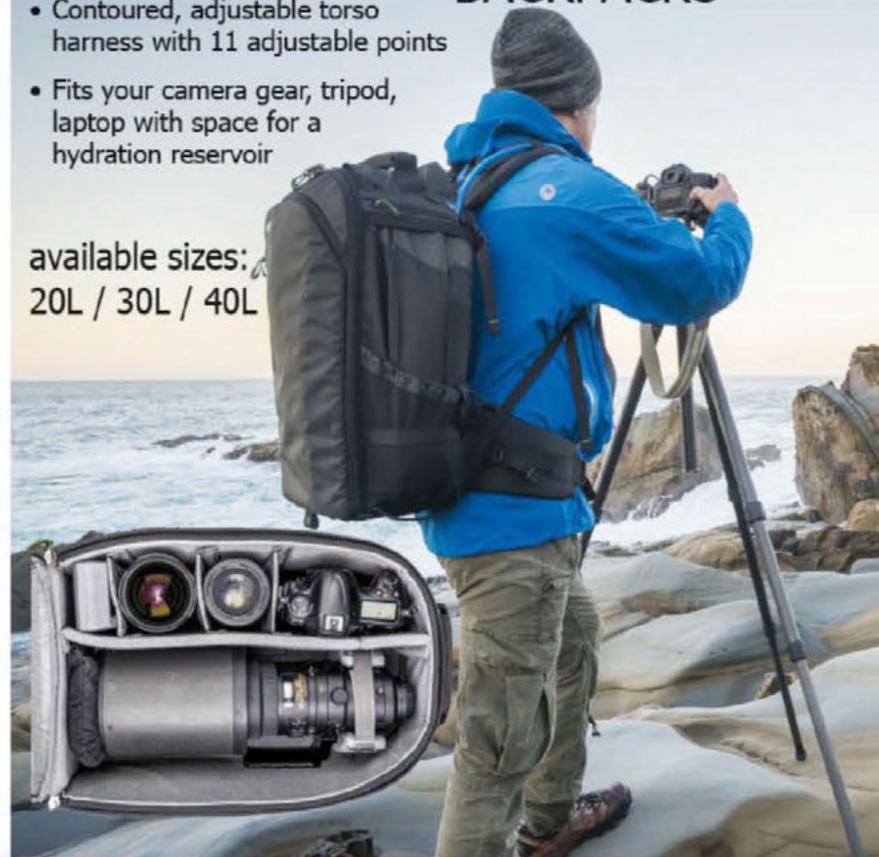
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MACRO MAGIC

Lenses with close focusing ability are relatively affordable. We focus in on four options



Of all the more niche areas of photography, the world of macro shooting is arguably the most popular and unquestionably the most accessible. Often, you don't even need to leave the house to capture something striking, as the list of potential subjects is endless. Furthermore, high-quality macro lenses can now be bought for most mainstream camera systems at a very reasonable price, meaning that anyone can get started without too much trouble.

In some ways, the four macro lenses on test are very much equal to each other. All are, for example, true macro lenses, in the sense that they can reproduce a subject on the sensor at the same size as it appears in real life. All also provide coverage for full-frame systems, but can be used with cropped-sensor models if required.

Not all incorporate features like image stabilisation or weather resistance, however, and one of the optics on test even lacks a focusing motor. They are also priced very differently. Over the next few pages, we'll test these features and weigh up the overall proposition against each lens' price tag to see how much value for money each offers.

We'll also consider how well each manages to capture fine detail, and the extent to which it can keep out-of-focused areas pleasing and bokeh nice and round. Macro lenses tend to be well-corrected for various aberrations, so we'll examine the degree to which this is the case for each.







SRP: £870/\$900

Canon EF 100mm f2.8L Macro IS USM

It's the dearest optic on test, so our expectations are high for this 2009 model

Upon its release in 2009, this lens was notable for being Canon's first optic to include a Hybrid IS system, correcting for both rotational movement and shifting, although this kind of correction is now more widely available with camera-based stabilisation systems.

This is the lightest optic out of the four here, and arguably the nicest to use too. Build quality is high, and the attention to detail is superb. The fact that the lens is weather-sealed makes it even better.

The focusing ring isn't quite as tactile as some others, but it moves with just the right level of resistance for fine control, while the focus distance window is the clearest one on test. The various switches, which include a focus-limit control, are flat enough to prevent them from being knocked out of place, but large enough to shift easily.

Thanks to the USM motor, autofocus is smooth. While it's not as speedy as its Nikon rival when hunting, it's still swift enough.

For this kind of money we expect a lot from the images, and we get it. Central sharpness is already very good at the maximum aperture, with corners just a touch behind, but once you stop down to f4 the lens shines. Some vignetting and very minor chromatic aberration can be seen at f2.8, but distortion is practically non-existent.



Above
Corner sharpness
Corner sharpness is good wide open, but consistency improves once you get to the middle apertures

Top
Quality craftsmanship
From the finish of the barrel to the large and clear focus distance window, this lens is constructed to an excellent standard



SRP: £350/\$599

Samyang 100mm f2.8 ED UMC Macro

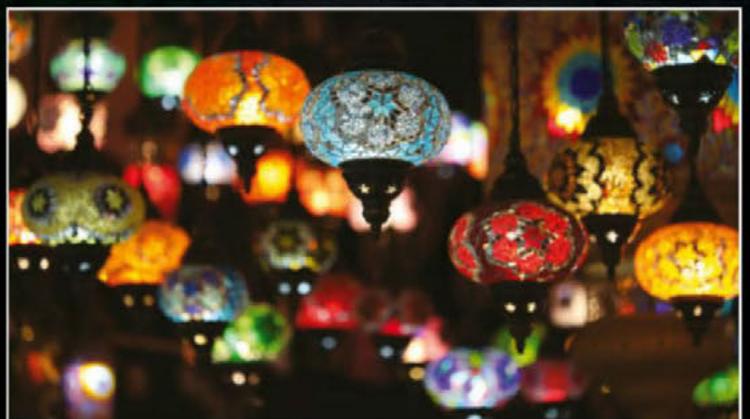
Available for a broad range of users, if you're happy to live without an AF motor

Available for seven mounts and with the lowest street price, this optic would perhaps have the greatest appeal, were it not for the fact that it lacks an autofocus motor. Those who tend to use manual focus for macro may not mind this, but it does make things more awkward for conventional shooting. Furthermore, only the Nikon version supports auto exposure, so you need to adjust the aperture through a ring on the lens if you use it with a Canon, Sony, Fujifilm or Micro Four Thirds body.

Elsewhere, however, the lens has a solid set of specs, including full-frame coverage for Canon, Nikon and Sony E-mount systems and a nine-bladed diaphragm with circular blades to keep bokeh round.

Unlike the other three optics on test, there's no focus distance window: the markings are on the barrel itself. The lens itself feels sturdy, although the plastic aperture ring feels cheap.

You need to focus with great precision to get the best out of it, particularly when shooting handheld, but it's great to see a sound optical performance. Used wide open, vignetting is well-controlled and sharpness is very respectable in the centre of the frame, although corners suffer a little by comparison. Axial chromatic aberrations are minor, while pincushion distortion is low enough to not be a concern.



Above
Sharpness

There's good central sharpness at f2.8, but consistency across the frame soon improves with smaller apertures

Top
Streamlined design

A broad focusing ring sits in the centre of the streamlined body, and this bears markings to show focus distance



SRP: £360/\$570

Sigma 105mm f2.8 DG Macro HSM

This optically stabilised lens is a significant update to Sigma's older 105mm macro lens

Sigma's previous 105mm f2.8 EX DG Macro lens was already a well-respected optic, but this newer version is considerably more refined, yet still keenly priced. It's just slightly dearer than its Samyang competitor, yet it offers a four-stop Optical Stabilizer and a Hyper Sonic Motor that promises fast and silent autofocus.

This system makes full-time manual focus possible when the lens is set to autofocus, while the floating inner focus system is designed to keep any aberrations at a constant level as focusing distance varies. There's also a nine-bladed diaphragm on the inside.

In addition to a focused-distance window, the barrel sports AF/MF, Optical Stabilizer and Focus Limit switches; these are both large and pleasingly salient, but they can catch and shift out of place.

The Hyper Sonic Motor delivers pleasingly prompt and relatively unobtrusive autofocus, although when it does need to hunt it's a little slower than the Canon lens (and considerably slower than Nikon's).

Image quality is very good overall, with a noticeable effectiveness from the OS system and very good central sharpness at 2.8, but slightly soft corners. There's also relatively strong vignetting at the maximum aperture, but once you stop down to f4 the situation is much better.



Above
Vignetting

Real-world images show vignetting to be pronounced at f2.8, but much of this disappears when you stop down to f4

Top
Distortion

Curvilinear distortion is practically non-existent in images, even those containing subjects with linear details



SRP: £770/\$900

Nikkor AF-S VR Micro 105mm f2.8G IF-ED

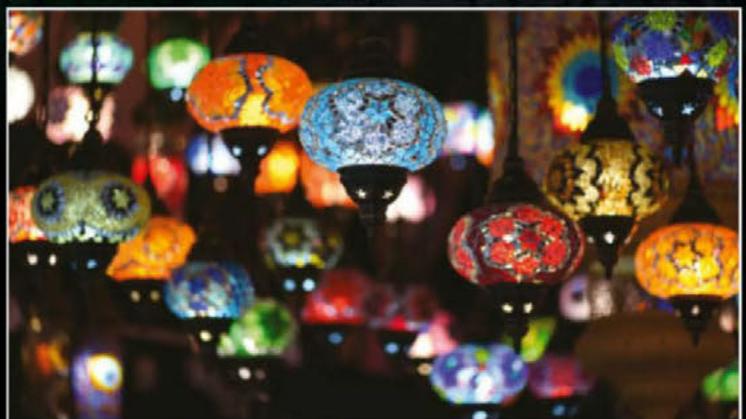
Arguably the most popular macro for Nikon users, with a Silent Wave Motor for autofocus

Nikon claims that this model, long a favourite among Nikon users, was the first macro lens to incorporate an image stabilisation system. Here, it provides up to four stops of correction, and is joined by Extra Low Dispersion glass, Nano Crystal Coating and a nine-bladed diaphragm for round bokeh.

The barrel is furnished with a focus distance window and a one-option focus-limit switch; these work with a Silent Wave Motor on the inside. It's relatively quiet, but, perhaps more importantly, a comparison with the other two AF-ready lenses shows the Nikon races ahead for speed when focusing between different distances.

Sharpness is nice and consistent across the frame – even at wider apertures – but stopping down shows details to be clarified to an excellent level. The image stabilisation system also proves its worth, with very good performance down to 1/30sec or so, before it becomes harder to get acceptably sharp results.

There's a touch more curvilinear distortion than with the Sigma lens, and you'll see some vignetting at the widest few apertures, which can affect the character of bokeh. At least Nikon's camera-based corrections make vignetting less of an issue in images.



Above Clear details

Clarity of details is superb at all apertures, but particularly when you stop down a little

Top Design

The Nikkor is more bulbous than the other designs here, with a pleasingly deep focusing ring and a sturdy barrel going some way to justify its price



Canon EF 100mm f2.8L Macro IS USM

Manufacturer Canon
Elements/construction 15 elements/12 groups
Angle of view 23.4° (diagonal)
Max aperture f2
Min aperture f32
Min focus distance 30cm
Mount Canon EF
Filter size 67mm
Length 123mm
Diameter 78mm
Weight 625g

Features Image Stabilization, fast AF and a two-option focus limit switch mean top marks ★★★★★

Build quality Despite its lightness, it's crafted to a high standard, with plenty attention to detail ★★★★★

Handling With a pleasing finish, a large focusing ring and light construction, handling is excellent ★★★★★

Quality of results Great image quality overall, with minor issues capable of being easily rectified ★★★★★

Value for money While image quality is strong, the price is significantly higher than it ought to be ★★★★★

Overall
 An excellent performer that's only really let down by its sky-high price tag
 ★★★★★



Samyang 100mm f2.8 ED UMC Macro

Manufacturer Samyang
Elements/construction 15 elements/12 groups
Angle of view 24.8° (diagonal)
Max aperture f2.8
Min aperture f32
Min focus distance 30.7cm
Mount Canon EF, Nikon F, Pentax K, Sony A, Sony E, Fujifilm X, Micro Four Thirds
Filter size 67mm
Length 120 to 150mm (dependent on mount)
Diameter 73mm
Weight 730g (dependent on mount)

Features With no AF or image stabilisation, and AE only offered for Nikon users, it's not too rosy ★★★★★

Build quality The body and lens mount feel solid, but the cheap aperture ring lets it down ★★★★★

Handling It's not bad to handle at all, with a pleasingly large throw from the focus ring ★★★★★

Quality of results Very good results for the money, with nice out-of-focus characteristics and low aberrations ★★★★★

Value for money Decent if you can stand its limitations, but at this price the Sigma trounces it for features ★★★★★

Overall
 While the other three offer greater convenience, the Samyang is still capable of respectable results
 ★★★★★



Sigma 105mm f2.8 DG Macro HSM

Manufacturer Sigma
Elements/construction 16 elements/11 groups
Angle of view 23.3° (on Sigma SD1)
Max aperture f2.8
Min aperture f22
Min focus distance 31.2cm
Mount Canon, Nikon, Sigma, Sony
Filter size 62mm
Length 126mm
Diameter 78mm
Weight 725g

Features A sound AF motor, two-mode OS system and a focus distance switch leave nothing missing ★★★★★

Build quality Lack of weather-sealing and the smooth finish feel a little cheap, but these are minor points ★★★★★

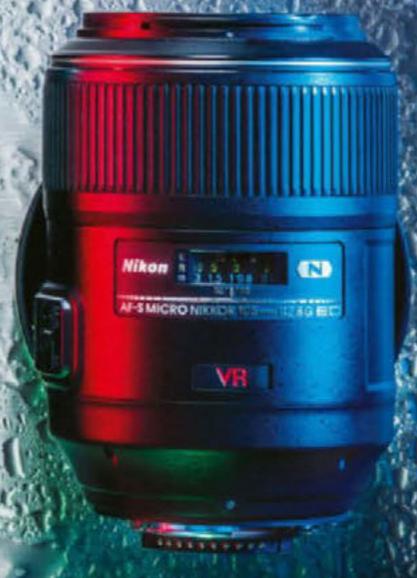
Handling The finish might not be to everyone's taste, but its size provides great handling ★★★★★

Quality of results Only the vignetting at f2.8 lets it down – otherwise, it's a commendable performance ★★★★★

Value for money For this price it's surprising to find all key boxes ticked – it's an absolute steal ★★★★★



Overall
 With a current asking price of around £360, this lens delivers far more than expected
 ★★★★★



Nikon AF-S VR Micro 105mm f2.8G IF-ED

Manufacturer Nikon
Elements/construction 14 elements/12 groups
Angle of view 23° (diagonal)
Max aperture f2.8
Min aperture f32
Min focus distance 31.4cm
Mount Nikon F
Filter size 62mm
Length 116mm
Diameter 83mm
Weight 750g

Features Another focus-limit distance and larger window would be nice, but the basics are here ★★★★★

Build quality The switches don't feel as solid as they could be, but the barrel itself feels pleasingly robust ★★★★★

Handling The focusing ring is large and great to handle, although the switches are fiddly ★★★★★

Quality of results Despite some wide-aperture vignetting and a touch of distortion, an overall solid performance ★★★★★

Value for money While its performance justifies a handsome price tag, it's still dear next to the Sigma ★★★★★

Overall
 A superb focusing system and great image quality. An easy, if pricey choice, for Nikon users
 ★★★★★

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Above
Asymmetric design
The body is designed very differently to the norm, although the grip does provide fine handling

Opposite-top
Solid build
With magnesium panelling used in its construction, the camera feels mightily robust



SRP: £1,350/\$1,200 (body only)

Sigma sd Quattro H

With a sensor claimed to produce 51MP-quality images, is the sd Quattro H a cut-price, medium-format killer?



One of two mirrorless cameras released last year by Sigma, the sd Quattro H is much the same as its sd Quattro launch partner, although it features a larger APS-H-type sensor in place of the sd Quattro's more standard APS-C chip.

This type of sensor was used inside a number of Canon EOS-1D editions, although it appears to have been abandoned in recent years. Thanks to the Foveon technology on which it is based, Sigma claims its sensor can produce images equivalent to those from a more conventional camera with a 51MP sensor. However, as with previous Foveon-sensor models, there's no video mode.

Aside from this, the spec sheet is pretty sound. Inside its rugged magnesium-alloy body, you get a 2.36million-dot viewfinder and a 1.62million-dot LCD, with an adjacent LCD screen to show shooting information. The focusing system only offers nine AF points, but you can move the point around the frame.

You'd expect the phase- and contrast-detect AF hybrid system to find focus speedily. Sadly, this doesn't appear to be the case. Although focusing speeds will partly depend on the lens used, with the Sigma 35mm f1.4 DG HSM that was supplied for this review, they aren't quite as fast as the responses we're used to seeing elsewhere.

In good light it typically takes around a second for the camera to confirm focus, which is fine for still-life and macro work but less so elsewhere. This is mirrored by a general sluggishness post-capture, such as when you try to play back images or when you zoom in and out of them.

The menu system, however, is excellent. Sigma has made very good use of colour coding, and everything is clearly marked. Navigating the menus is fairly straightforward too, with the buttons on the rear having a good, positive bounce to them. The D-pad used to do this is slightly recessed into the back plate, though, which can make pressing some of the buttons slightly awkward.

With 2.36million dots, you should expect the viewfinder to be of a similar standard to those found in other current mirrorless cameras, although performance here is mixed. When composing images and immediately after capture, the feed is nowhere near as clear as expected, with artefacts and a general lack of detail. Once images are reviewed and zoomed into, however, they are much crisper.

There's also typically a slight delay between the image being shown and it being rendered in full detail; this is also the case with the LCD screen. While the LCD lacks the ability to be tilted or operated by touch, the display itself reproduces images and fine details well.

For all its quirks, it's difficult to fault the camera's build quality. Sigma claims it's

“You'd expect the AF hybrid system to find focus speedily. Sadly, this doesn't appear to be the case”

FEATURES

SUPER FINE DETAIL MODE

This option captures seven separate exposures, which are then blended together to create a single image with a wider dynamic range and lower noise.

DC CROP OPTION

Only Sigma's DG optics produce an imaging circle large enough to satisfy the APS-H sensor's dimensions, but you can use Sigma's DC lenses too.

DUAL RAW MODE

The camera shoots both DNG and proprietary X3F RAW files, although it's not possible to shoot DNG+JPEG at the same time.

PHASE+CONTRAST DETECT AF

Focusing is performed through a combination of phase- and contrast-detect systems, with sensitivity down to -1EV.

FOCUS PEAKING

When manually focusing the lens it's possible to call upon focus peaking, which places highlights over the edge of a subject.

APS-H SENSOR

Slightly larger than the APS-C sensors commonly found elsewhere, the sensor applies a 1.3x crop factor to any mounted lens.





ISO RESULTS
 Noise is present at all sensitivities, but at the lowest ISOs it's generally well-controlled. There's a sharp downturn after ISO 400, with saturation of certain colours dropping at ISO 800 and ISO 1600 as noise takes over.

dust-and weather-resistant, and its choice to keep things fairly minimal around the front and top plates has resulted in a camera that has no apparent weak spots. It look smart and feels sturdy – even the eyecup seems to be soldered on with incredible strength.

As we've come to expect from Sigma's cameras, image quality can be superb at times but decidedly less so at others. At its lowest sensitivity the camera can record impressive detail at its default resolution of 25.6MP, and even when set to the S-HI option (which outputs 51MP files), images hold up surprisingly well. Noise, however, is more noticeable than on other cameras, even at lower ISOs.

Due to the nature of their capture, RAW files barely need any sharpening as they are naturally detailed enough (at least, those at lower sensitivities). Programs such as Adobe Camera Raw tend to apply a touch of sharpening as they open images, which only exacerbates the noise that's already present.

The camera can capture RAW images in both DNG or Sigma's proprietary X3F formats, although the latter can only be opened in its clunky Sigma Pro Photo software, or through in-camera RAW processing. Although this feature takes its time to spring to life, it's welcome to find it as usable as it is, with an agreeable level of image-processing control.

While detail in images can be very good, the camera's metering system can be less than consistent on occasion, which makes exposure compensation necessary. Dynamic range is strong, however, with grossly

TALKING POINT...

Sigma's SA mount

The Sd Quattro H's body makes use of the same SA mount that has featured on the company's previous interchangeable-lens cameras, such as its SD1 DSLR. Looked at one way, this is a very good thing. Not only does this make the camera compatible with a broad range of lenses for a mirrorless model, but many of the most recent additions have been very well received.

The downside is that these lenses are typically larger and heavier than equivalent options for other mirrorless cameras. The use of these same lenses also means that the flange back distance – that is, the distance between the sensor and the lens-mounting ring – is also fairly far forward for such a camera, which further compromises size.



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underexposed images capable of being brought up to a usable standard in post-processing.

Colours have a pleasant depth to them, and the Vivid colour option does a wonderful job of giving images containing foliage and other natural subjects a boost, making such images very usable straight out of the camera. You just need to be careful at times with the metering system, as slightly underexposed images can appear a little overcooked.

The sd Quattro H is just as intriguing a camera as previous Sigma models. On one hand it can produce excellent images, with the advantage of the Foveon sensor very clear. On the other, it's bulky and occasionally sluggish.

Right Metering

The camera generally gets exposure right, but it is sensitive to backlighting, which can cause underexposure

Above-inset

Pleasingly out-of-focus characteristics

With the Sigma 35mm f1.4 DG HSM lens, it's possible to get some beautifully defocused background areas at wide apertures



Sigma sd Quattro H

Megapixels
38.6MP

Max resolution
6192 x 4128 /
8768 x 5840
(S-HI mode)

Sensor information
Foveon Direct X3,
APS-H

Shutter speed
30-1/4,000sec, Bulb

ISO sensitivity
100-6400

Exposure modes
P, A, S, M

Metering options
E, CW, S

Flash modes
N/A

Connectivity
USB 3.0,
mini-HDMI (Type C)

Weight
635g (without
battery and card)

Dimensions
147x95x91mm

Batteries
Rechargeable
lithium-ion battery

Storage
SD, SDHC, SDXC

LCD
3-inch LCD,
1.62million dots

Viewfinder
EVF, 2.36million dots

Features

A capable sensor and great LCD screen, but it would be nice to see a tilting display and Wi-Fi

★★★★★

Build quality

Thanks to its magnesium alloy body, the sd Quattro H is a solid camera that should withstand knocks

★★★★★

Handling

The deep grip gives good purchase but the unconventional design doesn't appear to have any benefit

★★★★★

Quality of results

The sd Quattro H is capable of delivering superb detail, but noise and metering issues disappoint

★★★★★

Value for money

For this kind of money we expect a camera with a sound focusing system and a clear viewfinder

★★★★★

Overall

There's plenty to love about the sd Quattro H, but its bulky size and a handful of other significant shortcomings make it difficult to recommend over rivals

★★★★★



1 DUAL SCREEN
The main LCD screen is accompanied by a secondary screen that displays shooting information.

2 DISPLAY SWITCH
A lever allows you to switch between the viewfinder and the LCD, but this can be left to Auto if you prefer.

3 VIEWFINDER
The camera's electronic viewfinder protrudes a fair way from the camera's back plate.

4 THUMB REST
A substantial, raised thumb rest works with the grip around the front to provide a secure hold.



Top
Artificial light
 Colours are still impressive even under artificial light and noise remains low

Middle
Metering
 Metering can err at times but exposure compensation is easily applied

Above
Default colour output
 The default Bright Custom Image mode delivers gorgeous colours

SRP: £599 / \$599 (body only)

Pentax K-70

With a weather-sealed body and a pentaprism viewfinder, the K-70 belies its upper-entry-level price

 Ricoh Imaging has sent a couple of years revamping its Pentax-branded DSLR line; the K-70 is its upper-entry-level offering. Despite that billing, it offers the same high features-to-price ratio we've come to expect from the company.

Headline features include a 24MP APS-C sensor that's been designed without an optical low-pass filter, for detail retention. This also boasts phase-detect AF pixels to provide a Hybrid AF system when using Live View. A pentaprism viewfinder with almost 100% scene coverage is good to find at this level, as is sensor-based image stabilisation and the camera's weather-resistant construction.

The body is larger and heavier than many rivals. The boxy design might not be to everyone's taste and the handling is also likely to split opinion, as the grip unusually protrudes beyond the side of the camera. Still, the grip itself is nice and deep, and the thick rubber used here is very comfortable to the touch.

The design of the power control makes it easy to overshoot the On position and end up in the movie mode. Otherwise, buttons press positively, the mode dial is nice and tall for easy turning, and it's great to find two command dials on a camera at this level. Customisation here is recommended, however, as it can be difficult to turn the rear dial with your face to the viewfinder.

The viewfinder is clearly superior to those on rivals, with almost 100% scene coverage, although its high magnification of 0.95x makes it somewhat difficult to see in its entirety

without having to look around it. The LCD screen is high in contrast, though, and its vari-angle design boosts its suitability for awkward compositions, although it's a pity it's not touch-sensitive like the displays in many rivals.

An 11-point AF system is somewhat behind the times at this level, but the presence of nine cross-type points and -3EV makes it very capable for general shooting. With the SMC DA 18-135mm f3.5-5.6 ED AL (IF) DC WR kit lens, focusing is generally prompt for static subjects. The fact that points are spaced relatively far apart, however, means that the K-70 can't quite be used for continuous focus with the same degree of success as some rival models.

The Hybrid AF system means that focusing in Live View is particularly snappy. It's worth identifying the focusing point rather than leaving the camera to analyse the scene, however, as its ability to identify and focus on key subjects can't always be relied upon.

Image quality is generally very good. As has been the case on previous Pentax models, the camera's default Bright Custom Image option delivers pleasingly saturated colours. Slight underexposure is something of an issue at times, although this is not difficult to rectify.

Control over noise is also excellent throughout the range, and even once you're well into the four-figure range you just tend to get a gentle texture that can easily be dealt with if required.

The K-70 falls down slightly with video recording. Details are not rendered with the expected clarity, although the Shake Reduction system does well at keeping things stable.

FEATURES



AA FILTER SIMULATOR
 To help counter aliasing effects, this applies microscopic vibrations at sub-pixel level.

PIXEL SHIFT RESOLUTION
 This captures four images with a one-pixel displacement to create a composite file with better detail.

WEATHER-SEALED BODY
 Thanks to 100 seals around the camera's body, the K-70 is dustproof and weather-resistant.

BUILT-IN STABILISATION
 Sensor-based stabilisation for compatible Pentax lenses provides up to 4EV of correction.

ASTROTRACER
 Paired with an optional GPS unit, the camera can adjust to star movement and shoot streak-free.

AF FINE ADJUSTMENT
 Unusually in its class, the K-70 allows you to fine-tune where a lens focuses if it's out of line.

NIGHT VISION

The K-70 debuts a Night Vision mode, which applies a red cast to the LCD screen to keep its brightness down in low light. The Outdoor View mode lets you boost or reduce screen brightness in poor or harsh light.



Pentax K-70

- Megapixels**
24.24
- Max resolution**
6000 x 4000
- Sensor information**
23.5 x 15.6 (APS-C), CMOS
- Lens data**
Pentax KAF2
- Shutter speed**
30-1/6,000sec, Bulb
- ISO sensitivity**
100-102400
- Exposure modes**
Auto, P, A, S, Tv, Sv, M, Scene
- Flash modes**
A, A+RE, On, O+RE, SS, M
- Connectivity**
USB 2.0, HDMI, Wi-Fi
- Weight**
628g (without battery)
- Dimensions**
126 x 93 x 74mm
- Batteries**
Rechargeable Li-ion
- Storage**
SD, SDHC, SDXC (UHS-I)
- LCD**
3-inch vari-angle, 921k dots
- Viewfinder**
Pentaprism viewfinder, 100% coverage, 0.95x magnification

Features

A better AF system and 4K video would be nice, but you still get an awful lot for the money



Build quality

Largely plastic as expected on the outside, but weather-sealing is great to have at this price level



Handling

There's pleasingly deep grip but its design, together with the body's angular styling, is awkward



Quality of results

Slight metering issues, but lovely colours, low noise and effective Shake Reduction impress



Value for money

In true Pentax style, the K-70's spec sheet goes well beyond what's expected at this level



Overall

Very much a camera of two halves. Its weighty body and design quirks won't be to everyone's taste, but plenty of top features and great results make it worth considering



Above
Beefy grip
The camera's beefy, rubber grip protrudes beyond the side plate

Right
Tall and accessible mode dial
The mode dial protrudes well for ease of turning





Left
One-stop shop
 This system maintains beautiful colour and sharpness, from the first shot through to the screen you edit on, down to the profile used to colour-correct for printing

SRP: £299 / \$279

Spyder5 Capture Pro

Push the boundaries of your images' colours with this calibration system

 Datacolor's Spyder5 Capture Pro is a four-pronged attack system that not only calibrates your monitor, but creates shoot-specific colour profiles in a bid to speed up workflow and attain crisp, focused imagery with accurate colour.

The Capture Pro system comprises a Spyder5 Elite calibration unit, a SpyderCube, the LensCal, and the SpyderCheckr. Having all of these items together is perfect if you are a commercial studio; even if you aspire to create similar content, this bundle is perfect for you. But the photographers and designers who have an old i1 or Huey kicking around need to ask themselves: upgrade or not?

For those upgrading from previous models, it is the revamped Spyder5 calibrator that will be of interest. The addition of seven colour sensors has led to an enhanced shadow and highlight response – around a 55% improvement. This will be of great use to low-light photographers.

The design and build of the Spyder5 takes a more pragmatic approach, adding a more rugged, durable feel. The unit's light-gathering sensors have more protection, as the sensor cap is part of the stability system when it's attached to the screen. This is both great and really frustrating if you are paranoid about scuffs on your screen. The unit's ambient light checker is built onto the outer shell, and

makes ambient readings less complex. As for the SpyderCube and the LensCal, there is no change in design from the previous Spyder4 kit. The SpyderCheckr software has not progressed too far either: it still serves its purpose in creating a custom profile from an initial test shot of the swatches shown from the Checkr. You shoot a test image in the shooting environment, and subsequently reshoot for every light change; your swatch shots maintain colour consistency through the profiles they create.

Initially it's a bit of a hassle having to bounce from Camera Raw to Photoshop and then to the Checkr software, as well as shooting the devices at every light change – but if you want colour consistency in your imagery, the hassle will be worth it.

Summary

- Ease of use ★★★★★
- Value for money ★★★★★
- Features ★★★★★
- Quality of results ★★★★★

Overall

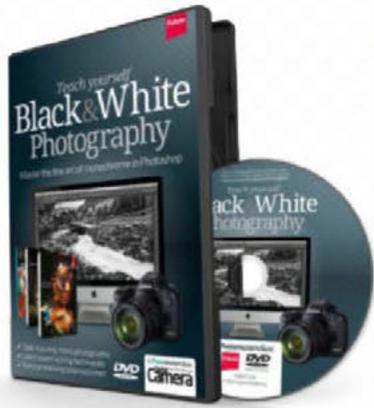


Undoubtedly a one-stop shop for all calibration needs. The proliferation of products makes things seem a bit convoluted – but you can't argue with results, and this kit delivers



Above
Hands-on colour
 Use your model or a tripod to hold the swatch book before you get started with the shoot. This is a similar practice to using grey cards for white balancing

Top
Accurate hues
 Using the Spyder5 Elite for monitor calibration, then using Checkr and creating profiles for your shoots can be daunting, but it will make colourful shoots easier to edit later



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Teach Yourself Lightroom

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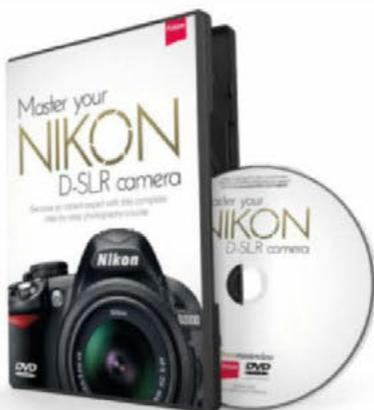


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Camera harnesses

Take the strain off your neck with these supports

Blackrapid Double Breathe

SRP: £149 / \$150

This harness is the ideal choice if you shoot with two camera bodies – we can see wedding and press photographers getting a lot out of it. It's far less sturdy than the other two offerings and is designed for the cameras to sit at your hips when not in use, so it won't suit everyone, but it does the job of taking the weight away from your neck well, and the breathable pads in the straps make it comfortable to wear.

Overall



Think Tank Photo Pixel Racing Harness V2.0

SRP: £37 / \$43

You must buy a belt and camera straps separately before this harness is of any use. It is a nice and very comfortable design; the padded straps are well-made. You can attach accessories using the D-rings provided. If you are looking for a more sturdy support solution, we'd still probably choose the Cotton Carrier.

Overall



Cotton Carrier CCS Camera Harness System – Sport

SRP: £99 / \$128 (approx)

This is an impressive harness if you're looking for the ultimate level of support for your kit. This is definitely the most sturdy harness of the models on test here – it will suit professional shooters who are out regularly, and we can see this harness really benefitting sport, action and wildlife shooters.

Overall



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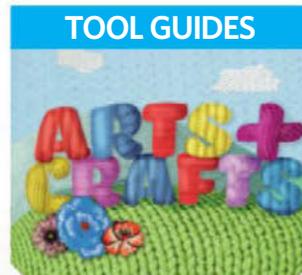
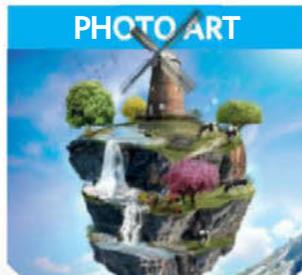


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Above
HDR focus
Focus allows you to adjust what's in the actual focus of your shot; you can alter the brightness or sharpen and clarify your work too

Macphun Focus

Get even more precise with your blur, using this dedicated focusing app

SRP: £44.99/\$59.99 **OS:** macOS 10.9 and above

Macphun has a reputation based on thorough precision. Its Creative Kit software suite – a collection of Mac-based apps for transforming your photos – contains programs for every photo-editing eventuality. They offer in-depth sliders and genuinely useful presets for everything from de-noising to altering the tone and saturation of your pictures.

Focus is one such app, designed to enhance your photos with specialised blurring and sharpening tools. The program replicates the effect of a lens with natural-looking effects, and can be used either on its own or as part of Creative Kit (£79.99/\$99.99). The question is: is Focus as effective as Macphun's credentials would suggest, or does it lack a little sharpness?

Focus is extremely easy to use and well laid out, with the types of blur you can choose between along the bottom and the sliders for controlling the effects along the right-hand side of the screen. The controls are strong

for the most part too; Tilt-Shift is a particular highlight that can transform landscapes, either dramatically or just quite subtly. It's simple too to hone in on exactly the kind of effect you want to create, as the sliders are precise.

Where Focus really comes into its own, however, is with its masking capabilities. With the sliders and various different blurring options, Focus certainly has the power to transform your images, but with the masking tools, you can really focus in on exactly what you want to blur. As with Macphun's best apps, Focus is adept at making tricky edits, but it still feels user-friendly and easy enough to use, with the mask tool mixing both precision and simplicity.

Ultimately, Focus is a great addition to the software collection of any photographer looking to master blurring and detail in their work, whether it's a tiny adjustment you're looking to make, a quick preset you'd like to apply to a picture, or a full-scale edit you'd like to get stuck into. Focus is in-depth and

sophisticated enough and lives up to its name in that respect: this is a typically well-built Macphun app, and a great piece of software.

www.macphun.com

Top-left
Macro focus

You can create the perfect macro shot using the crosshair-like guides to control the effect within the Macro option of Focus

Summary

Ease of use	★★★★★
Value for money	★★★★★
Features	★★★★★
Quality of results	★★★★★

Overall



Focus isn't about to become the most vital app in a photo editor's arsenal, but its capabilities make it a valuable addition nonetheless

darktable

This new Mac program is taking on Lightroom – and it's free

SRP: Free **OS:** macOS 10.7 and above

Free software often falls into one of two categories: a fantastic bargain, or hugely underwhelming. With so many photo-editing programs on the internet offering distinctiveness, ease of use and sophistication, it's unusual for a free app to offer anything truly groundbreaking. However, if you find the right one, it's worth trying out: especially if you're a beginner to photo-editing and looking to test out particular tools and features before diving deeper and investing in something more expensive.

darktable is an open-source program (which means it's developed by an open community of volunteers) that offers raw file processing. It looks and feels similar to Lightroom, right down to the layout of the program. Importing images is easy to do, and navigating around the program is a breeze; it feels quick, and as you get cracking on preliminary edits, you'll find that the sliders are thorough.

darktable may be a freebie, but as you dive deeper into the program, it feels as powerful as you'd expect a much higher range piece of software to be. There's a huge variety of

tools for all kinds of photo editing needs and, crucially, the edits are flawless. Converting images is easy too, and although there isn't much of an organising section in the program, it's a program capable of really quite advanced edits that you would usually reserve for more expensive software packages. darktable is definitely worth trying for anyone, from beginner to photo-editing software fanatic.

www.darktable.org

Summary

Ease of use	★★★★☆
Value for money	★★★★★
Features	★★★★☆
Quality of results	★★★★☆

Overall



A fantastic piece of software considering it's free, darktable is great to get stuck into and experiment with: you might just find a new favourite effect



Top

Split Toning

Alter the hue around the lightest and darkest areas of your image using darktable's Split Toning effects

Above

Colour correction

Tweak the hues and saturation of your image using colour correction, the Channel Mixer and colour zones



App Focus



Superimpose

Price: £0.99/\$1.99

OS: iOS 8.0, Android 4.1 or later

Mobile technology has really put the fun into photography over the last few years, with many novelty apps appearing for doing amazing things with your snaps. Superimpose is one example: it doesn't require any skill, just imagination.

Superimpose allows you to create photo manipulations with the pictures in your camera roll. It's a neat idea, but ultimately nothing more than a novelty effect for your photos.



Accessories

A collection of the best fun-yet-functional products out there for photographers





1 Vanguard Alta Action 80 tripod bag

Website: www.vanguardworld.co.uk

Price: £49 / \$50

The Alta Action 80 tripod bag will offer a little more protection than standard tripod bags – a good thing when tripods don't come cheap. This bag will fit an 80cm tripod with head and accessories. The tripod bag has also been specially designed to be used with the Vanguard Alta bags that feature the Alta Link symbol: the bags are designed to be attached to each other, which will make carrying them around far easier. Although it does provide some extra protection, it's bulky and we're not completely convinced it's worth it.

★★★★★

2 Sitpack

Website: www.sitpack.com

Price: £47 / \$60

The Sitpack is a compact foldable chair that can be used almost anywhere. It folds up into a neat cylindrical case that won't take up too much room in your kit bag, and the folding mechanism itself is easy to use, while feeling sturdy enough to take your weight. However, it adds a noticeable amount of weight to your gear so we are not completely convinced by its necessity – it is certainly not for everyone. We see more use for it at concerts and events rather than photography expeditions.

★★★★★

3 Slik Lite AL-420M tripod with SBH-100DQA ball head

Website: www.intro2020.co.uk

Price: £132 / \$170 (approx)

For a compact tripod, the Slik AL-420M is great. It's really light, with a maximum payload of 2kg. It can fold down to 35cm but has a maximum height of 123.9cm. You can't use kit that is too heavy, but for travelling it is the ideal solution. The legs fold out with ease: they are multi-angle with a low-level feature, which means you get stability even when you have to get close to the ground. It even has a LED torch in the centre column for when you are shooting at night.

★★★★★

4 MindShift Gear Filter Nest

Website: www.snapperstuff.com

Price: £36 / \$45

If you shoot frequently using filters, the MindShift Gear Filter Nest is the perfect solution for keeping your kit together and safe from accidental knocks. It won't take up too much room in your kit bag, and it will fit more than comfortably onto a utility belt if you want instant and easy access. It fits eight round filters up to 82mm as well as two variable NDs; each slot is rigid as well as colour-coded, so it will be straightforward to find the filter you want and you won't have to worry about them being damaged.

★★★★★

5 Lastolite by Manfrotto Joe McNally Ezybox Speed-Lite 2 Plus

Website: www.manfrotto.co.uk

Price: £60 / \$79

We were really impressed with the Joe McNally Ezybox softbox: it looks really high-end and the black case feels very stylish. Attaching it to a flashgun is simple: once you have secured the band using the screw, it feels very secure. The softbox has a white interior, which gives off a soft, delicate quality of light; the recessed diffuser gives you greater control over the light too. The quality of product that you get for £60 is really great, and definitely worth the expense.

★★★★★



BRIAN MAY TALKS STEREO

The legendary Queen guitarist discusses his love of 3-D photography

All images © Brian May



OK, Digital Photographer readers! In 500 words I'm going to convince all you passionate 2-D photographers that you need to embrace stereo

photography! As a kid of 12, I was lucky to have a dad who taught me to take black and white photos on roll film, develop them in the improvised darkroom he'd made, and then make prints – watching the images magically appear in the red light as the papers swished in the developing dish. I was hooked. But then I got hooked on something that took things much further.

Thanks to Weetabix giving away small 3-D cards in their cereal packets, I discovered the incredible world of stereoscopy. My first memory is of a view of a hippopotamus. Every one of those little cards depicting wild animals had two pictures side by side, that looked the same but actually were slightly different from each other – due to tiny 'parallax' discrepancies between the appearance of the subject from two viewpoints a few inches apart... just like our two eyes. Those differences worked the magic. When I looked at the cards through the viewer – for which I'd sent away my one and sixpence (and a

Weetabix packet top) – that hippo sprang into scary real life. I could see right into his huge mouth, as if I was just a few feet from him. I could almost smell his breath! Now that's what I call virtual realism! From that moment on, I was obsessed with making my own 3-D images. After all, if you could capture a scene so stunningly in three dimensions, why bother with just two? I figured out that, in every case, I needed to take one picture for each eye, just like these people had done, and then present them side by side, so each eye would exclusively get the view it would have seen in real life. And I never looked back.

You can do this. For your iPhone, get an app called 3D Camera, written by a friend of mine. It will help you use the 'rocking' sequential method to make your own stereo snaps in five seconds flat. Tell your subject to keep still between exposures! Then pop your smartphone into my patent VR kit – an OWL with an ingenious locating system – and your phone becomes a stereoscope (or a VR device). You'll instantly see your pals or your landscape in glorious three-dimensional realism. And you may never look back. Also, try to find a Fujifilm W1 digital stereo camera on eBay. They don't make 'em anymore, sadly, but they still work great... and using this, you

can take truly instantaneous 3-D pictures, even of things that move!

Check out my new book, *Queen in 3-D*, published this month by my own London Stereoscopic Company, which contains hundreds of moments in Queen history captured from the inside, and in intimate 3-D. It comes with an OWL viewer, so you can experience these scenes just as I did. I really hope the book will inspire people everywhere to capture precious moments in their own lives in 3-D, rather than boring old 2-D.

Yes, I'm a torch-bearer for the art. Over the years it's given me endless pleasure. See you out there – in depth!



Queen in 3-D by Brian May is published by The London Stereoscopic Company, £50, and is out now. www.queenin3-D.com



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