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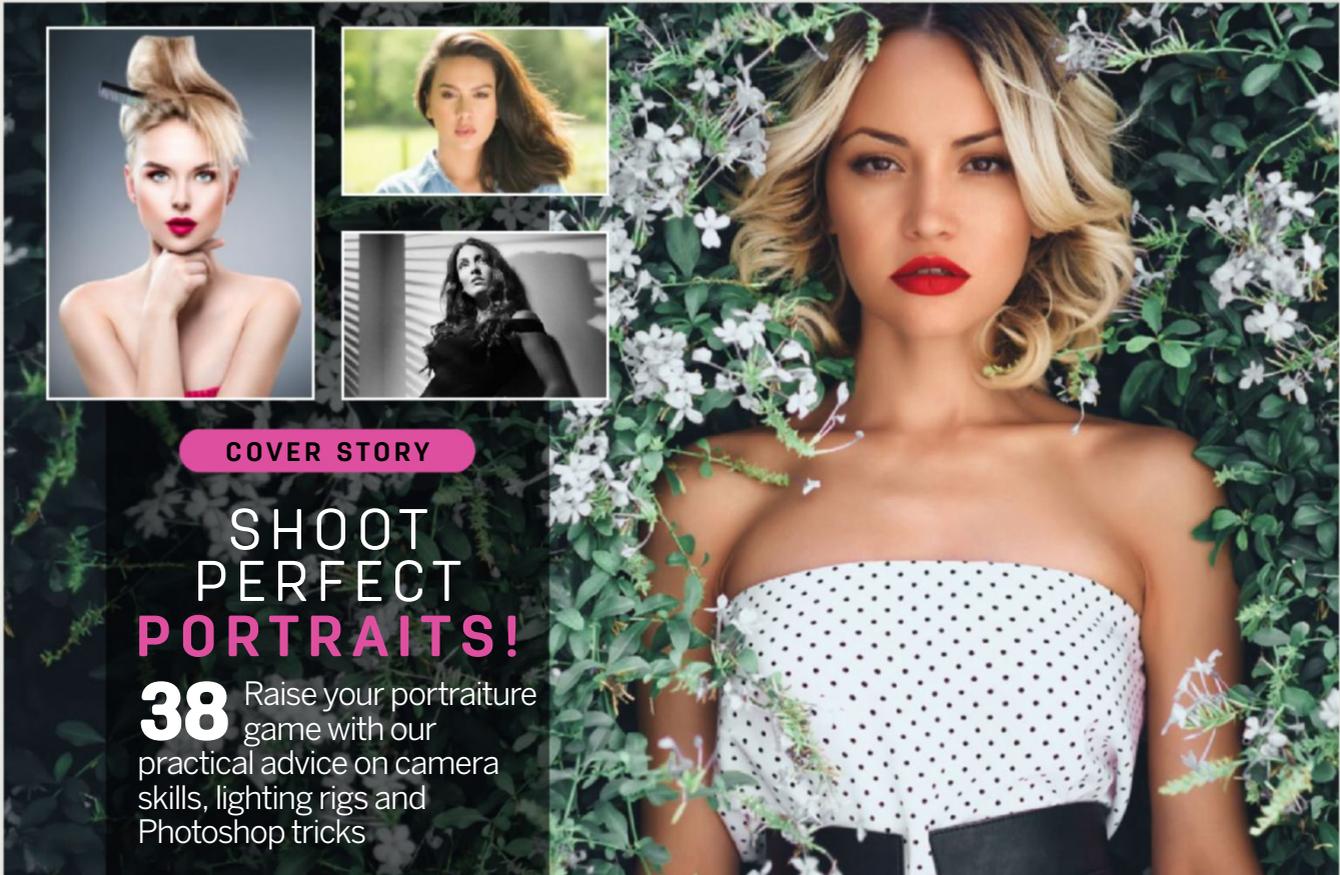


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What qualities do you need in a lens for shooting portraits? Find out as we subject six primes and two zooms to the world's toughest test regime

Welcome to the July 2016 issue of Digital Camera

WHETHER you're shooting formal portraits, fashion, weddings, candid or kids, this month's issue is full of killer tips and techniques that are guaranteed to improve your people shots. Our cover story reveals everything you need to know, from mastering the art of the headshot and using natural light to working with studio lights and even some basic retouching skills.

To whet your appetite and get you inspired, we also meet one of the world's top wedding photographers, Jerry Ghionis. And we talk to one photographer who only used an iPhone to photograph an epic Indian wedding. Bonkers? Turn to page 96 and judge for yourself.

With the generous help of Phottix, this month's Shootout took place in a studio where our two readers, Will and Simon, battled it out with off-camera flash and more. Enjoy the issue – and happy summer shooting!

Ben

Ben Brain
Editor, Digital Camera



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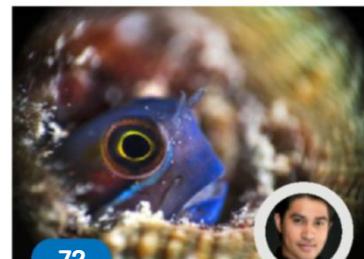
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Complete your digital Digital Camera magazine collection with our back issue library for iOS or Android tablets and smartphones, plus PCs and Macs.

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FREE GIFTS

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MASTER THE ART OF RETOUCHING EBOOK

This month's Photoshop Guide ebook shows you how to take your portraits to the next level with clever but accessible retouching techniques. Improve the look of skin, hair and eyes, add digital make-up, and more! You can also watch or download six videos with extra detail for selected tips.

You can read this ebook after the magazine or download it as a PDF via www.bit.ly/dc179ebook



11 VIDEOS

Our video lessons are packed with essential image-editing advice to help you get the best from your pictures. This month, in addition to five videos to accompany our Digital Darkroom tutorials (see page 127), you'll find six videos to support your free Master Retouching ebook.

You can watch the videos on YouTube via www.bit.ly/dc179video or download them to your computer via www.bit.ly/dc179extra



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VIDEOS

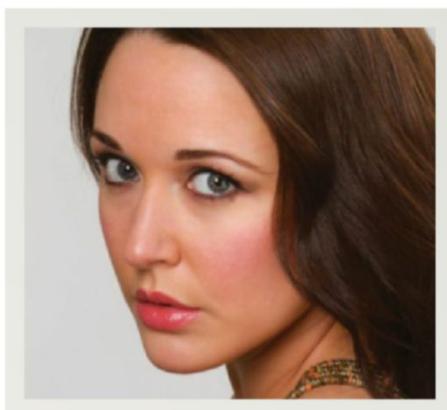
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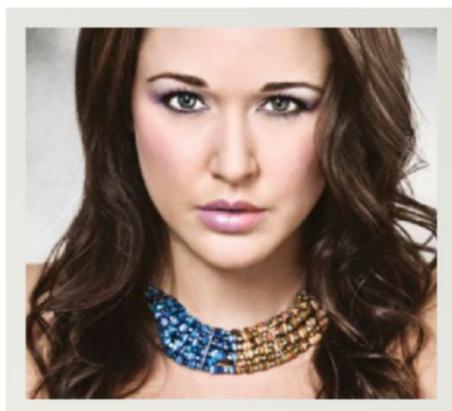
How to make your subject look flawless every time
[See page 2 of the ebook](#)



Retouch skin with the High Pass filter in Photoshop
[See page 6 of the ebook](#)



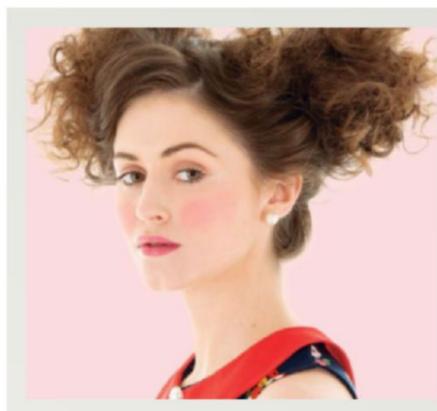
Discover a simple trick to make skin look softer
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[See ebook pages 8 and 14](#)



Add a high-dynamic-range effect with HDR Toning
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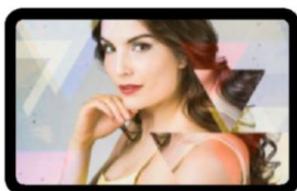


Make a precise selection when cut a subject out
[See page 12 of the ebook](#)

VIDEOS

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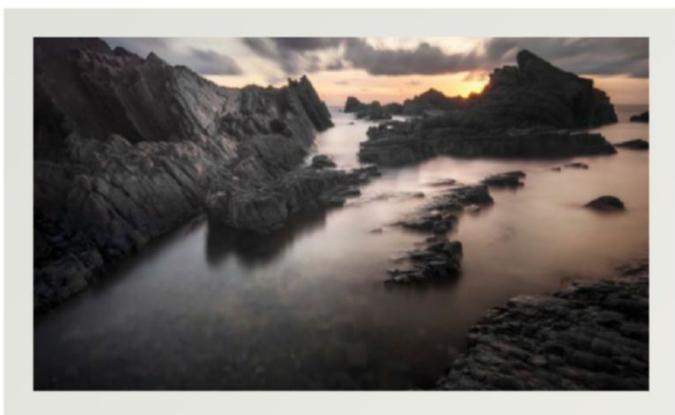
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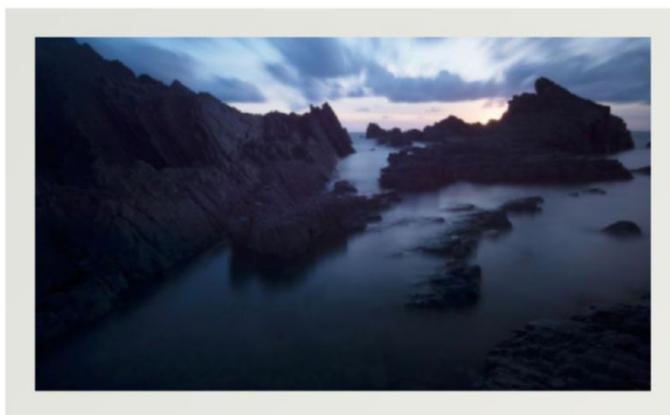
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Lightroom Skills: Adjust bright landscape skies with the Graduated Filter
[Read the tutorial on page 128](#)



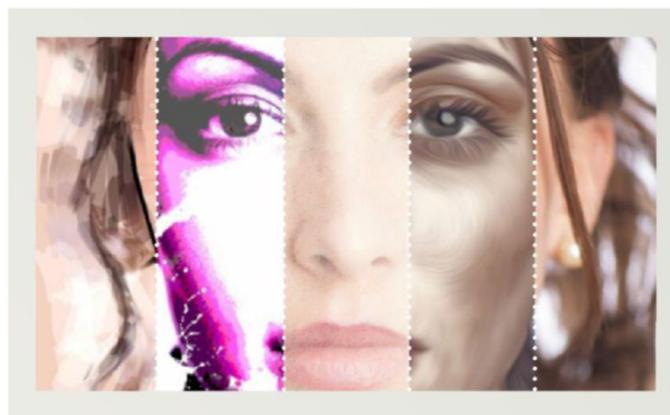
Tool School: See how the Magic Wand helps you make complex selections
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Tool School: Go through the key settings for the Magic Wand in Photoshop
[Read the guide on page 131](#)



Artist Insight: Give your portrait the movie poster look with a detail boost
[Read the tutorial on page 132](#)



Creative Spotlight: Four ways to add painterly effects to your photographs
[Read the tutorial on page 136](#)



GEORGIA DARLOW, UK — “This was shot in Bagan, Myanmar, during a trip last year. I was lucky enough to have the most fantastic guide who knew lots of off-the-beaten-track locations, including this ancient temple that we had to persuade ‘the Keyholder’ to let us access. So with key in hand and an obliging young monk from a nearby monastery as the subject, I was able to capture this shot. It was a truly magical location and shoot that is by far the most enjoyable I’ve been fortunate enough to experience so far.”

Kit Canon 5D Mk III with EF 24-70mm f/2.8L II USM lens **Exposure** 1/60 sec at f/5.6, ISO 3,200

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HOTSHOTS

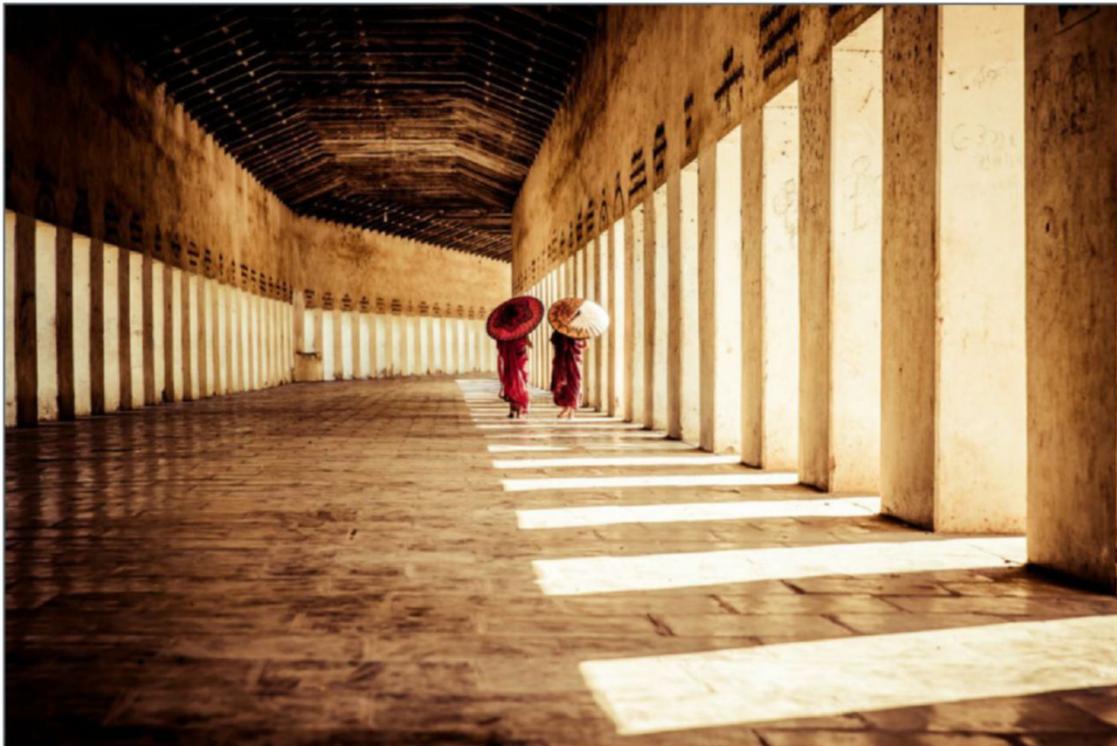
THE BEST NEW PHOTOGRAPHY FROM AROUND THE WORLD





GEORGIA DARLOW, UK — “This was shot in Bagan, Myanmar, late one afternoon. It had been a busy day exploring this magical location and my guide was hurrying me along to our final location of the trip, promising me the best light we’d seen all day. I certainly wasn’t disappointed! We didn’t have long before the light began to change, so with added urgency, light shafts streaming in and wafted incense enhancing the rays, I was able to capture this shot of a young monk from a nearby monastery reading in an ancient temple.”

Kit Canon EOS 5D Mk III with EF 24-70mm f/2.8L II USM lens **Exposure** 1/200 sec at f/7.1, ISO 1,600



GEORGIA DARLOW, UK — “This was shot in Bagan, Myanmar, late one morning, with two young monks from a nearby monastery taking a stroll together. There was something very tranquil about this location and the geometry of the space and shadows was quite interesting to play with. As with all the shots from this trip, it was my guide I had to thank for showing me round locations I would have never known were there. His knowledge on where, when and how to capture the essence of this location was invaluable and something I feel privileged to have been able to share.”

Kit Canon 5D Mk III with EF 24-70mm f/2.8L II USM lens **Exposure** 1/200 sec at f/5.6, ISO 200



OSCAR DEWHURST, UK — “I spent two months at the Los Amigos Biological Research Station in the Peruvian Amazon rainforest. There was a set of trails that I walked every day; on one of them there was a gap in the forest that allowed you to see out over the river. The view was incredible: on the clearest days I could see the snow-capped peaks of the Andes in the distance. One day I spotted this roadside hawk perched on the trunk of a cecropia tree by the river. I over-exposed the image to create this high-key effect.”

Kit Nikon D800 with Nikon 600mm f/4 AF-S II lens **Exposure** 1/250 sec at f/5.6, ISO 640





ROBERTO LAINEZ — “This is an old railway wagon abandoned many years ago in an area of The Railway Museum in Guatemala City. Immediately upon entering the area, the light and the way it softly illuminated the dust accumulated over the decades caught my attention. I couldn’t help thinking about how it must have been travelling in it during its heyday.”

Kit Nikon D7100 with Nikkor 35mm f/1.8 lens **Exposure** 2 sec at f/9, ISO 720



AGUS WAHYUDI, INDONESIA — “I live in Palangkaraya in Central Kalimantan. My hobby is macro and animal photography, which I have been practising for five years. I joined a macro photography group called Foto Macro Kalteng, and these shots of an iguana and a snail were taken at home.”

TOP Kit Canon EOS 7D with 100mm f/2.8 macro lens **Exposure** 1/125 sec at f/7.1, ISO 200

ABOVE Kit Canon EOS 7D with 100mm f/2.8 macro lens **Exposure** 1/125 sec at f/7.1, ISO 200



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Photography news from around the globe

SONY SMARTPHONE

ARE YOU XPERIA'D?

Smartphone cameras take another leap with the launch of Sony's Xperia X. Angela Nicholson takes a look

NOT least because of their small sensor size, smartphones can't beat a CSC or SLR, but for most people their image quality is more than good enough to negate an entry-level compact camera. And let's not forget the key benefit of having a decent camera on a phone is that you carry it everywhere so you can capture everyday trivia and unexpected moments. Sony's Xperia X could be especially useful for the latter because it is capable of switching from sleep mode to taking a picture in just 0.6 sec. Naturally I wasn't able to verify that exact figure when I got my hands on a unit at Sony's London launch event, but it's certainly fast in smartphone terms.

Inside the Xperia X's main camera is a Sony 23MP 1/2.3-inch Exmor RS sensor



The Predictive Hybrid Autofocus system means you can keep your subject sharp until you're ready to shoot.

with the ability to shoot at ISO 12,800 in low-light conditions. Its Sony G-series lens has a focal length equivalence of 24mm and a maximum aperture of f/2. While that aperture is useful in low light, the wide-angle lens (and small sensor) means that you'll still have to get very close to your subject before you can start blurring backgrounds.

STAY IN FOCUS

Perhaps the most exciting feature about the X is its Predictive Hybrid Autofocus system, which is designed to track a subject's movement around the frame. That's something we've seen in many compact system cameras for a while. All you need to do is tap on the 5-inch 1080p screen to identify your subject and the camera keeps it sharp while you tap the shutter release. Well, that's the theory. It actually works pretty well even in gloomy conditions, but don't expect 100% accuracy as fast-moving targets will escape its bounding box from time to time.

In addition to the Superior Auto mode, which is likely to be the most popular shooting mode, there's a Manual mode, but this affords a disappointing level of control – you can only set sensitivity and white balance. Thankfully, the X seems to do a pretty good job with exposure on its



own, but a bit of control over shutter speed would've been nice.

Naturally there's also a front-facing camera for selfie-lovers. This has a 13MP 1/3-inch Exmor RS sensor with a 22mm equivalent f/2.0 lens and a maximum sensitivity setting of ISO 6,400. That wide-angle lens means you don't need ludicrously long arms or a selfie stick to get yourself in a shot.

As yet I haven't been able to examine any images that I've taken with the X on a computer screen, but the results look very good on the phone screen. As you'd expect, noise is visible in images taken in very low-light conditions, but it looked within acceptable limits and the automatic white balance system coped well with artificial light.

£459; www.sonymobile.com



NEW LEICA

REAR EXIT

Leica's new digital camera is so simple you don't even need a back-of-camera LCD

L EICA'S latest digital rangefinder aims to take users back in time by completely omitting the rear LCD.

Leica claims the M-D Typ 262 will take users to a simpler time before digital photography. In the place of a rear LCD you'll find an old-school ISO dial; the lack of a screen also means this digital rangefinder features controls for everything from shutter speed to drive modes.

Checking a photo straight after snapping it (or chimping) is such a common habit now

that it seems perverse to leave it out. But consider how much of a crutch it is. How often do you take a dozen shots of a subject to ensure you got it right?

Leica's sensors are famous for capturing great quality and detail; and the Typ 262 should have no problems doing the same thanks to its 24MP sensor. The Maestro image processor saves raw images, so you'll be able to flexibly post-process any shots you didn't nail perfectly.

£4,650/\$5995; <http://uk.leica-camera.com>

LEGAL DRAMA

GOOGLE VS GETTY

Stock image giant takes on web search overlords

G ETTY has filed a formal complaint with the EU's antitrust commission, claiming that Google is promoting the piracy of copyright photos by scraping images from third-party sites.

Getty says it's seen a big drop in visits since 2013, when

Google started including high-resolution images on Google Images. "Because image consumption is immediate, once an image is displayed in high resolution, there is little impetus to view the image on the original source site," Getty's complaint reads.

<http://wherewestand.gettyimages.com/advocacy>



BOOK SHELF

New in print and digital formats



DARK ROOMS

Former fashion photographer Nigel Shafron captures a series of banal scenes with a poetic grace. Texts by David Chandler and Paul Elliman make the connections between the five sets clearer.

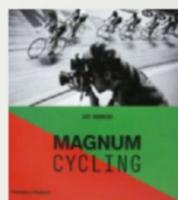
£35/\$50; mackbooks.co.uk



KOSEN

Documenting the five years it takes to become a geisha, John Davies made repeated visits to Kyoto to shoot Kosen as she finished her training. The result is a stunning collection of images, exquisitely presented in this book.

£30/\$45; thephotographersgallery.org.uk



MAGNUM CYCLING

Cycling aficionado Guy Andrews has clearly been busy scouring the Magnum archives for inspiring images. Here he brings together a showcase of cycling photography that includes greats such as Robert Capa.

£32; thamesandhudsonusa.com



Andy Farrer

CONTEST OPEN

LPTY, ANYBODY?

IF £10,000, being featured in a major exhibition and the respect of your peers all sound good to you, why not enter this year's Landscape Photographer of the Year Awards? Now in its 10th year, the contest boasts a prize fund worth £20,000 (with £10,000 for the overall winner) and is open to everyone, including a category for photographers aged 17 or under.

Images must be entered by 10th July 2016 to be considered for judging, and they must depict the UK landscape. Visit the LPTY website for further details.

www.take-a-view.co.uk

NEW LENSES

YIN AND SAMYANG

SAMYANG has introduced a pair of new lenses for Sony E-mount cameras with full-frame sensors, unveiling the Samyang 14mm f/2.8 and Samyang 50mm f/1.4.

The brightest lenses in their class, according to Samyang, these new lenses expand Samyang's lens range from manual focus-only optics to now include autofocus.

Samyang's 14mm f/2.8 and 50mm f/1.4 are compatible with both phase detection and contrast detection sensors, while the company says their 67mm diameter allows the maximum amount of light into the lens to create stunning bokeh and shallow depth of field.

£TBC; www.syoft.com





POLAROID REVISITED

INSTANT SUCCESS

The glory days of instant film photography return with this new camera release

THE Impossible Project is best known for buying up Polaroid's film factory to produce new instant film for existing Polaroid cameras.

However, six years after re-inventing instant film, the German company has now created its own instant camera.

Meet the Impossible Project I-1. It bears a strikingly similar silhouette to the original Polaroid camera and it uses Type-600 film, but that's those are the only ways the two instant film cameras are alike.

Impossible Project's CEO Oskar Smolokowski says that the I-1 is an analog camera for the digital age. It does everything your parents' Polaroid camera did, only better, and furthermore adds the ability to connect to a smartphone.

While you can frame your shots and take photos with the shutter button, there are no controls on the camera itself. Instead you have to turn on the app and pair it to a smartphone to adjust your shutter speed and aperture. The app also offers specialised shooting modes, including double exposure and light painting.

By itself, the camera operates on automatic mode at all times, adjusting the exposure and racking focus on its own. Though

there's a viewfinder, there's no light or chirp to tell you whether your subject is in focus other than to keep it centred in the flip-up optical viewfinder.

There is a plus/minus switch, which essentially acts as your exposure compensation, bringing the exposure up or down by a stop of light. Otherwise, you'll have to take out your smartphone to tweak your settings.

It's an interesting shift that forces you to stay in the moment and focus more on what's in your shot rather than getting the exposure right.

IN DEVELOPMENT

Once you press the shutter, the camera spits out a photo and you'll wait for a few seconds (or longer if you're in a cold place) for it to develop.

All there is to the camera is a lens with a built in 10 LED (eight white, one red, one blue) ring flash wrapped around it, plus a built in light meter and autofocus system. You won't find a single screen or even an indicator light on this camera.

The I-1 instant film camera is on sale now for \$299 (£219) or \$349 (£269) with three packs of film, and you can buy it from the Impossible Project, MoMA Design Store, Paul Smith and Selfridges in the UK.

FOCAL POINT

Rounding up what's new and exciting



PEAK DESIGN SHELL

The Shell is designed to work with Peak Design's Capture Clip system, which attaches your camera to a belt or bag strap. The neoprene sleeve slips over your lens and body.

£28/\$40; www.peakdesign.com



LEE FILTERS SUPER STOPPER

Lee Filters' 15-stop Super Stopper is available in 150mm, 100mm and 75mm sizes (for CSCs). Expect to see an exposure time of 1/250 sec increase to two minutes.

£103/\$150; www.leefilters.com



MANFROTTO 190 GO! CARBON FIBRE TRIPOD KIT WITH BALL HEAD

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£360/\$470; www.manfrotto.co.uk



HELPDESK SONY SUPPORT

SONY has announced it will be extending its Imaging Pro Support programme to include UK photographers from September.

The free service includes a telephone helpdesk that will provide professional photographers with support in using their Sony cameras.

The scheme will also include a free collect-and-return service for Sony units requiring repairs, as well as a free back-up loan unit to keep professional photographers up and running in the interim.

There will be no membership fee for the service, which will be available to photographers who own at least two camera bodies and three lenses from a qualifying list to be announced.

www.sony.co.uk



ZEISS LENS PRE-ZEISS FOCUS

ZEISS has launched its fastest and widest lens to date for a mirrorless camera.

The new autofocus Zeiss Batis 18mm f/2.8 E-mount lens is designed to be used with Sony's Alpha 7 series. It will also work with smaller-sensor models such as the Alpha 6000 and the new Alpha 6300. (Review, page 102.)

Like all Batis lenses, focusing distance is viewable on an OLED on the lens barrel. The aperture range is f/2.8-22 and the minimum focusing distance is 9.8 inches. The Batis 2.8/18 accepts 77mm filters, there's a rubberised focus ring for when you wish to manually focus the lens, and it's weather-sealed.

£1,499; www.zeiss.com



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Oscar Gustav Rejlander / National Portrait Gallery



VICTORIAN EXHIBITION

BEFORE PHOTOSHOP

Pioneering photos from Oscar Gustav Rejlander land at the National Portrait Gallery

U **NSEEN** photographs by the celebrated early Victorian photographer Oscar Gustav Rejlander have been acquired by the National Portrait Gallery, and will soon be on show to the public. Anticipating Photoshop by more than a century, Rejlander is known for his pioneering work

combining multiple negatives in the darkroom to create new, artificial compositions.

As a portraitist, Rejlander influenced famous photographers such as Julia Margaret Cameron and Lewis Carroll, and he also collaborated with Charles Darwin and the Pre-Raphaelite Brotherhood of artists.

www.npg.org.uk

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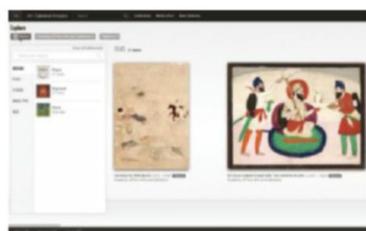
W **HEN** it's not defending itself against Getty (page 19), Google has been dipping its toe into the camera market.

The Google Art Camera takes multiple high-resolution close-ups of artwork – each image is over a billion pixels – that are then stitched together into one image, enabling you to zoom down to an individual blot of paint or a crack in the canvas.

What's more, the Art Camera uses a system of lasers and sonar that measures out an exact

distance between it and the artwork, allowing it to focus its lens more accurately and ensure great detail without subjecting it to being exposed to bright light.

www.google.com/culturalinstitute/project/art-camera



FOCAL POINT

Rounding up what's new and exciting



MANFROTTO SPECTRA 2

At 153x93x45mm and 225g, Manfrotto's affordable new hotshoe-mountable light panel is lighter and more compact than the company's Croma2 and MicroPro2 panels, yet packs a 650 lux punch of daylight-balanced light. **£155/\$220; www.manfrotto.co.uk**



VANGUARD VEO 42

Featuring a side pocket and strap to hold a travel tripod, the Veo 42 backpack splits into two sections, with a top cavity that has enough space for a day's supplies and a jacket. Camera kit is protected by a removable insert. **£54/\$79; www.vanguardworld.co.uk**



LAOWA 105MM F/2 SMOOTH TRANS FOCUS

The new Laowa 105mm f/2 lens features a wide aperture to ensure beautifully defocused backgrounds. The inclusion of a built-in 'apodisation' filter helps create a smooth transition of bokeh. **£679/\$699; www.venuslens.net**



ACTION CAM

TOUGH TALK

BETWEEN GoPros, Sony's Action Cam and even Nikon's recent KeyMission 360, there's no shortage of ways to record the most extreme moments of your life. Now Olympus is getting in the game with a sensor-laden camera named the Stylus Tough TG-Tracker.

On top of shooting 4K movies with its 8MP 1/2.3-inch sensor, the TG-Tracer comes with an array of other sensors including a barometer to measure water depth and elevation, a compass and GPS.

The TG-Tracker camera also offers an ultra-wide 205-degree field of view, and the seven-element lens opens up to an f/2 aperture. **\$349; www.olympus.co.uk**



CANON MACRO LENS

LITE WORK

CANON has unveiled a new macro lens for its EOS M range of mirrorless cameras, the EF-M 28mm f/3.5 Macro IS STM.

Featuring a compact and lightweight design that weighs just 130g, the lens employs what Canon says is the world's first built in Macro Lite for removing shadow and darkness.

Used to illuminate small objects up close, the Macro Lite function allows you to alter the lighting intensity and direction.

£295/\$299; www.canon.co.uk



Focal length: 90mm
Exposure: F/5.6 1/60sec

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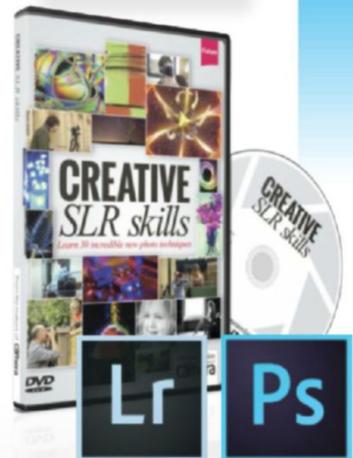
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How to balance the brightness

At sunrise and sunset, the contrast between the sky and the foreground will be too high to record detail in both. One option's to use a square graduated neutral-density filter to darken the sky. To position the transition, press the camera's depth of field button as you look at the Live View screen. If hills and trees protrude into the dark section, ditch the filter and make two separate exposures – one for the land and one for the sky – then blend these later.

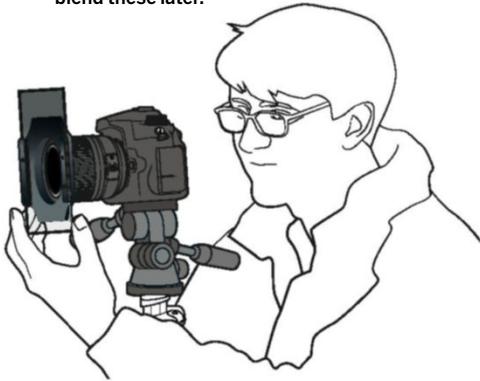


PHOTO PROJECTS

8 fresh and creative ideas to try – from street photography to double exposures...

[PROJECT 1]

Fields of lavender

Seize the opportunity to add a splash of colour to your summer scenics

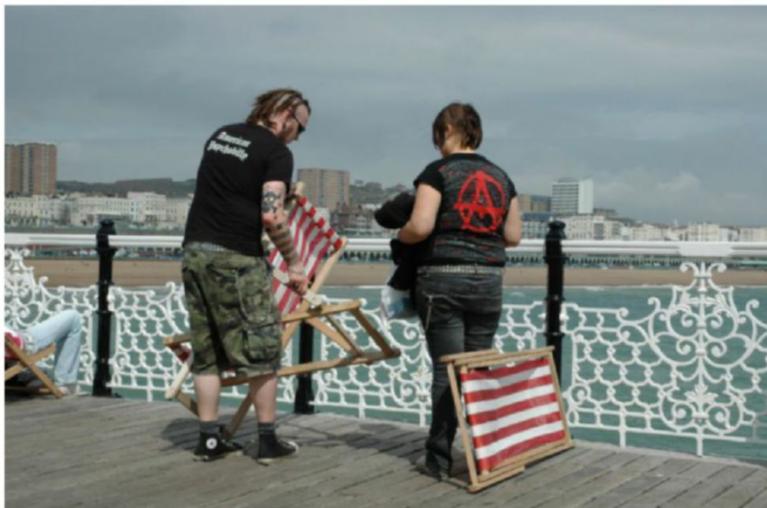
NOW is the time of year to get this landscape classic

in the bag. Many lavender farms open their gates to the public when the plants flower during July and August, although the opening times don't typically tie in with the best light of early morning or early evening. A friendly chat with the farmer and the offer of a free print may be all it takes to get permission to shoot during these times.

Getting low and close to foreground plants with a wide-angle lens will enable you to make the most of the leading lines created by the rows of lavender. Take your time to find the most attractive sections of the field

and look for something of interest on the horizon, be it a tree, the sun or an interesting sprinkling of clouds. If you are shooting into the sun, as photographer Zhasmina Ivanova has done here, then shooting with a smaller aperture can produce an attractive starburst effect. To avoid flare, fit a lens hood and be ready to shield the front element using your hand.

Follow good landscape practice for sharp shots: use a tripod, an aperture of f/11-16, mirror lock-up and trip the shutter with a remote release. Working with a tripod-mounted camera gives you the space to compose with care too, so there's no excuse for wonky horizons!



Paul Russell

[PROJECT 2]

Seafront street photography

Take characterful candid photos at the coast

C OASTAL resorts offer a feast of photo opportunities for the sharp-eyed photographer. The blend of colourful paraphernalia, faded glamour and hit-and-miss weather (in the UK at least) means that it doesn't take long for an intriguing juxtaposition to come together.

Fear of being confronted might put you off having a go at this style of photography, but, as Weymouth-based photographer Paul Russell confirms, it's a rare occurrence. "I've been doing urban and seaside street photography seriously since 2004, and in all that time I've only had maybe three uncomfortable experiences," he says. "When I'm shooting, I always have some

vague explanation in mind about what I'm doing that focuses on themes rather than individuals that may be in the photographs – 'Oh, I'm doing a project on shopping in this road/seaside towns in spring' and so on. I also have a business card within easy reach at all times – it seems to defuse a situation surprisingly quickly.

"I generally walk around slowly, without stopping at any particular location. I'm looking all the time but taking very few shots – in a typical two-hour session I may only take 10 pictures. When a scene does offer up a picture, the beach location often presents simple, graphic shots."

www.paulrussell.info

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Andy Howe

[PROJECT 3]

Explore the underground

Create moody mono masterpieces on a Tube safari

T RANSPORT networks such as the London Underground can fuel ideas for a photography project, whether you're looking for a quick weekend fix or something more long term.

From cavernous spaces to design details, there are numerous excellent photo opportunities that can be covered by the price of a single ticket, each of which could form the theme for a number of individual projects or be part of a much larger one.

It was on a visit to London a couple of years ago that Andy Howe became taken with the possibilities offered by taking his urban photography underground. "Many of the most celebrated, and architecturally beautiful underground stations tend to be further out of central London and consequently are much less busy," says Andy. "There are some fantastic examples of 1930s Art Deco design

and some iconic stations such as Arnos Grove and Southgate on the Piccadilly line, Gants Hill on the Central line, and Hampstead on the Northern line. The stations have wonderful design features such as ceramic tiling, winding passageways and period fixtures and fittings.

Obviously if you're taking pictures on a transport system, you'll need to travel light. "Tripods and flash are not permitted on the London Underground and, I'd guess, most urban metro systems, unless you have special permission," says Andy. "I tend to use an ultra-wide angle lens (10-20mm in my case) to help deal with confined spaces. A shutter speed of 1/30 second is about as slow as I like to go, as this, combined with the image stabiliser on my lens, seems to produce a fairly sharp image."

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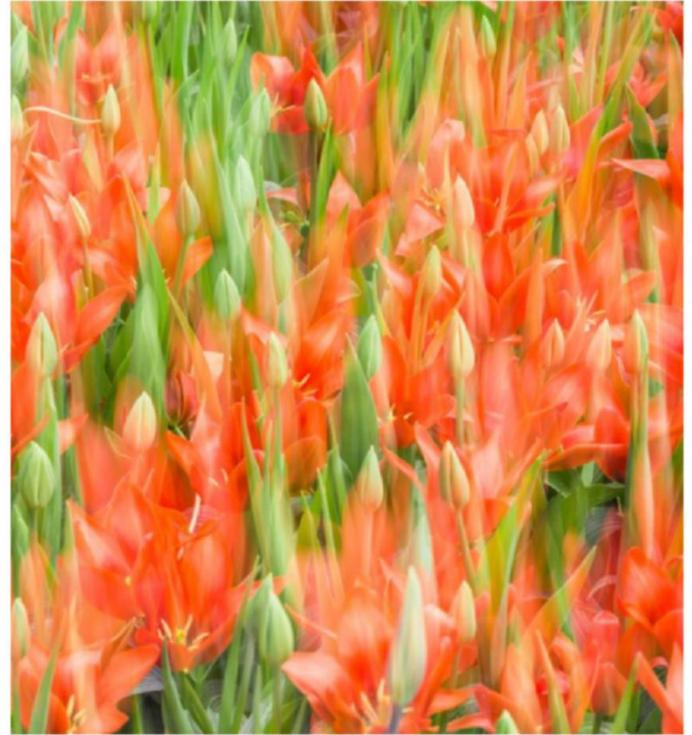
[PROJECT 4]

Backlit leaves

Make a macro studio at home

U **SING a strong backlight to illuminate a leaf enables you to reveal its structure and colour in a vivid way.** It's a technique that also works well with delicate flowers. You can keep things simple and tape the leaf to a window or, as we've done here, stick the leaf to the lid of a plastic box and

illuminate it with off-camera flash. Make the leaf as flat as possible to keep as much of it as possible within the shallow depth of field that results from working at close distances. A macro lens will let you fill the frame with detail, but you can use extension tubes and close-up diopters to adapt a normal lens so it focuses closer.



Marcus Hawkins

[PROJECT 5]

Floral abstracts

Take a fresh approach to flowers

R **ATHER than taking trophy portraits of flowers, why not take advantage of the seasonal explosion of colour to try something a little different with your floral shots?** There are a number of approaches you can take to create vibrant abstract images. For instance, you might opt to zoom in and

isolate the curve of a petal, or move the camera during a slow exposure to create an abstract blur. You can combine several exposures to create a fusion of colour and shape, or combine techniques and images – try shooting both a sharp photo and a blurred one then blending the two together, as we've done to create this image.

[PROJECT 6]

Summer of sport

Document the highs and lows at home

U **EFA Euro 2016 and Rio 2016 are set to make this summer one to remember for sports fans – and offer the perfect opportunity for documentary and street photography fans to flex their creative muscles.** Instead of focusing on the sporting action itself, turn your camera on the houses

clad in team colours, the supporters glued to their TVs, the celebrations and the fall-out when things don't go to plan. Look for the small details that tell the story: a solitary flag in an unexpected location, people going about their daily lives while others are engrossed in the action, and messages of support in shop windows.



Shutterstock



Linhof Techno, Phase One P45+, 40mm Rodenstock Digaron-W lens. 1/8 sec @ f/16, iso 50

Crummock Water

The English Lake District has been immortalised in literature, poetry, painting and photography since the dawn of the Romantic era. I am lucky to have friends living in the Lakes, and it was they who guided me to this magnificent prospect of Crummock Water early one autumn morning.

The sun rose into a mostly clear sky, but as soon as the cloud built over the central lakeland fell the light became inspiring and ever-changing for almost an hour. It was one of those occasions to be grateful for digital photography, for in days past this would have cost a fortune in exposed large format film!

Great perspective, cool foreground shadow light and warm sun rays, but highlight/shadow range was extreme. Fortunately, a medium 0.9 ND graduated filter (three stops) did most of the work needed to balance the dynamic range discrepancy. LEE have made medium grads for me, and others, to order for a while; these are now being made available to all. Carrying several different strengths of grad enables me to tune exposure balance really accurately in camera.

It was a thrill to subsequently discover a painting by JMW Turner of Crummock Water, with stormy lighting and a rainbow over the lake, made over two hundred years earlier.


Joe Cornish
www.joecornishgallery.co.uk



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LEE 0.9 ND
medium grad filter



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Medium grad filter



Ben Brain

[PROJECT 7]

Shoot a single subject

Pick an object that you can find everywhere

THE greatest challenge that many of us face when starting a photo project is not so much overcoming any technical hurdles but coming up with an idea in the first place. If you're fishing for inspiration, one easy option is to pick a single subject that you can use to bring focus to your photography. Choose an object that's fairly widespread as this will enable you to keep

topping up your project with images when you're out and about. For instance, some people opt for doors or windows, others plump for the ubiquitous public bench. Here, we went for the slightly more niche 'shovel heads' in a garden in Germany, but at least there were enough examples to build an interesting set.

You don't have to treat the objects in an identical way photographically, as we have

done here, but repetition provides a convenient way to make a collection of images hold together as a complete body of work. You can also use a compositional or editing treatment to link a more disparate set of objects. For instance, nominating a specific colour and shooting examples of it, be they full-frame and in-your-face or more subtle examples, is a great starting point for this type of project.

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Create a double exposure

*Make a portrait that mirrors
this month's cover image*

D **DOUBLE-EXPOSURE** images have been around for donkey's years, but the ease with which digital cameras enable you to pull them has ensured their enduring popularity. Combining shots of people with textures from nature is a frequently used treatment. The trick here is to photograph both the person and the natural feature against a pale background, such as an overcast sky, where their outlines will appear distinct. The tops of trees work well, as illustrated in our example here, but specialists in this technique have put rock formations, flowers and waves to good use.

Although you can combine a portrait and texture in-camera using a compatible model's multiple-exposure mode, you'll have more control if you do it in software. We're using Photoshop CC here, but it's a simple layering trick that works in everything from Elements to Gimp. We've covered the basic steps but you can go on to fine-tune the results using dodging, burning and cloning.



James Paterson



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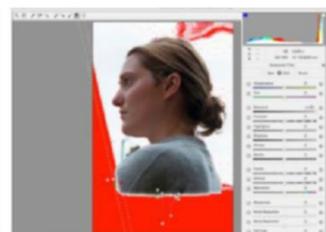
Step 1

Open your two images in Photoshop CC and convert them to Smart Objects. Use Select > All on the tree image and copy and paste this onto the portrait image. To combine the two, set Screen as the blending mode at the top of the Layers Panel.



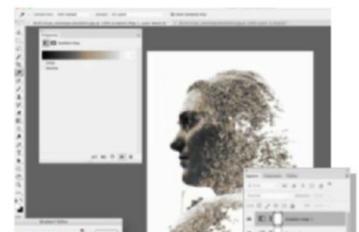
Step 2

Using Edit > Free Transform, rotate and reposition the tree layer. Now use a Black and White Adjustment layer to convert the shot to mono and boost contrast with a Curves layer, before using Filter > Camera Raw Filter on the portrait layer.



Step 3

With the portrait open in ACR, select the Graduated Filter, set Exposure to +4.00 and drag gradients over sections you want to make white, such as the bottom and left sides here. Use the Adjustment brush to further tidy areas, then click OK.



Step 4

In Photoshop, highlight the top layer, click the Create Adjustment Layer icon and choose Gradient Map. Click in the gradient to open the Gradient Editor and click the cog icon to open the flyout menu. Pick Photographic Toning, then your preferred preset.



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SHOOT PERFECT PORTRAITS!

Raise your portraiture game with practical advice on camera skills, lighting rigs and Photoshop tricks

BY JAMES PATERSON

PORTRAITURE is the genre that keeps on giving. There are always new skills to learn, new faces to shoot and new looks to achieve. Our advice over the next 16 pages will help see you through.

There's a heavy emphasis on lighting here – with good reason. Whether it's from the sun, a flash or a continuous lamp, light plays a huge part in the success of a portrait. Learning how to find the right light – or create your own – lies at the heart of all great portraiture.

IN THIS GUIDE...

Master the headshot	40
Natural light	42
21st-century portrait lighting	44
Lighting modifiers	46
Super strobes	48
Retouching secrets	50
Getting the look	52



KEY SETTINGS



A diffuser for your flashgun and a reflector are all you need to create a classic 'clamshell' lighting scheme.



MASTER THE HEADSHOT

Simple, elegant and timeless, a good headshot can reveal more about a person than any other type of portrait

IF YOU think of some of the world's most celebrated and creative portrait photographers – names like Richard Avedon, David Bailey, Irving Penn – it's their headshots that really stick in the memory. That's because they do something all great portraits should: reveal the character of the subject. From the neck down, one person may be indistinguishable from another. It's what's up top that marks us all out as individuals. Our faces are our most expressive feature; a good headshot should celebrate this.

Compared to some kinds of portrait, the humble headshot might seem a tad rudimentary. But there's an art to getting it right, and

it's an important feather in any portrait photographer's bow. Headshots are always in demand, whether it's for a company website, school photos, actor's headshots, passport pictures, or just for your own pleasure.

In some ways a headshot is a simple thing: you needn't think too much about composition or the background, as the head dominates the frame. But simplicity brings its own challenges, as it means you need to get the basics of lighting, depth of field and focal length absolutely spot-on. There's nowhere to hide with a headshot.

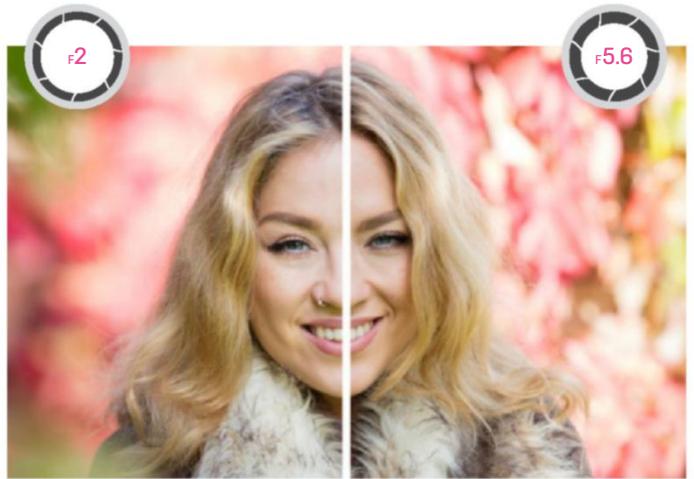
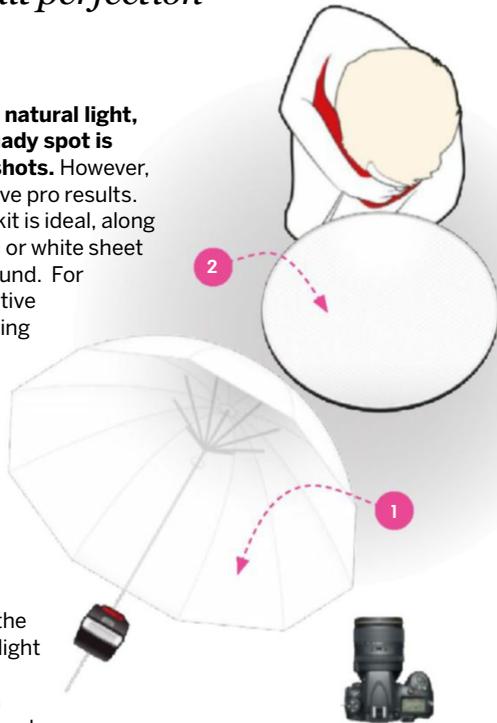
However, the technicals are secondary here. More importantly, we need to coax something interesting out of our subject...

STUDIO SET-UP

LIGHTING

Control the way light falls across a face for portrait perfection

IF you're using natural light, a window or shady spot is ideal for headshots. However, a flash kit will give pro results. A home studio kit is ideal, along with a plain wall or white sheet for the background. For a simple, attractive 'clamshell' lighting design like the shot to the left, position one light (ideally fitted with a softbox or umbrella [1]) above the face and camera, with a reflector [2] held below the chin to bounce light back upwards. If you're using a second light, direct it onto the backdrop.



LENS SETTINGS

DEPTH OF FIELD

Get your aperture right for flattering portraits and blurred backdrops

WIDE apertures restrict depth of field and lead to blurred backgrounds – but how wide do you need to go? Here, the difference between f/2 and f/5.6 is just enough to blur the distracting background. You might think f/5.6 – the typical maximum aperture of a standard kit zoom – is fairly wide, but for beautiful blur it's often not wide enough. As such, a prime lens with a wide maximum aperture like f/2 can prove useful for portraits.

PRO ADVICE **Posing the head**

Even small adjustments can have a big impact on the look of the face. All subjects are different, but in general a slightly side-on stance works well. As you can see here (**below**), asking the subject to roll back their shoulders and push their head forwards slightly will tighten the skin and reduce

double-chins. Camera height is important too: having the camera level with the eyes creates a strong connection. As with any portrait, it's vital to put the subject at ease, so chat to them as you shoot, perhaps put some music on to help them relax and, vitally, offer lots of encouragement.



CAMERA SKILLS

GET THE LOOK

Find out the ideal exposure settings for natural light or flash-lit headshots

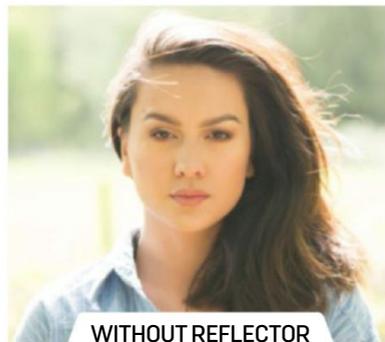
WHEN the subject is moving (as people almost always are), you're restricted to faster shutter speeds. Here's a good stock setting for outdoor headshots: set Manual mode, Auto ISO with shutter speed at 1/250 sec and the aperture at its widest setting, such as f/4. With flash, use a similar setting but with ISO 100. Take test shots to work out the best pairing of aperture and flash power.



NATURAL LIGHT

Harness the power of the sun for beautifully lit portraits in any location

WHEN you're starting out, there's no need to go out and buy a host of expensive lighting gear when you already have a source of free light that offers endless variety. Direct from the sun, light can be a bit harsh, but when diffused through clouds, or bounced off different surfaces it can take on all kinds of wonderful qualities. Then there's the fact that it moves position and colour throughout the day, from warm and low in the morning to cool and overhead at midday, then back again. The great advantage you have with portraiture is a movable subject, so you can place them where the light looks best.



WITHOUT REFLECTOR



WITH REFLECTOR

KIT REFLECTORS

LIGHT, inexpensive and hugely versatile, a simple reflector is one of the most important items in the portrait photographer's kit bag. It acts almost like a secondary light source by letting you bounce light into shadows on the face. Here you can see the difference it makes: with the sunlight coming from behind, the reflector helps to bounce light back towards the face, evening out the contrast and adding catchlights in the eyes for a punchier, more saturated portrait (right).



TIP 1 WINDOW LIGHT

WINDOW light offers soft, directional illumination that can fall beautifully over a face. North-facing windows are best (north of the equator) as they don't see direct sunlight. Try having the subject side-on (perhaps with a reflector to bounce light into the shadow side), or shoot with their back to the window and expose for the shadows for a high-key feel.



TIP 2 SEEK CONTRAST

IN most good portraits, the subject stands out from the background. One way to do this when shooting outdoors is to look for contrasting lighting between the subject and backdrop, either by having the subject in shade with a bright patch behind like this, or finding a spot where the light falling on them is brighter than the backdrop, like a doorway.



TIP 3 AVOID SUNLIGHT

WHEN the sun is out, you may think it's the ideal time to go out and shoot portraits. But sunlight can be unkind on faces. This is because light that comes from a small source is harsh, like a bare bulb; and while the sun is huge, for us it's a small spot in a big sky. So avoid direct sunlight. It casts shadows of the nose across the face, shows up spots and makes subjects squint.



TIP 4 LOOK FOR SHADE

A CLOUDY sky or spot of shade is much better for portraiture than direct sunlight. In the shade, the light is far softer. It's also less strong, which might mean increasing ISO, but that's a worthwhile compromise for flattering light. If there's no cloud, look for a spot in the shade of a tree or wall. Alternatively, shade the subject with your reflector.

TOP TIP

Seek out places where the natural light is coming from one direction, like a window or doorway indoors, or a covered spot outdoors.





TOP TIP

For off-camera flash, a speedlight only needs to offer manual power control and an optical slave: features found on even the cheapest models.

21ST-CENTURY PORTRAIT LIGHTING

Modern techniques and kit can help your images to stand out in a world awash with cameras

NOW that anyone with a decent camera can take a competent photo, photographers are constantly looking for ways in which technology can help set their lighting and technique apart from the crowd. One such approach used increasingly by wedding and portrait photographers is to supplement ambient light with off-camera flash, giving their images an edge over natural-light portraits. Another approach might be to include a heavy dose of Photoshop in the workflow, not just with creative composites like the image above, but also with more subtle colour shifts and effects.

Another technology that has come on in leaps and bounds is continuous lighting like LED panels, fluorescent tubes or simple lamps. These aren't as powerful as flash, but any changes to the angle or power can be assessed instantly and they're ideal for if you shoot both stills and video.

TECHNIQUE

LIGHTING WITH LEDS

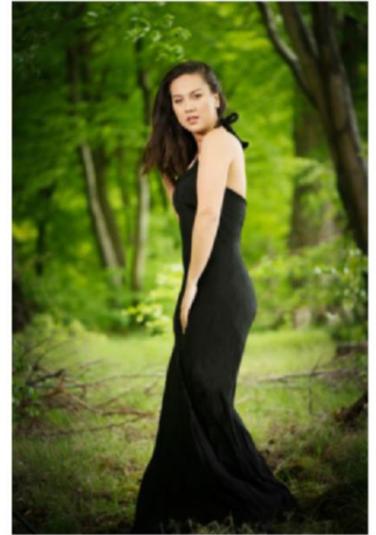
Continuous lighting is simple, affordable and adaptable to all

LED panels have become increasingly popular.

They're far less powerful than flashes, but with SLRs performing ever better at higher ISOs, many will find this option a worthwhile compromise for the ease of use and colour temperature

control that LED lighting offers you.

The Interfit LED panel used for this outdoor portrait provides a welcome fill to lift the shadows and to counteract the effects of the green light filtering through the leaves.



TECHNIQUE

FLASH OUTDOORS

An off-camera speedlight or two can elevate your outdoor portraits

SUPPLEMENT natural light with flash and you can create a huge variety of looks, perhaps with a pop of fill flash to even out shadows, or maybe something more dramatic like this.

Here the deep shade under the trees makes a balanced

exposure between foreground and sky impossible without the use of flash (as the near-right image shows). Two speedlights lift the subject: one placed to the left of the camera, the other behind the model, to our right.



TECHNIQUE

LIGHTING COMPOSITES

Learn how to light each element in a composite image consistently

IF you want to combine two images together to create something new or fantastical, it's not just about Photoshop skills. The key to making it believable starts with your lighting. Each element to be combined should be lit at least roughly the same

way. Here the light comes from the right in both the portrait and the background image, which helps everything to click. Once shot, it's simply a case of cutting out the subject, dropping them on the new background, and adding a few shadows.





TECHNIQUE 1

BARE BULB

Modifier-free direct flash is effective with care



OUR single light source here is an **Elinchrom head from a home studio kit.** One of the simplest options is to fire it bare, without any attachment or modifier. This provides 180 degrees of hard light, which isn't the most flattering or refined look, but can be a very dramatic effect.

Like all the shots here (barring the ring light), the light is positioned to the right of camera and above the face, and the subject's body and face are angled towards the light source. Harsh light is often best employed when the subject's face is angled towards it: at other angles it can produce unattractive shadows across the face.



TECHNIQUE 2

UMBRELLA

Diffuse the light with a shoot-through brolly



A WHITE umbrella will diffuse and spread the light to cover a wide area. It'll give you a nice even illumination and fill in a lot of the shadows. With white umbrellas you have two options: angle the head away from the subject so the light bounces back off the umbrella, creating a very wide spread; or angle the head towards the subject and shoot through the umbrella to make the light more directional. While great for producing a spread of soft, flattering light, umbrellas aren't as useful if you need to control where the light falls.



TECHNIQUE 3

SOFTBOX

The first choice of the portrait photographer



A SOFTBOX is a rectangular-shaped panel fitted with diffusers. It produces a wide bank of even illumination, which is ideal for portraits. Like an umbrella, softboxes will also produce soft light, but it's more directional. You won't get as large a spread of light with a softbox, so you have more control over which areas are illuminated, and which are in shadow. And when shooting close ups, softboxes create more attractive, rectangular-shaped catchlights in the eyes. Softboxes come in all kinds of shapes and sizes, each with differing tasks. The larger the softbox, the softer and more even the light.



LIGHTING MODIFIERS



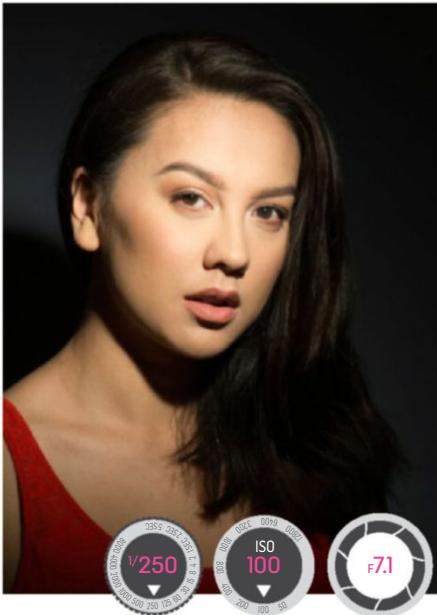
Learn how to control the light your flash emits with accessories

ONE of the great things about using studio heads is the sheer variety of modifiers and accessories that you can choose to attach to them. From huge softboxes to tiny snoots, these accessories will help you become a master of light, bending it to your will for any look you like.

Essentially these modifiers allow you to change three qualities in the light: its spread, its strength and its softness. You can tell a lot about each

light by the way it affects the shadows under the chin on the images above. Smaller light sources like a bare bulb or a snoot cast sharp, hard-edged shadows, while larger sources like the softbox and beauty dish create softer shadows, with more gentle transitions between light and dark.

You also need to bear in mind the environment you're shooting in. In a small room with white walls, the light will bounce off them and fill the shadows, while in a dark cavernous room there'll be much less fill.



TECHNIQUE 4

SNOOT

Channel the light into a tight beam for true drama

A **SNOOT** like the Interfit S-Type here channels the light down a tube into a circular opening, producing a very narrow beam of light. The light on the face here is hard, with deep shadows under the nose and chin. Unlike the other five shots here, there's no spill of light across the background, and that's why it comes out almost black. Because of this, snoots are useful for directing the light to a specific part of your subject. You wouldn't often see one used in this way to light the face. More often they're teamed with other lights, perhaps as a hair light to pick out details that need extra illumination.



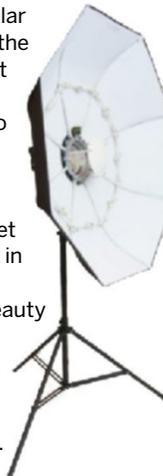
TECHNIQUE 5

REFLECTOR

Get the fashion look with a beauty dish

A **BEAUTY** dish is a large parabolic reflector often used in fashion photography. A white, circular deflector directly in front of the bare bulb shades the subject from direct flash, bouncing the light back into the dish to produce a velvety quality of directional light somewhere between direct flash and a softbox. Shadows are soft yet defined, while the catchlight in the eye is circular.

There are two kinds of beauty dish. The metal kind can be fitted with honeycomb grids or white diffusers. There's also the collapsible kind like the Interfit beauty dish here.



TECHNIQUE 6

RING LIGHT

Shadowless light and beautiful catchlights

NOT an accessory as such, but a different kind of light altogether. A ring light is simply a circular ring of light that provides frontal illumination with minimal shadows. The idea is that you direct your lens through the circle, so the light comes from the camera position. It's similar in some ways to the light from a pop-up, but it's far more attractive as you don't get the hard shadows pop-ups inevitably produce. Instead, you get beautiful, shadowless illumination, which is very kind to faces, and useful if you want to soften wrinkles. The other benefit is the attractive ring-shaped catchlights you'll get in the eyes.



PRO ADVICE

Size and spread

It might sound slightly counter-intuitive, but the closer a light source is to your subject, the softer the light appears. Closer in, the size of the light increases in relation to the subject, and the larger a light source is, the more it fills out the shadows and the softer the effect becomes. As such, you'll often see portrait photographers bring the lights in very close to the face.



NEAR SUBJECT



AWAY FROM SUBJECT

SUPER STROBES

Overpower direct sunlight for moody, dramatic results with an outdoor lighting setup that won't break the bank

WHEN you shoot portraits purely with natural light, you're usually restricted to one 'correct' exposure. But when you start to mix natural light with flash, then you can manipulate the exposure to suit your artistic means.

Any time that you work with two different light sources, the key is all about the ratio between the two. You can't control the power of the sun, for example, but you can change your speedlight power to alter the ratio between the two – as we've shown

here by overpowering the midday sun for a dramatic moody portrait.

Notice how the boy's hair has the look of a studio portrait with a nice hair light to bring out detail and texture. But this is in fact sunlight. Posed with his back to the sun, the natural light hits his hair, making it shine. By underexposing the shot for natural light, we effectively transform the sun into our secondary light source. Then we simply lift the face with our flash. Here's how you can achieve similar results in just a few steps, with the help of an off-camera flashgun and the sun...



STEP 1 GET THE SHOT SET UP

All you need for this is a speedlight fixed to a stand with a silver umbrella attached, plus an ND filter and a means of triggering the flash off-camera, like radio triggers, a sync lead or your camera's wireless flash system. (We used Nikon's commander mode with the SB-900 here). Direct the speedlight into a silver umbrella for soft, diffuse light.



STEP 2 EXPOSE FOR AMBIENT LIGHT

Don't turn on the flash yet. Instead, set the camera to Manual mode and work out an exposure for the ambient light. If it's very bright, start with ISO 100 and a shutter speed of 1/200 sec, then adjust the aperture in further shots until the face is correctly exposed. Here we had f/4. With his back to the sun, this correctly exposes the face but blows out the sky.



STEP 3 UNDEREXPOSE WITH FILTERS

Next, underexpose the ambient light. You could do this by tightening the aperture, but then you'd also increase depth of field, and in this case you want it shallow to blur the background. So instead, add an ND filter and a polariser. The two filters combined block out about four stops of light, which makes the sky look better but leaves the face far too dark.



STEP 4 LIGHT THE FACE

Now you can turn on your flash. On a sunny day you'll be working at the power limits of most speedlights, so start in Manual at full (1/1) power, then reduce if necessary. We positioned our flash (bounced off our silver umbrella) directly above the face here (about a metre away), with a silver reflector placed on the ground to bounce light back up into the shadows.

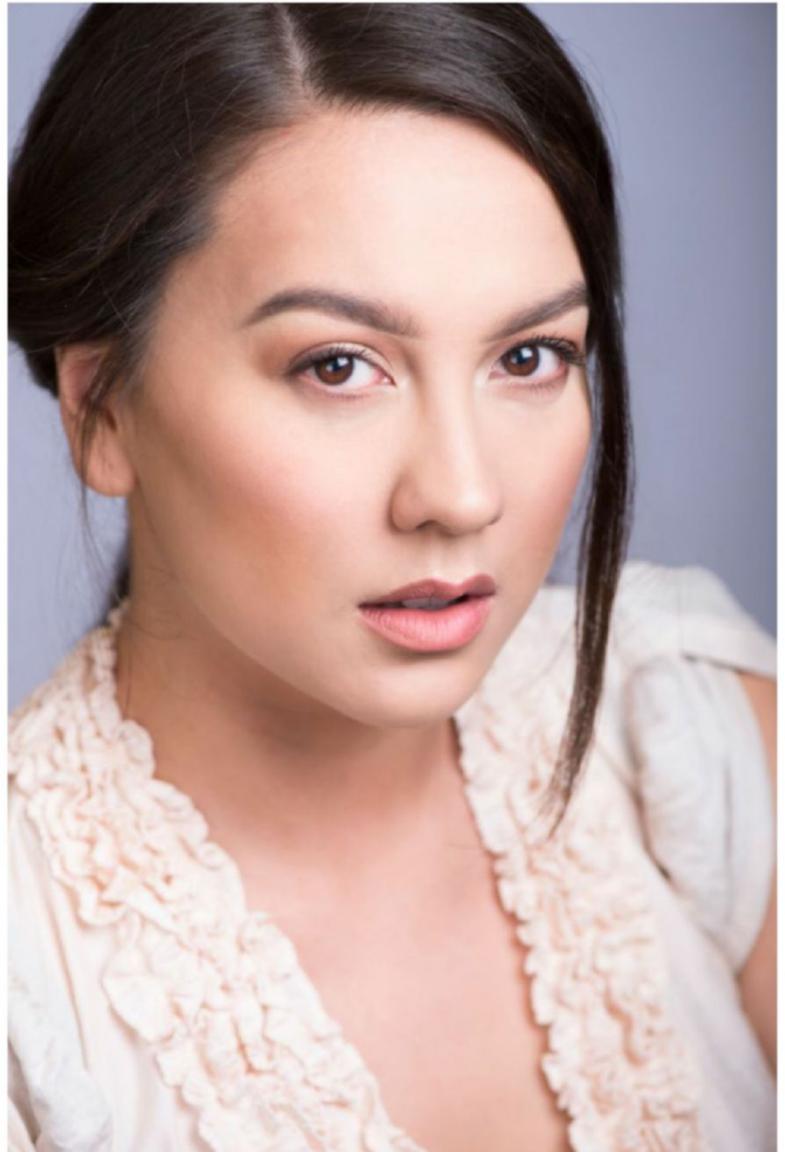


TOP TIP

Light from a speedlight will almost always look better when it's diffused with a modifier like an umbrella, or bounced off a wall.



KEY SETTINGS



RETOUCHING SECRETS

Pressing the shutter is only half the job: whether it's simple adjustments or more intensive retouching, finishing off the image is equally important

LOVE it or hate it, Photoshop has changed the way portraits are created – and it's also changed the way we perceive portraiture as truthful or not. With a few skills, anyone can transform a portrait into

whatever they please. But when you can get rid of every wrinkle, drop three dress sizes and remove every imperfection, the real skill is in knowing when to stop.

The art to good retouching is making subtle, almost imperceptible alterations. The three tricks explained here will help. First we'll use two tools cherished by retouchers – Heal and Clone – to tidy up marks and spots. Then there's a skin softening technique that works wonders, softening and smoothing out skin while still retaining the delicate skin texture that so many inferior methods obliterate. And finally is a useful trick for reducing eye bags that lets you lift dark tones without losing detail.

Professional retouchers might spend hours working up a single image, but thankfully, these tricks take much less time to achieve...



TIP 1
HEAL AND CLONE

The Heal and Clone tools are great for quick and effective retouching

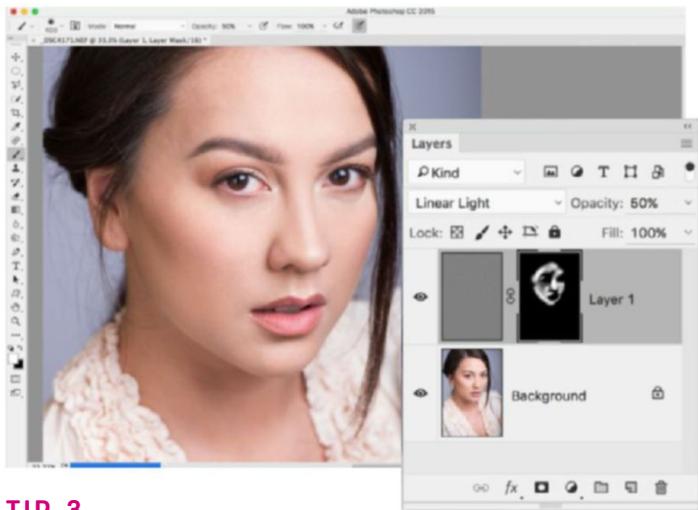
Photoshop's Spot Healing Brush lets you remove spots, blemishes and stray hairs by painting over them. Switch to the Clone Tool when you need to blend untidy patches or rough skin. Set the tool to 20% and Alt-click to sample a clean area nearby, then gradually clone over the problem area. Both tools can be set to 'Sample All Layers', so it's best to use them on a new empty layer to preserve your original image. That way, you can change your mind later...



TIP 2
REDUCE BAGS

This quick trick reduces unsightly eye bags while preserving fine details

Add a Curves Adjustment Layer, then click on the Curves layer thumbnail to deselect the mask. Double-click the black point eyedropper in the Curves settings, then sample a clean skin tone. Click OK, then click over the dark eye bag. The shadow tones will change colour to match the first sampled tone. Now you simply mask it to cover just the bags. Highlight the mask thumbnail and press Ctrl/Cmd+I to invert, then paint with white over the eye bags.



TIP 3
SOFTEN SKIN

This superlative softening technique retains the fine texture of the skin

Duplicate the background layer then invert it with Ctrl/Cmd+I. Set the layer opacity to 50%, and change the Blend Mode from Normal to Linear Light: your image should now be grey. Go to Filter > Other > High Pass and set the Radius to around 9px. Go to Filter > Blur > Gaussian Blur and set it to around 3px. Finally, Alt-click the Add Mask icon for a full black mask, then paint white over the skin to reveal the softening effect.

PRO ADVICE Dodge and burn the face



Dodging and burning might seem more suited to landscape photography than portraits, but a little selective lighting and darkening can have a huge impact. Here's one way to do it: Alt-click the new layer icon, set the Blend Mode to Overlay and tick the Fill With box, then paint white or black over the image.

More important than the method is where you dodge and burn. With a few subtle

strokes, you can emphasise the contours in the face in much the same way as a make-up artist. In general, aim to lighten the centre of the forehead, the area below the eyes and the chin; then darken the hairline, below the cheekbones and underneath the chin.



GETTING THE LOOK

Whether inspired by vintage films, analogue effects or cutting-edge digital work, with a combination of lighting and Photoshop skills we can create a huge variety of looks

THE best portrait photographers get to where they are because they settle on a look that works for them, then hone it to perfection.

This could be masterful control of classical lighting, genius-level creative Photoshop abilities, or a throw-out-the-rulebook manner. Choose an approach or specific look that appeals to you, then put in the time to perfect it and carve out your own niche. Inspiration can be drawn from everywhere you look – films, magazines, the web, even people on the street. Here are four looks to try out, each achieved with a cunning combination of lighting and Photoshop skills...



LOOK 1

HOLLYWOOD GLAMOUR

Use gobo lighting to build an iconic look made famous by the silver screen

FOR the moody look of a 1930s film noir, why not try lighting with a gobo? Short for 'go-between', a gobo can be anything placed in front of your light source that casts an interesting shadow onto the scene.

A blind is a classic example, casting strips of light across the scene. For this shot, two lights were used: one positioned off to the left of the camera,

with the blind placed in front, fired bare for hard, well-defined shadows; and another light off to the right, directed at the face with a honeycomb modifier to narrow the beam.

A combination like this gives the perfect look for a punchy black and white conversion. Don't forget to add plenty of grain in post-production to really enhance the retro feel.



LOOK 2

BACKLIT RAIN

A downpour looks wonderful when lit from behind with an off-camera speedlight

LIKE the moody flash-lit portrait on page 48, we've used an off-camera speedlight here to overpower the natural light. But this time it's positioned on a stand directly behind the subject (covered with a clear plastic bag to prevent it getting wet) and fired bare at full power. The resultant backlighting captures the falling rain beautifully, creates deep

shadows and darkens the background – even though the shot was actually taken in broad daylight. As for post-production, here it's minimal. Try increasing Clarity in Camera Raw to crisp up the rain, and add blue into the shadows with Photoshop's Color Balance command. Pick an umbrella colour in advance that will set off the blue nicely.



LOOK 3

DOUBLE EXPOSURE

Replicate the old film technique of exposing the same frame twice for evocative portraits

ONE of the few analogue effects to make as big an impact on the digital world, double-exposures are hugely popular, not just in stills but also in music videos and TV programmes. Shoot an underexposed portrait taken against a bright, blown-out backdrop like a sky. This way, the second exposure will be confined to the shape of the body.

The Photoshop part is simple: copy one image on top of another, then simply change the Blend Mode to Screen. (You can also do this with video layers in Photoshop.) It's perfect for conceptual portraits as you can literally get inside your subject's head.

For more help with this technique, see our double-exposure tutorial in Photo Projects: turn to page 36.



LOOK 4

DIGITAL ART

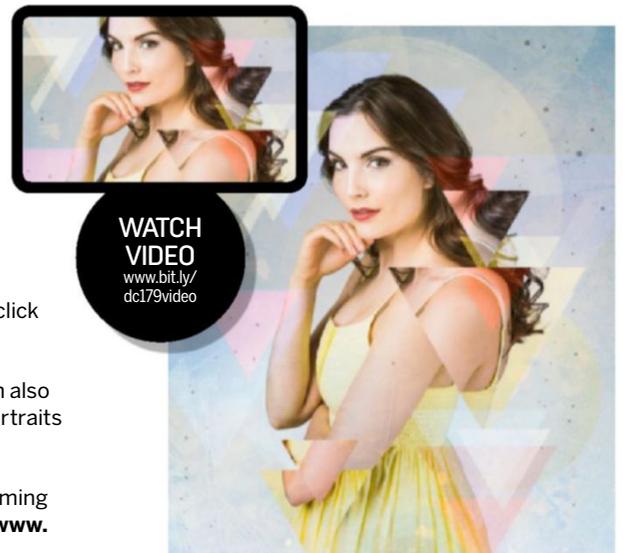
If you want to go all out with Photoshop, why not try a geometric mash-up?

AN effects-heavy portrait treatment like this is easier than it looks. Begin with a studio-lit portrait against plain grey. Then you simply make shapes with Photoshop's Shape Tool, add a colour and experiment with different Blend Modes. (Hard Light, Linear Light and Divide work well here, for example.) To offset the portrait, 'clip' a duplicate to a Shape Layer: drag it above the

shape in the layer stack and Alt-click the line between the two.

Images of textures like the weathered leather used here can also look great when blended with portraits (try Overlay or Soft Light).

You'll find the full technique explained in our 13-minute streaming video, which you can watch via www.bit.ly/dc179video



BACK TO BASICS

TECH MADE EASY

1 FOCAL LENGTH

As the name suggests, a wide-angle lens offers a wide angle of view, while a telephoto lens – one that has a long focal length – produces a much narrower angle of view.

2 CAMERA POSITION

The field of view – the physical distance captured across an image – changes depending on how near or far a camera is to the scene being photographed, but the angle of view is determined by the focal length.

3 CAMERA TYPE

Although the angle of view is fixed at each focal length, the size of the imaging sensor inside the camera can have an effect on the overall angle of view that's recorded in the picture.

4 DIAGONAL ANGLE

When you check a lens's specifications, the angle of view is typically quoted for the diagonal of the image.



THIS MONTH: ANGLE OF VIEW

How focal length and sensor size determine what your camera 'sees'

ANGLE of view is a measure of how much of a scene or subject a lens can take in. Expressed in degrees, the angle of view can be measured horizontally, vertically or diagonally across an image. It's the focal length that's key: lenses with shorter focal lengths are able to capture more of a scene in a single shot, while longer focal

lengths offer a much narrower view. You can, of course, move your camera further away in order to bring more of a scene in to the picture or move closer to produce a tighter shot – or stay where you are and adjust the setting on a zoom lens – but the angle of view for the chosen focal length doesn't change. What does change is the relationship

between the objects in the picture if you physically move closer or further away. Step forward with a wide lens and you'll continue to capture more of the background relative to the subject of the photo. A long lens will continue to take in a much smaller portion of the background relative to the subject as you move away.

Why sensor size is important



THE size of the imaging sensor has an impact on the effective focal length of a lens, and consequently the angle of view. With 35mm film cameras and full-frame digital cameras, the focal length gives a good guide to

the angle of view. But cameras with smaller APS-C or Four Thirds sensors capture a smaller area of the image projected by the lens. This means that shorter focal lengths are required to get the same angle of view.



Full-frame

These sensors are the same proportions as a frame of 35mm film and capture the full view of compatible lenses.



APS-C

Being either x1.5 or x1.6 smaller than a full-frame sensor, an APS-C sensor gives a narrower view with the same lens.



Four Thirds (4/3)

These sensors are half the size of a full-frame one, so a 50mm lens on a Four Thirds camera gives the equivalent angle of view as a 100mm lens on a full-frame SLR.



WHEN photographers talk about a lens's focal length, what they're really concerned about is the angle of view.

This is because the angle of view determines how a scene can be framed and composed. Long lenses with focal lengths of 200mm, 300mm or 400mm and beyond offer narrow angles of view that make it easier to isolate objects within a wider scene.

The drawback to having an angle of view of just a few degrees is that it's equally easy to lose track of a subject, as a slight shift in the position of the camera can have a dramatic effect on which area is picked out by the lens. This problem is compounded if you're following a moving subject, as anyone who's tried photographing fast-flying birds up close through a 600mm lens will know!

Wide-angle lenses flip this problem on its head. Focal lengths in the region of 16-35mm are capable of sucking in a great deal of a scene in one photo, and consequently it's easier to initially frame the shot and to recompose quickly. The downside of taking

in an angle of view of almost 100 degrees is that it's easier for distractions to creep into the frame and it's more challenging to make an object stand out from all the 'noise'.

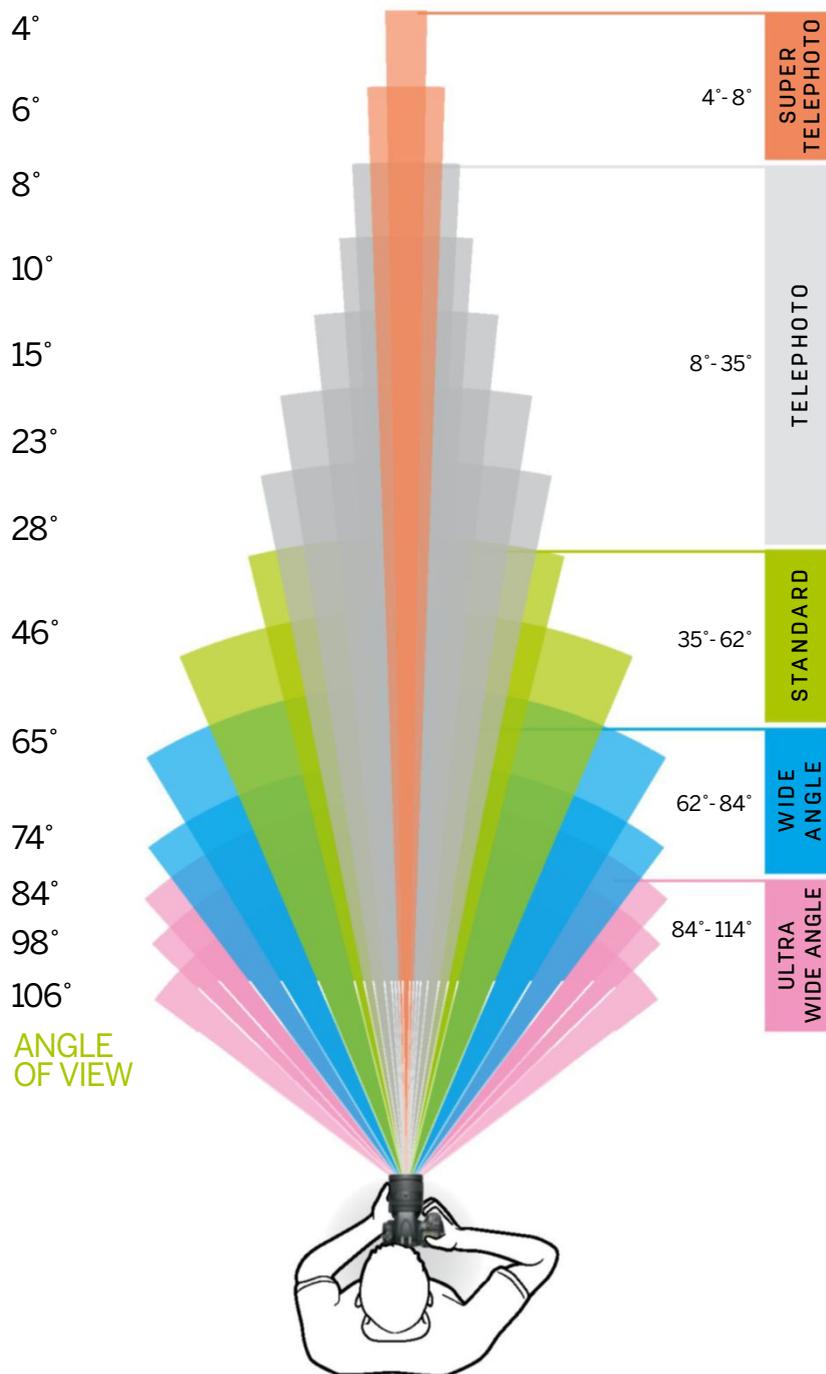
You can exploit the traits of different angles of view creatively. For instance, as well as being essential in confined spaces where you can't physically move further from a subject, getting up close with a wide-angle lens means that you can capture both a subject and its surroundings in one picture. You can also play with scale, as objects closer to the camera will appear much larger in relation to those in the distance.

Longer focal lengths take in a much narrower section of the background. Not only does this make it easier to compose a 'cleaner' shot – a small movement of the lens is all it takes to find a more suitable section of the backdrop – but it magnifies that part of the background too. You can use this aspect to make distant buildings, mountains or even the moon appear much larger in relation to the objects in the foreground. The trade-off here is that you'll

have to be shooting from a greater distance to squeeze them both into the shot.

As you'll see above, sensor size makes a difference, with smaller sensors such as Nikon's DX format requiring much shorter focal lengths to achieve a wide angle of view than their full-frame counterparts. But the way in which small sensors effectively increase the focal length of a lens can make them useful for long lens work.

The downside of taking in an angle of view of almost 100 degrees is that it's much easier for distractions to creep into the frame



Super telephoto

ANGLE OF VIEW	7°	5°	3.5°
4/3	150mm	200mm	300mm
APS-C	200mm	250mm	400mm
FULL-FRAME	300mm	400mm	600mm



Telephoto

ANGLE OF VIEW	28°	15°	10°
4/3	35mm	70mm	100mm
APS-C	45mm	90mm	135mm
FULL-FRAME	70mm	135mm	200mm



Standard

ANGLE OF VIEW	54°	49°	40°
4/3	17mm	20mm	25mm
APS-C	24mm	28mm	35mm
FULL-FRAME	35mm	40mm	50mm



Wide-angle

ANGLE OF VIEW	98°	84°	65°
4/3	8mm	10mm	14mm
APS-C	10mm	14mm	20mm
FULL-FRAME	16mm	20mm	28mm

FOCAL LENGTH

How to select the right lens for the shot

THE shorter the focal length is, the wider the angle of view. For instance, an 8mm fisheye lens may be able to take in a huge 180-degree view – and there’s a risk that your feet will inadvertently end up in the picture if you’re not careful. Super

telephoto lenses, on the other hand, may offer an angle of view of just three or four degrees. To the right, you’ll find a list of common horizontal angles of view and the focal length required to achieve them with different sensor sizes.

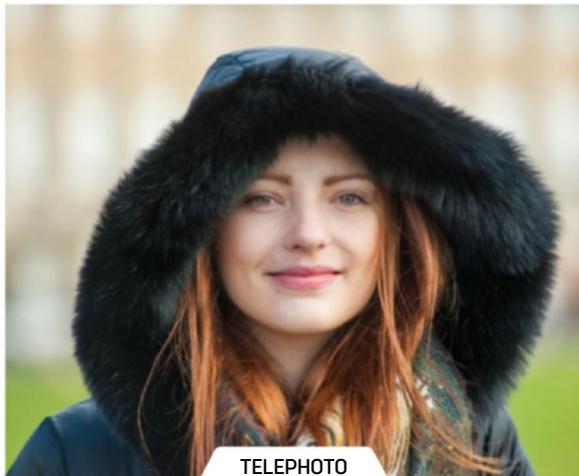
BACKGROUND MATTERS

Where you stand makes a big difference to how large or small distant objects appear

CHOOSING the right focal length for a situation isn't simply a matter of working out how large or how small you want the subject to appear in the picture: it's also about the perspective and the overall look you want to achieve. Here you can see the

power that perspective can have. One photo has been shot from a distance with a 200mm telephoto lens; the other has been shot up close with a 20mm wide-angle. The subject size might be consistent between the two images, but that's about it. You can see how the

wide-angle lens has captured much more of the environment, although having to shoot within such close proximity has resulted in some distortion on the features close to the camera. The telephoto lens doesn't show the same distortion.



TELEPHOTO



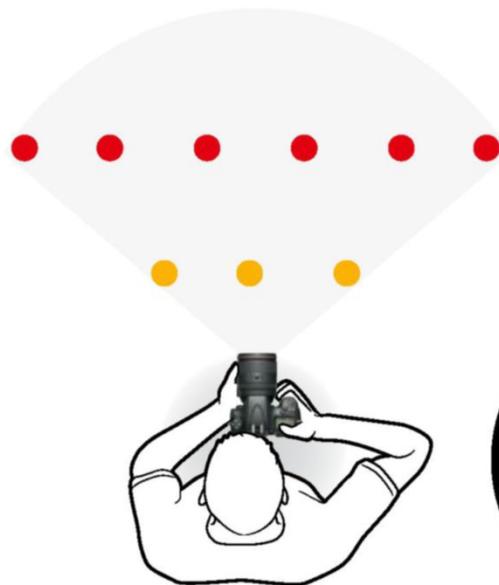
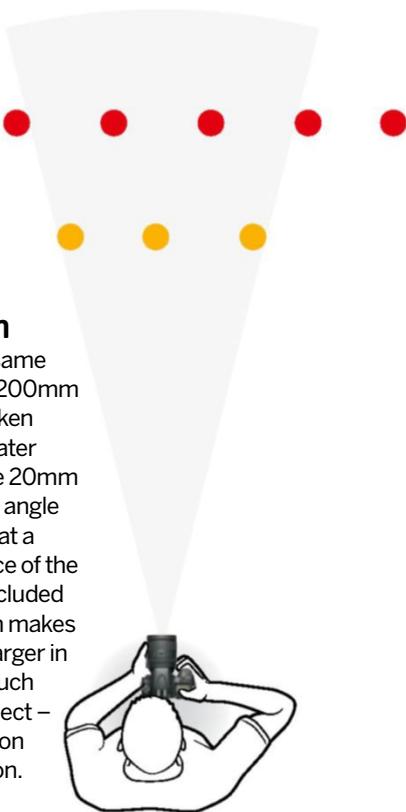
WIDE-ANGLE

KEY

- Subject
- Background

Compression

To maintain the same subject size, the 200mm shot had to be taken from a much greater distance than the 20mm shot. The narrow angle of view means that a much smaller slice of the background is included in the shot, which makes it appear much larger in the frame and much closer to the subject – this is compression distortion in action.



Extension

Choosing a 20mm lens and shooting within a few feet means that much more of the background is visible. As a result, the subject appears much larger than objects in the distance. This is what's known as extension distortion, which can make for more dramatic results. It's not particularly flattering for portraits, though...

NEXT MONTH

Get to grips with image stabilisation

#1

FLOUR POWER

The winner of Food Photographer of the Year reveals some tasty secrets for success



MANY entrants to photography competitions think they need to go to exotic locations to get winning shots, but sometimes you only need to go down the road.

Bath resident Mark Benham recently won Pink Lady Food Photographer of the Year with this shot of Duncan Glendinning, who runs the Thoughtful Bread Company in, you've guessed it, Bath. "The wife of a friend of

mine is a food stylist and writer, and she suggested I get in touch with Duncan," Mark explains. "So I went along on a day when he was working a double-shift, as they were short staffed."

Mark took the images in the hot and cramped basement of the bakery, in less than ideal light. Fortunately there was a space with a clean background, against which Mark framed this shot of Duncan. "It was about four in the afternoon and I was getting pretty tired, so I suggested we had a bit of fun.

Duncan was making dough and threw in some flour, and that is how this shot came about."

Originally Mark was going to use a flashgun, but technical problems meant he had to rely on high ISOs and fast lenses. "I increased the ISO to 2,000 and used a Canon EF 50mm f/1.8 lens, which is fast, sharp and very reasonably priced. You don't always need the latest and greatest gear, and money constraints mean I need to make the most of my kit." www.markbenham.co.uk





Mark Benham

Why it works

1 The shutter speed was 1/640 sec at f/4.5, using Single-Point autofocus. Duncan shot in Aperture Priority mode, as he was working fast and needed some degree of automation.

2 Mark focused on Duncan's eyes. The fact that Duncan isn't staring directly at the camera or 'posing' gives the images much more of an authentic documentary feel. At the same time, you get a sense of a hard-working artisan who clearly enjoys his work.

3 There is a lot going on in the foreground of this image, so it was important that the background was sympathetic and non-distracting.

4 Mark did minimal tweaking: "I edited the image in Adobe Camera Raw and began by adjusting the lens profile and boosting Clarity, Vibrance and Contrast." After upping the whites, he then imported the image into Photoshop and used some simple Adjustment Layers.



#2

THE DANCE OF LIGHT

Dried flowers are creative flowers, particularly with innovative lighting



Polina Plotnikova



LONDON-based enthusiast photographer Polina Plotnikova is on a roll this year. Already she's

won a Food Photographer of the Year category and received a Commended gong in the Garden Photographer of the Year for her still-life work – including this image, 'The Last Dance'. It's a great example of her simple but highly creative approach to still-life photography in the studio.

"This image is part of an ongoing project on dried flowers," she explains. "It's an orchid – I love orchids – and I dried it out to reveal the interesting lines and shapes it makes when dead.

"I am very much a studio-based still life photographer. Other genres are fun, but this is the one that suits me best. If I can produce two images a month that I am happy with, that is great, although that might not seem particularly productive to other types of photographers."

www.polinaplotnikova.com

Lighting set-up

- 1 "I shot the orchid against a Bowens softbox, placed behind it as backlighting. The background is just ordinary baking paper. I do sometimes use art paper from art shops, but this had such a nice, fibrous, parchment feel, with a lovely pattern."
- 2 The second source of light is another Bowens flashlight, used with an umbrella in front. "In other words, the orchid is between two flashlights," Polina explains.
- 3 "Usually I know in advance whether I will convert an image into mono or not. I do also shoot in colour to be on the safe side. In terms of Photoshop, I did the minimum to this image – cropping, curves, correction, contrast, sharpening, and the black-and-white conversion."





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Adrian Dennis

#3

TAKING A DIFFERENT VIEW

Research and experimentation can yield great documentary results



A DISTINGUISHED press photographer for the AFP agency in London, Adrian Dennis had to 'think different' when covering the Queen as she inspected a cadet Guard of Honour at Berkhamsted School in this, her 90th birthday year.

"Because many of the 'royal boys' [the photographers that make their living shooting these kind of events] had filled the

main areas allocated to the photographers, I chose a different position," Adrian explains. "I'll usually try and do this if I'm allowed – mainly because I can't see the point of shooting the same picture as 15 other guys, but also I didn't necessarily think theirs was the best angle."

He had to park half a mile away and wheel all his photographic gear in, but he says the effort was worth it.

<http://portfolios.afp.com/photographer/adrian-dennis.html>

The eyes have it

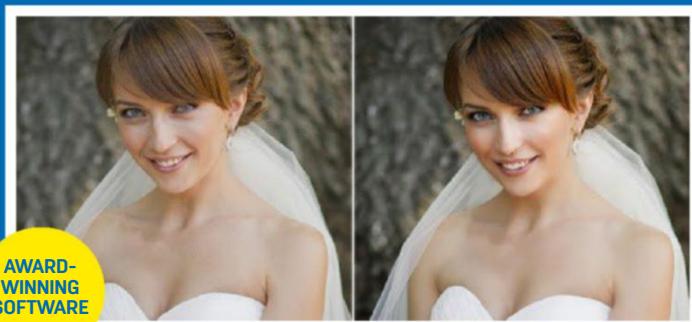
1 Not knowing exactly where he would be in relation to Her Majesty, Adrian lugged in three Canon SLRs and four lenses (24-70mm, 70-200mm, 300mm, and 500mm). "I was adamant I was going to use the 300mm lens on my latest body, the amazing Canon EOS-1D Mk II. It's a great combination: the autofocus and sharpness is incredible." Earlier, Adrian had quizzed a cadet officer who told him the best place to stand. "The allocated photographers' position was too head-on and wouldn't lend itself to seeing the cadets in the background."

2 Being in a better position also enabled him to get the eye contact between the cadet and HRH. "I want my picture to give a clue to what the Queen is doing



on that particular day, whereas the 'royal boys' are looking for a timeless, 'clean' portrait of her. To keep everything sharp at 300mm, Adrian kept a high shutter speed of 1/2,000 sec at f/4, ISO 250.

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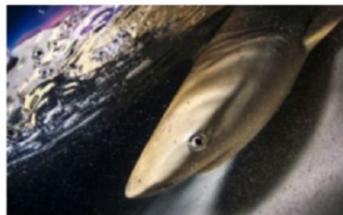
82 See the winners in our 'dusk to dawn' challenge



66

SHOOTOUT

Our special portrait issue continues as two readers work with lighting to improve their people shots



72

PORTFOLIO

Reverse-mounting his lenses enables Imran Ahmad to capture fish close-ups on an epic scale



74

PHOTO ANSWERS

Help with viewing focus points in Lightroom plus cities at night, flashgun diffusers and adding drama to shots



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Digital Camera SHOOTOUT!

Two readers take on a studio-based challenge in the wild West Midlands



STUDIO LIGHTING

For this month's Shootout, **Ben Brain** tasked two readers to get to grips with studio lighting and off-camera flash techniques



READER 1



Will Lloyd

CAMERA: Canon EOS 70D

LOCATION: Northampton, Northamptonshire

WILL started taking pictures with a **Minolta SR101 35mm film camera** when he was a teenager in the late 1970s. "Life happened," as he puts it – he's now the managing director of a financial advice firm – and it wasn't

until three years ago that he got back into photography again. His core kit includes a Canon EOS 70D with Canon 40mm, 50mm and 85mm EF primes and a Sigma 18-35mm zoom. He's also a keen user of Phottix Mitros flashguns.

READER 2



Simon Allen

CAMERA: Canon EOS 5D Mark III

LOCATION: Poole, Dorset

BEING a graphic design studio manager in Poole meant that **Simon** faced an eight-hour round trip for this month's Shootout. But he was keen to make the long journey, as he wanted to test himself when it came to

lighting set-ups and directing a model. Simon specialises in wedding photography and has seen some of his work published in *Dorset, Wiltshire & Hampshire Bride* magazine. www.saweddingphotography.co.uk



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CHALLENGE 1

Create a punchy backlit portrait



Kit Canon EOS 70D with Sigma 50-100mm f/1.8 DC HSM Art lens at 69mm Exposure 1/250 sec at f/16, ISO 100



Will

WE spent the day at the headquarters of the UK distributor of Phottix studio lights, hotshoe flashguns and accessories, so we had an ample supply of kit at our disposal. We also had the ample talents of Phottix brand manager Tony

Dudley available for technical and technique guidance.

The session began with tips for mastering exposure and how to make a neutral background appear white or black, before progressing to using a single backlight and a three-light set-up. "Tony was a fantastic teacher," says Will. "We covered a lot of ground at pace! Learning the mantra of setting up background, fill and key lights (in that order) was a lot to take in, but I soon got to grips with the process."

Expert opinion

- Will's engaging way with the models has produced this equally engaging expression from Freddie.
- Overexposing the backlight creates a clean white backdrop.
- Will's retained detail in the fine areas of Freddie's hair while delivering the high-key look.



Controlling studio lights

We used Indra360 and Indra500 TTL studio lights, with Phottix Odin II TTL flash triggers attached to the hotshoes of Will and Simon's Canon SLRs to provide cable-free control. Working with the camera in Manual exposure mode meant that the shutter speed, aperture and ISO could be locked in, with the power of the lights being adjusted via the flash trigger to increase or decrease the brightness.



Simon

ALTHOUGH he's been in a studio environment before, Simon has never had to think for himself in regards to setting up lighting, and this was one of the aspects he wanted to crack. "I had no idea what the challenges were before I arrived, so I was pretty apprehensive," he admits. "I found the build-up really interesting: Tony did a great job explaining how to manage the power of the lights and how to balance artificial and ambient light using my camera settings."

Our models, Freddie and Tanya, were very experienced, and their ability to run through a sequence of poses with relatively little prompting certainly helped to put Simon and Will at ease. Working out the best lighting set-up was the initial focus. Here Simon used a large folding octagonal softbox to create the blown-out background, with a softbox and an octa softbox positioned to Tanya's left and right.

Kit Canon 5D Mark III with Canon EF 135mm f/2 lens
Exposure 1/200 sec at f/16, ISO 200

Expert opinion

- When photographers talk about strong eye contact in a portrait, this is what they mean!
- The position of the model's hands adds a sense of movement to this otherwise static shot.
- Simon's deftly avoided a deep shadow being cast across Tanya's face by her arm.



Directing a model

Will and Simon were thrown in at the deep end, having to work with two models, sometimes with both in the same shot. "I had some ideas in my head and a mood board of poses on my phone," says Simon. "Looking back, I've learned not to rush and panic and to use the resources I've put in place." Tony's top tip was to ask the model which side they prefer to be photographed from, and to arrange the lights accordingly.

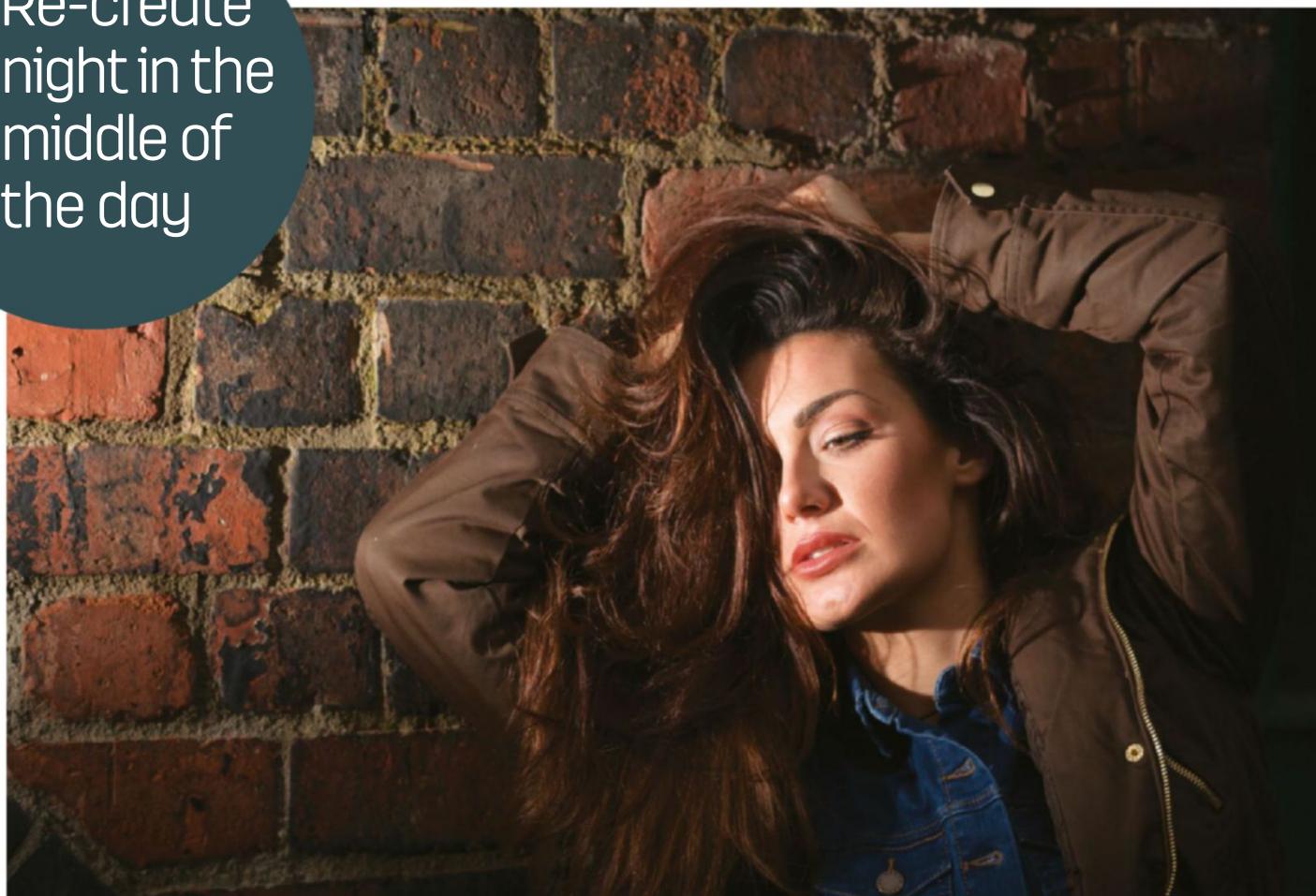


TOP TIP



CHALLENGE 2

Re-create night in the middle of the day



Kit Canon EOS 70D with Sigma 50-100mm f/1.8 DC HSM Art lens at 55mm Exposure 1/2,000 sec at f/2.8, ISO 100



Will

WE switched to portable but powerful off-camera TTL flashguns for an outdoor session during the second part of the day. The challenge here was to overpower the ambient daylight and create images full of mood. "Using high-speed sync was a revelation," says Will.

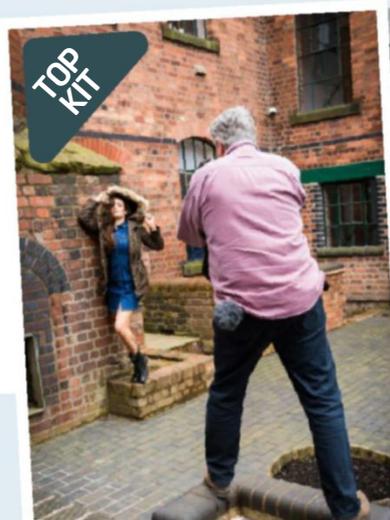
High-speed sync (HSS) enables you to use much faster shutter speeds than normal with flash – so fast, in fact, that the daylight can be underexposed, to the point where it becomes a fill light to the flash's key (main) light. "The way in which you can exclude extraneous background details and get the model to be the central element was really instructive," adds Will. Using a single, bare flashgun, held by an assistant, meant that Will could work quickly and try a range of different backgrounds with next to no set-up time.

Expert opinion

- Will has met the challenge, bringing a dark twist to a damp afternoon in Wolverhampton.
- Holding a single flashgun camera right, at a raised angle mimics the effect of street lights.
- The blend of earthy tones ties everything together nicely.

Working wirelessly

The Phottix Mitros+ flashguns we were using have built-in wireless radio signal receivers that are compatible with the Odin transmitters from our studio session. Unlike infrared, radio signals don't require line-of-sight triggering, so the flashgun can be positioned much more freely, including behind objects or cocooned in a softbox.





SHOT OF THE DAY

NEXT MONTH

Two readers take on our Dartmoor challenge

Kit Canon 5D Mark III with Canon EF 135mm f/2L USM lens **Exposure** 1/60 sec at f/6.3, ISO 100



Simon

SIMON worked a number of different single-light set-ups, making use of the courtyard's numerous doorways and stairwells to add depth to his compositions.

"Shooting outdoors was just as much fun, if not more so, than the studio element, with plenty of different

backdrops and textures in close proximity," he says. Simon kept things simple, sticking with a single, diffused flashgun, supported on a lighting stand, and a 135mm f/2 portrait lens. "This style of photography is what the majority of my personal work consists of, so I was really relaxed during this part of the day. As I do with most situations, I often look back and wish I did this and tried that, but ultimately I walked away from the day not only having learned something but also happy with what I produced."

Expert opinion

- Beautiful spotlighting, with enough detail in the rest of the frame to keep things interesting.
- Simon has done well to balance the highlights and shadows in this high-contrast scene.
- Super use of off-centre framing with the perspective and light giving a three-dimensional feel.

Big thanks

We'd like to express our thanks to Phottix (www.phottix.com) for its help and hospitality – in particular Tony, who dealt with technical questions regarding the Odin wireless system with great patience!



PORTFOLIO

Reverse-mounting his lenses enables Imran Ahmad to capture fish close-ups on an epic scale

NAME: Imran Ahmad Bin Rayat Ahmad
LOCATION: Singapore
SUBJECT: Underwater wildlife
EQUIPMENT: Nikon D4 in Seacam housing with RGBLue System 02 lights and a wide range of lenses
WEBSITE: www.escapeinc.com.sg



IN a world awash with awe-inspiring images of life in the ocean, underwater

photographers have to be able to serve up more than just pretty pictures of curious fishes in order to make an impact. The work of Imran Ahmad is a case in point. A dive operator, lecturer and Nikon Professional Photographer, Singapore-based Imran has earned a reputation as someone who's always looking for a fresh approach.

"I'm pretty experimental when it comes to photography," he says. "I enjoy exploring older techniques alongside new technologies, and I believe I'm the first photographer in the world to successfully use the reverse-ring macro technique in the sea and to explore the potential for HDR photography underwater.

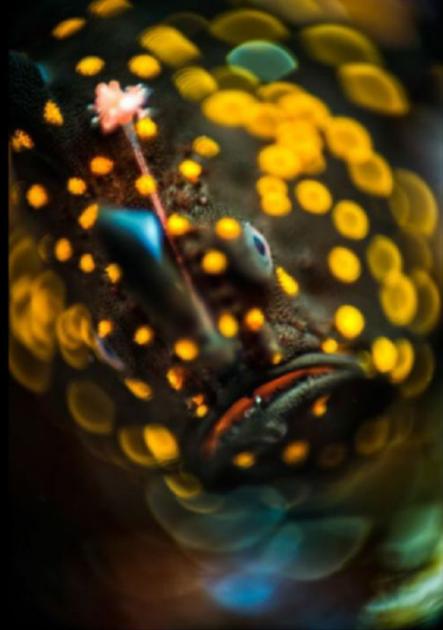
"I'm also a firm believer in working with lights in creative ways rather than just treating them as a way to illuminate a subject in the depths. Light gives character to a shot, and in underwater photography that is something to embrace. After all, a fish is just a fish until you add your imagination and creativity."

Imran's intriguing, vibrant images are sure to inspire a new

generation of underwater photographers, as the work of David Doubilet and Kurt Amsler did for him. But how much diving experience does he think someone needs before they can start taking the photography side of things seriously?

"Shooting underwater is much easier now than it used to be, thanks to the wide availability and cheaper price of equipment. But it is important to first learn the proper way to scuba dive; not only will this help you to get images but also help you protect the environment with good buoyancy control. A safe measure is to have a minimum of 50 dives under your belt before you go in with an underwater camera."

As you'd expect, raising awareness of the vulnerability of the ocean environment is just as important to Imran as revealing its beauty. "I've been blessed to have dived in some of the best destinations in the world, from sunny Indonesia and spicy Thailand to the exotic Seychelles and colourful Philippines. Sadly, I have watched the deterioration of beautiful reef wonderlands through irresponsible tourism and bad scuba practice. It's so important to educate our younger generation to the importance of our reefs and their inhabitants."



Kit Nikon D4 with 50mm f/1.8 lens reverse-mounted on a 105mm f/2.8 lens
Exposure 1/250 sec at f/4, ISO 200
 Attaching a reversed 50mm lens to a 105mm lens gives extreme magnification and a funky bokeh effect.



Kit Nikon D200 with 60mm f/2.8 lens
Exposure 1/100 sec at f/7.1, ISO 100
 Colourful fins captured with a standard macro lens in the waters of Indonesia's Raja Ampat archipelago.



Kit Nikon D4 with 105mm f/2.8/50mm f/1.8 RRM
Exposure 1/125 sec at f/13, ISO 200
 Focusing accurately is difficult when you're using the RRM technique, as the depth of field is wafer-thin.



Kit Nikon D4 with 13mm f/2.8 Nikonos RS lens
Exposure 1/160 sec at f/11, ISO 200
 A Seychelles seascape takes on an extra-terrestrial appearance after being mirrored in Photoshop CS6.

Kit Nikon D4 with 16mm f/2.8
fisheye lens

Exposure 1/15 sec at f/16, ISO 200

This split-screen shot was achieved
with video lights rather than
strobes. Not having to wait for
strobes to recharge makes for a
faster continuous shooting speed.



**NEXT
MONTH**

The cinematic
family portraits
of Fang Tong



ANDREW JAMES

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Shoot while there's still colour in the sky for the most effective results.

City lights

Q I want to shoot cities at night. Can you give me some tips for this, please?

Tom Wood

A **MOST** of the basic steps you'd follow during the day are all applicable, so you need to think carefully about composition and choose an aperture of $f/11$ or $f/16$ to ensure you have plenty of depth of field. But there are some critical differences too. A building at night can change as the lights come on, so it's always

worth watching how its lights respond to the surroundings as it becomes dark.

The key element is timing. You want to shoot at the point the lights of the building are completely on but there is still some light in the sky – so you have some interesting colour there too, such as deep blue rather than just black. This will ensure maximum impact of the buildings against the backdrop. On drab, cloudy nights this isn't really possible so I always try to shoot on clear nights or when there are broken clouds. You will need to use a tripod too, as your exposures are going to run into several seconds.

White balance choice is always difficult because the lights within your scene will vary in temperature. For this reason

I always shoot raw, leave my white balance as Daylight, and adjust later, both globally across the whole image and sometimes in selected areas too.

As you can see on my example image taken in Zaragoza, Spain, the lights along the bridge in the foreground are quite warm in colour, while those on the far bank of the river are a much cleaner white. The raw image, shot at a temperature of 5,500K (Daylight), is overall much warmer in tone, but I manually adjusted it to 4,000K to give the whole scene a better balance.

The closest I would have got to this would have been to shoot it with the white balance set to Fluorescent WB (4,000K), so if I was shooting a JPEG, this is certainly what I'd have used.



Flash modifiers and diffusers enable you to control how the light leaves your flashgun.

LAYMAN'S GUIDE

Flashgun modifiers and diffusers

Adjust the light produced by your flashgun

What are they?

Handy widgets that attach to your external flashgun to help you shoot portraits or other flash-lit subjects with more interesting light effects. They redirect, soften and generally control the amount of light reaching your subject.

How are they attached to the flashgun?

There are lots of varieties available, and the way they attach to the gun itself changes from model to model. Typically you can fix them to the flashgun with an adjustable strap or piece of elastic, then shoot away.

Will they work on all external flashguns?

It's best to check with the manufacturer or retailer that your flashgun is OK with their model but, as a general rule of thumb, most modifiers are designed to be universal.

Is there a huge benefit to using one?

If you are an occasional flashgun user, they are probably not for you; but if you shoot portraits regularly using flash, a modifier can be a relatively simple and portable way to increase the versatility of your flashgun.

What sort of lighting can they achieve?

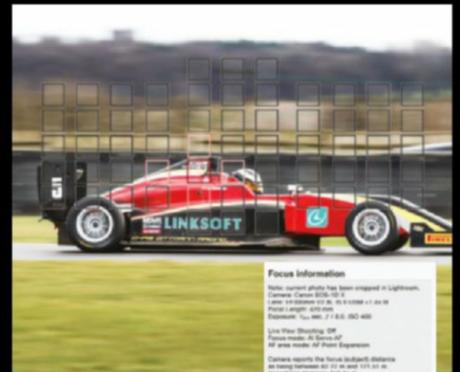
You can buy modifiers that will create a ringflash-style light that is typified by almost shadowless lighting and a telltale circular catchlight in the eyes. Others will help you bounce the light for a more even spread or even control the amount of light to a narrow beam so that you can really target where the flashlight illuminates your subject. Basic diffusers will just reduce the harshness of direct flashlight.

How much do they cost?

You can buy a very basic flash diffuser for £10 or less, but for a specialist modifier or a kit that will give you several different options with your lighting, you should expect to pay between £99 and £159.

Are there any downsides to using them?

Some models can be a bit fiddly to use and put on, but practice makes perfect. They will also naturally reduce the amount of light hitting your subject, so you need to account for this with your exposure if you're used to setting your flashgun without a diffuser or modifier.



See the focus

Q I can't find a way in Lightroom to see the AF point that was selected when the picture was taken. Is there a way to do this I'm missing?

Davy Renwick

A LIGHTROOM doesn't have this facility, but that doesn't mean all is lost. You could use the free raw conversion software that came with your camera and work outside of Lightroom, but if you want to add the option to Lightroom, you'll need a plug-in.

Show Focus Points (www.lightroomfocuspointplugin.com) works well but is restricted to Canon and Nikon cameras, and you need Lightroom 5, 6 or CC to use it. You can download it for either Windows or Mac OS X; after installation it can be opened via Library > Plug-in Extras, but you have to be in the Library module to see this menu. The plug-in will show you the AF point or group of points you used and identify which one was used to lock focus.

A black-and-white square shows the inactive focus points; red outer and white inner square is for the AF point or points originally selected but not locked on; black outer and red inner shows the AF point that was originally selected and locked on; and white outer and red inner will reveal a locked on AF point that wasn't originally selected.

In my shot of the panned racing car, you can see I selected the middle group of AF points. That's the one at the very centre of the AF grid and four surrounding it in a cross configuration. As I'd generally expect, it was the central AF point (black outer and red inner) that locked the focus.

ASK US A QUESTION
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(subject line: Photo Answers)



f/8 and be there

Q An experienced photographer has told me to shoot f/8 if I'm in any doubt over the correct aperture. Is he right?

Sally Hall

A **THE** phrase “f/8 and be there” is something that has been passed down over the years. Like all such sayings, there is a basis of truth to it. If you select f/8, you'll get good of sharpness throughout the shot so, if your focusing isn't 100% accurate, then this aperture will help a bit. Also, if your lens has a maximum aperture of f/4, then f/8 may well prove to be its sweet spot: the point where it will achieve the best resolution and therefore the sharpest image. Ultimately, f/8 is the middle ground of apertures, so it won't let you down in many situations.

However, it would be wrong to adopt the f/8 approach all the time. When you shoot digitally and have the benefit of instant review of your image, it makes sense to try different apertures and look at the effect your choices have on the finished images. For example, shooting f/8 in lots of situations will bring the background more into focus and therefore distract from the subject itself. Of course, this will vary with the focal length you are using and the distance between subject and background.

To sum up, Sally, f/8 is an aperture that you will find is great for lots of situations – but it is by no means the only aperture you should ever use.

QUICK Q&A

Up to date

Q Should I update my camera's firmware?

Fred Hutton

A **IF** there is a more recent firmware release available for your camera on the manufacturer's website, then yes, you really should update it. This is simply because manufacturers often bring out new and improved



firmware to sort out small bugs or they just make improvements to the operating system.

First of all, you need to find the firmware version you are currently using by going into your camera's menu, then go to the manufacturer's website to see whether there is a more recent version available.

The next step is to download the file, copy it to a formatted memory card using a card reader, place the card in the camera and simply follow the instructions.

Drama queen

Q A camera club judge said my landscape images lack mood. How can I improve this element?

Shirley Trimble

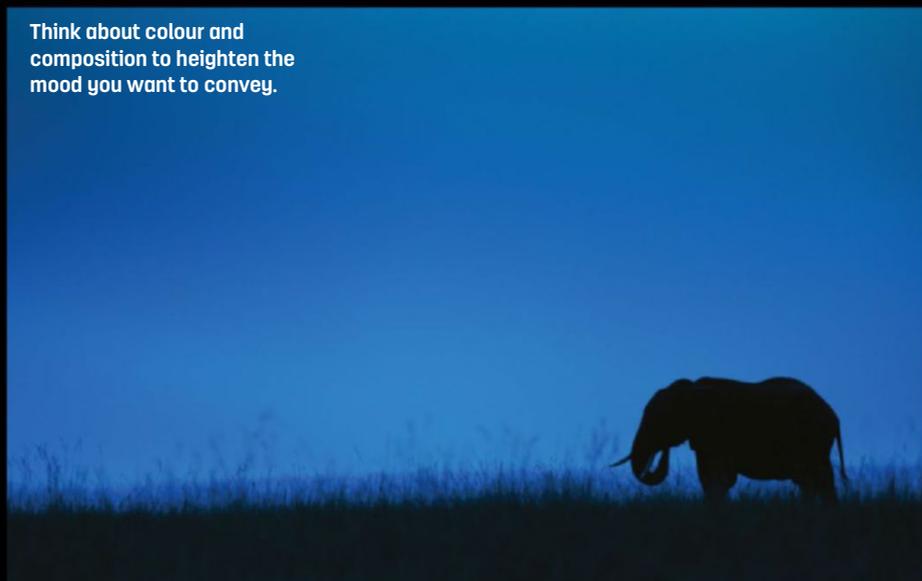
A **I CAN'T** say exactly what this judge was missing in your images, Shirley, but mood can be conveyed in a number of ways. When it comes to landscapes or wildlife, you need to be shooting in the sort of conditions and light that will naturally give the viewer some sense of drama – whether that is an energetic drama or a sombre mood. You can use filters to help you capture this feel but timing is always crucial. If you shoot in

the middle of a dull day, your image will probably look dull; but if you shoot early or late, or when there are some kind of atmospheric conditions (such as storm clouds), then mood will happen naturally.

You could also think about how colour affects the human brain and use this to inject some sense of emotion into your photographs. At its crudest, an image with strong reds can invoke a sense of energy and vibrancy, but go for something pink and we immediately associate this with romanticism. Blue, however, is cooler and generally more associated with tranquillity.

This shot of a single elephant has plenty of mood. The blue tones of that big sky suggest peacefulness and that's enhanced by the fact there is just a single, isolated animal on the horizon line. Even the decision to keep the elephant small in compared to its surroundings helps to hammer home a sense of isolation.

Think about colour and composition to heighten the mood you want to convey.



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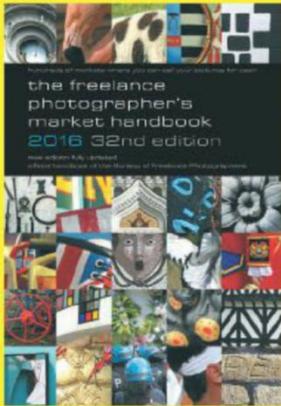
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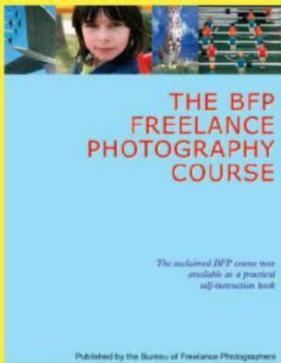
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While the BFP Handbook (above) will show you WHERE to sell your photos, this lavishly illustrated manual will show you HOW to sell them.

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HOW TO



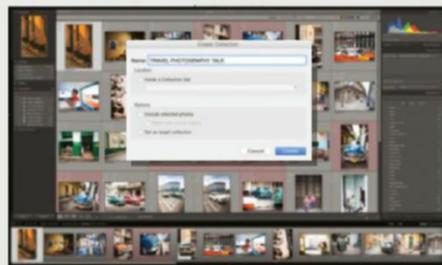
Create a Collection in Lightroom

Bring all of your favourite images together so that they're easier to edit as a group or to find later on

1 Create a Collection
In the Library Module, go to the left-hand side of the interface and scroll to the bottom to find the pane marked 'Collections'. Click on the + symbol and you'll be given a number of options to choose from in a drop-down list. You need to select the option at the top – Create Collection – and then click on it.



2 Name your selection
A grey dialog box will open. In the Name box, type the name you wish to give your selection. I'm creating a Collection for a travel photography talk, so that's the name I will give it. I could place this Collection within a Collection Set, but as I don't want to here, I'm not going to tick anything else in the box, so just click Create.



3 Find your images
Go in and out of your normal folders and look for images, selecting any that you want in the Collection. With the images selected, drag and drop them into the Collection. When you hold them over the Collection its name will turn blue. Each image is put inside as a virtual copy: the original file remains in its appropriate folder.



QUICK Q&A

In the hood

Q My new lens came with a hood. Should I be using it?
Dawn Whittaker

A **THE hood** is there to prevent stray light from hitting the front element of the lens. This controls unwanted flare and ensures colours are more saturated. I know hoods can be a pain to attach quickly and can be knocked off at the wrong moment if not fixed properly: I once had one fall onto the ground about 20 feet from a wild tiger. But they will improve the quality of your images.

They're also some very useful protection when you're walking through undergrowth: once one of mine prevented extensive damage when it acted as a buffer on a dropped lens.



Card-less

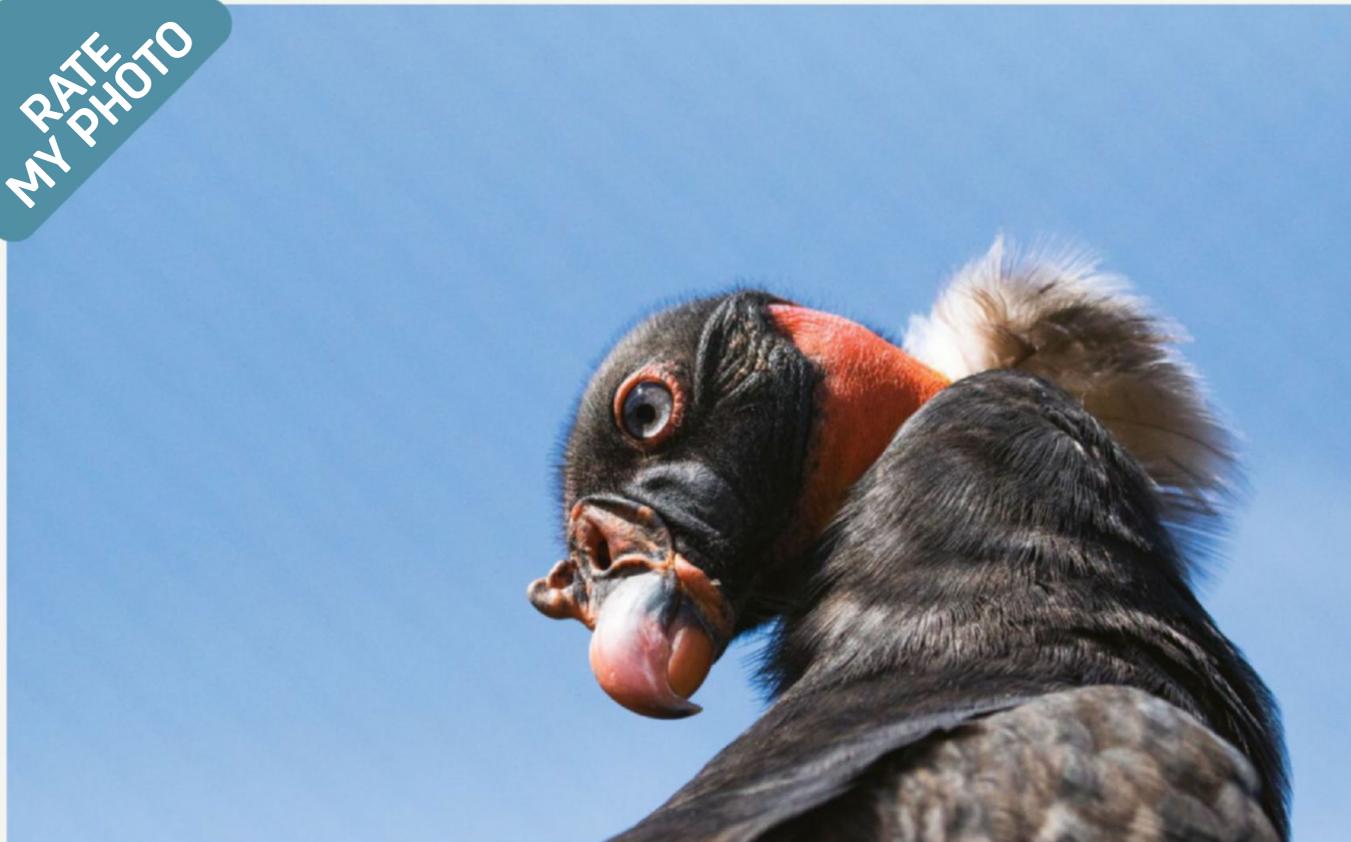
Q I know it's stupid, but I recently shot for half a day without a memory card in the camera. How can I stop this happening again?
John Ryedale



A **MOST modern cameras** have a menu setting that allows you to lock the shutter when there is no memory card inserted. This is a simple fail-safe everyone should use because it is far too easy to start snapping and totally forget that you haven't loaded a card. When you've enabled this function, you won't be able to focus or use the shutter button and the display will say 'card' to remind you what your error is. Set this, John, and it'll never happen again!

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RATE
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PAUL BARROW

The sharpness is spot-on, but a wider aperture might have helped with the background

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PAUL SAYS: This is a king vulture, and the shot was taken at South Lakes Zoological Park in

Cumbria. There was something about the vulture's rather ugly but colourful head that attracted me to it, and I knew it would make for an unusual shot. It was taken hand-held on my Canon EOS 7D Mk II with a 100-400mm lens at approximately 150mm. The exposure was 1/1,000 sec at f/5.6 and ISO 500.



ANDREW SAYS: I feel sorry for the poor vulture.

He wasn't first in line for looks – and yet, as you've ably demonstrated in this shot, Paul, he has a charm all of his own.

There are a number of things to be commended here. Focus is nicely on that eye so it is tack-sharp; the head of the bird is leaning into the negative space; and the wonderful deep red of the neck really contrasts well with the blue sky behind it.

My issue with the shot is the wire mesh lines that are showing in the background. You've shot relatively

wide at f/5.6 but in an ideal world a wider aperture might have helped render this more out of focus so that it wasn't as obvious.

The second option would have been to zoom in a lot further so your framing was much tighter to the head and lose most, if not all, of that background. After all, you had another 250mm to play with on your zoom range; that could have created an almost abstract shot.

Digital Camera VERDICT

NICELY DONE

- ✓ Accurate focus ensures it's pin-sharp in the eye
- ✓ Great use of colours that contrast well

ROOM FOR IMPROVEMENT

- ✗ Visible wire mesh in the background is best avoided
- ✗ The bird's hunched pose looks uncomfortable

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ASSIGNMENT

The top three entries in our recent '*dusk to dawn*' contest – and details of this month's challenge, where the emphasis is once again on balancing light and shade...

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

Your mission in issue 177 was to create cracking pictures at sunset and sunrise – and during all the dark hours in-between. Hundreds of night-time images were submitted and, as you might imagine, the Milky Way made an appearance in more than one shot – including the stunning overall winner from Marek Kosiba, pictured above.

Don't miss out! To be in with a chance of winning a Lowepro backpack, enter this month's assignment – full details over the page...

CROWD
VOTE



2



3



1 WINNER & CROWD VOTE WINNER
MAREK KOSIBA _____ When you want to reveal the stupendous scale of the night sky, sometimes a single frame just isn't enough. Here, 22 shots have been expertly combined to make a 360-degree panorama that really does make you feel small.
Kit Nikon D7100 with Sigma 18-35mm f/1.8 lens at 18mm
Exposures 30 sec at f/1.8, ISO 3,200
CROWD VOTE Chosen by the community at Photocrowd

2 GRAEME _____ Shooting at night heightens the technical challenges of photography. How do you compose, focus and expose in the dark, especially when you're on the slippery floor of a rainforest trying to record bioluminescence on a micro scale? Hats off to the photographer here...
Kit Canon EOS 7D with 100mm f/2.8 macro lens
Exposure 30 sec at f/5.6, ISO 1,600

3 SCOTT SIM _____ The contrast between the warm glow of Tokyo Tower and the cool urban sprawl works superbly. You really get a sense of scale: the tower dominates the skyline, and the choice of viewpoint here, along with the compression effect of the long lens, gets this across.
No shooting data available

**TURN
OVER!**

We want to see how creative you can be when it comes to shooting shadows and silhouettes

NEW ASSIGNMENT

AGAINST THE LIGHT

This month, we want you to join the dark side and show us how you can capture striking images of silhouettes and shadows...

COMPOSITION and exposure are key when it comes to our latest challenge.

For instance, you'll need a keen eye for detail when it comes to framing a silhouette, as it's all too easy for shapes to merge and become indistinct. Look for clean compositions where objects aren't overlapping one another: you'll often find that getting low and shooting against the sky helps.

As with silhouettes, shadows require some exposure know-how to get right. Train your lens on a dark area and the camera may try to brighten things up in order to reveal hidden detail. But underexposing these types of shot and allowing shadows to become 'crushed' and black can produce bolder results.

ENTER TODAY!

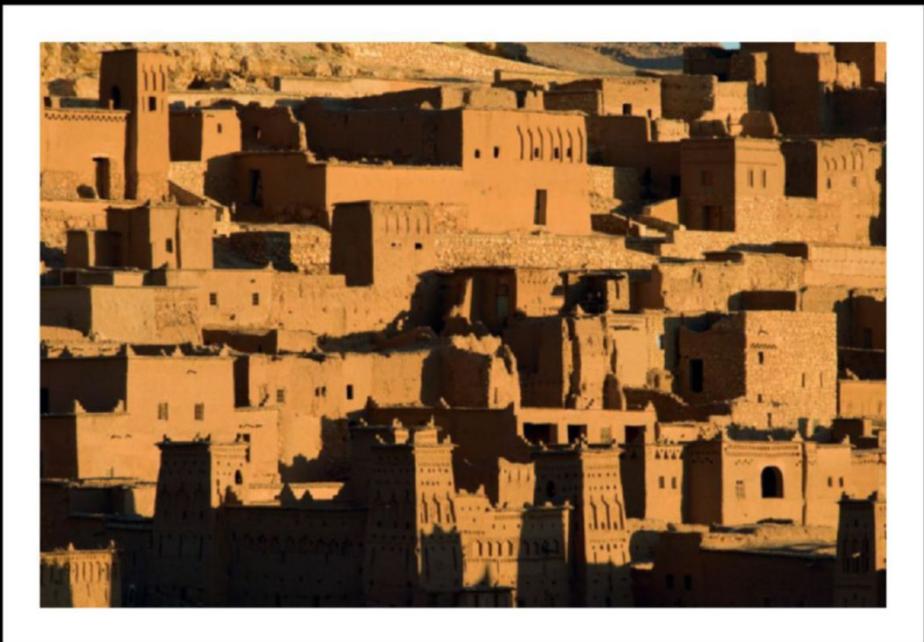
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Closing date: Friday 15th July

How to enter

Visit www.photocrowd.com/a/current and look for the Digital Camera Shadows & Silhouettes contest. (It's free to join.) Click

Submit An Image to upload your entry. The closing date is Friday 15th July. The creator of the best photo in the judges' opinion will receive a brand-new Lowepro Photo Hatchback BP 250 AW II bag. The Crowd Vote winner also receives a special prize. A selection of winning images will appear in issue 181.



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We're giving away this versatile Lowepro daypack worth £99 to the winner of our new assignment.

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Devon and Matt, Beverly Hills
Jerry says: "This was photographed during a night shoot in front of the Bulgari store on Rodeo Drive, using the Ice Light."

INTERVIEW

JERRY GHIONIS

One of the best wedding photographers in the world, Jerry Ghionis has a glamorous but natural style. He shares the secrets of his success with Geoff Harris

HOW did you get into wedding photography?

My brother Nick got into photography, and gave me my first camera when I was 15. I got obsessed quickly and soon tired out my family and friends. I then did a four-year photography course, but I quit after a year, as I felt it was teaching me stuff I'd never use.

After working at a few camera stores, I approached a studio in the Italian district in Melbourne, which specialised in weddings. I assisted and held the bags for a while, then I was taken on as a photographer. I shot my first wedding aged 20, and started my own business in 1997.

So what is the attraction of weddings for you?

I have always been a people person, I love having a laugh, and I love beauty. I thought that as a wedding photographer, I would always have a job! At 15 I wanted to be the biggest

singer in the world or the biggest photographer, and I chose photography in the end.

Wedding photography is the best testing ground for any photographer. There are so many genres that you deal with on the day, under time and weather constraints, surrounded by different personalities and cultures. Not much in photography intimidates me now after doing weddings.

What was your first big wedding?

I did a lot of 'bread and butter' weddings... Greek, Italian, Anglo-Saxon Australian, Asian. But the first big one that stands out in my mind was a Jewish wedding. I thought we Greeks party hard, but I was blown away by the chair-dancing and the bride jumping over big skipping ropes. They even had a satellite hook-up to the relatives in Israel.

My first high-society wedding was a five-day event in Rome. Every day had a different event. I ended up going out to Spain for the hen days >



Above — Red phone box
 “I love voyeuristic images and perhaps a unique perspective of a clichéd subject matter.”

Above right — Groom with tie
 “This photo was inspired by Johnny Depp’s character in the movie *Cry Baby*.”

Opposite page — Bride on ground
 “This image [of Melissa Ghionis] was created on our wedding day. It was inspired by the infamous movie poster for *Blow Up* that was popularised in the 1960s (and arguably the only time I could ask a bride to hold my legs on a wedding day!).”

before the actual ceremony. Coming from Australia, it was my first experience of old money and that European or American grandeur.

Were there any big disasters in the early days?

An assistant once loaded a roll of previously exposed film into the Mamiya I was using at the time, so everything got double-exposed. Somehow we managed to sort it out, and the couple was happy.

Messing up at a wedding is the worst feeling in the world. In the film days you never knew whether shots would be OK until the film came back. Being able to check images on digital cameras is amazing.

How would you describe the Ghionis style... and how has it developed over the years?

People describe it as glamorous but natural. I combine the beauty of the



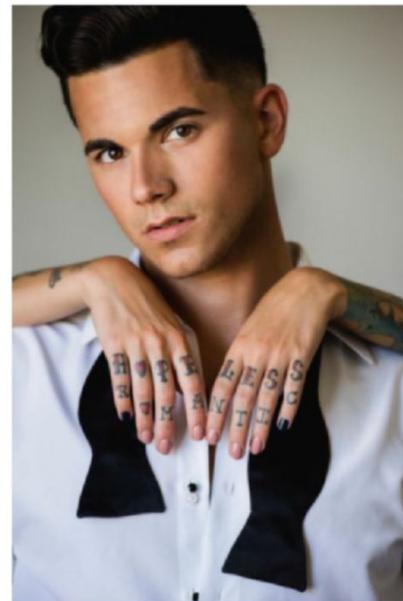
JERRY GHIONIS

Wedding photographer and tutor

Born in 1973, Jerry Ghionis was named one the top five best wedding photographers in the world by the WPPI (Wedding & Portrait Photographers International). Jerry and his wife Melissa are based in Melbourne, Australia, and Beverly Hills, USA, and serve international markets.

Jerry was also named in the first list of Top Ten Wedding Photographers in the world by *American Photo Magazine* and is a Nikon USA Ambassador. In 2014 he received a Photography Leadership Award from the United Nations International Photography Community.

Jerry created the Ice Society, a photography training website; designed the Ice Light, an innovative LED continuous light cylinder; and developed the Omega Reflector, the world’s first 10-in-1 shoot-through reflector.



pose with the ‘natural nature’ of something candid. When I have control over the subject – at the couple’s homes or at a location shoot, for example – I try to make images that look effortless and natural. The right place, right light, right expression. My main objective is to make people look and feel beautiful. Their wedding day is arguably the most beautiful they have looked and felt in their life. So it’s about bringing out their beauty, not mine.

Also, my photography has become more sophisticated. I’m very happy in my personal life, and I can see more passion and sentiment and emotion in my images. It’s a reflection of where I am in this point of my life. When you get to 43, you know who you are and make no excuses for it.

You also teach a lot. What kind of problems – creative and business-related – do students struggle with?

You will stunt your growth if you don’t start the right way. You can assist or become a second shooter, but you don’t learn a thing. Your growth will also get stunted if you try to do everything yourself, such as book-keeping or editing, or waste time on social media.

Rather than spending four hours a day promoting yourself on Facebook or waiting for an email enquiry, be proactive. Go out to venues and promote yourself. You can stand out from rivals by going on the road and getting people to see your enthusiasm and passion. >





Above — Couple at reception
“DJ lights can be somewhat distracting, but in this case they formed a beautiful backlight.”

And technique?

Technique can be taught, but being a good person or having charisma can be much harder to teach. I'd say the biggest problem creatively is a lack of confidence. Also people shoot too quickly. Know your gear and slow down.

Why did you develop the Ice Light, a hand-held constant LED light source?

Since the start of my career I've used video lights. They were OK, but I thought there should be a beautiful, daylight-balanced light, like window light, which I love. As LED lights got more popular a few years ago, I thought why not do a bigger portable light? Being a fan of *Star Wars*, I decided to try a cylindrical light source, like a light sabre. It's so flexible. If you hold the Ice Light vertically, it's a bit more

Above — Bride in car

“With this image, I was struggling to eliminate all of the creases in the veil over the bride's face. I eventually decided to use one crease to emulate a single tear drop falling on the bride's face.”

contrasty; hold it horizontally and it's going to be softer. So the Ice Light gives you two qualities or densities of light.

I went to Westcott, who I thought were the leaders in continuous lighting, and we went from there. It's really taken off. I recently saw David Attenborough holding an Ice Light in a BBC documentary to light his path, which really freaked me out!

Do you think you will ever give wedding photography a rest to focus on your business interests, charity work and product development?

No, I love photography. It's in my blood and I will do it until I die. I don't actively promote my wedding work now, but I get the bookings I want. My body might tell me to slow down with the weddings, though, as it's

QUICKFIRE Q&A

What do you miss most about Oz when you are in LA?

Having a competition of wits with my family at my brother's Greek restaurant.

And about LA when in Oz?

In-n-Out Burger.

What is your all time favourite wedding venue or location?

Italy.

If you could only take one lens to a wedding, what would it be?

The Nikkor 24-120mm f/4 zoom.

Right — Bride on staircase

"This was created at the historic La Bassa mansion in Melbourne. The bride is still the point of interest even though she is dwarfed by the environment. All the leading lines lead to her and she is the brightest part of the image."



Bride and groom, Las Vegas
 "This deliciously kitsch Las Vegas wedding image of photographer Sandy Puc was created to look like it was taken in the 1970s."



physically demanding. I am leaving time for personal projects, which is important, as they invigorate you.

What do you think are the next big trends in wedding photography?

We've seen this hipster style for a while – static, almost meaningless images, where couples stare deadpan at the camera. At the opposite end, there is creativity for the sake of it. Weird perspectives and styles that mean nothing.

I like to be creative, but it needs to communicate something. Good photography is either flattering or it helps communicate the message you have for the viewer. I maintain a quite classic style, and avoid just being creative and showy for the sake of it.

Wedding photography as a viable business is under threat from the rise of smartphones and couples asking friends or relatives to take the shots. Do you feel optimistic about the future?

There's certainly a threat from smartphones or guests with SLRs who'll take the shots for free. I would like to be optimistic, but it will only



JERRY'S KIT BAG

Jerry says: "I'm a Nikon USA Ambassador and my main workhorse is the D4S. I also use the D810 and D750 and have a D5 waiting for me in the States. My favourite lenses are the Nikkor 70-200 f/2.8 VR, then the macro 105mm and the 85 f/1.4 – plus the underrated 24-120mm f/4.

"At weddings you need to be able to go close and zoom out quickly, shooting at wider angles and keeping some depth of field. So f/4 is better for me than f/2.8. Where I used to lose moments, now I can catch them with this lens. At f/4 I am happy."



get worse. We have a generation of new customers who were brought up with 'good enough' phone and tablet photography. Ignorance is bliss. People don't know the charm of a beautiful wedding album, they just swipe a finger.

I think there will be a renaissance at some point. I hope in 10 years or so that people will appreciate the photographer's craft again, and the luxury of holding albums. As I get older, I appreciate more the touchy-feeliness of albums of memories.

www.jerryghionis.com

Above — Star Wars

"I was invited to second-shoot a Star Wars-themed wedding. Here is the Force in limbo..."

NEXT MONTH

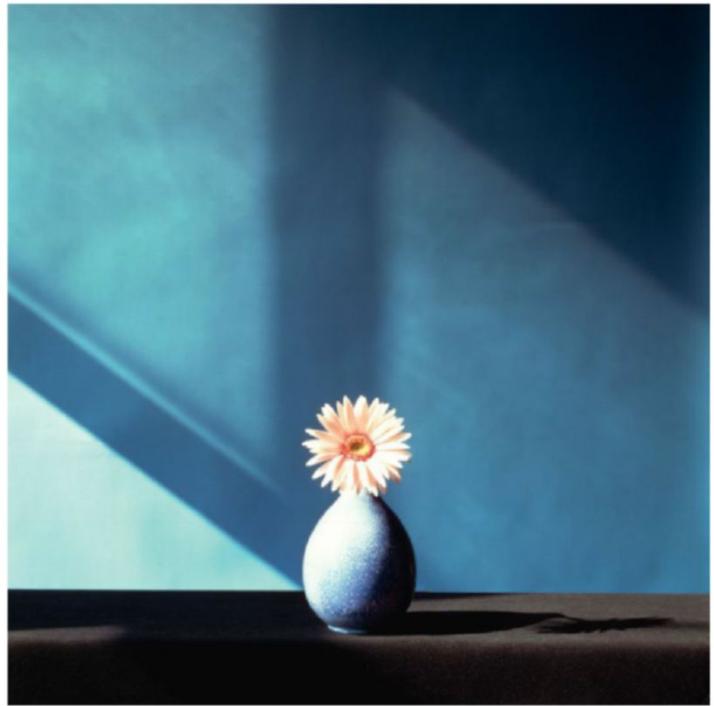
King of the north: Ragnar Axelsson

**“Which renowned
photographer did Nicole
Kidman play in the
movie Fur?”**

#SMARTERMOVIEMAG

ROBERT MAPPLETHORPE

An American photographer known for his sensitive yet blunt treatment of controversial subject matter



ROBERT Mapplethorpe's work has inspired everything from reverence to outrage.

He's best known for his distinctive, masterly studies of flowers, which have been widely praised, as have his celebrity portraits of people including Debbie Harry, Andy Warhol and his close friend Patti Smith. However, his erotic and even pornographic images of gay fetishes have caused controversy, particularly when exhibited in the USA.

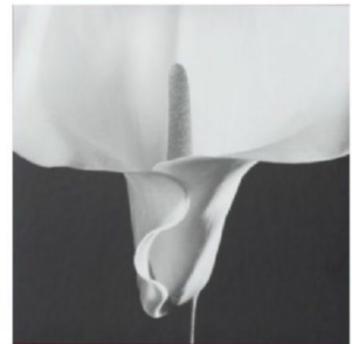
How did he get into photography?

Mapplethorpe was born in Queens, New York, in 1946. In 1963 he began studying drawing, painting and sculpture at college in Brooklyn. His work included collages made up of other photographers' work, but he started to shoot his own images in 1970. He used a Polaroid camera but in 1975 he began using a Hasselblad. He started shooting portraits of friends and honed his technique while developing the range of subjects for which he's famous, which also included classical nudes, self-portraits and statuary.

What was his style?

Most of his work was shot in the studio and precisely lit; he sometimes took hours just setting up lights. Whatever he photographed, Mapplethorpe did it with the same cool detachment. "I don't think [my flower photographs] are very different from body parts," he said.

"Maybe I experiment a little more with flowers and inanimate objects because you don't have to worry about the subject being sensitive... However, I don't think I see differently just because the subject changes."



Robert Mapplethorpe Foundation / Phaidon

What was so special about his flower photographs?

Shot either with natural or artificial light, they're sensual, carefully composed and make a small and delicate subject look powerful. They are also often erotically charged: Mapplethorpe playfully made parallels between these images and his pictures of human sexual organs.

Which exhibition caused the biggest controversy?

In 1989, the Corcoran Gallery of Art in Washington, DC, planned to show his exhibition *The Perfect Moment*. However, the graphic nature of some of the images and their sado-masochistic themes led to an outcry from conservative and religious organisations. The exhibition was cancelled, although it was subsequently shown at other galleries.

What was his legacy?

In 1988, a year before his death from an Aids-related illness, he set up the Robert Mapplethorpe Foundation, a non-profit

organisation that represents his work and artistic vision. The Foundation has funded numerous photographic books and exhibitions, and raised millions of dollars to support medical research into Aids and HIV.

Why is Mapplethorpe in the news now?

2016 is the 70th anniversary of his birth. To mark it, a documentary film about his life, *Mapplethorpe: Look at the Pictures*, was released earlier this year, and a number of exhibitions are planned.

Where can I see his work?

His website www.mapplethorpe.org includes pictures and information. Fans of his flower work will enjoy a new collection of his work, *Mapplethorpe Flora: The Complete Flowers*, published by Phaidon, £125. See www.phaidon.com/mapplethorpeflora

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MONTH**

The urban fashion work of Terence Donovan

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WORK EXPERIENCE

*Would you shoot one of the biggest weddings of your career exclusively on an iPhone? **Sephi Bergerson** recently did just that, and tells Jeff Meyer his story...*

AFTER more than 10 years working as a commercial photographer in Tel Aviv, Sephi Bergerson closed his studio in 2002 and moved to India with his family to follow his dream to be a documentary photographer. Since then, Sephi's work has been featured in books and publications worldwide.

Increasingly Sephi has been using his iPhone 6S Plus as the primary camera in his personal projects. He's currently working on a book about Africa, shot entirely on the iPhone – and recently he used his iPhone professionally for the first time to shoot a grand three-day wedding in India...

What was it about the iPhone that appealed to you to make it your primary camera for this project?

I've been shooting on the iPhone for quite some time, ever since the first iPhone was

released. I found myself using it more and more on vacation rather than carrying my own camera.

I think the switch really started with the iPhone 3G in Egypt a few years ago. I felt it produced a different kind of image. Also, it had me playing again, giving myself the freedom of not being a serious photographer all the time. When you're out with your traditional camera, you get caught up in processes, but this freed me from that.

Over time I started shooting more of my personal projects with the iPhone, such as wildlife in Africa, and people started asking me about these images because they looked so different.

I didn't make the leap to incorporating it into my professional work until one day after a wedding the light wasn't right at all, so I suggested that the couple do a few Instagram-style shots on the iPhone. They loved them, and they looked great, and what really impressed them was that I post-processed the images for them on the drive to the airport and shared them so they already had some wedding images to show their friends.

So I started using it here and there a bit more, and eventually I got the idea to try and shoot a whole wedding.

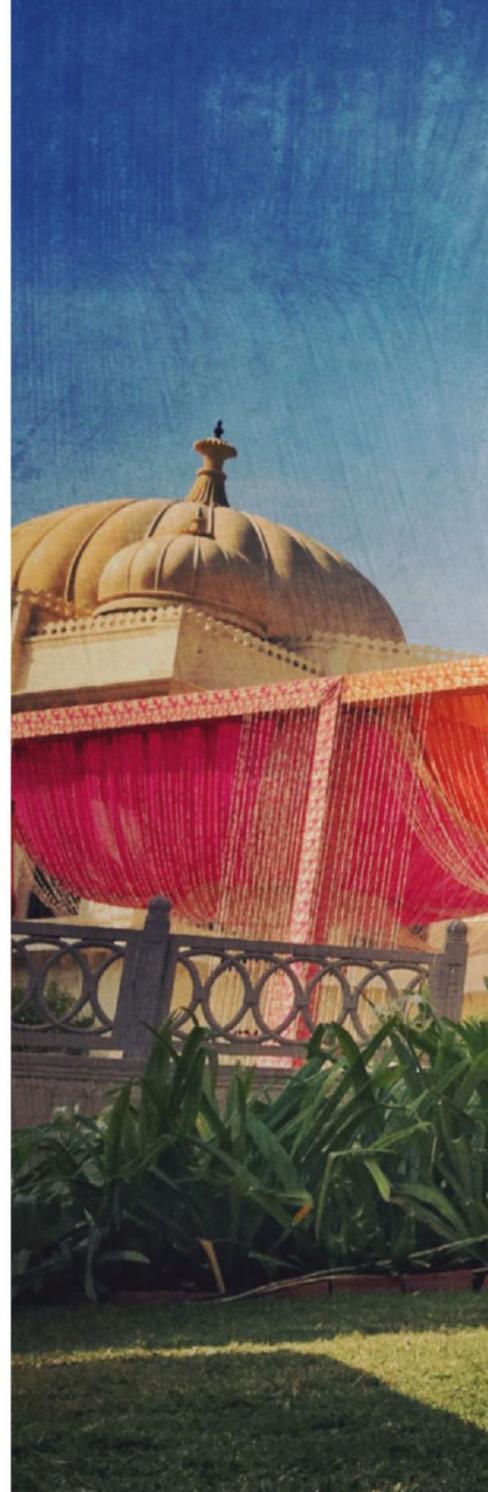
Did the couple take convincing?

They were very open to it! I had this opportunity in November 2015 to shoot a big wedding in India, and because of this I had a big team with me. My second photographer was an established wedding photographer himself.

So I spoke with the couple, who have been following my work for three years. I said, "This will sound strange, but I want to shoot your wedding only on the iPhone. I have a good team behind me and we'll get all the other traditional shots, and I'll be directing them, but >



Sephi Bergerson is using a smartphone for more of his commercial work, a move he describes as "giving myself the freedom of not being a serious photographer all the time".



SEPHI'S WORK

This page — The wedding between Ayushi and Abhishek took place in Udaipur over three days in November 2015. The wedding photo agency Silk Photos, of which Sephi is a member, was responsible for photographing and filming the celebrations.



“If I shot a really nice image, I could show it and share it instantly. That also enabled me to give the couple instant reassurance”

I’d also like to try this.” And they trusted me. I think they saw that it could be something really unique.

For me, I knew that my team was there and that the traditional coverage would be very good, so that made it easier. And it was a fantastic spectacle. For the event I got the iPhone 6S Plus, which has a really superior camera. It’s now or never, I thought. I was really relaxed.

What advantages did your iPhone give you that you didn’t have with a traditional camera?

I’d have to say that the real advantage was in the editing. The post-production is so simple to do on the phone. I loved the fact that if I shot a really nice image, I could show it and share it with the guests instantly. That also enabled me to give the couple instant reassurance of what I was doing. By the second day they were feeling like they were getting something that had never been done before.

The other advantage I noticed with the iPhone’s simplicity is how much closer it brings you to your subject. I’ve been a photographer almost 30 years. I used to be a commercial photographer shooting large-format and medium-format. I would hold those cameras at waist level and look down at them – a very solitary process. Even using a D-SLR, you put the eye piece to your eye and block contact with the subject.

With the iPhone you have this big screen and you don’t block contact with the subject at all. You feel like you’re still there, in the scene. This enables a different kind of interaction and conversation with people you don’t normally get when you’re holding a traditional camera.

Weddings are often low-lit affairs with lots of movement. How did you get fast enough shutter speeds?

Well, because it’s a very different type of camera, some images weren’t achievable – but I wasn’t trying to get those types of



SEPHI'S WORK

This page — While the second lead photographer Christophe Viseux and the rest of the Silk team used conventional equipment, Sephi used an iPhone 6S Plus throughout.





images either. I found that capturing dancing wasn't possible, for instance, nor any of the performances. Anything with movement in low light was a little difficult.

The one limitation with the phone is that the ISO doesn't go high enough, so you get a lot of motion blur. So I would have to wait until someone stopped or, as I soon learned to do, I held an LED light in one hand and shot with the other.

What surprised you most about shooting a wedding with an iPhone?

The most rewarding thing was the immediacy of it all. Excitement is something you lose after 30 years as a photographer, and it was really great to have that again. To share and be excited and surprised by the kind of image that comes out, and to see the amazement on people's faces who are surprised you could make this on a phone is a wonderful feeling for a photographer.

Why do you think some photographers are sceptical of mobile phone cameras?

Photographers who are amateurs usually make the mistake of comparing their work with the highlights of professional photographers. The only work they see from us is the work we have on our websites. They don't see all of my bad stuff. And I think this is the cause of a lot of insecurity. When you speak with photographers who know their tools, they know it's not the cameras that enable great pictures, it's the person.

The truth of the matter is that a lot of professional photographers go back to older cameras and more basic tools. I've gone back to using a wood camera. I enjoy working with the Lomo and plastic cameras. If you know what to do with an alternative technique you can produce images that are really unique.

Do you think camera phones are the future of photography?

I think D-SLRs are over. I don't even own a D-SLR anymore. They're still very relevant if you're a sports photographer, but if you have to move around I don't think D-SLRs are needed anymore.

Brands like Canon and Nikon need to reinvent themselves or they will end up like Kodak, which wasn't smart enough to move ahead. I think mobile phones will have better and better cameras, which will democratise the field. You might say, what's the point of a photographer? But a photographer will always be able to produce a unique image because they have a particular vision.

MORE INFO

• Visit Sephi Bergerson's website at www.sephi.com and his wedding photography sub-site at wedding.sephi.com. His Instagram account is [sephibergeron](https://www.instagram.com/sephibergeron).



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

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- ★★★★★ Forget it
- ★★★★ Below average
- ★★★ Good for the price
- ★★★★ Very good all round
- ★★★★★ An exceptional, best-in-class product

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For products that offer superb value for money



Given to products that receive five stars overall



Given to products that are innovative & groundbreaking



Given to products that merit very special attention



CSC www.sony.com

Sony Alpha 6300

£999/\$999 (body only)

With a fresh AF system and 4K video, the A6300 aims to set the bar high for the enthusiast user



SPECIFICATIONS

Sensor _ 24.2MP APS-C Exmor
Focal length conversion _ 1.5x
Memory _ SD/SDHC/SDXC (inc UHS-I)/Memory Stick Pro Duo
Viewfinder _ 0.39-inch OLED EVF; 2.36 million dots
Max video resolution _ 4K UHD (3,840 x 2,160) up to 60p
ISO range _ expandable to 51,200
Autofocus points _ 425 points (phase-detect AF); 169 (contrast-detect AF)
Max burst rate _ 11fps
Screen _ 3-inch LCD, 921k dots, tiltable
Shutter speeds _ 30-1/4,000 sec, Bulb
Weight _ 404g (including battery and memory card)
Dimensions _ 120 x 67 x 49mm
Power supply _ Rechargeable Li-Ion battery (NP-FW50)

The new 24.2MP Exmor CMOS sensor is more efficient at gathering light and reading out info than the A6000



SONY has done a stellar job to get its Alpha line of compact system cameras and lenses firmly established in the mirrorless camera market, with everyone from complete beginners to demanding professionals now catered for. Plenty of focus has been placed on Sony's most recent Alpha 7 full-frame models, although it scored a big hit with the more junior A6000 before this – and now it seeks to repeat its success with the A6300.

Features

The A6300 may look similar to the camera it updates, but a handful of changes on the inside show it to be a much mightier proposition for the enthusiast. It has been constructed around a new 24.2MP Exmor CMOS sensor, which is said to be more efficient at gathering light and reading out information than the A6000. This also allows it to offer

1

The 16-50mm Power Zoom kit lens adds only a little to the camera's profile.

2

Not only does the A6300 offer a built-in flash, but there's also a hotshoe.

3

The Fn button brings up commonly used options, and these can be customised.



4

The camera's rear screen can be tilted up and down, but it's not sensitive to touch.

4K video recording, a feature that Sony is strongly pushing through on cameras of all levels.

The sensor also offers an unprecedented 425 phase-detection AF points, plus 169 contrast-detection points. This combination is said to ensure that focus is swift against static subjects – focusing in as little as 0.05 sec – and capable of keeping up pace with moving ones.

There's also the familiar sight of a tilting three-inch LCD screen, with 921,000 dots for clarity, but sadly no touch operation. The 2,359,000-dot electronic viewfinder above this has been upgraded from the 1.440,000-dot version on the A6000. Sony has also thrown in the option of shooting at up to 11fps with focus and auto-exposure maintained throughout, as well as Wi-Fi and NFC for easy image sharing.

Build & handling

All of this is wrapped up in a magnesium alloy body that's designed with improved dust and moisture resistance over the A6000, as well as a sturdier lens mount. The

Although the A6000's viewfinder was a good performer, it's great to see this being made even better here with a higher resolution panel

grip is large and deep, and well rubbered for comfort, although larger-handed users might prefer this to be even deeper.

Controls are plentiful around the back of the camera, and a good level of customisation is possible. The control wheel at the rear moves freely enough for quick menu scrolling and option selection. The command dial on the top plate has a pleasing stiffness to it, although there can be a slight disconnect between its turning and the camera responding.

The LCD screen pulls away easily from the back plate: this makes viewing it in more awkward shooting positions easier, although when extended it can get in the way of certain controls, such as the commonly used Fn button and the rear control wheel.

Performance

Although the A6000's viewfinder was a good performer, it's great to see this being made even better here, with a higher-resolution panel. It's crisp and high in contrast, and only troubled by a little noise in darker conditions. The LCD screen's specifications aren't quite class-leading, and at default settings it appears somewhat under-powered and in need of a boost in brightness through the menu, although it otherwise performs as you would expect.

The camera's revamped focusing system is one of its main highlights, and it's pleasing to discover that it delivers. There's very little delay when focusing on everyday subjects, while performance against moving subjects is also strong. The spread of focusing points, almost up to the peripheries of the frame, ensures that the system stays with the subject well wherever it moves. Objects travelling in a variety of directions and speeds relative to the camera are picked up and >



1

Colour

The camera's Vivid Creative Style has given the greens and reds in this image a pleasant boost, without oversaturating them.

2

Out-of-focus areas

Captured at f/4 with the Carl Zeiss Vario-Tessar T* E 16-70mm f/4 ZA OSS, the out-of-focus areas in this scene appear smooth.

3

Exposure

This shows the camera's slight tendency to under-expose on occasion. This image benefits from +0.5EV over-exposure to make it more balanced.

Meet the rivals...

The cameras taking on the Sony A6300...

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Olympus Pen F
£999/\$1,199

The latest Pen model from Olympus oozes style, but it's just as impressive on the inside, with a cracking EVF and high-quality images.

Reviewed Issue 178



Panasonic GX8
£574/\$998

The GX8 has an excellent 20MP sensor to recommend it, together with a fast AF system, 4K video – and a great price.

Reviewed Issue 170



Fujifilm X-E2S
£549/\$699

With a 16MP X-Trans CMOS sensor and X-series glass, Fujifilm's compact and affordable rangefinder-style mirrorless model is worth a closer look.

Not reviewed



Above The camera's electronic level makes it easy to capture images completely horizontal (or vertical) – important in scenes where linear details make any slight skewing more apparent.



Above Comparing this JPEG with the corresponding raw file shows the camera has done a great job boosting contrast and colour. Sharpness is also just at the right level.



Above The camera's Auto White Balance system keeps colours faithful under a range of conditions. This image was captured under a mixture of daylight and various artificial sources.

adhered to well. Every now and again the system does get a little distracted and venture off elsewhere but, to be fair, this is true of many similar systems.

When set to burst shooting, Sony claims the camera can record 21 consecutive raw frames or the same number of raw+JPEG frames, and 44 JPEG frames at the highest quality setting – and with a fast memory card in place it manages to do just this. 4K videos looks crisp and

detailed, and even when light levels fall there's just a slight noise visible in footage rather than anything more disagreeable, with footage pleasingly free from aberrations.

Audio quality is also very good, although using an external microphone is advised as the camera joins many others in being susceptible to picking up wind noises when shooting outside.

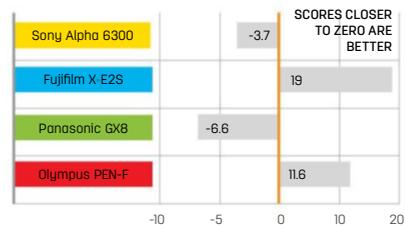
Noise is well controlled in images, and usable results are still possible at settings as high as ISO 6,400, although you may wish to adjust noise reduction (or process the raw versions) as the camera's noise reduction system can leave images lacking in detail. Images straight out of the camera show the A6300's JPEG processing does a fine job, with pleasing colour, contrast and sharpness. (You may find that you wish to nudge up a little at times, particularly when shooting very detailed subjects).

The camera's Dynamic Range Optimizer also does a fine job to reveal more detail in shadowy areas, helping images to appear balanced, which is just as well as the metering system can occasionally under-expose the odd frame. Exposure compensation is very easy to apply, though – and usually only around +0.5EV is all that's required.

Matt Golowczynski

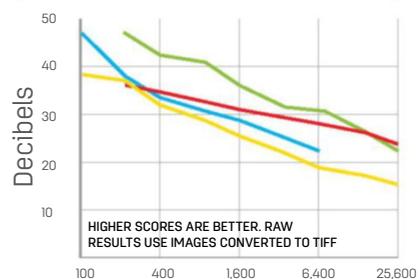
Images straight out of the camera show the A6300's JPEG processing does a fine job with pleasing colour

COLOUR ERROR



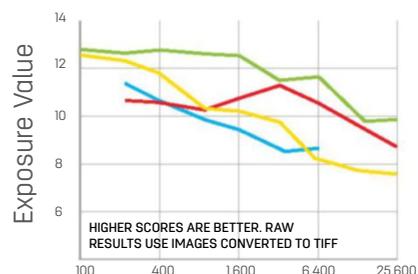
The Sony A6300 does a great job with colour accuracy in JPEGs. Only the rival Alpha 7 II shows a marginally better performance out of the models tested here.

RAW SIGNAL-TO-NOISE RATIO



A slightly disappointing performance across the camera's full sensitivity span here, with a signal-to-noise ratio that's either the same or lower than the others at every setting.

RAW DYNAMIC RANGE



The A6300 doesn't fare too badly for raw dynamic range at its lowest sensitivities, although as ISO increases, its performance is largely outgun by the other cameras here.

WE SAY...

Although a comparison with its immediate rivals shows the A6300 to slip a little with dynamic range and noise, when viewed in isolation it performs well. It's packed with features, focuses promptly and accurately, and records superb video. While it's not cheap, you get a lot of camera for your money.

VERDICT

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

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★★★★★
- Digital Camera
5 stars in DCs ND Group Test

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Canon EOS	Olympus OM	£24.95	Micro 4/3	Mirofla IVD	£29.95
Canon EOS	Con/Yash	£24.95	Micro 4/3	Leica R	£29.95
Canon EOS	Leica R	£22.95	Micro 4/3	Leica M	£29.95
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Canon EOS-M	Canon EOS	£29.95	Micro 4/3	Canon FD	£29.95
Canon EOS-M	Leica M	£29.95	Micro 4/3	Con/Yash	£29.95
Canon EOS-M	Nikon	£29.95	4/3	M42	£17.95
Canon EOS-M	Canon FD	£29.95	4/3	Con/Yash	£22.95
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Canon EOS-M	M39	£29.95	4/3	Nikon	£22.95
Canon EOS-M	M42	£29.95	4/3	Olympus OM	£22.95
Fuji X	M42	£24.95	4/3	Pentax K	£22.95
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- NPhoto Magazine

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★★★★★
- Digital Photo, April 2014
for build, image quality & value

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You could easily expect to pay that for the lightweight alloy head alone. - F2 Freedance Magazine

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★★★★★
- Practical Photo, Jan 2016

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SLR www.canon.com

Canon EOS 80D £999/\$1,199

Canon's new 80D looks great on paper, but does it deliver – and is it worth upgrading from the 70D?

SPECIFICATIONS

Sensor _ APS-C format with 24.2 million effective pixels
Focal length conversion _ 1.6x
Memory _ SD/SDHC/SDXC (UHS-1)
Viewfinder _ Optical covering 100%
Max video resolution _ Full HD (1920 x 10800)
ISO range _ 100-16,000, expandable to 25,600
Autofocus points _ 45, all cross-type
Max burst rate _ 7fps
Screen _ Three-inch 1,040,000-dot Clear View II TFT
Shutter speeds _ 30-1/8,000sec, Bulb
Weight _ 650g (body only)
Dimensions _ 139 x 105 x 79mm
Power supply _ Lithium-ion LP-E6N

The 80D's screen is very good, but the viewfinder is still the most natural option for photographers to use when shooting stills



THE EOS 80D is aimed at dedicated enthusiast photographers, a demanding group of people who want to be able to shoot a huge range of subjects in a variety of conditions. Inside is a new 24-million-pixel sensor along with a Digic 6 processing engine; a combination that brings a native sensitivity range of ISO 100-16,000 (one-stop higher than the 70D) and a maximum expansion value of ISO 25,600 (the same as the 70D).

The maximum continuous shooting rate is the same as the 70D's at 7fps, but the burst depth has been increased to 110 JPEGs or 25 raw files when a UHS-1 SD card is used. That's a significant step up from the 65 JPEG or 16 raw files possible with the 70D.

Modern SLRs have two autofocus systems: one for when using the camera conventionally (in reflex mode), where images are composed in the viewfinder; and a second for use in Live View and video mode. Canon has improved both of these systems for the 80D in comparison with



- 1 An NFC chip means the 80D can connect to an NFC enabled smartphone or tablet with just a tap.
- 2 The vari-angle screen is the same as the Canon 70D's, but it provides a delightfully detailed view.
- 3 Canon has kept the 80D's shape and control layout the same as the 70D's.
- 4 A headphone port joins the mic port for audio monitoring and recording.

the 70D. The reflex mode system, for instance, has 45 AF points, all of which are cross-type, whereas the 70D has 19 points. It can also use colour information from the 7,560-pixel RGB+IR (infrared) metering sensor to help with subject tracking. This and the increased burst depth makes the 80D more attractive to keen sport and action photographers.

Turning to the Live View and video autofocus system, the 80D uses Dual Pixel CMOS AF technology like the 70D, which means it has phase detection points on the imaging sensor itself. The new system is more sensitive and faster than the one in the 70D, but because fast autofocus often isn't desirable when you're shooting video, it's possible to vary the speed of the 80D's system over seven steps for slower focus changes.

Build & handling

Canon gives touch-control over both the main and Quick Menus, and it can really speed up use. The Quick Menu is very useful, providing a

speedy route to some of the most commonly used features. It would be nice, however, if this was customisable so that it only contained the features you use on a frequent basis.

Although the 80D's screen is very good, the viewfinder is still the more natural option for most photographers to use when shooting stills, especially if the subject is moving. This also provides a bright view – and unlike the 70D's viewfinder, which only covers 98% of the lens field of view, the 80D's covers 100%. That means there are fewer surprises around the edge of the frame when you review your shots.

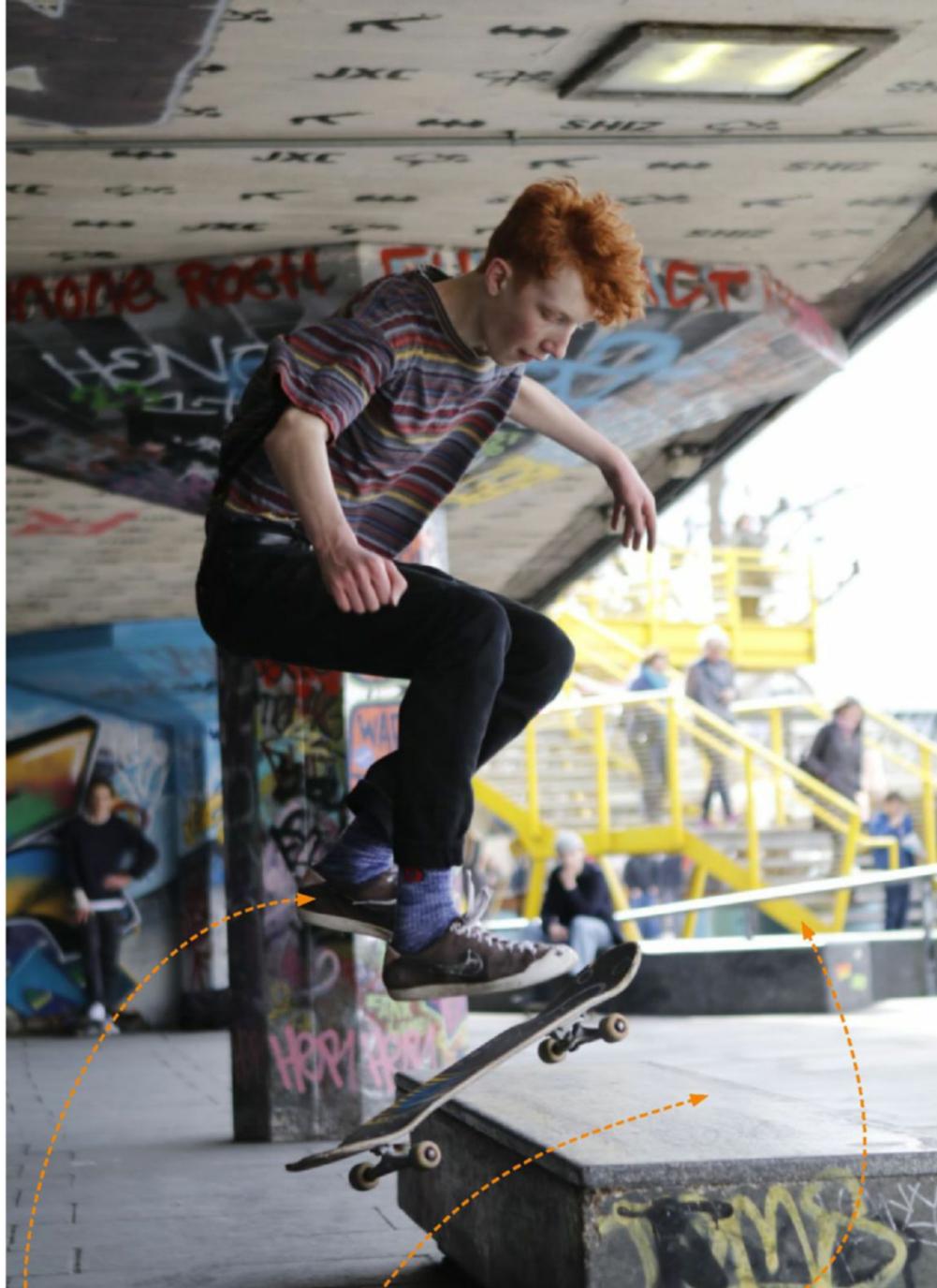
In an update on the 70D, it's possible to select the Creative Filter mode via the 80D's mode dial. When this is selected, one of 10 filter effects can be applied to JPEG images as they are shot. If you're shooting raw files or raw+JPEG files, the camera switches automatically to shooting just JPEGs. Although it's possible to use Creative Filters when composing images in the viewfinder, their impact can only be previewed on the main screen in Live View mode.

Performance

The 80D's 24.2MP sensor makes a 25% increase in pixel count over the 70D's, and it enables the new camera to make a significant step up in detail resolution for the majority of the sensitivity range without an increase in the level of noise. It's noticeable, however, that at ISO 12,800 the 80D scores lower in our resolution tests than the 70D. However, when the default levels of noise reduction are applied, images shot at this sensitivity setting (and at ISO 16,000) look good.

Noise is controlled well and although some detail is lost, there's no obvious smearing. We would advise caution with the uppermost setting of ISO 25,600, because some areas have a slight haze and lack detail when images are at around A4 size. But that's why this value is an expansion setting: Canon makes it available for use if it's really needed, but doesn't consider the image quality entirely satisfactory.

Canon has given the 80D a significantly better autofocus (AF)



1

Fast AF

In continuous autofocus mode, the 80D kept this skateboarder sharp easily as he moved across the frame and towards the camera.

2

Dynamic range

Thanks to the 80D's high dynamic range, there's detail in the bright highlights as well as the gloomy interior of this scene.

3

It's natural

The automatic white balance system coped with the different light and numerous colours of the scene to produce a natural image.

Meet the rivals...

The cameras taking on the Canon 80D...

FOR TEST IMAGES AND RESOLUTION CHARTS, VISIT www.techradar.com/cameras



Nikon D7200
£714/\$1,047

Like the K-3 II, this SLR's 24MP sensor lacks an optical low-pass filter, which helps it resolve a higher than average amount of detail.

Reviewed Issue 164



Pentax K-3 II
£709/\$850

Pixel Shift Technology helps reduce noise from this 24MP SLR, but its impact isn't obvious with most shots at normal viewing sizes.

Reviewed Issue 170

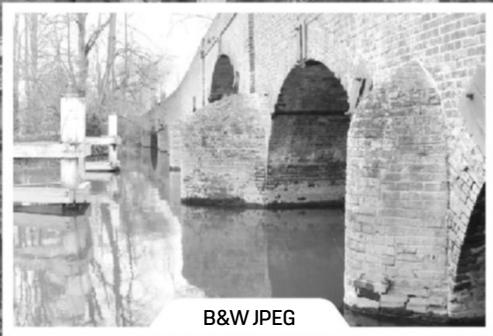
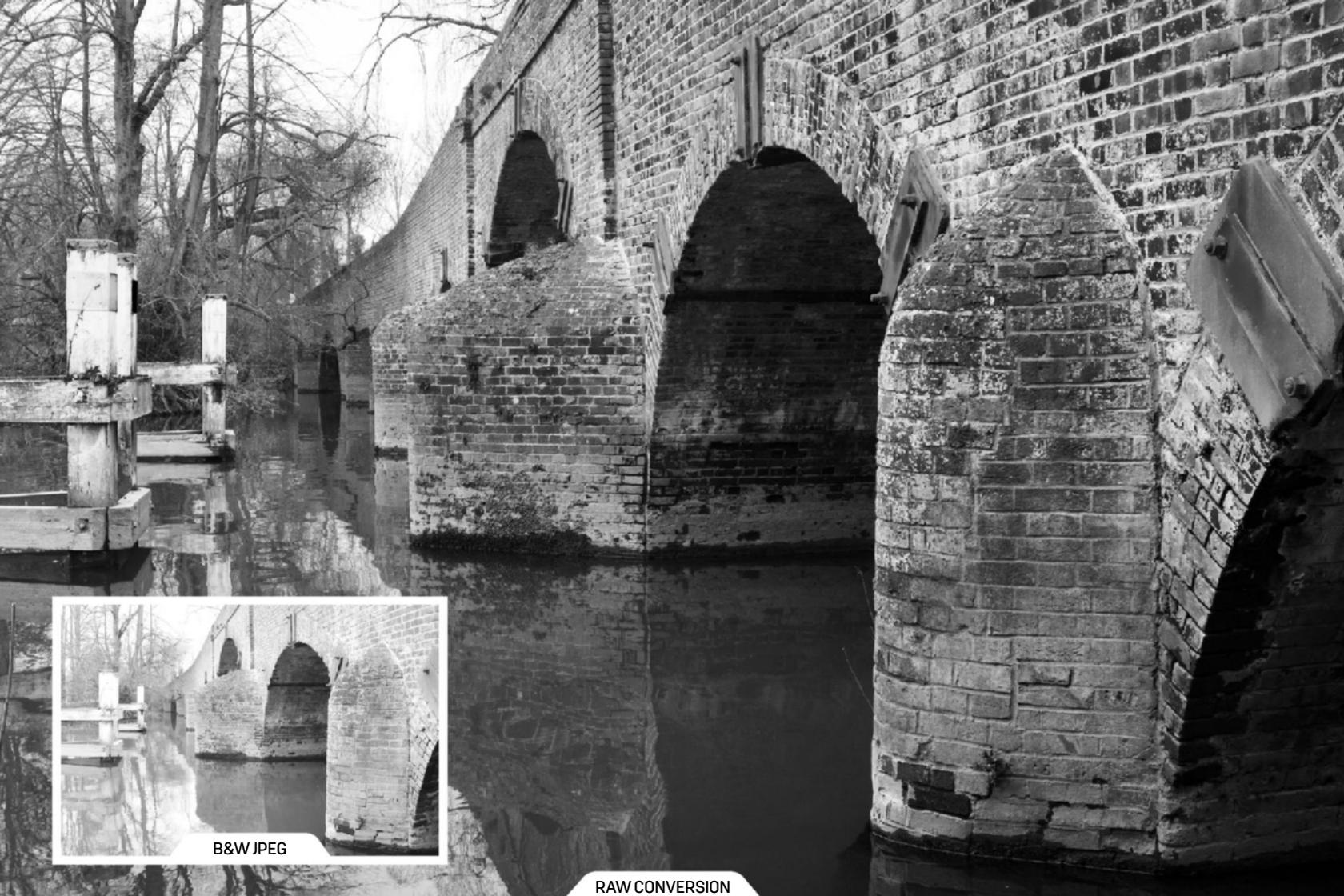


Sony Alpha 77 II
£764/\$1,198

This 24Mp SLT has an electronic viewfinder, along with an AF system that's fast and accurate even in low light.

Reviewed Issue 156





B&W JPEG

RAW CONVERSION



We found that the 45-point Automatic Selection option is pretty capable, probably aided by the new colour detection system

system for use with the viewfinder than the 70D, so I was keen to put it to the test. It didn't disappoint, getting stationary subjects sharp in a flash and keeping fast-moving subjects sharp, even in low light.

I experimented with the AF point selection modes when shooting skateboarders in the

Above The Monochrome Picture Style gives a useful indicator, but the best results are created by converting a raw file.

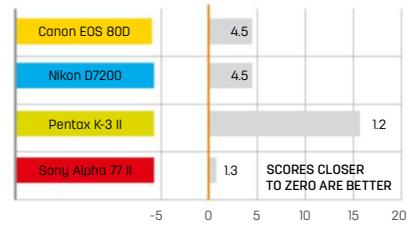
Left Despite the very low light, the camera was able to focus, and noise is controlled well for ISO 16,000.

gloomy conditions of London's Undercroft skate park, and found that the 45-point Automatic Selection option is pretty capable, probably aided by the new colour detection system. Single-point AF (Manual selection) mode also worked well provided I could keep the active point over the subject. That's easier said than done when you're shooting skateboarders, who are prone to jumping, twisting and turning, and I had greater success when using the Zone AF mode.

In this mode, the 45 AF points are grouped into nine zones and you select the most appropriate zone to use before starting to shoot. The camera then tracks the subject using the AF points within that zone. It's a great option for moving targets and you see the points light up as they activate, giving you confidence that your images will be sharp. It's not 100% fool-proof but I got a high hit rate, and it's more reliable than 45-point Automatic Selection mode.

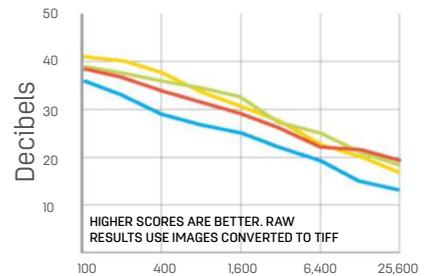
The Live View and Video mode AF system is also good. It's fast enough to shoot stills of moving subjects in some situations, but the viewfinder system is more reliable.

COLOUR ERROR



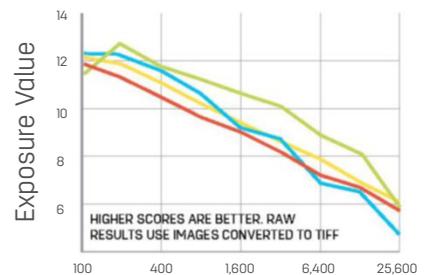
While colours aren't as saturated as in images from the Pentax K-3 II, the 80D's shots are a little more saturated than is technically correct. Still, they make for attractive results.

RAW SIGNAL-TO-NOISE RATIO



On the whole, the Canon 80D's images are a little cleaner than the 70D's. It only drops slightly behind the Pentax K-3 II and Sony Alpha 77 II at the top sensitivity values.

RAW DYNAMIC RANGE

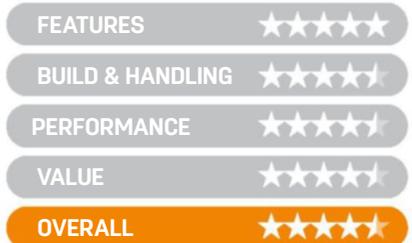


Canon has squeezed more dynamic range from the 80D than the 70D, indicating images have a better range of tones. However, the K-3 II achieves higher values.

WE SAY...

Canon has created an excellent camera that makes a worthwhile upgrade from the 70D. It's well-built with sensibly arranged controls, has good ergonomics and an extensive feature set, and can be set up to suit your shooting style. Most importantly, the image quality is superb with lots of detail.

VERDICT



Above The articulating screen is really useful when you want to shot from low angles like this.

The Dual Pixel CMOS AF system's focus shift is smooth enough to be usable when shooting video, but it is dependent upon the shooting scenario and speed of movement.

In reflex mode the 80D uses the same metering system as the 750D and 760D, which means there's a 7,560-pixel RGB+IR (infrared) sensor and 63-zone Evaluative, Partial, Centre-weighted and Spot metering options. The evaluative system is very good, but the weighting applied to the active AF point can mean you need to apply exposure compensation in high-contrast situations. There's nothing especially unusual in that.

When shooting in Live View mode, the 80D uses the imaging sensor to measure exposure, and it does a good job. However, if you've turned up the brightness of the screen to cope with bright ambient light, keep an eye on the histogram view: images may look brighter than they actually are.

Angela Nicholson

When shooting in Live View, the camera uses the imaging sensor to measure exposure





SLR www.nikon.com

Nikon D5

£5,199/\$6,499

It's a great camera with a fabulous AF system – but forget about using the highest sensitivity setting

SPECIFICATIONS

Sensor — Full-frame (35.9 x 23.9mm) with 20.8 million effective pixels
Focal length conversion — 1
Memory — Dual XQD or Dual CF
Viewfinder — Optical covering 100%
Max video resolution — 4K (3,840 x 2,160 pixels)
ISO range — 100-102,400 expandable to ISO 3,280,000
Autofocus points — 153 and 99 cross-type
Max burst rate — 12fps with AF and metering, 14fps without and in live view mode
Screen — Touch-sensitive 3.2-inch 2,359,000-dot
Shutter speeds — 30-1/8,000 sec, Bulb
Weight — 1,235g (body only)
Dimensions — 60 x 158.5 x 92mm
Power supply — Rechargeable Li-ion EN-EL18a

Real-world images look cleaner and sharper than those from the D4S



THE D5 takes the top spot from the D4S in Nikon's SLR line-up. It's aimed

primarily at professional news and sports photographers, and is designed to take photographs in challenging conditions. It comes equipped with a 20.8MP full-frame sensor and Nikon's Expeed 5 processing engine, which enable a native sensitivity range of ISO 100-102,400, with expansion settings going to ISO 3,280,000. Yes, three million.

In addition there's a 153-point autofocus (AF) system with 99 cross-type sensors and the ability to shoot at up to 12 frames per second, with full autofocus and metering capability for up to 200 raw files.

Build & handling

Nikon has kept the D5's control layout the same as the D4S. While this makes it easy to swap between the two cameras, there are a few niggles with the handling. Because of differences

1 Until a promised firmware upgrade comes, there's a three-minute maximum for 4K video.

2 In review mode, this 3.2-inch, 2,359,000-dot screen is touch-enabled for easy image navigation.

3 Nikon should combine the functions of the Info and 'i' buttons to streamline controls.

4 The D5 has a metal body and extensive weather-sealing; there's even a weatherproof cover for the hotshoe.

in the number and position of the controls for horizontal and vertical shooting, you have to adapt the way you control the camera to the orientation you're shooting in.

Performance

In many respects the D5 is a phenomenal performer. It beats or matches the 24MP D750 for detail resolution, for example. Real-world images look cleaner and sharper than those from the D4S, although it's best to keep sensitivity below ISO 102,400, and the results at the maximum sensitivity setting (ISO 3,280,000) are very poor.

I found the AF system extremely capable, getting fast-moving subjects sharp in very low light and tracking them around the frame. The 3D tracking option is useful, but it relies on a strong colour contrast between the subject and the background.

In other respects the D5 performs well. The Matrix metering system is fairly easily influenced by very dark or bright sections in the scene, but it's usually predictable.

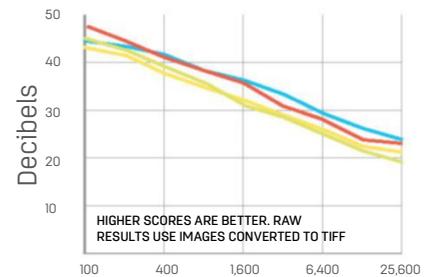
Angela Nicholson

COLOUR ERROR



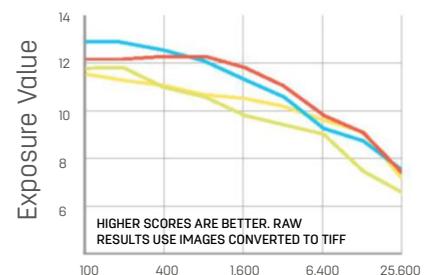
This indicates that the D5 produces more vibrant images than the competing cameras. We found it produced quite muted tones of natural subjects like landscapes or people.

RAW SIGNAL-TO-NOISE RATIO



DXO Analyzer was unable to analyse the files taken at the D5's upper sensitivity values. The Canon 1D X Mark II beats the D5 in all but the lowest sensitivity values.

RAW DYNAMIC RANGE

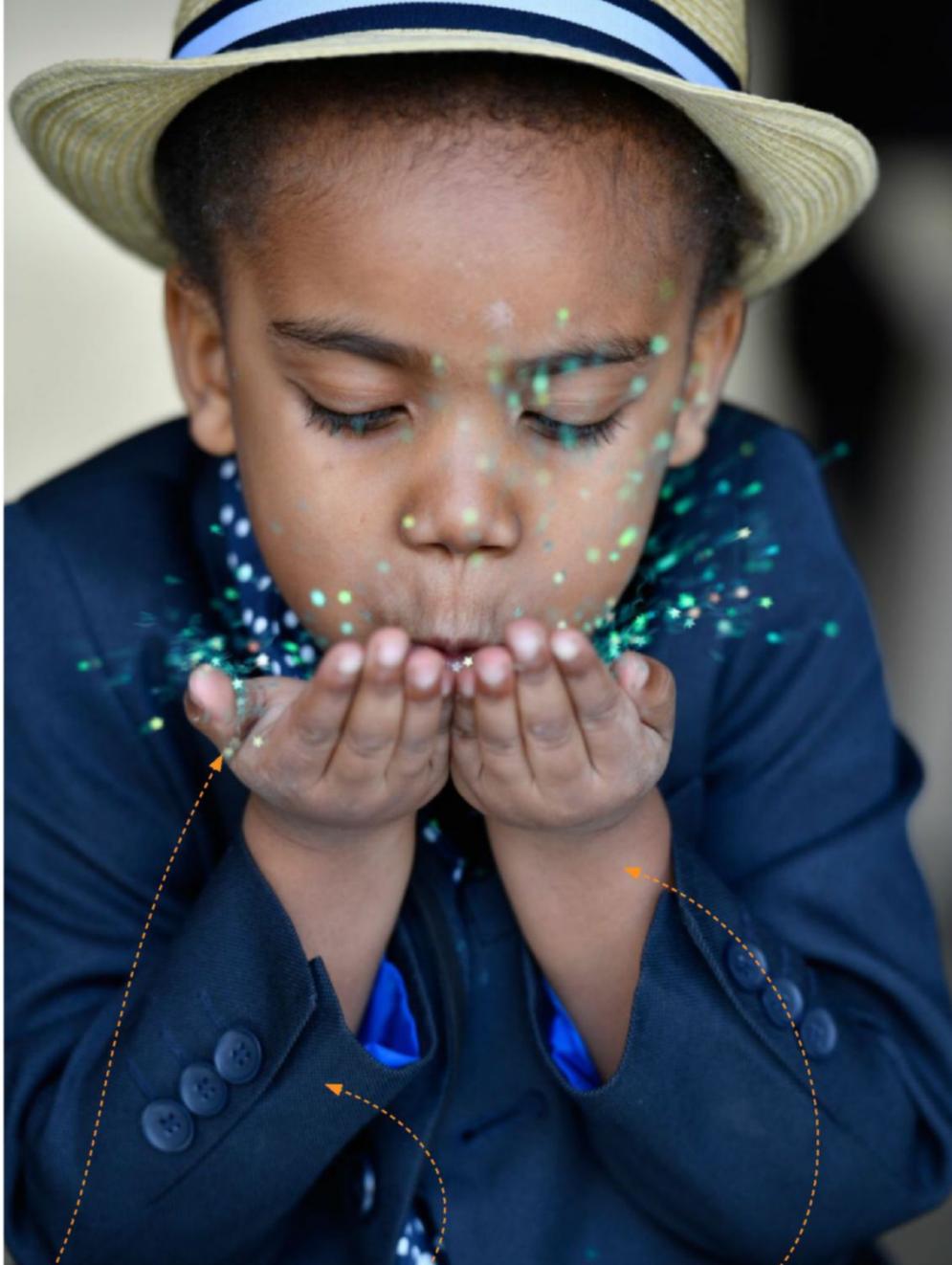


While the D5's raw file dynamic range is good, it is beaten by the D4S and the 1D X Mark II, indicating that these cameras capture a broader range of tones.

WE SAY...

The D5 is a great camera and a worthwhile upgrade to the D4S, but there are a few niggles that stop it from being an absolute belter. The top sensitivity expansion settings are headline-grabbing, if largely useless to most photographers, but the image quality in the native sensitivity range is high, provided you keep an eye on the exposure.

VERDICT



1 Decisive timing
The 12fps burst rate came in very handy for getting a nice cloud of glitter on an Aspire Photography Training course. (www.aspirephotographytraining.co.uk).

2 Faithful hues
At low sensitivity settings, the D5 captures a lot of detail, with results on a par with or even beating a higher-resolution camera like the D750, for example.

3 Natural colour
In the Standard Picture Control mode, the D5 produces quite subtle shades of natural subjects, but it still makes bold colours look pleasantly vibrant.

Meet the rivals...

The cameras taking on the Nikon D5...

FOR TEST IMAGES AND RESOLUTION CHARTS, VISIT www.techradar.com/cameras



Canon EOS-1D X Mark II
£5,199/\$5,999 (body only)
Canon's direct competitor to the D5, this 20.2MP full-frame SLR has a superb AF system, 14fps shooting and excellent metering. **Not reviewed**



Nikon D750
£1,385/\$1,997 (body only)
Aimed at enthusiast photographers, the D750 is a capable all-rounder that has a 24MP full-frame sensor and an excellent AF system. **Reviewed** Issue 158 **★★★★★**



Nikon D4S
£4,189/\$5,997 (body only)
Still a great 16MP camera, the D4S has been popular with pros. There should be some well-used examples available second-hand. **Reviewed** Issue 153 **★★★★★**



EXPERIENCE BETTER

★★★★★
Rated Excellent
(99% POSITIVE)
BASED ON OVER 450 REVIEWS ON TRUSTPILOT.CO.UK

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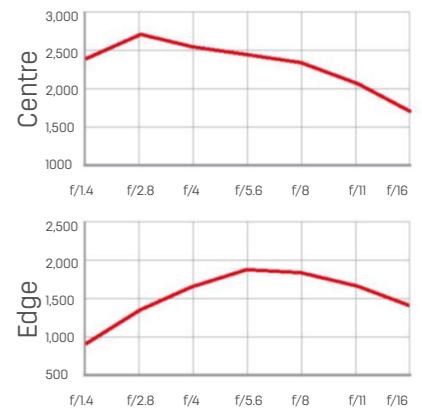




SPECIFICATIONS

Full-frame compatible __ Yes
APS-C compatible __ Yes
Autofocus (single) __ Yes
Autofocus (continuous/auto) __ No
Direct manual focus __ Lens-dependent
Use with teleconverters __ No
Optical stabiliser __ If supported in lens
Exif data retained __ Yes
Weather seals __ No
Communication port for updates __ USB
Supplied accessories __ Caps
Compatibility check __ Via LED lamp

SHARPNESS

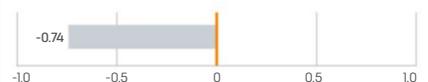


Excellent lab scores for sharpness are retained when using the MC-11 with Sigma's top-flight Art and Sport classes of lens.

FRINGING NEARER 0 IS BETTER

f/1.4 0.58 f/8 0.43 f/16 0.41

Scores for colour fringing are at least as good as when using lenses on Canon bodies, and even better with Sony's in-camera corrections.

DISTORTION NEARER 0 IS BETTER

Again, automatic distortion corrections can be applied in compatible Sony bodies, whereas this isn't available in Canon D-SLRs.

WE SAY...

The MC-11 gives a new lease of life to many Canon-fit Sigma lenses, if you want to add a Sony camera body to your collection.

VERDICT

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

ACCESSORY www.sigma-imaging.co.uk

Sigma Mount Converter MC-11 £190/\$250

Want a Sony body? Don't ditch your Sigma lenses...



THERE'S a lot to be said for Sony's lightweight yet high-performance

compact system cameras, like those from the A7 and NEX series. So much so that users of relatively bulky Canon SLRs might feel tempted to jump ship. One thing stopping them is that their existing lenses won't be compatible. But the new Sigma Mount Converter MC-11 goes some way to changing that.

The high-tech converter enables you to mount 19 of Sigma's current Canon-fit (or Sigma-fit) lenses on a Sony E-mount body. It ensures the correctly spaced physical coupling, and enables electronic control of autofocus, aperture, and more besides. In-camera corrections for peripheral illumination, distortion and lateral chromatic aberration are available, even though these aren't supported when using Sigma's Canon-fit lenses on actual Canon bodies.

The built-in electronics and data bank currently support

Sigma lenses ranging from Contemporary class APS-C format zooms to high-quality Art and Sports line primes and zooms for full-frame cameras. The full list is on Sigma's website.

The converter features a dual-colour status lamp. Solid green indicates compatibility; blinking orange indicates that the lens needs a firmware update (available via the Sigma USB Dock for compatible lenses); and a lack of any illumination means the lens is incompatible.

Performance

Autofocus speed and accuracy isn't impaired, although only single rather than continuous autofocus can be used. Sharpness remains as impressive as when using Canon-fit lenses on Canon bodies, and other image attributes can actually be better, thanks to in-camera corrections. With a physical length of about an inch, and the large size of some Sigma lenses, the combination can feel front-heavy on Sony's diminutive bodies, but performance is good.

Matthew Richards

1 The mounting plates enable Canon/Sigma-fit lenses to be attached to Sony E-series bodies, complete with all electronic communication.

2 A USB port is fitted to allow updates to be applied to the mount converter, direct from a computer.

3 The LED indicator shows compatibility status, and whether a firmware update is required for the lens.



PORTRAIT LENSES

*Want to make people look good on camera? **Matthew Richards** picks out the ideal lenses*

SOME say the lens is 'everything', but that's not really true in the digital age. It's more about how the body and the lens combine to deliver the results that you're after – and that's particularly true for portraiture.

Full-frame bodies, for example, have an advantage over those with smaller image sensors, in that they can deliver a tighter depth of field at any given 'actual' versus 'effective' focal length. But some APS-C camera systems fight back, like Fujifilm bodies with the

availability of a super-fast f/1.2 lens that also packs a secret weapon for enhancing bokeh (the quality of defocused areas in images).

Then there's the question of whether a 'fast' f/2.8 telephoto zoom is better than a faster 85mm prime lens for portraiture. The zoom might be better for portraiture at weddings and events, whereas similarly priced prime lenses tend to have faster apertures of f/1.2 or f/1.4. Let's see how the most exciting contenders compare...

THE CONTENDERS

- 1 **Canon** EF 70-200mm f/2.8L IS II USM £1,500/\$2,000
- 2 **Canon** EF 85mm f/1.2L II USM £1,500/\$2,000
- 3 **Fuji** XF56mm f/1.2 R APD £875/\$1,500
- 4 **Nikon** AF-S 70-200mm f/2.8G ED VR II £1,800/\$2,100
- 5 **Nikon** AF-S 85mm f/1.4G £1,200/\$1,600
- 6 **Sigma** 85mm f/1.4 EX DG HSM £620/\$900
- 7 **Sony** FE 85mm f/1.4 G Master £1,500/\$1,800
- 8 **Tamron** SP 85mm f/1.8 Di VC USD £750/\$750





Mount option: Canon EF

Canon EF 70-200mm f/2.8L IS II USM

£1,500/\$2,000

The full-cream Canon stands out

THIS 70-200mm zoom certainly stands out in the crowd. It's the only one here with a cream-coloured paint job, which Canon often applies to its larger telephotos to minimise the build-up of heat when shooting under a hot sun. The creaminess of its bokeh is also pretty good at the long end of the zoom range, although the widest available aperture of f/2.8 means it loses out for shallowness in depth of field at 85mm, compared with the prime lenses on test.

The lens has a tough magnesium alloy-based construction, a high-performance fluorite element and no fewer than five UD (Ultra-low Dispersion) elements. It also boasts a four-stop image stabiliser and weighs in at a hefty 1.4kg, complete with a tripod collar.

Performance

The autofocus system in this Canon zoom is super-fast, and the stabiliser lives up to its claims. Zoom versatility is nice to have but, at the short end of the range, sharpness isn't particularly great, and the smoothness of defocused areas is a little lacking.



Sharpness is good overall, but could be better at the short end of the zoom range.

FRINGING (AT F/8) LOWER IS BETTER

Wide 1.22 Mid 0.32 Tele 0.79
Lateral chromatic aberration is extremely well controlled for a telephoto zoom.

DISTORTION NEARER 0 IS BETTER

Wide -1.17 Mid 0.89 Tele 1.35
There's slight barrel and pincushion at the short and long ends, but little of concern.

VERDICT

FEATURES ★★★★★

BUILD & HANDLING ★★★★★

PERFORMANCE ★★★★★

VALUE ★★★★★

OVERALL ★★★★★



Mount option: Canon EF

Canon EF 85mm f/1.2L II USM

£1,500/\$2,000

The joint fastest lens on test

LIKE only the Fujifilm 56mm lens on test, this Canon has an extra-wide aperture of f/1.2. That's a third of a stop faster than the f/1.4 lenses, a full stop faster than the Tamron 85mm, and more than two stops faster than the 70-200mm zooms. It's a big, chunky lens and the only prime here to tip the scales at over a kilogram. Even so, the filter attachment thread is relatively small at 72mm, compared with 77mm for the 85mm f/1.4 lenses.

The pro-grade build lacks the weather-seals of most Canon L-series (Luxury) lenses. This Mk II edition has a ring-type ultrasonic autofocus system that includes an electronically coupled fly-by-wire focus ring.

Performance

The reduction in depth of field enabled by the oversized f/1.2 aperture is minimal compared with the f/1.4 lenses, but the soft and smooth bokeh is maintained even when stopping down a little, aided by an eight-blade aperture. The autofocus speed is slow, requiring movement of the heavy front element, but at least the filter thread doesn't rotate.



It's downright soft at f/1.2 but becomes pretty sharp at f/1.8 and crisp at f/2.8.

FRINGING (AT F/8) LOWER IS BETTER

Fringing 1.32
Lateral colour fringing is minimal but longitudinal fringing can be quite evident.

DISTORTION NEARER 0 IS BETTER

Distortion -0.96
Lab scores show slight barrel distortion but, again, it's difficult to spot in images.

VERDICT

FEATURES ★★★★★

BUILD & HANDLING ★★★★★

PERFORMANCE ★★★★★

VALUE ★★★★★

OVERALL ★★★★★



Mount option: Fujifilm X-Series

Fujifilm XF56mm f/1.2 R APD

£875/\$1,500

It's all about the filters



Mount option: Nikon FX

Nikon AF-S 70-200mm f/2.8G ED VR II

£1,800/\$2,100

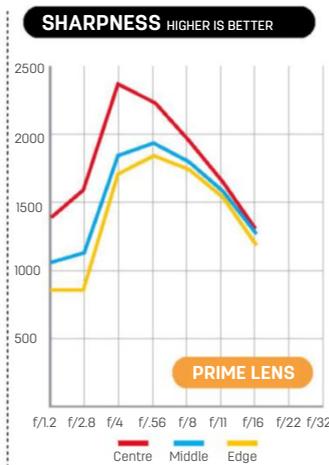
King of the fast tele zooms

WHEN it comes to minimising depth of field, the APS-C format Fujifilm lens is at a disadvantage compared with full-frame lenses, because its 'effective' 84mm focal length is derived from a shorter 56mm focal length. It fights back with an extra-wide aperture of f/1.2, and an apodisation filter, which is unique in this test group.

Based on nano-technology engineering, the internal filter seeks to maintain sharpness of in-focus areas, while applying a 'melting' effect to blur defocused areas more effectively. Naturally, the apodisation effect works best at wide apertures and, as such, the lens is supplied complete with an additional ND8 (three-stop neutral-density) filter.

Performance

Only contrast-detection autofocus can be used, but it's not overly sluggish. The lens does well to produce a rich and creamy bokeh for defocused areas, but the actual depth of field isn't very shallow even at f/1.2, where it's roughly equivalent to shooting at f/2.8 with an 85mm lens on a full-frame camera.



Focused areas generally sharp, apart from at the edges of the frame at wide apertures.

FRINGING (AT F/8) LOWER IS BETTER

Fringing 0.11
Extremely negligible amounts of lateral and longitudinal (bokeh) fringing.

DISTORTION NEARER 0 IS BETTER

Distortion -0.02
Essentially zero distortion from this lens, with a lab score that's practically perfect.

VERDICT

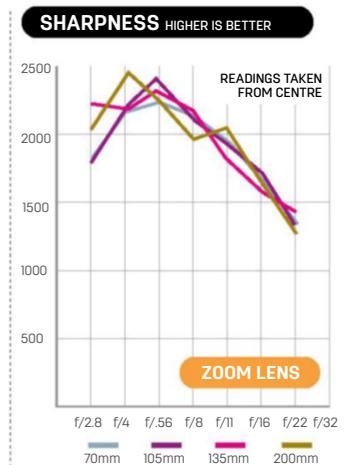
- FEATURES ★★★★★
- BUILD & HANDLING ★★★★★
- PERFORMANCE ★★★★★
- VALUE ★★★★★
- OVERALL ★★★★★

THE winner of our 70-200mm group test in issue 175, this Nikon isn't short on build quality or features. The sturdy magnesium alloy construction is weather-sealed and plays host to a three-mode focusing system that gives priority to either automatic or manual focusing during autofocus. The dual-mode stabiliser has normal and active settings, as well as automatic panning detection.

Nikon's ED (Extra-low Dispersion) glass is used for no fewer than seven of the 21 elements in the optical path, while Nano Crystal coatings are on hand to reduce ghosting and flare.

Performance

All areas of performance are simply excellent, from the lightning-quick autofocus system, through the highly effective optical stabiliser, to all aspects of image quality. Even so, it suffers from the same drawback as the Canon 70-200mm lens, in that you simply can't get such a tight depth of field towards the short end of the zoom range, compared with using any of the 85mm prime lenses on test.



Sharper than many prime lenses, even at the extreme edges of the frame it's a solid zoom.

FRINGING (AT F/8) LOWER IS BETTER

Wide 0.84 Mid 1.09 Tele 2.19
Fringing gets slightly worse at the long end of the zoom range, but it's only minimal.

DISTORTION NEARER 0 IS BETTER

Wide -0.64 Mid 1.18 Tele 1.83
There's slight pincushioning at 200mm but performance is good throughout the range.

VERDICT

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



Mount options: **Nikon FX**

Nikon AF-S 85mm f/1.4G

£1,200/\$1,600

As good as it gets for Nikon



Mount option: **Canon EF Nikon FX Pentax K Sony A Sigma SA**

Sigma 85mm f/1.4 EX DG HSM

£620/\$900

An attractive buy at half the price

LOSING out by a third of a stop compared with Canon's top-flight portrait prime, the Nikon is more mainstream at f/1.4. It also has two more optical elements than the Canon, but with ten elements in nine groups, it's still a lot less complex than the two zoom lenses in the group.

The pro-grade construction feels solid and robust, and the aperture is slightly better rounded than that of the Canon lens, based on nine rather than eight diaphragm blades. The internal focusing system also enables much faster autofocus than in the Canon lens. This isn't really a 'must have' for portraiture but can be a bonus sometimes, like when you're trying to capture fleeting expressions. Another improvement over the Canon lens is that the Nikon has weather-seals.

Performance

Contrast and sharpness are very good overall, with a touch of softness at f/1.4 that can look pleasant in portraiture. Lateral chromatic aberration is only very slight, and longitudinal or 'bokeh' fringing is better controlled than in the Canon and Sigma lenses.

SHARPNESS HIGHER IS BETTER



Centre-sharpness is excellent throughout almost the entire aperture range.

FRINGING (AT F/8) LOWER IS BETTER

Fringing 1.53
Minimal lateral chromatic aberration, with reduced longitudinal fringing.

DISTORTION NEARER 0 IS BETTER

Distortion -0.5
Negligible barrel distortion, but it's technically lower than in the Canon lens.

VERDICT



WE'RE big fans of Sigma's Art-line prime lenses and, for Canon and Nikon APS-C format cameras, the full-frame compatible Sigma 50mm f/1.4 A lens is our favourite portrait lens. This 85mm optic is an older design but nevertheless features aspherical and SLD (Special Low Dispersion) elements, along with a ring-type ultrasonic autofocus system. The lens doesn't include weather seals, but it does have a well-rounded nine-blade aperture and Sigma's super multi-layer coatings to reduce ghosting and flare.

It has almost identical specs to the Nikon 85mm f/1.4 lens, but costs about half the price. The Canon and Sony 85mm lenses are nearly 2.5 times as expensive, making the Sigma great value.

Performance

Autofocus is fast and quiet, while centre-sharpness is excellent, even at f/1.4. Corner-sharpness is underwhelming at any aperture, but that's not normally a deal-breaker for a portrait lens. Longitudinal chromatic aberration can be quite noticeable, as with the Canon 85mm lens.

SHARPNESS HIGHER IS BETTER



It's a little disappointing in the corners, but excellent at the centre of the frame.

FRINGING (AT F/8) LOWER IS BETTER

Fringing 0.96
Lateral chromatic aberration is very low, but longitudinal fringing can be noticeable.

DISTORTION NEARER 0 IS BETTER

Distortion -0.2
The extremely small amount of barrel distortion is almost impossible to spot.

VERDICT





Mount options: **Sony E**

Sony FE 85mm f/1.4 G Master

£1,500/\$1,800

A portrait lens for E-mount cameras



Mount options: **Canon EF Nikon FX Sony A**

Tamron SP 85mm f/1.8 Di VC USD

£750/\$750

Sometimes the tortoise wins the race

SONY'S new G Master portrait lens is beautifully built, features a weather-sealed construction, and adds plenty of useful touches like a focus hold button and hands-on aperture ring. Better still, the aperture ring has a de-click option that can be operated via a switch on the barrel, enabling smooth aperture transitions when shooting video.

Smart glass includes an XA (eXtreme Aspherical) element and three ED (Extra-low Dispersion elements). Sony claims the XA element features increased surface precision, which further beautifies the quality of bokeh. Another bokeh-enhancing feature is that the incredibly well-rounded aperture is based on an impressive 11 diaphragm blades.

Performance

Sharpness is very good at f/1.4 and stunning at f/1.8 and beyond. Despite this, bokeh is smooth and dreamy, and the transitions between focused and defocused areas are impressive. Sony's Nano AR coating fends off ghosting and flare, and lateral and longitudinal fringing are both minimal.

SHARPNESS HIGHER IS BETTER



f/1.4 f/2.8 f/4 f/5.6 f/8 f/11 f/16 f/22 f/32
Centre Middle Edge

It's almost too sharp for a portrait lens, but it's nicer to have too much detail than not enough.

FRINGING (AT F/8) LOWER IS BETTER

Fringing 0.63
There's little colour fringing throughout the entire aperture range, right across the frame.

DISTORTION NEARER 0 IS BETTER

Distortion 0.71
There's a very small amount of pincushion distortion, but it's extremely hard to spot it.

VERDICT

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

THIS is the slowest prime lens in the group but, with a widest aperture of f/1.8, it still beats both of the zoom lenses on test by more than a stop. It's also the only prime lens here to feature an optical stabiliser, which is a worthwhile addition when shooting on Canon and Nikon bodies.

It has pro-grade build quality, with excellent handling and a full set of weather-seals. It features XLD (eXtra Low Dispersion) and LD elements, along with Tamron's eBand and BBAR nano-structured coatings. The overall aim is to deliver superb image quality with great sharpness even in hand-held shooting, along with minimal colour fringing, ghosting and flare.

Performance

The ring-type ultrasonic autofocus system is ultra-fast, while sharpness is impressively consistent, both throughout the aperture range and across the whole frame. You can't get quite such a minimal depth of field as with an 85mm f/1.4 lens, but the Tamron's bokeh is simply gorgeous, which makes up for it.

SHARPNESS HIGHER IS BETTER



f/1.8 f/2.8 f/4 f/5.6 f/8 f/11 f/16 f/22 f/32
Centre Middle Edge

There's more than enough sharpness on tap for portraiture, with impressive consistency.

FRINGING (AT F/8) LOWER IS BETTER

Fringing 0.54
Lateral fringing is impressively low, and longitudinal flaws are almost non-existent.

DISTORTION NEARER 0 IS BETTER

Distortion 0.22
The amount of pincushion distortion is so tiny that it's essentially a non-issue.

VERDICT

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

THE VERDICT

Sony gives a portrait masterclass

The Sony FE 85mm f/1.4 G Master is a gem of a lens

SONY'S new 85mm G Master delivers everything you could hope for in a portrait lens, and more besides. Sharpness is exceptional, while defocused areas are sumptuously soft and dreamy. The focus hold button and de-click aperture ring option are bonuses, the latter working very well for shooting video.

Second place in the rankings goes to the similarly new Tamron 85mm. Despite being the 'slowest' prime lens in the group, it still enables a really tight depth of field when shooting at f/1.8 on full-frame cameras, and it combines impressive bite with exquisite bokeh, minimal fringing and negligible distortion. The optical stabiliser can be very useful, although the faster Nikon AF-S 85mm f/1.4G just about has the edge for all-round

image quality. By comparison, the performance of Canon's top-flight EF 85mm f/1.2L II USM is a little lacklustre, with very sluggish autofocus and comparatively high longitudinal chromatic aberration or 'bokeh fringing'. The Sigma 85mm f/1.4 EX DG HSM is also a little worse than average for bokeh fringing, but it's great value at its relatively inexpensive asking price.

The Fujifilm XF56mm f/1.2 R APD is a super lens for APS-C format portraiture, combining a very wide aperture with its crafty apodisation filter for boosting the quality of bokeh. Even so, when you want a really tight depth of field, it can't compete with an 85mm f/1.4 or f/1.8 lens on a full-frame camera. The same goes for the versatile Canon and Nikon 70-200mm zoom lenses.



HOW THE LENSES COMPARE

	Canon EF 70-200mm f/2.8L IS II USM	Canon EF 85mm f/1.2L II USM	Fuji XF56mm f/1.2 R APD	Nikon AF-S 70-200mm f/2.8G ED VR II	Nikon AF-S 85mm f/1.4G	Sigma 85mm f/1.4 EX DG HSM	Sony FE 85mm f/1.4 G Master	Tamron SP 85mm f/1.8 Di VC USD
Contact	www.canon.co.uk	www.canon.co.uk	www.fujifilm.co.uk	www.nikon.co.uk	www.nikon.co.uk	www.sigma-imaging-uk.com	www.sony.co.uk	www.tamron.co.uk
Street price	£1,500/\$2,000	£1,500/\$2,000	£875/\$1,500	£1,800/\$2,100	£1,200/\$1,600	£620/\$900	£1,500/\$1,800	£750/\$750
Mount options	EF	EF	X	FX	FX	EF FX A K SA	E	EF FX A
Elements/Groups	23/19	8/7	11/8	21/16	10/9	11/8	11/8	13/9
Diaphragm blades	8 blades	8 blades	7 blades	9 blades	9 blades	9 blades	11 blades	9 blades
Autofocus type	Ultrasonic (ring-type)	Ultrasonic (ring-type)	Stepping motor	Ultrasonic (ring-type)	Ultrasonic (ring-type)	Ultrasonic (ring-type)	Stepping motor	Ultrasonic (ring-type)
Manual AF override	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time
Min focus distance	1.2m	0.95m	0.7m	1.4m	0.85m	0.85m	0.85m	0.8m
Max magnification factor	0.21x	0.11x	0.09x	0.12x	0.12x	0.12x	0.12x	0.14x
Minimum aperture	f/32	f/16	f/16	f/22	f/16	f/16	f/16	f/16
Optical stabilizer	Yes	No	No	Yes	No	No	No	Yes
Filter size	77mm	72mm	62mm	77mm	77mm	77mm	77mm	67mm
Weather-seals	Yes	No	No	Yes	Yes	No	Yes	Yes
Included accessories	Hood, soft case, tripod collar	Hood, pouch	Hood, cloth, ND8 filter	Hood, soft case, tripod collar	Hood, pouch	Hood, pouch	Hood, soft case	Hood
Dimensions (DxL)	89x199mm	92x84mm	73x70mm	87x201mm	87x84mm	86x88mm	90x108mm	85x91mm
Weight	1,490g	1,025g	405g	1,540g	595g	725g	820g	700g

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

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www.delkindevices.com
**Delkin Devices 1TB
 RhinoDrive**
 £400/\$400

With its rubberised casing and silicone bumper, the RhinoDrive offers ultimate shock protection. It's far from sleek, though, and the SSD within can't match the cheaper Samsung drive for speed.

OVERALL



www.g-technology.com
**G-Technology 1TB
 G-Drive ev ATC**
 £113/\$130

This toughened drive is protected by a crush-, dust- and shock-resistant compartment that also has a built-in USB cable. Using a conventional hard drive keeps the cost down, but it's no slouch.

OVERALL



www.samsung.com
**Samsung Portable SSD
 T3 500GB**
 £150/\$180

At 74 x 58 x 10.5mm, this svelte metal-shelled SSD is the smallest and lightest drive here. It also boasts winning performance, outpacing the Delkin SSD while still being shock-resistant.

OVERALL



www.seagate.com
**Seagate Backup Plus
 Ultra Slim 2TB**
 £95/\$130

Seagate claims that this 9.6mm design is the world's thinnest 2TB mobile hard drive. It looks the part too, and transfers images and video at a respectable rate, despite using a traditional hard drive.

OVERALL



www.transcend-info.com
**Transcend StoreJet
 25M3 2TB**
 £80/\$183

The plasticky StoreJet doesn't ooze quality, but it's shock-resistant to military standards. Transfer speeds are the fastest on test for a hard drive, and with 2TB of storage you get incredible value.

OVERALL



www.wd.com
**WD My Passport
 Ultra 1TB**
 £58/\$60

WD's compact contender is narrowly beaten into last place here for speed, but it's well-priced and includes extensive back-up and drive encryption software. Even so, it's an average overall package.

OVERALL



TRAVEL BAGS

Six backpacks that'll transport your camera kit and much more



www.lowepro.com

Lowepro Fastpack BP 250 AW II
£120/\$130

THIS bag has enough space in its lower half for a full-frame body and attached lens, plus two or three extra optics and accessories. What's more, the clever wraparound flap can be partially opened for on-the-go side access, or peeled all the way back to reveal your lenses.

There's a spacious top compartment for travel essentials, and you can bring both a 15-inch laptop and a tablet along for the ride. That all adds up to some serious weight, but supple straps, generous pack padding and a large hip belt really lighten the load.

Factor in the reassuringly thick gear padding, the built-in rain cover and useful accessory pockets, and the Fastpack shapes up as a superb all-rounder.

This bag has a versatile, well designed camera compartment with on-the-go access, but it's not suited to big full-frame optics. It's a high-quality bag that's an almost faultless travel companion.

OVERALL



www.manfrotto.com

Manfrotto Advanced Rear Access camera and laptop backpack
£120/\$160

IF you're more used to travelling in the city than in the country, Manfrotto's smarter styling will help you look the part. It conceals a good-sized laptop slot, although this is at the front of the bag – furthest away from your back, where it's least comfortable. It has to be located here because the rear panel is used to access the large camera compartment that'll swallow a 70-200mm f/2.8, plus a body and two or three extra lenses.

The upper daypack space isn't especially large, but you can stash personal effects in some spacious front and side pockets. You'll want to travel fairly light, though, due to the stiff shoulder straps and basic hip belt.

Although it's tricky to access quickly and the straps could be more comfortable, it's a great bag if subtlety and security matter more to you than convenient access.

OVERALL



www.mindshiftgear.com
Mindshift rotation180° Panorama 22L
£162/\$200

CAMERA backpacks don't often amaze us, but this bag is quite something. It retains the traditional daypack design, comprising a versatile top compartment and removable camera pod below. But this is designed to be pulled out from the side of the bag and rotated around your waist while held securely by the attached hip belt. It's a terrific example of logical thinking that works a treat and revolutionises on-the-go access.

The only downside is there's only enough space in the camera compartment for a body and attached lens, plus one other lens and maybe a flashgun. The split design also rules out a laptop slot, but this bag's designed for the trail, where the three-litre hydration pack pocket and comfortable back and shoulder padding are more important.

It's not suited to transporting a lot of camera kit or a laptop, but this bag comes a very close second to the Lowepro.

OVERALL





WHAT TO LOOK FOR IN A TRAVEL BAG

It's all very well splashing out on a dedicated camera backpack that'll store all your photography gear, but a bag of this type isn't ideally suited to prolonged periods off the beaten track. Here you'll be better off with a bag that's got more

of a split personality. Travel-orientated photo backpacks still let you carry essential camera kit, but also offer enough space for clothes and food.

Getting the right balance of camera versus daypack storage isn't easy, so

we've selected six bags with varied layouts and capacities. Most will still swallow a full-size laptop, though, and all have mounting points for a tripod. What really separates the best from the rest, however, is ease of access.

4



www.geographicbags.com

National Geographic Africa Medium Rucksack

£129/\$90

AT first glance, this backpack has a lot going for it. The retro design is stylish yet understated, and there are some nice details like buckle straps. But its appeal soon wears off when you're in the field, due to the hard, uncomfortable back padding.

At least you won't have much to carry, though: the bag's shallow depth restricts space in the upper daypack compartment and also the camera section beneath. The latter is entered via a front flap, but this hinges upward, completely ruling out any access while on the move. And just for some added annoyance, the flap has a tendency to spring closed.

You do get plenty of extra pockets and a well-placed rear slot for a 15-inch laptop, but some of the front pockets have limited use. Although it's well-priced, the size, internal layout and accessibility all frustrate, as does the hard padding.

OVERALL



5



www.thinktankphoto.com

Think Tank Trifecta 10

£130/\$160

WHERE most travel backpacks are tailored towards APS-C camera kits, the Trifecta 10 is a no-compromise design built to carry bulky full-frame gear. It'll easily accommodate a 5DS or a D810 with a 70-200mm f/2.8 attached, plus two sizable f/2.8 optics alongside, and 32 x 49 x 17.5cm exterior dimensions. Your gear will be well-protected too, thanks to Think Tank's rugged build and superb interior padding. That extends to the outside, where your shoulders and back are sumptuously cossetted.

Things aren't quite perfect: the small upper compartment won't store many personal effects. There is a tablet slot, though, and a tripod can be strapped to the front, out of the way of large side openings that keep kit within easy reach.

With tough construction, this is very comfortable and great for large lenses. It's a top-quality yet keenly priced bag for serious camera set-ups.

OVERALL



6



www.vanguardworld.com

Vanguard Havana 48

£80

WITH its cavernous upper section, the Havana 48 is more a daypack than a photo backpack, but it does contain a useful camera compartment that helpfully hinges out as you open the front access flap. Inside there's enough room for a small SLR and a couple of extra lenses, although the space isn't the most practical shape or particularly easy to divide. It's effortlessly removable, though, as is the bag's centre divider, leaving you with a normal backpack.

Plenty of smaller front and side pockets give ample accessory storage, while a tripod will stow on the side and a 15-inch laptop can nestle at the back. There's protection from the elements courtesy of an included rain cover, but the bag's lightweight materials and limited padding don't offer much kit protection.

This is an attractively designed bag that works well as a daypack – just don't try to carry too much camera kit.

OVERALL





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SEAN McCORMACK

Photographer and writer

Sean McCormack is an experienced photographer and writer based in Galway. He is the author of *The Indispensable Guide to Lightroom CC*.
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WHEN you shoot landscapes, you'll see that the sky in your photos is often much brighter than the

ground. Traditionally, experienced landscape photographers use graduated neutral density filters, which have a tinted top with a clear bottom, in front of the lens. They're usually measured in exposure reduction, so you'll see one-stop graduated neutral-density filters for example. The tint looks grey on these, so they don't change the colour in the sky.

These filters still have a place in digital photography to get the best look in-camera, but Lightroom allows you to recreate these filters digitally, with more options than reducing exposure or colour in the sky.

1 GRADUATED FILTER

Open the Graduated Filter from the Toolstrip under the Histogram in Develop. You can also use the keyboard shortcut M. If you need to reset the current settings, double click on the Effect text.



2 GET THE LOOK

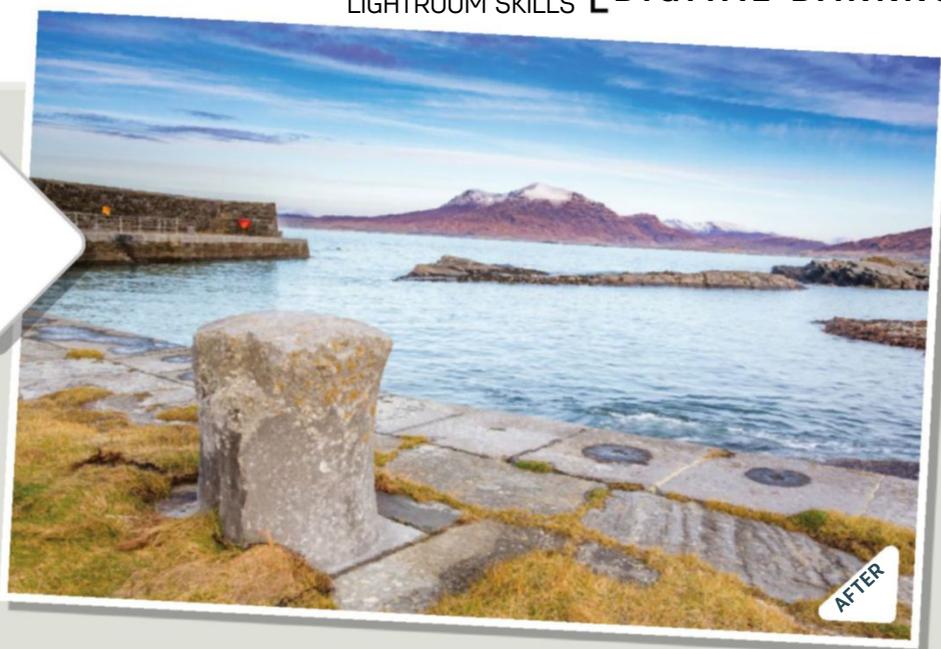
Click above the skyline and drag down until you're below it. If you want a hard line on the horizon, only drag a short distance. For a softer look, drag much further. To keep the filter straight as you drag, hold the Shift key. To change position, click and drag the pin.



3 DEHAZE SLIDER

For the skies, you should start with the Dehaze slider. This removes the haze, but at the same time increases contrast and saturation. It also darkens the area it works on, which is why it's good to use before or instead of changing exposure. I've gone for 30 here.

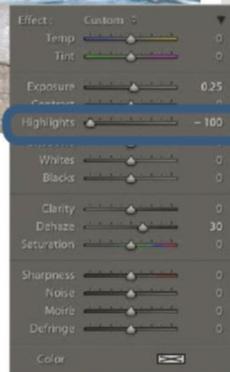




4 EXPOSURE If Dehaze has darkened too much, or if you prefer the sky darker, go to Exposure and change to get what you want. For this image, I increased the exposure subtly (+0.25) to bring better balance to the sky. (The original image did use a real ND grad filter but it wasn't strong enough. Dehaze has darkened it too much.)



5 HIGHLIGHTS If there's a lot of cloud, you can pull the Highlights slider down to stop them being too bright. Don't be afraid to go the whole way down – you can always go back!



6 CONTRAST There are a few other options worth using. Tweak Sharpness to better define the clouds (+15); view the image at 1:1 when changing this. Increase Clarity (+30) to boost local contrast. You may want to have a go at adjusting Contrast too.



Built-in Brush Tool

The Graduated Filter is a linear tool, so anything that's above the horizon will take on the effects you apply to the sky. Lightroom has a fix for this: in the Mask section, select Brush. From the Brush section that appears, select the Erase brush. Change Size and Feather to Taste. Generally I leave Flow and Density at 100.

Auto Mask should be on if the part you want to remove has hard edges. To make

the Mask (the area where the Grad is working) more visible, press O to show a red overlay.

Use the Erase brush to remove the mask off the area you need to bring back. In this image, I'm clearing the mask off the pier to bring it back to normal. It's great for bringing foreground elements back to where they were before you applied the Graduated Filter.



**JAMES
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With a decade as a working writer and photographer behind him, James knows exactly which Photoshop and Lightroom tools and techniques matter the most to you.

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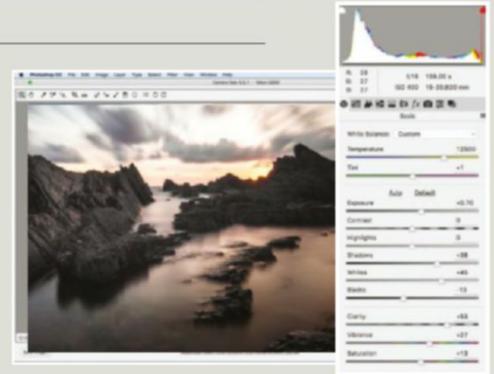
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STEP BY STEP ENHANCE A SKY

Improve a dull sky by adding a touch of drama to it...



1 IMPROVE THE TONES

You can use the Magic Wand in combination with Camera Raw and Smart Objects. First right-click the image in Bridge and choose Open In Camera Raw, then adjust the tones in the Basic Panel to improve the foreground. Don't worry about how the sky looks for now. Once done, hold Shift then click Open Object.



2 SELECT THE SKY

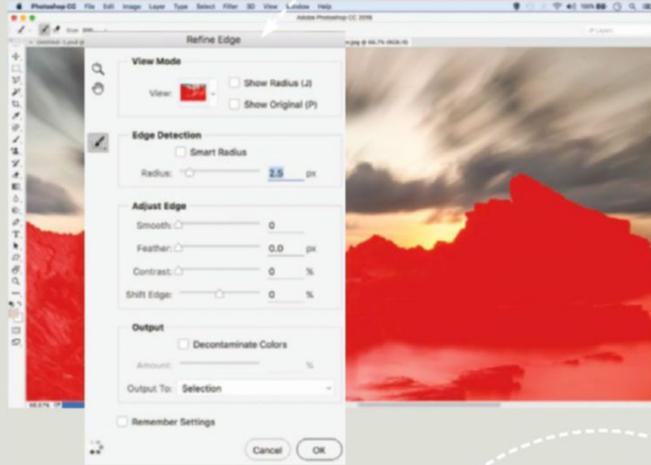
Right-click the layer and choose New Smart Object Via Copy. Grab the Magic Wand tool, tick Contiguous then Shift-click over the sky until selected. Go to Layers Panel > Add Mask, double-click the layer thumbnail to re-open in Camera Raw, process the image to enhance the sky, then click Done.

PHOTOSHOP ANATOMY



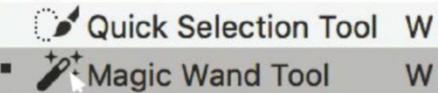
ADD, SUBTRACT, INTERSECT

When you use the Magic Wand – or any selection tool – you’ll see these four icons to the top left. Toggling each on or off will allow you to add to a selection, subtract from it or intersect. However, in this case it’s always easier to use keyboard shortcuts: hold Shift to add, hold Alt to subtract, and hold both Shift+Alt to intersect.



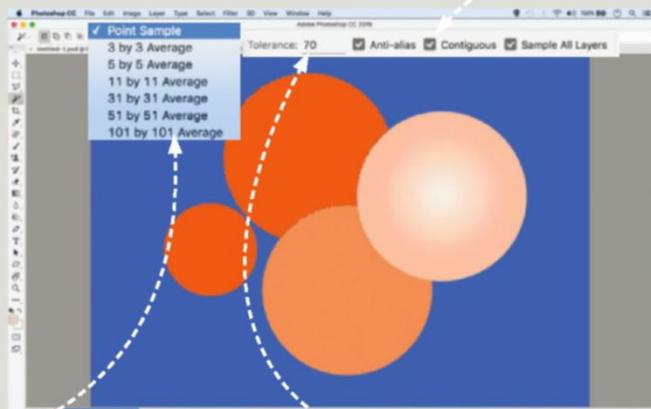
REFINE EDGE

All selection tools will initially create very hard-edged selections (even with Anti-Alias ticked). Most objects in real-world photos have softer edges, so it’s worth taking the selection through the Refine Edge command to improve it. You can use Radius to expand the ‘search area’ along the edge, or Feather to soften it slightly.



THE MAGIC WAND

One of Photoshop’s oldest and most useful selection tools, the Magic Wand, works by seeking out similar tones and colours. It’s found in the Tools Panel alongside the equally useful Quick Selection tool. Simply click over a point in your image and the tool will select similar pixels, making it easy to select large expanses of tones or colours.



CONTIGUOUS

Tick Contiguous and the tool will only pick up pixels connected to the first point you click over. Untick it and the tool will search image-wide for similar colours. Here, with Contiguous unticked, the tool finds both the larger and smaller orange circles, while with Contiguous ticked it will select each one individually.



SAMPLE SIZE

This drop-down lets you control how the tool samples pixels. You can set it to either sample a single pixel with Point Sample, or take an average reading from a larger area of 3 x 3 pixels, 5 x 5 and so on. Imagine it as either pointing with a needle, a finger or a fist.

TOLERANCE

The Tolerance setting controls how inclusive the tool is of different shades of colour. With Tolerance below 100, the Magic Wand includes only one of the coloured circles here. Between 100-200 it finds two, and above 200 it selects all three at once.

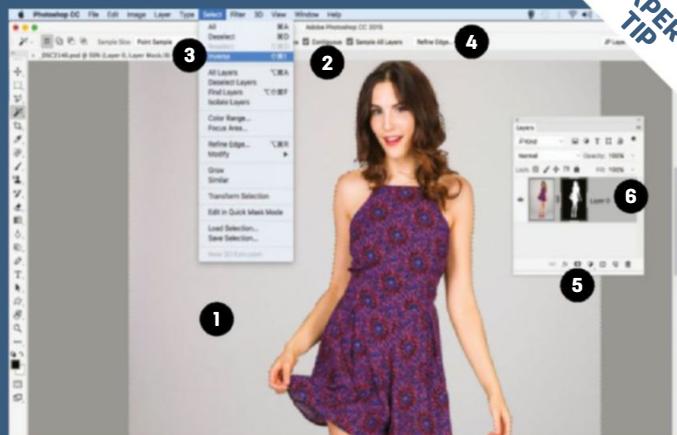
Select the opposite

Do the reverse of what you want, then invert it

Sometimes it’s easier and quicker to select the opposite of what you want and then invert it, particularly if the subject is against a uniform backdrop [1]. This works especially well for cutting out portraits. Simply set the Magic Wand to Contiguous [2]. Use a low Tolerance setting of around 20-30, then Shift-click a few times around the background until it’s all selected.

Once done, go to Select > Inverse (or press Ctrl/Cmd+Shift+I) [3] to select the subject instead. Then you can go on to use Refine Edge [4] to fine-tune it.

Once the selection is as precise as possible, click the Add Layer Mask icon [5] to convert it to a Layer Mask [6]. Everything but the selected area will be hidden behind the mask.



EXPERT TIP



GLYN DEWIS

Photographer
and author

Glyn is a commercial photographer and retoucher, and is also an Adobe Community Professional trainer. He is the author of *The Photoshop Workbook*.
www.glyndewis.com

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FOR this tutorial, I want to take you through three different techniques for giving your photographs much more detail and lending them a gritty feel. This particular look is incredibly popular in the movie industry these days, and you'll no doubt see it being used a lot to

create movie posters and other film-associated artwork.

Now, I'm a big believer in knowing a variety of techniques to produce similar results. This is because every picture is different. Because of this, the same technique will likely not work on every picture and may well produce different

results. Knowing a variety of techniques means you'll always be able to achieve the look you want.

In the tutorial that follows, I'll take you through a technique that uses filters within Photoshop, but I'll also touch on two third-party plug-ins that I sometimes call on too.

METHOD 1: PHOTOSHOP

1

**SET UP A LAYER GROUP**

Open the start image. Create two copies by pressing Ctrl/Cmd+J twice. Click the upper layer and Shift-click the layer below so both copies are selected. Go to Layer > New > Group from Layers. Name the group 'Details', set the Blend Mode to Soft Light and click OK.



2

**PREPARE THE IMAGE**

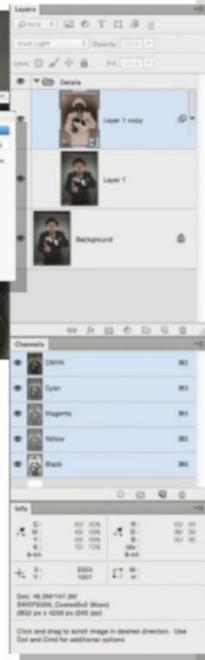
Click the triangle icon for this group to open it and reveal the two layers inside. Change the Blend Mode of the uppermost layer in the group to Vivid Light. On the same layer, go to Image > Adjustments > Invert: this seems to restore the picture to how it originally appeared, but the image has now been set up to enhance details.



3

**ADD SURFACE BLUR**

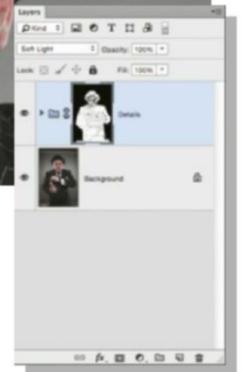
Convert the layer to a Smart Object by going to Filter > Convert for Smart Filters. Add the details by going to Filter > Blur > Surface Blur. In the Surface Blur properties, set the Radius and Threshold settings to the same number. I find that settings not exceeding 30 produce the best results.



4

**CONTROL THE EFFECT**

To limit where and how strongly the details are applied, close the Details group by clicking the triangle icon, as before, and Option/Alt-click the layer mask icon to add a black layer mask. Then, with a white medium soft-edged brush, paint over the image to reveal the details. Use a lower-opacity brush when painting over the skin as opposed to the clothing.

**Handle with care**

Photoshop's Surface Blur is a great tool, but don't go too mad!

Surface Blur works well in a lot of photos you'll use this effect for, but don't apply too high an amount as it can introduce haloes and artefacts into your pictures, especially if they have lots of shadow areas. I typically use Radius and

Threshold settings of 35 or lower, and I usually apply the same strength to both settings.

In practice, the Surface Blur technique doesn't work brilliantly with our tutorial photo, probably because of the high proportion of shadows and dark areas. Even using my preferred settings, you can see artifacts appearing in the hat rim and some haloing becoming apparent around the hat and suit.



Before



Too much

EXPERT TIP

METHOD 2: NIK COLLECTION



DETAILS EXTRACTOR

I'm using the latest version of Nik Color Efex Pro 4, which includes a preset called Details Extractor. I'm a big fan of this plug-in – not just because of the results but also because it allows me to work non-destructively. Starting from the beginning, with no layers other than the original image, go to Filter > Convert for Smart Filters, and then to Filter > Nik Collection > Color Efex Pro 4.



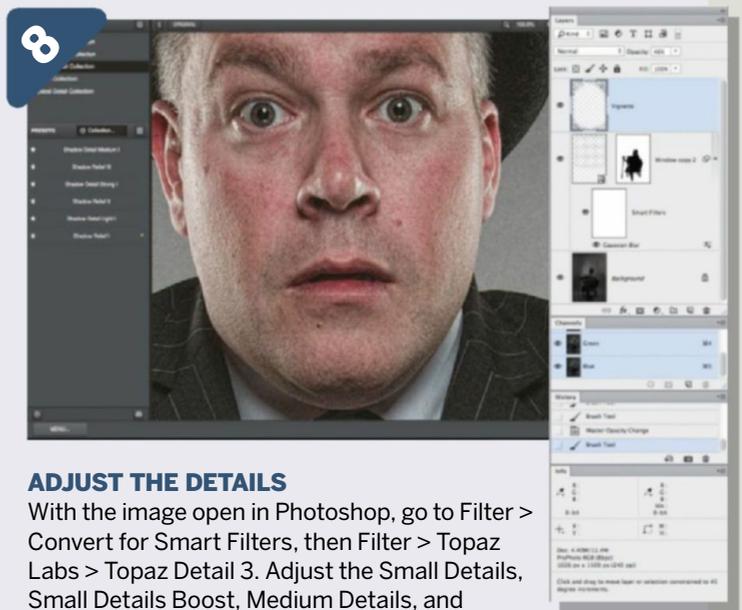
CLICK AND TWEAK

From the Presets list, choose Detail Extractor. The default settings are immediately applied. You can have a go at experimenting with them to see what you prefer. Click OK. Because the details have been applied to the entire picture, click the white layer mask attached to the filter in the layer stack and then go to Image > Adjustments > Invert to change it to black.



PAINT IN THE DETAIL

With a white medium soft-edged brush, paint over the image area to reveal the details. Use a lower-opacity brush when painting over the skin as opposed to the clothing. You can see it enhances the details and information incredibly. Unlike the previous technique, it creates few artefacts and haloes.



ADJUST THE DETAILS

With the image open in Photoshop, go to Filter > Convert for Smart Filters, then Filter > Topaz Labs > Topaz Detail 3. Adjust the Small Details, Small Details Boost, Medium Details, and Medium Details Boost settings, with the upper slider increased to the right the most, and less for the others, to produce an arc. Click OK. Invert the mask and paint over it.

Three of a kind

Each of these three techniques suits different types of photo better – try them all!

For this shot, my favourite result came from Topaz Detail. The results it produces are quite different from the other two techniques, and add a slight textured effect. This plug-in gives great results but needs to be used sparingly on skin. For this particular image, Topaz

Detail has produced the best result because it enhances detail while maintaining the original darkness of the suit. Whichever method you use, always increase the magnification to 100% before you start apply the effect so you can see what's really going on.



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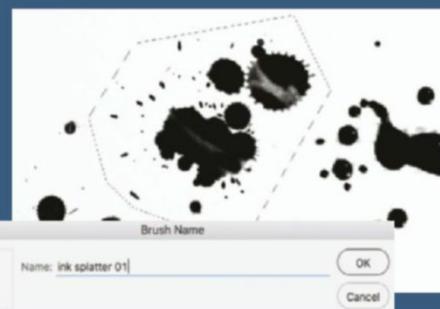
Create your own brushes

When pre-existing brushes can't do the job, it's easy to make your own...

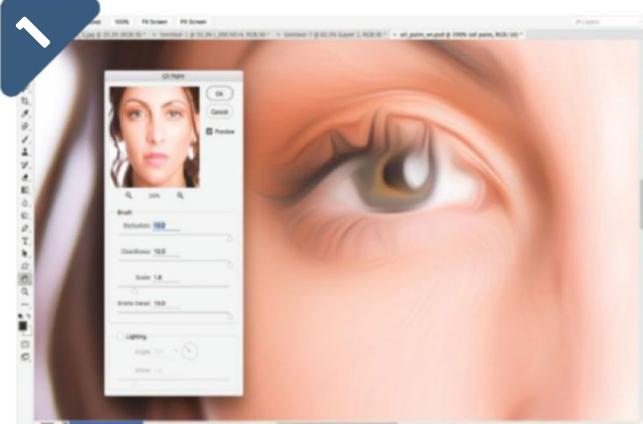
Photoshop offers a huge range of brush tips within the Brush Picker, and there are thousands more available free of charge online. But if you want something special, why not make your own? It's very easy.

All you need to do is select something, then go to Edit > Define Brush. Any white parts will be transparent, so it works best when you can isolate a shape against a white backdrop. Take, for example, the ink splatter brushes used

in tip 3 (which you can download via www.bit.ly/dc179extra). To make these, we dropped ink on a piece of white paper, then photographed it. After converting to mono and boosting contrast, we made a rough selection around each spot with the Polygonal Lasso Tool, then went to Edit > Define Brush and gave our new brush a name. Any new brushes appear in the Brush Picker at the end of the list.

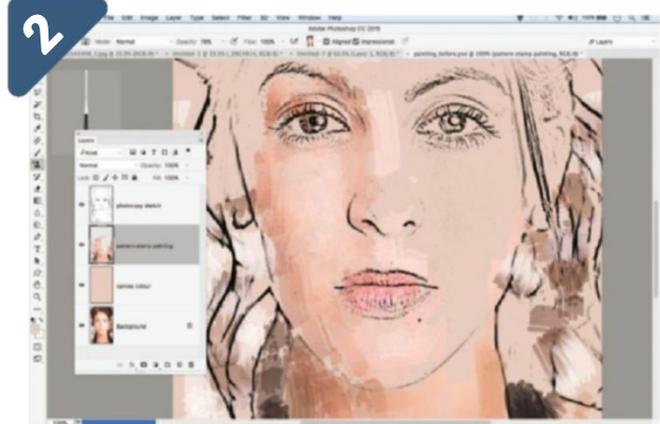


**EXPERT
TIP**



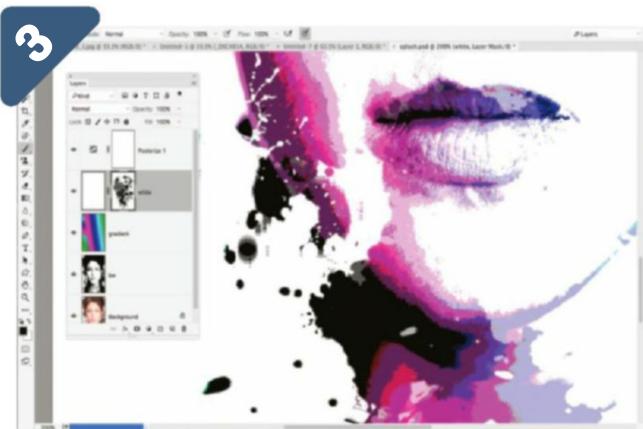
GET THE OIL PAINTING LOOK

Duplicate the background, then go to Filter > Stylise > Oil Paint. Set Stylisation, Cleanliness and Bristle Detail to 10, Scale 1.6, untick Lighting and click OK. Press Ctrl/Cmd+F to run again. Go to Filter > Nik Collection > Color Efex Pro. (Download it at www.google.com/nikcollection.) Use the Detail Extractor filter to pull out detail. Add a Color Lookup Adjustment Layer, choose Foggy Night and set Opacity to 50%.



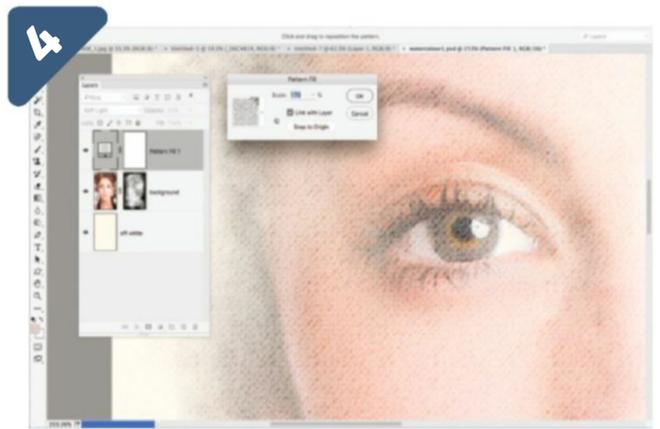
PAINT WITH PATTERNS

Go to Edit > Define Pattern and save. Duplicate the layer, press D then go to Filter > Filter Gallery > Sketch > Photocopy. Set the Blend Mode to Multiply and erase any messy parts. Make two new layers below the photocopy layer. Fill the lower one with light brown. (Try #dbc5b8.) Select the upper one and grab the Pattern Stamp tool. In the options, target the new pattern, choose a bristle brush tip and tick Impressionist, then paint.



USE SPLATTER BRUSHES

Add a Black and White layer then a Levels layer, and squeeze in the whites and blacks. Make a new layer, grab the Gradient Tool, and choose a colourful preset. Make a gradient and set the Blend Mode to Overlay. Add a layer filled with white. Grab the Brush Tool and load the free splash brush set from www.bit.ly/dc179extra. Add a Layer Mask and paint with black to gradually reveal the face. Add a Posterize Adjustment Layer.



MAKE A WATERCOLOUR

Go to Filter > Camera Raw Filter > Details. Set Noise Luminance to 100, Luminance Detail to 20. Add a layer; fill with off-white. Drag the lower layer to the top; add a Layer Mask. Grab the Brush Tool, load the Wet Media set and pick a tip. Paint the edges black. Add a Posterize Adjustment Layer (40 levels). Add a Pattern Fill layer; choose Extra Heavy Canvas. Make the Blend Mode Soft Light with 60% Opacity.



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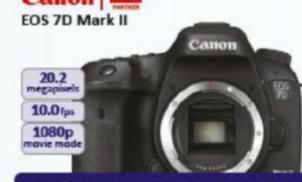
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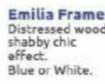
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ND8 Soft Graduated £15.99
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Dark Blue Graduated £17.99
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Dark Tobacco Graduated £17.99
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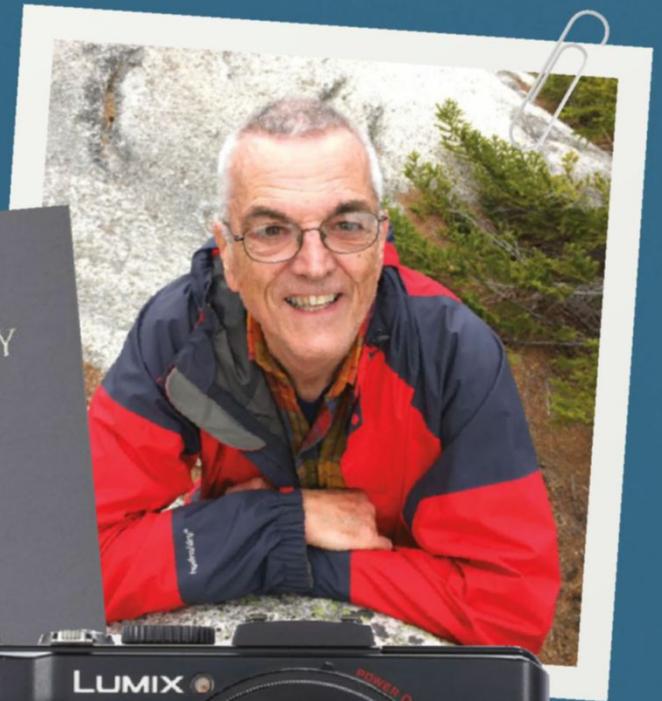
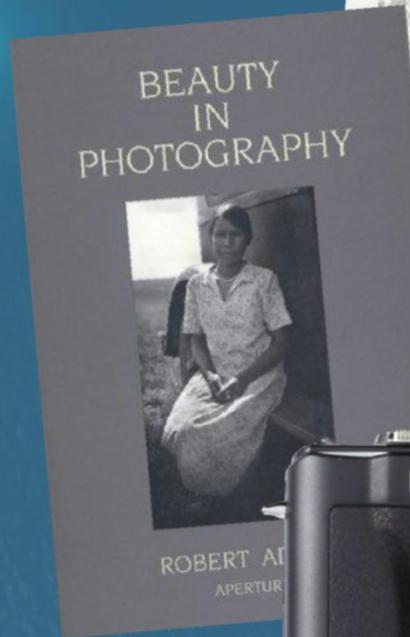


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Which photographer (living or dead) would you like to have round for dinner?

Roger Fenton – to understand what it was like to make the first photos.

What's your favourite place on earth?

The Derbyshire Peak District, although Yosemite really impressed me.

What is on your memory card?

Images from when I was volunteering with refugees in Greece; some from New York, where I exhibited in April; and a few New England landscapes.

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

Brian Randle, who helped me get my first photographic job with the *Birmingham Mail* when I started freelancing. Also, my late wife Angela, who was very involved in setting up the workshops we started in 1976.

Tell us a secret about your photography that you haven't told anyone before?

When I was given my first assignment as a freelancer, I'd never processed film on my own before. I winged it!

To crop or not to crop?

I prefer to orchestrate things in the viewfinder if I can, but I'm not precious about cropping.

What features at the top of your bucket list?

To do a show drawn from the material in my archive.

What's in your kit bag right now?

I use small cameras, so the iPhone and a Panasonic Lumix. I don't need a camera bag anymore.

Which book should every photographer read?

Apart from mine? *Beauty in Photography* by Robert Adams and *Photography: Key Concepts* by David Bate.

Whose work do you most admire?

Bill Brandt.

How many pictures do you shoot on an average project?

Very few, even when out in Greece photographing the refugees as things started to kick off on the Macedonian border. I hate waste, which I think must come from my film background.

Talking once to Josef Koudelka, I worked out that he shot more film in one month than I probably would in my entire life!

Any words of wisdom for aspiring professionals out there?

Be different. Try not to press the shutter if you've seen the picture in the viewfinder before. And hard work doesn't guarantee success, but persistence does.

Do you have any unfulfilled photographic ambitions?

No. I tend to wait for photographs to find me. I'm reactive, and I don't want to do what everyone else has done.

What is your desert island D-SLR?

My iPhone.

Approaching Photography by Paul Hill is published by Photographers' Institute Press. Prints from Paul Hill and Maria Falconer's recent trip to Greece are on sale now at www.mariafalconer.co.uk/prints.html with the proceeds being donated to voluntary groups out there.

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FE 70-200mm F2.8 GM OSS

FE 24-70mm F2.8 GM



Tomorrow's lenses today, from Sony

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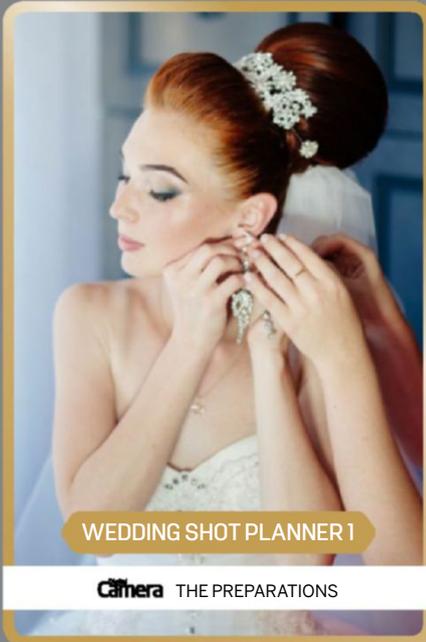
Sony now redefines the lens, with a clear vision of the future. The G Master revolution begins with three large-aperture lenses that achieve a supreme blend of high resolution and beautiful bokeh thanks to new XA (Xtreme Aspherical) lens elements with increased surface precision.

With these new additions, there are now 20 full-frame e-mount lenses available, giving you all the tools you need to capture the ultimate shot.

All lens availability is dependent on market release dates. Discover more at www.sony.co.uk

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Camera WEDDING PLANNER 3

THE RECEPTION

USE THIS CHECKLIST TO MAKE SURE YOU NEVER MISS THE KEY SHOTS

- **People:**
 - Bride and groom – full-length
 - Bride and groom – half length
 - Bride and groom – close-up of the rings
 - Bride by herself – full-length
 - Bride by herself – half-length
 - Bride by herself – head shot
 - Full group shot showing venue
 - Smaller requested groups
- **Incidental shots:**
 - Reception venue exterior/interior
 - Wedding cake table and cake details
 - Candid portraits of bridesmaids and guests
 - Venue details – centrepieces, place settings, champagne glasses
- **Events:**
 - Speeches and toasts
 - Cake-cutting
 - First dance

Image: Shutterstock

Camera WEDDING PLANNER 2

THE CEREMONY

USE THIS CHECKLIST TO MAKE SURE YOU NEVER MISS THE KEY SHOTS

- **Before:**
 - Groom waiting for the bride
 - Bride and father in wedding car
 - The arrival of the bride
 - Bride walking down the aisle
 - First glance between the bride and groom
 - The father giving the bride away
- **During:**
 - Wide shot of the venue's interior
 - Candid portraits of parents
 - Candid portraits of other guests
 - Vows
 - Exchange of rings
 - First kiss
- **After:**
 - Bride and groom walking down the aisle
 - Bride and groom kissing outside
 - Bride and groom showered in confetti
 - Bride and groom in wedding car

Image: Shutterstock

Camera WEDDING PLANNER 1

THE PREPARATIONS

USE THIS CHECKLIST TO MAKE SURE YOU NEVER MISS THE KEY SHOTS

- **The bride getting ready:**
 - Wedding dress on a hanger
 - Wedding dress embroidery details
 - Bride's shoes
 - Bride's jewellery
 - Wedding bouquet
 - Hair being styled
 - Make-up being applied
 - Reflection of bride in make-up mirror
 - Dress being laced or zipped up
 - Bride in her dress – full-length
- **At the wedding venue:**
 - Flower displays
 - Orders of service
 - Groom and ushers – wide shot
 - Groom and ushers – head shots
 - Groom's cufflinks, flowers and shoes
 - Venue details (eg, church gargoyles)
 - Guests arriving

Image: Shutterstock

Camera BRIDAL PORTRAITS

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/2.8-f/5.6
Shutter speed	Automatically set
ISO	200-800

TO IMPROVE YOUR SHOT...

- Background distractions are everywhere – take a good look around before shooting.
- Start with a wide, full-length shot before moving in for 3/4-length and head shots.
- Use continuous drive mode, asking the bride to change her pose or the direction of her gaze slightly between each frame.

TOP TIP: Shoot from a short stepladder and ask the bride to raise her chin a little: this often creates a more flattering angle.

Image: Shutterstock

Camera WEDDING INCIDENTALS

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/2.8-8
Shutter speed	Automatically set
ISO	Auto

TO IMPROVE YOUR SHOT...

- Look for images that help to tell the story of the day: hats, flowers, children playing, architectural details, etc.
- For close-up details, use a macro lens and keep to a mid-range aperture such as f/8.
- Ask to move items such as shoes and rings into as much natural light as possible.

TOP TIP: Take a small reflector – it will be as handy for removing shadows in close-up shots as it is for portraits on the day.

Image: Shutterstock

Camera BRIDE & GROOM

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/3.2-5.6
Shutter speed	Automatically set
ISO	200-800

TO IMPROVE YOUR SHOT...

- Scout the reception venue for three suitable locations ahead of the big day.
- To avoid high-contrast images with harsh shadows, position the couple in the shade.
- Check the histogram: there should be a spike to the right (the white wedding dress), but it shouldn't be pushed off the edge.

TOP TIP: Ask the bride and groom to rub noses rather than kiss, as this will ensure that their faces won't be obscured.

Image: Shutterstock

Camera FIRST DANCE

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/2.8-f/4
Shutter speed	Automatically set
ISO	400-3,200

TO IMPROVE YOUR SHOT...

- If the room is well-lit, you can increase the ISO and go for ambient mood.
- If you have to use flash, use two or three off-camera flashguns positioned on light stands and trigger them wirelessly.
- Recruit a friendly waiter to help you test the dance floor exposures during the meal.

TOP TIP: Try a slow-sync flash shot – get in close, use a shutter speed of 1/4 sec and move the camera after the flash fires.

Image: Shutterstock

Camera GROUP PORTRAITS

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/8-11
Shutter speed	Automatically set
ISO	200-400

TO IMPROVE YOUR SHOT...

- Ask the best man to organise the various groups that need to be photographed.
- For smaller groups, stand back and use a longer focal length, such as 70-200mm.
- For a large group of 100-300 people, use a wide-angle lens and stand on a small ladder so that you can see everyone's face.

TOP TIP: Use continuous drive and shoot in bursts to improve your chances of getting a shot without anyone blinking.

Image: Shutterstock

Camera WEDDING CEREMONY

FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Aperture	f/2.8
Shutter speed	1/200 sec
ISO	800-1,600

TO IMPROVE YOUR SHOT...

- Get to the venue early (or preferably the day before) to assess the light and work out your manual exposure settings.
- Increase the ISO to get a fast enough shutter speed to prevent motion blur.
- Use a 70-200mm f/2.8 lens to give yourself framing flexibility during the service.

TOP TIP: If it's a church service, try to sit at the front with the choir on the groom's side, so that you're facing the bride.

Image: Shutterstock

Digital
Camera
PRESENTS



[PHOTOSHOP GUIDE]

MASTER THE ART OF RETOUCHING



1 Tidy up a face

There are three tools that any pro retoucher would be lost without: the Spot Healing Brush, the Clone Tool and the Patch Tool. Used in combination, they can clean up marks, scratches and spots in seconds.

In CS6, the Patch Tool was given a massive boost with a Content-Aware option. This makes

it similar to the Content-Aware Fill command, but the tool is more useful for retouching. What's more, as with the Clone, Spot Healing Brush and Healing Brush Tools, you have the option to Sample All Layers, which means that all your patching, cloning and healing can be done on separate layers.



START IMAGE

Step by step: Clean up a grubby face



1 Patch messy areas
Open patch_before.jpg from the start files. Make a new layer and rename it 'Patch'. Grab the Patch Tool then choose Patch: Content-Aware and tick Sample All Layers in the Options bar. Make rough selections around a messy area, then drag to a nearby clean area to tidy it up.



2 Remove spots
Continue patching up the larger messy areas, then switch to the Spot Healing Brush and once again tick Sample All Layers in the Options bar. Make a new layer named 'Healing', then use the Spot Healing Brush to paint over marks, spots and blemishes to remove them.



3 Clone tones
Make another new layer called 'Cloning'. Grab the Clone Tool, set the Opacity to 20%, and then choose Sample: All Layers. Hold down **Alt** to sample a source next to a messy area, then paint over the area a few times to blend the tones and make it smoother.

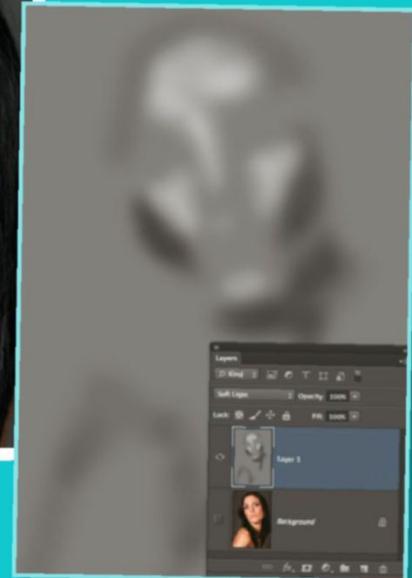


2

Sculpt faces with the Brush Tool

This is a really effective enhancement for adding depth and definition to a face. It works by selective lightening and darkening to accentuate facial features like cheekbones and jawlines.

Hold **Alt** and click Create New Layer in the Layers Panel to access the New Layer dialog box. Choose Mode: Soft Light and tick Fill With Soft Light Neutral Color, then press **OK**. Grab the Brush Tool. Press **D** to reset your colours to black and white, and **1** to set Brush Opacity to 10%. Paint with black over the shadow areas on the face and body, then paint with white over the highlights. The grey image below right gives you an idea of where to paint. For a similar view, just hide your Background Layer. When you're done painting, go to **Filter > Blur > Gaussian Blur** and set Radius to about 50px. This helps to make the effect look more natural.

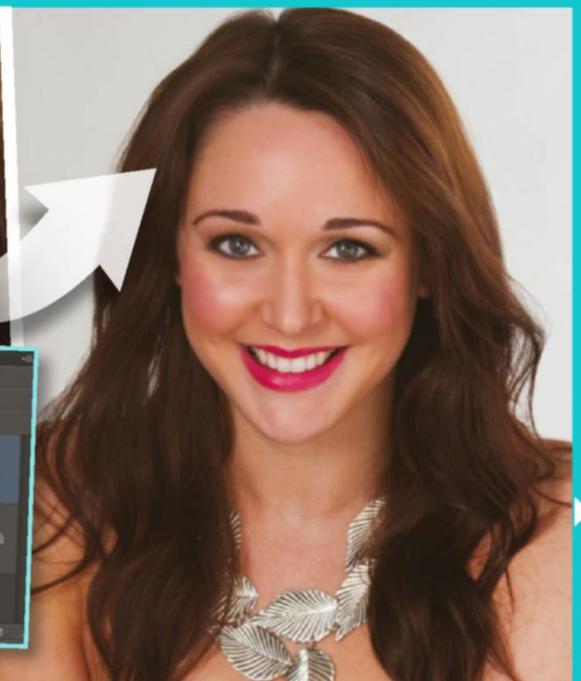
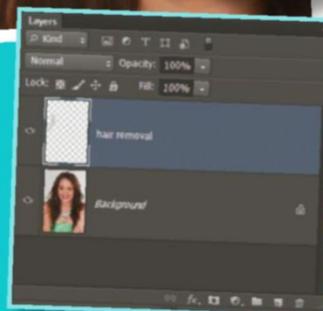


3

Remove stray hairs

Stray hairs are one of those things that are easily overlooked when photographing a person. It's only when you look at the image later that you realise how annoying and distracting they are. Taking a few minutes to remove the hairs and tidy up around the head will really help to give your portraits a professional polish.

Make a new layer, then grab the Clone Tool and set Sample: All Layers in the Options bar. Choose a hard-edged brush tip and set Opacity to 100%, then zoom in close. (Hold down **Ctrl/Cmd+Space** then drag to the right to zoom.) Hold down **Alt** and click to sample a point in the background next to the stray hair, then paint over it. Continue around the head, varying the hair lengths so the results aren't too uniform. To tidy up hairs that cross over the face, switch to the Spot Healing Brush, set Sample: All Layers, and paint over the hairs.





START IMAGE



4 Change body shapes

Every portrait photographer knows there are certain things you can do to make a person look slimmer. For example, getting a person to lean forwards or shooting from slightly above the face will reduce double chins; crossing legs while standing or making an L-shape with the feet will lead to a more forgiving body shape; and shooting into the 'dark side' (having your light source behind and to the side - see the image used in Tip 17) will make a face appear thinner.

We know it's a touchy subject, but slimming with Photoshop is just another method for making a person look their best. We're not talking about huge shifts in body shape, but a few nips and tucks to reduce bulges, shrink chins and trim flab. The best tool for the job is the Liquify Tool. It's easy to master. Simply go to Filter > Liquify and use the Forward Warp Tool to start moving pixels around. Of course, what you do depends on your image. Here, a quick tuck to the underarm bulge and the angle of the waistline, is all that's needed.

5 Tone down eye bags

Day-to-day life takes its toll on your eyes. Unless you've spent the past month being pampered in a luxury spa with 10 hours of sleep a night, it's likely that you'll have dark circles under them.

As with most retouching techniques, we don't want to remove eye bags completely, as this will look fake. We just want to tone them down.

Zoom in close to the eyes then click the Create New Layer icon at the bottom of the Layers Panel. Grab the Clone tool from the Tools Panel then go to the Options bar at the top of the screen. Choose Mode: Lighten (this means you'll only replace areas that are darker than your clone source), set the Opacity to 20%, and set Sample: All Layers.

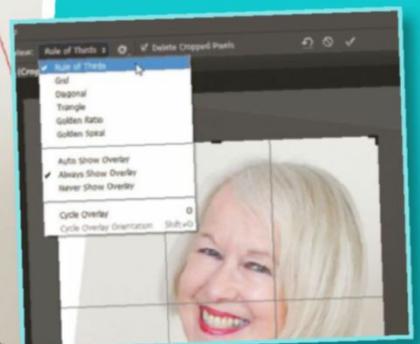
Hold down Alt and sample a clone source on the cheek directly below the dark area, then make a couple of swipes with the Clone Tool to tone down the bag.



6 Crop in and tilt

It's best to get composition right in-camera, but when it comes to photographing people you're often working with moving targets, which can make framing slightly more tricky. You're also usually trying to coax an expression or reaction out of your subject, which means concentrating on what is or isn't included in the frame may slip down the list of priorities. Luckily, with modern sensors being the size they are, we can get away with a bit of post-capture cropping in Photoshop.

Cropping in tighter is something that you'll see portrait photographers do time and time again, and a slight tilt to the frame when cropping will often result in a more pleasing angle. Tilting the head backwards towards their higher shoulder, like in this image, is seen as a more feminine angle, while a tilt forwards is more masculine. The Crop Tool also offers a 'rule of thirds' guide in CS6 or later - you can access further compositional guides such as the Golden Ratio via the View drop-down. For a classic composition, loosely position the eyes or face along one of the thirds.

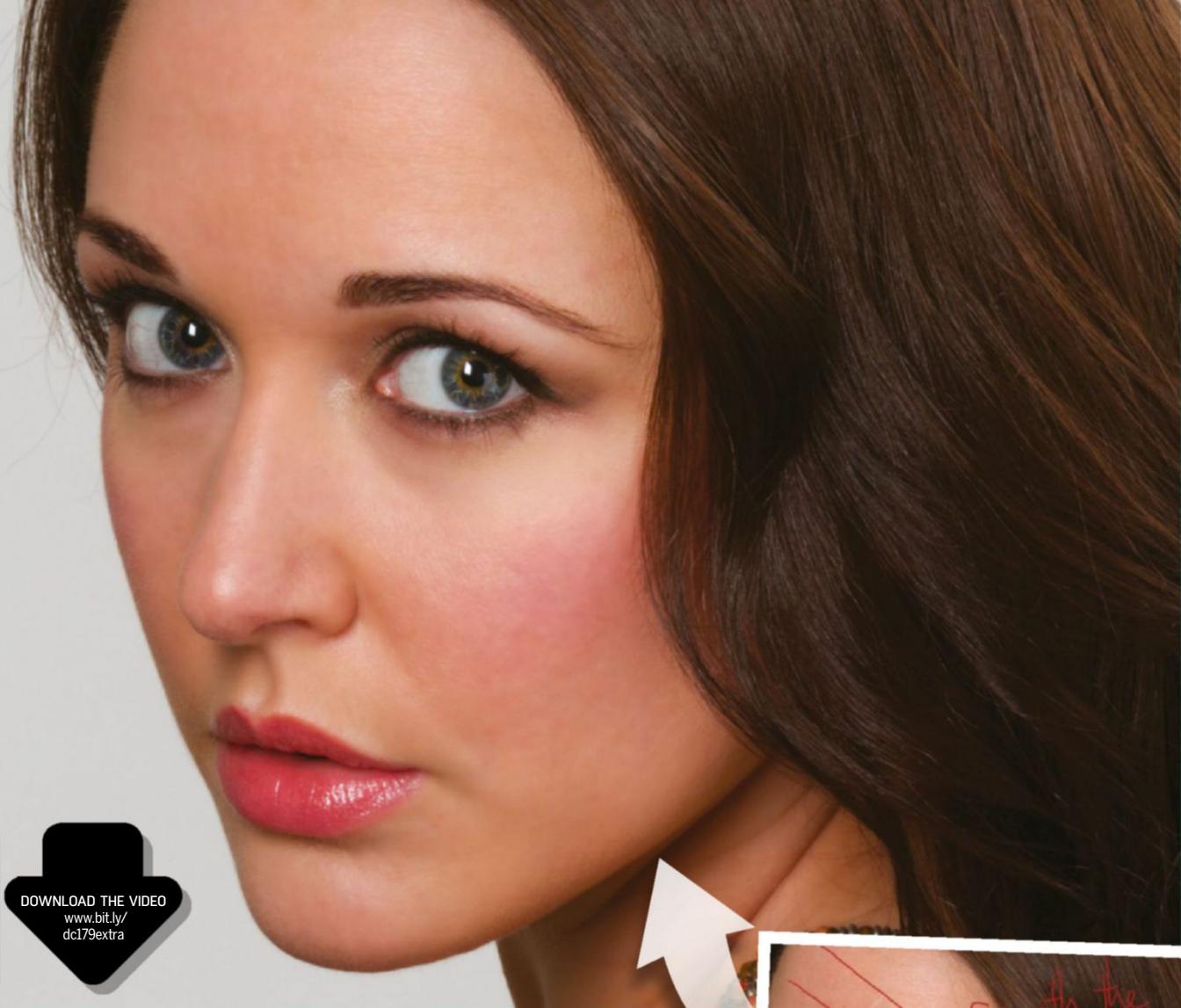




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7 High Pass Skin smoothing

Pro retouchers will often spend a few hours working just on a model's skin, painstakingly removing every imperfection with the Clone and Healing Tools. Of course, most of us don't have the time or patience for such work, but luckily there are things we can do to cut corners.

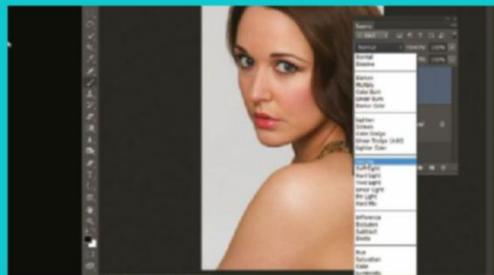
One of the best loved - and fastest - skin smoothing techniques is the High Pass method. It gives your subject silky-smooth skin while still retaining some detail and texture. Therefore you don't end up with the dreaded

'plastic look' some methods can give. Instead, you get beautifully realistic smoothness.

Here's the quick method below, but if you want greater control over the strength of the smoothing effect, you could try applying a touch of Gaussian Blur (Filter > Blur > Gaussian Blur) between Steps 2 and 3. As the image is inverted at this stage, the greater the blur radius value, the more subtle the effect. When painting the mask in Step 3, you don't need to be too precise. A few quick strokes with a large, soft-edged brush should do the trick.



Step by step: Silky skin with the High Pass filter



1 Copy the layer

Open high_pass.jpg. Press **Ctrl/Cmd+J** to copy the layer. Note: if you're working with lots of layers, highlight the top layer and press **Ctrl/Cmd+Shift+Alt+E** to merge a copy. Rename the layer 'High Pass', then click the Blend Mode drop-down and choose Overlay.



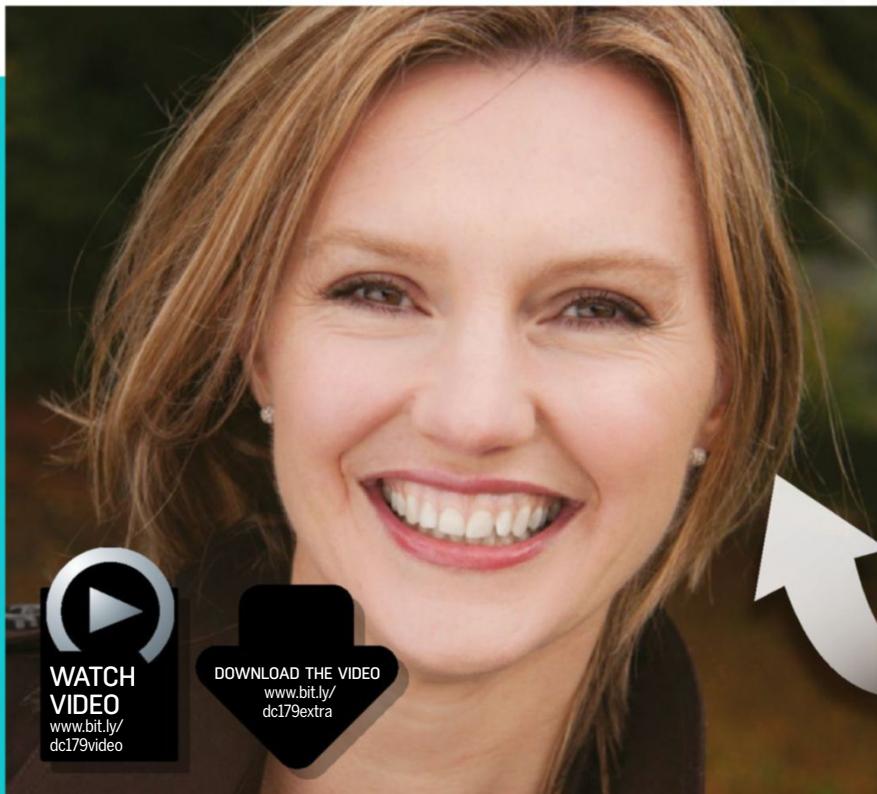
2 Overlay and High Pass

Go to Filter > Other > High Pass. Set Radius to 9px and press OK. This applies sharpening, but when inverted, it turns into a softening effect, so go to Image > Adjustments > Invert (or press **Ctrl/Cmd+I**) to invert the colours on the 'High Pass' layer.



3 Smooth the skin

Hold Alt and click the Add Layer Mask icon at the bottom of the Layers Panel to add a full Layer Mask that completely hides the softening. Now grab the Brush Tool, choose a soft-edged brush tip and set the colour to white, then paint over the skin to reveal the 'High Pass' layer.



8 Clarity Skin Smoothing

You may think of Camera Raw as merely a raw converter for your camera files, or a place to make a few tonal tweaks before opening your image into Photoshop. But delve a little deeper and you'll find a host of incredibly useful tools and settings. One such setting is the Clarity slider. When dragged to a positive value, the Clarity slider increases midtone contrast, which can be great for teasing out detail in your images. But drag it to a negative value, and you'll get a wonderful

softening effect that works brilliantly over skin. There's a Clarity slider in the Basic Panel but, crucially, you can also use it in conjunction with the Adjustment Brush (which is another ACR gem) to confine the softening effect just to the skin. Here's how...



Step by step: Smooth skin with ACR's Clarity slider



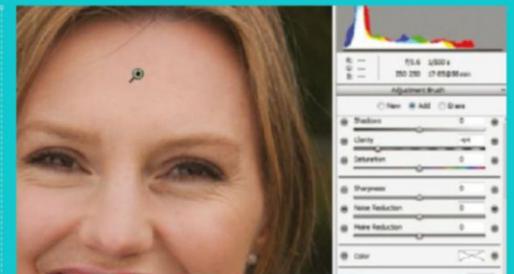
1 Prepare the mask

In Bridge, right-click on clarity_before.jpg and choose Open in Camera Raw. Click on the Adjustment Brush in the toolbar, then go to the settings on the right and tick Show Mask. Click the colour picker next to this and choose a bright colour for your mask.



2 Paint the mask

Click on the forehead to add a new Pin. Then paint a mask that covers the rest of the skin. Take care not to go over the facial features. If you do, hold down ALT and paint to erase parts of the mask. Use the] and [bracket keys to resize your brush as you paint.



3 Reduce Clarity

Untick Show Mask, then go to the settings in the top right. Make sure all the sliders are reset to their default values (double-click a slider to quickly reset it), then drag the Clarity slider back to -64 to soften the area covered by the mask.

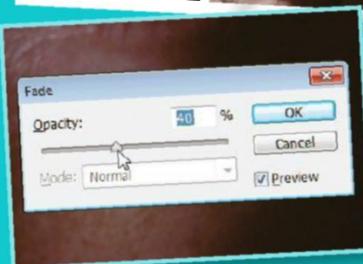
9 How to remove hot spots

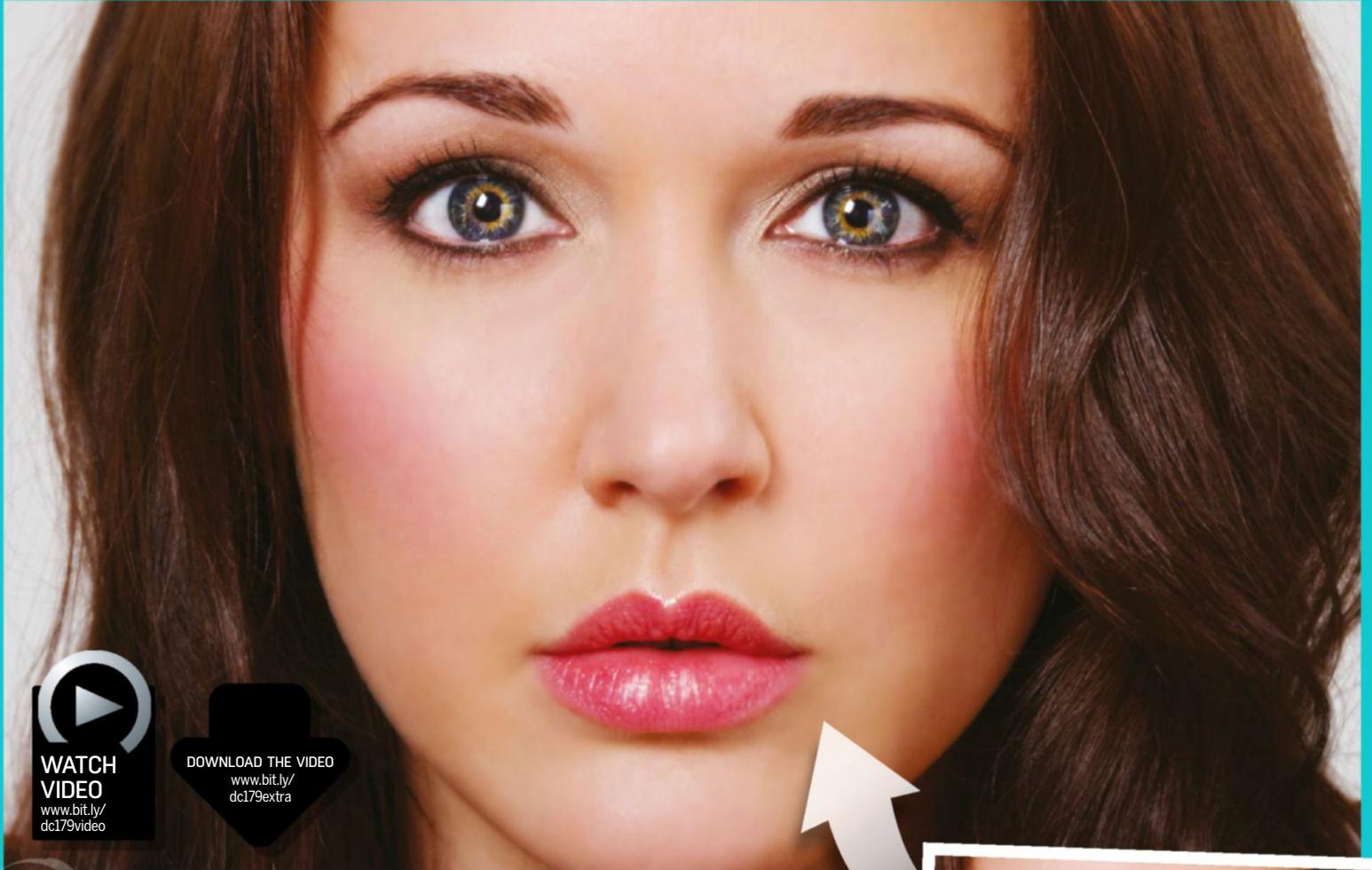
You know those shiny parts you sometimes see on a person's face where bright lights are reflected? They're called hot spots. Not only are they distracting, they can also make a person look sweaty, even when they're not. Nobody wants to look like a Sweaty Betty, but if we remove the hot spots completely we'll lose some of the shimmer that helps to define the face. The solution is to tone them down with a combination of the Patch Tool and the little-known but very useful Fade command.

Duplicate your layer, then grab the Patch Tool. If you're using CS6 or later, choose Patch: Normal in the Options bar, then make a rough selection around the hot spot. Drag the selection to a clean area of similar tone to remove the hot spot completely. Next, press **Ctrl/Cmd+H** to hide the marching ants, then go to **Edit > Fade Patch Selection** (or press **Ctrl/Cmd+Shift+F**) and lower the Opacity to about 40% to reveal a toned-down hot spot.



START IMAGE





10 Boost the eyes

Most photographers will agree that the eyes are the principal part of any portrait, so it pays to make a few subtle improvements to give them extra sparkle.

Here, we'll concentrate on the essentials of eye enhancement, but if you want to take it further you can do a lot more - change the colour, add a catchlight, apply make-up, even

make them larger. It can be useful to think of an eye as a set of four elements: pupil, iris, whites and lashes. Each element requires a different set of tools. We want to boost the tones inside the iris, darken the pupil and iris rim, lighten the whites and sharpen the lashes. Subtlety is key here, so don't be afraid to lower the layer Opacity of any effect to tone it down.

Step by step: Add impact to eyes



1 Boost contrast

Open eyes_before.jpg, then click the Create Adjustment Layer icon at the bottom of the Layers Panel and choose Curves. Make an S-shaped curve like the one shown to boost contrast, then press **Ctrl/Cmd+I** to invert the Layer Mask. Next, grab the Brush Tool and paint with white over the eyes.



2 Dodge and burn

Hold down **Alt** and click the Create New Layer icon at the bottom of the Layers Panel. In the New Layer box, name the layer 'Dodge Burn', choose Mode: Overlay and tick the Fill With Overlay - Neutral Color box. Grab the Dodge Tool, set Range: Midtones, Exposure: 20%, and then paint over the iris.



3 Sharpen the lashes

Switch to the Burn Tool. Set Range: Midtones, Exposure: 20%, then paint to darken the pupil, the edge of the iris and the lashes. Next, create a new layer and grab the Sharpen Tool. Enable Sample All Layers in the Options bar and set Strength to 20, then paint over the lashes to selectively sharpen them.

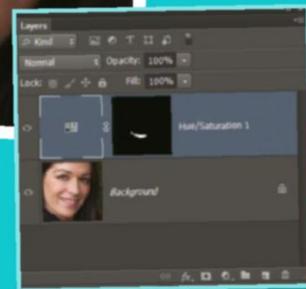
11 Whiten teeth

People are often so worried about their teeth that they refuse to smile when having their photograph taken, or they'll do a close-lipped smile that isn't fooling anyone. If only they knew how easy it is to whiten teeth in Photoshop!

Zoom in close then click the Create Adjustment Layer icon at the bottom of the Layers Panel and choose Hue/Saturation. Next, click on the drop-down at the top of the Hue/Saturation settings (where it says Master) and choose Yellows. Drag the Saturation slider to about -50 and set Lightness to +10.

Now you just need to localise the colour effect to the teeth, so press **Ctrl/Cmd+I** to invert the Hue/Saturation Layer Mask so the effect is hidden.

Grab the Brush Tool and paint with white over the teeth to reveal the effect.

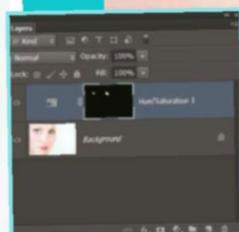
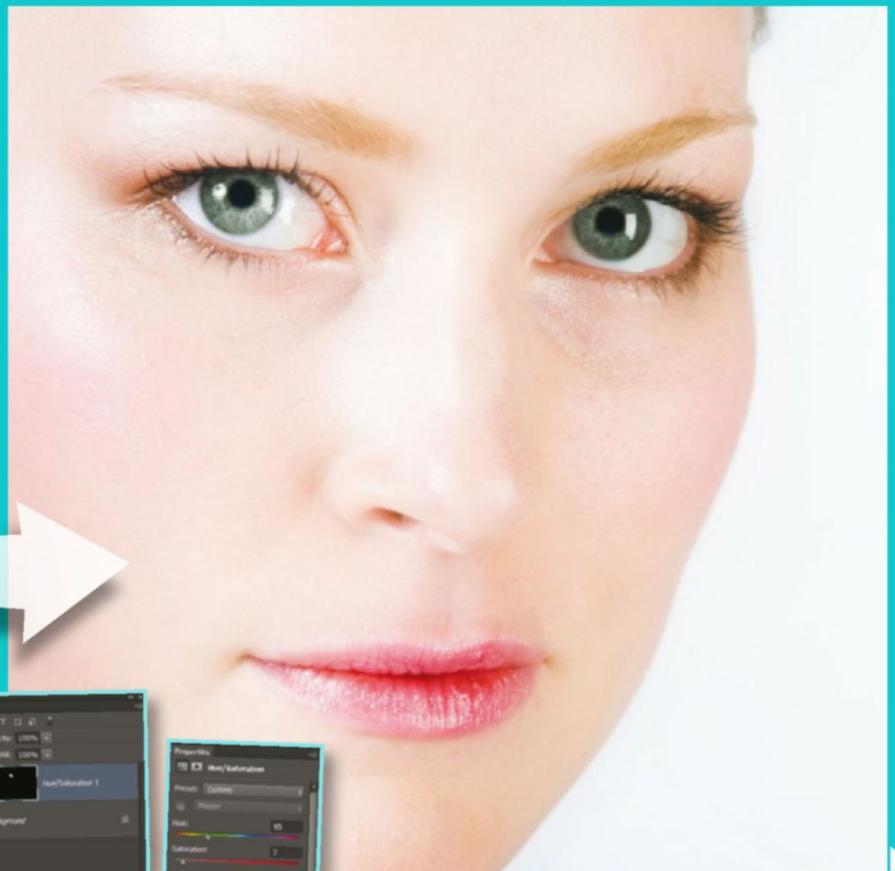


12 Change eye colour

You can change the colour of just about anything with Photoshop, including an iris. This is very similar to the method described in Tip 11 above. Add a Hue/Saturation Adjustment Layer and then use the Hue slider to adjust the colours. If you have a specific colour in mind, tick Colorize, then simply invert the Layer Mask with **Ctrl/Cmd+I** and use the Brush Tool to paint with white over the iris.

Of course, the beauty of working with Adjustment Layers is that the colours you choose aren't set in stone, so you can try out different shades at any time simply by double-clicking the thumbnail of the Hue/Saturation layer in the Layers Panel. Hue/Saturation isn't the only option for colour changes, either. If you like, you can use a Color Balance or Photo Filter Adjustment Layer to tint the colours.

For finer control over colour channels, you could use a Curves or Levels layer.



13 Make your portraits pop

Portraits will often benefit from an increase in contrast. However, skin tones are primarily made up of reds, so you need to be careful when boosting contrast because this can lead to overly red faces. You can combat this with a combination of Color Balance and Curves Adjustments. First, use Color Balance to dial down the reds. Click the Create Adjustment Layer icon at the bottom of the Layers Panel and choose Color Balance, then drag the top slider towards Cyan. Next, add a Curves Adjustment Layer to increase contrast. Click near the top-right of the diagonal curve line to add an anchor point, then drag this up slightly to lighten the highlights. Make a second point towards the bottom-left of the Curve line, then drag this down to darken the shadows. An alternative method for boosting contrast without affecting colours is to add a Curves Adjustment Layer with the Blend Mode set to Luminosity.



START IMAGE

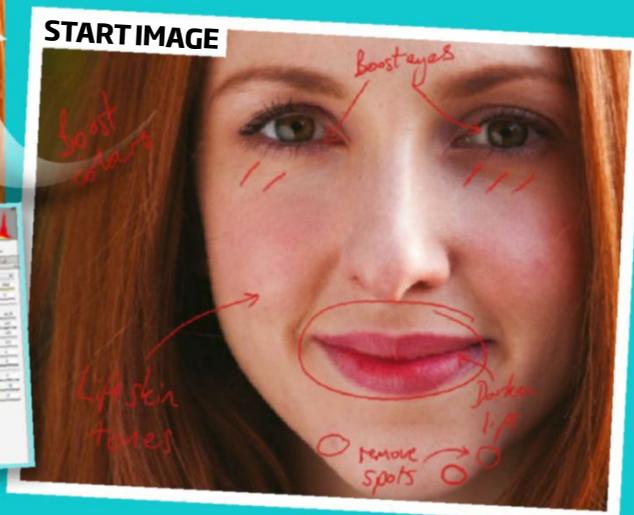


14

Improve tones in ACR

Straight out of the camera, raw files can sometimes look a bit flat. Fortunately, Camera Raw has plenty of controls and settings that can be used to enhance and improve tones. The best place to start making these adjustments is the Basic Panel. Use it to tweak exposure and boost contrast. Explore ACR a little further and you'll find other great tools that can be used for selective adjustments. The Adjustment Brush is ideal for enhancing portraits, because you can set pins for different parts of the face such as the eyes, lips and skin, then adjust the tones accordingly. The Spot Removal Tool is also useful, because each time you heal a spot or mark you get two interactive circles that can be resized and repositioned. The tool can also be used to batch-remove sensor marks by opening a group of files then clicking Select All.

START IMAGE

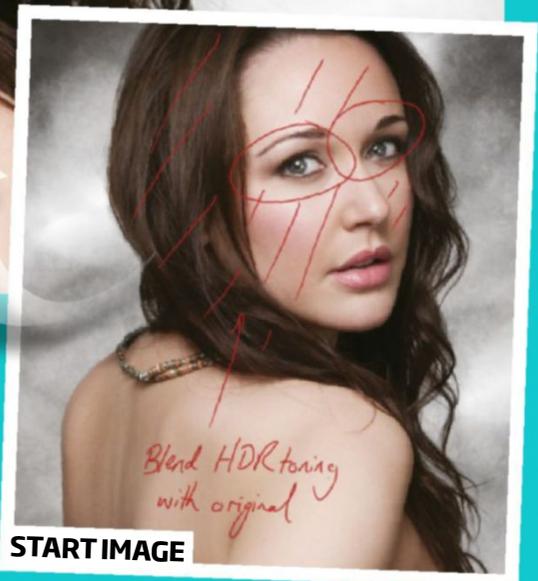




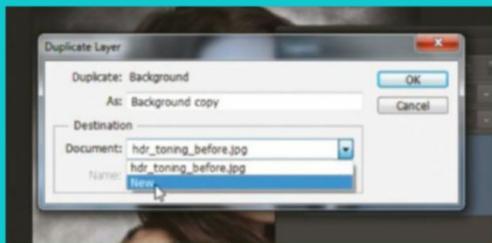
15 Add HDR Toning effects

The HDR Toning command can be used to give an image a stylised HDR effect. You'd be forgiven for thinking it should only be used on landscapes, but in fact it can also give portraits an eye-catching stylised finish. The HDR Toning command will only work on a flattened document, but for greater flexibility we'd like the effect on its own layer,

with the original image underneath. So we need to work around the problem by making a duplicate document. We'll show you how here. The effect will tease out detail in the shadow areas, so once it's applied, you may find that you need to use other retouching techniques such as spot removal and skin smoothing to perfect the look.



Step by step: Create a stylised portrait with HDR Toning



1 Make a new document

Open `hdr_toning_before.jpg`, then go to the Layers Panel. Right-click the Background Layer and choose Duplicate Layer. In the Duplicate Layer dialog box, choose Destination: New and click OK. Make sure that you're working on the new untitled document, then go to Image > Adjustments > HDR Toning.



2 Apply HDR effects

In the HDR Toning box, set Radius: 81px, Strength: 1.75, Detail: 110%, Highlight: +10%, Saturation: -100%, then click OK. Next, right-click the layer in the Layers Panel and choose Duplicate Layer again. This time, set Destination: `hdr_toning_before.jpg` and click OK. Go to the `hdr_toning` image.



3 Blend with the original

Go to the Layers Panel and change the Blend Mode of the top layer to Luminosity. Next, hold down **Alt** and click the Add Layer Mask icon at the bottom of the panel. Grab the Brush Tool and paint with white at 40% Opacity to gradually reveal the stylised effect over the face.





16 Cut out hair

If you'd like to change the background colours or make a composite, you'll need to use selection tools to isolate your figure. The biggest challenge with this is getting an accurate selection around hair. There's no perfect solution to the problem, but since CS4 Adobe has made things much easier with the Refine Edge command which, as the name suggests, can be used to refine the

edges of a selection (or a Layer Mask, with the almost identical Refine Mask command).

To access Refine Edge, you'll need to make an initial selection with any of the selection tools. If you have a clean background you could use the Magic Wand or Color Range command, but if the background is more cluttered, you may find the Quick Selection Tool gives you a better starting point.



Step by step: Change the background colour



1 Make a selection

Open *cutout_hair_before.jpg* and grab the Quick Selection Tool from the Tools Panel. Paint over the head with the tool to make a selection. (Hold down Alt and paint to subtract areas from the selection if it goes wrong.) When you're happy, click on the Refine Edge button, which can be found at the top of the display.



2 Refine the edges

Tick Smart Radius and set Radius to 72. Tick Decontaminate Colors and choose Output: New Layer with Layer Mask, then click OK. Next, highlight the bottom layer, then click the Create Adjustment Layer icon and choose Solid Color. Set R:227, G:196, B:196 and click OK.



3 Refine the mask

Highlight the top layer's mask, then right-click it and choose Refine Mask. Grab the Refine Radius Tool from the left of the Refine Mask box, then use it to paint over any gaps in the hair where you can still see the original white background. When you're happy, click OK.

17 Replace the background

The ability Photoshop gives you to change a background opens up a whole world of possibility: you could sit someone on a one-pence piece, place a person in a vintage scene, or on top of a mountain, or wherever your imagination takes you. To transfer a figure to another scene, follow the selection technique shown opposite in Tip 16, then open a suitable background image, grab the Move Tool and drag the portrait to the background. You may need to resize the layer, in which case press **Ctrl/Cmd+T**, hold down Shift, and drag the corner of the bounding box. Things will look more realistic if the lighting is similar in both images, so if the background is lit from a different angle to the portrait, you could try flipping one or the other (Edit > Transform > Flip Horizontal.) As a finishing touch, tweak the colours to help the images gel together. You could also try adding a Blur filter to simulate depth of field.



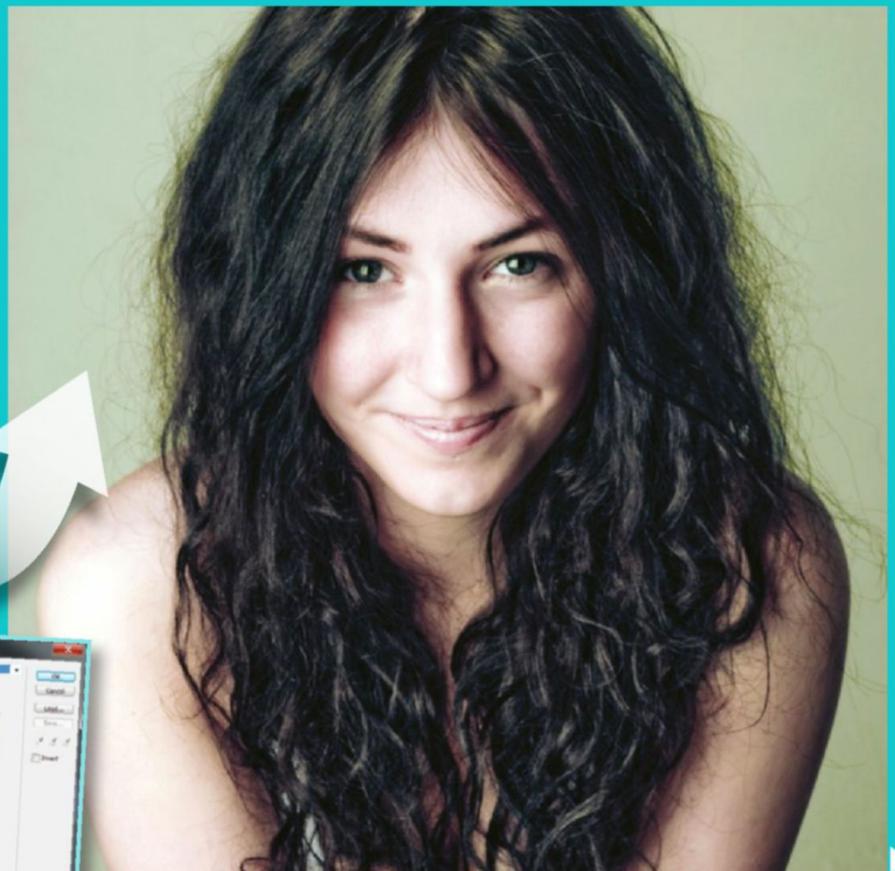
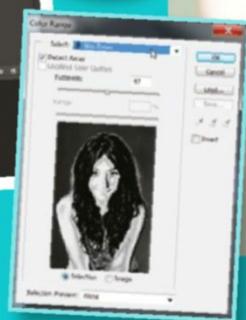
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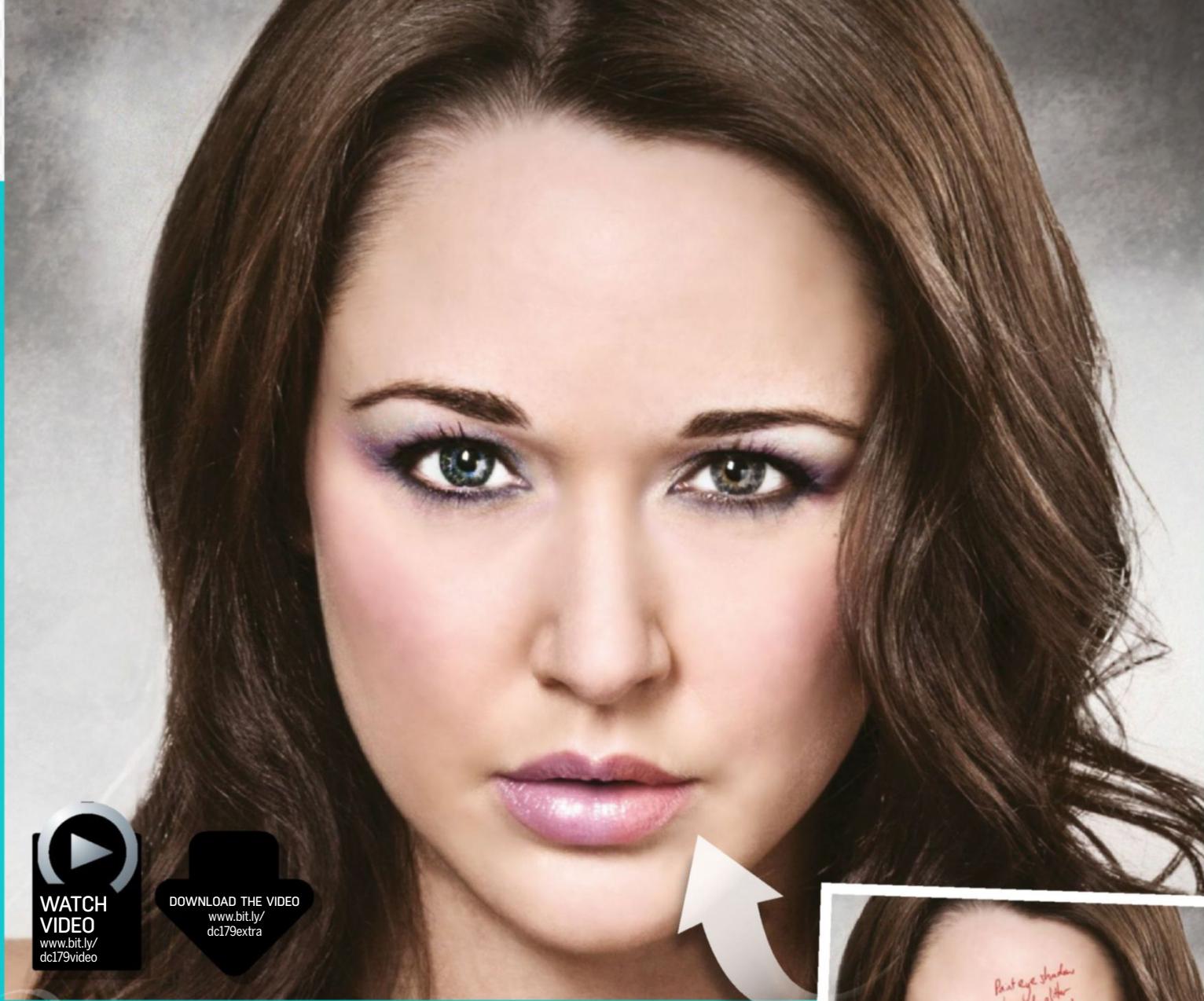


18 Skin tone selections

If you have CS6 or later, you can access a handy feature hidden within the Color Range command that allows you to quickly select skin tones. Go to Select > Color Range, then click the drop-down menu at the top of the box and choose Skin Tones. The command is useful if you want to target and lift skin colours, or isolate and preserve them while changing the rest of the image. The feature may seem a little frivolous (after all, you could achieve the same results with a couple of clicks within the standard Color Range settings), but if you're working at speed, a few clicks can make all the difference. Plus if you're into making Actions, you could build the command into a recorded sequence, then play it back on other images for fast, automated changes to skin tones.

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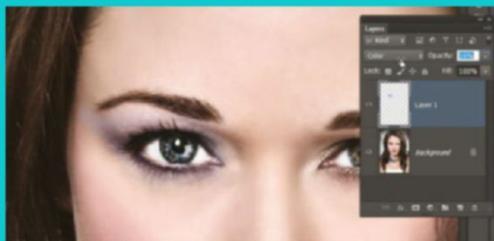
19 Apply digital make-up to the eyes

Nothing can replace real-life make-up, but if you want to try applying digital make-up in Photoshop, it's not hard to get convincing results. You can experiment with different colours and erase at any time – plus it's cheaper than forking out on eye shadow! The key is to apply different colours to separate layers, each one set to the Color

Blend Mode with a low layer Opacity. This makes it easier to give the effect depth, and it gives you greater control if you need to tweak or erase anything. With Photoshop's excellent Brush Panel, it's also quick and easy to apply scattered glitter. And, of course, once you've completed one eye, you can simply copy the effect and flip it to cover the other eye.



Step by step: Add make-up and glitter to eyes



1 Paint the colours

Open eye_makeup_before.jpg, then click the Create New Layer icon in the Layers Panel. Click the Blend Mode drop-down menu in the Layers Panel and choose Color. Grab the Brush Tool and choose a colour, then paint around the eye. Set the layer's Opacity to about 16%. Continue adding other colours on new layers.



2 Add glitter

Create a new layer and rename it 'glitter', then click the Brush Panel icon in the Options bar. Highlight Brush Tip Shape, then set Size to 4px and Spacing to 182%. Next, highlight Scattering and set Scatter to about 980%, then paint with white to add the scattered glitter effect. Set the glitter layer Opacity to about 50%.



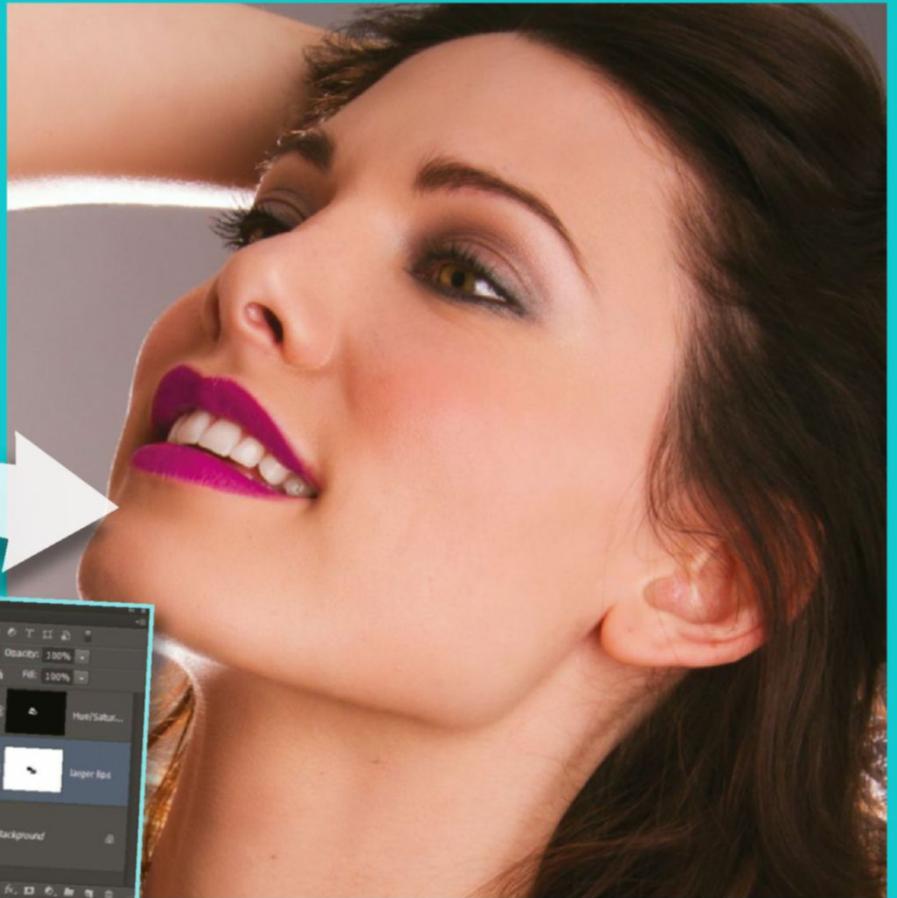
3 Flip the make-up

Hold down Ctrl/Cmd and click to highlight all except the Background layer. Press **Ctrl/Cmd+G**, then drag the new group to the Create New Layer icon. Grab the Move Tool and tick Show Transform Controls, then click the bounding box. Right-click and choose Flip Horizontal, then position the copied group over the other eye.

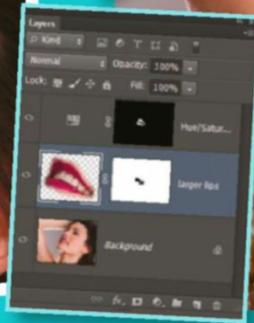
20

Enhance the lips

Often, parts of the face will look better when slightly enlarged. In particular, we find larger eyes and lips more appealing. So as well as lips, this technique for speedy enlarging is equally effective on eyes. Grab the Lasso Tool and make a loose selection around the lips, then right-click and choose Feather. Set Radius at 10px, click OK, then press **Ctrl/Cmd+J** to copy the selected area to a new layer. Next, press **Ctrl/Cmd+T** to enter Transform mode; go to the options at the top of the screen and set W at 110% and H at 110%, then press Enter to apply. If the teeth are showing, add a Layer Mask and paint with black to hide the oversized teeth and reveal the original teeth on the layer below. We've also changed the lip colour here with a Hue/Saturation Adjustment Layer (the same as the technique for changing eye colour in Tip 12).



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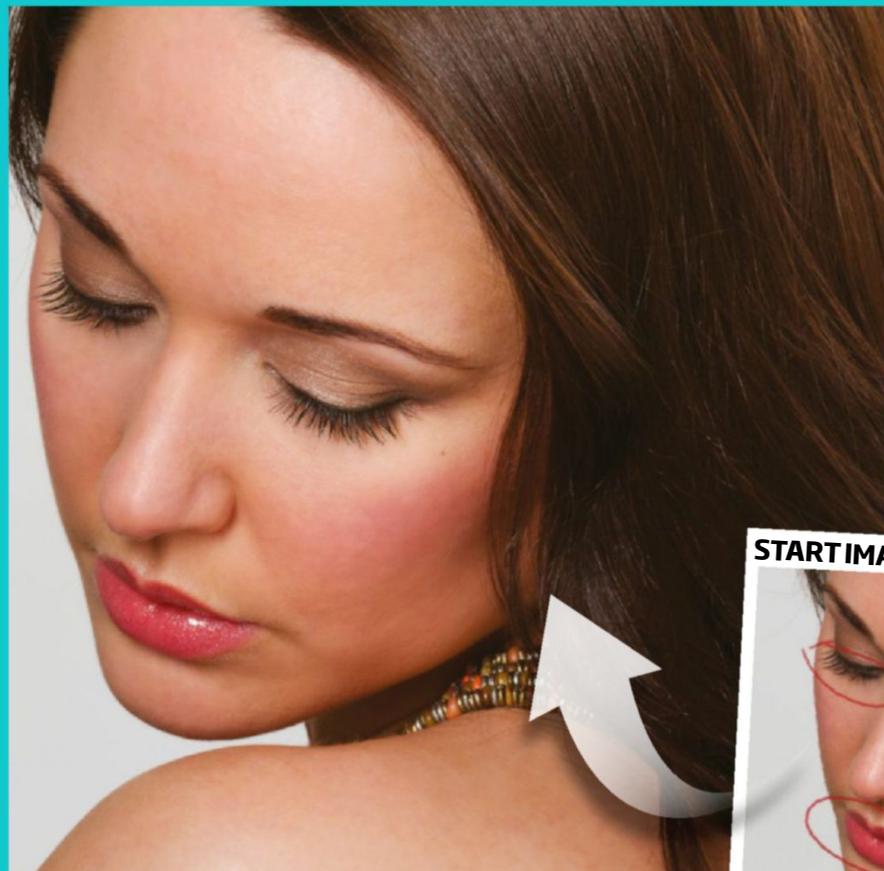


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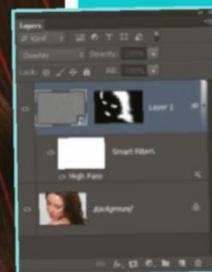
Apply selective sharpening

Sharpening is the vital final part of any image-editing process. But when it comes to working on faces, you don't necessarily want to apply sharpening to the entire image. It's much better to apply sharpening selectively to certain areas, such as the eyes, hair and lips. As usual with Photoshop, there are several ways to achieve this. One popular method is High Pass sharpening.

The technique for High Pass sharpening is very similar to that for High Pass skin softening. Follow Tip 07, but to get a sharpening effect instead of softening, simply skip the part in Step 02 where you invert the layer. Because you don't need to invert the layer, you can also convert the layer to a Smart Object (Filter > Convert for Smart Filters) before you apply the High Pass filter. This gives you the option to change the strength of the sharpening effect at any time, simply by double-clicking the High Pass Smart Filter in the Layers Panel.



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