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**Peter Travers** Editor

## Welcome

h, the great open road. There's nothing better than driving in exciting new places in search of new photographic opportunities. We were fortunate enough to go on a two-day road trip around the French Alps recently, exploring the Savoie Mont Blanc region that surrounds Chambéry. It was a very productive photographic adventure, with many memorable scenes to capture, from big mountains and lakes to pretty villages and vineyards. It also gave us a chance to polish our camera skills and photo techniques. See page 30 for some of our inspirational imagery and your 48-hour Canon masterclass.

This issue we also head up to the hills of the Peak District to take some great landscape photos, see page 8 for some new pro tips and the Hot Shots our Apprentice managed to take with their Canon DSLR. We speak to Tim Allen, an award-winning travel photographer, who took an interesting path to become a professional photographer. See page 68.

In our Canon School section, from page 83, you'll learn how to master exposures after dark, from shooting fireworks to city lights at night, find out how Canon's free DPP is great for creating better black-and-white images, and our resident Canon expert Brian Worley answers more of your techie questions in EOS SOS. In our Canon Skills section we have 19 pages packed with new photo projects and image-editing tutorials for you to try, including accompanying video guides. See page 45.

Are you a subscriber? You're missing out if not! You save money and get a great gift, and if you upgrade to Member Plus you can now take advantage of our amazing new e-learning portal, with over 500 expert photography training videos. See page 20!

- We're the only photo magazine in the newsagent that's 100% DEDICATED TO CANON EOS DSLR OWNERS so we're 100% relevant to your needs.
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- Our Video Disc has THE VERY BEST DSLR TECHNIQUE & PHOTOSHOP VIDEO GUIDES which can also be viewed via our digital editions.
- We're proud to use THE WORLD'S TOP CANON PHOTOGRAPHERS and experts. Meet them on page 6.

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# PhotoPlus PhotoPlus

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**Project 1** Discover key photography skills for beautiful boudoir portraits



Project 4 Use your DSLR's Auto Lighting Optimizer to improve exposures



Tutorial 2 Reshape wildlife with the Liquify filter for playful caricatures



Project 2 Make taking kid's portraits outdoors a less painful pastime



Project 5 Shoot delicate structures and create a



Tutorial 3 Get to grips with the powerful Adjustment brush tool in Lightroom



**Project 3** Shoot long-exposure seascapes for smooth, mono and minimalist results



Tutorial 1 Use the Shake Reduction tool to reduce camera shake blur



**Canon School** Create striking high contrast monochrome shots in DPP4

#### READ THE TUTORIALS... THEN WATCH OUR EXPERT VIDEOS



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To view our 'pop-out' videos, tap these badges that appear alongside the tutorials inside the magazine, or type the link that appears alongside into your web browser.

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#### Meet the team...

# otoPlus

Who we are, what we do, and our very best bits of this issue...



**Peter Travers** Editor • 5D Mark III peter.travers@futurenet.com

"We had a brilliant road trip around the French Alps for our 48-hour Canon masterclass, surrounded by epic mountains. But I'll let Adam translate for you..." PAGE 30



**Hollie Latham** Technique editor • 60D hollie.latham@futurenet.com

"Trudging for miles to reach a peak for the dawn Apprentice shoot, my spirits were lifted when the pro said we'd be shooting from that peak, in the distance" PAGE 8



Rod Lawton Head of testing • 6D rod.lawton@futurenet.com

"HDR is hugely popular, but it's not so easy to get good results, so this month Ben Andrews has written a really useful test of the best HDR editing apps." PAGE 96



**Adam Waring** Operations editor • 7D adam.waring@futurenet.com

"En France, je suis allé faire du vélo de montagne, vignobles visité et mangé énormément de fromage. Il est un travail difficile, mais quelqu'un doit le faire." PAGE 30



**Martin Parfitt** Art editor • 600D martin.parfitt@futurenet.com

"This issue I really love the stunning Landscape Photographer of the Year images in Inspirations. Some truly beautiful shots from early spring to autumn." PAGE 22



**Matthew Richards** Technical writer • 760D photoplus@futurenet.com

"It's been great to rediscover the excellent image quality delivered by Canon's entry-level DSLRs. I was impressed by their performance in really low light." PAGE 104

#### This issue's contributors...



Dave **Fieldhouse** This issue's Apprentice

shot the picturesque Peak District under the guidance of Canon pro Dave. PAGE 8



**Timothy** Allen The travel and anthropology

stills photographer behind the BBC's Human Planet series speaks. PAGE 68



Marcus **Hawkins** In this issue's Canon School,

night owl Marcus shows you the best ways to take a shot in the dark. PAGE 84



Rob Cottle Wildlife pro Rob reveals

the kit he relies on to bag shots of all creatures great and small. PAGE 80



David Noton David goes to Bolivia and

gets breathless at 4000m above sea level to take some inspiring photos. PAGE 42



George **Cairns** Canon software

expert George shows you how to tranform your shots to mono in DPP. PAGE 88



James **Paterson** James shot ladies in high

heels, suspendies and a bra this issue. Whatever makes him comfortable. PAGE 46



Brian Worley Our Brian goes in-depth on

the 5D Mark IV's Dual Pixel Raw tech, and answers all your questions. PAGE 91

Our contributors Timothy Allen, George Cairns, Rob Cottle, David Clark, Olly Curtis, Neil Goodwin, Peter Gray, Marcus Hawkins, Gareth Jones, David Noton, James Paterson, Matthew Richards, Brian Worley



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# Turn every wedding into a Hollywood film with digital film quality that's dramatically better than DSLR!

When you're entrusted to capture precious moments, URSA Mini is the only camera that lets you shoot with the digital film quality of a high end Hollywood feature film! You get a handheld, Super 35 digital film camera that works with your existing Canon DSLR lenses, has a 4.6K image sensor with 15 stops of dynamic range, and records video as camera RAW, ProRes and more so you can enhance colors and deliver results superior to anything your clients have seen before!

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URSA Mini features a custom 4.6K digital film sensor that shoots up to 60 frames per second with 15 stops of super wide dynamic range! That means your images will retain shadow and highlight detail simultaneously without clipping. You'll get clarity and textures that are impossible to capture with a DSLR or regular video cameras. Imagine shooting indoors with the correct exposure and still seeing every detail through the windows outside!

#### Lightweight and Portable

URSA Mini's perfectly balanced body is rugged, yet lightweight and comfortable for all day shooting. There's even an optional shoulder mount kit that lets you move from tripod to handheld in seconds! Everything you need is built in, so you don't have to carry around extra equipment. You get a super bright 5" fold out touch screen for monitoring video, displaying timecode, histograms, audio meters, focus peaking and more!

#### Record in RAW, ProRes and more

You never have to stop recording because URSA Mini features two CFast 2.0 recorders! When one card is full, recording continues on the next so you'll never miss an important moment! Unlike DSLRs that heavily compress video, URSA Mini records 12-bit RAW files that preserve all the dynamic range and quality captured by the sensor. You can also record ProRes files that are easy to edit and use less storage!

#### **Completely Customizable**

Choose from hundreds of accessories to create the perfect rig! URSA Mini features 9 standard 1/4" mounting points so you can mount it directly to a tripod, add rails, matte boxes and more! You also get full size professional connections such as SDI for video, and XLR for microphones. You can even add the Blackmagic URSA Viewfinder and Blackmagic URSA Mini Shoulder Kit for easy handheld shooting!



Blackmagic URSA Mini 4K EF £2,475\*
Blackmagic URSA Mini 4K PL £2,895\*
Blackmagic URSA Mini 4.6K EF £4,139\*
Blackmagic URSA Mini 4.6K PL £4,539\*
Blackmagic URSA Mini Shoulder Kit £335\*
Blackmagic URSA Viewfinder £1,345\*

All models include DaVinci Resolve 12 Studio for editing and color correction.

## **PHOTOPLUS** APPRENTICE



**Photo** 



The Canon Magazine

## **THEAPPRENTICE**

## TECHNIQUE ASSESSMENT

Canon pro Dave checked over Tim's camera to ensure it was set up for peak performance



#### M FOR MANUAL EXPOSURE

"I WAS pleased to see that Tim was already comfortable shooting in Manual mode," says Dave. "Being able to independently control the shutter speed and aperture gives you far more control over your exposures, which is crucial in constantly changing lighting conditions. I got Tim to set a narrow aperture of between f/11 and f/16 for a good depth of field for front-to-back sharpness."

#### **ENABLE LIVE VIEW MODE**

"I GOT Tim to enable Live View mode, which slows down the whole process to enable you to really think about composition," Dave explains. "Switch your lens to manual focus



(MF) and zoom into your focal point, which should be a third of the way into the scene. Then gently twist the focus ring to bring your subject into sharp focus. Another benefit is that the mirror is locked up, so there's no chance of camera shake from the movement of the mirror during the exposure."

#### CHECK THE HISTOGRAM

"I ENCOURAGED Tim to get into the habit of checking his histogram after each exposure to ensure there was an equal spread of pixels," reveals Dave. "If pixels are



Dave. "If pixels are stacked up and cut off on the right-hand side, the highlights are clipped. An added benefit of shooting in Live View means you can see the histogram before you take the shot, so can adjust the shutter speed accordingly for a balanced exposure."









## EXPERT INSIGHT

# WATCH OUT FOR SHADOWS



THE LATE afternoon winter sun sits low in the sky, which can cause havoc with shadows when shooting with the sun behind you. Not only do you have to watch out for areas of high contrast from parts of the landscape already in shade, but also be aware of your own shadow creeping into the frame. Here, Tim has captured a potentially good shot of a lone tree with distant rocks, but most of the foreground area has been plunged into distracting shadow.



#### TOP GEAR #1 Canon EOS 5D Mark III

**AFTER** starting out with a Canon EOS 7D, Dave upgraded to a 5D Mark III to take advantage of its full-frame capabilities. "I love the colours that the camera recreates, and the latest processing software enables a lot of recovery of detail from the shadows. Together with my wide-angle Canon EF 16-35mm f/2.8L IS II USM, I can capture sweeping scenes and achieve great depth of field for front-to-back sharpness," reveals Dave.

#### **TIM'S COMMENT**



We were en route to Roach Barn for our sunset shoot when we passed this stunning scene, so Dave pulled over into a lay-by so we could get out and capture it. I love the depth in this photo, it has so many layers to explore; from the stone walls in the foreground, through the lone windswept tree and sheep lit up by the

warm evening sun, to the fields, Tittesworth reservoir and the distant hills beyond. I composed the shot to ensure I captured the entire reservoir and Dave suggested a 16:9 crop in post-production to make use of the rule of thirds.

# PRO TIF

#### **UP THE ISO**

"IT WAS extremely windy up on Ramshaw Rocks, which was great for capturing a bit of movement in the grass and trees. But for other shots, where we wanted to freeze all movement, our shutter speed needed to be relatively quick. Rather than opening up the aperture, which I would rather keep at a narrow value, it's better to increase the ISO to achieve a faster shutter speed."



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The Canon Magazine ProtoPus



## TOP GEAR #2

Assortment of filters

"I DON'T go anywhere without my set of Lee filters as I'd rather capture everything in-camera. I carry soft and hard ND grads to darken bright skies and reveal detail, plus a variety of 'straight' ND filters, including a Big Stopper, to slow exposures and capture movement in a scene."



## ŘO.

#### **RAW QUALITY**

"I WAS pleased to hear that Tim shot in Raw. It's vital that your camera records as much information as possible to get the most out of the file. Raw processing software, such as Lightroom, is excellent at recovering lost detail in the shadows and rescuing clipped highlights. A quick demo of how to process a Raw file back at the hotel we were staying at had Tim hooked on Lightroom instantly."



#### **EXPERT INSIGHT**

#### **INCLUDE WILDLIFE**

"WHEN we arrived on location I knew the sunset wasn't going to be as forecast so I discussed other options with Tim. That's when we noticed the sheep grazing near this lone tree, making an excellent photo op, providing we didn't scare them off! Including wildlife in your scene adds another element of interest and helps to tell a story. One of my favourite Peak District shots has a hare in it, which earned me category winner in Landscape Photographer of the Year competition in 2014."





## **THEAPPRENTICE**



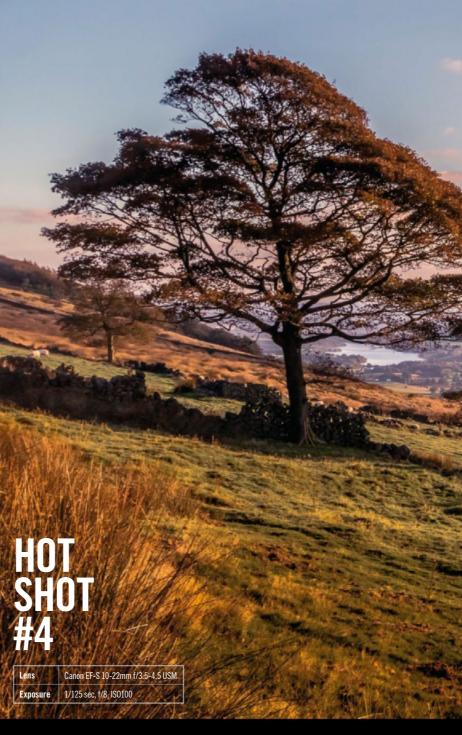
# EXPERT INSIGHT EXPLORE THE AREA

**"WE SPENT some time at Roach End Barn and I asked Tim to circumnavigate the area to see what compositions were on offer.** He managed to capture a handful of shots and it's interesting to see how much variety you can get from one subject in one location. This shot was taken from the other side of the barn to Hot Shot #4. This time we gave it a monochrome and split-tone treatment for a scene full of texture and contrast."

# PRO TIP

#### LOSE THE LEGS

"AT EACH location I got Tim to walk around with his camera and look through the viewfinder to establish a rough composition before setting up his tripod. It's much quicker and easier to see how things are looking from different angles, up high or down low," advises Dave.



#### RIVER DEEP AND MOUNTAIN HIGH

We take a peek at a trio of Dave's favourite images from his extensive landscape portfolio



"HAVING spent the night wild camping on St Sunday Crag, I surprised some locals; I guess they weren't expecting anyone coming down the fell at 7am."



"A LOT of planning and a little luck with the elements enabled me to capture this snowy Lake District scene. I decided this shot was worth catching a cold for."



"HAVING waited for well over an hour the sun broke through the clouds, adding contrast, clarity and drama – and also the perfect title for the shot."



#### **TOP GEAR #3**

**Essential extras** 

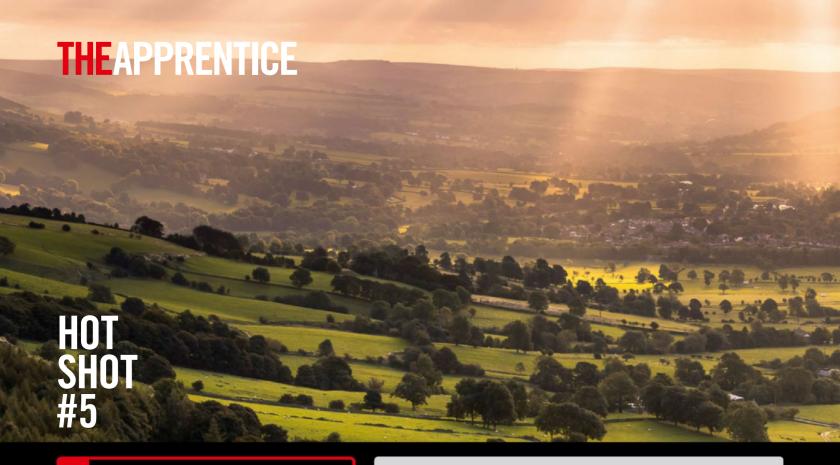
"I ALWAYS carry gloves, even if it's not that cold, as strong winds soon cause numb fingers, which isn't helpful when controlling a camera. A head torch is a must for sunrise and sunset shoots, while a packet of biscuits will help to keep hunger at bay while you're waiting for the perfect moment to capture your scene."



# FLAG THE FLARE

"LENS flare can be really

distracting yet it's easy to stop it from ruining your landscape scenes," Dave explains. "I simply held a filter bag to one side of the lens to shade it from the direct sunlight; if you don't have anything suitable, even your hand will do the job."



# PRO TIF

#### HANDY APPS



Photographer's
Ephemeris to see
where and when
light will fall at any
given time in any
location over the
world. He uses the
BBC Weather app
to check the

forecast; if there's not much wind and humidity levels are above 90% then there's a good chance of capturing mist at sunrise for added atmosphere.

#### **TOP GEAR #4**

Zoom lenses

DAVE'S go-to lenses for landscape photography are all zooms for flexibility. "Many people associate landscape photography with just wideangle lenses, but I beg to differ," he argues. "I carry my standard Canon EF 24-70mm f/2.8L II USM and telephoto Canon EF 70-200mm f/4L IS USM zooms for when I want to compress the perspective to bring objects closer together in the distance."





#### **EXPERT INSIGHT**

# GET A SENSE OF PERSPECTIVE

WHILE wide-angle lenses are the logical choice for capturing as much of the scene as possible, Dave also likes to use a telephoto lens to zoom in on distant details or to isolate parts of a scene.

"It enables me to concentrate on the most interesting elements in the scene, and also enables me to crop out the sky if there's no interesting cloud detail or colour to capture," he explains.



#### TIM'S COMMENT



After Dave showed me how easy it was to stitch together a panorama in

Lightroom the previous evening, I was eager to give it a go myself. With my tripod and camera set in place and pre-focused, I fired off five consecutive frames, overlapping each one by approximately 20 per cent. The sun came out at just the right moment, shining through the clouds and lighting up the entire valley, adding another dimension to the shot. I'm so pleased with the final results, and I can't wait to get back out there to try my hand at another panorama!



#### WHITE BALANCE

#### **SHOOTING** Raw means the white balance can be changed in post-

production, so Auto White Balance is



fine most of the time. But for a panorama each frame needs to be consistent for easy blending, so Dave suggested Tim set Cloudy white balance for that sequence.

#### **TOP GEAR #5**

Steady on

A STURDY tripod is an essential tool for landscape photographers. "I chose my Gitzo GT3452XLS legs for its stability and height options, but found Gitzo's geared head to be a little on the heavy side, so paired it with a Manfrotto



XPRO 3 Way geared head, which enables me to make very small and precise movements for fine-tuning a composition," says Dave. "Ensure the spirit levels are centred for straight horizons before shooting a sequence of images to stitch together for a panorama."



#### NEXT MONTH WINTER PORTRAITS

#### **TIM'S COMMENT**

I had a great couple of days in the Peak
District with Dave and the *PhotoPlus* team; it really boosted my confidence when it came to shooting landscapes, especially during the golden hours. This shot was taken at dawn; we were on location half an hour before to give us plenty of time to get set up. While it didn't turn out to be the most spectacular sunrise, I love the colours and texture in the sky. I took on board many of Dave's tips, including using the rule of thirds to compose the scene, with the landscape in the lower two-thirds and sky at the top, and I made use of the pathway as a leading line to draw the eye into the frame. It was wonderful to be able to capture the eye into the frame. It was wonderful to be able to capture such an iconic Peak District image.

#### **DAVE'S VERDICT**



Tim was a fantastic Apprentice – he was eager to learn and already had a good eye for composition. This shot was taken at a popular photographic location and, had the conditions been perfect, we would have been fighting for a spot! On one hand we were lucky to have the place to ourselves but on the other, conditions could have been better. Tim did well to capture a good exposure with plenty of detail that we could pull out in post-production. By setting his camera up high he has included the gate and fence in the lower third of the scene, but without making them too dominant, and the extra height has enabled him to capture the entire pathway on extra height has enabled him to capture the entire pathway on the other side trailing off into the distance to lead the eye in.



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# -INSPIRATIONS







#### LANDSCAPE PHOTOGRAPHER OF THE **YEAR COLLECTION 10**

This stunning coffee table book showcases winning entries from the Landscape Photographer of the Year Awards 2016 and is out now (AA Publishing, £25). The Landscape Photographer of the Year Awards are held in association with VisitBritain and the GREAT Britain #OMGB campaign. A free exhibition of winning images will be held at London Waterloo station from 21st November 2016 to 5th February 2017. For more information, see

JURASSIC SNOW BY ALEX WRIGHT

I woke early to discover that it had snowed overnight. I set off for Durdle Door, Dorset. The steep climb up Swyre Head was made much more difficult, with a real possibility of sliding unceremoniously down again. I was captivated by the view; with the quality of the light and the patterns of the snow, like a dusting of icing sugar on a cake.

Canon EF 24-105mm f/4L IS USM Lens

1/30 sec, f/20, ISO100 Exposure

IN THE DUNES BY JUSTIN MINNS

I've photographed this row of colourful beach huts at Southwold, Suffolk, numerous times but never in such good light as this winter morning. Winter is surely the best time to be at the coast, with dark skies and a bracing wind rippling through the grass on the dunes and whipping the foam off the North Sea. The beach huts looking jolly in the face of such weather struck me as very British.

Canon EF 16-35mm f/4L IS USM Lens 1/20 sec, f/16, IS0100

Exposure

TREE WITH A VIEW BY SUE BLYTHE The sun peeps over the mountain and colours illuminate the clouds in the sky and reflect in the lake whilst 'The Buttermere Tree' takes centre stage. Not a hint of wind, no ripples in the water, just fresh icy air that I can see when I breathe out.

Canon EF 24-105mm f/4L IS USM

81 secs, f/16, ISO100 Exposure







#### FANTASTIC CANON PHOTOGRAPHY



THE SERPENT BY STUART BENNETT During early spring, day rapidly turns into night as the River Thames snakes its way

from Docklands to Tower Bridge, London.

Lens Canon EF 24-70mm f/2.8L USM

**Exposure** 8 secs, f/18, ISO100

DERWENTWATER BY MATTHEW WHITE
The promise of clear skies, which led
me to the Lake District that morning,
disappeared in multiple snow flurries.
I changed from my original plan, as the
mist level looked set to expose the peaks.
After 20 minutes of waiting and absorbing
the scene, the conditions fell perfectly for
the shot that I wished to make.

Lens Canon EF 50mm f/1.4 USM

Exposure 10 secs, f/16, ISO100

DEMOLITION BY LESLEY SMITH

I took up position at 10am, as demolition of Glasgow's Red Road Flats had been scheduled for 1pm. Crowds started gathering about noon and my tripod and I stood still. Finally, at 3.17pm, the siren went and, ten seconds later, there was a huge boom as the flats started to collapse. One minute later it was all over.

 Lens
 Sigma 18-250mm f/3.5-6.3 DC Macro OS HSM

 Exposure
 1/1250 sec, f/5, ISO1000





ANOTHER FLURRY BY ROBERT BIRKBY
A day of frequent snow showers in
Calderdale, West Yorkshire, so not wanting
to venture too far I headed to the nearby
village of Ripponden. After finding a
suitable composition, I waited for the next
heavy flurry to catch a shot of the snow
falling and hopefully enhance the wintry
atmosphere. Whilst taking the photos,
I was pleased to see two figures appear in
the viewfinder. I waited for them to reach
the optimal point in the frame and then

Lens Canon EF 70-200mm f/4L IS USM

**Exposure** 1/30 sec f/11, ISO100

took this shot.

## BATTERSEA POWER STATION BY FINBARR FALLON A timeless view of the power station and

A timeless view of the power station and tracks, shrouded in a light mist on an early winter's morning. It took many months of visiting the same location until the perfect shot came about.

Lens Canon EF 70-200mm f/4L USM

**Exposure** 1/400 sec, f/9, ISO100





## **48-HOURMASTERCLASS**

#### PHOTO ROAD TRIP

# MASTER YOUR CALL MASTER YOUR LANGUAGE STATEMENT OF THE SECOND STATEMENT OF THE SECOND SECOND

Learn great new camera skills and techniques on a road trip around the picturesque town of Chambéry and the Savoie Mont Blanc region in the French Alps

AKING A road trip is a great way to visit beautiful new locations, and while you'll naturally want to document your journey with suitably beautiful photographs, it also offers the perfect opportunity to improve your DSLR skills. Spending some quality time with your camera enables you to take the best possible photos of all the great scenery and sights on offer, in wildly varying conditions.

Of course, things don't always go entirely to plan, and on our trip we had bright blue sky on one day, followed by cloudy conditions and some driving rain the next. The trick is to be adaptable; there are great low-light shots to be had in cathedrals, and wet streets offer fantastic night-time reflections.

We spent a full 48 hours in the stunning Savoie Mont Blanc region. After an hour's drive from landing in Geneva, we were photographing scenery at the attractive lakeside town of Aix-les-Bains. Our base for the trip was Chambéry, the capital of Savoie, which offers amazing photo ops in its historic centre, from the Castle of the Dukes of Savoie to the imposing 1779 cathedral. It's also perfectly positioned to access the mountains in the Parc Naturel Régional du Massif des Bauges, a huge nature reserve, as well as countless most spectacular vineyards.

countless most spectacular vineyards.
So, armed with our camera bags and a sense of adventure in our hearts, we went in search of numerous photo ops, and practised some key camera techniques along the way...

www.savoie-mont-blanc.com

#### PHOTO **ROAD TRIP**



## **48-HOURMASTERCLASS**



# **EXPOSURE**

Do justice to the incredible scenery by mastering your exposures and making sure your shots reflect the brightness of the scene in front of you





#### **Auto Exposure Bracketing**

IF YOU'RE unsure what the best exposure is, use your Canon camera's Auto Exposure Bracketing (AEB) setting to take a sequence of three photos - a standard (or 'correct') exposure, an underexposed shot and an overexposed one. If you're using Av mode (as we were, see right), the aperture will stay fixed for the three exposures, while the shutter speed will change for each different exposure. Start off with around +/- 1-stop and review your

results. Note: you may need to increase your ISO if the slowest shutter speed is causing blurred shots when shooting handheld.







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Although f/5.6 doesn't capture a great depth of field, for this view we focused a third into the scene to ensure that the house, land and mountain are all sharp



Shooting with an EF 70-200mm telephoto zoom lens at 120mm and f/8, the church and colourful mountain-side forests behind are acceptably sharp

#### Shoot in Av mode

**FOR OUR** French Alpine road trip, we needed to work quickly and found that shooting in Av (Aperture value) mode was the best way to shoot. In Av mode, you set the aperture, and your camera will set the shutter speed for a standard exposure. This way, you can control the depth of field – set a wide aperture (such as f/4) for shallow depth of field; everything will be blurred behind your focal point. Set a narrow aperture (such as f/16) for broader depth of field;

the entire scene will now be acceptably sharp from the front to back of the frame, which is ideal for shooting scenic shots, where you want detail from the closest tree to the furthest mountain.

We needed to work quickly and found shooting in Av mode was the best way to shoot

Bracketing increases your chances of getting

a perfect picture



If in doubt when shooting landscapes, set your aperture to f/11 for good depth of field – and increase your ISO if shooting handheld to increase your shutter speed

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## 48-HOURMASTERCLASS

# SHUTTER SPEEDS

Learn how to control your shutter speed for different types of shots, from freezing movement to capturing blur

#### Uncover better photo ops

**LEAVING THE** car in École, we pedalled up on electric mountain bikes to discover sweeping alpine scenery and valley views from up high. Hiring a bike is a great way to access unique places, and you'll spot photo ops that are easily missed when driving.

#### Capturing movement

**FOR** normal, everyday photography, you only need your shutter speed to be fast enough to avoid camerashake – a good rule is to be 'one over the focal length' so at least 1/100 sec for a focal length of 100mm.

However, when shooting fast-moving subjects, such as mountain bikers, shutter speed takes on a whole new role. The longer the shutter is open, the more your subject moves during the exposure, so even faster shutter speeds of around 1/250 sec to 1/500 sec are required to 'freeze' them. It was a wet and cloudy day, and the tall trees surrounding the mountain track made it quite dark, so we set our ISO to 800-1600 to achieve fast enough shutter speeds.









A fast shutter speed freezes the subject, while a wide aperture with a long focal length results in a shallower depth of field

#### PHOTO ROAD TRIP









#### Motion blur

**USING A** fast shutter speed to freeze your subject can result in quite a static-looking shot. So an alternative is to set a much slower shutter speed and 'pan' to follow the movement of your subject. Get it right and they will look sharp against a blurry background, conveying a real sense movement. Shoot continuously with a shutter speed of around 1/80 sec, swinging smoothly as you follow the action through the viewfinder. Decrease the shutter speed as you hone your technique – we shot at 1/30 sec for our most successful panning shot.

## 48-HOURMASTERCLASS

## LENS CHOICE

Make the most of your DSLR's lens arsenal and capture a variety of different viewing angles

#### Wide angle of view

**THE SUN** was shining and the skies were blue when we arrived in Aix-les-Bains, situated next to a huge lake, Lac de Bourget, that's filled with boats and surrounded by imposing mountains. It's filled with photo ops – and nice cafés for lunch! It's an ideal spot to shoot with the different lenses we packed in our carry-on luggage.

One of the big benefits of DSLRs, over basic compact cameras, is the ability to switch lenses to suit whatever you're shooting. Both editor Peter and operations editor Adam use Canon's trusty EF 24-105mm f/4L IS USM as their go-to standard zoom lenses, but switch to specialist wide-angle and

telephoto zoom lenses as and when the situation demands it.

For a shot of boats in the harbour we reached for a wide-angle zoom. Shooting on a full-frame 5D Mk III, the 16-35mm captures a broader view to include more in the frame.

If you're using a crop-sensor DSLR, such as an 80D or 7D Mk II, then you'll need a 10-20mm lens or similar for an equivalent focal length – 1.6 crop x 10mm = 16mm. Note that wide-angle lenses will capture greater depth of field (at equivalent apertures, compared to telephoto lenses), making them ideal for landscapes with front-to-back sharpness.



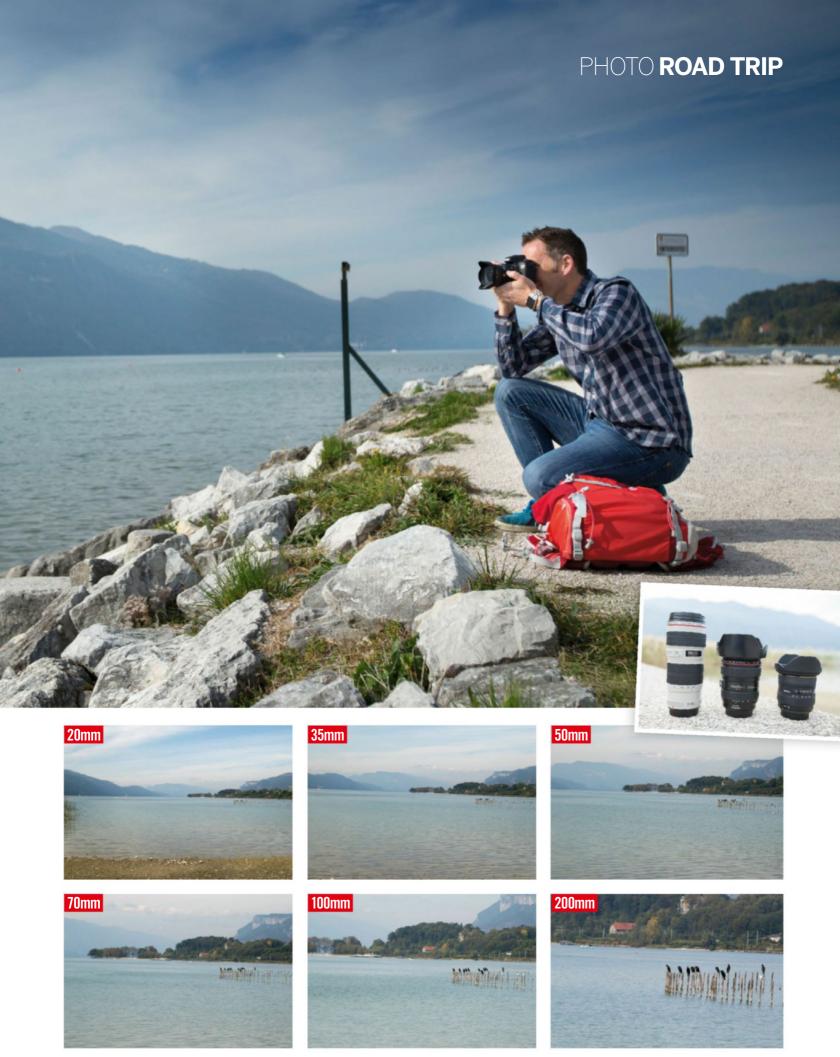
### Tight angle of view

**THERE** was lots of action on the water, so we reached for our telephoto zoom lens to capture the faraway sailing boats, backlit beautifully by the sunlight. Shooting at 200mm enabled us to zoom in and isolate a group of four boats from their surroundings. Note that telephoto lenses will produce a shallower depth of field (at equivalent apertures, compared to wide-angle lenses), so at wide apertures, such as f/4, they're great for focusing on subjects to separate them from the background.



Left: Shoot close-up boats with a wide-angle lens and (above) faraway vessels with a telephoto

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20mm to 200mm: try a focal-length sequence to learn what your lenses can fit into the frame. We switched between three lenses for these shots

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# 48-HOURMASTERCLASS

# Perfect panos

**ONE** common mistake is trying to squeeze a sweeping vista into a single photo with a wide-angle lens; you'll end up with oodles of sky and vast empty foregrounds,

with the 'impressive' mountains reduced to an insignificant strip. The solution is to zoom in and take a series of overlapping shots, then merge them into a panorama. Use a tripod and ensure it's level. Set an exposure for the most interesting part of the scene, then lock this in

with Manual exposure as otherwise you'll have a mishmash of differently exposed frames. Shoot at around 50mm focal length and overlap each image by 30 per cent. Then let Photoshop do all the really hard work by selecting File>Automate>Photomerge...

This panoramic image was made up from 15 vertical (not horizontal, see inset) shots for a merged image with more height



# **BIG MOUNTAIN SCENES**

Take your photography to new heights as you capture wonderful shots of mountain scenes



# Aim high

**THERE'S** something special about being up in the mountains; the air is clearer, it's so still and peaceful, and, of course, there's the beautiful mountain scenery and epic views you've earned after making your way up top. But taking fantastic shots of big mountains isn't always easy. Knowing how to compose your shots when you have big skies to contend with can be baffling if you don't know the solution.

We made our way up to Belvédère du Revard viewpoint, next to Mont Revard at 1538 metres, and boy, are we glad we did – the 360 degree view was stunning, with snowy mountain ranges of the Massif des Bauges national park in one direction, and the valley down to Aix-les-Bains and the lake in the other. But capturing an epic vista in a single frame needs the right technique...

# Aerial perspective

A CREATIVE way to shoot mountains is using 'atmospheric perspective' – the further away each mountain range, the more the contrast decreases, and this change in tones makes for a lovely image.

We took our Raw file into
Photoshop and cooled the white balance to make the shot even more blue, darkened the shadows, and boosted sharpness and contrast to emphasise the effect.



This layered effect is caused by particles in the atmosphere reducing contrast in distant ranges



# 48-HOURMASTERCLASS

# INTERIORS & NIGHT

When the weather becomes intolerable or light levels drop, there are still plenty of opportunities for great travel photos

# Bit dull? Go B&W!

**WE HAD** a mixed bag of weather, but even when it was raining, Chambéry offered much to photograph. First up was the 16th century Franciscan cathedral. As it was raining and light was low, a black-and-white conversion captures a more evocative image, with the wet foreground actually enhancing the shot. We shot from a handy arch to avoid getting soaked!





Wet stones reflect lights for a more interesting scene than in dry conditions

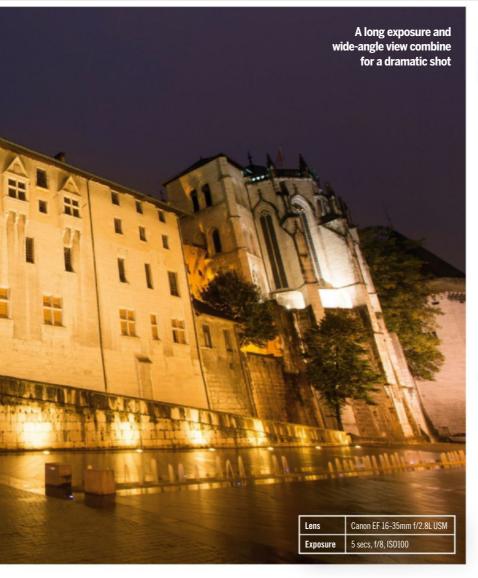
# Rainy reflections

**WE AGAIN** used the rain to our advantage for this cobblestoned street, as reflections on wet stone reflect the shop lights. A symmetrical composition with diminishing perspective it can make a seemingly mundane scene look captivating. We warmed the white balance for our city night shots to counteract the images feeling too blue and cold.



**THE CASTLE** of the Dukes of Savoie is lit up at night, making a great spectacle in the dark. Using a tripod, we composed in Live View to ensure everything fitted into our wide-angle shot, then took a long exposure in Av mode at 5 secs, f/8, ISO100. Converging verticals were unavoidable so we embraced them, exaggerating the angle of the imposing castle towering above us.





# MERCI BEAUCOUP

Many thanks to Céline Guillermin at Savoie Mont Blanc tourist board www. savoie-mont-blanc.com, Gerard Charpin at Chambéry Tourist Office www. chambery-tourisme.com,



Ludmilla Roidin at École de VTT Buissonnière **www.ecolevtt. com**, and Le Cinq Hotel **www.hotel-chambery.com**.

# Balance your whites

**SHOOTING** indoors or under artificial light at night can play havoc with getting the right white balance, as whites often appear orange-tinged. For greater accuracy, we set a custom white balance. Simply take a picture of a plain sheet of white paper under the lighting, zooming in so it fills the entire frame. In the camera's menu, select Custom WB, pick your 'white' image and press OK. Now simply choose the Custom WB setting (two triangles with a little square) for bang-on whites. Of course, shooting in Raw means you can fine-tune the white balance in post-production, if necessary.

# High ISO for interiors?

**INSIDE** the cathedral we were greeted by an impressive interior with the cavernous walls and ceilings covered with intricate paintings as well as stained-glass windows. Light levels were very low so, using the EF 16-35mm lens at 16mm, we really pushed our Canon 5D Mk III's sensor to its limits, shooting at ISO3200 for a shutter speed of 1/40 sec at f/2.8 for a sharp shot with an admirable amount of detail. However, we asked permission to use our tripod, which enabled us to take a preferable long exposure of 13 secs, f/8, ISO400, capturing much more light and detail in the shadows, sharp from foreground to background, and with no noise.





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# DAVIDNOTONONLOCATION

# Andes man

Isla del Sol and Lake Titicaca, Bolivia, South America. 6-11 December 2009

# A trek through the peaks of Bolivia leaves David Noton breathless for many reasons

he boat drops us on the southern tip of the island with all our bags; now what? Eventually a young lad with a donkey arrives, and up the track to our lodge we trudge, wheezing in the thin air. Here on the Isla del Sol it feels like we're at the seaside, but we are in fact 4000 metres above sea level. The visibility at this altitude is amazing. The views across Lake Titicaca to the Cordillera Real and Peru are incredible. And so, as dusk settles, I'm set up beside the tripod on a hilltop, taking advantage of light so clear I reckon those distant Andean peaks I've trained my long lens on are over 50 miles away, and yet there's not a trace of haze.

Next morning, I'm lurking on a terrace, built by the Incas no doubt, shooting the Isla del Sol Rush Hour. Heavily laden donkeys and men pass below, interspersed with ladies in distinctive hats and colourful shawls. Oh yes, it is so good to be back in South America.

Three days later we're driving across the endless white salt flats of the Salar de Uyuni. With no reference points except distant volcanoes on the horizon it's a surreal experience, and a real adventure, but as the sun drops I'm wondering how I'm going to make something of this minimalist landscape; essentially it's just a whole lot of nothing. The best compositions are always the simplest; I better just get on with it. We stop in the middle, I bolt on a fisheye, get low to use the repetitive patterning of the little ridges on the pan, position Volcan Tunupa to the north in the middle of my frame and take advantage of the gorgeous light and dramatic sky while utilising the distortion of the fisheye for creative effect.

The next day is a long, arduous drive over the altiplano. With no roads and precious few visible tracks I'm glad we have the services and local knowledge of Coco and Oswald, our driver and guide. We pass through an arid landscape of twisted rock formations beneath pyramidal volcanic peaks, getting higher and higher all the time. Just walking on the level or supporting



# **DAVID NOTON**

Pro travel & landscape photographer

DAVID IS AN AWARD-WINNING Canon photographer with more than 28 years' professional experience. During his career David has travelled to just about every corner of the globe. In 2012, Canon invited David into its Ambassador Program by designating him an Official Canon Explorer. Info and photos at www.davidnoton.com



With no reference points except volcanoes on the horizon it's a surreal experience

01

The Andes from Lake Titicaca, South America's largest lake

s Canon EF 100-400mm f/4.5-5.6L USM osure 1/640 sec, f/6.3, ISO320

my camera leaves me breathless. The colours in the rocks, the texture of the landscape, the deep blue sky streaked with clouds, the mirages, the lagunas and the flamingos all make us realise we're a long, long way from Milborne Port.

From Ojo de Perdiz, a hostel and outpost of Bolivia 4500 meters high near the frontier with Chile, we're up at 3am for the drive to Laguna Colorado. Incredibly, so is the manager's wife, who rustles us up omelettes before we go. What service! We drive through the desert under a night sky full of stars. Slowly a faint twilight starts to glow to the south east. I am concerned how I'll tackle a location I've never laid eyes on and with precious little time to assess options, but as we approach from the north an unforgettable view of volcanic peaks above a steaming laguna flocked with flamingos opens up. Its been a long journey to get here, but what a reward.

**NEXT MONTH THE CANADIAN ROCKIES** 







# Always up to speed Profoto D2

A photographer faces many different challenges every day. It's with that in mind we created the Profoto D2. It's a breakthrough, because it's the world's fastest monolight. So for the first time, no matter what the assignment, speed is always on your side.

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# **PhotoPlus** CanonSkils

Sharpen up your photography skills with our all-new photo projects and expert guides



# New projects with video guides

Follow our Canon DSLR walkthrough guides and Photoshop editing videos

# Welcome...

WINTER is here but there's no reason to hibernate with your camera! It's the perfect time to head to the seaside to slow down stormy seas and shoot long exposures and convert your images to black and white. If you want to stay indoors, shoot an artistic triptych, perfect for your wall. If portraits are more your thing, we've got three great projects lined up for you. Learn how to take beautiful boudoir photos with our top tips on lighting and posing. Discover the **Auto Lighting Optimizer** feature on your Canon to improve your exposures. Finally, get to grips with your outdoor children's portraits with some key portrait skills and tips for great results. Moving over to the digital darkroom, find out how to reduce blur from camera shake with the handy Shake Reduction tool in Elements 14. Use Photoshop's Liquify filter to liven up your wildlife shots and find out how to use the Adjustment Brush tool in Lightroom.



The art of boudoir With the right gear, lighting skills and posing tips, a boudoir shoot needn't be a daunting prospect



Doing It IVI the Make taking children's Doing it for the kids portraits outdoors a less painful pastime with our top techniques



52 Slowly does it
Take a minimalist approach by learning how to create longexposure black-and-white seascapes



**6** Brighten dull images Discover the Auto Lighting Optimizer feature on your camera to boost exposure and contrast

Make animal magic

Reshape photos of wildlife

and pets using Photoshop's Liquify

filter to create 'creature caricatures'





**58** Triptych art Three is the magic number! Shoot delicate plant structures and create your own artistic triptych



**Behind the mask** How to use Lightroom's Adjustment Brush to create masks for precise tonal adjustments



62 Shake it off Find out how to reduce blur from camera shake with Photoshop Elements 14's Shake Reduction tool

# VIEW THE VIDEOS

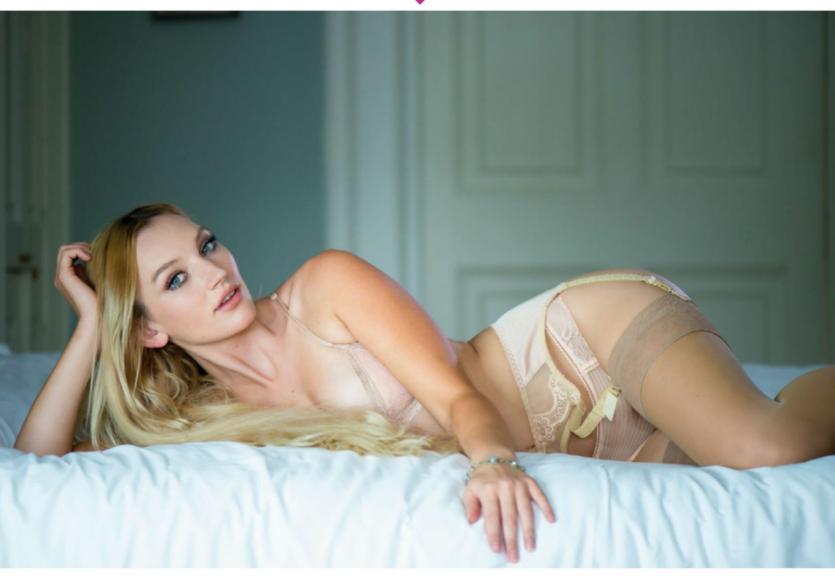
WHENEVER you see this icon you'll find an accompanying video – tap the link and the video will 'pop-out' of the page (as long as you have an internet connection). You can also download project files to your computer.

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The Canon Magazine **PhotoPlus** 



**PROJECT 1** 



# THE MISSION

Learn key skills for stunning boudoir photography, from lighting and posing to camera settings and gear

# **Time needed** 2 hours

Skill level Intermediate

# Kit needed

Monopod • Fast lens • LED constant lighting (optional)

# The art of boudoir

With the right gear, lighting skills and a few posing ideas a boudoir shoot needn't be a daunting prospect – **James Paterson** bares all

oudoir photography is big business at the moment and if you're into portraits, it's a useful skill to master. You'll find lots of technical advice over the next couple of pages but first off it's worth thinking about the style. Page 3 glamour has its place, but it's not here. It's not just about hiding the rude bits – the odd nipple on show isn't the issue. It's more about a shooting style that celebrates the shape of the

body without objectifying the subject. There's an element of empowerment to boudoir, which is why, more often than not, it's women – rather than husbands or partners – who willingly seek out and pay for this type of photo shoot. It's a boost for the ego, and a chance for them to say 'I can look like this if I want to'.

So how do we get this sense of empowerment across in the photos? Firstly we talk to our model and find out the kind of looks and styles that appeal to her to give us an idea of what she wants to show – or hide – and what she considers her best assets. The best portrait photographers learn how to emphasize a person's most interesting or alluring assets and play down the unflattering parts. With boudoir, this is vital. On the technical side, there are choices that we can make to take our shots out of the Reader's Wives category and into the realms of the pros... •

# **KEY SKILLS** ENTER THE BOUDOIR

Approach a boudoir shoot with the right gear and camera settings for great shots in challenging conditions

# **01 CAMERA SETTINGS**

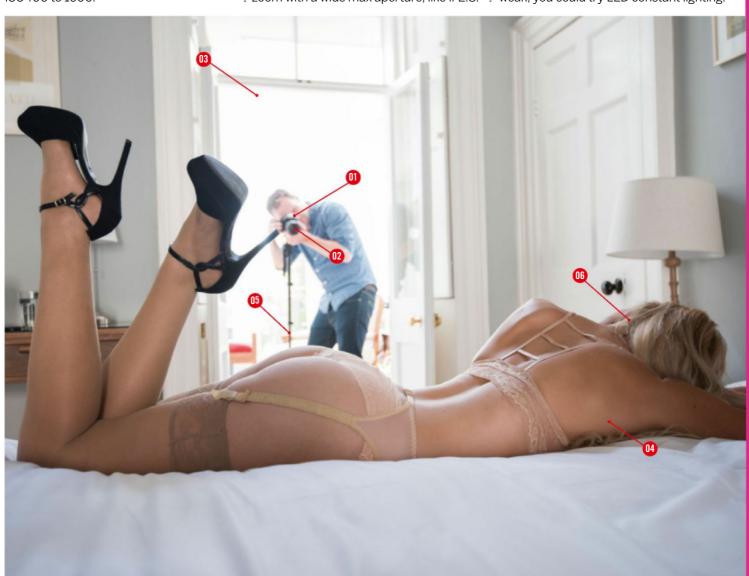
There's no stock setting for all scenarios, but most of our shots here were taken in Manual mode with the aperture around f/2.8 and shutter speeds around 1/100 sec. We then adjusted ISO to perfect the exposure, with the sensitivity ranging from ISO400 to 1600.

## **02 CHOICE OF LENS**

The ideal lens here is a prime with a focal length between 50-100mm and a wide maximum aperture such as f/1.8. Image stabilization is useful too. This'll mean the lens performs well in the kind of low light we'll be shooting in. Alternatively, use a zoom with a wide max aperture, like f/2.8.

# **03 WINDOW LIGHT**

Window light is ideal for this kind of shoot. Soft, flattering, and cheap to boot, it floods over the body with beautifully even light. By moving your subject around, you can have the window in front, to the side or behind them. If the window light is too weak, you could try LED constant lighting.



## **04** THE SUBJECT

Posing in underwear isn't easy. Compile a mood board together before the shoot so they know what to expect. During the shoot offer encouragement, tell them how great the shots look, give them clear directions on posing and show them the odd shot on the back of the camera.

#### **05 MONOPOD**

In dim interiors camera shake can be a problem. With a monopod to help prevent shake, you can get away with shutter speeds as low as 1/80 sec, especially if your lens has image stabilization. Ask your subject to keep still, brace the camera and fire off shots in bursts.

#### **06 FOCUS POINT**

When shooting with wide apertures precise focusing is essential, so move your focus point over the eyes and take the time to focus precisely. When reviewing shots, zoom in close to check the eyes. It doesn't matter if everything else is soft, as long as the eyes are sharp.

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# **CanonSkills**

## **PROJECT 1**



# **POSING** TIP 1

#### On the bed

For one of the classic boudoir shots, get your subject lying on the bed, on their tummy or side. The angle is flattering on the face, it presents a great cleavage, and it gives you the opportunity to either go in for a close up or pull out for a full body shot. For heavier ladies, the front-on view in the above image can be more flattering. Ask them to cross their legs behind them then shift the hips onto one side to create a great curve to the back and the behind.

**Lighting:** Window light from opposite windows behind and in front of subject

**Exposure:** 1/80 sec, f/2.8, ISO1000



# **POSING TIP 2**

## At the window

Here a large window floods over the subject for beautiful natural light. You could also try introducing a gentle narrative by using props. Even something as simple cup of tea transforms the mood; it's no longer just a person looking out of a window, it's more thoughtful and voyeuristic – as if they've been caught during a private moment. As the image below shows, you can use side-on window light in a more controlled, directional way for a moody look – here every other window is blocked except a single strip of light directly to the left of the subject.

**Lighting:** Window to the left of subject **Exposure:** 1/160 sec, f/3.5, ISO160



# **BOUDOIR PHOTOGRAPHY**





# **POSING** TIP 3

#### On the floor

When it comes to posing, we should always be looking for ways to create interesting shapes out of the body, to show the curves and the rise and fall. A pose like this gives you separation between the subject and the chair. Here the camera is almost on the floor to make her seem more dominant and statuesque. Similarly with the above image, you can see how the pose celebrates the shape of the body by freeing it from any surface – if she was lying on the floor or on the bed then the shape might get a little lost.

**Lighting:** Window light from two bay windows directly behind the camera

**Exposure:** 1/160 sec, f/2.8, ISO800



# **POSING** TIP 4

## Light the edges

Window light is lovely and soft, but sometimes harder light and stronger shadows can be more effective. Here strong side-lighting from the left of camera creates an edgy fashion-type shot. The light comes from a single LED panel to the left of the subject. LEDs can also be used to backlight the body and create edge highlights, as in the above image. Place her on her tummy and the curves of the behind can create a beautiful shape when backlit. This one is all about the lighting – we position a light behind the subject angled back towards the camera.

**Lighting:** LED continuous light panel **Exposure:** 1/100 sec, f/2.8, ISO400



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# THE MISSION

Photograph young children outdoors – without the stress

# Time needed

45 minutes

# Skill level

Easy

#### Kit needed

Telephoto zoom lens • Colourful woodlands • Funloving children

# Doing it for the kids

Make taking children's portraits a more painless pastime as experienced photographer – and parent – **Peter Travers** explains all you need to know

hotographing the family is the reason many of us bought a Canon DSLR in the first

place. But taking portraits of young children can be more trouble than it's worth – especially when it comes your own kids who refuse to pose or smile as soon as you get your camera out. The key is to have fun outdoors – we headed to our local woods in early autumn just as the leaves were

starting to fall – and, as children don't like sitting still, you need to shoot fast before they run off or get bored. We'll explain more top tips and camera settings to make the photo shoot fun for everyone.

Get your telephoto zoom lens out as it enables you to shoot from a distance so you're not crowding your little subjects, plus, with a wide aperture, it will help capture a shallower depth of field to blur surroundings for a more dreamy portrait style. A 200mm focal length is ideal, and you'll need to match this figure with a fast shutter speed to overcome camera shake and blurry shots. On the full-frame 5D Mk III we're using, we used a shutter speed of at least 1/200 sec to combat camera shake – while on crop-factor cameras, like an 80D, use a shutter speed over 1/320 sec. Then use specific AF points to focus on the kids' faces or eyes for a sharp result. •

# CHILDREN'S PORTRAITS

**PROJECT 2** 

# **STEP BY STEP** CAMERA AND LENS SETUP

Learn how to get your Canon DSLR set up to capture great kids' portraits



### **01 CAMERA SETUP**

We headed to a pretty woodland setting, and shot in Av mode with an aperture of f/2.8. As it was fairly dark inside the woods, we needed our ISO set to 640 to achieve a shutter speed of 1/200 sec. If it's darker, up your ISO further to get the right shutter speed.



# 03 BLUR THE BACKGROUND

A wide aperture of around f/2.8 or f/4, depending on your lens, will help blur the background behind your little subjects; but make sure they are a good distance (at least 25-30 feet) from the background elements, otherwise they'll remain too noticeable in the frame.



### **02 TELEPHOTO ZOOM LENS**

Using a long focal length of 200mm, with a wide aperture, will really reduce depth of field and blur the foreground and background details around your subjects to ensure they stand out. We used Canon's fast EF 70-200mm f/2.8L IS II USM but any tele-zoom



#### **04 GET DOWN TO THEIR EYE LEVEL**

Get down low to the children's eye level for the best results; this also reduces how much foreground is in the shot too. Getting mum or dad to stand behind you making faces is a good way to get a fun reaction from the kids – as our portrait (left) illustrates.



QUICK TIP!

children that if

after the shoot

Treats always work a treat, so tell the

they're well behaved

they'll be rewarded

# **TOP TIPS** LEARN TO HAVE FUN!

Struggling to capture children in camera? Try these tips





AND... ACTION! As kids rarely sit still, make a virtue of it and shoot the action as they run around the fields or woods, or in autumn time, throw piles of dried leaves around. It gives them something fun to do, and also provides great expressions to capture – but you'll need to be quick!

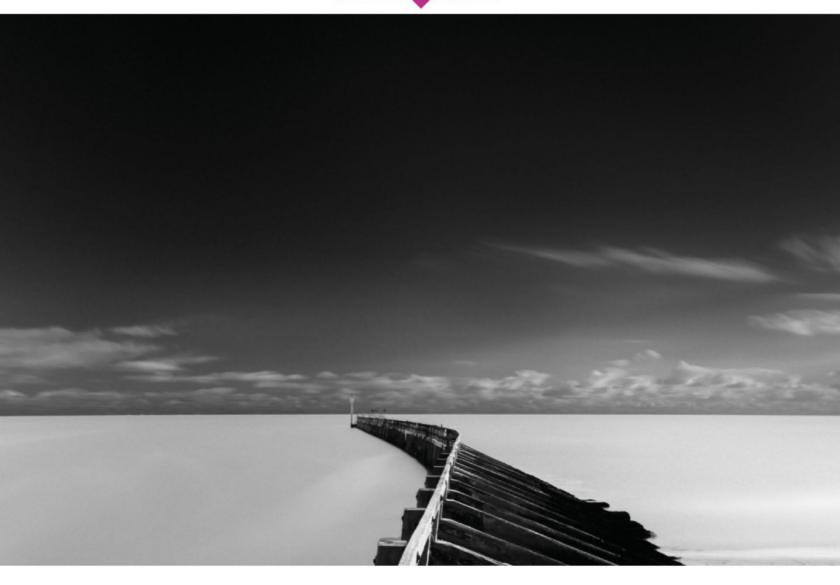


**SILLY POSES!** Kids often won't smile nicely for photos, but will happily pull silly faces. It can be frustrating sometimes, but have fun with them instead, showing them the shots as you go as they'll enjoy seeing the silly faces – and want to do it again!

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**PROJECT 3** 



# THE MISSION

Extend your shutter speeds to minutes for minimalist seascape photos

# Time needed

One hour

# Skill level

Intermediate

# Kit needed

Tripod • 10- or 13-stop ND filter

- Cable release
- Photoshop CC/CS or Elements
- Stopwatch (or timer on a phone)

# Slowly does it

**James Paterson** takes a minimalist approach to landscapes and shows how to shoot and process ethereal long-exposure seascapes

e photographers often obsess about detail, sharpness and resolution. But simplicity can be just as powerful. By paring down our images to the barest elements we can create beautiful, minimalist artwork. In this project we'll show you how to set up and shoot long exposures, then strip out colour for a gorgeous mono finish.

Few things highlight the magic of photography more than a long

exposure. When we stretch out our shutter speeds to several seconds, or even minutes, any motion in the scene is recorded as beautiful silky blur. The ability it gives us to present everyday scenes in a completely different way can be hugely effective. It gives them a surreal, calm quality that goes hand-in-hand with the minimalist approach.

Seas are a perfect example. Photographed normally, choppy seas are full of detail – there are all the dips and ridges on the surface, the foaming waves, the spray and any floating debris. But with a longer shutter speed all of this is eradicated, transforming those busy, distracting details into a silky-smooth surface.

Extending shutter speeds requires a strong neutral density filter, a tripod and a few simple camera skills. It takes meticulous attention to detail and you might only come away with one or two shots, but that's all you need!

QUICK TIP!
Light levels can change during long exposures in fading light – so you may need to extend

exposure time to

allow for the drop

# **STEP BY STEP** GET SET FOR A LONG EXPOSURE

There's a simple process for long exposures during daytime — here's what you need to do...



#### **01** USE A STURDY TRIPOD

Attach your DSLR firmly to a sturdy tripod and ensure it's stable – we need it to stay still for entire minutes, so any movement at all will ruin the shot. If it's windy then weigh down the tripod – you could attach your camera bag to the hook under the centre column.



#### **03** FIT THE ND FILTER

Attach your neutral density filter to the lens. Here we're using Formatt-Hitech's Firecrest filter holder with a 13-stop ND. Consider using a polarizing filter too. Not only will this darken down blue skies, it also blocks around two more stops of light.



#### **02 TAKE A TEST SHOT**

Before attaching any ND filters, first take a test shot. Use Aperture priority and ISO100 with an aperture of f/11 or narrower. Focus on your subject, switch to Manual focus to lock it, then take a shot. Take note of the shutter speed – 1/60 sec at f/11 in our shot.



#### **04 LOCK OPEN THE SHUTTER**

The shutter speed in our test shot was 1/60 sec, so with the 13-stop ND filter attached we need to double this value 13 times, equalling 2 mins. Switch your DSLR to Bulb mode (B), attach your cable release, then lock open the shutter for the required time.

# **ESSENTIAL KIT** THE GEAR YOU NEED TO HELP YOU TAKE IT SLOW



## **01 ND FILTER KIT**

You need a strong ND filter to achieve super-long exposures – at least 10 stops if you want to shoot in the daytime. The Formatt-Hitech Firecrest ND set we used includes 10-, 13- and 16-stop NDs.



## **02 WORK OUT EXPOSURE**

Each stop of light blocked with an ND filter doubles the exposure time. For 13 stops that's a lot of maths, so make life easy with an exposure calculator like this one within the excellent PhotoPils app.



## **03** VIEWFINDER BLOCKER

If we leave the viewfinder open during a really long exposure then we run the risk of light leaking in. Use a viewfinder blocker (there's one attached to your strap) or piece of black tape to cover it up.



## **04 TIDE CHECKER**

High tide might cover messy patches, while low tide may allow access to certain areas or include temporary pools in the sand. Check tides before you head out with the free Tides Near Me app.



# **05 TRIGGERTRAP APP**

A stopwatch and cable release is fine but there are smarter options for timed exposures. The Triggertrap dongle hooks up your DSLR and phone, and the app lets you set exposures of any length.

# **CanonSkills**

# **TOP TIPS** ESSENTIAL SKILLS FOR MINUTE-LONG EXPOSURES

There's more to long exposures than ND filters and tripods — here are four essential tips to help improve shots...



# WHICH ND FILTER?

Neutral density filters block the flow of light into your camera, thereby extending shutter speed. The strength of filter you need will depend on the ambient light and your exposure choices. Every stop enables you to double the exposure length, so consider that if you meter 1/125 sec without any filter, a 6-stopper will slow this down to 1/2 sec, while a near-opaque 16-stopper will take it to 8 mins 44 secs. Some super-strong ND filters will often introduce strange colour casts, but the Formatt-Hitech Firecrest set we used produced very neutral results.





#### **01** WHAT TO LOOK FOR

A strong focal point is the single most important thing, so look for interesting details that stand alone, like a single post, a pier or building surrounded by moving water or clouds – there's no point shooting long exposures unless there's movement in the frame!



#### **03** FIND THE SWEET SPOT

There's often a temptation to use narrow apertures, like f/16 or f/22, to extend depth of field. But all lenses have a sweet spot, usually around f/5.6 to f/8. Above f/11 diffraction can cause softness, so consider whether you really need the extra depth-of-field.



#### **02 BANISH LIGHT LEAKS**

Often showing as purple patches, light leaks are the enemy of long exposure photography. The two main leakage points are the viewfinder and the filter fixing, so as well as covering up the viewfinder, use a good quality filter set with tight, light-blocking seals.



#### **04 TURN OFF STABILIZATION**

Whenever you shoot a long exposure it's a good idea to turn off any stabilization, as it can lead to blurry images. There's really no need to use mirror-lockup as the effects of the mirror will go unnoticed when your exposures stretch to several seconds or more.

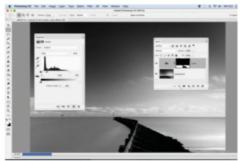
# **STEP BY STEP** CONVERT YOUR SEASCAPES TO MONOCHROME

Use Photoshop and selective adjustments to finish off with a classy black-and-white conversion



# LONG-EXPOSURE

images suffer from noise so set noise reduction in ACR's Detail panel. Convert to mono with ACR's HSL/Grayscale panel, which enables you to control the brightness of colour ranges – here we darkened the blues for a moody sky.



YOU CAN change the mood of your image with a series of selective tweaks. In Photoshop Shift-click over the sea with the Magic Wand to select, then add a Levels adjustment layer, using the sliders to lighten the area. Repeat to adjust other areas of the image.





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**PROJECT 4** 

# Brighten dull images

Hollie Latham explains how ALO can help boost exposure and contrast



Learn when to use the ALO feature in your EOS

Time needed

10 minutes

**Skill level** Easy

#### Kit needed

Canon DSLR with the Auto Lighting Optimizer feature

• Standard zoom

# **NEXT MONTH DSLR MOT**

uto Lighting Optimizer (ALO) is a neat little feature that goes unnoticed by many but is pretty handy to have and is worth experimenting with.

It enhances exposure and evens out contrast in images with less-than-ideal lighting conditions. It is automatically applied when you're shooting in Full Auto, Creative Auto or any of the scene modes. To disable or adjust the strength of the tool in-camera you must be in P, Tv, Av or Manual mode. It is set to Standard by default in the semi-auto modes, but disabled in Manual mode.

ALO helps with underexposed or low-contrast scenes, and is useful when using flash or shooting backlit subjects. Once a shot has been taken, it analyses lighting and contrast, then modifies shadows and highlights to minimize loss of detail for a balanced exposure.









# RAW CANON WORKFLOW



If you use Canon's Digital Photo Professional (DPP) software to process your Raw files, you can change the ALO settings that are applied to your images in-camera as part of your usual Raw post-processing workflow.

# **STEP BY STEP** WORKING WITH AUTO LIGHTING OPTIMIZER

In P, Tv, Av, and M modes you can access the Auto Lighting Optimizer tool via your Canon's main menu



# **01 MENU SETTINGS**

You'll find the Auto Lighting Optimizer feature in one of your camera's shooting tabs in the main menu when shooting in Manual or one of the semi-automatic modes (P, Tv, Av).



#### **02 ADJUST THE STRENGTH**

You can disable or adjust the strength of ALO to Low, Standard (default) and High by scrolling through and hitting Set. Experiment with all settings to achieve the desired effect.



#### **03 PREVIEW THE IMAGE**

ALO is applied in-camera to JPEG images and to the LCD preview of Raw images. As Raw image previews are processed with settings including ALO applied, it will be reflected in the histogram.

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**PROJECT 5** 







# **THE MISSION**

Shoot and create an artistic triptych

## Time needed

Half a day

# Skill level

Intermediate

#### Kit needed

Flashgun • Macro lens • Reflector

# Three is the magic number

Hollie Latham reveals how to create an artistic triptych fit for your wall

s the saying goes, 'good things come in threes', so we're going to reveal some top tips on shooting and selecting images to create a beautiful, artistic triptych. Having the opportunity to display more than a single frame as a finished piece will enable you to tell a story, reveal different sides of a subject or repeat a particular theme across varying subjects that work together in unison.

Triptychs work well for a range of genres and subjects, and in this project we're going to show you how even the simplest of objects can create beautiful artwork. Here, we've collected a variety of grasses and weeds which are readily available in the countryside at this time of year. By stripping away distractions and shooting these subjects against a plain white background, we can focus our attention on the delicate designs of these plant structures. By adding a macro lens into the mix we can get up close to reveal even the most fragile of details for an abstract composition.

As we'll be getting in close to our subject, we require a bit of extra light to reveal the shapes and textures and add some depth to our images, so we'll be using off-camera flash triggered by our camera's pop-up flash to light our subjects (if your camera doesn't have a pop-up flash, you'll need to use an off-camera flash cable, or trigger it from a second flashgun instead). To ensure we don't capture any garish shadows we will diffuse the light by firing the flash through a reflector to soften and spread the beam.

Once we've taken a series of images of our subject, it's then down to choosing three that will sit well together before taking them into the digital darkroom to assemble the triptych.

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# **STEP BY STEP** KEY SETTINGS FOR SHOOTING YOUR SUBJECTS

When working in such close proximity to your subject, set your camera up on a tripod for full support



# **01 CAMERA SETTINGS**

Switch to Manual mode for full control and set the shutter speed to the maximum flash sync speed, usually 1/200 or 1/250 sec. With macro photography, depth of field is restricted the closer you are to your subject, so start with a midrange aperture of f/5.6-f/8 to see how much is in focus.



## **02 COMPOSITION**

By focusing on the finer details of a plant you can get a variety of shots from one subject, so take your time to explore and create an assortment of compositions. Experiment with the depth of field and change the focus point too – you'll be surprised at how different a shot can look.



#### **03 CRITICAL FOCUSING**

With Live View enabled, decide on your focus point, zoom in to 5 or 10x magnification and slowly twist the manual focus ring to bring the area you want to appear sharp in focus. To ensure you don't knock the focus during the exposure, use a remote shutter release to take your shot.

# **STEP BY STEP** GET SET UP FOR FLASH

Place the flashgun to one side of your setup and position your diffuser in between the flash and your subject

**TO FIRE** the external flashgun we're going to use our built in pop-up flash as a transmitter, with the camera acting as a master and our external flashgun set to Slave mode. To set up the wireless control, go to the Flash Control settings in the main menu and select Built-in Flash Func, set Flash Mode to Manual Flash, scroll down to Wireless Func and select the option to trigger the off-camera flash only. The Flash Control menu also allows you to select and control the flash power output on your external flashgun. We set ours to a 1/32 power. Set your flashgun to the Slave wireless setting and check that it's set to the same channel as the camera.



59

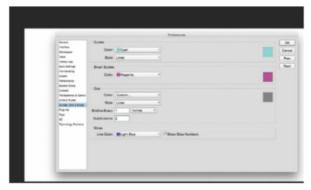
# **STEP BY STEP** THE RULE OF THREE

Build your triptych in Photoshop and convert to monochrome for a fine art finish



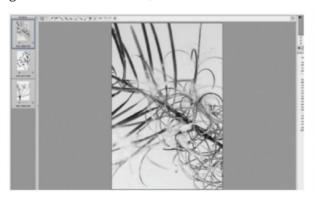
# INCREASE BRIGHTNESS &CONTRAST

Once all three images are positioned in place, you'll be able to clearly see if any of them need brightening so that the exposures look consistent. Select the layer in the Layers panel that you want to adjust, then go to Image> Adjustments>Levels and apply adjustments as necessary. To add the finishing touches to all three images, hit Ctrl+Alt+Shift+E to create a merged layer and add a Curves adjustment layer, then draw a gentle 'S'-shaped curve to boost their overall contrast.



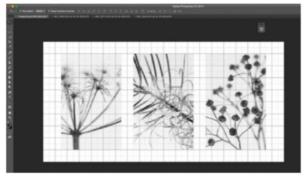
### **01 CREATE A NEW DOCUMENT**

Go to File>New, set Name 'Triptych', Width 20 inches, Height 10 inches, Resolution 300 pixels/inch and Background Contents to White. Go to Photoshop> Preferences>Guides, Grids & Slices, set a one-inch grid with two subdivisions, then use View>Show>Grid.



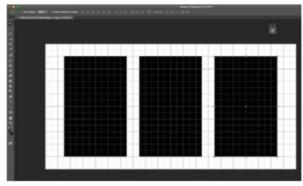
#### 03 ADD AN IMAGE

Open the images in Photoshop ACR. Select All, set Exposure +1.55, Contrast +20, Clarity +34, Saturation -100. Select image 1 and 2, set Blacks -15, Shadows -28, then open all images. Select the Move tool, check Auto-Select Layer and Show Transform Controls.



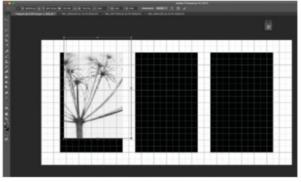
# **05 RESIZE AND REPOSITION**

Highlight the image layer and click the bounding box to transform it – hold down Shift and drag the corners to resize. When you're happy with the positioning, hit Enter to apply. Repeat Steps 4 and 5 to add and position the remaining two images.



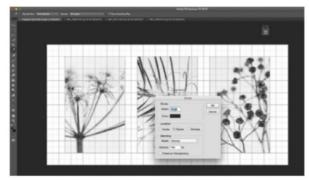
#### 02 DRAW THE FRAMES

Click-and-hold on the Shape tool in the Tools panel and select the Rectangle tool. Drag out a box measuring 5x8 inches, using the grid as a guide. Select the Move tool, hold Alt and drag the box to create two copies and space them out evenly.



#### **04 DRAG AND DROP**

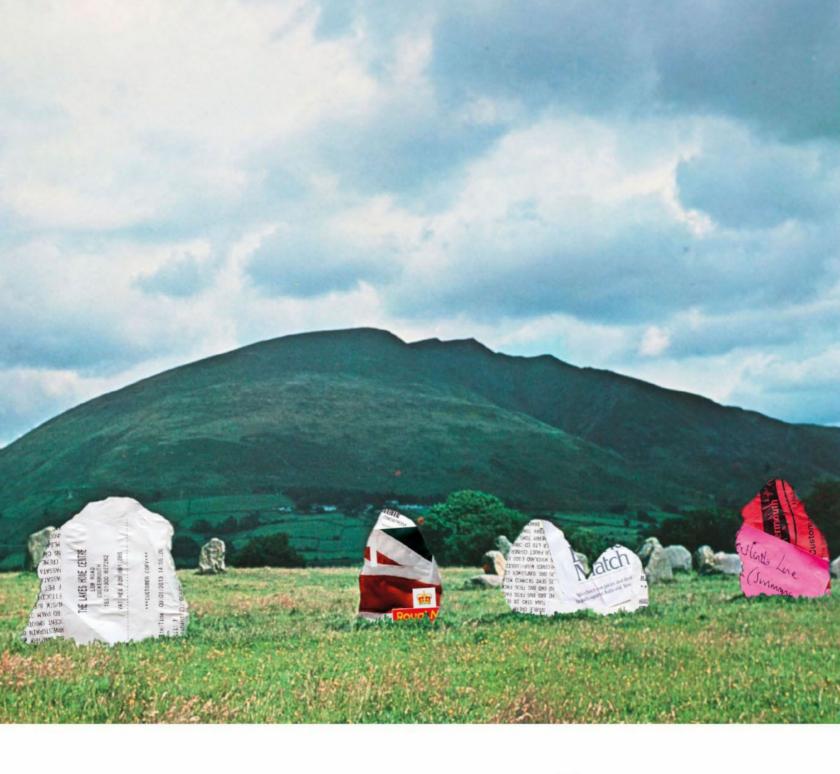
Drag an image onto the tab of the 'Triptych' document then down to copy it in. In the Layers panel, move the image layer above the box layer you want it to fill. Alt-click the line between layers to add a clipping mask so only the area within the outline of the box is visible.



#### **06 ADD A KEY LINE**

To add a key line to the edges of each frame, make a new layer at the top of the stack, hold down Ctrl+Shift and click the box layer thumbnails to load their outlines as selections. Go to Edit>Stroke. Set a Width of 10px, set Color to black and hit OK.





The OCA has facilitated my own creative transformation. A flexible framework entrusts you to control the pace and direction. My passion for photography has grown. Penny Watson





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PHOTOSHOP ELEMENTS

# Shake it off

**Rod Lawton** shows you how to reduce blur from camera shake with Elements 14's Shake Reduction tool

# THE MISSION

Learn how to use the Shake Reduction tool to reduce blur

**Time needed** 10 minutes

Skill level

Easy

**Kit needed**Photoshop
Elements 14

amera shake is one of the biggest bugbears for photographers. It happens when the camera moves during the exposure, so it's closely tied to shutter speed. The slower the shutter speed, the greater the danger of shake. We've all experienced this frustrating problem after not keeping a close enough eve on our shutter speed in low light conditions, and there's nothing worse than bagging what looks like a great shot and then, on closer inspection, realizing it's not quite pin-sharp.

We can also relate this issue to the focal length of the lens – telephoto lenses magnify any shake to make it appear a whole lot worse. You need to watch out for camera shake when you're shooting indoors or in low light, because this is when the camera will have to use a slower shutter

speed. Normally, you'd counteract this by increasing the camera's ISO setting to force the shutter speed back up again, and that's what we *should* have done here. Instead, we used a low ISO, which resulted in a slow shutter speed of just 0.4 sec – no wonder the details are blurred!

In this tutorial we're going to show you how a handy tool, that was introduced with version 14 of Photoshop Elements, can help. It's called the Shake Reduction tool and, as the name suggests, it does exactly that, reducing camera shake caused by any movement from the photographer. With a click of a button you can remove the effects of camera shake from your images, however, for the best results, take full control by delving into the additional options in the tool to tweak your image for more accuracy.



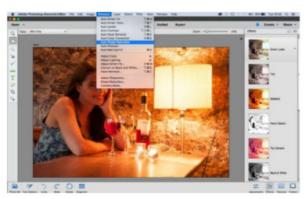
# **STEP BY STEP SHARPEN YOUR IMAGES**

Discover the Shake Reduction tool to remove signs of camera shake with ease

# POSITION THE SHAKE REGION

When positioning the Shake Region box, if a warning triangle appears it means that the area cannot be analysed, so you will need to move it or enlarge the region until it can. Click-drag the handles of the box to resize or move it around using the central pin.

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# **01** WHERE TO FIND SHAKE REDUCTION

The Shake Reduction tools are found in the Enhance menu, and you can use them in both the Quick and Expert modes. The top section of this menu is where you'll find all the 'Auto' options, but you get much more control if you choose the manual Shake Reduction option, further down.



# **02 SHAKE REGIONS EXPLAINED**

The first thing you'll notice is the default 'Shake Region', the area of the image analysed for movement. This is used to work out the shake correction needed, which is then applied to the whole image. You move the Shake Region to a more suitable location by dragging the centre.





# **03 MORE SHAKE REGIONS**

Here, we've positioned the first Shake Region over our model's face, since this is where we want the best shake correction. But we can add another Shake Region for another key area by clicking the tool at the bottom of the window and dragging out another selection marquee.



# **04** ZOOM IN TO CHECK

You can check the effectiveness of the Shake Reduction tool before you commit to processing the image. If you click the zoom button at the bottom of the window, you'll get a square 'loupe' which you can drag around the picture to check how well the details are being rendered.

QUICK TIP! To turn your adjustments off and on, toggle the Before/After switch

**NEXT MONTH REFINE SELECTIONS** 

**PhotoPlus** 63 The Canon Magazine



PHOTOSHOP CC





# THE MISSION !!

Get to grips with the Liquify filter and transform an animal photo into a unique caricature

# **Time needed** 30 minutes

Skill level

Intermediate

**Kit needed**Photoshop CC

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# Make animal magic

James Paterson explains how to reshape photos of wildlife and pets, using Photoshop's Liquify filter to create a playful 'creature caricature'

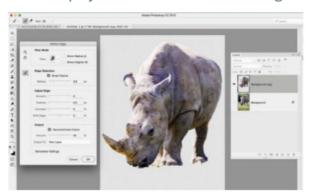
mong the most enticing tools in Photoshop's box of tricks are those that give you the power to reshape objects, people or even animals.

Chief among these pixelpushing tools is the Liquify command. It acts almost like a mini-app within Photoshop, coming complete with its own toolbar, menus and shortcuts. With Liquify, you can smoothly nudge a shape into something entirely new. The most common – and controversial – application of this technique is to reshape the bodies of models for fashion magazine photo shoots, but it can be used for almost anything – including creating a caricature of a rhinoceros!

You begin by creating a rough cutout of the rhino and copying it to a new layer, so you can reshape it without affecting the pixels in the background. Once done, you can get stuck in with the Liquify command. The trick is to emphasize the natural shape of the animal, so that at first glance you can't quite put your finger in why it looks a little odd...

# **STEP BY STEP** BOX CLEVER

Create a playful creature caricature using the Liquify filter



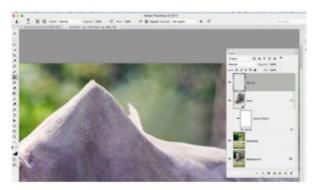
#### **01** ISOLATE THE ANIMAL

Paint over the animal with the Quick Selection Brush (if it picks up any background, hold Alt and paint to subtract). Once you have a selection, go to Select> Refine Edge, increase Radius and check Smart Radius to improve it. Set Output to: New Layer. Hit OK.



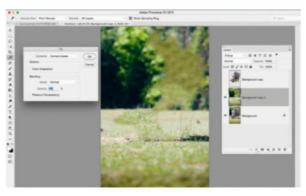
#### **03** RESHAPE THE BODY

Right-click on the top layer and 'Convert to Smart Object'. Go to Filter>Liquify. Use the Forward Warp tool and a large brush size to nudge the edges of the animal into whatever shape you like. The Forward Warp tool is most effective with lots of short pushes.



# **05 TIDY THE EDGES**

There will be messy patches around the edges of the animal. Click on the Create New Layer icon in the Layers panel and grab the Clone tool. Set Sample: All Layers in the tool options, then zoom in, hold Alt to sample the nearby background, and clone to tidy up.



#### **02 FILL IN THE BACKGROUND**

Go to the Layers panel, highlight the bottom layer and hit Ctrl+J to duplicate it. Ctrl-click on the rhino layer's thumbnail. Go to Select>Modify>Expand and set 15px. Go to Edit>Fill and choose Contents: Content-Aware to create a rough backdrop minus the rhino.



#### **04 ANGLE THE DETAILS**

Continue pushing pixels with the Liquify tools. You can take the effect as far as you like, perhaps by making the details, like the eye here, more angular. If any areas go wrong, rebuild them using the Reconstruct tool in the Liquify toolbar. Hit OK when you're happy.



# **06 FINISHING TOUCHES**

Pick the Spot Healing tool, set to Sample All Layers, and paint to remove any messy spots. Finally, with the top layer highlighted, click on the Create Adjustment Layer icon in the Layers panel, pick Curves, then plot an S-shaped curve to boost the colours slightly.

# PET PROJECT

We've provided the start image for this project, but if you'd like to experiment on one of your own images, why not take a pet portrait? Pets make excellent subjects for photography, as they don't mind having a camera pointed at them and — with dogs or cats in particular — it's easy to coerce them to capture dramatic action poses.

# QUICK TIP!

Liquify can be applied nondestructively to a Smart Object layer so that the filter remains endlessly editable

NEXT MONTH ADD SNOW

PhotoPlus



# THE MISSION

To use masks to select areas for adjustment

Time needed

10 minutes

Skill level

Intermediate

**Kit needed** Lightroom

# Behind the mask

**George Cairns** shows you how to use Lightroom's Adjustment Brush to create masks for precisely selecting areas for tonal adjustment

here are a whole host of controls to make global adjustments to your images but, more often than not, you may only want to target certain areas within a scene. For this you can use the Adjustment Brush. This tool enables you to selectively apply Exposure, Clarity, Brightness, and other adjustments to images by painting over the specific area in the photo that you want to adjust. In this image it's ideal for dodging some dark standing stones, while burning more detail into the brighter sky. By altering the size, softness and

flow of the Adjustment Brush, you can target and tweak the tones of specific objects with precision.

When you click on a photo with the Adjustment Brush you place an edit pin. This pin records the position and strength of all the tonal adjustments you make. Thanks to edit pins, you can make multiple adjustments to a photo and then click on a pin to finetune its effect at any time. If you click on a pin and drag to the right, you can increase the value setting of each associated slider to, say, brighten the image more or boost the contrast more. Drag left on a pin to reduce the slider

settings. By moving the mouse over a particular pin, you can see a red mask overlay that indicates the area that is being adjusted by that pin. The Adjustment Brush strokes we used to lighten the stones were fairly soft and imprecise. It would be quite easy for the brush tip to stray over the background and lighten the sky or ground. So in this tutorial we'll show you how to use Auto Mask to dodge and burn with much more precision, so you can lighten the complex jagged edges of the dark rocks in our starting image without blowing out the background details.

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**LIGHTROOM** 

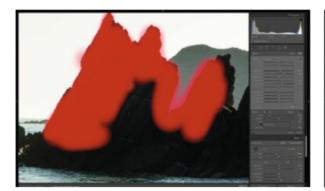
# **STEP BY STEP** EDIT WITH MASKS

Create a mask for more precise selective adjustments



#### **01 IMPROVE THE TONAL RANGE**

Import mask\_start.dng into Lightroom and click on Develop. The histogram graph doesn't quite stretch to the far left. Drag Blacks to -24 and Whites to +18. Push Clarity to +30 to increase the contrast. The colours are rather weak, so push Vibrance up to +49.



#### **03** ACTIVATE THE MASK

Hover the cursor over the edit pin to see a red mask overlay indicating the edited areas. To turn the overlay on permanently, tick the Show Selected Mask Overlay box at the bottom-left. Some of the Adjustment brush's strokes have strayed over the background.



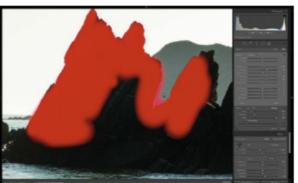
# **05** USE AUTO MASK

Keep Auto Mask active as you continue to paint around the edges of the dark rock – it won't select the lighter background details – but turn it off when painting inside the remaining sections of the rock. Turn off the mask overlay to see the lightened rocks.



### **02 GET SPECIFIC**

For the underexposed rocks, pick the Adjustment Brush (press K), click Effect, choose Dodge (Lighten). Set Exposure +0.43, Contrast +34, Shadows +24, Clarity +26, Flow 100. Zoom in to 1:2 magnification. Click to put a pin on a rock and paint to reveal detail.



#### **04 ERASE THE UNTIDY AREAS**

To tidy up the mask, go to the Brush section and click Erase. Set Size 10, Feather 21, Flow 100. By default the Auto Mask box is ticked, so the brush accounts for contrast changes, protecting the lighter background from the adjustment when you paint the rock edges.



#### **06 ADD THE FINISHING TOUCHES**

Boost Shadows to 44 to reveal even more texture, then click Done. Click on the Before and After icon to see the effect of your adjustments. Lightening the rock has revealed some sensor spots. Use the Spot Removal tool (see issue 119) to replace them.

QUICK TIP!
In the Brush
section, click on
A to access your
original Adjustment
Brush settings

# TOOL OPTIONS

There are a number of options relating to the Adjustment Brush, and while Size is rather selfexplanatory, the options below are worth knowing. The Feather adjustment creates a soft-edged transition between area you've applied the brush to and the surrounding pixels. The amount of feather controls the distance between the inner and outer circle of the brush. The Flow controls the amount of the adjustment that is applied and the Density is the amount of transparency in the stroke. If you tick Auto Mask, this will confine the brush strokes to areas similar in colour.

NEXT MONTH

PhotoPlus





Timothy Allen is an award-winning travel photographer who arrived at his career via an unconventional route. He talks to David Clark

OR PEOPLE who love exploring the world and its diverse range of people and cultures, being a travel photographer has to be the ideal way to make a living. It's certainly the one job

Timothy Allen wanted to do more than anything else. Since leaving the world of news photography more than ten years ago, he has travelled widely around the globe, won numerous awards and created a portfolio brimming with stunning images.

Yet Allen didn't initially set out to become a travel photographer and, as he explains, his journey to this sought-after job was dependent on a dash of good fortune supplementing his natural enthusiasm and photographic skills...

# Travel's a big part of your life. When did you start?

I first went backpacking after I finished a degree in Zoology at Leeds University. As part of my course I did a research project with a bunch of friends and six of us went travelling in Indonesia. Backpacking really opened my eyes to travel. While in Sulawesi we met an indigenous tribe that

# ONE FISHIN'

Allen photographed Sulbin, a free diver who can hold his breath for long periods, hunting for fish in Sabah, Malaysia

 Lens
 Canon EF 16-35mm f/2.8 II USM

 Exposure
 1/1300 sec, f/5, IS0640

# THECANONCONVERSATION

# I just quit my job and took off. I ended up travelling from one end of the Himalayas to the other

hadn't really had contact with the outside world before. I was travelling for about three years in total and it became obvious to me that this is what I wanted to do.

# Did you take photographs while on your travels?

I took some pictures on the trip with an old Fuji 35mm film camera, but at that time I had absolutely no inclination to be a photographer. When I was growing up, becoming a pop star, model or photographer weren't available career options. Nobody ever talked about those kinds of things. I went to a school that was setting you up for a normal job that you'd do for life, probably in the city of London. It took quite a few years of deconstructing my personality before I realized I might actually be able to do photography as a job.

# How did you get into it?

After I came back from Indonesia I went to live in Herefordshire and I started a night course in photography at a local Art & Design college. During this time a woman came to the college to give advice. She saw some black-and-white photos I'd taken and said I was on to something. She called a friend of hers, Judah Passow, who was the founder of the Network agency. He told me to see the picture editor of the Sunday Telegraph, who asked me to shoot ten portraits and come back in a week. I did, and after that he started to give me shifts of two or three days a week on the paper. At that point I moved to London.

# Was working as a freelance photographer difficult back then?

There was no internet to tell you what to do. So you literally had to track down other photographers, cold call them and ask, "Who do I need to see?" Then you'd have to call picture editors and show them your portfolio. If you were lucky you'd get a call to do a shift a few days later. The Holy Grail was working on a





broadsheet and I literally walked into the *Sunday Telegraph* office and, within a week, I had a job. After that, I started working for lots of other papers. Within a year *The Independent* asked me if I wanted something more reliable and I worked exclusively for them as a news photographer for about six years.

# How did you make the move into travel photography?

When I started, working for national newspapers or magazines was great; it was the pinnacle of what I was aiming for. But after six years I wasn't that bothered about it. I wanted to be travelling hard, not covering politics, I wanted to get out and do real *National Geographic*-type travel. I had money I'd

saved up and so I just quit my job and took off. I ended up travelling from one end of the Himalayas to the other, over about two years.

# Did anything else prompt you to make that decision?

The tipping-point for me was when the Canon EOS 5D came out. That camera was a game-changer. Prior to that I was a Nikon user and there were no full-frame digital cameras out there. But the 5D was small, full-frame and it could take great images, so I could go out and shoot exactly what I wanted. When I came back, it was the fledgling internet age and I put up pages of pictures on my website. They were seen by some BBC researchers, which started a dialogue that led to me



being given a two-year contract on the documentary series Human Planet.

#### How did you talk them into it?

The researchers initially contacted me looking for story ideas. I then tapped them up and said this project sounds amazing; do you have a project photographer shooting all the publicity images? They said they didn't. The Natural History Unit has never done that in the past, because it's expensive to get a cameraman and photographer on a shoot. But Human Planet was about humans and so it was far more predictable. It was quite easy for me to cover as many of the stories as I could without it costing them a huge amount of money.

#### When did you start to shoot video?

I did that about halfway through shooting Human Planet. For the first year we were shooting video with the Panasonic VariCam, but when the 5D Mark II came out I got one and it blew everyone away. Suddenly I could shoot video simply and easily, and that's when a lot of people, myself included, started dabbling with it and now it's quite a large part of my work.

## Would you have moved on to shooting video anyway?

Shooting video is a double-edged sword: it's a very good medium for telling stories, but getting the stories is far more tedious. With photography you can walk into a situation and work almost undercover, but with film you have to re-shoot things and do reverse angles and cutaways and all that stuff. It's far less fun and you have far less time to enjoy what you're doing because the workload is huge.

## What camera body do you use now, and any plans to upgrade?

I use the Canon EOS 5D Mark III but I'll be updating soon. I'm happy with the Mark III and it gives me great images. I've tried Nikon and just don't get the warmth out of them that I can with Canon. I've used Canon for so long it's almost like an extension of my hand. I shoot manually, I don't use any auto-exposure modes and my fingers move intuitively. The important thing for me is the camera's low-light capabilities, and the 5D Mark III gives me exactly I want in low light. I reluctantly upgrade to the new version of the 5D each time, then, in hindsight, I'm glad I did.

#### And what lenses do you use?

I've shot with the same lenses for many vears. The 50mm f/1.2 and 85mm f/1.2

# **INQUISITIVE CHILDREN**

Allen photographed this playful group of children looking through the windows of a building in River Gee, Southern Liberia

Canon EF 85mm f/1.2L II USM

**Exposure** 1/250 sec, f/5.6, IS0640

#### FOOTBALL AT SUNSET

This atmospheric shot shows silhouetted boys of the Mizo people, playing football on a dusty pitch in Mizoram, Northeast India

Canon EF 85mm f/1.2L II USM

1/3200 sec, f/9, ISO200

# CHIMBU PEOPLE

In the central highlands of Papua New Guinea, members of the Chimbu tribe wear their traditional skeleton body paint

Lens

Canon EF 50mm f/1.2L USM

Exposure

1/5000 sec. f/1.8. IS0125

 $^{\prime}$  The 5D was small, full-frame and took great images, so I could go out and shoot exactly what I wanted

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# STORY BEHIND THE SHOT



# Boy on Kibarani dump

Timothy Allen tells the story behind this arresting image of a boy he found sleeping on a huge mound of rubbish

"As part of my work on *Human Planet*, I was shooting a story about a family who survived by finding things on the Kibarani rubbish dump outside Mombasa," says Timothy. "I was there for five days. One evening, I was shooting a photo of the rubbish dump at dawn and

suddenly realized there was a dude at my feet. He blended into his surroundings. I don't normally like taking someone's picture without their permission, but he was asleep.

"I had a 16-35mm lens on the camera, set it to 16mm and held the camera above him pointing downwards. I didn't even look through the viewfinder. I know what I can get with a wide-angle, so I just autofocused, knocked a few frames off, then just left him in peace. He didn't know anything about it. The black-and-white version of this image won an award, but I think the colour version is better."

are the ones I most often use. The 16-35mm f/2.8 is always hanging around somewhere, but if I've got the time I'll use a prime lens. I also carry the 200mm f/2.8 and the 400mm f/5.6. The differences between primes and zooms are becoming a bit niggly these days because of the way people are consuming these pictures. Most people are looking at them on a phone, let alone a computer screen, so the difference is negligible. It's rare that images are printed up.

# Do you spend much time processing your images?

I spend a fair amount of time on it. For me, it's part of the image-making process and when I'm shooting something I'm thinking about what I can get out of it in post. However, I think we're getting to the point where there's so much capability in post that too many people are relying on it and it makes pictures looks unrealistic. It's not what real life looks like. I use Photoshop to the degree I would have used an enlarger. I deal with every part of the photo separately, masking areas off and making them punchier.

#### Do you shoot Raw images?

No, I only shoot JPEGs because I shot them for years as a news photographer and I got quite good at getting the exposure right. I like the look of the JPEGs I get out of the camera. These days, some news agencies insist that





photographers shoot JPEGs because you can't over-process the images. It's also good training because it's not so forgiving and if you screw up your exposure you can't bring it back in post.

# How do you feel about today's camera technology?

There's so much new kit now it's overwhelming. This morning I'm buying a drone for the new 5D and it's incredible what this thing can do compared to ten years ago. Then, it would have cost ten grand to get a shot, and now I can do it

with my own personal piece of equipment. There are so many little gimmicks you can get now that I'm starting to go back to just using one camera body and a fixed lens. Drones are so good these days that anyone can shoot incredible aerial images, whereas it used to be a skill ten years ago. What not everybody can do is get a great picture and a great story.

## After all your travels, what's been your favourite place to visit?

I've been a long-time admirer of Mongolia

🗓 DOGON WOMAN

A woman shelters from heavy rain under a thatched roof. This shot is from a series on the Dogon people of Mali, West Africa

Lens Canon EF 200mm f/2.8L USM Exposure 1/250 sec, f/2.8, IS0640

**©** EAGLE HUNTER

A portrait of Shohan, one of the Kasakh people of Western Mongolia, who train golden eagles to hunt for them

 Lens
 Canon EF 85mm f/1.2L II USM

 Exposure
 1/640 sec, f/4.5, IS0640

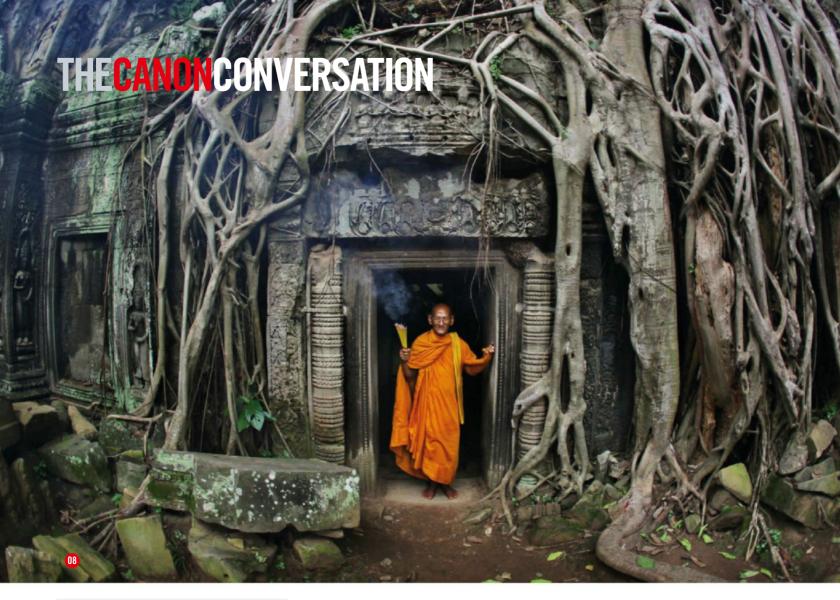
WODAABE MEN

The nomadic Wodaabe people of Niger at Gerewol, where men wear elaborate costumes and makeup to attract women

Lens Canon EF 16-35mm f/2.8 II USM

Exposure 1/1300 sec at f/2.8, ISO 640

I only shoot JPEGs. I shot them for years as a news photographer and I got good at getting the exposure right



#### TA PHROM MONASTERY

Allen photographed Kong Di, a 75-year-old monk, in Angkor Wat, Cambodia. Ta Phrom was a location in the film *Tomb Raider* 

Lens Canon EF 15mm f/2.8 Fisheye

Exposure 1/125 sec. f/2.8. ISO640

#### SCHOOL RUN

Children walk to school in the mountainous Zanskar region of Ladakh, India. The route takes them along the frozen Zanskar River

Lens Canon EF 16-35mm f/2.8 II USN
Exposure 1/5000 sec, f/9, IS0640

#### MAN ON A WIRE

A fisherman crosses an extremely turbulent Mekong river on a precariouslooking wire in Laos, Southeast Asia

 Lens
 Canon EF 400mm f/5.6L IS USM

 Exposure
 1/8000 sec, f/5.6, IS0400

Countries like
Bulgaria, Romania and
Macedonia excite me
because they're pretty
much unknown

and have been there many times over the years, maybe too much. The places I like now are the ones that are off most people's radar. Countries like Bulgaria, Romania and Macedonia excite me because they're pretty much unknown. There are tons of great things happening there and nobody, apart from local photographers, are reporting on them. In the world of travel, there are thousands of people shooting the same things over and over again. The pictures look lovely but there's no originality to them. As a traveller, I'm looking for original content that's also interesting.

## Is most of your photography now self-assigned?

Since I did *Human Planet*, work now comes to me and I will think something up, then go and do it. When I shoot an editorial story now I have no intention of selling it, because there's really no money in doing that any more. I use it to publicize my own brand, which gets me all kinds of other work. It's important to shoot the great images of faraway places because it keeps everything rolling along. In the past it would have been my income, but now I concentrate on completely different things while maintaining a high-profile portfolio.

#### What other things do you do?

My company makes money in various different ways, and one of them is running expeditions for photographers. We've been doing it for four years now. It's basically the same process as organizing a film shoot, but instead of taking a crew along we take the clients. It's a nice way to work because you get the pleasure of doing those things without the pressure of producing a film. We use the same fixers and setup, and it works pretty well. We run three trips a year and they always sell out within a few days of them being announced.

## How has your work changed since you started as a photographer?

There are far fewer jobs in the kind of work I used to do. Twenty years ago there were 15 or more staff photographers at *The Independent* and there are none now. I got out of that kind of photography when it was still okay and I've watched it collapse ever since. After I left editorial, I worked on a couple of long-term projects and when they were finished I contacted some people and flashed some ideas at them. It was incredible what had happened while I was away. Even magazines such as *National Geographic* had cut budgets immensely. *National* 





Geographic Traveller offered £500 for a complete story, but you had to shoot it first. It's difficult to make a living with that kind of journalistic travel work now.

What advice would you give aspiring photographers?

Get a job you love and make photography your hobby — that's the way to get to do things you really want to

I don't know what advice I'd give someone getting into the business now. It used to be quite simple. Now I often tell people, get a job you love and make photography your hobby, because that's the way you're going to get to do the things you really want to do. The photography trips I run are basically full of enthusiasts who have a job and then can afford to do those kinds of things. And they're all getting great experiences – better than your average working photographer.

# Your pictures are uplifting – do you like giving a positive view of the world?

Absolutely. I come from the world of photojournalism, and in that world the



PROFILE

### Timothy Allen Travel Photographer

Allen was born in Tonbridge, Kent, in 1971. He attended Leeds University, where he completed a BSc in Zoology. After a period of travel he took a part-time diploma in photography in his late 20s.

He freelanced for national newspapers before working as a news photographer for *The Independent* for six years. He was in charge of stills photography on the BBC series *Human Planet* from 2009-2011.

He has won numerous awards for his work, including six Picture Editors' Guild Awards and 17 Travel Photographer of the Year commendations, plus the competition's top prize in 2013.

**Next issue:** Wildlife and *Big Cat Diary* photographers Jonathan and Angela Scott

way I work now would be frowned upon. Photojournalists tend to look for hardship, strife and conflict, but I do the opposite. Yes, there are terrible things happening in the world, but there are also great things happening. There are plenty of people highlighting the terrible things. I used to believe a great way to influence people was to kind of scare them, but now I think it's better to inspire people.

To see more of Timothy's photography, read about his workshops and buy prints, visit www.humanplanet.com/timothyallen. For latest news, see Timothy's Facebook page: www.facebook.com/timothy.allen

# PHOTOSTORIES

Photo essays from **PhotoPlus** readers and professional photographers alike



One of the great things about photography is being able to share your view of the world. This issue, why a swamp can be a thing of beauty, and photographing one of England's most picturesque cities after dark...

We want your photos and stories! For your chance to show off your images in *PhotoPlus*, send three to five high-resolution JPEGs, along with a brief synopsis – explain why you took the shots, the location, whether they're part of an ongoing project or a one-off shoot, and anything else unusual or interesting. Also include Canon DSLR, lens and exposure details.

#### Email

photoplus@futurenet.com

#### Online

www.facebook.com/photoplusmag www.twitter.com/photoplusmag

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.......



# Swamp rock

Taking a few days to escape to the country and capture the breathtaking beauty of the unlikely sounding Dunns Swamp

NAME: Fran Rein
LOCATION: Wollemi National

Park, Australia

MISSION: Mention Dunns Swamp to anyone who hasn't been there and they invariably ask why on earth you'd want to go, so my aim was to demonstrate the beauty that belies the name of this place

KIT: Canon EOS 5D Mark III, Canon EF 17-40mm f/4L USM, Canon EF 70-200mm f/4L IS USM, Canon EF 50mm f/1.4 USM, Manfrotto 390 Series tripod and head, Cokin ND grad filters

www.redbubble.com/fran53

espite the rather uninspiring name, Dunns Swamp is a beautiful spot hidden in the Wollemi National Park, 230km northwest of Sydney, Australia. Tucked away in the hills, it is a great place to simply relax or go bushwalking, birdwatching, kayaking, swimming, fishing – or all of the above...

Dunns Swamp, to which the local indigenous

Australians refer to as Ganguddy, is part of the Cungegong River, dammed in the 1920s to supply water by pipeline to a nearby – but now defunct – cement works. The result is a clear, placid, reedlined... well... swamp, which is enclosed by 200-millionyear-old sandstone rock formations. I took my camper van and camera gear to the swamp for a few days in March, on the first weekend that the weather let us know

### YOUR **PHOTO STORIES**



## Each morning the air was still and cold, with a wonderful steam of fog rising from the water

we had left summer behind, so the mornings were quite crisp. My aim was to set up the camper van so I could simply fall out of bed for the sunrise. Each morning the air was still and cold, with a wonderful steam of fog rising from the water and, with my sturdy Manfrotto and ND grad filter, I was able to capture the mist drifting slowly by in the golden light. I still like to use filters as I don't have an enormous amount of patience with the processing side of things, preferring to be outside taking photos instead.

In the late afternoon I protected my camera in a dry bag and kayaked to a cliff face I had spied earlier in the day, and where I predicted the sun would highlight the sheer, sandstone cliffs surrounding the swamp. Following the afternoon shoots it was nice to settle down in front of a roaring fire with a local red, knowing that you've packed some photography, bushwalking, kayaking and birdwatching all into one day.

I hope I have captured the serenity of the area and the grandeur of the surrounding rock formations, which make Dunns Swamp such a special place, even if its name belies its beauty.

#### FOG ON THE ROCK

I used my telephoto zoom to foreshorten this view of an interesting rock formation on the far side of the swamp

Canon EF 70-200mm f/4L IS USM

Exposure 0.6 sec, f/16, ISO100

**CLINGING ON** 

While in a tiny canoe I clung tightly to my camera for this shot of a hardy eucalypt clinging tightly to the clifftop

Canon EF 17-40mm f/4L USM

Exposure 1/200 sec, f/7.1, ISO100

**STORM BUILDING** 

The clouds and their reflections suited a symmetrical format

Lens Canon EF 50mm f/1.4 USM

**Exposure** 1/160 sec, f/9, ISO400

# **PhotoPlus** FEEDBACK

Morning mist is typical in autumn, where the temperature is pleasant during the day but drops significantly overnight. This causes moisture in the air to form pockets of fog as the temperature vises again.

Having a few days to explore an area means you can take the time to discover a range of possible shooting locations that you can return to later on if the weather conditions or light aren't quite perfect.

**PhotoPlus** 77 The Canon Magazine



### PROJECT INFO



**NAME: Matt Hayward** 

LOCATION: Canterbury, Kent, UK

MISSION: My goal was to capture all the detail and the incredible lighting of the city at night

KIT: Canon EOS 760D, Canon EF 24-105mm f/4L IS USM, Slik 88 Black Diamond tripod, Benro Ranger Series 400N backpack, Zomei UV filter, Canon EOS RS-60E3 remote

www.facebook.com/ matmanphotography

# **Canterbury tales**

Taking the time to wander around one of the country's most stunning cities, capturing every fantastic sight possible

fter returning home from work one day I grabbed my camera gear and jumped into the car to head to the wonderful and historic city of Canterbury. Living not too far away, I reached my first destination within 45 minutes. I began at the main medieval wall that circles the city. My eyes lit up when I noticed a monument on top of a steep hill, which gave me a fantastic view of the city, including the spectacular and world-famous cathedral.

I fixed my camera to my tripod, and sat there, enjoying the view, while setting a

30-second exposure. After a few attempts I was happy with the results and decided that it was time to move on.

I headed to the city centre to attempt a shot I had envisaged a few weeks earlier. I have a passion for night-time photography - the views, the peace and the outstanding results from my trusty kit - and there it was in front of me, the view I had pictured all lit up. The time was now around 9.30pm, so it was nice and dark. I was amazed by the colours and sheer detail that the camera was able to capture. I sat on the cold cobbled floor while my camera was sat low to the ground on a

tripod to capture the reflections from the lights of the shop windows, which seemed to make the cobbled stones really stand out. The biggest problem was that Canterbury always tends to be busy, so timing was key. There were a few passers-by, and once a couple disappeared out of sight I took the shot.

After getting a few strange looks from people as I sat on the floor I headed to the lower part of Canterbury, to an area known as Westgate Towers. I couldn't believe my eyes; there were so many visual delights here to capture, including the added bonus of the traffic giving some rather



### YOUR **PHOTO STORIES**



nice light trails. Funnily enough, people tend to slow down once they see a camera on a tripod, which made me chuckle to myself.

Photography is like an addiction to me; I'm always thinking what's next and where to go, and this place was definitely hitting the spot. Once I was happy with my results, I started to work my

way back. From the corner of my eye I spotted a fascinating sculpture of a large iron face with lovely ground-level lighting. So out came the tripod once again, and a few more shots were fired. This really was the icing on the cake for me. I could have easily stayed there all night, but it was time to head home. Next stop, London and bed!

The biggest problem was that Canterbury always tends to be busy, so timing was key

CANTERBURY CATHEDRAL

Shooting the cathedral in its full glory from my high-up vantage point

Lens Canon EF 24-105mm f/4L IS USM

**Exposure** 30 secs, f/13, ISO100

THE GOLDEN STREET

Capturing the lights glimmering off the cobbles with a low angle

Lens Canon EF 24-105mm f/4L IS USM

**Exposure** 15 secs, f/13, ISO100

THE WESTGATE TOWER

A busy tower full of detail that's accentuated by traffic light trails

Lens Canon EF 24-105mm f/4L IS USM

**Exposure** 30 secs, f/13, ISO100

IRON FACE

The uplighting lent a dramatic feel to this iron statue

Lens Canon EF 24-105mm f/4L IS USM

**Exposure** 5 secs, f/14, IS0100

# **PhotoPlus** FEEDBACK

Shooting a popular tourist destination at night is a great way to capture some fantastic sights of the city without crowds of people ruining your shots.

Suss out suitable locations earlier in the day so you have a good plan for your night-time shoot.

Setting a narrow aperture, as Matt has done, turns street lamps into star-shaped bursts of light. See page 84 for more night photo tips...

The Canon Magazine PhotoPus 79



# **Rob Cottle**

Wildlife photographer Rob Cottle likes to travel light and relies on his beloved 100-400mm most of the time, along with a few other key essentials. . .

know we wildlife photographers have been dreaming about Canon announcing a 10-600mm f/2.8L lens that weighs a kilo, but until then we will have to come up with other ways to reduce the weight in our camera bags.

I've been honing my bag to reduce weight, partly down to a 'dicky' back, but also as it's much more enjoyable to walk around without feeling like there's a small hatchback on your shoulders. As a lucky consequence, I've found that

carrying less gear concentrates the mind to the task at hand, rather than being in two minds when faced with an opportunity. For the majority of occasions I only take the 7D Mark II, 100-400mm II, a 1.4x III Extender and an 18-55mm for those situations when I just can't help myself and have to take a landscape. Other essentials include a spare battery, head torch, microfibre cloth and fingerless gloves for when I forget my main pair.

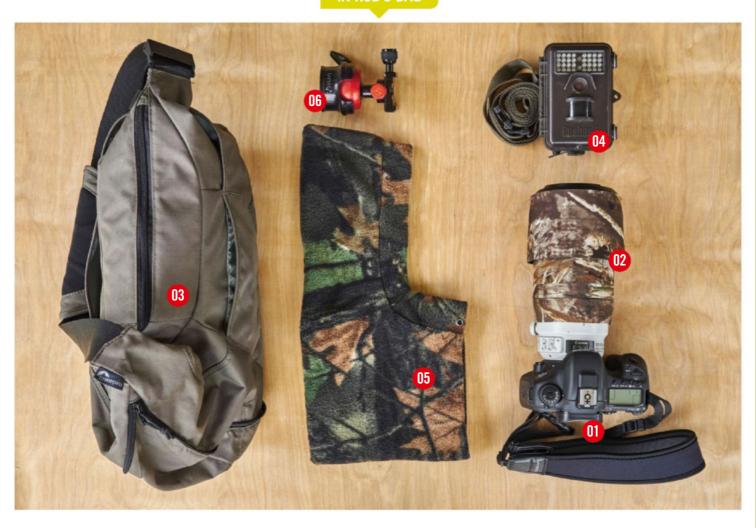
I keep processing as simple as possible with Capture One; I don't want to spend too long working on images as there are always so many, and it clogs up the 'mojo'. Everything is shot in Raw, partly to retain detail, partly to avoid adding to the list of things to check in the field and partly in case I cock up! I'm a huge champion of working around your local area where you can hone your photography and think of new ways to shoot a subject. You get to know your scene, light, and when's best to visit. I also believe that photographing a common subject in fabulous light is way better than an exotic species in dull light. •



I'M AN image maker, workshop taker, critter lover and sometimes music creator based in South Wales. My main love is nature photography, but I'm partial to capturing foreign travel images, given the opportunity. I like to emphasize the storytelling aspect of photography in my workshops, rather than the technical side. There's nothing better than discovering new wildlife sites using trail cameras, research and patience. Remember, it's all the frustrations that make achieving shots so much better (well, sometimes). Enjoy, wonder and conserve, but please leave everything as you find it.

www.robcottleimages.co.uk

#### **IN ROB'S BAG**



# **Canon EOS** 7D Mark II

WEB: www.canon.co.uk

**WHILE** looking to upgrade my kit a while back I obviously wanted the best tool I could afford, and at the time the 7D Mark II was hands-down the number one APS-C body, especially with its autofocusing speed. I also love using the joystick to shuffle through focus arrays, and I would not want to do without the three Custom settings on the Mode dial, which I use all the time.

### Canon EF 100-400mm f/4.5-5.6L IS II USM

WEB: www.canon.co.uk

**THIS** is a great wildlife lens – sharp at the long end. where it's wanted. and versatile to zoom back when needing to grab more of the environment or fit in your subject when it becomes too close. The only disadvantage is that, as it's f/5.6 at the long end, when using a 1.4x Extender only the central focus point is active on the 7D Mark II.

## Lowepro **Passport Sling**

WEB: www.lowepro.co.uk

**ALL MY** day-to-day gear fits snugly into the Passport Sling, which is super light, comfy to carry and doesn't look like a typical camera bag. It happily takes my 7D Mk II with the 100-400mm attached (or does now, since I cut the inside pouch off at one end), as well as all my other essential bits and pieces.

## **Bushnell Trophy Cam**

## **Essential**

WEB: www.bushnell.com

**SCOUTING** and planning play a big part in my photography, and this trail camera makes finding wildlife that much easier. It can be strapped to a handy tree and is triggered by motion to record video or night-vision photos (you'll be surprised at what you can see in the early hours). Finding the best opportunities can be just as satisfying as taking the photo itself, and when you finally reap the rewards, it is that much sweeter.

# **Balaclava**

WEB: www.amazon.co.uk

**£8 FROM** Amazon (which included gloves and a hat; admittedly they don't fit but still, a bargain!). You don't need to become a camouflage fetishist to approach most subjects but the 'bank robber's friend' will take the shine off your head (especially for those of us with a less-thanhirsute disposition).

# UniaBall

WEB: www.unigball.eu

I'M NOT a great fan of the tripod, but when frequently shooting in low light, needs must and this sits atop my Giottos carbon fibre tripod. This is a great versatile head that replaces many styles of ball head and is fantastic for avoiding wonky horizons, which I previously always seemed to have (I had thought that maybe one of my legs must be shorter than the other).

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"Blows Photoshop Elements out of the water with its dazzling array of tools and effects. It's easy, intuitive and fun."

Best Budget Software for Portraits, N-Photo Nov 2015



New PortraitPro 15 is out now! The world's favourite professional portrait software now offers realistic makeup controls, wide angle (selfie) lens distortion correction, enhanced Child Mode, advanced skin colouring and tone correction, improved feature detection, and support for ultra high-resolution displays. You now have even more creative control and can show your subjects in their best light in seconds. Try it free at www.PortraitPro.com today!















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# **PhotoPlus**

# CANONSCHOOL

Your ultimate photographic reference guide to the complete Canon EOS DSLR system

### DIGITAL SLR ESSENTIALS

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Shoot after dark with our expert tips on skylines, fireworks, the moon and many other aspects of nocturnal photography





# PhotoPlus EXPERT

**MARCUS HAWKINS** 

PHOTO EXPERT

Marcus has been passionate about photography for more than 25 years. A former editor of our sister publication *Digital Camera*, he has written about photography for Canon and Jessops, and uses a Canon EOS 5D Mk III.



SOFTWARE **SOLUTIONS** 

Cut the clipping and make great monochrome images with our guide to black and white conversions in Digital Photo Professional



# **PhotoPlus** EXPERT

**GEORGE CAIRNS** 

**EDITING EXPERT** 

George Cairns has been writing image-editing tutorials for *PhotoPlus* since our first very issue, back in 2007. He uses a Canon EOS 650D and 70D, and writes for the Canon Professional Network newsletter.

### EOS S.O.S

Confused about macro depth of field or the new Dual Pixel Raw? Expert Brian solves more of your Canon problems



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# **PhotoPlus** EXPERT

BRIAN WORLEY

CAMERA EXPERT

Brian has unrivalled EOS DSLR knowledge after working for Canon for over 15 years. He now works as a freelance photographer and photo tutor in Oxfordshire.



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# **CANONSCHOOL**

# DIGITAL SLR ESSENTIALS

Welcome to Canon School. This issue we shoot from dusk till dawn, using flash and long exposures to light up the night



# After dark photography

Get to grips with making exposures in the dark thanks to our expert insight

n the UK at least, now is the perfect time of year to indulge in some nocturnal photography. The shorter days and relatively mild weather means that shooting at night is a pleasure rather than a pain.

Naturally, exposures are much longer when light levels are low, which can make it harder to take sharp shots. It's become something of a cliché to recommend a 'sturdy tripod' for general photography, but it's smart advice when it comes to photography at night. Exposure times can stretch for multiple seconds, even when the lens's aperture is at its widest setting, and to combat that you'll need to keep the camera rock-steady.

If your low-light exposures require shutter speeds longer than 30 seconds, you'll have to switch to Bulb mode (see Setting up your camera, right) and use a lockable remote release to keep the shutter held open instead of setting a shutter speed. But how do you know how long that will take?

One technique is to switch to Aperture Priority mode temporarily, and increase the ISO one full stop at a time (double the ISO to do this, from ISO1600 to ISO3200,

for example) until the shutter speed display stops flashing. How many stops did it take? Reset the ISO, switch back to Bulb mode and use that figure to work out by how many stops you need to slow the shutter speed. For instance, if it took an ISO increase of three stops, you'll need to increase the shutter speed by three stops: 30 secs to 60 secs, 60 secs to 120 secs, 120 secs to 240 secs. So, in this case, you'd need to keep the shutter held open for four minutes at your original ISO.

It's easy for street lights, illuminated buildings and other hotspots to become burned out during these sorts of exposure times, and even during much shorter exposures. So it's a good idea to bracket your exposures – in other words, take a sequence of shots that are shorter than your main one. You can then combine shots and 'paint in' lost details later.

A large degree of trial an error is required for night photography, as the camera's suggested exposure will be based on the metering system attempting to brighten up the scene, rather than a moody night scene, so we've suggested some starting exposures for subjects...



### ALL ABOUT **NIGHT SHOOTING**

**HOW TO SHOOT AT NIGHT** 

# Setting up your camera

Simple steps to take for successful shot

#### **Flash**

YOU CAN use flash to blast a foreground object with light and leave the background dark, or opt for 'slow-sync' flash, which combines a burst of flash with a slower shutter speed to record background detail as well. Aperture Priority mode uses slow-sync by default, but this can lead to blurred photos if the shutter speed becomes too slow. To avoid this, you can restrict the shutter speeds available to the camera using the Custom Functions menu.



### ISO

**YOU CAN** use a high ISO sensitivity to get faster shutter speeds, and in brightly lit areas of towns and cities this can make handheld photography at night possible – especially when twinned with an image-stabilized lens. But in order to reduce noise, achieve clean colours and exploit the dynamic range of the camera's sensor, there's no substitute for setting a low ISO, such as ISO400 or 800, and using a tripod.



### **Exposure mode**

IN MANY situations you can shoot in your preferred exposure mode and the camera will take a meter reading as normal. Take a test shot, check the histogram and make any exposure adjustments before taking another shot. If shooting in total darkness the exposure may run longer than 30 seconds, and '30' will flash in the display. You'll either have to increase the ISO, use a wider aperture to let more light in, or switch to Bulb mode and time the exposure yourself.



### **Aperture**

wide apertures mean more light to make an exposure. So lenses with fast maximum apertures, such as f/1.4, are a good choice for handheld night photography, as you'll be able to use faster shutter speeds for sharper pictures. Narrow apertures have benefits though: choose f/16 and points of light become stars...





# Right time, right place

Use the blue hour to create more evocative pictures

THERE WILL be some situations where you'll either want or need to shoot in the dead of night, but many scenes benefit from being shot during 'the blue hour' – the period of time after sunset of before dawn when the sky is a deep blue colour. Not only does it lead to more interesting pictures, it also makes it easier to come up with a balanced

exposure. Time it right and the meter readings for the sky and a floodlit building will be closer together, enabling you to record detail in each in a single picture. Arrive early and get set up during daylight as this will allow you to compose and prefocus your pictures more easily, as well as getting those blue hour shots.



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# Seeing in the dark

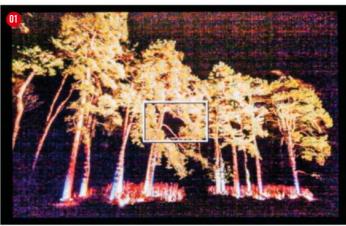
Try this trick to make manual focusing easier on the eye

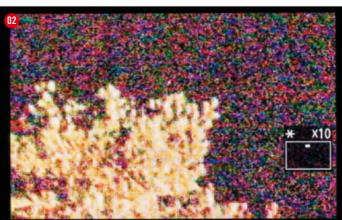
our camera will struggle to focus in the dead of night, but if you're using a tripod you can take advantage of the bright Live View screen to assist with manual focusing of stationary subjects. If the monitor appears dark after you've activated Live View, try increasing the ISO, opening up the aperture or selecting a slower shutter speed until you get a usable image. Alternatively, if you don't want to mess with the settings you've dialled in, briefly switch the camera to Bulb mode.

The picture can look decidedly choppy on the Live View screen when you're shooting in the dark.

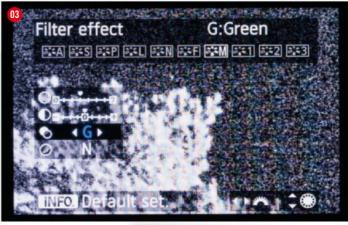
This sea of noise won't be recorded in the shot you take, but it can make it tricky to find the sweet spot when you're focusing manually, especially if you magnify the image.

One trick is to change the picture style to Monochrome and apply the green filter as this can make it easier to judge sharpness. Make sure you shoot Raw, so the image will still be recorded in full colour.









# Do you need some assistance?

Use a flash's AF-assist beam to help your camera see in the dark

IF YOU'RE close enough to a person or object, you can use the AF-assist beam of either a built-in flash or an external Speedlite to illuminate them and enable the camera's autofocus system to lock on. If you're relying on the internal flash to help out then a short pulse of pre-flashes will be triggered. This can be distracting and

it may cause people in the shot to think that you've taken the picture. A compatible external Speedlite will fire an infrared beam that's much more discrete. You may find that the flashgun continues to fire while the camera focuses. If this is unwanted, you'll need to dip into the camera's Custom Function menu and set

'AF-assist beam firing' to 'IR AF assist beam only'. If you find that the beam doesn't fire, check that it hasn't been disabled in the Custom Function menu on the camera or the Speedlite (if it's set to be disabled in the flashgun this will overrule any setting on the camera),



and that you're not shooting with AI Servo AF – you can only use the beam if the focus mode is set to with One Shot or AI Focus.

### ALL ABOUT **NIGHT SHOOTING**

#### **WHITE BALANCE**

# **Fixing colour casts**

How to remove ugly tints from artificial lights

hen you're taking pictures after hours you're often faced with mixed lighting. City

scenes, in particular, are a tangle of different light sources, from sodium-orange and LED-white street lamps to fluorescent office lighting and more. Faced with a scene like this, which white balance should you go for? After all, your camera can be set to one colour temperature at a time; if you choose a white balance to match the predominant light source, won't that make all the rest look wrong or sickly?

The best advice is to shoot Raw rather than JPEG as you'll be able to try different colour



temperature settings when you process your images later. You can then leave the camera set to Auto White Balance as this generally produces a balanced preview on the rear screen.

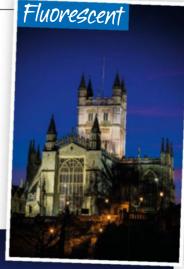
Shooting Raw also means you can apply different white balance settings to parts of an image using adjustment brushes and masks, as we've done in this example. First, we applied a Fluorescent white balance preset in Adobe Camera Raw to boost the blue hour feel, but left the floodlit abbey looking too cool. We then processed the same Raw file using Auto White Balance, which brought back the warmth in the stonework. The two images were layered in Photoshop, with the warmer tone painted onto the Fluorescent layer using a mask.

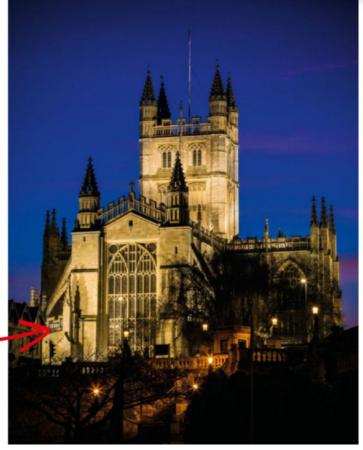


With the AWB image layered above the Fluorescent one, we Alt-clicked the Add Mask button on the Layers panel, then painted using a white brush to reveal the warmer stone



We used the HSL sliders in Adobe Camera Raw to reduce the green tinge on the near face of the abbey





# **School tip** Keep the noise down!

Reduce the noise from long exposures, but it takes time

**TO KEEP** image noise down it pays to keep the ISO as low as possible. But did you know that long exposures can lead to noisy pictures too? Your camera has a Long Exposure Noise Reduction function, which you'll find in the red shooting menu. You can set it to Auto or On, both of which apply noise reduction to pictures that have exposures of one second or longer.

It's a setting that permanently affects a Raw file, however, and in some cases can actually make pictures appear grainier. Worse, it can take the same time to do its thing as it took to record the picture, and you won't be able to take another shot until it's finished. That adds up when you're shooting for minutes at a time, and it eats up more battery juice too.



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# **CANONSCHOOL**

# SOFTWARE SOLUTIONS

Get to grips with Canon's free Raw image organizing, editing and sharing software — Digital Photo Professional 4



# **Better black and whites**

Create striking high-contrast monochrome shots with help from clipping warnings

ocial media is swamped with vibrant images vying for attention, whether that's on a Instagram feed or a Facebook wall. By dropping a black-and-white image into the mix you can make your work stand out from the crowd, even in a thumbnail. A well-processed monochrome image can also suit particular subjects. By throwing out the

scene's distracting colour information you can create contrasting greyscale tones that help the eye perceive contrasting shapes (such as the curved lines of the path and reflection of the tree in our image).

Making an effective mono conversion can be a challenge. If you simply desaturate the shot then you can end up with a drab wash of greyscale tones that lack contrast. Your PC's

monitor may not be calibrated correctly, so what looks like pure white on screen may print out as a dull grey.

Fortunately, Digital Photo Professional 4 packs enough tools to help you guarantee a mono print that boasts a striking contrast, featuring both white highlights and black shadows. We'll look at how the threshold clipping warning helps you ensure maximum contrast without

losing important detail. We'll also examine how the filter effect helps you lighten or darken specific greyscale tones based on the image's original colours. We'll also show you how to combine global exposure adjustments with selective tonal tweaks, so you can reveal detail where it's needed and overcome in-camera exposure problems, leading to a striking and effective mono conversion.

## **STEP BY STEP** ADD A SPLASH OF COLOUR

Use the Toning Effect filter to alter the mood by adding subtle colour tints



#### **01 DESATURATE THE SHOT**

Click our mono\_start.CR2 image file's thumbnail and choose View>Edit Image Window. Use our annotation's settings to desaturate the shot and adjust its tones to create a strong contrast with some clipped shadows and highlights.



#### **02 FILTER EFFECT**

Set the Filter Effect drop-down menu to Red; this darkens the blues of the sky, helping the lighter greyscale tones of the tree stand out more, and helps reveal subtle cloud texture and detail that was lost in the initial mono conversion.



#### **03 TONING EFFECT**

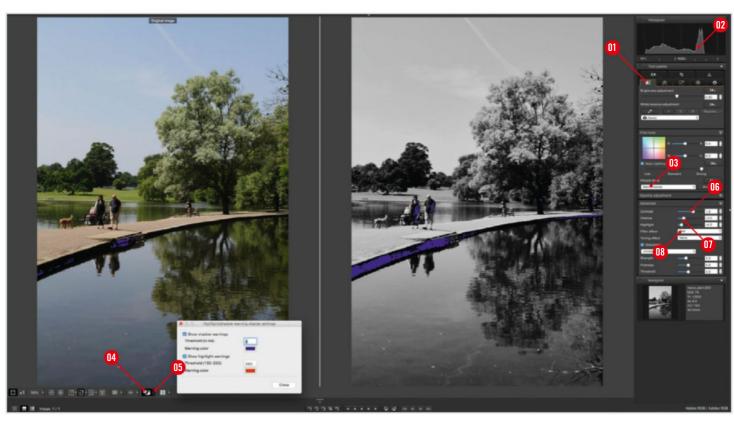
Experiment with different colour tints by using the Toning Effect drop-down menu. Green might suit a natural subject like our park scene. Sepia helps give a warmer, friendlier vintage vibe to the monochrome conversion.



**CANON DPP 4** 

# **HOW IT WORKS** HIGH-CONTRAST MONO

Ensure the presence of black shadows and white highlights with help from clipping warnings





#### **BASIC PALETTE**

The Basic image editing-panel provides a range of tools to help you make a striking high-contrast mono conversion of your colour Raw file.



#### **HELPFUL HISTOGRAM**

This tool is particularly useful for ensuring a black-and-white image has a healthy spread of tones, with shadows represented at the left and the highlights at the right. Our start image is underexposed, so the graph will be clumped more towards the shadows and midtones at the left of the histogram when you first open it. The edited image's histogram should look more like this, with a wider spread of tones.



#### **PICTURE STYLE**

Click this drop-down menu to access the Monochrome picture style. This removes all colour information so that only the greyscale tones remain.



#### **CLIPPING WARNING**

Click this icon to reveal clipped pixels. Underexposed shadows will appear as patches of blue. These areas will print out as pure black and be free of detail. Overexposed highlights will appear as patches of red. These areas will appear as pure white.



#### **DISPLAY SETTINGS**

Click this triangle to fine-tune the threshold of the clipping warning's settings. By default the threshold is wide, but we only want to be warned about the very darkest shadows and the brightest highlights. Set the Shadow Warning threshold to 5. Set the Highlight Warning threshold to 250. Now only shadows with a level between 0-5 will appear in patches of blue. Highlights with levels between 250-255 will appear as patches of red. This helps you discover the darkest and lightest pixels so you can restore detail where needed while ensuring a strong contrast.



#### CONTRAST

An effective mono conversion should have some black shadows and white highlights (or you'll end up with a drab wash of greyscale tones). Drag this slider right to create darker shadows and whiter highlights.



#### **SHADOW & HIGHLIGHT**

The Shadow slider enables you to selectively lighten the shadows and midtones in your monochrome conversions to reveal missing tonal details. The Highlight slider helps to claw back missing highlight detail.



#### **FILTER EFFECT**

By experimenting with various filter effects you can make specific objects stand out in the black-and-white version of the scene, based on the their original colours. For example, the Red filter darkens the blue sky, which helps reveal more subtle contrasting cloud detail.

### JARGON BUSTER

#### PICTURE STYLES

These in-camera presets change the way an image is processed to adjust its colours and tones. You can also alter a Raw file's picture style in DPP 4.

#### **THRESHOLD**

This term refers to the precise range of shadows (or highlights) that the blue (or red) clipping warning patches will appear in; reduce the threshold to show only the darkest or brightest areas.

### Can I use DPP 4?

Download the latest version of DPP from http://bit.ly/get\_dpp. Check the website to see if your DSLR is compatible with DPP 4 – you'll need your serial number to update. DPP 4 works with most recent Canon EOS DSLRs, but for older cameras you may have to use a previous version.

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The Canon Magazine PhotoPlus



- Professional Imagemaker Magazine, 2012





#### Circular Filters

#### ND1000 Our award winning 10 stop long exposure filter 🖈 🖈 🖈 - Photoplus

46mm	£24.95	62mm	£29.95	Best Value
49mm	£25.95	67mm	£31.95	in Photoplus
52mm	£26.95	72mm.	£32.95	
55mm	£27.95	77mm	£34.95	Big Stopper
58mm	£28.95	82mm.	£39.95	Group Test

#### **ND Fader Filters**

46mm £29.95 49mm £31.95 52mm £32.95 55mm £33.95 58mm £34.95	62mm£35,95 67mm£36,95 72mm£37,95 77mm£39,95	AP May 4 stars for quality & va
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ND	Filters	
32mm	Grads:0.3 0.6 0.9 1.2	

Sizes: 27 to 8	Grads:0.3	30.60.91.2	
46mm £13.95 49mm £14.50 52mm £15.50 55mm £16.50 58mm £17.50	67mm. 72mm. 77mm.	£19.50 £20.50 £22.50 £24.50 £29.50	★★★★ - Digital Came 5 stars in DC ND Group Tes

Circular Polarisers			Practical Photograph	
Sizes: 25	to 86mm		Ju	ne, 2016
49mm	£16.95	67mr	n	£19.50
52mm	£17.50	72mr	n	£19.95
55mm	£17.95	77mr	n	£22.50
58mm	£18.50	82m	mm	£24.95
62mm	£18.95	86m	m	£29.95

#### **UV Filters**

	Sizes: 25	to 105mm	
46mm	£12.50	62mm	£14.95
49mm	£12.95	67mm	£15.95
52mm	£13.50	72mm	£16.95
55mm	£13.95	77mm	£18.95
58mm	£14.50	82mm	£20.95

### **ND Grad Filters**

Sizes: 40	10 82mm	Grads:0.3	0.6 0.9 1.2
46mm	£16.50	62mm	£20.95
49mm	£16.95	67mm	£21.95
52mm	£17.95	72mm	£22.95
55mm	£18.95	77mm	£23.95
58mm	£19.95	82mm	£24.95

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Skylight Filters	fram £9.95
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#### Square Filters

#### **Pro Square Filter Holders**



#### **Pro Filter Kits**

Types: ND Soft, I	ND Hard, Full ND
Starter Kit: 1 filter	Filter Kit: 3 filters
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A Size Pro Filter K	it£44.95
P Size Pro Starter	Kit£34.95

#### P Size Pro Filter Kit 3x ND Fifth Cloth & W €49.95

#### **Square Filter Holders**

A Size Holder	£8.95
P Size Holder	£4.95
P Size W/A Holder	€4.95
Adaptor Rings	€4.95

#### Square Filter Kits ND Soft\*, ND Hard, Full ND

A Size Starter Kit	£24.95
A Size Filter Kit	£39.95
P Size Starter Kit	£24.95
D Size Filter Kit	C30 0F



#### Individual Square Filters

0.3 Full ND 0.6 Full ND 0.9 Full ND	£13.50 £13.50 £13.50	★★★★★ - Digital Photo, April 2014
1.2 Full ND	£15.95 £13.50 £13.50 £13.50 £15.95	0.3 ND Glass Pro         £29,95           0.6 ND Glass Pro         £29,95           0.9 ND Glass Pro         £29,95           1.2 ND Glass Pro         £29,95
0.3 Hard ND Grad 0.6 Hard ND Grad	£13.50 £13.50	Sunset Grad £13.50 Twilight Grad £13.50
0.9 Hard ND Grad 1.2 Hard ND Grad Circular Polariser	£13.50 £15.95	Black & White Filters         £13.50           4x Star Effect         £13.50           6x Star Effect         £13.50
Blue Grad	£13.50	P Size Diffusion Filter£12.50



.50	P Size 6-Stop Filter	£29.9
.50	P Size ND1000	£29.98

#### Lens/Camera Adaptors

Camera	Lens	£	Camera	Lens	£
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Canon EOS	Nikon G	£39.95	Micro 4/3	M42	£29.95
Canon EOS	Pentax K	£24.95	Micro 4/3	Olympus OM	£29.95
Canon EOS	Olympus OM	£24.95	Micro 4/3	Minolta MD	£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
Canon EOS	Leica M	£24.95	Micro 4/3	Sony Alpha	£34.95
Canon EOS	Canon FD	£44.95	Micro 4/3	Pentax K	£29.95
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
Canon EOS-M	C Mount	£29.95	4/3	Leica R	£22.95
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
Fuji X	Leica M	£29.95	Pentax	M42	£18.95
Fuji X	Nikon	£29.95	Pentax	Nikon	£44.95
Fuji X	Canon EOS	£29.95	Pentax	Sony Alpha	£44.95
Fuji X	Olympus OM	£29.95	Pentax	Canon FD	£44.95
Fuji X	Canon FD	£29.95	Sony Alpha	M42	£15.95
Fuji X	Con/Yash	£29.95	Sony Alpha	Minolta MD	£44.95
Nikon	M42	£24.95	Sony Alpha	Nikon	£44.95
Nikon	Canon FD	£44.95	Sony Alpha	Pentax K	£44.95
Nikon	C Mount	£32.95	Sony Alpha	Canon FD	€44.95
Nikon 1	M42	£24.95	Sony NEX	Canon EOS	£29.95
Nikon 1	M39	£22.95	Sony NEX	Nikon	£29.95
Nikon 1	Nikon	£29.95	Sony NEX	Sony Alpha	£34.95
Nikon 1	Canon EOS	£44.95	Sony NEX	Olympus OM	£29.95
Nikon 1	Pentax K	£29.95	Sony NEX	Pentax K	£29.95
Nikon 1	Leica M	£39.95	Sony NEX	Leica M	£29.95
Nikon 1	Leica R	£37.95	Sony NEX	Leica R	£29.95
Nikon 1	Con/Yash	£23.95	Sony NEX	Canon FD	£42.95
Micro 4/3	Canon EOS	£29.95	Sony NEX	M42	£23.95

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N	FW.
In-It Camera Wrap	.trom £8.95
Lens Pen	£4.95
Cleaning Kits	.trom £5.95
Dust Blowers	.tom £3.50
Cleaning Solution	£4.95
Memory Card Cases	29.95
Reflector Kits	£8.95
Rainsleeves Pack d 2	£5.95
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# Close up Lens Sets

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#### Close up & Macro



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Micro 4/3	£49.95	Sony NEX £49.95
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#### \*\*\*\*

#### Manual Extension Tubes

	Olympus 4/3£17.50 Sony Alpha£17.50
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#### Lee Filters

#### Lee 100mm system



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Big Stopper	£104.95
Little Stopper	£95.99
Landscape Polariser	£173.99

#### Lee Seven5 system Starter Kit. £109.00



ND Grads	£52.00
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Big Stopper	£65.00
Little Stopper	£68.00
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Deluxe Kit	£460.00



SW150 Mark II Holder

Mark II Adaptors	£89.95
Screw-in Adaptors	
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Lee SW150 system

£59.50 \*NEW\* Lee Filters 15-stop Super Stopper now available online! Seven5 system - £64.95 100mm system - £99.95 SW150 system - £129.95

# **CANONSCHOOL**

# EOSS.O.S

Our technical guru is here to help. No Canon conundrum is too big or small. Get in touch today at **EOSSOS@futurenet.com** 

### **PhotoPlus** EXPERT **BRIAN WORLEY CANON PRO** Brian is a freelance photographer and photo tutor, based in Oxfordshire. He has unrivalled EOS DSLR knowledge, after working for Canon for over 15 years, and is on hand to answer all your EOS and photographic queries



This armoured cricket was photographed in a studio with flash using a 100mm macro lens at f/14, but depth of field is minimal

### I have a 100mm macro, but DoF at 1:1 is tiny. Would a 50mm lens give more? **\**

Paul Unitt. Alcester

BRIAN SAYS... Macro lenses come in a range of focal lengths, however the key of all of them is having 1:1 magnification. You might think that a shorter focal length will give increased depth of field, but if you want to maintain the magnification you also need to change the distance between the camera and subject.

Each macro lens is capable of life-size magnification at different working distances, with longer lenses giving an increased working distance. But at minimum focus distance, depth of field for each lens works out almost the same for each given aperture. The only way to get more depth of field is to use focus stacking.



EOS 5D Mk IV's Dual Pixel Raw files provide additional capabilities for post-processing in Canon's Digital Photo Professional software

### **I** have the 5D Mk IV and shot photos with Dual Pixel Raw but can't open them in Lightroom. How can I access them? \\

Philip Clarke, Aberdeen

**BRIAN SAYS...** Dual Pixel Raw was introduced with the EOS 5D Mk IV, however, when the camera first went on sale, there were only two ways to process the Raw files; using the in-camera Raw processing or with Canon's Digital Photo Professional (DPP) software. After a few weeks Adobe updated its Raw processing software tools to support the EOS 5D Mk IV, so the latest Adobe Lightroom CC and Photoshop CC will open Dual Pixel Raw files and can process them, however none of the dual pixel capabilities are possible in Adobe's software at this time.

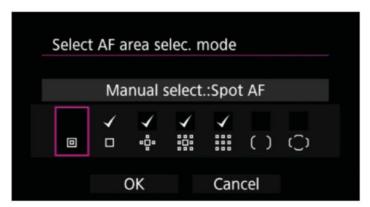


#### **Processing a number of Dual Pixel** Raw files in DPP is simplified with the batch-processing function

Currently the only software that uses the Dual Pixel Raw data is DPP 4.5 (see right). You could process your Raw files with DPP and make full-resolution 16-bit TIFF files to import into Lightroom.

The Canon Magazine **PhotoPlus** 

# **CANONSCHOOL**



The EOS 7D Mk II can have the AF area selection modes limited to the ones that you use most for faster operation of the camera

# Is it necessary to 'tick' all the AF area selection modes on my EOS 7D Mk II?

Maurice Kime, Stockport

**BRIAN SAYS...** The EOS 7D Mk II has multiple AF area selections that *can* be used. In the AF4 menu it is possible to limit those that can be selected when changing the AF area selections with the AF area selection lever. With up to seven AF area selections, it takes seven clicks of the AF area selection lever to go through all of them. I only have four of the seven options active on my EOS 7D Mk II, as this makes it much faster for me to switch between the different patterns and avoids me selecting an AF area mode I don't work with.

# Can I use Canon Extenders on my 70-200mm f/2.8L IS II USM and 24-105mm f/4L IS USM lenses?

Martin Young, Portsmouth

**BRIAN SAYS...** Canon Extenders are not compatible with all lenses; their design includes an optical element that locates inside the rear of the lens it is fitted to. Your EF 70-200mm f/2.8L IS II USM can use either Extender; the EF 2x Extender would make it a 140-400mm f/5.6, and the 1.4x would make it 98-280mm f/4. Either combination will still autofocus on EOS cameras, it is only when the maximum aperture is slower than f/5.6 that AF becomes difficult.

Your EF 24-105mm f/4L IS USM, however, is *not* compatible as the rear optical element is close to the

end of the lens and would impact with the front of the Extender. Kenko teleconverters use a different design and can be used with virtually all EF and EF-S lenses.

A Canon EF 1.4x Extender and EF 70-200mm f/2.8L IS USM was used to photograph this European Lynx



# How do I use the electronic level with Live View?

Alan Priest, Selby

BRIAN SAYS... The electronic level only displays when the AF Method in Live View is set to Flexizone Multi or Flexizone Single, however Face Detection + Tracking AF is the default setting. Press the Q button when in Live View, then choose the AF Method.

#### How do I avoid changing the shutter speed by mistake when in TV mode on my EOS 7D Mk II?

Tina Manning, The Cotswolds

BRIAN SAYS... The lock switch on the rear of the camera, below the Quick Control Dial, is the best solution. By default the lock is set to lock the Quick Control Dial only, but it can additionally be configured to lock the Main dial, Multi-controller and AF Selection lever.

#### What lens should I use to shoot the Northern Lights?

Ciro Marin, Stevenage

BRIAN SAYS... Faster lenses are generally preferred to reduce the exposure times required for Northern Light photography. You already have an ideal lens in your EF 24-70mm f/2.8L II USM, but might choose to add an even wider-angle lens such as a 16-35mm or even the 11-24mm. For a short trip or holiday you might find it more cost effective to rent a lens.



Landscape photography is simplified when Auto ISO is used with Manual exposure mode

# Can I use Auto ISO in Manual mode?

Les Moss. West Byfleet

**BRIAN SAYS...** Both your EOS 5D Mk III and EOS 80D can use Auto ISO with Manual exposure. The camera meters the scene and adjusts ISO for a correct exposure, in this way Manual mode is effectively a shutter and aperture priority auto exposure mode.

The 80D takes this one step further as it is also possible to use exposure compensation. Press the Q button then tap the exposure compensation setting to adjust its value on the LCD screen.



The EOS 80D and EF-S 18-135mm f/3.5-5.6 IS USM lens is a great combination for video

# What lenses are best for video with the 80D?

Keith Evans, Chicago, USA

**BRIAN SAYS...** The silent and smooth-focusing EF-S 18-135mm f/3.5-5.6 IS USM and EF-S 10-18mm f/4.5-5.6 IS STM lenses will together give plenty of options for wide and tight shots, and both have silent autofocus motors to avoid disrupting captured audio. The EOS 80D has dual pixel AF that makes the camera really capable for tracking moving subjects. Focus tracking speed can be configured to deliver smooth gradual focus change; tap the LCD to change from one subject to another.



#### **DUAL PIXEL RAW**





# **Dual Pixel Raw**

What does Canon Dual Pixel Raw do, and do you need it?

ach of the EOS 5D Mk IV's 30 million pixels is made up of two photo diodes that can be used together or individually. With Dual Pixel Raw, the data from each photo diode is stored, giving a pair of images shot from slightly different viewpoints. Storing two sets of information doubles the Raw file in size to 60-70MB and slows the maximum frame rate to 5fps.

Canon's Digital Photo Professional (DPP) software allows photographers



Focus adjustment is limited, as this test chart series of regular, back and front focus shows

to perform one of three unique adjustments to Dual Pixel Raw files: Image Microadjustment, Bokeh Shift and Ghosting Reduction.

Image Microadjustment moves the point of peak sharpness slightly in front or behind the point of focus. In practice, this is more about shifting from the end of the eyelash to the eyeball than from the tip of the nose to the eye. Wildlife photographers might find that the eye of the subject can be sharpened up when they have not got exact focus, though there is a limited range of adjustment. Bokeh Shift makes use of the slightly different viewpoints of the two photo diodes to shift the viewpoint - and hence the out-of-focus blurred elements – in front of and behind the subject that's sharply in focus. Potentially you can save an image of a bride that has her eye obscured by a bit of confetti. Finally, Ghosting

Reduction is claimed to reduce the effects of lens flare.

Once the files are open in DPP, start the Dual Pixel Raw Optimizer from the Tools menu. You need to choose one of the three optimizations then adjust the amount of optimization. The best way to see the effect is to create multiple versions of the Raw file with different optimization, then switch between each one to see the change. Bokeh Shift and Ghosting Reduction can be applied to a specific part of the frame, if needed.

You'll see the most obvious effects with fast primes in the 50-200mm range used wide open. Wide-angle lenses have too much depth of field and super-telephotos focused on distant subjects capture very little difference between the two viewpoints. Those who take portraits in natural light with wide-aperture prime lenses will see the most benefit from Dual Pixel Raw.

# **CANONSCHOOL**

# There's a slot on the rear of my EF 11-24mm f/4L USM lens, is it for a filter?

Aiden Schwartz, Brussels

BRIAN SAYS... Since the front of the lens is so large, there are limited solutions for using a filter on the front. Lee Filters has an adapter that allows its range of 150mm square filters to fit on the lens. However, due to the wide angle of view that is a characteristic of the lens, you may still find vignetting with the lens set wider than 13.5mm when using a filter



EF 17-40mm f/4L and EF 14mm f/2.8L USM are other lenses that have a gel filter holder at the rear

holder with two slots. To allow simple plain filters to be used with the lens, Canon includes a gel filter slot in the rear of the mount, and this is what you can see. Historically the rear gel filter slot was more useful for film photography, to convert daylight to tungsten film or vice versa. Also for some monochrome landscapes, a yellow filter may be used. With digital the need is less for these, but ND gels for long exposures are still commonly used.

The rear filter takes cut gel filters, but you will need to cut your own strips of 31mm wide filter gels. While the rear filter holder is a good option for single-colour filters, there are no polarizing filter gel sheets or graduated neutral density sheets available; it would be almost impossible to



Here, a colour temperature blue (CTB) filter has been fitted to the rear gel filter slot of this EF 14mm f/2.8L USM lens

accurately align a polarizer or graduated ND filter in the rear of the lens. If you decide to use the rear filter slot, take care handling the filters as finger marks and distortions in the filter will degrade the images you take.

Over the years the gel filter holder has been incorporated

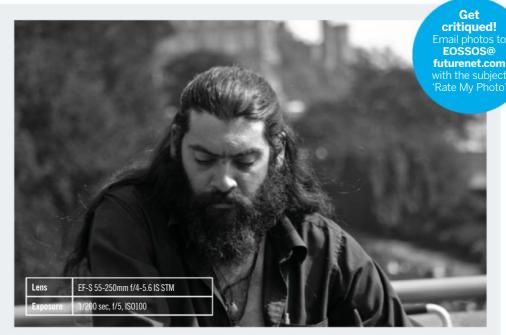
into several wide-angle lenses in Canon's lineup. These include your EF 11-24mm f/4L USM, but also the EF 8-15mm f/4L Fisheye Zoom USM, EF 14mm f/2.8L USM, EF 14mm f/2.8L II USM, EF 15mm f/2.8 Fisheye, EF 17-35mm f/2.8L USM and EF 17-40mm f/4L USM.

### RATE MY PHOTO

# **Street musician** by Ronald Reid

RONALD SAYS.... I took my camera to Edinburgh to try and capture some of the colourful scenes at a street festival. The gentleman in this photo was a street musician entertaining the crowds visiting the festival. He seemed so unaware of the people around him as they passed by and watched him. He looked as if he was so in the moment while performing, I felt the need to photograph the intensity of his facial expression. I shot at 100mm focal length and chose monochrome because I felt it fitted with the mood of the picture.

**BRIAN SAYS...** Street photography is a challenge, but you've done a good job in capturing the musician's portrait. However, I would really like to see more context; something that shows the instrument he's playing, perhaps, or including some of the crowds around



him to show how they are busy and he's in a moment of quiet contemplation.

The picture is sharp and the telephoto lens has let you isolate him from his environment, but I think it would be worth trying to be closer to

him with a wider lens so that you can include more of the scene that he's part of. Monochrome does fit well with street photography, but I think this shot would be improved if you were to increase the contrast a little more.

# **TRAINING ACADEMY**

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Beginners, Oxford 09/02/2017 Advanced, Oxford 10/02/2017





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PHOTOSHOP ELEMENTS - £99

Photoshop Elements by Adobe is still

favoured amongst photographers and

has a more creative side than most

other editing software. Learn how to

enhance your photography using its

editing, adjustment and creative tools to

full effect on this instructive workshop.

#### MAKING THE MOST OF YOUR EOS CAMERA - £99

Learn the basics and more on this two-part workshop series. Get to know how your camera functions and what the features do, and how to combine them to give you full control over your photography. Suitable for most EOS models except 5D Mk III/5D Mk IV/5DS/7D Mk II/1D series. (Max. 12.)

#### DATES

Part one, Oxford 17/01/2017 Part two, Oxford 18/01/2017 Part one, London 16/02/2017 Part two, London 17/02/2017

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#### DATES

Central London 16/01/2017 Central London 27/01/2017













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**Buyers' Guide**Every EOS and
Canon-fit lens



The latest Canon DSLR and photo gear tested. Independent advice to help you buy smarter



## Welcome...

**THIS** month's super test is a really interesting one. It doesn't feature radical new camera technology, but concentrates on a really important step in your photography career – choosing your first Canon DSLR!

Canon has made this a little easier with the low-cost EOS 1300D, but this is by no means the only choice for novices, because there's also the super-small EOS 100D, the more advanced 24-megapixel EOS 750D and – let's not forget – the classic EOS 700D is still on sale, and at knock-down prices too.

I was also keen to see the new Canon EF 16-35mm f/2.8 USM Mk III lens. It's an update of a popular lens, and is very important in Canon's line-up. For many of us, a fast ultra-wide-angle zoom will prove just as useful as a telephoto, and many pros won't leave home without one.

And don't miss Ben Andrews' HDR software mini-test. HDR is a hugely popular technique, and these programs can deliver stunning images even in the hands of HDR novices.





### **TESTS & AWARDS**

**WHEN IT** comes to testing Canon DSLRs, lenses, photo gear and services in *PhotoPlus*, we tell it like it is. We're 100% independent and we use our in-depth lab tests to find out how kit really performs and compares. Here are our main awards...







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The Canon Magazine PhotoPlus

# GEA RUPDATE





# G E A RUPDATE

Our round-up of the latest digital photography must-haves



### NFW CANON-FIT KIT



# Adobe Photoshop Elements 15Premiere Elements 15

Speedy and simple media editing

#### £119/\$150

www.adobe.com

ADOBE'S popular image and video editing programs are now even easier to use, with streamlined searching and touchscreen control of the Organizer and Quick Edit modules. Photoshop Elements 15 now offers 45 Guided Edits, which turn complex editing tasks into walkthrough tutorials, and there's a fresh feature for transforming photos into visual text (see our full test next issue). While Premiere Elements 15 gets a new Haze Removal filter, along with a Video Collage mode and automatic music mixing to sync a music track to the length of your clip.

#### Manfrotto Windsor bags Camera bags with bags of style

£100-£150/\$120-\$170

www.manfrotto.com

**COMPRISED** of three shoulder bags and a backpack, the Windsor range sports a sophisticated new look and quality materials including real leather accents. The backpack will hold a 5DS and attached 70-200mm, plus two extra lenses and a 15in laptop, with extra space for daily essentials. The Windsor Reporter shoulder bag can stash a similar Canon setup and a 13in laptop, while the compact Small and Medium Windsor Messenger bags are tailored towards smaller EOS M kit.

### Hähnel Captur Timer Kit

Wireless remote with time-lapse

#### £80/\$102

www.hahnel.ie

**THE** Captur Timer Kit's modular ethos means you can use the remote trigger and timer with a single Canon, or purchase extra receivers if you need to fire multiple cameras or flashguns over the 100-metre range. Digital Channel Matching eliminates interference from rogue radio waves.

#### Zeiss Milvus lenses

Three new primes enhance the range £1899-2329/\$2199-\$2699

www.zeiss.com

**ZEISS'S** Milvus lineup has been expanded to include 15mm and 18mm f/2.8

ultra-wide primes, plus a 135mm f/2 telephoto. All are manual focus optics, but each incorporates a focusing ring with a large rotational travel to assist in making precise adjustments. The lenses uphold Zeiss's reputation for sharpness, while also producing cinematic bokeh smooth enough to satisfy video enthusiasts. Robust build, a metal hood and weather seals help justify the premium pricing.

#### Kaiser SmartCluster Midi

Compact LED panel for stills and video £99/\$120

www.kaiser-fototechnik.de/en

**MEASURING** 115x71x21mm and weighing a mere 135g, this continuous light panel is easily pocketable, yet its 80 5800 K LEDs still emit a respectable 190 lux at 1m while projecting a 120-degree beam angle. Power comes from a commonly available NP-120-type Li-ion battery capable of around 90 minutes of run time and is charged via USB. One battery is included, and you also get a diffuser filter along with a warming filter, plus a swivel joint to attach the panel to a hotshoe.

### Kenro Speedflash KFL 101

A feature-packed flash for modest money £79/\$97

www.kenro.co.uk

**THIS** frugal flashgun won't break the bank, yet it packs serious punch. A guide number of 58 puts it in the same territory as Canon's top-of-the-range Speedlite 600EX II-RT. The Speedflash also packs E-TTL compatibility, 1/8000 sec high-speed sync, wireless slave mode and a fast 2.3-sec full power recycle time. A large backlit LCD, metal hotshoe mount, storage pouch and diffuser cap seal the deal.

#### Phottix Transfolder softboxes

Soften your Speedlite in seconds

#### £54/\$66

www.phottix.com

**THE** simple pop-up design opens from flat to a softbox with minimal fuss, much like a collapsible reflector panel. Phottix's Cerberus universal metal flashgun mount is required to attach your flashgun to the Transfolder – this is a separate buy. Inner and outer diffuser panels are included helping ensure maximum light softness. It comes in three size options: 40x40cm, 60x60cm and 80x80cm.

The Canon Magazine 99

# **GEARMINITEST**

# **HDR** software

Increase the amount of dynamic range your EOS captures with these software solutions

**IKE THE** selfie stick, HDR images seem to be everywhere, and they share the same ability to polarize opinion. That's largely due to some photographers getting carried away and producing psychedelic, eye-poppingly unrealistic images. But treated with restraint, HDR software simply helps you create photographs containing more shadow and highlight information than a single exposure can reveal.

The trick is to exploit your camera's exposure bracketing feature and capture at least three different exposures; one underexposed to contain

maximum highlight detail, an accurate exposure for midtones, plus an overexposed shot that reveals shadows. Load the sequence into HDR software and it works its magic by combining the best bits of each shot, with the final compiled result having a dynamic range closer to what the human eye perceives.

We've selected six of the most highly regarded HDR packages to see which is easiest to use, offers the best features, and produces the most realistic and seamless results, even when dealing with a handheld, misaligned bracketed sequence.

## **Aurora HDR 2017**

£78/\$99 www.aurorahdr.com

**AURORA** HDR is produced in collaboration with HDR guru Trey Ratcliff, who provides a selection of HDR presets. It's Mac-only, but we're told a Windows version could be on the way soon.

This 2017 version brings a whole host of improvements over older Aurora software, including batch-processing, a new Polarize Filter and Radial Masking tool, plus improved noise reduction, along with a 50% processing speed boost.

Like other HDR tools, Aurora HDR can merge separate exposures, fixing ghosting, chromatic aberration and alignment at the same time. You can then choose an HDR effect preset and/or make manual adjustments using an array of powerful, if sometimes confusing, tools and in-built layers and



masks. The effects are excellent, with the majority of presets looking attractive right from the off, thanks to their subtle realism.

### **PhotoPlus** VERDICT

PROS: Great presets; powerful layers; standalone or plug-in CONS: Relatively pricey; jargonladen manual tools; Mac-only WE SAY: It's an expensive option, but the results are worth it

### FIVE THINGS TO LOOK OUT FOR

There's more to HDR software than increasing dynamic range – pick the right package and it'll help you create masterpieces

#### Hold steady

HDR software can work wonders and merge slightly misaligned shots, but it'll still thank you for shooting your exposures from a tripod to minimize possible ghosting.

#### Weep it Raw

Raw images already contain more dynamic range than JPEGs, so ensure your chosen HDR software can handle Raw files and is regularly updated to cater for new cameras.

#### Photobombers

Shooting multiple exposures – especially in cities – can result in things moving through your frame. Thankfully, more advanced HDR software can detect this and compensate.

#### Speed up

Snapped a whole shoot in need of the HDR treatment? Software containing a batch processor will streamline the process, automatically applying your chosen settings to multiple images.

#### 1 Little extras

HDR software isn't just about preset effects and adjustment sliders. Selective editing, multiple layers, blending modes, post-processing effects and noise reduction can all be had.

# **HDR** Efex Pro

Free www.google.com/nikcollection

 $\star$ 

THE HIGHLY respected Nik Collection of photo-manipulation software may now be completely free since Google bought the brand, but this isn't a case of you get what you (don't) pay for. For starters, Google bundles HDR Efex with a whole suite of other image enhancement plug-ins (that used to set you back £330/\$499), and HDR Efex itself isn't short on features, with 28 preset effects and a good range of colour and tone adjustment options. There's also Nik's signature Control Point selective editing feature that's great for quickly making targeted tweaks.

Right off the mark, HDR Efex produces attractive results biased towards realism over eye candy. But on closer inspection, boundaries between some component images in merged sequences can be noticeable, and



HDR Efex doesn't deal with noise particularly well. You'll also need to run the software from a host program, such as Photoshop.

### **PhotoPlus** VERDICT

**PROS:** Fast; easy to use; produces realistic results; selective editing **CONS:** Doesn't give the cleanest results; short on customization **WE SAY:** It may not be the best but you can't complain when it's free

# EasyHDR 3

£24/\$32 www.easyhdr.com

**EASYHDR** lives up to its name, with a reasonably intuitive interface and plenty of instant presets that offer a good balance of realistic and artistic looks. Despite the emphasis on ease of use, you still get a decent selection of customization options, including curves adjustment, tone mapping alteration, and plenty of colour tweaks. There's also comprehensive Raw file support built in, and even a batch-processing ability.

But it's EasyHDR's results that impress most. Our handheld bracketed test shots were merged with no visible ghosting, and the software does a good job of dealing with image noise. Processing speeds are quick, as are effect previews during editing, and it manages this without



resorting to using a low-resolution preview. Windows and Mac support rounds off this superb all-round package.

#### **PhotoPlus** VERDICT

**PROS:** Simple yet well-featured interface; quick; top-notch results **CONS:** Not quite as comprehensive as Aurora HDR or HDR Projects **WE SAY:** For fast yet attractive results, this is a great value choice

## **HDR Darkroom 3**

£70/\$89 www.everimaging.com

 $\star$ 

**CONTRARY TO** EasyHDR's name claim, we found HDR Darkroom to be even easier to use, thanks to its streamlined interface with minimal clutter. Stylish preset thumbnails add visual flair, and selecting one automatically reveals a range of options that give you capable customization without being intimidating.

You only get 16 presets to play with, but they cover the basics and are easy on the eye. The same also goes for HDR Darkroom's output images, which impress with little effort, are very well blended, and keep noise and fringing well at bay.

But while HDR Darkroom is enjoyable to use and delivers great results, its value is questionable. Batch processing and Raw file support are present,



but you'll have to do without funky extras like layers, a history palette, and more advanced tone mapping customization.

### **PhotoPlus** VERDICT

**PROS:** Effortlessly easy to learn and use; high-quality results **CONS:** Lacks the features and customization of the heavy hitters **WE SAY:** On a par with EasyHDR, but it can't match it on value

# **HDR** Projects 4

£78/\$99 www.projects-software.com

 $\star$   $\star$   $\star$   $\star$ 

**HDR PROJECTS** is one of the most comprehensive HDR packages available. However, its enormous range of customization options can be somewhat baffling, especially if you delve into Expert mode and reveal options like HDR processing algorithms, and the extensive selection of post-processing filters. These include multiple de-noising filters, although they tend to be crude and oversmooth, yet without noise processing our test images were far noisier than necessary.

At least HDR Projects doesn't have to be daunting, with a whopping 134 preset styles to choose from in the Professional version that give instant results, while basic adjustments are relatively easy to apply. Effects can be targeted to specific areas of an image, courtesy of effective



masking and selective painting tools, plus there's extensive Raw file support along with a fully-featured batch processor.

### **PhotoPlus** VERDICT

PROS: Advanced features and functionality, yet still easy to use CONS: Default results can be noisy; 2.5Mp preview resolution WE SAY: Highly capable, but other packages are much easier to use

# **Photomatix Pro 5**

£72/\$50 www.hdrsoft.com

 $\star$ 

PHOTOMATIX PRO is arguably the daddy of HDR software, and like many daddies, it's starting to show its age. Its interface now looks distinctly dated, with clunky floating palettes that don't self-align when adjusting window size, plus there's the odd display glitch. Effects previews can also be a little sluggish to load, too, although at least the preview is full resolution.

Photomatix's range of 36 preset effects seems somewhat limited, especially when compared to HDR Projects, but despite some ugly thumbnails, most do actually look the part when applied. The amount of customization you get varies between presets though, with many only packing eight enhancement variables. Even so, Photomatix manages to produce



some of the best results on test. It's easy to create natural-looking HDR with minimal noise and no visible ghosting.

### **PhotoPlus** VERDICT

**PROS:** High-quality results; batch processing; good Raw file support **CONS:** Awkward interface; not as powerful as some rivals

**WE SAY:** Delivers stunning results, if only it was more pleasing to use

# G G A R LENSTEST



# **CANON EF 16-35mm** f/2.8L III USM

Canon's top-flight ultra-wide zoom gets a major revamp, following in the footsteps of the 5D Mk IV

ow in its third incarnation, Canon's fast, ultra-wide 16-35mm f/2.8L III USM is one of two upgraded lenses to be launched alongside the much vaunted 5D Mk IV. The other is the more general purpose EF 24-105mm f/4L IS II USM. The new ultra-wide lens is a proper whopper, gaining considerable size and weight compared with its predecessor. Canon has set out to create something rather special in this new lens. It's a major revamp over the Mk II edition, in pretty much every area. A starring role is played by a new and highly complex large-diameter, double-surface GMo (Glass Moulded) aspherical element. This sits right at the front of the lens, and there's also a ground aspherical element at the rear. Two UD (Ultra-low Dispersion) elements,

inherited from the Mk II, aim to dramatically reduce distortion and colour fringing.

Further improvements include an updated diaphragm with nine (rather than seven) blades, producing a better rounded aperture for enhanced bokeh. The grouping of the lens elements has also been redesigned to give greater resistance to shock and vibration.

Advanced coatings include SWC (SubWavelength Coating) and ASC (Air Sphere Coating) for greater resistance to ghosting and flare,

**Canon has set out to create** something rather special. It's a major revamp in every area

The lens sees big improvements over the Mk II version, but is also bigger and heavier both of which are lacking in the Mk II lens. It's a worthy improvement, given the suitability of ultra-wide lenses for landscape photography with big skies. A fluorine coating added to the front and rear elements repels moisture and muck.

Build quality is simply excellent, with a robust and comprehensively weather-sealed construction. Focusing is fully internal, so the

#### SPECIFICATIONS

**FULL-FRAME COMPATIBLE Yes EFFECTIVE FOCAL LENGTH** 16-35mm full-frame, 25.6-56mm APS-C

**IMAGE STABILIZER No. MINIMUM FOCUS DISTANCE 0.28m** MAX MAGNIFICATION FACTOR 0.25x MANUAL FOCUS OVERRIDE Full-time

**FOCUS LIMIT SWITCHES** No **INTERNAL ZOOM** Yes (within casing)

**INTERNAL FOCUS** Yes

FILTER SIZE 82mm

**IRIS BLADES** 9

**WEATHER SEALS** Yes SUPPLIED ACCESSORIES EW-88D hood,

caps, pouch DIMENSIONS (DIA x LENGTH) 89x128mm

WEIGHT 790g PRICE £2350/\$2200

### CANON EF 16-35mm f/2.8L III USM



front element neither extends nor rotates. The overall physical length remains fixed while zooming, but the front element comes closer to the front of the outer barrel at both ends of the zoom range.

#### **Performance**

One of our criticisms of the Mk II lens is that sharpness is lacklustre towards the edges and corners of the frame. The Mk III does hugely better, delivering excellent sharpness across the whole frame, along with superb contrast, even when shooting wide-open at f/2.8. However, sharpness and contrast aren't significantly improved over the EF 16-35mm f/4L IS USM, which we rate as one of Canon's

sharpest ever lenses, and that lens also features image stabilization.

At the short end of the zoom range, there's a dramatic reduction in the amount of distortion and colour fringing, compared with the Mk II lens. Here again, though, there are no real improvements over the f/4 lens. Ghosting and flare are well controlled by the new coatings, while action shots benefit from fast autofocus speeds, enabled by a new high-performance processor.

As you'd expect from a fast, wide-angle zoom lens, vignetting (darkened image corners) is very noticeable when shooting wide-open, but mostly dies away when stopping down to f/5.6. This is the case throughout the zoom range.

#### **FEATURES**



You can fit filters via a standard 82mm attachment thread.



The front element is a complex double-surface glass moulded aspherical affair.



Typical of many zoom lenses, the focus ring is positioned towards the front, the zoom ring sits at the back.



The metal mounting plate and joints in the lens casing are all weather-sealed.



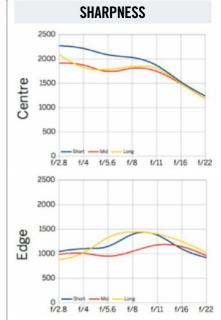
A new, high-power CPU helps to achieve very fast autofocus speeds.



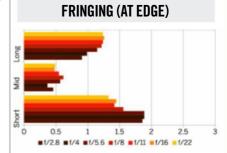
Ring-type ultrasonic autofocus comes with full-time manual override.



The rear and front elements both feature a muckrepellent, easy-toclean fluorine coating.



The Mk III kicks the Mk II into touch for corner-to-corner sharpness



Colour fringing is negligible. It's another big improvement over the Mk II lens



The swing from barrel to pincushion distortion is minimal for this type of lens

### **PhotoPlus** VERDICT

Excellent build quality and fast f/2.8 performance suit low-light reportage, wildlife and sports photography. For landscapes, architecture and static subjects, the EF 16-35mm f/4L IS USM is nearly as good and much more affordable.

FEATURES
BUILD & HANDLING
IMAGE QUALITY
VALUE
OVERALL





The widest viewing angle is pretty extreme, equivalent to using a 10mm focal length on an APS-C Canon SLR

# G C A R SUPERTEST





Everybody has to start their EOS SLR journey somewhere, but where? Matthew Richards reveals the best SLRs for beginners

uying your first Canon EOS SLR can be a daunting prospect when you're making the step up from using a cheap compact camera (or relying on a basic smartphone camera) to take photos. How many magical moments have been lost forever, because a camera phone failed to autofocus in time, or there was too much lag between the shutter button

Performance is crucial. You need a camera that you can rely on, that has predictable handling and efficiency. And that's exactly what you get with one of the latest entry-level Canon SLRs.

To newbies, 'proper' cameras can appear frightfully complicated. Thankfully, Canon has made great strides in simplifying the whole process and user experience. All of the SLRs that we've chosen for this Super Test have 'intelligent' fully automatic modes that respond to wide-ranging shooting tenarios and subjects, along with icated scene modes for easily getting tresults in tricky situations.

Just because a camera is simple to use, it doesn't have to be basic. An SLR that's suitable for absolute beginners should also be able to grow with you. It should feature all the controls and adjustable settings that you'll come to rely on, as you learn new skills and techniques. It's another area in which Canon SLRs excel, but some more than others.

Let's take a closer look at what's on offer from Canon's entry-level EOS SLR line-up...



# **CANON EOS 1300D**

The successor to the trusty budget 1200D is new and improved, but can you spot the differences?

he 1200D represented a major revamp of the previous 1100D camera, when it was launched back in early 2014. But despite being a more recent design than the 100D and 700D that are also on test, it's already been replaced by the new 1300D. This time around, improvements are comparatively subtle, and the new model looks almost identical to its predecessor. At 18Mp, the megapixel count remains the same as in the 1200D. And while the other cameras on test have late-generation DIGIC 5 or DIGIC 6 processors, the 1300D only takes a small incremental step from DIGIC 4 to 4+.

So what's new? The headline attraction is that, along with only the 750D in this test group, the 1300D boasts built-in Wi-Fi and NFC connectivity. The LCD screen gets a resolution boost over the 1200D, from a disappointing 460k

to a high-res 920k pixels, but the 1300D remains the only camera in the group to lack a touchscreen. On a minor note, there's an additional 'food' scene mode, for people who like shooting their dinner.

#### **Build and handling**

Simple yet effective, the layout of

It's the cheapest of Canon's current cameras, but not the best value, in our opinion

The rear screen is lower resolution than the other cameras, and isn't touch-operated controls is very typical of a Canon entry-level camera. There's a good compromise between having enough buttons and dials to enable you to access a wide range of shooting settings quickly and easily, without too much clutter that could result in tricky and confusing handling. As usual, the Q (Quick) menu on the LCD screen works well for keeping tabs on the most important shooting settings. However, the intuitive nature of the Q menu for adjusting settings

#### SPECIFICATIONS

SENSOR 18Mp APS-C CMOS
EFFECTIVE FOCAL LENGTH 1.6x
MEMORY SD/HC/XC
VIEWFINDER Pentamirror, 0.8x, 95%
VIDEO Full HD at 30, 25 or 24 fps
ISO RANGE ISO100-6400 (12800 EXP)
AUTOFOCUS POINTS 9 (1 cross-type)
MAX BURST RATE 1110 JPEG,
6 Raw at 3fps
SCREEN 3-inch, 920k dot
SHUTTER SPEEDS 30-1/4000 sec, Bulb
WEIGHT 485g (body inc batt/card)
DIMENSIONS 129x101x78mm (WxHxD)

WEB www.canon.co.uk

PRICE £340/\$500

### **SLRS FOR STARTERS**



suffers slightly from the lack of touchscreen facilities.

It's a comfy camera to use, with a more generously sized handgrip than the 100D. As usual in this class of camera, the main body material is carbon fibre-reinforced polycarbonate, which is durable and pleasant to the touch, while being light in weight.

#### **Performance**

From a shooting standpoint, there aren't many real performance upgrades over the 1200D, and the specifications are in keeping with the 1300D now being Canon's most inexpensive SLR. As such, it has the slowest continuous drive rate

of 3fps (frames per second), and a relatively basic autofocus system that's painfully slow in Live View mode and prohibits continuous autofocus when shooting movies.

The 1300D also has the smallest sensitivity range, stretching to ISO6400 (12800 expanded) whereas all the other cameras tested top out at ISO12800 (25600 expanded). That said, the 1300D produces vibrant, richly saturated images and combats high-ISO noise almost as well as the other cameras on test. An upside of the relatively slow maximum drive rate is that you can continuously shoot over a thousand images in JPEG quality mode, should you feel the need.

#### **FEATURES**



Unlike other cameras on test, there's no separate SCN (scene) position on the Mode dial, but a new 'food' mode has been added.



The 18-55mm IS II kit lens is a poor relation to the newer STM lens sold with the other cameras.



The pentamirror viewfinder is typical of 'budget' cameras, giving the usual 95 per cent frame coverage.



The LCD has double the pixel count of the 1200D's screen, but it's still not touch-sensitive.



New Wi-Fi and NFC functions come complete with an indicator lamp.



The full-sized hand grip feels more comfortable than that of the 100D.

### 1300D LAB TESTS

# RAW\* SIGNAL-TO-NOISE RATIO

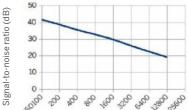
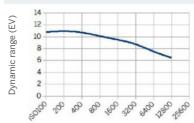


Image noise is better controlled than in the older 1200D, and is more on a par with the other cameras on test

#### **RAW\* DYNAMIC RANGE**



Dynamic range is good on the whole, only really dropping off at sensitivity settings of ISO3200 and above

#### **RAW\* RESOLUTION (AT ISO200)**



It boasts impressive resolution, and is beaten only by the 750D

#### **COLOUR ERROR**



Colour rendition is vivid but mostly accurate, with good AWB performance

### **PhotoPlus** VERDICT

Delivers good image quality but lacks some of the other cameras' advanced shooting functions and is a poor choice for capturing video. Ultimately, it's a camera you might soon grow out of.

FEATURES
BUILD & HANDLING
IMAGE QUALITY
VALUE

**OVERALL** 



Landscape image quality is better than from the 1200D, with bolder, more vivid colour rendition



Shots taken with high ISO settings are far less noisy than the 1200D, similar to the other cameras on test



# **CANON EOS 100D**

For those who feel that size really does matter, the small-but-perfectly-formed 100D is refreshingly diminutive

ispelling the myth that SLR cameras are big and bulky by nature, the 100D is something of a downsized **delight.** It's the outright smallest digital SLR that Canon has ever made, and shaves about 10mm off the height and depth of other cameras on test, and about 15mm off the width. Weighing in at just over 400g, it's also only about two-thirds as heavy as the 700D, which was simultaneously launched back in early 2013. Like the 1300D, beginner-friendly scene modes include a 'food' setting, while other options are more far-reaching, with additional modes for candlelight, kids and HDR (High Dynamic Range), as also featured in the 750D. The HDR setting, available in all the cameras on test apart from the 1300D, is particularly useful. This enables automatic blending of multiple, exposure bracketed shots

of very high-contrast scenes, to produce a single image that retains excellent detail in both very bright highlights and dark shadows.

#### **Build and handling**

Despite being an older design than the 1300D, the 100D has a latergeneration DIGIC 5 processor and a

y bright
vs.

The rear LCD g
touchscreen



Lightweight with svelte proportions, it slips easily into a handbag (or manbag...)

The rear LCD gains touchscreen functionality, making navigating menus easy more advanced autofocus system, in which the central cross-type point (able to resolve detail in both the vertical and horizontal planes) offers greater accuracy when using lenses that have an aperture rating of f/2.8 or wider. More crucially for movie capture, the 'Hybrid CMOS AF II' system enables continuous autofocus to track moving objects, and it's much quicker and more effective when shooting stills in Live View mode.

While the reduction in size and weight might be good news for

#### SPECIFICATIONS

SENSOR 18Mp APS-C CMOS
EFFECTIVE FOCAL LENGTH 1.6x
MEMORY SD/HC/XC (UHS-1)
VIEWFINDER Pentamirror, 0.87x, 95%
VIDEO Full HD at 30, 25 or 24 fps
ISO RANGE ISO100-12800 (25600 EXP)
AUTOFOCUS POINTS 9 (1 cross-type)
MAX BURST RATE 28 JPEG, 7 Raw at 4fps
SCREEN Touchscreen 3-inch, 1040k dot
SHUTTER SPEEDS 30-1/4000 sec, Bulb
WEIGHT 407g (body inc batt/card)
DIMENSIONS 117x91x69mm (WxHxD)
WEB www.canon.co.uk
PRICE £380/\$520

#### **SLRS FOR STARTERS**



travel photography, there's an adverse effect on handling. The control buttons at the rear feel a quite cramped, and the usual dual functions of the cross keys (four-way pad) are lacking. There's therefore greater dependence on the Quick menu system, but at least the touchscreen facilities make this easier to use than in the 1300D. The relatively small and shallow hand grip disappointingly feels much less than a handful.

#### **Performance**

With essentially the same image sensor and processor as the 700D, there's practically no difference in image quality between these two

cameras. We'll discuss this further in the following review. However, unlike in the 700D, only the central AF point is cross-type, rather than all nine points, so it can be best to stick to the central point for greatest accuracy.

For continuous shooting, the 100D falls between the 1300D and 700D, with a maximum burst rate of 4fps. Although it's one frame per second faster than the 1300D, the 100D can only keep firing for up to 28 JPEG images, compared with the 1300D's 1110 shots. This is despite adding UHS-1 (Ultra High Speed) memory card compatibility, which is featured in all the other cameras on test except the 1300D.

#### **FEATURES**



The hand grip can feel quite cramped and uncomfortable, compared with the other cameras.



An infrared receiver on the finger grip enables shots to be taken with an RC-6 wireless remote controller.



The multifunction control dial, just behind the shutter button, enables adjustment of both aperture and shutter speed.



A proximity sensor automatically blanks the rear LCD when you put your eye to the viewfinder.



The high-res LCD is touchscreen, but lacks the vari-angle facility of the 700D and 750D.



The functions of the four-way cross-keys don't double up to give quick access to shooting settings.

#### 100D LAB TESTS



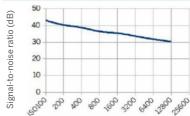
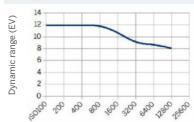


Image noise at high ISO settings is well controlled in JPEG quality mode, with a marginal improvement in Raw mode

#### RAW\* DYNAMIC RANGE



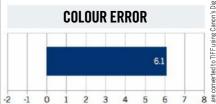
There's very good retention of detail in highlights and lowlights, the 100D edging ahead of the 1300D at high ISO settings

#### **RAW\* RESOLUTION (AT ISO200)**



The ability to resolve fine detail in images is similar to that of the 1300D and 700D

#### **COLOUR ERROR**



There's a marginal warmth to colour rendition, which is generally pleasant

#### **otoPlus**verdict

The 100D's main claim to fame is its smallness, but handling suffers a little as a result. We prefer the 700D, but the 100D is nevertheless a very capable performer and great value at the price.

**FEATURES BUILD & HANDLING IMAGE QUALITY VALUE** 

**OVERALL** 

 $\star$   $\star$   $\star$  $\star$   $\star$   $\star$   $\star$  $\star$   $\star$   $\star$   $\star$  $\star$   $\star$   $\star$   $\star$   $\star$ 



The 100D produces more natural images than the 1300D, without bumping up the colour saturation



Noise suppression is impressive, even at ISO6400, where images look smoother than from the 1300D

**PhotoPlus** 

\*Raw files



# **CANON EOS 700D**

An excellent creative tool that really does let you play all the angles, but is beginning to show its age next to newer models

lthough the 700D shares much of the 100D's DNA, there are some notable differences between the two cameras. While both have a nine-point autofocus system, all of the AF points are cross-type in the 700D, instead of just the central point in the 100D. This boosts accuracy when using the peripheral AF points. Meanwhile, the image sensor-based Hybrid CMOS AF autofocus system for Live View and shooting movies is technically a generation older than that of the 100D, but performed equally well in our tests.

The 700D lacks the 'kids' and 'candlelight' scene modes of the 100D, but does include the useful HDR mode. There's also the same range of creative filters, for in-camera processing of previously captured images. These include grainy black & white, soft focus, fish-eye, toy camera, miniature,

and a couple of painterly effects, going a little further than what's available in the 1300D.

#### **Build and handling**

The most major differences between the 700D and 100D are in build and handling. The 700D is about the same size as the 1300D

This time the rear touchscreen gains a pivot function, useful for shooting at awkward angles

The 700D offers improved functionality over the 1300D and 100D, but image quality is similar and 750D, and therefore noticeably larger than the 100D. It's also the heaviest camera in the entire group, built on a stainless steel, rather than aluminium, chassis, along with the usual reinforced polycarbonate casing.

The 700D comes with a fully articulated LCD touchscreen at the rear, replacing the fixed screens of the 1300D and 100D. So while touch facilities are on hand (unavailable in the 1300D) you can also pivot the screen to allow Live

#### SPECIFICATIONS .....

SENSOR 18Mp APS-C CMOS
EFFECTIVE FOCAL LENGTH 1.6x
MEMORY SD/HC/XC (UHS-1)
VIEWFINDER Pentamirror, 0.85x, 95%
VIDEO Full HD at 30, 25 or 24 fps
ISO RANGE ISO 100-12800 (25600 EXP)
AUTOFOCUS POINTS 9 (all cross-type)
MAX BURST RATE 22 JPEG, 6 Raw at 5fps
SCREEN Vari-angle touchscreen 3-inch, 1040k dot
SHUTTER SPEEDS 30-1/4000 sec, Bulb
WEIGHT 580g (body inc batt/card)
DIMENSIONS 133x100x79mm (WxHxD)
WEB www.canon.co.uk
PRICE £460/\$650



#### **SLRS FOR STARTERS**



View and video shooting from just about any angle. It's a real bonus for video capture, and great for self-portrait stills. It also enables you to compose images accurately when shooting from high over your head, or from muddy ground level, without the need for a step ladder or a change of clothes.

You'll find the articulated LCD to be a genuine enhancement to handling but, even in regular shooting using the viewfinder, handling of the 700D feels much more assured than with the smaller 100D. The ergonomics of the controls are less cramped, and the camera feels more comfortable and natural in the hand.

#### **Performance**

Auto white balance delivers very good colour accuracy in wideranging lighting conditions, while the Auto Lighting Optimizer, that's featured in all current and recent Canon DSLRs, retains good detail in both the highlights and shadows of high-contrast scenes. Overall image quality is excellent, and is pretty much identical to that of the 100D.

Slightly souped-up compared to the 100D, the maximum drive rate is 5fps, rather than 4fps, although the largest number of shots you can take at this speed drops from 28 to 22 (JPEG quality) and from seven to six (Raw quality).

#### **FEATURES**



Unlike in the 1300D and 100D, the pop-up flash can be used to control remote flashguns in wireless slave mode.



The scene modes, aren't quite as plentiful as in the 100D and 750D.



Like in the 100D and 750D, the main on/off switch gives easy access to movie shooting mode.



The vari-angle touchscreen pivots through 180 degrees horizontally and 270 degrees vertically.



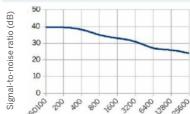
The cross-keys give quick access to white balance, autofocus modes, picture style options and drive modes,



As in the 750D, the memory card slot is accessed via the side, rather than sharing the battery bay underneath.

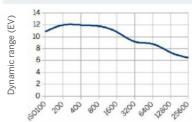
#### 700D LAB TESTS

## RAW\* SIGNAL-TO-NOISE RATIO



As with the other cameras, image noise becomes rather more noticeable if you push the sensitivity beyond ISO6400

#### **RAW\* DYNAMIC RANGE**



Our lab tests revealed a slight loss of dynamic range at ISO100, but it's not noticeable in real-world shooting

#### **RAW\* RESOLUTION (AT ISO200)**



Resolution scores are dead level with the 100D, but less impressive than the 750D

#### **COLOUR ERROR**



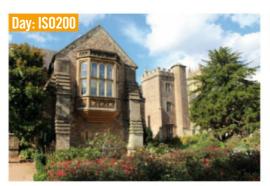
Colour rendition is vibrant but natural, and indistinguishable from the 100D's

#### **PhotoPlus** VERDICT

It's a great camera that outstrips the 1300D and 100D in terms of photographic features and ease of handling, although there's little, if any, improvement in outright image quality.

FEATURES
BUILD & HANDLING
IMAGE QUALITY
VALUE

**OVERALL** 



There's good retention of fine detail and excellent colour rendition, as with the image shot on the 100D



As with other cameras on test, the sky and water are rendered with little noise, even at ISO6400

**PhotoPlus** 



# **CANON EOS 750D**

There's a feast of high-tech thrills in this showstopper of a beginners' camera that boasts some advanced features

or sheer image resolution, the 750D kicks all the other cameras on test into touch, with its 24.2Mp image sensor. That's a significant increase from the 18Mp sensors featured in the other cameras but, of course, megapixels aren't everything. There's usually a trade-off in that, while more megapixels give the potential to capture finer detail and texture, image noise is likely to be more noticeable, especially when using high ISO settings under low lighting conditions. We'll come to how the 750D fares in these respects across the page.

Along with its greater megapixel power, the 750D is the only camera in the group to sport a new-generation DIGIC 6 processor, and an 'intelligent' viewfinder that can warn you about flickering lighting, and gives the option of a superimposed grid pattern to aid composition. The autofocus system

is much more advanced, based on 19 rather than just nine points, and all of the AF points are cross-type. Meanwhile, Live View and movies benefit from a revamped Hybrid CMOS AF III autofocus system. The 750D is well connected too, with Wi-Fi and NFC built in, which are lacking in the 100D and 700D.



By far the best beginner EOS, it's faster, has more advanced AF, and more megapixels

It looks similar to the 700D, and around the back the cameras are hard to tell apart

#### **Build and handling**

In the hand, the 750D feels remarkably similar to the 700D, which is no bad thing. The sculpted and textured grip areas ensure a comfortable hold, while the layout of the buttons and dials makes for quick and intuitive adjustment of the most important shooting settings. The 750D also shares the 700D's fully articulated touchscreen facility, with all the same benefits to handling that we mentioned previously.

#### SPECIFICATIONS

SENSOR 24.2Mp APS-C CMOS
EFFECTIVE FOCAL LENGTH 1.6x
MEMORY SD/HC/XC (UHS-1)
VIEWFINDER Pentamirror, 0.82x, 95%
VIDEO Full HD at 30, 25 or 24 fps
ISO RANGE ISO100-12800 (25600 EXP)
AUTOFOCUS POINTS 19 (all cross-type)
MAX BURST RATE 940 JPEG, 8 Raw at 5fps
SCREEN Vari-angle touchscreen 3-inch, 1040k dot
SHUTTER SPEEDS 30-1/4000 sec, Bulb
WEIGHT 555g (body inc batt/card)
DIMENSIONS 132x101x78mm (WxHxD)
WEB www.canon.co.uk
PRICE £580/\$750

#### SI RS FOR **STARTERS**



One difference in handling is that the 750D has a row of three buttons behind the shutter button, instead of just one for ISO. The extra two buttons enable you to easily turn the LCD touchscreen on or off, and give quick access to options for the more advanced autofocus options. These include the availability of five different subsets or 'zones' of AF points, as well as the usual single-point selection and automatic multipoint mode.

#### **Performance**

A sporty little number, the 750D overtakes the 700D for continuous shooting. It has the same 5fps

maximum frame rate, but can keep going at full tilt for up to 940 shots in JPEG mode, instead of just 22 shots. In Raw quality mode, the rather more modest increase is only from six to eight shots.

The autofocus systems work superbly well for both regular and Live View/movie shooting. The 750D also features a new metering system that, in our tests, proved a little more consistent than with the other cameras in the group. Remarkably, while the greater megapixel count enables the capture of finer detail, there's no real degradation in image noise at high ISO settings, making the 750D an excellent low-light performer.

#### **FEATURES**



Near-identical to the 700D in size, the 750D is 25g lighter.



A button on the top of the camera enables easy access to single-point, full multi-point and five subset zones of AF points.



The 'intelligent' viewfinder gives a clear display of which autofocus points or zones you're selecting.



The high-resolution, 1040k pixel 3in touchscreen has the same vari-angle facility as the 700D.



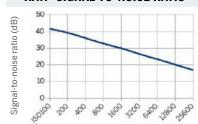
The 18-55mm kit lens has a stepping motor that enables smooth and silent autofocus transitions when shooting movies.



The connectivity benefits of Wi-Fi and NFC are only matched by the 1300D in this group.

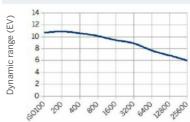
#### 750D LAB TESTS

#### **RAW\* SIGNAL-TO-NOISE RATIO**



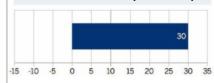
The 750D does enormously well to suppress image noise, despite the greater pixel density of its sensor

#### RAW\* DYNAMIC RANGE

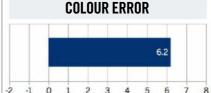


Dynamic range can suffer in cameras with greater numbers of megapixels, but the 750D matches its 18Mp siblings

#### **RAW\* RESOLUTION (AT ISO200)**



A winner for resolution, it captures finer detail than the other cameras on test



Colour reproduction is accurate, without the slight over-saturation of the 1300D

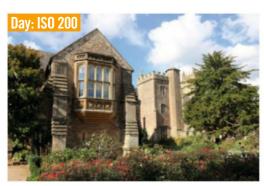
#### **PhotoPius** verdict

From its image sensor and processor to its autofocus and metering systems, the 750D represents a major upgrade over the other cameras on test. It's simply spectacular, and not just for beginners.

**FEATURES BUILD & HANDLING IMAGE QUALITY VALUE** 

**OVERALL** 

 $\star$   $\star$   $\star$   $\star$  $\star$   $\star$   $\star$   $\star$   $\star$  $\star$   $\star$   $\star$   $\star$  $\star$   $\star$   $\star$   $\star$   $\star$ 



Glorious landscapes are assured, the extra megapixel count revealing superb levels of detail



High ISO images are as low in noise as the other cameras on test, while fine detail is better retained

# **G G A B SUPERTEST**

COMPARISON TABLE



# **THE WINNER IS... CANON EOS 750D**

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It's a phenomenal beginners' camera that can even satisfy seasoned enthusiasts

OVERALL

beginner's camera should be easy to use so that novices can take it out of the box and start taking photos, rather than wading through the manual for days. The 750D accomplishes this with a helpful 'feature guide' option, like the other cameras on test, however, it's also more able to grow with you as your skills increase, offering an excellent range of high-end features and custom functions. With its greater megapixel count, later-

OVERALL

generation processor, superior autofocus systems and revamped metering module, the 750D is Canon's best ever beginners' camera.

**OVERALL** 

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OVERALL

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The next option is the 700D, though its specs make it look like a bit of a poor relation. The 100D is only really worth considering if you want the smallest possible SLR for saving a few millimetres of storage space. The 1300D is a good camera at a low price, but you might feel the need to upgrade sooner rather than later.  $\Phi$ 



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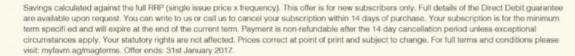


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# **PhotoPlus**

With prices ranging from a couple of hundred quid to several thousand, Canon has a DSLR to suit everyone, from the complete beginner to most demanding pro...



#### What to look for

Canon EOS DSLRs

Canon splits its EOS lineup into entry-level, enthusiast and professional ranges, and the fewer digits the more upmarket the camera; so the new 1300D is the most basic, the 750D/760D for intermediates, while the new 80D is for more advanced enthusiasts. Expect greater ease of use (with thumboperated scrollwheels replacing cumbersome cursor keys), more robust build quality (with weather-sealing and tough magnesiumalloy shells), more advanced functionality, and full-frame (rather than smaller APS-C) image sensors with more expensive EOS models.

DSLR/CSC prices quoted are body-only unless stated

#### **CANON EOS 1300D (REBEL T6)**

#### TESTED IN ISSUE 120 PRICE: £289/\$499 (US PRICE WITH KIT LENS)



CANON'S entry-level, budget-friendly EOS DSLR gets up a minor upgrade over its predecessor with added Wi-Fi and NFC to make it easy to instantly share images online. A basic 18Mp sensor, ISO6400 and 3fps are all specs ideal for a beginner's first 'proper' camera.

Sensor	r 18Mp, APS-C (5184x3456 pixels)	
Viewfinder	Pentamirror, 0.8x, 95%	
ISO	100-6400 (12,800 expanded)	
AF	9-point (1 cross-type)	
LCD	Fixed, 3-inch, 920k-dot TFT	
Max burst (buffer)	3fps (6 Raw/1100 JPEG)	
Memory card	SD/SDHC/SDXC	

#### **CANON EOS 100D (REBEL SL1)**



169160 IN 19906 150 PRICE. #2/9/ \$399	
Sensor	18Mp, APS-C (5184x3456 pixels)
Viewfinder	Pentamirror, 0.87x, 95%
ISO	100-12,800 (25,600 expanded)
AF	9-point (1 cross-type)
LCD	3in touchscreen, 1040K dots
Max burst (buffer)	4fps (7 Raw/28 JPEG)
Memory card	SD/SDHC/SDXC

#### **CANON EOS 700D (REBEL T5i)**



WITH A faster continuous drive rate than the 100D, better AF and the bonus of a vari-angle touchscreen, the 700D is more versatile for shooting from extreme angles or around corners. It's a lovely lightweight camera but is now outclassed by the newer 750D.

TESTED IN ISSUE 120 PRICE: £399/\$64
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Sensor	18Mp, APS-C (5184x3456 pixels)
Viewfinder Pentamirror, 0.85x, 95%	
ISO	100-12,800 (25,600 expanded)
AF	9-point (all cross-type)
LCD	3in touchscreen vari-angle, 1040K dots
Max burst (buffer)	5fps (6 Raw/22 JPEG)
Memory card	SD/SDHC/SDXC

#### **CANON EOS 750D (REBEL T6i)**

**HEADLINE** attractions include a new 24.2Mp high-resolution image sensor and DIGIC 6 processor, plus a 19-point autofocus system. It beats the older 700D in all these respects, and adds Wi-Fi and NFC connectivity for easy image sharing and printing.

TESTED IN	ISSUE <b>120</b>	PRICE:	£529	/\$749

Sensor	24.2Mp, APS-C (6000x4000 pixels)
Viewfinder Pentamirror, 0.82x, 95%	
ISO	100-12,800 (25,600 expanded)
AF	19-point (all cross-type)
LCD	3in touchscreen vari-angle, 1040K dots
Max burst (buffer)	5fps (8 Raw/940 JPEG)
Memory card	SD/SDHC/SDXC

#### **CANON EOS 760D (REBEL T6s)**



**BUILDING** on the impressive features of the 750D, the 760D adds a secondary info LCD on the top and Quick Control Dial on the rear. This improves handling and makes it feel more like an 'enthusiast' model, rather than an entry-level DSLR, and is worth the extra outlay.

#### TESTED IN ISSUE 108 PRICE: £549/\$849 Sensor 24.2Mp, APS-C (6000x4000 pixels) Viewfinder Pentamirror, 0.82x, 95% ISO 100-12,800 (25,600 expanded) ΑF 19-point (all cross-type) LCD 3in touchscreen vari-angle, 1040K dots

5fps (8 Raw/940 JPEG) SD/SDHC/SDXC

Max burst (buffer)

Memory card

116 **PhotoPlus** 

#### **CANON EOS M10**

#### **CANON EOS M3**



#### TESTED N/A PRICE: £189/\$449 (with lens)

Sensor	18Mp, APS-C (5184x3456 pixels)
ISO	100-12,800 (25,600 expanded)
AF	Hybrid CMOS AF II & 49 AF points



#### $\star |\star| \star$

TESTED IN ISSUE 102 PRICE: £369/\$479

Sensor	24.2Mp, APS-C (6000x4000 pixels)
ISO	100-12,800 (25,600 expanded)
AF Hybrid CMOS AF III & 49 AF point	

#### **CANON EOS 80D**



**THE 80D** builds upon its 70D predecessor with 25% more pixels, 45 cross-type AF points, improved ISO performance and retains the ability to capture 7fps bursts. It can record movies at double-speed 50/60fps for slow-motion, and has NFC data transfer in addition to Wi-Fi.

169160 IN 19906 113 PRICE. #333/ \$1133		
24.2Mp, APS-C (6000x4000 pixels)		
Pentaprism, 0.95x, 100%		
100-16,000 (25,600 expanded)		
45-point (all cross-type)		
3in touchscreen vari-angle, 1040K dots		
7fps (25 Raw/110 JPEG)		
SD/SDHC/SDXC		

TESTED IN ISSUE 108 PRICE: £1179/\$1349

#### **CANON EOS 7D Mk II**



HERE'S the king of action-packed APS-C format cameras. A long-overdue revamp of the original 7D, it has 65-point AF with advanced tracking, 10fps continuous drive, dual DIGIC 6 processors and GPS, all wrapped up in a tough, weather-sealed magnesium alloy shell.

TESTED IN ISSUE 100 TRICE. WIII 3/ WISTS		
Sensor	20.2Mp, APS-C (5472x3648 pixels)	
Viewfinder	Pentaprism, 1.0x, 100%	
ISO	100-16,000 (51,200 expanded)	
AF	65-point (all cross-type)	
LCD	3in, 1040K dots	
Max burst (buffer)	10fps (31 Raw/unlimited JPEG)	
Memory card	CompactFlash + SD/SDHC/SDXC	

#### **CANON EOS 6D**



**AMAZINGLY** good value for a full-frame EOS DSLR in a medium-sized body, the 6D combines a respectable 20.2Mp sensor with super-high sensitivities of up to ISO102,400. Image quality is excellent and there's built-in Wi-Fi and GPS, but the 6D has a fairly basic AF system.

16216D IN 12206 108 PRICE: #1549/\$1569		
Sensor	20.2Mp, full-frame (5472x3648 pixels)	
Viewfinder	Pentaprism, 0.71x, 97%	
ISO	100-25,600 (50-102,400 expanded)	
AF	11-point (1 cross-type)	
LCD	3in, 1040K dots	
Max burst (buffer)	4.5fps (17 Raw/1250 JPEG)	
Memory card	SD/SDHC/SDXC	

TESTED IN ISSUE 119 PRICE: £3599/\$3499

#### **CANON EOS 5D Mk IV**



A SUPERB all-rounder, the pro-level weather-sealed full-frame 5D Mk IV combines a stunning hi-res 30Mp sensor with a swift 7fps frame rate. Its impressive specs list includes 4K video, a touchscreen LCD, Wi-Fi and NFC connectivity, and GPS to automatically geotag images.

Sensor	30.4Mp, full-frame (6720x4480 pixels)
Viewfinder	Pentaprism, 0.71x, 100%
ISO	100-32,000 (50-102,400 expanded)
AF	61-point (41 cross-type, 5 dual-cross)
LCD	3.2in touchscreen, 1620K dots
Max burst (buffer)	7fps (21 Raw/unlimited JPEG)
Memory card	CompactFlash + SD/SDHC/SDXC

#### **CANON EOS 5DS (5DS R)**





**THE** world's first 50Mp full-frame DSLR delivers huge *and* amazingly detailed hi-res images. The higher-cost 5DS R adds a 'low-pass cancellation filter' for marginally sharper shots. As expected with such a high-res sensor, max ISO and drive rate are lower than with the 5D Mk IV.

Sensor	50.6Mp, full-frame (8688x5792 pixels)
Viewfinder	Pentaprism, 0.71x, 100%
ISO	100-6400 (50-12,800 expanded)
AF	61-point (41 cross-type, 5 dual-cross)
LCD	3.2in, 1040K dots
Max burst (buffer)	5fps (14 Raw/510 JPEG)
Memory card	CompactFlash + SD/SDHC/SDXC

#### **CANON EOS-1D X MARK II**



**CANON'S** Mark II flagship full-frame pro-level EOS boasts ultra-fast 14fps shooting (16fps in Live View) and super-high ISO, along with sublime handling. It sports 4K video, body build quality is rock-solid, yet its 20Mp image resolution is relatively modest when compared to the 50Mp 5DS/R.

20.2Mp, full-frame (5472x3648 pixels)
Pentaprism, 0.76x, 100%
100-51,200 (50-409,600 expanded)
61-point (41 cross-type, 5 dual-cross)
3.2in, 1620K dots
14-16fps (170 Raw/Unlimited JPEG)
CompactFlash + CFast

TESTED IN ISSUE 115 PRICE: £5199/\$5999

**PhotoPlus** 

# PhotoPlus BUYERS' CIIII

With over 150 lenses available for Canon DSLRs, picking the best for the job can be a minefield. Here's the lowdown on all currently available EOS-fit glass

**KEY:** • BEST VALUE AWARD • BEST ON TEST AWARD



### **Choosing lenses**

Key factors to watch out for

THE MAIN factors to consider in a lens are its focal length, maximum aperture, and whether or not it's full-frame compatible. We've categorized lenses by focal length range – from wide-angle to telephoto. The larger a lens's maximum aperture, the 'faster' it's considered to be – allowing you to control depth of field more, and offering better options in low light. Zooms are more flexible than primes, but tend not to have such fast maximum apertures. Full-frame lenses will also work with 'crop-sensor' EOS D-SLRs, but crop-sensor lenses aren't compatible with full-frame cameras.

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WIDE-ANGLE ZOOMS	Pries.	Full-frai	Nat Zoof	Image	ability Hay ale ture	Weight	Mit focus di	Maxmagni	Fillersize	lijsh	ades sur revi	Rains	Amards
Canon EF 8-15mm f/4L Fisheye USM	£900/\$1250	Yes	1.9x	No	f/4	540g	0.15m	0.34x	None	7	90	****	
Canon EF-S 10-18mm f/4.5-5.6 IS STM	£180/\$280	No	1.8x	Yes	f/4.5-5.6	240g	0.22m	0.15x	67mm	7	113	****	
Canon EF-S 10-22mm f/3.5-4.5 USM	£380/\$650	No	2.2x	No	f/3.5-4.5	385g	0.24m	0.17x	77mm	6	113	***	
Canon EF 11-24mm f/4L USM	£2650/\$2900	Yes	2.2x	No	f/4	1180g	0.28m	0.16x	None	9	116	****	
Canon EF 16-35mm f/2.8L III USM	£2350/\$2200	Yes	2.2x	No	f/2.8	790g	0.28m	0.22x	82mm	9	120	****	
Canon EF 16-35mm f/4L IS USM	£685/\$1000	Yes	2.2x	Yes	f/4	615g	0.28m	0.23x	77mm	9	116	****	
Canon EF 17-40mm f/4L USM	£500/\$750	Yes	2.4x	No	f/4	500g	0.28m	0.24x	77mm	7	113	****	
<b>Sigma</b> 8-16mm f/4.5-5.6 DC HSM	£500/\$700	No	2.0x	No	f/4.5-5.6	555g	0.24m	0.13x	None	7	113	****	
Sigma 10-20mm f/3.5 EX DC HSM	£330/\$450	No	2.0x	No	f/3.5	520g	0.24m	0.15x	82mm	7	113	****	
Sigma 12-24mm f/4.5-5.6 II DG HSM	£530/\$950	Yes	2.0x	No	f/4.5-5.6	670g	0.28m	0.16x	None	6	113	****	
<b>Sigma</b> 18-35mm f/1.8 DC HSM A	£550/\$800	No	1.9x	No	f/1.8	810g	0.28m	0.23x	72mm	9	90	****	•
Sigma 24-35mm f/2 DG HSM A	£700/\$1000	Yes	1.5x	No	f/2	940g	0.28m	0.23x	82mm	9	113	****	
<b>Tamron</b> SP AF 10-24mm f/3.5-4.5 Di II LD	£350/\$500	No	2.4x	No	f/3.5-4.5	406g	0.24m	0.2x	77mm	7	113	***	
Tamron SP 15-30mm f/2.8 Di VC USD	£800/\$1200	Yes	2.0x	Yes	f/2.8	1100g	0.28m	0.2x	None	9	113	****	
Tokina 10-17mm f/3.5-4.5 AT-X DX Fisheye	£430/\$550	No	1.7x	No	f/3.5-4.5	350g	0.14m	0.39x	None	6	87	***	
Tokina 11-20mm f/2.8 AT-X PRO DX II	£500/\$600	No	1.8x	No	f/2.8	560g	0.28m	0.12x	82mm	9			
Tokina 12-28mm f/4 AT-X Pro DX	£430/\$400	No	2.3x	No	f/4	530g	0.25m	0.2x	77mm	9	87	***	
Tokina 14-20mm f/2 AT-X PRO DX	£850/\$850	No	1.43x	No	f/2	750g	0.28m	0.12x	82mm	9	116	****	
Tokina 16-28mm f/2.8 AT-X PRO FX	£550/\$590	Yes	1.8x	No	f/2.8	950g	0.28m	0.19x	None	9			
Tokina 17-35mm f/4 AT-X PRO FX	£430/\$450	Yes	2.1x	No	f/4	600g	0.28m	0.21x	82mm	9			

TELEPHOTO ZOOMS	Price	Full-II	Max	IM366	Makar	Meigh	William	Maxmor	Filter	Hispir	15 SUR	Ratins	Awards
Canon EF-S 55-250mm f/4-5.6 IS STM	£200/\$300	No	4.5x	Yes	f/4-5.6	375g	0.85m	0.29x	58mm	7	107	***	
Canon EF 70-200mm f/2.8L IS II USM	£1500/\$1950	Yes	2.9x	Yes	f/2.8	1490g	1.2m	0.21x	77mm	8	116	****	
Canon EF 70-200mm f/2.8L USM	£945/\$1250	Yes	2.9x	No	f/2.8	1310g	1.5m	0.16x	77mm	8	64	****	
Canon EF 70-200mm f/4L IS USM	£795/\$1100	Yes	2.9x	Yes	f/4	760g	1.2m	0.21x	67mm	8	107	****	
Canon EF 70-200mm f/4L USM	£440/\$600	Yes	2.9x	No	f/4	705g	1.2m	0.21x	67mm	8	96	****	
Canon EF 70-300mm f/4-5.6 IS USM	£340/\$450	Yes	4.3x	Yes	f/4-5.6	630g	1.5m	0.26x	58mm	8	107	***	
Canon EF 70-300mm f/4-5.6L IS USM	£1030/\$1350	Yes	4.3x	Yes	f/4-5.6	1050g	1.2m	0.21x	67mm	8	117	****	
Canon EF 70-300mm f/4.5-5.6 DO IS USM	£1090/\$1400	Yes	4.3x	Yes	f/4.5-5.6	720g	1.4m	0.19x	58mm	6	90	***	
Canon EF 75-300mm f/4-5.6 III	£190/\$200	Yes	4.0x	No	f/4-5.6	480g	1.5m	0.25x	58mm	7	15	***	
Canon EF 75-300mm f/4-5.6 III USM	£220/\$180	Yes	4.0x	No	f/4-5.6	480g	1.5m	0.25x	58mm	7	70	***	
Canon EF 100-400mm f/4.5-5.6L IS II USM	£1800/\$2100	Yes	4.0x	Yes	f/4.5-5.6	1640g	0.98m	0.31x	77mm	9	117	****	
Canon EF 200-400mm f/4L IS USM Extender 1.4x	£8600/\$11,000	Yes	2.8x	Yes	f/4	3620g	2.0m	0.15x	52mm	9	77	****	
Samyang 650-1300mm MC IF f/8-16	£265/\$240	Yes	2.0x	No	f/8-16	2000g	5.0m	0.2x	95mm	0			
<b>Sigma</b> 50-500mm f4.5-6.3 DG OS HSM	£850/\$1450	Yes	10.0x	Yes	f/4.5-6.3	1970g	0.5-1.8m	0.32x	95mm	9	117	***	
Sigma 70-200mm f/2.8 EX DG OS HSM	£730/\$1150	Yes	2.9x	Yes	f/2.8	1430g	1.4m	0.13x	77mm	9	107	****	
<b>Sigma</b> 70-300mm f/4-5.6 DG Macro	£100/\$140	Yes	4.3x	No	f/4-5.6	545g	0.95m	0.5x	58mm	9	110	***	
Sigma APO 70-300mm f/4-5.6 DG Macro	£150/\$150	Yes	4.3x	No	f/4-5.6	550g	0.95m	0.5x	58mm	9	96	***	
<b>Sigma</b> 120-300mm f/2.8 DG OS HSM S	£2500/\$3400	Yes	2.5x	Yes	f/2.8	3390g	1.5-2.5m	0.12x	105mm	9	98	****	
<b>Sigma</b> 150-600mm f/5-6.3 DG OS HSM C	£740/\$1100	Yes	4.0x	Yes	f/5-6.3	1930g	2.8m	0.2x	95mm	9	117	****	
<b>Sigma</b> 150-600mm f/5-6.3 DG OS HSM S	£1200/\$2000	Yes	4.0x	Yes	f/5-6.3	2860g	2.6m	0.2x	105mm	9	117	****	•
<b>Sigma</b> 200-500mm f/2.8 EX DG	£12,700/\$26,000	Yes	2.5x	No	f/2.8	15,700g	2.0-5.0m	0.13x	72mm	9			
Sigma 300-800mm f/5.6 EX DG HSM	£5500/\$7500	Yes	2.7x	No	f/5.6	5880g	6.0m	0.14x	46mm	9			
Tamron SP AF 70-200mm f/2.8 Di LD (IF) Macro	£475/\$770	Yes	2.9x	No	f/2.8	1320g	0.95m	0.32x	77mm	9	64	***	
Tamron SP AF 70-200mm f/2.8 Di VC USD	£930/\$1500	Yes	2.9x	Yes	f/2.8	1470g	1.3m	0.13x	77mm	9	107	****	
Tamron AF 70-300mm f/4-5.6 Di LD Macro	£85/\$150	Yes	4.3x	No	f/4-5.6	458g	0.95m	0.5x	62mm	9	96	***	
Tamron SP AF 70-300mm f/4-5.6 Di VC USD	£240/\$450	Yes	4.3x	Yes	f/4-5.6	765g	1.5m	0.25x	62mm	9	107	****	
<b>Tamron</b> SP 150-600mm F/5-6.3 Di VC USD	£740/\$1050	Yes	4.0x	Yes	f/5-6.3	1951g	2.7m	0.2x	95mm	9	117	****	

### BUYERS' GUIDE LENSES

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STANDARD ZOOMS	Price	Full-frain	Nat Ind	Inage s	Matalectur	Weight	Min facus d.	Mat Hagriff	Filter size	list	ades Issue revi	Rains	Amards
Canon EF-S 15-85mm f/3.5-5.6 IS USM	£510/\$800	No	5.7x	Yes	f/3.5-5.6	575g	0.35m	0.21x	72mm	7	84	****	
Canon EF-S 17-55mm f/2.8 IS USM	£520/\$880	No	3.2x	Yes	f/2.8	645g	0.35m	0.17x	77mm	7	84	****	•
Canon EF-S 18-55mm f/3.5-5.6 IS II	£130/\$200	No	3.1x	Yes	f/3.5-5.6	200g	0.25m	0.34x	58mm	6	110	***	
Canon EF-S 18-55mm f/3.5-5.6 IS STM	£140/\$250	No	3.1x	Yes	f/3.5-5.6	205g	0.25m	0.36x	58mm	7	110	****	
Canon EF 24-70mm f/2.8L II USM	£1400/\$1750	Yes	2.9x	No	f/2.8	805g	0.38m	0.21x	82mm	9	116	****	
Canon EF 24-70mm f/4L IS USM	£675/\$900	Yes	2.9x	Yes	f/4	600g	0.38m	0.7x	77mm	9	93	****	
Canon EF 24-105mm f/3.5-5.6 IS STM	£350/\$600	Yes	4.4x	Yes	f/3.5-5.6	525g	0.4m	0.3x	77mm	7			
Canon EF 24-105mm f/4L IS USM	£730/\$1000	Yes	4.4x	Yes	f/4	670g	0.45m	0.23x	77mm	8	93	****	
Sigma 17-50mm f/2.8 EX DC OS HSM	£280/\$420	No	2.9x	Yes	f/2.8	565g	0.28m	0.2x	77mm	7	84	****	
Sigma 17-70mm f/2.8-4 DC Macro OS HSM C	£320/\$500	No	4.1x	Yes	f/2.8-4	465g	0.22m	0.36x	72mm	7	84	****	
Sigma 24-70mm f/2.8 IF EX DG HSM	£530/\$750	Yes	2.9x	No	f/2.8	790g	0.38m	0.19x	82mm	9	93	****	
Sigma 24-105mm f/4 DG OS HSM A	£600/\$900	Yes	4.4x	Yes	f/4	885g	0.45m	0.22x	82mm	9	85	****	
Tamron SP AF 17-50mm f/2.8 XR Di II VC	£330/\$500	No	2.9x	Yes	f/2.8	570g	0.29m	0.21x	72mm	7	84	****	
Tamron SP AF 24-70mm f/2.8 Di VC USD	£680/\$1300	Yes	2.9x	Yes	f/2.8	825g	0.38m	0.2x	82mm	9	93	****	
Tamron SP AF 28-75mm f/2.8 XR Di	£320/\$500	Yes	2.7x	No	f/2.8	510g	0.33m	0.26x	67mm	7	57	***	

**KEY:** • BEST VALUE AWARD • BEST ON TEST AWARD

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SUPERZOOMS	Pilos	Full-fra	Max 20	IMage St.	Mat ale fu	Meight	Will focus by	Maxmab	Filler size	lisp	e Issue to	Raling	Whatda
Canon EF-S 18-135mm f/3.5-5.6 IS STM	£295/\$550	No	7.5x	Yes	f/3.5-5.6	480g	0.39m	0.28x	67mm	7	92	****	
Canon EF-S 18-200mm f/3.5-5.6 IS	£355/\$700	No	11.1x	Yes	f/3.5-5.6	595g	0.45m	0.24x	72mm	6	92	****	
Canon EF 28-300mm f/3.5-5.6L IS USM	£1795/\$2450	Yes	10.7x	Yes	f/3.5-5.6	1760g	0.7m	0.30x	77mm	8	6	****	
Sigma 18-200mm f/3.5-6.3 DC Macro OS HSM C	£250/\$400	No	11.1x	Yes	f/3.5-6.3	430g	0.39m	0.33x	62mm	7	92	****	
<b>Sigma</b> 18-250mm f/3.5-6.3 DC Macro OS HSM	£280/\$350	No	13.9x	Yes	f/3.5-6.3	470g	0.35m	0.34x	62mm	7	92	****	
<b>Sigma</b> 18-300mm f/3.5-6.3 DC Macro OS HSM C	£350/\$500	No	16.7x	Yes	f/3.5-6.3	585g	0.39m	0.33x	72mm	7			
Tamron 16-300mm f/3.5-6.3 Di II VC PZD Macro	£400/\$500	No	18.8x	Yes	f/3.5-6.3	540g	0.39m	0.34x	67mm	7	92	****	•
<b>Tamron</b> 18-200mm f/3.5-6.3 Di II VC	£170/\$250	No	11.1x	Yes	f/3.5-6.3	400g	0.49m	0.25x	62mm	7	110	****	
Tamron AF 18-200mm f/3.5-6.3 XR Di II LD Macro	£130/\$200	No	11.1x	No	f/3.5-6.3	405g	0.45m	0.27x	62mm	7	92	***	
<b>Tamron</b> AF 18-270mm f/3.5-6.3 Di II VC PZD	£270/\$450	No	15.0x	Yes	f/3.5-6.3	450g	0.49m	0.26x	62mm	7	92	****	
<b>Tamron</b> 28-300mm f/3.5-6.3 Di VC PZD	£500/\$850	Yes	10.7x	Yes	f/3.5-6.3	540g	0.49m	0.29x	67mm	7			
<b>Tamron</b> AF 28-300mm f/3.5-6.3 XR Di LD Macro	£320/\$400	Yes	10.7x	No	f/3.5-6.3	435g	0.49m	0.34x	62mm	9			

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WIDE-ANGLE PRIMES	Pice	Full-fram	Nat Iour	Inale state	Mat alettile	Meight	hintone district	Mat Halfifted	Filter size	lish	lades sur feith	Rains	Awar
Canon EF 14mm f/2.8L II USM	£1530/\$2100	Yes	None	No	f/2.8	645g	0.2m	0.15x	None	6			
Canon TS-E 17mm f/4L (tilt & shift)	£1450/\$2150	Yes	None	No	f/4	820g	0.25m	0.14x	77mm	8	90	****	
Canon EF 20mm f/2.8 USM	£385/\$540	Yes	None	No	f/2.8	405g	0.25m	0.14x	72mm	5	114	***	
Canon EF 24mm f/1.4L II USM	£1100/\$1550	Yes	None	No	f/1.4	650g	0.25m	0.17x	77mm	8			
Canon EF 24mm f/2.8 IS USM	£420/\$600	Yes	None	Yes	f/2.8	280g	0.2m	0.23x	58mm	7	114	****	
Canon EF-S 24mm f/2.8 STM	£130/\$150	Yes	None	No	f/2.8	125g	0.16m	0.27x	52mm	7	110	****	
Canon TS-E 24mm f/3.5L II (tilt & shift)	£1480/\$1900	Yes	None	No	f/3.5	780g	0.21m	0.34x	82mm	8			
Canon EF 28mm f/1.8 USM	£345/\$510	Yes	None	No	f/1.8	310g	0.25m	0.18x	58mm	7	67	***	
Canon EF 28mm f/2.8 IS USM	£390/\$550	Yes	None	Yes	f/2.8	260g	0.23m	0.2x	58mm	7	114	****	
Canon EF 35mm f/1.4L USM	£960/\$1000	Yes	None	No	f/1.4	580g	0.3m	0.18x	72mm	8			
Canon EF 35mm f/1.4L II USM	£1800/\$1800	Yes	None	No	f/1.4	760g	0.28m	0.21x	72mm	9	116	****	
Canon EF 35mm f/2 IS USM	£380/\$600	Yes	None	Yes	f/2	335g	0.24m	0.24x	67mm	8	114	****	
Peleng 8mm f/3.5 Fisheye	£250/\$215	Yes	None	No	f/3.5	400g	0.22m	0.13x	None				
Peleng 17mm f/2.8 Fisheye	£290/\$290	Yes	None	No	f/2.8	630g	0.3m		None				
Samyang 8mm f/3.5 IF MC CSII DH Circular	£220/\$240	Yes	None	No	f/3.5	435g	0.3m	N/S	None	6			
Samyang 10mm f/2.8 ED AS NCS CS	£300/\$400	No	None	No	f/2.8	600g	0.25m	N/S	None	6			
Samyang 12mm f/2.8 ED AS NCS Diagonal	£360/\$470	Yes	None	No	f/2.8	530g	0.2m	N/S	None	7			
Samyang 14mm f/2.8 IF ED UMC	£270/\$330	Yes	None	No	f/2.8	560g	0.28m	N/S	None	6	74	***	
Samyang 16mm f/2 ED AS UMC CS	£295/\$360	No	None	No	f/2	590g	0.2m	N/S	77mm	8			
Samyang 24mm f/1.4 ED AS UMC	£440/\$470	Yes	None	No	f/1.4	680g	0.25m	N/S	77mm	8			
Samyang T-S 24mm f/3.5 ED AS UMC (tilt & shift)	£625/\$760	Yes	None	No	f/3.5	680g	0.2m	N/S	82mm	8	90	****	
Samyang 35mm f/1.4 AS UMC AE	£370/\$460	Yes	None	No	f/1.4	660g	0.3m	N/S	77mm	8	100	****	
Schneider 28mm f/4.5 PC-TS (tilt & shift)	£4980/\$6000	Yes	None	No	f/4.5	1560g	0.15m	0.16x	122mm				
Sigma 4.5mm f/2.8 EX DC HSM Circular Fisheye	£600/\$900	No	None	No	f/2.8	470g	0.14m	0.17x	None	6	87	****	
Sigma 8mm f/3.5 EX DG Circular Fisheye	£600/\$900	Yes	None	No	f/3.5	400g	0.14m	0.22x	None	6	87	****	•
Sigma 10mm f/2.8 EX DC HSM Diagonal Fisheye	£500/\$600	No	None	No	f/2.8	475g	0.14m	0.11x	None	7	87	****	
Sigma 15mm f/2.8 EX DG Diagonal Fisheye	£500/\$610	Yes	None	No	f/2.8	370g	0.15m	0.26x	None	7	44	****	
Sigma 20mm f/1.4 DG HSM A	£630/\$900	Yes	None	No	f/1.4	950g	0.28m	0.14x	77mm	9	114	****	
Sigma 24mm f/1.4 DG HSM A	£600/\$850	Yes	None	No	f/1.4	665g	0.25m	0.19x	77mm	9	114	****	•
Sigma 30mm f/1.4 DC HSM A	£300/\$500	No	None	No	f/1.4	435g	0.3m	0.15x	62mm	9	100	****	
Sigma 35mm f/1.4 DG HSM A	£600/\$900	Yes	None	No	f/1.4	665g	0.3m	0.19x	67mm	9	100	****	
Tamron SP 35mm f/1.8 Di VC USD	£500/\$600	Yes	None	Yes	f/1.8	480g	0.2m	0.4x	67mm	9	114	****	
Voigtlander 20mm f/3.5 Color-Skopar SL II	£505/\$500	Yes	None	No	f/3.5	240g	0.2m	N/S	52mm	9	111	AAAAA	
Voigtlander 28mm f/2.8 Color-Skopar	£440/\$480	Yes	None	No	f/2.8	230g	0.22m	N/S	52mm	9			
Zeiss Distagon T* 15mm f/2.8 ZE	£2150/\$2950	Yes	None	No	f/2.8	820g	0.25m	0.11x	95mm	9			
Zeiss Distagon T* 18mm f/3.5 ZE	£1090/\$1395	Yes	None	No	f/3.5	510g	0.25m	0.08x	82mm	9	44	****	
Zeiss Distagon T* 21mm f/2.8 ZE	£1300/\$1845	Yes	None	No	f/2.8	720g	0.22m	0.2x	82mm	9		AAAAA	
Zeiss Distagon T* 25mm f/2 ZE	£1270/\$1700	Yes	None	No	f/2	600g	0.25m	0.2x	67mm	9			
Zeiss Distagon T* 28mm f/2 ZE	£980/\$1285	Yes	None	No	f/2	580g	0.24m	0.17x	58mm	9			
Zeiss Distagon T* 35mm f/1.4 ZE	£1300/\$1845	Yes	None	No	f/1.4	850g	0.24III	0.21x	72mm	9			
Zeiss Distagon T* 35mm f/2 ZE	£850/\$1120	Yes	None	No	f/2	570g	0.3m	0.19x	58mm	9			
Zeiss Milyus 2.0/35 ZE	£830/\$1120	Yes	None	No	f/2	702g	0.3m	0.19x	58mm	9	114	****	

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Schneider www.linhofstudio.com

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STANDARD PRIMES	Piice	Full-frail	Max 200	Image S	Maxabe	Meight	Willfoch	Maxmab	Filter Str	lish	IS HE TE	Rains	Awards
Canon EF 40mm f/2.8 STM	£150/\$200	Yes	None	No	f/2.8	130g	0.3m	0.18x	52mm	7	110	****	
Canon TS-E 45mm f/2.8 (tilt & shift)	£1100/\$1400	Yes	None	No	f/2.8	645g	0.4m	0.16x	72mm	8			
Canon EF 50mm f/1.2L USM	£995/\$1450	Yes	None	No	f/1.2	580g	0.45m	0.15x	72mm	8	103	****	
Canon EF 50mm f/1.4 USM	£235/\$330	Yes	None	No	f/1.4	290g	0.45m	0.15x	58mm	8	116	****	
Canon EF 50mm f/1.8 STM	£100/\$125	Yes	None	No	f/1.8	160g	0.35m	0.21x	49mm	7	110	****	
Samyang 50mm f/1.4 AS UMC	£285/\$350	Yes	None	No	f/1.4	575g	0.45m	N/S	77mm	8			
Schneider 50mm f/2.8 PC-TS (tilt & shift)	£2820/\$3365	Yes	None	No	f/2.8	1400g	0.65m	0.11x	90mm	8			
Sigma 50mm f/1.4 DG HSM A	£580/\$950	Yes	None	No	f/1.4	815g	0.4m	0.18x	77mm	9	103	****	
Tamron 45mm f/1.8 Di VC USD	£500/\$600	Yes	None	Yes	f/1.8	540g	0.29m	0.29x	67mm	9	110	****	
Voigtlander 40mm f/2 Ultron	£445/\$450	Yes	None	No	f/2	250g	0.38m	N/S	52mm	9			
Zeiss Planar T* 50mm f/1.4 ZE	£560/\$725	Yes	None	No	f/1.4	380g	0.45m	0.15x	58mm	9			
Zeiss Otus 55mm f/1.4	£2700/\$3990	Yes	None	No	f/1.4	1030g	0.5m	0.15x	77mm	9			

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TELEPHOTO PRIMES	Pice	Full-fram	Nat Zooff	Image sta	Mat ale ture	Weight	Min lease distrib	Max Hagrifted	Filter size	lish	les les le le la	Rains hualds
Canon EF 85mm f/1.2L II USM	£1500/\$1900	Yes	None	No	f/1.2	1025g	0.95m	0.11x	72mm	8	116	****
Canon EF 85mm f/1.8 USM	£240/\$350	Yes	None	No	f/1.8	425g	0.85m	0.13x	58mm	8	103	***
Canon TS-E 90mm f/2.8 (tilt & shift)	£1100/\$1400	Yes	None	No	f/2.8	565g	0.5m	0.29x	58mm	8		
Canon EF 100mm f/2 USM	£350/\$500	Yes	None	No	f/2	460g	0.9m	0.14x	58mm	8	46	****
Canon EF 135mm f/2L USM	£680/\$1000	Yes	None	No	f/2	750g	0.9m	0.19x	72mm	8		
Canon EF 200mm f/2L IS USM	£4350/\$5700	Yes	None	Yes	f/2	2520g	1.9m	0.12x	52mm	8	98	****
Canon EF 200mm f/2.8L II USM	£550/\$750	Yes	None	No	f/2.8	765g	1.5m	0.16x	72mm	8	98	***
Canon EF 300mm f/2.8L IS II USM	£4800/\$6100	Yes	None	Yes	f/2.8	2400g	2.0m	0.18x	52mm	9	54	****
Canon EF 300mm f/4L IS USM	£960/\$1350	Yes	None	Yes	f/4	1190g	1.5m	0.24x	77mm	8	117	***
Canon EF 400mm f/2.8L IS II USM	£7700/\$10,000	Yes	None	Yes	f/2.8	3850g	2.7m	0.17x	52mm	9	54	****
Canon EF 400mm f/4 DO IS II USM	£7000/\$6900	Yes	None	Yes	f/4	2100g	3.3m	0.13x	52mm	9		
Canon EF 400mm f/5.6L USM	£960/\$1250	Yes	None	No	f/5.6	1250g	3.5m	0.12x	77mm	8	117	***
Canon EF 500mm f/4L IS II USM	£6600/\$9000	Yes	None	Yes	f/4	3190g	3.7m	0.15x	52mm	9		
Canon EF 600mm f/4L IS II USM	£8895/\$11,500	Yes	None	Yes	f/4	3920g	4.5m	0.15x	52mm	9		
Canon EF 800mm f/5.6L IS USM	£9900/\$13,000	Yes	None	Yes	f/5.6	4500g	6.0m	0.14x	52mm	8		
Samyang 85mm f/1.4 IF MC	£230/\$270	Yes	None	No	f/1.4	513g	1.0m	N/S	72mm	8		
Samyang 135mm f/2 ED UMC	£360/\$530	Yes	None	No	f/2	830g	0.8m	N/S	77mm	9		
Samyang 500mm MC IF f/6.3 Mirror	£125/\$150	Yes	None	No	f/6.3	705g	2.0m	N/S	95mm	0		
Samyang 500mm MC IF f/8 Mirror	£105/\$110	Yes	None	No	f/6.3	320g	1.7m	N/S	72mm	0		
Samyang 800mm MC IF f/8 Mirror	£170/\$190	Yes	None	No	f/8	870g	3.5m	N/S	30mm	0		
Schneider 90mm f/2.8 PC-TS (tilt & shift)	£2805/\$3180	Yes	None	No	f/2.8	1110g	0.57m	0.25x	104mm	6		
Sigma 85mm f/1.4 EX DG HSM	£620/\$970	Yes	None	No	f/1.4	725g	0.85m	0.12x	77mm	9	103	****
Sigma APO 300mm f/2.8 EX DG HSM	£2200/\$3400	Yes	None	No	f/2.8	2400g	2.5m	0.13x	46mm	9	98	****
Sigma APO 500mm f/4.5 EX DG HSM	£3600/\$4400	Yes	None	No	f/4.5	3150g	4.0m	0.13x	46mm	9		
Sigma APO 800mm f/5.6 EX DG HSM	£4300/\$6600	Yes	None	No	f/5.6	4.9kg	7.0m	0.11x	46mm	9	21	***
Tamron SP 85mm f/1.8 Di VC USD	£750/\$750	Yes	None	Yes	f/1.8	700g	0.8m	0.14x	67mm	9	115	****
Zeiss Planar T* 85mm f/1.4 ZE	£980/\$1285	Yes	None	No	f/1.4	670g	1.0m	0.1x	72mm	9		
Zeiss Apo Sonnar T* 135mm f/2 ZE	£1600/\$2125	Yes	None	No	f/2	930g	0.8m	0.25x	77mm	9		

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Canon EF 50mm f/2.5 Compact Macro	£235/\$300	Yes	None	No	f/2.5	280g	0.23m	0.5x	52mm	6	50	***	
Canon EF-S 60mm f/2.8 Macro USM	£350/\$420	No	None	No	f/2.8	335g	0.20m	1.0x	52mm	7	118	***	
Canon MP-E65mm f/2.8 1-5x Macro	£770/\$1050	Yes	None	No	f/2.8	710g	0.24m	5.0x	58mm	6	50	****	
Canon EF 100mm f/2.8 Macro USM	£400/\$600	Yes	None	No	f/2.8	600g	0.31m	1.0x	58mm	8	118	****	
Canon EF 100mm f/2.8L Macro IS USM	£650/\$850	Yes	None	Yes	f/2.8	625g	0.3m	1.0x	67mm	9	118	****	To the state of
Canon EF 180mm f/3.5L Macro USM	£1050/\$1400	Yes	None	No	f/3.5	1090g	0.48m	1.0x	72mm	8	69	****	
Sigma Macro 105mm f/2.8 EX DG OS HSM	£320/\$620	Yes	None	Yes	f/2.8	725g	0.31m	1.0x	62mm	9	118	****	
Sigma APO Macro 150mm f/2.8 EX DG OS HSM	£650/\$1100	Yes	None	Yes	f/2.8	1150g	0.38m	1.0x	72mm	9	118	****	
Sigma APO Macro 180mm f/2.8 EX DG OS HSM	£1100/\$1700	Yes	None	Yes	f/2.8	1640g	0.47m	1.0x	86mm	9	102	****	
Tamron SP AF 60mm f/2 Di II LD (IF) Macro	£300/\$525	No	None	No	f/2	350g	0.23m	1.0x	55mm	7	118	***	
Tamron SP AF 90mm f/2.8 Di Macro	£290/\$500	Yes	None	No	f/2.8	400g	0.29m	1.0x	55mm	9	102	***	
Tamron SP AF 90mm f/2.8 Di VC USD Macro	£580/\$650	Yes	None	Yes	f/2.8	610g	0.3m	1.0x	62mm	9	118	****	
Tamron SP AF 180mm f/3.5 Di Macro	£580/\$740	Yes	None	No	f/3.5	985g	0.47m	1.0x	72mm	7	69	***	
Tokina 100mm f/2.8 AT-X PRO Macro	£330/\$350	Yes	None	No	f/2.8	540g	0.3m	1.0x	55mm	9	118	****	
Zeiss Makro Planar T* 50mm f/2 ZE	£940/\$1285	Yes	None	No	f/2	570g	0.24m	0.5x	67mm	9			
Zeiss Makro Planar 100mm f/2 T* ZE	£1300/\$1545	Yes	None	No	f/2	680g	0.44m	0.5x	67mm	9	50	****	



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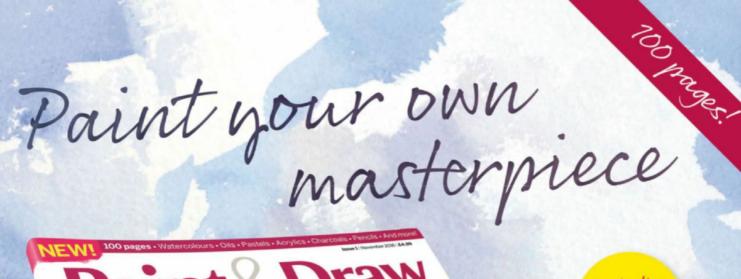
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SIGMA	150-600mm f5.0-6.3 C DG OS HSM	£739
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TAMRON	18-270mm f3.5-6.3 Di II VC PZD	£299
TAMRON	24-70mm f2 8 Di VC	£799
	28-300mm f3.5-6.3 Di VC PZD	
TAMRON	15-30mm f2.8 SP Di VC USD	£929
TAMRON	35mm f1.8 SP Di VC USD	£599
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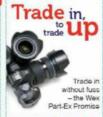
















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150-500 F5/6.3 HSM £499
180 F3.5 EX DG
HSM macro£399
1.4x EX conv£99
2x EX conv£99
Kenko Pro 300 1.4x conv£99
Kenko ext tubes£79
OTHER CAF USED
TAM 18-200 F3.5/6.3£119

1	TAM 28-300 F3.5/6.3 Di
•	VC PZD£399
1	TAM 28-300 box £149
1	TAM 45 F1.8 Di VC£379
1	TAM 70-300 F4/5.6
)	Di VC£219
	TAM 70-300 F4/5.6£99
	TAM 90 F2.8 VC£279
)	TAM 90 F2.8£179
•	CANON FLASH USED
1	CP-E3 batt pack£49
1	ST-E2 transmitter£79
	MT-24EX£549
)	430EXII£169
)	430EZ non digital£39
)	580EX box£179
1	600EX RT box £279
1	CANON FD USED
1	A-1 body£99
1	28 F2.8£49
	28-85 F4 box£199
1	35-70 F3.5/4.5£49
)	50 F1.4£99
)	70-200 F4£79
1	100-300 F5.6£79
1	135 F2£399
	2x extender B£49
,	299T flash£25
1	300TL flash£25



**CANON AF USED** 

















Website altered daily inc. manufacturers cashback & promotions



# **YOURVIEW**

# FOCUSPOINT

We'd love to hear your thoughts on the mag and all things photographic! Email us at **photoplus@futurenet.com** 

#### **Android devices**

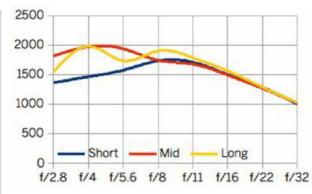
I have been a subscriber to your magazine since 2009 and was wondering when the digital version will be available for the Android system.

Penny Thomsen, Mount Louisa, Australia

Digital editions are already available on Android devices via Google Play, Nook for Android or on Zinio. To see the full range of devices go to http://bit.ly/ppdigi

#### Lens test graph mystery

I am a monthly reader of your Canon magazine, although we are a few issues behind the times here in Australia as issue 116 just hit the newsagents last week. In the August issue you have a series of tests on Canon lenses and although you show graphs of sharpness you do not say



what the units of sharpness are. Could you enlighten me? Frank Muscroft, Briar Hill, Australia

It is line widths/picture height, a standard measure now adopted by most testers because it is independent of the sensor size or print size. The units on a sharpness plot are LW/PH – line widths/

## picture height ndent

#### **STAR LETTER PRIZE!**

Each issue, every letter printed wins an Experience Seminars EOS training DVD. More info at www.eostrainingacademy.co.uk



# **PhotoPlus** The month in numbers

347

seconds our minimalist seascape shot lasted (p52)

1538
height in metres we took
pictures at during our trip

to the French Alps (p30)

AF points (all cross-type) in the 750D (p104)

2350

pounds – price of the EF 16-35mm f/2.8L III USM (p102)

years Timothy Allen was at *The Independent* (p68

2006 when Landscape Photographer of the Year

was founded (p22)

What do you enjoy shooting the most during the winter months?

3%
INDOOR
PROJECTS

PORTRAITS IN THE SNOW
PHOTOGRAPHY

SCENES

Vote in our next poll at http://bit.ly/pplus\_poll120



## The most popular stories found on the web this month



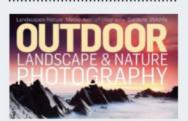
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#### Animal humour

Wildlife photography with a difference! Check out the finalists for the Comedy Wildlife Photography Awards 2016 www.boredpanda.com via *PhotoPlus* Facebook page



#### Outdoor photography guide

Special weekend treat... have this 162-page guide to outdoor photography as a gift from us https://learn.digitalcameraworld.com/pages/free-outdoor-guide via *PhotoPlus* Facebook page

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React instinctively to the moment and catch fast moving sports or wildlife action with ease thanks to a high performance AF system, a maximum 7fps continuous shooting rate and customisable controls.



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Add a Canon LP-E10 battery for £37.99

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Body only £459.00° + 18-55mm £559.00 + 18-135mm IS STM £724.00

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Body only £1,349.00\* + 24-105mm See web Add the Canon BG-E13 battery grip for £174.00

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In stock at £179

\*Price includes £20 cashback. You pay £199.00 & claim £20 from Canon Ul Offer available 19.10.16 - 18.01.2017.

#### Canon EF 16-35mm



\*Price includes £80 cashback. You pay Offer available 19.10.16 - 18.01.2017.

#### Canon EF-S 17-55mm f/2.8 IS

In stock at £608.00 \*Price includes £50 cashback. You pay £658.00 & claim £50 from Canon Ul Offer available 19.10.16 - 18.01.2017.

#### Canon EF 24-70mm f/41 IS USM

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#### Canon EF 70-300mm



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