COLLECT YOUR EXCLUSIVE DIGITAL CAMERA TIP CARDS EVERY MONTH

HOW TO SHOOT...
MACRO

FEATHERS

KIT CHECKLIST...
Macro lens
FOR YOUR FIRST SHOT, TRY...

TIPS FOR GETTING A GREAT SHOT...
- Lay your subject on a tabletop and shoot it directly from above, looking down.
- If your macro lens struggles to focus correctly, mount the camera on a tripod and use manual focus for more precision.

If there’s no morning dew (or you miss it), use a spray bottle to coat your plants with water.

TIPS FOR GETTING A GREAT SHOT...
- Shoot in the morning, after dew has collected on grass and plants overnight.
- Make sure your shutter speed is fast enough to freeze camera movement.

MOUTHS

KIT CHECKLIST...
Zoom lens, flashgun, reflector
FOR YOUR FIRST SHOT, TRY...

TIPS FOR GETTING A GREAT SHOT...
- To avoid having to get too close to your model’s face, hone in on her mouth using a zoom lens, such as a 70-200mm.
- Match the colour of the lipstick or gloss to props in the model’s mouth. Make it playful, but try to keep things classy.

If you don’t have studio lighting, use flash to light one side of the model and a reflector on the other.

HOW TO SHOOT...
PORTRAITS

NINE KITBAG ESSENTIALS
1. Torch: A head torch is ideal here, so you can see where you’re going in the dark! An LED torch can also be used to focus.
2. Spare batteries: The long exposures required (typically 20 sec at f/4, ISO 5,000) will quickly sap camera power.
3. Remote release: To avoid jiggling the camera when you press the shutter.
4. Tripod: A ultra-sturdy model is needed.
5. Wide-angle lens: To capture expansive skies.
6. Weather apps: These will help you to plan shoots and check the conditions.
8. Star map app: To find where the Milky Way will be in the sky at any time of year.
9. Warm clothes: To put on when the temperature drops later into the night.

HOW TO SHOOT...
LANDSCAPES

REFLECTIONS

Reflections in water can bring a sense of peace and tranquillity to a landscape image, mirroring pleasing colours in the scene.

- No breeze, no problem
  Little to no wind is essential for getting a pristine and sharp reflection in the water.
- Aperture Priority
  Put the camera into Aperture Priority mode, and select a narrow aperture of at least f/11.
- Check the focus
  Reflections can be tricky to focus on. Switch to manual focus if your lens hunts around.
- Make it pop
  By shooting during the golden hours, you’re more likely to get strong, warm colours. Boost the Vibrancy levels right up in your raw editor to make the most of them!

TIPS FOR GETTING A GREAT SHOT...
- Shoot images in raw format in Monochrome mode. This way, you can turn the black-and-white shot back to colour later if you want to.
- As mist commonly occurs in the early morning when the temperature drops overnight, be sure to head out early.

Mist can often fool the camera meter, so use positive exposure compensation if needed.

HOW TO SHOOT...
NATURE & WILDLIFE

DEW DROPS

KIT CHECKLIST...
Macro lens
FOR YOUR FIRST SHOT, TRY...

TIPS FOR GETTING A GREAT SHOT...
- Shoot the dew on grass and plants! Make sure your shutter speed is fast enough to freeze camera movement.
- Lay your subject on a tabletop and shoot it directly from above, looking down.
- If your macro lens struggles to focus correctly, mount the camera on a tripod and use manual focus for more precision.

TIPS FOR GETTING A GREAT SHOT...
- Use flash to light one side of the portrait image against a white background, wall or bright sky so that it appears as a profile or silhouette.

HOW TO SHOOT...
BLACK & WHITE

MIST

KIT CHECKLIST...
Telephoto lens, tripod
FOR YOUR FIRST SHOT, TRY...

TIPS FOR GETTING A GREAT SHOT...
- Shoot images in raw format in Monochrome mode. This way, you can turn the black-and-white shot back to colour later if you want to.
- As mist commonly occurs in the early morning when the temperature drops overnight, be sure to head out early.

Mist can often fool the camera meter, so use positive exposure compensation if needed.

HOW TO SHOOT...
CREATIVE

DOUBLE EXPOSURES

- What are multiple exposures?
  Multiple exposures are images that are made by combining more than one frame (either in-camera or using editing software).
- How do I create the effect?
  Set your camera to Multiple Exposure mode. Shoot your first layer (or select one from your camera’s memory card, if possible), then shoot your second layer.
  - The first exposure or layer of your image serves as the base portrait, which the second frame will blend into. The second shot should contain textures or bold colours.
  - Top Tip: Shoot your portrait image against a white background, wall or bright sky so that it appears as a profile or silhouette.

HOW TO SHOOT...
ARCHITECTURE

BOLD PATTERNS

You might think of urban architecture as grey and drab, but modern cities have bold splashes of colour if you look hard enough.

- Look up
  Don’t keep your gaze fixed at eye level, as tall buildings can be adorned with bright fixtures.
- Time of day
  Try shooting during the blue hour. At dusk, city lights come on and enhance colours, but the sky also still has some light left in it.
- Wide-angle lens: To capture expansive skies.
- Weather apps: These will help you to plan shoots and check the conditions.
- Camera with high ISO: Sensitive cameras aid low-light shooting.
- Star map app: To find where the Milky Way will be in the sky at any time of year.
- Warm clothes: To put on when the temperature drops later into the night.

TIPS FOR GETTING A GREAT SHOT...
- As mist commonly occurs in the early morning when the temperature drops overnight, be sure to head out early.
- Use flash to light one side of the portrait image against a white background, wall or bright sky so that it appears as a profile or silhouette.

HOW TO SHOOT...
ACTION

BMX BIKES

KIT CHECKLIST...
Wide-angle lens
FOR YOUR FIRST SHOT, TRY...

TIPS FOR GETTING A GREAT SHOT...
- Shooting upwards at a rider in action can make for a more powerful viewpoint.
- Speak to the rider and see if they can give you any insights on their trick. This will help you anticipate their movements.
- Crop in on riders with tight compositions.

Switch to high speed continuous shooting mode and fire off bursts when a bike enters the frame.

HOW TO SHOOT...
ASTROPHOTOGRAPHY

THE MILKY WAY

- You might think of urban architecture as grey and drab, but modern cities have bold splashes of colour if you look hard enough.
- Look up
  Don’t keep your gaze fixed at eye level, as tall buildings can be adorned with bright fixtures.
- Time of day
  Try shooting during the blue hour. At dusk, city lights come on and enhance colours, but the sky also still has some light left in it.
- Wide-angle lens: To capture expansive skies.
- Weather apps: These will help you to plan shoots and check the conditions.
- Camera with high ISO: Sensitive cameras aid low-light shooting.
- Star map app: To find where the Milky Way will be in the sky at any time of year.
- Warm clothes: To put on when the temperature drops later into the night.

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- Use flash to light one side of the portrait image against a white background, wall or bright sky so that it appears as a profile or silhouette.
- Top Tip: Shoot your portrait image against a white background, wall or bright sky so that it appears as a profile or silhouette.

- Shooting upwards at a rider in action can make for a more powerful viewpoint.
- Speak to the rider and see if they can give you any insights on their trick. This will help you anticipate their movements.
- Crop in on riders with tight compositions.

Switch to high speed continuous shooting mode and fire off bursts when a bike enters the frame.
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INTERVIEW
Landscape & wildlife legend Moose Peterson

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Welcome

Spring has finally sprung, so it’s the perfect time to offer tons of inspiration to get out outside and get shooting. If birds are your thing, head straight to page 8, where Tesni Ward shares smarts from many years spent as a leading wildlife pro. But if you’d rather shoot scenic views, then join Dave Fieldhouse (p40) for a masterclass in shooting landscapes, seascapes and cityscapes. Also this month, we unveil 10 new photo projects, demystify fill flash and field-test Panasonic’s Lumix S1R – the world’s highest-resolution full-frame mirrorless. Plus, as a spring treat, we’re running two cracking competitions: you can win a trio of top Sigma lenses (p60) or a copy of DxO’s powerful PhotoLab 2 Elite software (p90). Enjoy the issue.

Niall Hampton, editor
niall.hampton@futurenet.com
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This month’s contributors

Moose Petersen
Wildlife photographer
Moose is best known for capturing wild California, but he also gets a thrill out of shooting old warbirds. He’s in conversation with Keith Wilson on page 134.

Dave Fieldhouse
Landscape photographer
A landscape lover Dave may be, but he’s equally at home in all outdoor environments. On page 40, he shares a wealth of advice from his time in the field.

Tesni Ward
Nature photographer
Gannets ahoy! This month we go on a masterclass with Tesni Ward in Yorkshire, to photograph the UK’s largest display of coastal birds. On page 8, see her shots fly.

Benedict Brain
Creative photographer
On page 37, find out what happens when Ben wanders the streets of Bintulu, Borneo. He embraces a lack of obvious photo ops, finding beauty in the banal.

Andrew James
Our man with all the answers
Andrew’s photography career sees him take on all sorts of challenges, and his in-depth knowledge means he can solve your queries. See page 94.

Quintin Lake
Roving photographer
Quintin has set himself the task of walking all 6,000 miles of the UK coastline. This month he ventures into some of his wildest terrain yet on his epic walk. See page 105.

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Moose Petersen interview _ How utterly lovely: the wildlife pro talks animals, aviation, and capturing the natural heritage of his home state of sunny California

Reader challenge _ A sunny day’s shooting in Swanage

Photo Active _ 10 new project ideas, including flashy action shots, underwater wonders and watery abstracts

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Settings
Kit list

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16 reflection effects

These Photoshop documents help you add convincing water reflections to all manner of scenes. Find them in the Gifts folder on the disc (www.bit.ly/dc216disc), then turn to page 74 for Jon Adams’ guide on how to use them.

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Tesni and her Olympus OM-D E-M1X battled with gales off the North Sea to capture an array of birds.
Having grown up in a family of bird-lovers, I was very excited to arrange this month’s shoot at the RSPB’s (Royal Society for the Protection of Birds) flagship site, Bempton Cliffs in Yorkshire. Every year, nearly half a million seabirds pack the cliff ledges between Bempton and Flamborough – including thousands of the UK’s largest species, gannets. Bempton offers six safe cliff-edge viewing platforms, giving visitors (and photographers) stunning close-up views of life on the edge. These are where I’m spending most of my day with Tesni Ward, as she guides me through her top tips for capturing coastal birds.

As the RSPB explains on its website, the chalk cliffs of Bempton are an ideal habitat for a huge range of species: “From April to October, they support England’s largest population of seabirds, while grassland and scrub along the clifftops are home to breeding birds.” Although our shoot is at the very beginning of the season, Tesni is confident we’ll still get our fix of gulls, gannets and puffins. The mist and gales that we encounter upon meeting near the site’s visitor centre make me less confident, but I lighten the mood by finding out more about Tesni’s background in photography.

Tesni always had a passion for the natural world, but says that taking photos began on a family holiday as a teenager. “My parents were kind enough to give me my first DSLR, but outside of vacations it gathered dust.” It wasn’t until 2013 that she started giving it more attention. With upgraded equipment and a new

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**Tesni Ward**

Nature photographer

Wildlife pro Tesni lives in Sheffield, UK, but runs photo workshops across the country. As an Olympus and Benro ambassador, she uses her images to promote conservation. www.tesniward.co.uk

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**Master seabirds with Tesni Ward**

**Tesni Ward** is the pro behind this month’s photography masterclass. Lauren Scott meets her at the RSPB’s Bempton Cliffs Nature Reserve for a seabird spectacular
Know thy birds

Location familiarity
Tesni visits Bempton several times a year, so she knows its best vantage points and hotspots. “It’s very rare that you can just turn up and start shooting wildlife,” she says. “I know this location. The number of times I’ve been at a non-viewpoint and seen something amazing...”

Bird behaviour
Tesni regularly works on projects with individual species, and this allows her to develop a deeper appreciation of them. Understanding her subjects not only means that she can anticipate unique behaviours, but capture them on camera. At Bempton, she points out how the gannets circle away from the cliff, often taking several attempts to make a successful landing. “Hitting the side of the cliff in high winds could damage a wing, or worse, so the birds have to land at just the right angle. It helps to follow one bird in the viewfinder, firing off a shot as it lands or while it’s in flight.”

“I run workshops where the number of people isn’t going to disturb the animals, I want everyone to have enough attention.”

Between shots, Tesni also explains her approach to composition. “I always use a grid. If there’s a horizon line and I’m using my articulated screen, having the lines will help to avoid drunk horizons. If you’ve got tools in your toolbox, why wouldn’t you use them?” Tesni says that the grid lines don’t impede the image, and she can even change their colour to make sure they don’t become a distraction or get in the way. The Olympus OM-D E-M1X that Tesni is shooting with (she is now one of their brand ambassadors) allows her to change these grid lines to whatever colour she wants – perfect for making them stand out against different subjects and backdrops.

The E-M1X has a myriad of nifty tricks sitting in its menu. Another feature that Tesni shows me is the focus limiter. “Let’s say the sea is 100 metres below: I’ll set the limiter to 70 or 80 metres, and this increases the hit rate for focused shots,” she explains. This feature might not be crucial at Bempton – where subjects are plentiful and used to human presence – but the accurate autofocus is a boon when you have only moments to capture a shy animal.
Tesni shot through vegetation on the cliffs (with a wider aperture) to provide an attractive out-of-focus frame for these gannets.

**12.50pm**

Although the conditions were bleak and challenging on the day, opportunities still appeared.

**10.40am**

**12.30pm**

**2.15pm**

**Name**  Gannet greeting on a rocky outcrop  
**Lens**  M.Zuiko 300mm f/4 + MC-14  
**Exposure**  1/160 sec at f/5.6, ISO 400
Inside Tesni’s birding bag

Among many lenses for nature shots, here are Tesni’s favourites

1. **Benro Mach3 tripod**
   Tesni is a Benro ambassador, and uses a model from its pro range. With lightweight carbon-fibre legs, it provides reliable stability without weighing her down.

2. **Olympus OM-D E-M1X**
   Tesni started using a pre-release version of this pro-level Micro Four Thirds camera at the end of 2018. She loves its ergonomics, balance and totally solid build quality: “It just feels right, and the autofocus is cracking.” The E-M1X has a 20.4MP sensor, but can capture 80MP wildlife images in High Res Shot mode.

3. **Olympus 300mm**
   This is Tesni’s longest lens, but it’s compact and nimble enough to use handheld. On the shoot, she used it with a 1.4x teleconverter, which took the focal length to 420mm (effectively a whopping 840mm in 35mm film terms).

4. **Olympus teleconverter**
   This MC-14 extends the focal length of Tesni’s lenses by 1.4 times, giving her a telephoto zoom with a package that’s just 15mm wide. Though the teleconverter causes a stop of light loss, Tesni still has fast super-telephoto shooting when she uses it with her 40-150mm f/2.8 Pro and 300mm f/4 Pro lenses.

5. **Olympus 40-150mm**
   This f/2.8 Pro lens is another favourite in Tesni’s kitbag. The flexible zoom allows for speedy reframing, particularly when she’s shooting larger animals such as wild badgers.

Another feature of the E-M1X is its integrated vertical grip, which I notice provides Tesni with the same grip and controls whether she holds it vertically or horizontally: “In my early days, I didn’t have a battery grip, so shooting in portrait mode was a pain. Now I have the extra grip, I shoot portraits a lot more. But again, the orientation depends on the scene.”

For example, if Tesni is focusing on birds in flight, she’s more likely to be in landscape. “I want space for the bird to move into. You don’t want to cut off their wings or tails.”

Throughout the morning we move to each viewpoint along the cliffs, but also stop between if there’s a better opportunity. “I know where you’re more likely to see certain birds, and have flight shots, habitat shots and portraits,” Tesni says. That observation and know-how of an area is what sets the best nature photographers apart, and what helps Tesni to deliver shots with impact.

In terms of settings throughout the day, Tesni sets her ISO manually and generally stays at f/5.6, the widest aperture possible with her lens and teleconverter combo. “For flight shots, the shutter is the priority, but obviously nothing is fixed. It depends on the light. The depth of field is automatically wider because of the crop sensor.”

I notice that Tesni favours looking through the viewfinder rather than using the screen. “If I’m trying to do low-angle stuff, and I can’t or don’t want to get into water, I’ll use the LCD. It also comes into play when I’m recording video on a tripod.” A tripod rarely gets used on our shoot, something which traditional wildlife pros would once have sniffed at. This is partly thanks to the Olympus system: the 300mm lens is light enough to handhold, but sharp enough, too. Its 5-Axis Sync IS compensates for camera-shake by up to six stops.

Tesni’s beautiful images aren’t just down to her kit, though. Her work comes from the heart, not to mention the technical, artistic and fieldcraft skills she’s learned over the years. Her workshops are popular not only because she shares this knowledge openly, but because she gives them the chance to experience how wonderful (in our case, also wonderfully windy) the natural world is...
Key skills for successful seabird shots

Tesni says that her settings and advice will vary for different cameras, genres and subjects.

1. “In changing light, I’ll use Auto ISO. For the most control, I set the aperture and shutter speed manually, then change my ISO to get the correct exposure.”

2. “Spend time just watching the birds, and revisit a location throughout the year as well as at different times of the day. I’ll often come to Bempton for a few days and sleep in my car just to capture species in the best early-morning light.”

3. “If you’re panning with the birds, aim to shoot them between 12 and 3 o’clock in the frame. This way, if you’re keeping the birds on the right side of your frame, at worst they’re going to be in the centre when you take the shot.”

4. “Be aware of other people around you. Bempton is a public spot, so (on my workshops particularly) we can’t hog a viewpoint for too long if it’s busy.”

5. “A tripod isn’t always essential. I use mine in low light and for shooting video, but the Olympus 300mm is light and stable enough to shoot handheld.”

6. “Dress for comfort and warmth. I recommend waterproof clothes, gloves, boots, and a cover for your camera.”

Tesni’s simple but stunning portrait is of a male gannet collecting nest material.

Tesni sets up the AF limiter from the camera menu.

Autofocus limiter

This function on the OM-D E-M1X enables Tesni to set a specific AF operating range and concentrate exactly on the birds in flight (rather than have the focus jumping to the sea in the distance below them). She can set up to three autofocus ranges for each lens.
Up, up and away!

Jason Parnell-Brookes shows you how to take awesome aerial shots that aren’t all about the bird’s-eye view.

Commercial airlines carried nearly four billion passengers around the world in 2017, and there are now more aerial photographs being taken than at any other point in history. You don’t need to take a flight to get aerial images, of course: you can take aerial views of anything from just a few metres high standing on a ladder, all the way up to the furthest reaches of space with the help of a weather balloon. In this project we’ll look at how to make the most of whatever equipment you have, whether it’s a drone or a DSLR on a telescopic pole.

When you operate cameras at height, with a drone for example, it’s vital that you make yourself aware of the restrictions around you. This varies from country to country, with some locations lacking any restrictions at all. In the UK it’s useful to refer to the Drone Safe advice at www.dronesafe.uk/drone-code.

In short, you must keep drones in line of sight when flying; keep them below 120 metres and 50m from people and properties (150m from crowds and built up areas); and stay well clear of aircraft, airports and airfields.

Once you’re up and running with your drone, the photographic limitations are the same as with your digital camera. You have aperture, shutter speed and ISO to balance to get a well-exposed image, and the option of shooting raw stills with some drone models, like the DJI Mavic Pro 2 that we used.

There are even lens filters made for drone use. PolarPro has developed neutral-density filters that sit on the camera, enabling the use of long exposures in flight. This won’t work so well in windy conditions, of course, but the Mavic Pro 2’s gimbal and intelligent GPS positioning adjustments do a good job of keeping the camera steady enough to make long exposures feasible.
Position the drone
The front and back of a drone are distinguished by coloured lights. On the DJI Mavic Pro 2, the red lights signal the front of the aircraft, with green at the rear. Always keep the drone in line of sight so you can see which way the aircraft will move when you adjust the controller.

Link up the controller
Most drone controllers allow the use of a smart device to communicate with the aircraft. We used a Google Pixel 2 smartphone and launched the DJI Go app to communicate with the Mavic Pro 2 and record video and stills.

Run test flights
Start by running test flights in a wide open space with nothing around. Some drones have object avoidance technology, but this shouldn’t be relied upon too heavily. Slow, gentle movements on the controls and limited altitude is recommended for the inexperienced flyer.

Add a filter
Use neutral-density filters if you want to try your hand at long-exposure drone photography. ND filters restrict light to the camera, forcing you to use longer exposure times to get a good shot. PolarPro (www.polarprofilters.com) makes filters that fit the Mavic Pro 2 among others.

Dial in your settings
Input your preferred settings when the drone is grounded rather than in the air; this’ll make it easier to get good shots without wasting limited battery life. Use a low ISO and a narrow aperture in order to extend your shutter speed. This makes a decent starting point, but once you’re up in the air you’ll need to tweak these settings, as the lighting is likely to be different high up.
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Fisheye photos

Wildlife photographer Jack Perks heads into the weeds for an original shot of a freshwater fish. Pike conjure up images of a fierce predator – one that drags children and Yorkshire terriers into the depths of rivers – but the reality is that they have a very tender side to them, says Jack Perks. His photos capture the less-liked species of reptiles, insects and fish (like these pike) and try to put them in more of a positive light.

“Early in the spring, the larger pike females gather in the weeds with smaller males in tow. I knew I wanted to capture this behaviour on camera, and decided to go with natural light rather than a strobe. Using a fisheye lens (no pun intended) meant I could get very close to the pike and include some of the environment, which helps bring some context into the image.

“As the male gently caressed the female, Jack fired off several images on a continuous shooting setting. “In these situations, you never know if you might get an opportunity again.”

Get down into the depths

Jack is passionate about freshwater fish, and dives in many rivers in the UK. “With underwater photography, the two key things are clear water and getting close to the subject,” he says. “Being close to these pike meant it was much easier to get sharp images, and the clear water means you can see plenty of background interest. It remains one of my best experiences with British wildlife. I’m thrilled I was able to get a few images out of it.”

Jack used a Nikon D7000 in specialist underwater housing, shooting in manual mode with a high ISO of 800.
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Drone light

Jon Clark attaches a Lume Cube to his drone for a fresh take on long-exposure light painting.

When you think of drones, you tend to imagine capturing stunning landscapes from above. Here, photographer Jon Clark thought of another use for his photo gadget: attaching lights to the drone, to create a lighting platform that could be placed anywhere in the scene. “Lume cube creates small but very powerful LED lights (similar in size to a GoPro) that can be attached with mounts,” he says.

“My drone was set to perform specific manoeuvres while my camera on the ground took a long exposure. This technique allows for some very creative light painting possibilities, and I’ve been keen to try it at plenty of different locations.”

www.jonclarkphoto.com

Follow the drone code

Jon says: “Do your location scouting in the day, so that when you get to the location at night you’ll know what your composition will be. Think about actually flying the drone, too. Look for obstacles that you wouldn’t be able to see at night, and most importantly, always follow the drone code.”

Swirl of interest

Jon’s camera was locked down on a sturdy tripod. He mounted two Lume Cubes onto a Mavic 2 Pro. “For performing the circular shapes, I use ‘Point of Interest’ mode on the drone, meaning that it kept flying in a circle on its own. There is a balance between the speed of the drone and the length of the exposure – these exposures are around 30 seconds.”

Vary the altitude

Jon has experimented further with this clever technique by incorporating altitude changes into the drone’s flight path. “In this photo of Solomon’s Temple [near Buxton, Derbyshire], I managed to pull off a spiral shape. It’s a lot of trial and error and you can expect quite a few failed shots – but practice makes perfect!”
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Eye can see you!

Claire Gillo shows how Photoshop Layer Masks can help you create a surreal effect.

If you like your images with a surreal twist, Photoshop is one of the best programs out there! For this Photo Active project I’ll show you how to take two separate images and use Layer Masks to reveal one part of the image, producing a startling face-over-hands result.

To give your images that nitty-gritty look, open them in Camera Raw and push the Clarity slider up. This simply enhances the midtone contrast, and works really well when you use this effect on the skin. If you open both images at the same time you can batch-edit them together. Once you’re happy with the tone and contrast of your images, open them into the main editor.

Next, combine both your two images together into one document. Have the shot with the hands over the face as the main background image. With the facial feature image (this should be the top layer) reduce the opacity of the layer down to 50% and place in position. Bring the opacity back up to 100%, then add a black Layer Mask. This will remove the image with the facial features, but the Layer Mask enables you to paint back the parts of the image that you want to see.

Using a white paint brush and staying on the Layer Mask, paint back over the eyes and mouth (if applicable) to appear. Make sure you spend time getting the edges neat. You can always reduce the opacity of the brush around the edges to get a flawless finish. If you go wrong at any time, simply switch the brush back to black and paint over the Layer Mask to remove areas.

To ensure all the images match up for editing, place your camera onto a tripod. I decided to use a dark background and lit myself using one external flashgun. I was after a heavy, dark look. Take the first image without any hands over the face. For this you need to think about how you want your eye and mouth positions to appear. Next, take another shot with the hands in the correct place. Make sure your model remains in the same position to make it easier to blend the images together.

Above: A Layer Mask in Photoshop enables you to reveal parts of one photo in another.

The Photoshop bit

If you like your images with a surreal twist, Photoshop is one of the best programs out there! For this Photo Active project I’ll show you how to take two separate images and use Layer Masks to reveal one part of the image, producing a startling face-over-hands result.

If you want to shoot the starting images yourself, it is simple to do. We have also provided my starting images on the disc that comes with the magazine, so you can use these to practise.

Eye can see you!

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Above: A Layer Mask in Photoshop enables you to reveal parts of one photo in another.
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Beauty of a bluebell

Lauren Scott heads out with a macro lens to capture the quintessential scene of a bluebell wood in spring.

When spring officially makes its mark on the UK calendar in March, it’s easy to get excited and ahead of yourself by planning outdoor shoots, forgetting that seasonal changes can take some time to appear...

The bluebell season runs roughly between mid-April to late May (depending on the weather), so you should still have some time to capture late bloomers by the time this issue hits the shelves. If spring is mild, bluebells tend to come out earlier. If you miss them, the advice here can be applied to many other wild flowers found on the forest floor.

One of harder parts of this project was locating a bumper crop of bluebells in the first place, so I asked several photographer friends who knew the area (I was shooting near Bath) to point me in the right direction. To find a spot closer to you, check online forums or ask a local wildlife group for recommendations. Many organisations such as the National Trust even run bluebell walks; these tend to be perfectly timed for when the woodlands are at their most blue/purple.

We’ll cover weather conditions in more detail over the page, but it’s vital you check the forecast before your shoot to avoid disappointment. Rain and strong winds ruin any picturesque vibe in an instant. Once you’ve found your location and arrive in the right weather and light, you’ll no doubt be ready to grab your favourite macro lens and get going. Don’t worry if your first shots aren’t very inspiring. Pick out different specimens, and try out lots of locations within the wood to warm up your creative eye. Get low, go wide and try to avoid visual clutter.

1/250 sec  f/2.8  ISO 250
The right place at the right time

All outdoor shoots rely on the weather, and it’s important to check that the conditions match your subject. Here, for a serene and peaceful bluebell wood, I shot when there was little wind, as any breeze can blur the flowers in close-up. The ideal time to arrive was just after sunrise (or before sunset), when the low sun illuminates the bluebells more gently than the harsh midday sun.

Gear and settings

I used a Canon 100mm macro lens with full autofocus to isolate single flowers, making use of the f/2.8 maximum aperture to generate a dreamy bokeh in the background. I set my DSLR to Aperture Priority mode, so that the camera tweaked the shutter speed accordingly as the light or my composition changed.

Angle up

Finding a good specimen is really important; any flaws in a flower become obvious at macro level. Once you’ve picked a subject, move around it to find the best shooting position and angle. (Consider the direction of sunlight too.) Getting down to a low angle on the ground can create a more immersive view. Here, it’s often easier to use Live View, rather than the viewfinder, to compose.

Try different apertures

While for a wider shot of a bluebell wood you might want to set a narrow aperture and keep the whole scene sharp, with this macro approach the key task was to blur the elements around and behind the flower as much as possible. Here, you can see how busy the shot looks with a narrow aperture of f/11 – the main subject gets lost and the scene loses its focal point. Make sure you pay attention to the background of your images, moving around to avoid distracting or busy elements behind the flower.
Edit the final images

As I was fortunate enough to have warm, low light on my shoot, very little processing was needed afterwards. Using Camera Raw, I upped Contrast and Shadows and boosted Vibrance, keeping an eye on the histogram as I did so.
Summer abstracts

Capture light seeping through water to get beautiful abstract results, with Claire Gillo

If you're heading to the seaside for your holidays this summer, you can capture some amazing abstract images in rock pools and on the shoreline, using the reflections and splashes made by seawater.

If you're going to take images near, in or over the sea, it can be a good idea to either invest in a waterproof housing for your camera, or to get a cheap point-and-shoot underwater compact camera. Many of these small compacts are actually cheaper than underwater DSLR housing, although you are more limited in what you can do with the compact's camera settings and lens options, of course.

One big advantage to using an underwater camera on this project is that you can plunge the device in and out of the water without a care in the world (and it's protected from sand too). If you are shooting underneath the water, the light level is reduced, so keep an eye on your shutter speed setting.

I was after a calm and gentle result for my images, so I headed to the rock pools on the beach rather than trying to contend with the swell at the shoreline.

When it comes to setting up your camera try and take as much control as possible. Because I was using a point-and-shoot, I was far more limited than with my DSLR; but in the camera's Program mode, I still managed to keep the aperture at f/6.2 with a fast enough shutter speed to freeze the action. I also set the ISO to a variable option, limiting it to ISO 800 to ensure the images weren't too grainy.

Turn your images blue

For the final display, I selected four images and placed them in a grid formation. To turn the image blue, I then added a Color Balance Adjustment Layer in Photoshop. Although you may be tempted to simply whack up the Blue channels when it comes to this part of the edit you should also consider adding Cyan and Green, and even a touch of Yellow, to the mix. These help create a more dynamic result. Within the Colour Balance Adjustment Layer settings, you also have the option of adjusting the colour balance in Shadows, Midtones and Highlights by changing the Tone dropdown menu.

For this image, I used all three Tone options. On the Shadows, I set Blue to +90 and Cyan to -100. On the Midtones Cyan was set to -30, Green +20 and Blue to +22. Finally for the Highlights, I tweaked Yellow to -10 to simply add in a bit of warmth, to contrast against the cool blue.
MASTERS OF COLOUR

Over 80 years of experience in photography goes into every camera we make. It's part of what makes the FUJIFILM X Series special.
Mark Roe shoots a skateboard series using a clever combo of continuous light and short flash durations. The flash froze the action, while a modelling light produced colourful trails across the frame. Mark says: “I decided to shoot in a studio setting, so there weren’t any distractions from backgrounds or locations.” He was using the Broncolor Move 1200L power pack and two MobiLED flash heads. The bright modelling lights in the heads were ideal for the continuous light source, but they also have an incredibly fast flash duration for capturing the action across the frame. A 24-70mm f/2.8 lens made for speedy framing of the skateboarding subject.

www.markroe.co.uk

Choose your action

Mark says: “It’s important to find the right action for any sequence shot, and this blurred-motion style of shot is no different. Big, bold movements work really well.”
2 Choose your angle

“The best angle for this series was at 90 degrees to the action, but you should choose an angle that will best capture the action. Try shooting at 45 degrees, or perhaps from above or below, to capture something really eye-catching.”

3 Ask the athletes

“Everybody wants to leave a shoot with great images, so always talk to the athletes. Get them on board and make sure they know exactly what you want to achieve.”

4 Get the light right

“Experiment with different light set-ups and shapers. I concentrated on making sure the final action shot was lit exactly how I wanted it, using bare bulbs and hard lighting.”

5 Make it stand out

“Make sure the sequence stands out from the background. Here, I used the colour of the skater’s clothes to make them pop from the black behind him.”
Landscape photography is all around us, and we are incredibly fortunate to live in such a diverse country, with beautiful and easy-to-access locations all around us. This isn’t always a positive, as it can lead to overcrowding at some of the more popular photo hotspots. This can leave us feeling a little unfulfilled when the images we capture don’t feel all that special or hard-earned.

A great way to both find peace and solitude and create images that feel unique to you is to pack your rucksack and go for a hike. Not only will this give you many photographic opportunities, but it will help with your health and wellbeing and leave you with a great feeling of fulfilment and satisfaction, even if you don’t get the perfect light or end up coming away empty-handed.

Some of my fondest memories are of being out in the dawn light, hiking up a steep trail and watching the world around me come to life. These hikes don’t always guarantee the best images, as they are often into unknown territory.
Get yourself into the great outdoors

1. **Start small**
   Start small and hike a well-used trail that isn’t too challenging. You will have all of your additional camera gear to carry and there’s a chance you’ll be hiking in the dark, so you need to be happy and confident with the route you take. I do most of my hiking in the Lake District and Scotland, using online resources such as www.walklakes.co.uk and www.walkhighlands.co.uk to help with my route planning.

2. **Don’t go out without these**
   On a typical summer hike, I will always have these items with me: hat and gloves, map and compass, a head torch, water and snacks, first aid kit, waterproof jacket, insulated jacket, and a whistle for attracting help if you need it. More luxury items include a GPS watch, a flask of hot food or drink, walking poles, a foam pad to sit on, a stove and a water filter.

3. **Pack light**
   Don’t bring every bit of camera gear you own. My go-to lenses are my 24-70mm and my 70-200mm. This is more than sufficient when I’m trying to capture those beautiful moments out in nature. If you use lens filters, think about the terrain: it might not be appropriate to bring all of those hard-edge grads when mountains tend to be more suited to a soft edge.

4. **Take a long lens**
   If I could hike with only one lens, it would be my 70-200mm. When I’m in the hills and mountains, I am often awe-struck by the magnificent views, but it always seems to be the distant views that capture my imagination. By using a longer focal length to shoot the terrain you can compress the perspective, making the hills and mountains look as dominant as they feel.

5. **Stay safe**
   Hiking on well-laid footpaths is incredibly safe, but there is always a certain element of risk involved. Bad weather is your biggest enemy, so be sure that you check the forecast ahead of time. I use www.mwis.org.uk for weather forecasts in the UK mountains. Take a map and compass, and tell someone where you are going and when you expect to be back. Then you can relax and enjoy the beautiful surroundings on offer when you go for a photo hike.

That can be difficult to scout ahead of time; but when I am hiking, the photography always takes a step backwards and it becomes more about the experience. Photographs become opportunistic as the trail leads you up, down and around to new viewpoints with every step. You become much more in tune with your surroundings as you consider the weather, the light and the terrain, not only for your next photograph but also to guide yourself safely home.

www.thomasheaton.co.uk
Alternative aesthetic

Giulio Di Sturco documents India by using simple compositions and desaturated colours.

Many photographers cite the importance of working on long-term projects. This image is taken from a collection of work called Ganga Ma, the result of a 10-year photographic journey along the Ganges by Giulio Di Sturco. Documenting the effects of pollution and climate change, Ganga Ma follows the river for over 2,500 miles, from its source in the Himalayas in India through to its delta in the Bay of Bengal.

“The main character of my story is a non-human entity – a river,” Giulio says. “I decided to treat it as a human being, and create a flow that would document the river as if I was documenting the life of a person.”

Images of India often present a sensory overload of colour and exotic busyness, but Giulio’s pared-back approach in this sequence has created a quiet, almost haunting view of a well-photographed region.

www.giuliodisturco.com
1 Long-term project
Guilio began shooting in 2007, when he became witness to the effects of climate change, industrialisation and urbanisation affecting the river. Working on the project across 10 years gave him a comprehensive portfolio of images.

2 Viewpoints
Many of Guilio’s images were taken from the banks of the river, depicting the effects of industrialisation on a human scale. He also captured panoramic views to show man-made structures such as bridges or illegal sand-mining architecture, and to echo traditional landscape painting.

3 Slowing down
Guilio’s use of medium-format allowed him to slow things down, bringing him closer to his subjects and enabling a high level of detail and colour accuracy.
Action Portrait

Switch your camera into its burst mode and get ready to capture the action!

On your marks, get set, go! Essentially that’s what we want you to do for this month’s Facebook Photo Challenge!

When it comes to capturing a sharp action portrait, it’s all about being prepared. To ensure you get a sharp shot, put your camera’s focus setting in Automatic mode and enable the subject-tracking feature. You may also find it easier to switch your camera into its high-speed burst mode so later on you can pick the best frame of the bunch.

One of the biggest considerations to take into account when photographing action is your shutter speed setting. If it’s too slow (under 1/500 sec, but you may even need to go faster), your model will blur. In low-light conditions, it will be necessary to push your ISO setting to a higher number to ensure you have a fast enough shutter speed. You may also want to consider using a faster lens that can open to a wider aperture setting. (Prime lenses offer the widest apertures.)

So whether you want to shoot ballerinas leaping on the beach, capture a moment from an action-packed sports game or simply photograph your kids playing outside this summer, we’re excited to see what you come up with for our action-packed challenge.

How to enter

To enter your best ‘Action Portrait’ image/s either email your entry to digitalcamera@futurenet.com, putting ‘Action Portrait FB Challenge’ in the subject line; or go to our Facebook page at www.facebook.com/digitalcameraworld, look for the ‘Action Portrait’ post, and upload your entry into the feed.

By entering your image onto our Facebook feed, you confirm that you own the copyright to the image and agree that Digital Camera can publish your image in the context of the ‘Action Portrait’ Facebook competition. Full copyright of the image is retained by you, and you will be credited. The closing date is 30 May 2019.

The winner will receive a copy of the magazine featuring their winning photo!

The Signs of Spring winner…

Becca Fulcher

Well done to Becca who has captured this wonderful – and very cute – portrait of a duckling. The plain blurred background and foreground helps isolate the subject, surrounding it in a luscious rich green colour. Technically it ticks all the boxes, making it a delightful image that sums up the feeling of spring.
Recently I found myself wandering the streets of Bintulu, Borneo. As you do. I was on a work-related trip and hadn’t factored that I might have some time off here, so I hadn’t made any arrangements to visit a ‘photogenic’ location. However, I did have several hours to aimlessly wander with my camera. Heaven.

I think it’s fair to say that Bintulu isn’t graced with wall-to-wall photographic honey-spots. It’s an average-looking port town. Some of my travelling companions and budding photo-enthusiasts were bemoaning the lack of photo opportunities. I, on the other hand, relish in these moments and set about getting into the zone and wandered off by myself.

I believe there are opportunities to make photographs just about anywhere. I get irritated by photographers with a blind hunger to seek out the classic locations and compositions, to just capture ‘The Shot’ – especially when there are visual delights everywhere and anywhere.

Back on the road, Ben travels to Borneo – where he finds beauty in the banal.

The art of seeing

I’m inclined to think that the lack of an obvious go-to shot is actually a good thing. The creative boundary imposed by the banal makes you work harder, and ultimately see better.

Perhaps my favourite image from the day was of this shabby, dilapidated sink on the side of the street. The yellow walls, spreading black mould and rickety structure of the pipes and sink have come together in a harmonious and balanced composition. It reminds me of a lurching flamingo hanging on for dear life. Perhaps it could be seen as a metaphor – although I’m not sure for what...
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Over the last few years, wide-open spaces have become a passion of mine. I can think of nothing better than arriving at a special location to catch a glimpse of the new dawn or watch the last of the day’s light disappear over the horizon. I try to share the mood of the moment through a photograph.

My interest in photography turned serious when I bought a DSLR camera in 2012. I am mostly self-taught through an ever-increasing library of books and online tutorials, as well as taking a web-based diploma. Although my years behind the lens are still relatively short, I have come to realise there is beauty and interest in every environment, if only you take the time to look properly.

My photographic journey started with an interest in shooting landscapes and seascapes, but an experiment with street photography soon led to an interest in photographing the built environment, too.

Whether it be a carefully planned shoot to take a specific image (where maps, weather forecasts and even tide tables have been carefully consulted), a random walk on a fellsid, or a city centre pavement where something just catches my eye, it makes no difference when it comes to sharing the final image. These shots are simply a frozen moment in time I find interesting or beautiful.

Hopefully, some of the tips that follow over the next few pages will give you an insight into how I plan my shoots, while also helping you to select the right gear and compose images. The environment has become almost irrelevant: it’s simply an outdoor scene to me...
A narrow aperture and low ISO were key to capturing this shot of the Peak district village of Hathersage.
Capture the countryside

For a true taste of the great outdoors, reap the rewards of planning your shoots and travelling further afield.
LANDSCAPE SCENICS

PRO TECHNIQUE
USE A TRIPOD TO SLOW DOWN

A tripod is a fabulous tool for a landscape photographer. It naturally slows down the process of taking the shot, allowing you to carefully consider the basics of composition. It also gives you the time immediately after taking a shot to check the image you’ve taken. I always use this time to ask what could be improved rather than just admire the shot on the back of the camera. Is it exposed correctly? Is everything in focus? Consider all the things you should review and adjust them if necessary, to get that near perfect image. While you’re working on a tripod, switch to Live View and use tools such as the spirit level.

Frame your shot

When you shoot a landscape, you generally have plenty of time to consider your composition – so there is no excuse for not getting the basics right. Is the horizon straight? Is it in a good place? Have you cut anything important in half? Are your tripod legs in the shot? These are among the things you should be mindful of whenever you frame a landscape image.

Another consideration when it comes to framing is the position of the focal point: the part of the image that is most important to you. Again, ask yourself, does this sit in a good space? Is it being overlapped by anything?

Every photographer’s approach is different (which is a great thing for image diversity), but I always say: “A good composition in poor light can still work, but a poor composition in great light won’t.” Even if you’re still relatively new to landscapes, you should find that with a bit of practice, intuition soon takes over.

Catch the light

There is a gamut of information online that can help you prepare for a shoot. This is both a help and hindrance, making it easy to predict the conditions you’ll find at your given location, but also putting you off if the weather doesn’t look quite right.

Unfortunately, I don’t always have time to wait for the perfect forecast, so I often look for a location that best suits the weather predicted. While it’s true that some places look better in bad weather than they do on clear-sky days, don’t take any unnecessary risks for a shot. If mountain photos are your thing, let someone know where you’re going and check in when you’re back. Shoot with a buddy if possible, and hike down in time for darkness. Wherever you are, respect the elements.
Use guiding lines to draw your eye

They say a picture paints a thousand words, but I would prefer it to tell a story. A leading line, be it a pathway, a fence line, or a gap in a wall, takes the viewer’s eye on a journey. The leading line doesn’t need to be the focal point, more the scenic route through your photograph.

Be careful not to let the leading line lead out of the image, or to a part of the shot that’s less interesting. It’s also worth remembering that not every scene will have a natural leading line. Don’t try to force them where they visually don’t exist.

PRO TECHNIQUE
ASPECT RATIOS

Cropping your images is another way to alter a landscape’s final composition, both while taking a shot and editing it. A square format (right) often simplifies a scene, becoming more effective when the subject, such as this ridge, is placed in the centre of the frame.

In the atmosphere

Photographing in mist, fog and hazy conditions can lend a truly moody feel to your scenes. For this early-morning shot in the Lake District, I took full advantage of the atmospheric conditions that presented themselves. To ensure there was no noise at all in the mist, I set a low ISO of 100. A wide panoramic crop then created a tighter composition, focusing in on the lake house and the reflections in the water below.

PRO TECHNIQUE
GO WIDE

Most of my images are taken on a wide-angle lens, the Fujinon XF16-55mm f/2.8 (equivalent to 24-70mm on a full frame camera). This lens sits on my camera most of the time. I have wider or longer lenses for more specific shots, but I’m always careful of going too wide in order to cram everything in. Those distant mountains that look so impressive to the naked eye can start to look ever so small and unimpressive when you open up a lens too far.
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Living in the Midlands, I don’t get as much opportunity as I would like to shoot seascapes. On the positive side, living on an island like the UK means I am spoilt for choice with the sheer variety of coastlines I can visit. Wide sandy beaches or rocky shorelines provide options that cater to all tastes. The changing tides, shifting sands and natural erosion continually change the landscape, meaning no two visits to a location will be the same.

Seaweed, shellfish, fossils, or even just a colourful rock provide foreground features for your shots, and let’s not forget man’s influence on the coastline, which you can also use in your images. The coast can be dramatic or serene, calming or invigorating – all emotions you can try to capture.

Words of warning

You should exercise caution whenever you shoot at the coast. Waves are unpredictable and can often catch you out if you’re not paying them attention. Tread carefully too: wet rocks can be slippery, especially when covered in weeds. Be mindful of a rising tide and always note an escape route to prevent that tide from cutting you off.

At the coast, the only things you can accurately predict are the times the sun rises and sets, the positions where this will happen, and the tides. Everything else is a best guess, so always use the certainties first when you plan a trip.

Safety aside, consider the tides in terms of their visual qualities. For example, a high tide can be great for enhancing a rocky scene as the milky water wraps around boulders. The best times to shoot are often as a high tide starts to recede. If you plan to wade out into the water for a more intimate viewpoint, always make sure your camera is firmly mounted onto the tripod – no-one wants to see their kit drop into the sea.

PRO TECHNIQUE
USE AN ND GRAD

For the golden hours of light (about an hour after sunrise or before sunset), I would recommend the subtle use of graduated ND filters. I always expose my images based on the highlights – at these times, that’s the sky just above the horizon. This can mean you’re underexposing the ground below the horizon by some two to three stops – only fine if you’re going for a silhouette-style shot. If you want to retain detail in your foreground, use a graduated filter to darken the sky, lengthen your exposure time, or open the aperture enough to bring back all that lovely foreground back to life. The scene opposite was exposed for 30 seconds.
While landscape images are often very static, the water in seascapes gives you room to experiment. Long-exposure photography is something I practise most at the coast, and it can be extreme or subtle to suit your preference.

Using an ND filter allows you to be as creative as you dare. In this shot, I used a 1/20 sec exposure. Exposures between one and two seconds are enough to convey a sense of movement without losing all sense of realism, whereas a couple of minutes or more can give an otherworldly effect.
PRO TECHNIQUE
A DIFFERENT ORIENTATION
Just because the genre is known as ‘landscape’, it doesn’t mean that all your images have to fit into that orientation. I shot the above scene at Elgol as a portrait, too (left); both gave different effects and allowed for an alternative viewpoint. Both images were captured with a wide-angle 16mm focal length, but the lower height of the landscape shot works to immerse the viewer.

Mind where you step in the scene

If you are anything like me, you will want your beach shots to look as clean as possible, with minimum human disturbance. Beaches are popular places, so there are bound to be a few footprints — which can be annoying, but not as annoying as those you create yourself. When you approach a composition, do so with considered care. Don’t spoil your shot by rushing in. Even better, wait for the tide to clean the beach completely, and then you only have yourself to worry about.

Considering composition

A clear horizon or an empty beach can lend itself well to minimal-style compositions, such as the image on the right, which was shot with a shutter duration of 600 seconds. Don’t try to fit too much into your shot, though. Often it takes nothing more than an unusual rock, shell or sand pattern to create an interesting abstract that will compliment any portfolio. Work with your environment to highlight its key compositional features. Try positioning the tripod at a low height to capture foreground rocks, or work with a telephoto lens to compress the drama of crashing waves.

PRO TECHNIQUE
CARE FOR KIT
A coastal environment can play havoc with camera gear, so take care while shooting there. On a windy day, avoid changing filters too often: this risks sand entering the camera and ruining images. Whenever I return from a trip to the sea, I wash and wipe my filters and tripod thoroughly to remove all traces of salt: it is particularly corrosive and detrimental to carbon-fibre tripods.
Capture the city

Why not urban-ify your take on the traditional landscape? Focus on the lights and lives of a modern environment.

Most of the population lives in and around towns and cities. Why, then, is the built landscape so often overlooked by us? I stumbled into shooting the urban landscape only recently, and now wonder how I missed its potential in the first place. I have worked in a construction-related industry for 25 years, so it’s no coincidence I have an interest in architecture. My day-to-day working life often requires me to visit cities, so throwing a camera in the bag in case something catches my eye makes perfect sense.

The summer months are harder work for outdoor photographers so reliant on that soft light associated with the ‘golden hours’ of sunrise and sunset. These hours are still great in the city too, but if you’re a bit of a night owl, the time between dusk and dawn can be equally rewarding.

Are you allowed to take photos in a city?

The simple answer is yes. If you’re shooting for personal use, there are generally fewer restrictions when it comes to photography in an urban area. Commercial photography is very different, though, and permission can very much depend upon the ground you stand on. Is it public or private property? Using a bit of common sense is often all that is needed here. Don’t go pointing a big telephoto lens at the security features of a diplomatic building, for instance.

Another pointer is to remain courteous and polite if you are challenged by security. They are simply doing their job, and if you explain what you are doing, they’re often happy to leave you alone.
Shooting at night requires you to either boost up the ISO (then deal with any noise-related issues in post-processing) or to shoot longer exposures. If you’re going with the latter, you are going to need a tripod or similar support to help. Personally, I use a lightweight carbon-fibre travel tripod or a Gorillapod for my after-dark shots, but I have seen people improvise, resting cameras on walls and using bean bags to angle the lens. Try to expose for the highlights as you would in any other shot. You might even want to bracket your shots to capture as much detail lurking in the shadows as possible.

On finding the perfect location, location, location

You can approach your trips to the city with a strict plan: a list of locations, buildings or viewpoints you have found online, on TV or in magazines. Or you can go in ‘tourist mode’ and go for a wander. I have even been known to wander the streets virtually on apps such as Google Street View to find some original photo opportunities. I always take a camera with me whenever I can, just in case something catches my eye.

Shoot whatever the weather

Rain should not stop play when you shoot in the city. It can even enhance it. Take refuge in one of the many coffee shops during the heaviest downpours, then emerge to pavements full of reflections and light when it eases. This is especially useful at night, when the bright neon lights are doubly effective.

Battersea Power Station, London. Keeping the ISO at 400 meant using a sturdy tripod and an exposure time of one second.
Consider your vantage point

While it’s all well and good shooting the urban landscape from the ground, you will gain a totally different perspective if you can access a vantage point from higher up. There are a handful of buildings that have roof terraces or allow public access to an upper-floor viewing area. You can find these with a little online research. Many won’t allow tripods for health and safety reasons, but they don’t frown upon photography for private use.

PRO TECHNIQUE

HAPPY FEET

You will be surprised how many steps you will take while you’re shooting cityscapes; so, as with all other fields of outdoor photography, make sure you’re comfortable. Breathable trainers are ideal in most weathers, while waterproof walking shoes are great in the wet.

Zoom in, then zoom out

Shooting big buildings in the city can be a challenge, and sometimes it’s impossible to stand far enough away to get the whole subject into frame, even with a wide-angle lens. Instead, pick out some details that catch your eye. Experiment with abstract shots of interesting architectural features, or reflections in the glass and steel that many modern buildings are constructed from.

PRO TECHNIQUE

TRY A 35mm

In the shot to the left, a focal length of 35mm (or around 50mm on a full-frame model) gives a realistic field of view to a viewer, as it’s a close match to the focal composition of the human eye.
to focus attention on its shape, pose, colours, expression, look.” He has a series of images in this style, and places his subjects in the spotlight to arouse respect and empathy.

“My initial aspiration was to work with animals in photo studios. Seeing that this was difficult, I decided to try other ways to achieve a similar effect. I photographed this sea lion in the field, then simulated a studio effect with editing. In some of my photos the background is already black, because of the light conditions and the surroundings. In others, I simply burned some areas of the photo.”

With a simpler approach to shooting, Pedro was surprised to find that the end results pleased him more than he could have predicted. “Is it worth stress to the animal to get a naturally black background? Wouldn’t it be better to photograph the animal without disturbing it, showing its spontaneous side, and simply darkening the backdrop after? This animal – not being in a situation of stress – could show its behaviour naturally...”

Photographer Pedro Jarque Krebs describes himself as an animal photographer in the broadest sense of this definition. “This includes wildlife, but not exclusively. I create portraits of animals in any environment, be it in the wild or in captivity, in zoos and reserves.” This shot of a male sea lion was taken in a nature park in Germany. “My goal was to isolate the animal from any context that distracts”, says Pedro,
Does flash photography leave you in the dark? Get the most from your camera’s built-in flash or a flashgun with our illuminating two-part guide. This month, get to grips with the basics...

We get it. Flash photography can be complicated, unpredictable and unflattering, and it’s chock-full of complex jargon and acronyms. But to get the most from your camera’s flash system, you have to understand how it works. We’ll try and shed some light on it for you.

The majority of SLRs and mirrorless cameras have a built-in flash unit. When the camera is set to fully automatic mode, the flash unit will activate automatically when light levels are low. In the advanced modes – P, A, S, M – you can pop up the flash manually whenever you like by pressing the button marked with a flash symbol.

While it can allow you to take pictures when there’s no other source of illumination, the light that a pop-up flash spits out isn’t particularly flattering. The unit’s small size and fixed position means that the beam is direct and harsh, and its proximity to the lens can increase the risk of red-eye in portraits. It can also create shadows across the picture when you have a long lens or a lens hood fitted and you’re working up close. And you will need to be close: the power of a flash quickly falls away with distance – and, compared with an add-on flashgun, a built-in flash lacks power.

When it comes to working out a flash exposure, you can (more or less) forget about the shutter speed – as long as it’s below your camera’s ‘flash sync’ speed. This is the fastest shutter speed at which...
TTL vs manual flash
What is the difference between the two main flavours of flash exposure mode?

With a TTL (Through-The-Lens) flash exposure, the camera takes care of everything; it calculates the exposure and will, within reason, compensate for any changes you make to the aperture, shutter speed or ISO, and the distance between you and the subject, in order to maintain a consistent flash exposure.

As the name suggests, with a manual flash exposure you have to set the flash power yourself. The camera won’t make any adjustments, so if you move the flashgun closer to the subject or further away, for instance, or you raise or lower the ISO sensitivity on the camera, the flash exposure will change.

The camera doesn’t have to be set to Manual exposure mode to use a manual flash exposure, nor does it have to be in a semi-automatic mode such as Aperture Priority to use automated TTL flash. Use manual flash when you need consistency, and TTL when you need to work quickly.

How a TTL flash exposure works

Advanced TTL flash systems, such as Canon’s E-TTL II and Nikon’s iTTL, use a low power pre-flash before the exposure starts; in some instances you may notice this, but the pre-flash and main flash are usually indistinguishable. Light is reflected by the subject back through the lens and strikes the shutter curtains, where it is measured by the camera’s regular metering system rather than by a dedicated flash meter.

Pre-flash
The parts of the scene that are illuminated reflect some of the light through the lens before the picture is taken.

How a manual flash exposure works

There is no pre-flash or automatic exposure adjustment by the camera – it’s down to you to set an appropriate output. With the flash set to manual, you can adjust its power in fractional steps. A setting of 1/1 means the flash will fire at full power, but you can reduce the power (and the flash exposure) by selecting 1/2, 1/4, 1/8 and so on.

Exposure
If the flash power is insufficient to reach the subject, it will be underexposed (too dark). You’ll need to increase the power, move the flash unit closer, increase the ISO or choose a larger aperture.

Adjusting the flash exposure

You can make the flash exposure brighter or darker, but the way in which you do this depends on the flash exposure mode. As TTL metering takes the camera settings into account, your options are more limited, but TTL can be less time-consuming.

To reduce the flash exposure, use...

To increase the flash exposure, use...

TTL

- Negative Flash Exposure Compensation (FEC)
  (on some cameras, the regular exposure compensation setting also affects the flash exposure)

- Positive Flash Exposure Compensation (FEC)
  - A smaller aperture
  - A lower ISO sensitivity
  - A lower flash power
  - A softbox or similar modifier
  - ... or move the flash further away

Manual

- A larger aperture
- A higher ISO sensitivity
- A higher flash power
- ... or move the flash closer
How flash works

It’s the blip of flash that determines the exposure of a flash-lit subject, not the shutter speed

The flash itself is a very short burst of light, with a duration that’s maybe as fast as 1/3,000 sec. When you’re using flash alone to light a scene, it’s this brief duration that is effectively the length of the exposure, rather than the time that camera’s shutter is open. This is why you can’t control the flash exposure by adjusting the shutter speed. The shutter speed cannot be ignored, though, as the flash sync speed – the fastest shutter speed at which the sensor is fully exposed to light – may prove restrictive when you’re using flash in bright conditions. (See ‘Getting in sync’, opposite.)

By default, the flash is fired as soon as the first curtain has moved out of the way, although you may be able to set it to fire just before the second curtain closes. (More on that next issue.)

Shutter speed

The exposure for the rest of the scene is often much longer than the duration of the flash exposure.

Exposure starts
The first shutter curtain opens to reveal the camera’s imaging sensor and the exposure begins.

Flash fires
The flash duration is very short, allowing sharp shots of fast-moving subjects to be taken.

Exposure ends
The exposure ends when the second shutter curtain closes and blocks the sensor to light.

Shutter opens

Shutter closes

When it comes to working out a flash exposure, you can (more or less) forget about the shutter speed – as long as it’s below your camera’s ‘flash sync’ speed.

ordinary flash can be used. It’s relatively slow (in the region of 1/200 sec), but normally only becomes an issue when you’re using flash in daylight, and you may need to use a smaller aperture or a lower ISO sensitivity to achieve the correct shutter speed. Your camera will do this for you automatically in some shooting modes.

When you’re using flash as the main light, the length of the exposure is fixed by the duration of the flash; this varies according to the type of flash being used. Flash power, distance and aperture are the controlling factors in a flash exposure. The ISO setting is also a factor: the higher the sensitivity, the less flash power is required.

There are two main ways to expose with flash: by setting it to Manual mode (where available), where you control the power of the flash yourself; and TTL (Through-The-Lens) flash mode, where the camera measures the brightness of the flash being reflected into the lens and automatically adjusts the output. The advantage of a TTL flash exposure is that your camera will fine-tune the flash exposure to compensate for any filters on the lens or light modifiers such as softboxes and umbrellas.

“...
Although the duration of light from a flash is short, there’s a limit to how short an exposure can be.

A TTL flash system might be intelligent, but it’s still limited by the ‘flash sync’ speed, also known as the x-sync. As we mentioned last issue, this is the fastest shutter speed at which flash can be used, and is in the region of 1/180 sec to 1/250 sec (depending on the camera).

The reason you can’t use flash across the entire range of shutter speeds is down to the focal plane shutters used in SLR-type cameras. At the flash sync speed or slower, the full area of the sensor is revealed during the exposure. To get faster shutter speeds, though, the sensor is never fully exposed to light in one go: it is exposed through a narrow slit as the first and second shutter curtains move. If the flash fires, it will only illuminate a thin strip of the image; your camera may avoid this by defaulting to the slower sync speed when you’ve set a faster one.

**Flash button**
In some modes, you can manually trigger a built-in flash by pressing the flash button located near the flash unit. It may also give you quick access to the flash control screen if you press it again.

**Flash control**
For in-depth control over the flash, head to your camera’s settings menu. You may also be able to control an external flashgun in the same way, once it’s attached to the camera’s hotshoe.

**Flash compensation**
Some cameras have a dedicated button that allows you to adjust the flash strength; hold this down and rotate the camera’s dial to do so. You can also apply this via your camera’s control screen.

**Flash power**
When the flash is set to manual mode, adjust the flash power or output to control the exposure. A 1/1 setting gives you the full power of the flash, but it takes longer for the flash to recharge between shots.

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**Camera skills: Controlling flash**

Get to know some of the key camera controls that you’ll use when shooting with flash.

1. **Exposure starts**
   The first curtain opens to reveal the sensor and start the exposure.

2. **Open wide**
   With the first curtain out of the way, the sensor is fully exposed to the light and the flash fires.

3. **Exposure ends**
   The second curtain travels across to close the shutter and end the exposure.

Above the ‘flash sync’ speed

1. **Exposure starts**
   The first shutter curtain opens, followed almost immediately by the second curtain.

2. **Open wide**
   The second curtain is closing while the first is still moving, revealing a strip of the sensor.

3. **Exposure ends**
   The second shutter curtain closes – at no time was the sensor exposed all at once.
**What’s in a flashgun?**

**Increase your flash options by using a dedicated flashgun**

A pop-up flash can give decent results in a number of situations – it enables you to take pictures when there’s little or no daylight, for a start – but it’s not very powerful. Its small size and fixed position gives pictures that obvious, ‘flushed’ look. Not only does a dedicated flashgun give you more power to play with, it provides more control over how a subject or scene is lit.

You may get more creative options, such as being able to synchronise the flash with faster shutter speeds or create a stroboscopic effect, and you can usually rotate the flash head to bounce the light from a nearby surface, spreading and softening the light as a result. Freeing the flashgun from the camera’s hotshoe allows you to add a whole range of different lighting looks to your repertoire, such as using an umbrella or softbox to diffuse the light or a grid or snoot to narrow the beam.

**Anatomy of a flashgun**

1. **Flash head**
   - The majority of flashguns feature ‘tilt and swivel’ heads. These allow you to change the angle of the head and bounce the flash from a ceiling or a wall to produce a larger, softer source of light. Canon’s 470EX-AI can automatically bounce the light for you.

2. **AF assist**
   - In dark conditions, the chosen subject can be highlighted by a beam of red light before the exposure, helping the autofocus system to lock on.

3. **Hotshoe contacts**
   - Dedicated flashguns communicate more information about settings, power and other functions through the hotshoe than non-dedicated flashguns.

4. **LCD screen**
   - Here you can keep track of flash distance and power, the zoom setting, exposure compensation and more. Your camera model may enable you to control an external flashgun’s settings via the camera’s own screen instead.

5. **Zoom**
   - On many models, the flash head can be zoomed to match the focal length of the lens, ensuring even coverage.

6. **Mode selector**
   - Choose from TTL, Manual, Stroboscopic and other flash modes.

7. **Charge indicator**
   - Check that the flash is fully recharged between shots.

In front of a flashgun. Unlike manual flash, you don’t have to spend time working out the exposure if you change the aperture or the distance between the flash and the subject: as long as you’re close enough, the camera maintains a consistent exposure.

Inevitably, an automatic flash exposure may not give the results that you want. TTL measures the light that’s reflected from the subject, so it can overcompensate for very bright, dark or particularly reflective areas in the picture and output too much light or not enough. It also lacks the predictability of manual flash; a slight change in the position of the camera or subject may produce a different flash exposure. If you don’t like the result, you can use the flash exposure compensation function on your camera or flashgun in order to increase or decrease the brightness.

Working with a flashgun not only gives you more power to play with, it gives you more creative options too. As well as allowing you to experiment with flash modes, you can take your light ‘off-camera’. There are two ways you can do this: tether your flashgun to your camera’s hotshoe using a cable, or using a two-part ‘master’ and ‘slave’ wireless flash system.

Wireless has evolved hugely since the days of cheap and cheerful optical flash triggers that made a flashgun fire when they detected light from another flashgun. These days, wireless flash comes in infrared or radio, both of which offer more control over your remote flashguns.

TTL measures the light reflected from the subject, so it can overcompensate for very bright, dark or particularly reflective areas in the picture.
WHAT IS AVAX HOME?
Unlimited satisfaction one low price
Cheap constant access to piping hot media
Protect your downloadings from Big brother
Safer, than torrent-trackers
18 years of seamless operation and our users' satisfaction

All languages
Brand new content
One site

AvaxHome - Your End Place

We have everything for all of your needs. Just open https://avxlive.icu
Take more control of the light by using your flashgun remotely. This is how you do it...

The first step to more creative flash photography is to move your light source off the camera. This allows you to change the direction of the light, to control where the shadows fall and to use an array of modifiers to make the light source less (or more) obvious. There is a range of options to allow you to fire your flashgun remotely. The simplest is the traditional sync cable that provides a physical connection between the camera’s hotshoe and the flashgun. The problem here is that these cables aren’t typically very long, and there’s a risk of yanking over flashguns and lighting stands if you move the camera.

A wireless flash-triggering system offers more flexibility without the trip hazard. It’s a two-part system, with a ‘master’ and one or more ‘slave’ units. The slaves are typically triggered by infrared light, although this requires a line of sight between the master transmitter and a slave’s receiver. Radio control is reserved for higher-end lights; it doesn’t require line of sight, so you can conceal slave units behind objects or in modifiers.

Using off-camera flash

- Master flashgun: A flashgun on the camera’s hotshoe can act as a wireless ‘master’ unit, able to control one or more remote ‘slave’ flash units. When the master unit fires, the slaves are triggered, either optically or via radio transmission.
- Built-in flash controller: Some cameras enable you to use the built-in flash as a master or commander unit, triggering compatible flashguns that have a wireless slave function.
- Sync cable: Attach a flash sync cable between the camera’s hotshoe and a flashgun to take the flash off-camera while still retaining the same level of flash control. The flashgun can continue to act as a master unit, too.
- Wireless controller: A wireless controller can act as a master unit, allowing you to trigger a single off-camera flashgun or multiple groups. These are smaller and lighter than a hotshoe-mounted flashgun.
- Radio transmitter: Self-contained radio control systems are available. These require a radio transmitter to be fitted to the hotshoe, and radio receiver units fitted to each remote flashgun. Often, these units are identical ‘transceivers’, that are interchangeable and can be set to master or slave.
Competition

WIN the Sigma ‘Pro Trio’ of lenses

Digital Camera has partnered with Sigma Imaging UK to offer this incredible prize: three f/2.8 zoom lenses covering wide, standard and telephoto focal lengths.

The prizes
All three of these fast zoom lenses received top marks (5/5) when tested in our reviews.

LENS 1
Sigma 14-24mm F2.8 DG HSM Art
Zero distortion – the ultimate 14-24mm wide-aperture zoom lens.
Compatible with: Canon, Nikon & Sigma lens mounts
RRP: £1,399.99

LENS 2
Sigma 24-70mm F2.8 DG OS HSM Art
The definitive fast-aperture zoom lens for any shoot.
Compatible with: Canon, Nikon & Sigma lens mounts
RRP: £1,399.99

LENS 3
Sigma 70-200mm F2.8 DG OS HSM Sports
Flagship large-aperture telephoto zoom that meets the needs of professionals.
Compatible with: Canon, Nikon & Sigma lens mounts
RRP: £1,349.99

Enter today:
www.photocrowd.com/dcthree
shotstory
**Competition**

*Terms and conditions: The closing date for individuals entering the competition is 7 June 2019, and the winner will be announced in the July 2019 issue of Digital Camera. Open to UK residents only. Employees of Future Publishing, Sigma Imaging UK Ltd and its subsidiary companies, their families, agents and other parties directly involved with this promotion and the prize are not eligible to enter. By entering this competition, all participants are deemed to have agreed to be bound by the terms and conditions unless notified otherwise in writing. More T&Cs are available on the Photocrowd website, at www.photocrowd.com/terms.

This trio of lenses is the perfect addition to any serious photographer’s camera bag, offering wide coverage of the focal range, f/2.8 brightness throughout the zoom range, and the durability required in demanding situations. Each of these three lenses is a high-end model, offering top performance for professional use.

The challenge

To be in with a chance of winning this trinity of top-spec lenses, we’re asking you to submit a series of three photographs. These can cover a theme or subject of your choice – all we ask is that the images tell a story (of an event, for example) and show a clear beginning, middle and end. Telling a story in a single image can be challenging, but three images will allow you to really demonstrate your photography skills. You can submit your photos in colour or black-and-white – it’s up to you. The winning entry will be recognised for a distinctive and original interpretation of the challenge.

This competition is being hosted by Photocrowd. To enter, just go to: www.photocrowd.com/dcthreeshotstory
OVERALL WINNER: MOTHER’S HOPE
Edwin Ong Wee Kee
This Vietnamese woman has a speech disorder, but it does not stop her from continuing her life as a mother. A mother’s love is unconditional so, despite her speech disability, this mother manages to overcome her daily hardships. Her life is full of hope when she is looking down at her children.
AMONGST THE RUBBLE
Wissam Nassar
Salem Saoody, 30, makes use of the last remaining piece of his ruined home in the Gaza Strip – his bath tub – to bathe his daughter and niece.

THE KAZAKH EAGLE HUNTERS OF MONGOLIA
Sarah Wouters
These eagle hunters, living around the Ulgi province of Mongolia, preserve an old tradition that has been passed on from generation to generation. They tame eagles and use them to hunt smaller animals.
A STORMY DAY
Fanny Octavianus
A young boy plays in a street filled with water after heavy rains in Sabang, Central Jakarta.

Camera: Nikon D700
Lens: 18-35mm f/3.5-4.5
Exposure: 1/400 sec at f/10, ISO 1600

WAR CHILD
Sandro Maddalena
A refugee child is rescued by volunteers on the Greek island of Lesvos.

Camera: Canon EOS 5D Mark II
Lens: EF 24-70mm f/2.8L USM
Exposure: 1/100 sec at f/5.6, ISO 400
BRICK FACTORIES
Mustafa Turki Mhanawi
In Southern Iraq, these workers produce bricks. They are very hard-working despite the risks of high temperatures and dust.
**AN UNLIKELY ENCOUNTER**

Karim Iliya

A baby humpback whale interacts with a freediver in the clear waters of Tonga. At less than two months old, he is bigger than a car, feeding on milk until he is strong enough to make the journey back to Antarctica with his mother. This playful giant swam around us while his mother rested down below.

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**NIGHT MEAL**

Tibor Kercz

A little owl with its prey in the rainy night. Manual exposure mode and flash was used to illuminate the subject against a dark night sky. The shot was shortlisted in the black-and-white general award category.

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**WHIRLPOOL**

Abdullah Alshatti

A group of flamingo birds is looking for food on the crucial Kuwaiti coastal area of Alsulaibekhat, where the region is rich in crustaceans and shrimp.

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**BORN TO ICE (PORTFOLIO)**

Paul Nicklen

Ice amazes us even as we fear its harsh environment. But man and creature alike have found balance in its stark beauty – a balance that is being threatened by the hand of man, and our unwillingness to change.
An international award promoting art and culture

The Hamdan International Photography Award (HIPA) is an international photo contest that runs annually in Dubai. Now in its eighth season, it was established by HH Sheikh Hamdan Bin Mohammed Al Maktoum. The competition demonstrates the commitment of Dubai to encouraging and supporting art, culture and innovation. While the award appeals to photographers across the globe, it also nurtures national talent.

www.hipa.ae
We joined up with online photo game GuruShots to print the winning images from a ‘Give it your best shot!’ challenge. Over 39 million votes were cast, and these are the winners.

Editor’s Pick
‘Dreaming’ by Younes Ezzentri
Younes Ezzentri is a 25-year-old photographer who lives in Casablanca, Morocco. “Perhaps you haven’t been to an exotic locale, but photography can practically transport you there,” he says.
GuruShots is a platform for people who love taking photos. GuruShots believes that taking photos is an amazing way to express yourself. Wanting photography to be fun as well as meaningful, GuruShots has turned the sharing of photos into an exciting game packed with plenty of opportunities to show off people’s talent. Every month almost four billion votes are cast in over 500 challenges. Winners get prizes from GuruShots’ sponsors, including Lowepro, Kodak and Lensbaby. www.gurushots.com
PUT A PAUSE IN YOUR DAY

With so many demands from work, home and family, there never seem to be enough hours in the day for you. Why not press pause once in a while, curl up with your favourite magazine and put a little oasis of ‘you’ in your day.

PRESS PAUSE
ENJOY A MAGAZINE MOMENT

To find out more about Press Pause, visit:
pauseyourday.co.uk
Fundamentals: Black & white
Discover new ways to go mono as we look at recent changes to Lightroom

Step-by-step: Just add water
Transform a scene with a convincing water reflection, using our 16 effects

Tool School
Learn how Pattern Stamp helps you paint photos

Head To Head: Plug-in suites
Compare two popular options for doing a variety of editing tasks in one package

Raw War: Bluebell close-up
Two Photoshop experts turn their attention to a classic macro shot

Get The Look: Coastal scenes
Four ways to bring out the magic of the golden hour on the seafront

Just for fun
Add the finishing touch to your photos with a signature brush

WIN PHOTOLAB 2 ELITE
You could be editing images with DxO’s powerful photo tool in our competition

FREE SOFTWARE WORTH £159!
WIN 90 PLUS!
Flood foregrounds for striking water effects

Use our free Water Reflection Pack to add realistic liquid effects in Photoshop CC

This is a wonderful technique that emulates the effect of a water-flooded foreground. It works effectively on all kinds of scenes and subjects, but because it extends the height of the image, it’s best used with pictures that are in the horizontal or landscape format.

For the technique to work successfully, you need to crop the image at a suitable point, as the bottom of the shot will serve as the ‘join’ where the digitally generated water meets the picture itself. For this reason, look for images with a clean baseline, as this will effectively become the shore of your new lake. If you try it with architectural subjects, try to capture images that are square-on to the building, as any slants in the horizontal or vertical lines present will make both the reflection and the water’s edge look artificial.

When you’re working through the technique, make sure you follow it exactly as described, as any errors in the layer order will result in disappointment! There’s a full-length video on the disc with extra tips.
Make a basic reflection
Open Chrome Hill.jpg from the disc. With the Crop Tool, select the image, and crop so the bottom edge is where you want the water’s edge to be. Go to Layer > Flatten Image. Press Ctrl/Cmd+J to copy the layer, then click on the Background Layer. Go to Image > Canvas Size; after ticking Relative, change the units to Percent and put 100 in Height. Click on the top-middle Anchor box, set the Canvas Extension Color to White and click OK. Click on the top layer, and press Ctrl/Cmd+T. Shift-drag the top handle downwards to flip the image and create a reflection that covers the white area, and press Return.

Reduce definition with Motion Blur
Click on the Background layer, then click on the Create A New Layer icon to make a blank layer above it. With this new layer selected, hold Ctrl/Cmd and click on the top layer’s thumbnail to select the contents. Click the foreground colour swatch, then click directly on the blue of the sky to sample a colour. Press Return, then press Alt+Backspace to fill the selected area on the middle layer. Now click on the top layer with the reflection, and tick the Lock Transparent Pixels icon. Go to Filter > Blur > Motion Blur, and set an Angle of 90° and a Distance of 40. Click OK, and you’ll see a subtle blurring of the reflection.

Make waves with a Displacement Map
Copy the Water Reflection Pack to your hard disk. Back on the image, make sure the selection is still active on the reflection, and go to Filter > Distort > Displace. Set Horizontal Scale to 200 and Vertical Scale to 400, and tick the Stretch To Fit and Repeat Edge Pixels boxes. Click OK. In the dialog box, find your Water Reflection Pack. Double-click one of the files (such as Reflection 01.psd), and a rippled effect will appear on the reflection. Different effects can be created by inputting different amounts into the Horizontal and Vertical Scales, but always ensure that the Vertical Scale is double the Horizontal.

Enhance the effect for a natural look
Press Ctrl/Cmd+D to lose the selection lines. With the top layer active, click the Add Layer Mask icon. Select the Gradient Tool then the Black, White preset. Make sure Reverse is not ticked in Options. Drag from the bottom of the pic to the ‘join’. To make it more subtle, double-click the Layer Mask thumbnail and reduce Density. For brighter pictures, create a new layer at the top of the stack, and click with a black, soft-edged 50px brush on the ‘join’ on the left side. Shift-click on the right side to give a soft black band. Change the Blending Mode to Multiply, then run a Gaussian Blur filter with a Radius that gives a natural effect.
Paint with Pattern Stamp

Get to grips with this powerful tool and learn how to become a painter – even if you can’t paint.

Photoshop offers a variety of tools that let even the most ham-fisted painter turn their photos into beautiful brush-based artwork. Some might look to Photoshop filters for this kind of thing, but they will usually look either generic or unrealistic. The problem with a filter is that it works uniformly across the image. Real paintings don’t work like this: they have areas of fine detail, and other areas that are less tightly depicted. For this kind of look, a filter just won’t cut it. Instead you need a good brush-based tool.

This is where Pattern Stamp comes in. In essence, it lets you paint a pattern over your image. But that pattern can be anything you like, including your photo. So rather than focusing on creating a pattern (which the tool is capable of doing), instead you can take advantage of the mechanics of the tool to create a painterly image by using short, sharp strokes for fine details, and broader strokes for other areas. You can even leave portions completely unpainted to give the painting a choppy, tangible look. What’s more, you’re able to utilise Photoshop’s powerful brush engine, with its array of brush tips as well as tilt, opacity and flow controls.

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

Content-Aware is a great option for filling in larger areas of a photo. You simply select the area, go to Edit > Fill and choose Use: Content-Aware. Recently, the command has been further developed to offer a dedicated dialog box. Here you can control and refine the fill by including or excluding sample areas, so that the command knows which details to target and replicate. You can exclude the subject, for example, so that the fill area only samples from the background details. It's a powerful extension of a hugely useful feature.
The basics
Pattern Stamp lets you paint from a defined pattern. It’s similar to the Clone Tool in that it samples from the source – but rather than Alt-clicking to define the source, you choose a pattern to sample in the options at the top. Like all brush-based tools in Photoshop, you can alter the size of the brush tip with the ] and [ keys, and set the opacity by hitting a number key – 1 for 10%, 2 for 20% and so on.

Define a pattern
Found under the Edit menu, this lets you create a new pattern to use in combination with the tool. By defining a pattern of the entire image, the new pattern will be the exact same size as the document. So when you start painting here, it’ll be like you’re painting a new, brush-based version of your original photo. After choosing the option, you can give your new pattern a name if you like.

Pattern presets
After defining a new pattern, it’ll appear at the bottom of the list of pattern presets here. You’ll also find a wide array of other patterns to play with by clicking the cog icon, including things like artists’ surfaces (useful for creating a textured feel) and erodible textures. What’s more, you can find plenty of free downloadable patterns online, which can be loaded in via the menu here.

Bristle brushes
Photoshop’s Bristle brushes can be used in combination with several brush-based tools, including Pattern Stamp. With a choice of tips based on traditional painters’ brushes (we used Flat Fan High Bristle Count here), they give you a realistic painterly look to your brush strokes. Bristle brushes are best used in combination with a graphics tablet: the angle and pressure controls make your strokes look much more natural.

Layer stack
It’s best to paint on a separate empty layer so that your workflow remains non-destructive. Here our layer stack begins with our original image (used to define the pattern). Above this is a brown base layer for our painting, then our Pattern Stamp painting layer. On top of everything is a duplicate of the bottom layer with the Glowing Edges filter applied. It has been inverted, desaturated and set to Multiply to create a sketch effect.

Impressionist
Tick Impressionist and Pattern Stamp will give you a wonderful brush-based look by sampling the colours from the targeted pattern in a painterly way. When you paint, the length of your strokes will affect the way the colours are blended with one another. Long strokes will blend colours more, while short strokes will preserve them. As such, you should use short strokes for areas of fine detail, like the eyes here.
Black-and-white magic
Changes to Lightroom mean there’s a more effective way to reliably create monochrome photo conversions

Expert tip
If you want a mono photo fast, simply set Saturation to -100. This will give a passable conversion. The key to getting the best from it is to boost Contrast as well. You can do this quickly using the Contrast slider as done here, or using the Tone Curve to get more control. Increasing Contrast improves the richness of both the blacks and the whites in the photo.

Adobe recently made a change to how black-and-white photos are made in Lightroom. Originally pressing V or changing the Treatment just created a photo with all the colour channels desaturated. This leaves the luminosity of the colours available. Now Lightroom changes the Color Profile to Adobe Monochrome. This means that how Lightroom creates the black-and-white look is directly tied to how it interprets information from the raw sensor data, rather than applying it after. You still access the luminosity of each colour channel.

You’re not limited to the Adobe Monochrome profile. As well as third-party profiles, you can also use legacy conversions – if you have an older camera-matching colour profile with a black-and-white photo, Lightroom can match a new mono version of the profile for you.

Colourless is how photography started. And even today, when you want to get to the essence of a photo, remove colour to leave only tone and form. The conversion to black and white has an amazing way of pulling the heart of the photo into focus. While we’ve gone away from relying on silver for our photos, we still love the look of a good black-and-white photo.

Lightroom itself actually uses silver in its internal naming, with plenty of parameters stored with an Ag prefix (the periodic table symbol for silver).

Sean McCormack is a photographer and writer, based in Ireland. He’s the author of The Indispensable Guide to Lightroom CC.
Check the original
I’ve chosen this photo because it has a lot of colour variety in it. Starting with the basic colour photo, we can see that the default Adobe Color profile is applied in the Basic panel. Treatment is displayed as Color. To begin the process of changing to black and white, there are a few things you can do: Press the shortcut V, change Treatment to Black & White, or select Adobe Monochrome from the Profile list.

Pick a Profile
Adobe Monochrome is not the only option. To get these options, click on the grid in Profiles to see the thumbnails of the profiles. Click where it says ‘B&W’ to hide colour profiles. Two main sets you’ll see are the Camera Matching profiles, and the dedicated B&W profiles. Hover over these to update the main preview. Choose the one that fits your vision for the photo. I’ve gone for B&W 06.

Take manual control
The B&W panel has eight sliders, representing the underlying hues in the photo. You can still change the luminosity of any colour. To darken a colour, drag to the left. Drag to the right to lighten it. You can also click the Targeted Adjustment icon then click and drag up and down on an area of the photo itself. I’ve lightened Red (51), Aqua (75), a hint of Green (2), Purple (68) and Magenta (70), while darkening Orange (-44), Yellow (-56), and Blue (-18).

Tweak the contrast
By now you’re probably most of the way towards the rich monochrome photo you’d planned, but you probably want that final bit of seasoning: the salt that makes the difference. In a black-and-white photo, that salt is Contrast. What makes black-and-white photos really pop is the richness in the blacks. Ansel Adams’ famous Zone System included full black and full white in the photo. Here I’ve set the Contrast to +35 and Exposure to +25 to complete the look.
Light and exposure

Discover four ways to enhance your coastal images and accentuate the golden hour

any photographers these days find that Lightroom is the only software they need to process their images in a way that suits them. But there are still many reasons why Photoshop remains an important part of the photographic workflow.

Layers and Blending Modes, among many other controls, make Photoshop essential for creating certain types of special effects. In this Get the Look we’re going to focus on four techniques that centre around light, colour and exposure to enhance images taken during the ‘golden hour’, just after sunrise or before sunset.

They range from a simple vignette to creating a bright burst of sunlight. Use any individually, or add them together for a dramatic end result.
**GET THE LOOK**

### 1. Add a vignette
First we’ll create a vignette to focus attention on the centre of the image. Press Ctrl/Cmd+J to make a copy of the Background Layer, then go to Filter > Camera Raw Filter. When the dialog box opens, click Lens Corrections, drag the Vignetting Amount to -100 and Midpoint to 15 and click OK. Reduce the layer Opacity of the Layer to the desired amount; here we set it to 80%.

### 2. Create a sunburst
Press D to set colours to black and white. Double-click on black and change it to yellow. Go to the Create New Fill Or Adjustment Layer icon in the Layers panel and select Gradient. Set Style to Radial, then move the gradient into position. Set the Blending Mode to Screen. Press X to make the foreground colour white. Create a new Gradient, set to Radial with Scale at 25%. Drag it into the centre of the other gradient. Make the Blending Mode Overlay.

### 3. Mimic an ND grad
Create a Curves Adjustment Layer. Click in the centre of the Curve, then drag down and to the right to darken the sky. Press Ctrl/Cmd+I to invert the mask: the effect will disappear. Make the foreground colour white and press G for the Gradient Tool. Shift-drag down to the bottom of the sky.

### 4. Enhance sunset hues
Click on the Adjustment Layer icon and select Solid Color. In the dialog box, select orange and press OK. Change the Blending Mode from Normal to Multiply to add transparency, and reduce the Opacity of the layer to 15%. If this is too strong, reduce it to between 5-10% for a more natural look.
## Plug-in collections

### DxO

**Nik Collection 1.1**  
Nik’s evergreen plug-ins, updated by DxO  
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### Topaz Studio

**A ‘fremium’ suite where you pay only for what you need**  
£0.464 ($0.604.77) [topazlabs.com](http://topazlabs.com)

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<table>
<thead>
<tr>
<th>What does it do?</th>
<th>Topaz Studio combines 24 effects filters in a single interface. You can choose image effects presets, most using combinations of filters. The software and image effects are free, but you have to pay to unlock ‘Pro’ filters to get access to more advanced tools.</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the range of features?</td>
<td>There are 24 filters to the Nik Collection’s seven, but many Topaz filters have a narrow range of functions that are combined into a single Nik plug-in. One big difference is the painterly Impressions filter, although the Pro version costs more than the entire Nik suite.</td>
</tr>
<tr>
<td>Are the results good?</td>
<td>You can create some very nice effects with Topaz Studio. The Nik Collection does offer HDR merge tools, though, and feels like it offers much more depth of control, particularly for black-and-white work, film/camera effects and local adjustments.</td>
</tr>
<tr>
<td>Is it worth the price?</td>
<td>You can’t complain about Topaz Studio’s value if you stick with the free filters, but the moment you start upgrading to more than a couple of Pro filters, the cost quickly outstrips that of the Nik Collection; if you buy them all, it will cost you hundreds.</td>
</tr>
</tbody>
</table>

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**Verdict**

| DxO | 5.0 ★★★★★  
The depth of control is impressive; the creative potential is limitless |
|---|---|
| Topaz Studio | 3.0 ★★★★☆  
Some of the effects are very nice, but the cost escalates rapidly |

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**Some users might be aggrieved that a suite that was free for a time under Google now comes with a modest licence fee, but the Nik Collection used to cost much more than it does now. It’s great value for anyone who wants to experiment with their photos.**

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**Analog Efex Pro simulates old cameras and films. Silver Efex Pro offers black-and-white tools, HDR Efex Pro is for HDR, and Color Efex Pro offers colour filters. Viveza is for dodging and burning, while Dfine and Sharpener Pro are for image enhancement.**
RAW WAR

ONE RAW FILE. TWO ARTISTS. FREE REIGN

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

The original raw
by Lauren Scott

His classic springtime shot was taken on a Canon EOS 5D Mark III with an EF 100mm f/2.8L Macro IS USM lens. The wide f/2.8 aperture ensures great separation from the background. As is often the case with an unedited raw file, the colour is in need of some work to bring out the best of this image.

Raw Warrior 1 wants to create...
A considered enhancement

Raw Warrior 2 wants to create...
A fine-art interpretation

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

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

Download the disc: www.bit.ly/dc216disc
or this shot, I’ve mostly chosen to keep things simple by boosting colour, sharpening detail and removing a few small distractions. These are the kind of quick techniques I’d normally use for editing macro flower photos.

However, with any image there are usually a few edits that you end up agonising over, and for me it’s the crop. Because of the central framing and healthy amount of negative space in the original, I have options. The rule of thirds can be a handy guide – but which third to go for?

I’ve cropped in and positioned the bluebells on the left third: the bokeh on the right is slightly more interesting, and it means the flower curves inwards rather than outwards. We all have our own compositional habits, and I’ve noticed I have a propensity to place my subject on the left. I’m not quite sure why!

**Cropping calculations**

The original image is cropped quite loosely, which allows for the freedom to experiment with different crops. Of course, a heavy crop like this inevitably leads to a lower-resolution image. When you crop, it’s worth thinking about your output and if necessary, make calculations to ensure you have enough pixels to work with. This crop lops off about a thousand pixels on the long side, but I’m still left with 4,700, which is enough to make a 15-inch-long print at 300 pixels per inch – more than enough for my purposes. You’ll see the resolution figures in the underlined text at the bottom update as you adjust the crop.
Targeted colour boosts
In an image dominated by greens and yellows – as so many macro photographs are – it helps to know how to control the intensity of those specific colours. There are several colour-tweaking tools in Camera Raw and Lightroom, but personally I like to use the Targeted Adjustment Tool for this task.

With this, I can right-click to target Hue, then simply drag over the background to make the greens more intense and reduce the yellows slightly. I can also target Luminance and lift the blues in the flower in a similar way. The Camera Calibration Panel can also be useful for subtle tweaks to the greens and yellows.

Retouching flowers
Flowers are beautiful objects, but look at them up close and they can often be rather messy, with little spots of dirt, stray pollen or other detritus. I like to spend time removing these distractions. Lightroom and Camera Raw offer the Spot Removal Tool, but I prefer Photoshop’s Healing and Clone Tools for anything more involved than a stray sensor mark. I’ve also cloned out a few parts of the bluebells that I find a little distracting, like the bright ‘spike’ near the top of the plant.

When you use Photoshop’s Healing and Clone tools, first make a new layer then set the tools to Sample All Layers to keep the edits non-destructive.
Crop the image to lose excess background areas
In Adobe Camera Raw, I select the Crop Tool (shortcut C).
With the dropdown preset set to Normal, I recompose the image to a vertical orientation, cropping out the empty space on both sides. In the Basic tab, I adjust the white balance by pushing Temperature to 6,500, then tweak the contrast with settings of -100 in Highlights, +50 in Shadows, +5 in Whites, and -30 in Blacks. Shot at f/2.8 on a macro lens, the bluebell is a little soft in places, so to give a sharper feel across the image, I push Clarity to +40. This enhances midtone contrast, giving extra definition and the appearance of a sharper subject.

pictures of a lone flower present opportunities for you to think in different ways when it comes to imaging treatments – and raw software has a huge variety of tricks up its sleeve when you want to experiment outside more naturalistic approaches. Although there’s already a nicely blurred background separating the subject from its environment, I want to accentuate this and create a fine-art look that’s focused primarily on the colours of the bluebell, rather than the detail in its petals. To do this, I’ll suppress the greens in the background and boost the purples and blues in the flower. I’ll also add a wash of film grain to tone down the detail, and make a vertical crop to turn the shot into a gently diffused, fine-art portrait.

JON’S PLAN FOR THE RAW IMAGE
Desaturate background
Crop off to get vertical composition
Add grain and dark border
2 Desaturate the background to isolate the subject
To further increase edge definition, I go to the Detail tab (Ctrl/Cmd+Alt+3) and set the Sharpening Amount to 100. To restrict this to the edges, I then hold the Alt key and move the Masking slider until just the edges showed white (a setting of around 72). In the HSL Adjustments tab (Ctrl/Cmd+Alt+4), I reduce the saturation in the background by setting Yellows to -80 and Greens to -70. To boost the vibrancy of the colours in the bluebell, I then increase Blues to +40, Purples to +30 and Magentas to +50. This creates a good sense of separation between the flower and its background, and gives an extra kick to the colours of the petals.

3 Add film grain and a dark border
To get a dreamy, fine-art look, I select the FX tab (Ctrl/Cmd+Alt+7) and boost the Grain Amount to 100. I then tweak the Size and Roughness sliders to around 70 and 60 respectively to get a gritty, stylised look.

The next step is to add a dark border. To do this, I move both the Amount and Roundness sliders beneath Post Crop Vignetting to -100, then move the Midpoint slider to the left until I’m happy with the effect. All that remains now is a contrast boost; I do this in the Curves tab (Ctrl/Cmd+Alt+2), dragging the tone curve into a shallow ‘S’ shape.
Adding a signature to a work of art has been standard practice for centuries, but digital artwork presents the problem that the original can’t be signed with a pen in the time-honoured way. Unless you have a pen tablet and can write directly onto a digital image, you’ll need to start with a photo of a signature, fashioned with pen and paper.

To do this, write your artist’s signature in black ink on a sheet of plain paper, and take a shot of it. It doesn’t matter too much whether you use a DSLR or a smartphone to do this, but whatever you use, make sure the image is free of motion blur (caused by camera movement) and is sharp across the frame. Ideally, add +1.5 stops of Exposure Compensation to keep the white paper bright, but don’t fuss too much over this: it’s not absolutely essential.

Load your signature pic into Photoshop, then open Levels (Ctrl/Cmd+L). In the palette, click on the Black Eyedropper tool, then zoom in tight and click on the text. This sets a black point. Now zoom out and, with the white eyedropper selected, click on the darkest part of the paper background. This will set a white point and ensure that you have pure black text on a pure white background. Use the Rectangular Marquee Tool to make a tight selection around the signature. Once you’ve done this, go to Edit > Define Brush Preset. In the dialog box, rename the brush as ‘Signature’, and click OK. Your signature brush will appear at the bottom of the brush preset list.

Because you’ve created a brush of your signature, you can now make it larger or smaller using the Brush Size slider (or the [ and ] keys). Also, just as with any other brush, the colour it uses will be imported from the foreground colour swatch box, so you can set whatever colour you require by clicking on this and choosing a colour from the Color Picker.

To apply the signature, just click anywhere on the image, but take care not to move the mouse when you click. If you want to add additional effects to your signature (such as a drop shadow), always use it on a separate layer. This gives you access to the effects in Layer Styles, which can be opened by double-clicking to the right of a layer’s name in the Layers panel.
Photographic Backgrounds

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and correctly answer the following question:

Q. Which tech company did DxO acquire Nik Collection from?

A. Facebook  B. Google  C. Yahoo!

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DxO PhotoLab 2 Explore the interface

1. **PhotoLibrary panel**  
Browse your photos to find the folder containing the images you want to enhance. The right side of the screen shows thumbnails of the images in the selected folder and, above that, a preview of the image you’ve selected. Optical lens correction profiles are located and applied automatically.

2. **Dynamic search field**  
This is a brand new feature – start typing in this box and PhotoLab will automatically offer matching search options. Enter the number ‘5’, for example, and the display will offer to show images taken at a focal length of 5mm, exposures of 5 seconds or a lens aperture of f/5.0. The search results are shown on the right.

3. **Customise panel**  
For detailed adjustments and enhancements, swap to the Customise mode. Your photo is then displayed filling the window, with an optional before-and-after view (shown here) to help you judge your adjustments and see how far you’ve come. For a one-click ‘look’, the Apply Preset button is in the top-right corner of the window.

4. **Tools panel**  
PhotoLab’s presets apply a specific set of image adjustments but you can adjust these yourself using these collapsible tools panels and palettes. These displays are customisable. (The DxO ViewPoint panel, which includes perspective correction tools, needs the ViewPoint 3 add-on, sold separately.)

5. **Local adjustments**  
PhotoLab’s killer feature was the inclusion of local adjustments, which followed DxO’s acquisition of the Nik Collection. You select this button then right-click on the image to choose between different adjustment types, including graduated filter, brush tool and control point adjustments.

6. **Control points**  
This is a control point adjustment centred on the rock in the middle of the picture. The adjustment sliders are to the right, split into three different sets, and the control point technology means that only the tones under he control point will be affected by your adjustments – so an adjustment mask is created automatically (inset).

This picturesque town on the south coast proves a fertile hunting ground for one reader in search of great shots.

**Niall Hampton** watches the day’s events unfold

---

**Reader**

**David Baker**

- **Camera:** Olympus OM-D E-M1 Mk II
- **Location:** Nottingham

David has been a photography enthusiast since his teens and particularly enjoys taking pictures of landscapes, seascapes and wildlife. He got a good crack at all three subjects during a recent holiday in Australia and New Zealand – but with over 625 ‘keeper’ images to sit and edit, he was looking for a good excuse to get behind the camera again. So what better opportunity than taking some sunrise shots in Swanage? David was keen as mustard and arrived very well accessorised, starting with a plethora of filters to attach to his trusty Olympus E-M1 Mk II.

---

**Mentor**

**Claire Gillo**

- **Camera:** Nikon D810
- **Location:** Devon

Contributing editor Claire stepped into the breach after we had a late cancellation. As a regular contributor to our Photo Active projects section, Claire was on hand to offer David some hints, tips and techniques for getting the most from a seaside shoot.

- Special thanks to The Swanage Pier Trust for its help. The Trust is happy to accommodate photographers outside the pier’s standard opening hours, by prior arrangement. In such instances, the Trust asks for a donation of £10 per photographer.

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Join us and learn new skills! Keep an eye on our Facebook page for Shootout invitations.

www.facebook.com/digitalcameraworld
If in doubt, filter it out

Just before capturing his classic sunrise shot, David tried something artistic. He spotted some rope on the beach trailing into some clumps of seaweed and thought it would act as a compositional lead-in line, zig-zagging along the seaweed and on to the sun starting to emerge over the pier. David transformed the rolling sea into a millpond by using a 10-stop ND filter.

Challenge 1
Shoot the sun rising over Swanage Pier

David Baker

Photography helps to remind you that a clock strikes five twice in one day – and that’s what was required to capture sunrise over Swanage Bay. But rising with the lark for our 5.45am rendezvous with David, we weren’t the first to get there – he was all set up and ready to shoot, having already scoped out the vista from the other side of the pier.

We had arranged to shoot on the pier before it opened (details on page 92), but we soon realised it would be an essential element of the shot, so we set up on its north side.

Starting on the sliver of beach between the receding tide and the rocky pebbles, David didn’t have masses of time to set his tripod up and find the right position. “As the sun broke cover, I was looking for some foreground interest,” he says. “As well as the sand, there was a rock pool in front of a slipway, which also had a lot of texture in the seaweed. So I used a three-stop graduated filter to reduce the brightness of the sky and expose some detail in the beach. The pier is left deliberately in the dark, to maintain a classic dawn shot look.”

Expert opinion

David found this classic composition of the pier during the sunrise, and did a great job of balancing all the elements in the scene. He has captured the sun peeking over the top of the pier at the optimum moment. We would suggest bringing out more detail in the foreground: some of the lovely greens and blues there are lost in the black.
imber piles are all that remain of Swanage's old pier, which was built from 1859 to convey stone from local quarries to ships anchored in the bay. It was superseded by the current pier, which originally serviced passenger steamers between nearby Bournemouth and Poole.

For this classic view of the old pier, David’s intent was to simplify the image in black and white, with minimal distraction from any water texture: “A Lee Big Stopper gave me the 10 stops of filtration needed to bring this down to a 20-second exposure,” he says.

**Expert opinion**

This is a great shot of the old pier (taken from the new); the black-and-white effect is well finished, leaving the eye to wander into the scene. David has cropped this image into a square format which balances the composition well. The slow shutter speed eliminates any distracting ripples.

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**Get accessorised**

David prefers deploying a remote shutter release over the camera’s two-second timer, as it gives him more control, and he eschews using the camera’s electronic level indicator. Instead, a hot shoe spirit level allows Live View previews to be displayed with fewer information overlays – ideal for finessing image compositions like these gulls perching on the timbers of the old pier.

---

**Challenge 2**

Capture the essence of the old pier

**Camera** Olympus OM-D E-M1 Mk II  
**Lens** M.Zuiko ED 12-100mm f/4 IS Pro  
**Exposure** 20 sec at f/18, ISO 200
progressing to the other side of the pier, we found a different perspective. The decayed timbers of the old pier provide significant visual interest, and David spent some time trying out some angles for an interesting composition. Peeking through a clump of the decayed uprights, it’s possible to see Old Harry Rocks, the three chalk formations at Handfast Point; and further into the distance was Bournemouth, with a fetching pair of tower blocks forming a version of Old Harry Rocks on terra firma.

David found more inspiration close by. “A rusty anchor and chain caught my eye at the end of the beach,” he says. “I selected the angle to get the maximum amount of anchor at an angle that excluded sections of the new pier, but with the interesting piles of the old pier still in shot, and the tower to balance the right-hand side. Using an ND grad to hold back the sky, combined with subsequently reducing the highlights in Lightroom, allowed the sun to come through as a hazy ball without washing out the sky.”

Expert opinion

This anchor shot was a tricky one to get and required some thinking and experimenting, which David did well! The low, wide angle David selected really helps to capture the whole scene, and he has done a great job to include elements like the old pier and the bell tower on the right in the background of the frame. We love how the cool and warm tones in this scene complement each other, showing off this gorgeous spring morning to its best advantage. David also coped well with the low sun in the scene.

Shoot it in raw

For another sunrise shot, this time making more of the pier, David found that the low light levels just needed a six-stop neutral-density filter to smooth the water, with some Dehaze added later in Lightroom to really help the sky pop. To have more image detail available during post-processing, David shot his images in raw as well as JPEG.
Polarise that sky

After a chilly start, the morning developed into a warm and sunny one. David felt that the pleasing cirrus clouds above the pier were calling out to be accentuated via a polarising filter, to darken the sky and increase its contrast with the clouds. For this particular composition, he aligned the vertical cloud column with the centre of the shelter, and set the latter low in the frame to boost the amount of sky in the image.

Expert opinion

When David got out his crystal ball, we all thought he was going to start predicting the future! Well, he didn’t – but what he did manage to get was a unique and fun image of Swanage Pier. We would be tempted to have gone slightly wider with our composition, to let the ball breathe in the space, but nevertheless it’s a great shot.

Challenge 4
Wild card round: it’s time to get creative!

Camera: Olympus OM-D E-M1 Mk II
Lens: M Zuiko ED 12-100mm f/4
Exposure: 1/160 sec at f/16, ISO 200

Regular readers will recall that our Great Olympus Festive Photo Walk winner Natasha Boorman used a lens ball to good effect (January issue, p98). Like David, she was also shooting on an E-M1 – there’s something in the water.

A distinctive aspect of Swanage Pier is the brass name plaques set into the wooden walkways. These range from brief epitaphs and dedications to loved ones to light-hearted and humorous personal messages. David felt that one of the accessories tucked away in his camera bag would be ideal for getting a shot with a different look and feel.

“The lens ball was a Christmas present from my daughter,” he says. “Placing the ball on the planking and lying full-length, I was able to get the dedication plaque and the shelter, along with the lampposts, in focus in the ball. The background is softly out of focus, but still distinguishable enough to give it some context. I shot this under normal conditions with no filters.”

“R”
Sketchy about shutter speeds? Disoriented by dynamic range? Send your technique and camera questions to digitalcamera@futurenet.com

Photo Answers

Liking Leica

Q I’m interested in the new Leica Q2 camera, but I have some concerns over its cropping functions...

Valerie Turner

This new compact camera from Leica has a big full-frame sensor. You are concerned, however, that despite its high price it has only a fixed 28mm lens. You’ve also read that it has an integrated digital zoom crop function that covers a range of focal lengths up to 75mm. Does this mean, you wonder, that an image taken at 50mm will still have sufficient pixels to avoid loss of detail, or do the extra pixels only benefit large-scale prints?

There’s no doubt that the Leica Q2 is a terrific camera, and it certainly has an impressively large full-frame sensor at 47.3MP. To be honest, even at its 35mm crop you still have a 30MP file – and this is a bigger resolution than I get with the DSLR I shoot with for a lot of my professional work.

By the time you get to the 75mm crop, maybe you should be a little more cautious about image size: 6.6MP is relatively small by today’s standards. That said, it only really becomes an issue if you are intending to make large prints from the smaller files. Even at 6.6MP I think you’d be able to print an A4 photo at 250 dots per inch without worrying about image quality too much.

Personally I feel the digital crop function is something of a red herring, since you can digitally crop any image file in post-processing if you want; but Leica has included it as a function in the Q1 and now the Q2 (with the 75mm crop option added) because it is a fixed-lens camera, and this is a way to give the idea that you can change focal length even on a fixed-lens camera.

My advice here not to reject it on the strength that the 75mm crop option produces too small a file size; instead make the buying decision based on its many other attributes, and after you’ve carefully considered whether, as a compact with a fixed 28mm f/1.7 lens, it will give you the kind of shooting experience you want.

If you feel that you are likely to want to use lots of different focal lengths in your shooting, I think you need to look for a compact camera with a zoom lens that offers these at that camera’s full resolution.

A

Andrew James

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

The Leica Q2 has a built-in fixed-length lens; you can zoom in, but at the cost of image resolution.
Six ways to shoot…  
Action sports

1. Get a zoom
   It’s not always possible or safe to get close to action sports, so telephoto lenses are essential. Fixed-focal-length telephotos are often faster but more expensive, while a telephoto zoom gives you more flexibility: 300mm or more is the minimum you should be aiming at.

2. Fast and slow
   You have a speedy subject to capture, so you will mainly need a fast shutter speed to achieve pin-sharp shots. Think 1/1,000 sec and faster. A slow shutter speed coupled with panning techniques can create a different sense of speed, with a sharp subject but blurred backdrop.

3. Keep AF continuous
   You must set your AF to continuous focus so that, as long as you keep the shutter button half depressed, it will try to keep locked onto a subject that’s moving. It’s not easy, though, and you’ll need to help it by tracking the subject as it moves through the frame.

4. Switch to burst mode
   Typically a camera will just take one photo each time you press the shutter button, but with action sports you will sometimes need to fire off a short sequence of frames one after the other, to help get the best shot. Make sure your selected drive mode allows the fastest possible continuous shooting with your camera body.

5. Work the angles
   Shoot low, shoot through a foreground barrier or get yourself up higher for a bird’s eye view… Whatever you do, work the angles and consider how your position impacts on the background behind the main subject.

6. Get creative with composition
   Just as with any photography, how you frame your subject can make a huge difference. Get in tight and use dramatic angles for maximum impact or pull back to place the main subject within its environment, for a different perspective.

Show time

Q I want to create a slide show. Is the Slideshow Module in Lightroom worth using to do this?

Mary McKelly

A If you already organise and process your raw images through Lightroom, it makes sense to use its Slideshow Module, as you will have all the photos you need to hand. However, it isn’t particularly controllable; and while some automation of the workflow can be a good thing and take some of the hard work away, I’m not convinced the Lightroom Slideshow Module really delivers a good enough result. You have some control over certain visual aspects, but when it comes to controlling the important aspects of transitions and movement, you are out of luck.

You can get far better control using Photoshop’s Timeline function, but it is quite a tricky process and might involve more work than you are prepared to do. I think that to create the most powerful and slick slide show possible, you have two options: either create it in specific video-editing software like Premiere or get purpose-made software such as Movavi Slideshow Maker (www.movavi.com) or Pro Show Gold (www.photodex.com). I’ve used Movavi (it’s available for macOS and Windows), and found it easy to get to grips with. You can create a slideshow more or less hassle-free or opt to go down the more controlled route of playing around with your own effects, transitions and so on to create something more personalised. Obviously the downside is that buying new software costs extra money, but if you intend to create a lot of slide shows and want them to be as good as they can be, I’d certainly suggest you try it. Download a trial version to play with before committing.
Shooting reflections

Can you give me some advice on taking images with reflections in? My results never seem to look as good as the scene I observed at the time...

Lorna Hipcock

Reflections can be quite tricky images to take, Lorna – but with a little bit of careful technique, you will be able to make the most of them. I think the time of day is critical for several reasons. First, good reflections are naturally going to occur when the water is still; this tends to be late, when wind often subsides, or early, before the sun has had an effect. These are also the times when you have lower light, so there is less chance of unwanted glare coming off the water.

The next factor to consider is exposure. The reflected part of the scene is always going to be a stop or two darker than the actual scene itself, so you need to make sure that you are exposing both parts correctly. There may be times when you need an ND grad filter over the brighter area of the scene to balance the exposure – but the reflection itself should stay darker than the object reflected. Don’t be tempted to over-brighten it in post-processing.

If you do find yourself shooting when there is wind ruffling the surface and the reflection isn’t very clear, then a longer exposure will smooth out the water and reveal more of the reflection, and a straight ND filter is good for extending the exposure – especially the ones that hold back a lot of light, like a 10-stopper!

The final bit of advice I’d give you is to really take your time over the composition. Is the reflection itself the most important thing, or is it part of a much wider scene? Reflection images also look good when you use the natural symmetry they make quite boldly, so this is a rare occasion when placing the horizon across the middle of the frame can be very effective.

Black-and-white manual

I am learning digital photography at a senior’s centre, and we have been tasked with taking manual photos in black and white. I can get to Black & White or Manual, but do not know how to combine them together...

John Wellburn

It’s great to hear that you are still keen to learn and develop your photography, and want to inspire the next generation of your family to share a passion for taking pictures. If you are shooting with your camera in Manual and therefore taking control of setting shutter speed, aperture and ISO yourself, then you just need to change the JPEG Picture Setting to Monochrome, and the camera will shoot black-and-white images.

If you are shooting in raw, then the camera will continue to produce colour images, and you would need to process them in Photoshop, Lightroom or whatever you choose to use. This adds to the things you need to learn. Of course, but it will ultimately give you more control over the final black-and-white photo. In fact, you can see the image in monochrome on the LCD screen when you shoot raw if your JPEG picture setting is Monochrome, but just remember that the raw file itself will be in colour until you process it.

At this stage, you probably want to just stick with a JPEG and that is fine – but make sure you are using the highest-quality JPEG setting your camera allows you. When you are shooting in black and white, the basics of exposure and composition remain the same, so watch that your image isn’t too light or too dark, and that you retain detail where you want, adjusting either shutter speed or aperture as required. Good luck!
Snapping kids

Q I want to create a business photographing children – how do I get started?
Courtney Johnson

A It goes without saying that you should be skilled enough to offer a quality service before you even consider this. Assuming this is the case, Courtney, don’t pack up a well-paid job and launch into it immediately: start by offering commissions at weekends to your friends and relations. This will help you to build up your portfolio – and your child-wrangling skills! If you get good feedback, start a Facebook page for your business that customers can link to, and steadily build your brand from there.

How big?

Q I am buying an EOS R, but I’m not sure what size SD card I should get. What do you suggest?
Kate Wade

A It depends a lot on how much you are likely to shoot. Two 32GB cards mean you don’t have all your eggs in one basket, but if you are a high-rate shooter with raws and maybe video too, a larger card would make more sense. I’d also suggest you opt for a fast card to handle the data if you decide to use 4K video or shoot on burst mode.

Image Rescue

This action car shot needs detail bringing out, plus a host of compositional changes to emphasise the fun of the moment

This raw file of some fun off-roading action is a little cool-looking, and the areas in shadow are losing details. First, I want to warm up the whole photo by pushing the White Balance slider in the Basic Panel to the right until I am happy with the result. Alternatively I can try one of the pre-set dropdowns, such as Cloudy.

To add drama to the composition, I am going to tilt the image with the Crop Tool. This will also result in the main subject appearing larger within the frame.

Now the biggest issues are bringing some detail out of the shadows, and creating more separation between the off-roader and the rest of the scene. To sort this, I’ll take an Adjustment Brush and mask over the very front and the right side of the vehicle, as both these areas are in shadow. Now I can adjust Exposure and Shadows to brighten things up a touch.

Finally, I want to make the backdrop more interesting. To do that, I need to lighten it, so I’ll use an angled Graduated Filter pulled down to the top of the car. However, I don’t want the car affected so, still with the Graduated Filter active and pressing Q so I can see the area masked, I select the Brush Tool, hold down Alt and erase any areas touching over the car.
This stunning close-up could still benefit from some Photoshop work

Lovely bubbly!

Our reader
Jerry Burgan

his image is a focus-stack composite of 31 images, taken using a Canon EOS 5DS R and a MP-E65mm 5x macro lens. I used a focus rail to advance the camera approximately 0.2mm per image, to secure enough images across the chosen area to give sufficient detail. The images were put through Helicon Focus to produce the final shot.

If you aren’t sure what the subject actually is, they are bubbles inside a bottle, lit with a single LED torch. A number of artefacts can be seen in the image. These are caused by the upward movement of an occasional bubble as it breaks free from the glass during a shot.

Verdict

- **Focus-stacking 31 images** takes patience and careful technique
- **Lighting it with the LED torch** has created some interesting directional light
- **Clone those artefacts out using Photoshop, to improve the finished image**
- **Consider whether the shot would look better in black and white**

Our expert
Andrew James

ow, that’s quite a setup, Jerry – but the results are brilliant. I love images like this where there is lots of impact, but it leaves you wondering how it was shot and what the subject actually is.

Before I read your shot information I’d guessed it was macro and focus-stacked, but I wasn’t 100% certain what it was of. It reminds me of something from outer space, such as an asteroid belt, although if you look really carefully, you can see the bubbles within the bubbles.

As you say, there are a few little artefacts within the frame but nothing you couldn’t clean up with the Clone Tool in Photoshop; although it might be laborious I think it would be worth it for an overall improved photograph. This is also a shot that would work perfectly in black and white. Personally, I think that slight hint of blue is almost a distraction.
A moment of prayer

This street photography shot in India looks great, but sharpness is lacking

Our reader
Jimmy Elsdon

My photo was taken on a recent holiday to India. The location was a mosque in Delhi, and as we were walking around the area we came across a man doing his prayers. I thought the scene portrayed a private tranquil situation, and the lack of vivid colour gave the image more of a visual impact.

The camera used was a Nikon D3200 with an 18-55mm lens with a 1/200 sec exposure at f/5.6. The photo was processed in Lightroom, with a crop to remove distractions in front of the subject. Other adjustments included small tweaks to Contrast, Clarity, Blacks and Whites, together with a small vignette to make the subject more prominent.

Verdict

- Grabbing the moment is essential with street photography
- The muted tones certainly help to emphasise the quietness of the scene
- Although it’s a moody shot, the main subject could be a bit brighter to draw the viewer’s eye

Our expert
Andrew James

India is a wonderful country for indulging yourself in some street photography, and this is a lovely shot. I’ve no doubt it was grabbed quickly: moments like this are missed if you don’t take them immediately. I agree that the limited colour palette really works well with this scene; in fact, I think this shot would also work effectively as a black-and-white.

Something you can think about next time is that I don’t think the image is quite as sharp as it could be. At 1/200 sec no major alarm bells sound, but I’d like the subject’s face to be sharper than it is. This might be caused by slight movement by him or you (or both), as well as the AF point being slightly in front of him – possibly on the white leg area. A faster shutter speed would help, as well as being very careful with where the AF point is locking onto the subject.

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a notoriously inaccessible part of Scotland culminating in the wilderness of Knoydart. In addition to being steeply mountainous, some of the roads were only built in 1966, with access prior to this being possible only on foot or by boat. Therefore it’s with surprise that I find I can follow a maintained path for a few miles. The Silver Walk is cut into the steep loch side. Running from Castle Tioram, it’s a fun, adventurous path, with devastating views back to the ruined castle over the mirror-like loch, with mist swirling around the trees and rising mountains.

Crossing Smirisary Hill, I’m soaked through with a pounding headache, and it’s getting dark. It’s also much steeper than I expected, and I slip alarmingly a couple of times due to fatigue. I collapse exhausted on a tussock, staring dead-eyed at the rain streaking horizontally in the head torch beam. I need to get into some shelter urgently, and decide to camp here for safety, even though it’s a poor site. It’s a struggle to put up the tent: it’s whipped out of my hand by the wind, and the loose, boggy ground doesn’t hold the pegs, so I need to tie the guy lines to heather. I scoop water from a shallow bog to cook dinner and rehydrate – which is probably why I have a headache. (It can be hard to remember to drink enough in the winter.) When I’ve sorted myself out, I listen to music to forget where I am, and awake having had a surprisingly rejuvenating night.

Next day at the Peanmeanach bothy, I welcome a roof over my head. Outside is a dejected-looking group of kids being encouraged by an upbeat outdoor instructor. They all look like they are about to cry. Each one wears a humungous backpack and a pair of massive flappy waterproof trousers as the final humiliation.

Perimeter
Quintin Lake ventures into some of his wildest terrain yet on his epic coastal photo walk

Quintin Lake
Roving Photographer
Quintin is past halfway in his 6,000-mile photo walk around the whole of the UK coast.
www.theperimeter.uk

This month’s route
Acharacle to Beasdale
6 days, 53 miles
Total so far: 4,159 miles

A mirrored reflection, a common occurrence in Scottish lochs, is paired with winter hues and textures to add a sense of place to the abstract beauty of the scene. Placing the horizon dead centre emphasises both the stillness and the abstraction. The image reminds me of an Rorschach ink blot test in that it encourages and yet defies comparison with other ideas.
Samyang’s Spring show

Independent lens maker Samyang has certainly been busy of late, releasing a bevy of new barrels as part of a ‘Spring Collection’ promotion. Most of the new lenses are manual-focus primes for use on the new full-frame mirrorless camera systems from Canon and Nikon.

With eight diaphragm blades, Samyang’s 85mm f/1.4 is well known for its bokeh characteristics. It is now available for the Nikon Z mount, Canon RF mount and Sony E mount. (The respective systems are designated by ‘Z’, ‘RF’ and ‘FE’ appended to the lens name.) There’s also an 85mm f/1.4 for Nikon’s F mount (full-frame DSLRs); unlike the others, this particular lens has autofocus.

In addition to the 85mm lens, the Samyang MF 14mm f/2.8 is now available for the Nikon Z and Canon RF mounts. This is good news for early adopters of these new systems, as they can enjoy the benefits of Samyang’s best-selling ultra wide-angle prime for less outlay than ‘native’ glass.

Samyang’s Spring Collection lenses are ultra multi-coated, to provide superior image quality, and are weather-sealed. In the US, Samyang lenses are sold under the Rokinon brand.

www.samyanglensglobal.com; 14mm f/1.4 RF, £363/$499; 85mm f/2.8 RF, £320/$399; 85mm f/2.8 FE, £599/$799; 14mm f/1.4 Z, TBC; 85mm f/2.8 Z, TBC; 85mm f/2.8 F, TBC

Rode launches world’s smallest wireless mic

Wireless Go consists of two small units: one on the camera’s hotshoe, the other on your clothes or bag. Both receiver and transmitter weigh just 31g, and the operating distance is 70m.

www.rode.com; £179/$199

Premium price confirmed for Zeiss ZX1

Forthcoming full-framer the ZX1 will cost between £3,450-4,250 ($3,299-4,995). Powered by Android, with a 500GB SSD and Lightroom on board, the ZX1 has a fixed 35mm f/2 lens.

www.zeiss.co.uk

Laowa 9mm for MFT

Laowa’s fast wide-angle has just been launched in Micro Four Thirds mount, so it can be used on Panasonic and Olympus models, with an effective focal length of 18mm.

www.venuslens.net; £485/$499

Owners of new mirrorless models like the Nikon Z series or the Canon EOS RP will soon have a selection of Samyang lenses to choose from.
4K for new EOS 250D

Canon's latest starter camera offers high-res video and a tiltable touchscreen

Canon's latest beginner DSLR offers 4K video capability - a first at its price point. The EOS 250D/Rebel SL3 is a compelling route into interchangeable-lens cameras for those looking to develop their skills beyond smartphone shooting.

Its appealing tech specs centre on a new Digic 8 processor allied to a 24.1 MP Dual Pixel CMOS AF APS-C sensor. Benefits include 4K video capture at up to 25/24 fps and improved autofocus when compared with the EOS 200D. The 250D's fold-out vari-angle touchscreen will be perfect for taking selfies and for filming yourself in fabulous 4K video.

www.canon.co.uk; £530/$549

Lexar 1TB SSD

High-speed data transfer in a robust mobile solid-state drive boosts on-the-road editing

It's billed as the world’s fastest 1TB portable SSD with Type-C USB ports. But there’s good news if your editing software doesn’t run on a device with the latest connections – a USB Type-C to USB Type-A cable is included. The pocket-sized SL100 Pro features a brushed aluminium surface and is drop-, shock- and vibration-resistant. It’s also two times faster than its predecessor, the SL 100, thanks to up to 950 MBps read and 900 MBps write speeds. Capacities available: 250GB, 500GB and 1TB. www.lexar.com; from £78/$100

Skylum Flex

Luminar software, but as a plug-in

The latest release of Luminar turned it into a stand-alone image editor, but now you can also use it as a plug-in thanks to this companion version – Flex works within Photoshop, Lightroom and even Apple Photos. It offers the same 50-plus filter effects as the current Luminar 3 software, customisable workspaces and more than 70 one-click ‘looks’ – some of which are new. www.skylum.com; from £54/$59

Leica & Canon on Z

New adapters mean you can use classic lenses on the new Nikon Z full-frame mirrorless series

Nikon’s Z series has deservedly attracted a lot of good press, but so far lens provision has been a tad limited. So there’s good news for owners of Canon FD and Leica M glass – a new adapter from Shoten brings these classic lenses into the full-frame mirrorless space. Owners of FD optics can dive right in and enjoy the benefits of the Z ecosystem for just £40/$53, while Leica M users can do the same for £68/$89. Each adapter uses rigid and highly durable brass parts on both sides of the mounting surface, and the interiors of both are also matte black, to reduce the amount of internal reflection. www.stkb.jp/; £40/$53. £68/$89
Drobo 8D
Up to 80TB of photo storage

Why not tackle your image storage capacity problems once and for all? Drobo’s 8D is a larger version of the 5D, winner of ‘Storage Solution’ in our 2018 Digital Camera Awards. The 8D, though, ups the disk bay count by three, enabling storage levels to top out just under a whopping 80TB. The 8D uses Drobo’s BeyondRAID technology; connections are made via Thunderbolt 3, or via Thunderbolt 2 using an adapter. www.drobo.com; £1,250/$1,299 (enclosure only)

Lumix G90/G95
New MFT camera offers shooting power that’s easy to use

Many eyeballs will have been directed at Panasonic’s Lumix S series (see page 112), but the Japanese giant hasn’t neglected its G series Micro Four Thirds product line. The new G90/G95 succeeds the G80/G85 and sees Panasonic seeking to offer the best of both worlds for stills and video. The G90/G95 is pitched at amateur shooters looking for a well-specified camera that’s easy to use, while its portability and build quality will appeal to videographers and vloggers. The key tech specs include a 20.3MP sensor, 4K video capture at 30p, 25p or 24p, contrast-based autofocus and Face/Eye detection. www.panasonic.com; £899/$1,199

Nikon & Sigma win big at TIPA
Technical plaudits for recent camera, lens and accessory releases

Nikon and Sigma were big winners at the Technical Image Press Association 2019 awards, taking three gongs each. Nikon’s Z 6, Z 7 and D3500 won in the cameras section, while Sigma collected awards for its 40mm f/1.4, 70-200mm f/2.8 and 60-600mm f/4.5-6.3. Other winners at the awards included Leica, Panasonic and Sigma’s L-Mount Alliance (Special Industry Award), the Zeiss ZX1 (Best Design), Hoya Fusion One filters (Best Camera Accessory), the Uniqball iQUICK3Pod (pro tripod) and Lowepro’s Whistler BP450 AW II (Best Camera Bag). www.tipa.com

Tokina Opera line-up doubles in size

This latest addition to the new Opera lens line-up takes the range to two-strong. With robust build and very good image quality, this full-frame fast 16-28mm zoom offers plenty of bang for the buck. www.tokinalens.com; from £699/$699

Alien Skin Exposure gets look-up tables

The key spec bump in the X4.5 update of this popular photo editor sees look-up tables added to the feature set. LUTs are digital filters popular in film-making, and help add a distinctive and atmospheric look. www.alienskin.com; from £60/$79

Zenit’s nifty fifty for Sony E mount
It has taken a while, but the wait is now over: this manual-focus Zenitar 50mm f/0.95 has 14 aperture blades for pleasingly circular bokeh balls. It stops down to f/16 and weighs in at 1.2kg. www.zenit.photo/en; £555/$735

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The tale of the Panasonic Lumix S1R is already a few chapters old, even though it’s only just been released. The company’s first full-frame mirrorless camera was rumoured long before it was officially confirmed at 2018’s Photokina event. Since then, models from Nikon and Canon have joined the incumbent Sony, so it joins an increasingly crowded sector of the camera market.

The S1R’s headline feature on release is that it’s the highest-resolution full-frame mirrorless you can buy today, albeit by a small margin. (There’s also a lower-res, less expensive S1 model.) It may have another ace up its sleeve: Panasonic’s L-Mount Alliance with Leica and Sigma should result in a strong line-up of lenses. Find out how the S1R performs out of the gate over the page.

Lenses are becoming a key weapon in supporting Nikon’s Z-series of cameras. The larger mount size Nikon has adopted for Z lenses does seem to be encouraging technical innovation, as the company had suggested. The latest Z lens is a 14-30mm f/4 wide-angle zoom; find out whether it makes the grade on page 119. Rod Lawton
We’ve waited quite a long time to get our hands on Panasonic’s new full-frame mirrorless camera. Announced at Photokina 2018 and rumoured long before that, the new Lumix S range is a big step up from the smaller Micro Four Thirds format cameras made by Panasonic before.

Designed for professionals, experts and advanced amateurs, the Lumix S range consists of the 24-megapixel Lumix S1 and the more expensive Lumix S1R reviewed here. There is a small selection of lenses to go with these new cameras from Panasonic, with more to follow, but the key factor here is Panasonic’s membership of a new L-Mount Alliance with Sigma and Leica. All three makers will be producing lenses for this new format, and Sigma has already adapted a number of its Art prime lenses. Panasonic has promised 42 different lenses by the end of 2020.

We’re testing the Lumix S1R with the Panasonic 24-105mm f/4 zoom, which looks like the best kit lens choice for this camera right now.

**Key features**

Like Sony and Nikon, Panasonic has produced two externally identical

---

**Mirrorless Panasonic Lumix S1R**

£3,399/$4,199 (body only)

The Lumix S1R is the highest-resolution full frame mirrorless camera yet to hit the market

www.panasonic.co.uk
cameras with two different resolutions and price points. The Lumix S1 has a 24-million-pixel sensor, while the S1R has a 47-megapixel CMOS sensor – the highest resolution yet offered in a full-frame mirrorless camera, if only by a small margin.

As if that wasn’t enough, both cameras offer a High Resolution mode, which combines eight images captured with a series of minute sensor shifts to produce one super-high resolution image well beyond the sensor’s native resolution. On the S1R, this means 187-megapixel photos that exceed the pixel count of even the most powerful medium-format cameras – although it relies on static subjects and with the camera mounted on a tripod.

This is made possible by Panasonic’s five-axis in-body stabilisation system, which offers 5.5 stops of shake compensation on its own, but up to six stops with one of Panasonic’s new image-stabilised lenses.

Other headline features include the ability to shoot 4K video at up to 60/50fps for the first time in a full-frame mirrorless model; the world’s highest-resolution electronic viewfinder, with 5,760k dots; and a continuous shooting speed of 9fps.

If there is a chink in the S1R’s armour, it’s here. That 9fps frame rate is achieved only with the AF locked on the first frame. With continuous autofocus the frame rate drops to 6fps; and while the S1R also has a 6K Photo mode that can capture 18-megapixel images at 30fps, it’s not quite the same thing.

**Build and handling**

Panasonic has taken a pretty uncompromising approach to the S1R’s build quality, with a magnesium alloy construction and weather sealing to make it dust- and moisture-resistant, and ‘freeze-proof’ down to -10 degrees. It’s a substantial camera to pick up and hold, and perhaps feels closest to Nikon’s Z 6 and Z 7 models in general size and feel.

The S1R goes further in a number of respects, though. The electronic viewfinder’s resolution is on a whole new level, for a start. It’s sharp, saturated and remarkably lag-free. We’re used to EVFs ‘smearing’ with fast camera movements, especially in low light, but this is perhaps the

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The Panasonic Lumix S1R was an average performer in the lab, but excellent in real-world shooting.
closest we’ve yet come to a genuine ‘optical’ viewfinder look.

The screen on the back of the camera deserves praise too. Its clever tri-axial tilt mechanism allows for sideways movement as well as up and down, so this is a tilting screen you can also use with the camera held vertically. However, the movement is restricted to about 45 degrees; it hinges in one direction only (to the right); and you have to slide a slightly fiddly catch on the side of the screen to release it.

Panasonic chose this mechanism to improve durability, and this sense of robustness is everywhere. Inside, the S1R has a shutter with a life expectancy of 400,000 shots; on the outside it has really firm, positive controls – and lots of them. It’s great to get a dedicated drive mode dial and a dual-function focus dial for setting the focus mode and selecting the focus area.

The only issue we had was with the sensitivity of the touchscreen display: it’s very easy to inadvertently set the focus point near the bottom-left corner when your nose touches the screen during shooting. This is a common problem with cameras that offer touch-focus control.

**Performance**

Pre-production Lumix S1 and S1R autofocus systems tended to hunt a little in very dim light, but this production camera showed no such hesitation. Even though Panasonic is using a contrast AF system rather than the theoretically faster phase-detection AF, the system feels very fast and responsive.

The Eye AF system is particularly impressive. In this mode, the camera...
We’re used to seeing good dynamic range figures from Panasonic cameras, and the S1R didn’t disappoint us, showing a slight advantage at lower ISO settings.

The Lumix S1R feels like it means business. It handles well and produces excellent images, but we are still waiting to see what lens system will emerge around it.

**4.5**
Outstanding

---

The exposure system proved pretty reliable, and you soon learn how it will react.

The image shows very nicely defined fine detail that stays sharp right to the edges.

The hybrid image stabilisation seems to work very well. In our tests we were able to shoot hand-held with the lens set to 105mm at 1/6 sec with about the same success rate as shooting at 1/125 sec without stabilisation – a gain of around four stops.

The image quality is excellent, especially at higher ISO settings. Because of this camera’s high resolution and hence relatively small photosites, we’d expect to see noise appearing quite soon and image quality falling as the sensitivity is increased, but the S1R’s images hold up very well. In fact, it’s only at ISO 12,800 and up that you see any substantial loss of visual sharpness and fine textures starting to smooth over.

It’s hard to fault this camera’s resolving power. Both in the lab and in real-world testing, it delivered extremely sharp detail; the 24-105mm f/4 zoom can take a lot of the credit.

Rod Lawton

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**Digital Camera verdict**

4.5 **Outstanding**

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Rod Lawton
he Ricoh GR was first launched over 20 years ago... and the new GR III will be the 12th generation of a camera that was first conceived in the film era. The basics of the camera remain the same. It has a fixed wide-angle lens, equivalent to a 28mm in full-frame terms.

Nowadays, of course, everyone already has a wide-angled camera with them all times in the shape of the cameraphone. So it is no surprise that the Ricoh GR III has needed to add more technical tricks to its armory, in order to ensure it is still relevant in the smartphone era.

Features

This latest digital version packs in a decent-sized APS-C sensor with a 24-megapixel count. There is no anti-aliasing filter on the camera, but the incorporation of a dust removal system on the system means that sensor vibration can be used as an electronic anti-aliasing filter should you need to engage this to avoid problems with moiré.

To appeal to the serious shooter, the GR III offers full 14-bit raw shooting – but video recording is limited to Full HD. (There’s no 4K video here.) Raw files can be developed in the camera.

The GR III’s pocket-friendly size suits spontaneous photographers.

Two thumbwheels aid camera setting selections, but they don’t have a ‘luxury’ feel.

The lens has a fixed focal length of 18.3mm – equivalent to 28mm in full-frame terms.
four groups, and has a nine-blade diaphragm to help with the bokeh. The fixed lens has no zoom capabilities, of course, but does provide 35mm and 50mm crop modes for those who want to get in closer. And there is also an optional ultra-wide screw-in converter (the GW-4) that gives an effective focal length of 21mm.

A new addition to the GR III is three-axis image stabilisation, which gives a four-stop improvement in the shutter speed you can get away with for handheld exposures. ISO has been boosted too to a maximum of 102,400, which will help cement the camera’s low-light credentials.

Autofocus also now benefits from Hybrid AF, using phase detection for speed, and contrast detection for accuracy. There is a macro mode that allows you to focus down to subjects in the 5-12cm range. And you can focus manually – with mods cons like focus peaking to help do this accurately.

The camera comes with no fewer than 10 image filters, which are all customisable. Of more interest will be the HDR function, and an intervalometer that allows you to shoot in 10-minute increments for up to 24 hours. There is an multiple exposure mode, that Ricoh tells us you can overlay up to 2,000 images on the same frame. Another neat trick is the provision of a built-in two-stop optical ND filter – to help you use wider apertures when shooting video, or to extend the shutter speed for stills.

Bluetooth and Wi-Fi come as standard, allowing you to link the camera to your phone using Ricoh’s ImageSync app. And there is a USB-C socket for data transfer and charging.

**Build and handling**
The beauty of this camera is in its size – Ricoh has gone to great
Compact Ricoh GR III

The fixed focal length of the integrated lens limits the GR III’s appeal as a travel camera.

Street photography is also a challenge, because you need to move in close to fill the frame.

The camera offers a good range of buttons and dials to aid the use of its full feature set – there are thumbwheels front and rear, for example. And as well as no fewer than three customisable user modes on the exposure mode dial, there is also a customisable Function button on the rear. The thumbwheels do not feel particularly substantial or as nice to touch as you might hope for on a camera at this sort of price, though.

Ricoh is making a big thing about the camera’s start-up time… its motorised lens can be out and ready in just 0.8 sec when you press the On button. But the camera switches itself off soon enough – which could prove a downer to those who want the camera to be always ready for the decisive moment. Chris George

Lab tests

The 24.2MP GR III seems here to be little better than the old 16MP GR II, but the camera resolves finer detail in real-world scenarios than the GR II.

The GR III generates slightly cleaner images than the GR II – not to the extent that you’d notice during real world shooting, but it’s nice to know it’s there.

Not only does the GR III produce images with minimal noise, it’s also capable of recording respectable dynamic range right up to ISO 12,800.

3.5 Very good

GR fans will love this update of an iconic camera, but in a world of multi-lens camera phones, the wider appeal of this compact will probably be limited.
Verdict
Modest aperture ratings for S-line Z system optics are becoming a bit of a theme. The new 14-30mm follows suit, packing similarly spectacular image quality and excellent all-round performance into a compact, lightweight package.

5.0 A best-in-class product

Features
5.0 Image quality
4.5 Value

Part from the notable exceptions of the 24-70mm f/2.8 and forthcoming 58mm f/0.95 Noct, Nikon has been restrained with the aperture ratings of its S-line lenses for the full-frame Z system. The 35mm and 50mm primes are rated at f/1.8 rather than f/1.4, and the first 24-70mm offering as well as this new wide-angle zoom are f/4 rather than f/2.8. Some say that these apertures are pretty meagre for up-market optics, but they make good sense, enabling the lenses to be relatively compact and light.

The 14-30mm S-line lens delivers the same maximum viewing angle (114 degrees) as the acclaimed Nikkor AF-S 14-24mm f/2.8G ED for full-frame DSLRs, along with a bigger overall zoom range. It’s much smaller, not only due to being an f/stop slower, but also thanks to its clever retractable design.

Although it’s small and light, there’s no shortage of high-quality glass. With 14 elements in total, the new lens matches its F-mount sibling, although it splits them into 12 rather than 11 groups. Four ED (Extra-low Dispersion) elements are included, along with four aspherical elements, Nano Crystal Coat, and a fluorine coating on the front element to repel grease and moisture.

Performance
The stepping motor autofocus system is practically inaudible in operation. It’s typically quick and snappy for stills, and delivers smooth focus transitions during movie capture. Manual focusing is smooth and precise, via the electronically coupled control ring.

Sharpness, contrast and colour rendition are stunning, while distortion and colour fringing are entirely negligible. Vignetting when shooting wide-open is noticeable when uncorrected in-camera, but certainly not severe, especially for such a wide-angle zoom.

Matthew Richards

Nikkor Z 14-30mm f/4 S

£1,349/$1,299

Nikon’s latest S-line zoom aims for big viewing angles in a small form factor

www.nikon.com

A grease- and moisture-resistant coating is applied to the front element.
Filters can be easily fitted, thanks to a 82mm attachment thread enabled by the removable hood.
The forward-positioned zoom ring operates with smooth precision.
Not just for manual focusing, the control ring can be used for adjustment of ISO and exposure compensation.

Sharpness

Short 0.99
Long 0.36

Fringing
Lateral chromatic aberrations are absolutely negligible throughout the zoom range.

Distortion
Short 0.51
Long 0.15
Even when shooting test charts at very close range, distortions are barely perceptible at any zoom setting.

Verdict
5.0 A best-in-class product

Features
Build & handling
Image Quality
Value

Modest aperture ratings for S-line Z system optics are becoming a bit of a theme. The new 14-30mm follows suit, packing similarly spectacular image quality and excellent all-round performance into a compact, lightweight package.
KitZone

ot on the heels of last month’s group test of 70-200mm telephoto zooms, we’re going extra-large. Money no object, a 400mm, 500mm or 600mm prime lens with a relatively fast aperture rating is likely to deliver unbeatable performance and image quality. However, they tend to be very heavy and unwieldy, and fiendishly expensive, usually with price tags of well over £10,000/$10,000. The lenses we’ve chosen for this group test are much more affordable, while adding zoom versatility. All can reach to at least 400mm.

We’ve included the latest Sigma and Tamron offerings, some of which really push the envelope for this class of lens. The flip side is that we’ve not been able to include some own-brand lenses including the excellent Fujifilm 100-400mm f/4.5-5.6 R LM OIS WR, the desirable Sony FE 100-400mm f/4.5-5.6 OSS G Master, and the sturdy Pentax 150-450mm f/4.5-5.6 ED DC AW HD. We reviewed all three in issue 195. Matthew Richards

Super tele zoom lenses

Go extra-large on your telephoto reach without breaking the bank. Here are the best-buy super-telephoto zooms on the market

<table>
<thead>
<tr>
<th>The contenders</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Canon EF 100-400mm f/4.5-5.6L IS II USM</td>
<td>£1,952/$2,049</td>
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<tr>
<td>2 Nikon AF-S 200-500mm f/5.6E ED VR</td>
<td>£1,250/$1,400</td>
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<tr>
<td>3 Sigma 60-600mm f/4.5-6.3 DG OS HSM</td>
<td>S</td>
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<td>4 Sigma 100-400mm f/5-6.3 DG OS HSM</td>
<td>C</td>
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<tr>
<td>5 Sigma 150-600mm f/5-6.3 DG OS HSM</td>
<td>C</td>
</tr>
<tr>
<td>6 Sigma 150-600mm f/5-6.3 DG OS HSM</td>
<td>S</td>
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<tr>
<td>7 Tamron 100-400mm f/4.5-6.3 Di VC USD</td>
<td>£749/$699</td>
</tr>
<tr>
<td>8 Tamron SP 150-600mm f/5-6.3 Di VC USD G2</td>
<td>£1,129/$1,229</td>
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</tbody>
</table>
Super tele zooms Group Test
Although Canon’s original version of this lens was a classic in many respects, it had a trombone-style, push-pull zoom mechanism that was generally unpopular. This second edition has a more regular twist-action zoom ring, plus new weather-seals. A neat feature shared by the Nikkor 200-500mm and Tamron 150-600mm lenses on test is the triple-mode optical stabiliser. As well as static and panning modes, a third option applies stabilisation only during exposures. The viewfinder image is therefore unaffected, making it easier to track erratically moving objects.

**Performance**

Autofocus is very fast, with strong tracking performance even under very dull lighting conditions. Sharpness and contrast are excellent at short to mid settings, but drop off more noticeably than with the competing Tamron lens.

Digital Camera verdict

This is a high-quality lens but it’s larger and nearly 50 per cent heavier than the Sigma and Tamron 100-400mm lenses on test, and more than twice as expensive.

### Sharpness

The generally excellent levels of sharpness take a bit of a hit at the long end of the range.

### Fringing

Short 2.44 Long 0.03
Noticeable at the short end, negligible at the long end.

### Distortion

Short -1.11 Long 1.33
Unusually there’s barrel distortion at the short end.

### Digital Camera verdict

4.5 ★★★★★ Outstanding

### Features

4.5

### Build & handling

4.5

### Performance

4.5

### Value

3.5

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It’s not often you find an own-brand Nikon lens that’s packed with sophisticated, late-generation technology for about the same price as third-party competitors. Sturdily built with a weather-seal ring on its mounting plate, this Nikkor has a lot going for it. Optical highlights include three ED (Extra-low Dispersion) elements. The ring-type autofocus system is typically quick and quiet, and the Vibration Reduction system is rated at 4.5 stops. The ‘normal’ mode is really two modes in one, as it features automatic rather than switched panning detection.

**Performance**

Sharpness and contrast remain very good even when shooting wide-open, throughout the zoom range. The lens falls a little short in telephoto reach compared with some of the Sigma and Tamron models, but not by much.

Digital Camera verdict

4.5 ★★★★★ Outstanding

### Features

4.0

### Build & handling

4.0

### Performance

4.5

### Value

4.5

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**Sigma**

60-600mm f/4.5-6.3 DG OS HSM | S

£1,899/$1,999

Superzoom range with super reach

*Lens mounts* Canon EF, Nikon FX, Sigma SA

With its unique 10x zoom range, this Sigma enables you to shoot at everything from a fairly standard focal length to extreme telephoto, without having to change lenses. As such, it follows in the footsteps of the ‘Bigma’ 50-500mm – but is even bigger and 40 per cent heavier, at 2,700g.

Upgrades are similarly sizeable. The optical path includes three top-grade FLD (‘Fluorite’ Low Dispersion) elements and one SLD (Special Low Dispersion) element. Fluorine coatings are applied to the front and rear elements, and the lens is extensively weather-sealed.

**Performance**

Autofocus is fast, stabilisation is effective and image quality is impressive, given the extra-large zoom range. However, there’s nevertheless a slight impact on sharpness, colour fringing and distortion.

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**Sharpness**

Compared with Sigma’s Sports lens, there’s a bigger drop at the long end.

**Fringing**

Short 3.47  Long 1.42
Relatively severe at short zoom settings.

**Distortion**

Short -2.29  Long 0.83
Marked barrel distortion at the shortest setting.

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**Digital Camera verdict**

Given this lens’s mighty zoom range, image quality is surprisingly good. The build quality and feature set are impressive, but it’s a weighty beast.

4.0  **Excellent**

<table>
<thead>
<tr>
<th>Features</th>
<th>Build &amp; handling</th>
<th>Performance</th>
<th>Value</th>
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**Sigma**

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

£689/$699

Relatively compact and light

*Lens mounts* Canon EF, Nikon FX, Sigma SA

Noticeably smaller and only about two thirds of the weight of the competing Canon 100-400mm lens, the Sigma weighs in at just over a kilogramme. The zoom and focus rings work as you’d expect but the zoom mechanism is designed so that you can also operate it with a push-pull ‘trombone’ action. Unlike other Sigma zooms, the zoom lock can only be engaged at the shortest focal length. The optical path includes four SLD (Special Low Dispersion) elements.

**Performance**

There’s no shortage of high-end features. You get the same range of dual-mode autofocus, dual-mode stabilisation, short/long autofocus range limiting and dual ‘custom’ modes as in the other Sigma lenses on test. The autofocus and stabilisation systems are highly effective, and image quality is very good.

**Sharpness**

Lab results are slightly below the Nikkor 80-400mm but it’s hard to spot the difference.

**Fringing**

Short 1.82  Long 1.01
There’s a little fringing at the short end, less at the long end.

**Distortion**

Short 0.91  Long 1.75
Pincushion distortion is very minor at 100mm.

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**Digital Camera verdict**

With high-end features, custom controls and strong performance shoehorned into a compact package, the Sigma is an attractive option, and very good value at the price.

4.0  **Excellent**

<table>
<thead>
<tr>
<th>Features</th>
<th>Build &amp; handling</th>
<th>Performance</th>
<th>Value</th>
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<td>4.5</td>
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</table>
Group Test Super tele zooms

**Sigma 150-600mm f/5-6.3 DG OS HSM | C**

Maximum reach, minimum outlay

**Lens mounts** Canon EF, Nikon FX, Sigma SA

His Contemporary lens goes the full distance, stretching to a 600mm focal length, yet it significantly undercuts direct competitors for price. It’s also easier on your back than either of the Sigma Sports lenses on test, at nearly a kilogramme lighter. Posh glass includes one top-grade FLD element (lacking in the Sigma 100-400mm lens) and three SLD elements. Despite the price drop from Sports lenses, you still get the full range of dual autofocus and stabilisation modes, an AF range limiter and two custom setup modes.

**Performance**

Performance is very respectable, from autofocus speed and stabilisation to image quality. It’s typically a little sharper than the pricier Tamron 15-600mm G, but doesn’t quite match Sigma’s 150-600mm Sports lens.

**Sharpness**

Levels of sharpness drop off gradually as you extend through the zoom range.

**Fringing**

Short 2.08  Long 1.16  Worse than average in the short to medium sector.

**Distortion**

Short 1.39  Long 1.41  Pincushion distortion can be a little noticeable.

Digital Camera verdict

4.5 ★★★★★ Outstanding

Features 4.5  Build & handling 4.5  Performance 5.0  Value 4.5

With high-end features, strong performance, generous telephoto reach and refined handling, this lens is a steal at the price. Its light weight makes it more manageable too.

**Sigma 150-600mm f/5-6.3 DG OS HSM | S**

A lens not to be taken lightly

**Lens mounts** Canon EF, Nikon FX, Sigma SA

From the Sports sector of Sigma’s line-up, this lens aims for performance, with no concessions to compactness or shedding a few grammes. It’s nearly a kilogramme heavier than the Contemporary edition. It has a full range of dual autofocus modes, dual stabilisation modes, a two-position autofocus range limiter switch and two custom modes.

More robust than the Contemporary lens, this one has a metal barrel and hood, and is comprehensively weather-sealed. There are four additional optical elements, including larger-diameter elements and two top-grade FLD elements.

**Performance**

Sharpness and contrast are excellent in out test shots, despite the lens not performing quite as well in close-range lab tests. Fringing and distortion are very well-controlled.

**Sharpness**

The lab results don’t look like much, but real-world performance is excellent.

**Fringing**

Short 1.99  Long 1.01  A little less noticeable than in Sigma’s 150-600mm | C.

**Distortion**

Short 0.64  Long 0.95  Well-controlled throughout the zoom range.

Digital Camera verdict

5.0 ★★★★★ A best-in-class product

Features 5.0  Build & handling 4.5  Performance 5.0  Value 5.0

This Sigma Sports lens is quite a handful in terms of size and weight but it has a really solid, pro-grade feel to its construction, along with excellent image quality.
**Tamron 100-400mm f/4.5-6.3 Di VC USD**

£749/$699

A downsized delight

Lenses mounts Canon EF, Nikon FX

Announced in 2017, eight months after the rival Sigma 100-400mm lens, this Tamron is similarly compact and light. It’s actually 17mm longer but marginally lighter, both lenses weighing just over 1kg.

Build quality is good considering the price, with a magnesium alloy barrel, comprehensive weather-seals and a fluorine coating on the front element. The optical path includes an LD (Low Dispersion) element and nano-structure coatings to minimise flare. Switchable static and panning stabilisation modes are available but, unlike in the Sigma lenses, there’s only one autofocus mode.

**Performance**

Autofocus is very fast. Stabilisation is worth about four stops and isn’t quite as good as the Tamron 150-600mm. The effectiveness also drops off a little more than usual in panning mode.

Sharpness

Sharpness is very impressive, with very similar results to the pricier Nikkor 80-400mm.

Fringing

Short 1.58 Long 1.11

Well-controlled, pretty much matching Sigma’s rival.

Distortion

Short 0.7 Long 1.54

Marginally less distortion than from the Sigma.

**Tamron SP 150-600mm f/5-6.3 Di VC USD G2**

£1,129/$1,229

It’s better second time around

Lenses mounts Canon EF, Nikon FX, Sony A

Tamron’s first 150-600mm lens was a pretty good buy, but the G2 edition is better. The optical path has been redesigned and now features three LD elements instead of just one. There’s a new mix of both regular and nano-structure coatings, and a fluorine coating is added to the front element. The G2 also features more extensive weather-seals and better overall build quality. An innovative zoom lock mechanism enables you to lock the zoom ring at any focal length.

The autofocus system is faster and more accurate, and the Vibration Compensation system has a 4.5-stop rating and static, panning and ‘exposure only’ modes.

**Sharpness**

Levels of sharpness are a little underwhelming through the short and medium sectors.

Fringing

Short 1.61 Long 1.91

There’s fringing at either end but almost none in the middle.

Distortion

Short 1.59 Long 1.57

Marginally worse than from the Sigma 150-600mm | C.

**Digital Camera verdict**

The Tamron delivers solid performance at a keen price. If weather-seals are more important to you than custom modes, it beats the Sigma 100-400mm.

4.5 Outstanding

4.0 Features

4.5 Build & handling

4.5 Performance

5.0 Value

**Digital Camera verdict**

The weather seals, build quality and most aspects of performance are highly impressive, but it’s not quite the sharpest tool in the box. The price is competitive, though.

4.5 Outstanding

4.5 Features

4.5 Build & handling

4.5 Performance

4.0 Value
**Group Test**  
Super tele zooms

**Sigma looks best on tele**

It’s a win for the Sigma 150-600mm f/5-6.3 DG OS HSM |S

For sheer clout and performance, the Sigma 150-600mm Sports wins out. It’s superbly well-engineered, has a wealth of features and customisable controls, and delivers excellent image quality. It’s also excellent value. However, there’s no denying that it’s a big, heavy lens. The Sigma 150-600mm Contemporary and Tamron 150-600mm G2 lenses are rather more manageable. The Sigma edges ahead for features and image quality, while the Tamron is more extensively weather-sealed. The Nikkor 200-500mm is also a great buy for Nikon shooters who like to stick with own-brand lenses. The Canon 100-400mm is smaller and lighter than any of the 150-600mm lenses; while it doesn’t give such long telephoto reach, it has a slightly faster aperture rating and superb build quality. Even so, the Sigma and Tamron 100-400mm are smaller and much lighter, yet give similarly impressive performance at a much more affordable price.

**How the lenses compare**

<table>
<thead>
<tr>
<th>Canon</th>
<th>Nikkor</th>
<th>Sigma (100-400mm f/4.5-5.6L IS II USM)</th>
<th>Sigma (EF 100-400mm f/5-6.3 DG OS HSM</th>
<th>Sigma (60-600mm f/5-6.3 DG OS HSM)</th>
<th>Sigma (150-600mm f/5-6.3 DG OS HSM)</th>
<th>Sigma (150-600mm f/5-6.3 DG OS HSM)</th>
<th>Tamron (100-400mm f/4.5-6.3 Di VC USD)</th>
<th>Tamron (SP 150-600mm f/5-6.3 Di VC USD G2)</th>
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<tr>
<td><strong>Mount options</strong></td>
<td></td>
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<td>C EF, N FX, Sg</td>
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**Features**

- Canon: ★★★★★
- Nikkor: ★★★★★
- Sigma: ★★★★★
- Tamron: ★★★★★

**Build & handling**

- Canon: ★★★★★
- Nikkor: ★★★★★
- Sigma: ★★★★★
- Tamron: ★★★★★

**Performance**

- Canon: ★★★★★
- Nikkor: ★★★★★
- Sigma: ★★★★★
- Tamron: ★★★★★

**Value**

- Canon: ★★★★★
- Nikkor: ★★★★★
- Sigma: ★★★★★
- Tamron: ★★★★★

**Overall**

- Canon: ★★★★★
- Nikkor: ★★★★★
- Sigma: ★★★★★
- Tamron: ★★★★★
Helping you upgrade for 20 years.

Our expert team give a **personalised service** for every customer.
We offer a simple hassle free part exchange service.
Just **Call us, Email us or Visit us. IT’S EASY!**

1. **Get in touch**
Call, email or complete an online form describing your equipment in detail.

2. **Get collected**
We’ll give you a quote within 48 hours and can even arrange FREE Collection!

3. **Get paid!**
After checking your gear we’ll confirm the quote & pay you or part-exchange.

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**LUMIX S**

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www.cameraworld.co.uk

Chelmsford: 01245 255510
High Chelmer Shopping Centre, Chelmsford, Essex, CM1 1XB. chelmer@cameraworld.co.uk

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*Free collection available on part exchange valuations over £300.
**Prices subject to change. Pictures are for illustration purposes only. All prices include VAT.*
Online photo printers
We compare six popular online photo printing services to see which offer the most attractive enlargement prints

**Bonussprint**
7x5 print: 14p
www.bonussprint.co.uk

Bonussprint gets off to a good start with a clever uploading page that automatically detects the aspect ratio of your images, and selects an appropriate print size to match. In addition to the usual 7x5 option, there’s 7.5x5 to suit a 3:2 APS-C or full-frame image; 6.5x5 caters for four-thirds cameras and smartphone shots; and there’s a 5x5 square format. All these variants cost a reasonable 14p per print. Delivery pricing is average at £2.99, but we received useful tracking email updates, and the prints arrived in just two working days.

Thankfully print quality doesn’t let the side down. Colours are accurate; highlight and shadow areas well resolved; and there’s plenty of fine detail. Only the Jessops Photo images could match the neutrality of our black-and-white image samples. Our only minor gripe is contrast could be slightly boosted.

**PROS**
- Plenty of aspect ratio options;
- Good print quality

**CONS**
- Colour and contrast could be slightly punchier for some images

**Verdict** ★★★★★★

**Cewe**
7x5 print: 20p
www.photoworld.com

Cewe offers decent downloadable print preparation software, but the online previewer is short on functionality. Only the software allows full control over how images are cropped to fit the six print sizes. There are no non-standard aspect ratio options, and square prints are only available in a set of at least 16. Price-wise, it’s 20p per 7x5 print, but this quickly drops to 17p if you order 20 or more, and 12p per print when buying 200+. Postage is a fair £2.95, and Cewe’s prints reached us in two working days.

We enabled Cewe’s Photo Optimisation option, a free feature claimed to tweak image sharpness, colour and contrast. Although we didn’t spot any major issues, many prints had overly lightened shadow areas, leading to slightly flat overall contrast. Black-and-white shots also exhibited a small but noticeable magenta cast, and this was also visible in neutral areas of colour images.

**PROS**
- Good overall print quality; fast, reasonably priced delivery; cost-effective for bulk orders

**CONS**
- Contrast is a little lacking; relatively few aspect ratio options; disappointing mono prints

**Verdict** ★★★★★

**Jessops Photo**
7x5 print: 18p
www.photo.jessops.com

Being a high-street retailer, Jessops Photo offers a click-and-collect print service where you can pick up your prints in just two hours, at a tempting cost of 30p per 7x5 print. We went for the standard online service costing 18p/print, but opted to have them delivered to a local store for free, making Jessops Photo the most cost-effective printer for small-volume orders.

The online uploader and image editor strikes a good balance of functionality and ease of use. You don’t get any aspect ratio variations of typical print sizes, however.

Colour vibrancy is the best on test, with our sample image of a scarlet Ferrari leaping from the paper. This wow factor is helped by contrast that manages to be punchy while still retaining good shadow detail. Black-and-white images also look the part, with no colour cast.

**PROS**
- Stunning, class-leading print quality; two-working-day delivery, free to store

**CONS**
- No extra aspect ratios means some images can be noticeably cropped

**Verdict** ★★★★★

**Cewe**
7x5 print: 20p
www.photoworld.com

Cewe offers decent downloadable print preparation software, but the online previewer is short on functionality. Only the software allows full control over how images are cropped to fit the six print sizes. There are no non-standard aspect ratio options, and square prints are only available in a set of at least 16. Price-wise, it’s 20p per 7x5 print, but this quickly drops to 17p if you order 20 or more, and 12p per print when buying 200+. Postage is a fair £2.95, and Cewe’s prints reached us in two working days.

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**PROS**
- Good overall print quality; fast, reasonably priced delivery; cost-effective for bulk orders

**CONS**
- Contrast is a little lacking; relatively few aspect ratio options; disappointing mono prints

**Verdict** ★★★★★
Mini Test

Tesco Photo
7x5 print: 30p
www.tescophoto.com

Tesco advertises 7x5 prints at 11p each, but that’s only if you order over 500. 1-199 prints will be 30p a pop, making them the priciest pics here. At least delivery is free to a Tesco Extra store, or a minimal £2.25 if you’d rather have them posted. We opted for the latter, and were impressed to receive our images in only two working days.

The online process is clear and simple, with large thumbnails and obvious cropping outlines. Only traditional print sizes are available – 6x4, 7x5, 8x6, 10x8, and 12x8 – so a 7x5 print will result in slight cropping of a 4:3 or 3:2 image, and there are no options for square prints.

Although our test prints benefitted from reasonable colour accuracy and good detail in highlights and midtones, every print was ruined by severely darkened shadows. This made every print look obviously dark and unappealing.

**PROS**
- Fast upload and preview process;
- Good overall print quality

**CONS**
- Horribly dark overall print quality;
- Limited print size/ratio options

**Verdict** ★★★★★★

Snapfish
7x5 print: 21p
www.snapfish.co.uk

Where Photobox’s web upload and preview pages are a bit dated and clunky to use, Snapfish’s software is, well, snappy. It’s also clear and intuitive; but while you can get square 5x5 prints, there are no other aspect ratio variations of the 7x5 print size, so expect 3:2 images to arrive cropped.

Print quality is mostly attractive, with good colour, contrast and detail. The only issue we found was a subtle magenta colour cast affecting black-and-white prints, as well as neutral areas of colour images. That’s a pity given the relatively expensive cost per print. We were also less than impressed with the four-working-day delivery time – the slowest by some margin – although at least the P&P cost is reasonable at £2.99.

Like many online printers, Snapfish regularly runs discount codes that can substantially cut the cost of your order.

**PROS**
- Good online image uploader and editor; decent overall print quality

**CONS**
- Slow; somewhat costly for 7x5 prints; quality not up to Jessops/Bonusprint standards

**Verdict** ★★★★★★

Photobox
7x5 print: 25p
www.photobox.co.uk

At a relatively pricey 25p per 7x5 print (even if you bulk order), we were expecting a lot from Photobox’s image quality. Our test chart print sample revealed slight pixelation of fine lines – an issue not visible in the same print from the other printers – yet all our other sample photos were slightly soft, blurring fine detail. We also spotted minor banding in areas of subtle gradations, and flat contrast made some images look relatively uninspiring and washed out.

Photobox does at least offer a 7.5x5-inch print option, in addition to the usual 7x5. The difference may seem subtle, but a 7x5 print of an image captured by an APS-C or full-frame camera will be noticeably cropped on either side.

Standard delivery is £2.99 and we had our prints in just two working days, but if you need even faster service, a Special Delivery option is also available for £7.

**PROS**
- Fast delivery; 7.5x5 and square size options; acceptable print quality

**CONS**
- Prints are nothing special and have some issues; relatively expensive

**Verdict** ★★★★★★

Five things to look out for

1. 7x5 enlargement prints can suit 3:2 and 4:3 images, and often cost little more than 6x4 prints.
2. Some printers offer 7.5x5, 6.5x5 and 5x5 variations so you can tailor prints to your images’ aspect ratios.
3. Almost all printers give you a gloss or matte surface choice – some also offer a luxury paper option.
4. Forget waiting for weeks to get prints – we found most printers to be super-speedy on standard postage.
5. Clear and easy-to-use print preview software means you shouldn’t receive prints that aren’t as expected.
Panoramic tripod heads
360-degree VR cameras are all the rage, but you can get higher-quality results with your main camera mounted to a panoramic tripod head.

Andoer PH-720B Starter Edition
£110/$130
www.amazon.co.uk

- Dropping big bucks on a head you only use occasionally can be painful, so this keenly priced option is tempting. The components feel rigid and lock in place positively. There isn’t a great deal of travel along each slider, but it’s enough to centralise a small DSLR. Andoer claims a 10kg max load, but this seems optimistic.
- The compact rotating base has five click-stop increments at 15, 30, 45, 60 and 90 degrees, though the click action isn’t particularly precise. Rotation is at least smooth, and there’s no excess movement in the bearings. The vertical arm’s rotation has click-stop points every 30 degrees. Trouble is, that’s too much vertical panning distance to allow for overlapping shots when using a lens focal length any longer than about 40mm.
- This head is a pleasure to use and great value, but only if you’ll use it with a wide-angle lens.

**PROS**
- Very competitive price; sturdy build quality; compact when packed

**CONS**
- Doesn’t work well with longer lenses

**Verdict** ★★★★★

GigaPan Epic Pro V
£996/$996
www.gigapan.com

- As its name suggests, this gadget is all about helping you shoot giant gigapixel panoramas comprised of hundreds of images. It’s a trick that’s nigh-on impossible with a conventional panoramic head.
- Enter your lens’s field of view, as well as where you want your panorama to start and finish, and this electronic cradle will automatically pan your camera and fire its shutter. You can’t capture full spherical pans, but the 360x155-degree range isn’t far off. There are multi-exposure and bracketing options for creating HDR images.
- This latest V (for video) edition of the Epic Pro adds the ability to pan horizontally, vertically and diagonally with your camera in video mode, so you can create stunning video timelapses.

**PROS**
- An effortless and accurate way to capture stunning ultra-high resolution images

**CONS**
- Heavy and very bulky; overkill for conventional panoramas

**Verdict** ★★★★★

Manfrotto 303SPH
£701/$720
www.manfrotto.com

- The array of sliders and markings on this head is daunting, but it doesn’t take long to learn the basics and find the nodal point. Adjustment is excellent, so you can nail perfect camera positioning; there’s even the ability to shoot straight down to easily capture the nadir image in a spherical panorama.
- The stout build and large slider travel also enables mounting of big cameras like an EOS-1D X or a D5.
- Top-quality engineering and materials ensure everything holds rock-steady, though it means the head weighs a hefty 2.4kg. Fortunately it can be dismantled for streamlined storage.
- Although it includes Manfrotto’s excellent 300N panoramic base (itself worth £229/$255), which enables incremental click panning for consistent image overlaps, the 303SPH has recently rocketed in price and is now getting close to the cost of the far more advanced Gigapan Epic Pro.

**PROS**
- Superb build quality; plenty of adjustment for mounting large cameras

**CONS**
- Heavy and bulky; not the easiest device to learn; now overpriced

**Verdict** ★★★★★
Mini Test

Rollei Panoramic Head 200 Mk II
£170/$222
www.rollei.com

Rollei’s entry isn’t far off the size of the Manfrotto 303SPH, but with fewer components and a lighter build, it’s half the weight at 1.2kg. The tall vertical arm gives you room to rotate a longer lens, and the 3kg payload capacity is enough for a full-frame DSLR setup.

The pan base has selectable click-stops at 15-, 24-, 60- and 90-degree increments, and it locks positively into these stops. The vertical pan motion is just as precise and has click stops every 15 degrees, making it more versatile than the Andoer head. Another nice touch is that you can swing your camera out, so it can shoot straight down to capture the nadir image with less tripod visible in the frame. The only downside with this head is its limited availability – a pity given its build and versatility for such a sensible price.

PROS
- Solid build and precise operation;
- Handy rotating vertical arm

CONS
- Restricted availability; locking knobs are nowhere near grippy enough

Verdict

Novoflex VR-System Slim
£366/$650
www.novoflex.com

With its slick, colourful components, Novoflex’s head certainly looks the part. The collapsible design enables it to pack small in seconds; but while the VR-System Slim is a reasonable 760g, the Nodal Ninja 3 is lighter still.

The build quality is solid enough to support a mid-size DSLR without flexing, and the head is rated to support lenses from 8mm fisheyes through to 160mm telephotos. The locking clamps grip nice and tightly, although they’re too smooth to operate easily in all weathers.

On the upside, the head features four click pan scales built into the base, while the upper arm also has click stops every 10 degrees to help set vertical angles when shooting multi-row and spherical panoramas. Novoflex includes a useful hotshoe bubble level to help with camera positioning, but it’s not enough to justify the price difference over the Nodal Ninja 3.

PROS
- Quality build; lightweight, space-saving design is great on the go

CONS
- Won’t suit large DSLRs; pricey next to the Nodal Ninja, especially in the US

Verdict

Nodal Ninja 3 Mk 3
£216/$220
www.shop.nodalninja.com

The Nodal Ninja doesn’t look like much, but this pared-down head is ideal for spherical or multi-row panoramas. The design is kept compact and collapsible, and weighs just 475g.

Build quality hasn’t been compromised, though: everything’s precisely machined with no slack between components. The base can be loaded with optional detent rings for incremental click panning. Choose from huge 120-degree stops if you’re using a fisheye lens, right down to a finely tuned 10 degrees for telephoto lens panoramas.

Improvements over the Mark 2 version include a higher load capacity of up to 3.5kg with the optional Rotator D10 base. Just remember that this is still a small head, best suited to a mirrorless or APS-C DSLR camera with a compact lens.

PROS
- Travel-friendly; precise operation;
- Relatively accessible price

CONS
- Not designed with full-frame DSLRs or gigapixel panoramas in mind

Verdict

Five things to look out for

1. There are plenty of panoramic heads, but not all can handle a large DSLR with a full-frame lens.

2. A compact folding head works well with a small camera and can stow in a kit bag for spontaneous shooting.

3. Even the best head needs stitching software. There are plenty of options; some are even free.

4. Shooting spherical panoramas requires a head that lets you rotate around your lens’s nodal point.

5. Pan flat and level, ensuring each shot has a decent overlap with the last. Stitching software does the rest.

www.digitalcameraworld.com
Help me buy a...
Grad filter

This essential tool for landscape photographers comes in a variety of shapes and sizes, so it helps to know what you’re looking for.

Graduated filters are used in front of the lens to darken the top part of the picture but leave the bottom part unaffected. They’re used almost exclusively in landscape photography, to tone down bright skies so that they are not overexposed and look more like we tend to see them with the naked eye, with all their cloud detail and structure intact. Between the top, darkened part and the clear bottom is a smooth transition – the ‘graduated’ part – so that the change in brightness is not sudden and obvious in the picture.

Why not just darken skies with software? Many image editors haveGraduated Filter tools for doing just that, and they do offer more control than regular photographic filters, so that you can tweak and enhance the effect until it’s just right. However, getting a shot right in the camera saves you a lot of processing effort later on. Sometimes the sky is so bright that you can’t achieve an exposure that records detail both in the sky and the landscape. And if you’re shooting video, you don’t have the same editing capabilities later that you do with stills photography.

Choosing the right grad filter comes with some complexities, however – here’s what to look out for...

1 Square vs round filters
You can get round graduated filters that attach to the front of a lens, but you can’t adjust the positioning of the darkening effect. Instead, you need a square filter system with vertical slots for sliding in filters. With these, you can move the filter up and down to position the darkening effect at or near the horizon, stack more than one filter and even use graduated filters alongside polarising filters.

2 Filter holders
Square filter holders come in different types and sizes. The most popular size takes filters 100mm wide. Some filter makers offer kits that include both filters and filter holders, but often you’ll need to buy the filter holder separately.

3 Adapter rings for lenses
Once you’ve got filters and a filter holder, you’ll need adapter rings to fit your lenses. These are not usually included in filter kits.

4 Choose your size
100mm is the most popular size, but not the only size. Cokin makes an inexpensive ‘P’ size filter holder for its 84mm filters (and other sizes). You can also get 150mm filter systems for ultra-wide-angle lenses with large front elements, where smaller filters would cause vignetting.

5 Filter strengths
Grad filters come in different strengths. Filter makers use different terms to describe these, but they all boil down to the same thing – the light reduction in f-stops (EV numbers). Cokin quotes strength in ND values: ND2 is one stop, ND4 is two stops, ND8 is three stops. Benro quotes f-stop values directly, while Lee and some others quote decimal numbers of 0.3 (one stop), 0.6 (two stops) and 0.9 (three stops). In general, one stop is enough for a bright, overcast sky, but you may need much more for shooting sunsets or into the light.

6 ‘Hard’ vs ‘soft’
Filter makers generally offer ‘hard’ and ‘soft’ graduated filters. This refers to the width transition between the clear area and the upper darkened area of the filter. A ‘soft’ grad is good for subtle darkening where there is no clear horizon line but will also tend to darken some of the foreground too unless you position it very high in the frame. Most photographers find a ‘hard’ grad lets you be more precise with positioning.

Good, better, best
Three grad filter systems to suit every budget

Cokin Gradual ND Kit plus holder
£62/$69
This inexpensive kit will get you started with graduated filters and is designed for use on smaller lenses, with filter rings up to 82mm. This system uses filters 84mm wide – most higher-end filter systems use 100mm filters as standard.

Lee 100mm ND Grad Hard Resin filter set
£185/$283
Lee Filters is one of the best-known names in quality photographic filters. It sells filters and holders separately, but it also offers this set of three graduated filters as a kit. (You’ll still need to get a holder and an adapter ring).

Benro Master 100x150mm Glass filters
£129/$99 each
Benro’s Master filters are made of glass to very high standards to deliver the minimum possible image degradation. They can be fitted to special frames for Benro’s unique ‘geared’ filter holder (sold separately).
What to look for in a graduated filter

Let’s take a closer look at the Benro Master system of filters and holder.

**Filter holder**
Filter holders tend to come in standard sizes, typically 100mm wide, but the Benro Master holder is adapted to take glass filters in frames.

**Graduated region**
Graduated filters have a ‘graduated’ zone where the effect is faded in gently. Benro filters, like others, come in both ‘soft’ and ‘hard’ varieties.

**Filter strength**
The top part of the graduated filter has a fixed ‘darkening’ value. Benro Master filters come in different strengths, as do those from other makers.

**Height adjuster**
On regular filter holders, you simply slide the filter up and down to adjust its position. With the Benro Master holder, you turn this geared knob.

**Adapter ring**
With any square filter holder, you need an adapter ring to attach it to your specific lenses. These are almost always sold separately.

**Filter frame**
Graduated filters usually slot directly into grooves in the filter holder. This Benro system uses filter frames with toothed gears on the sides.

ADAPTER RING SIZE
Some of your lenses might need different adapter sizes, so check which ring sizes you need for your lens before buying a filter kit.
Moose Peterson

Best-known for photographing wild California, Moose also gets a thrill out of shooting old warbirds, as Keith Wilson finds out...
With a name like Moose, it’s not surprising to hear that Moose Peterson’s first love was wildlife photography. But when I’m speaking down the phone to him in California, it’s a famous landscape view in Yosemite National Park that he’s framing in the early morning light. “Right now, I’m at a place called Tunnel View,” he says. “We’re watching the dawn mist coming in over the valley and looking at some cool clouds.” It is just a few weeks since devastating wildfires swept across the state, leaving more than 80 people dead and hundreds more homeless, while burning out thousands of acres of prime forest. However, the sight over Tunnel View appears unscathed...

How much of the famous landscape of Yosemite's Tunnel View has been affected by the wildfires?
It all depends... We were here last week, and the smoke from the fires was in the valley. About 45 days ago, the Ferguson fire, which was right outside the park, literally closed the valley because it was a hazard to your health with the smoke that was in here. Today, it’s clear as a bell and gorgeous. A week ago we got rain at lower elevations and snow here – that took care of it all.

Let’s look at your background: you’ve always been interested in wildlife and wild places, but how did these two and photography come together?
Our home is just 23 miles away, facing due east from where I’m standing, right here in Yosemite. I’m a third-generation Californian, and being in the Sierras is what I’ve been doing since I was about two weeks old.

Everybody in my family, from my grandfather all the way down, has been a shutter-bugger. I’m the first to actually see if I could make a living out of it. So bringing back that visual story is what my family has always done. It wasn’t some grand design; it’s just the way life unfolded for me.

Did you get much family encouragement for your photography?
My older sister was an incredibly talented commercial artist, so she was the...
one that had that kind of influence. My father was incredibly gifted with woodworking, so I was growing up with woodworking much longer than I've been shooting photos.

Then at home itself, the lighting in our house was never just your basic bulb in the ceiling. The lighting at home was always very purposeful: it set the mood for whatever we were doing.

Even my mum, who was a child psychologist, no doubt influenced the way I see, especially when it comes to colour psychology. It’s not like that was an f-stop, shutter speed kind of thing: it’s just all life’s influences that, for whatever reason, melded into me.

What is your favourite lighting?
The one that tells the story. If you’re a craftsman, you can use any kind of light to tell a story, be it a hard-contrast light, a soft, mellow light, or an overcast light. The trick is that you have to know how to use light to bring it into the eyes of the subject, then to frame and punctuate what it is you’re trying to say. Then, of course, you wrap it up with a big bow, which is the exposure, because exposure is how you can express the emotion of the moment.

You’ve also added aviation photography to your repertoire. How did that come about?
Wildlife is still my main thing, and aviation is no more than a combination of my wildlife and my landscape photography. The way I got into it is that there’s a very famous air race that’s just three hours from my home, called the Reno Air Races. For years my wife and I kept saying we should go there and see what...
they’re like. It was the same year that the Nikon D3 was released. The races have a pre-race for the pilots at the training school and the guy running it was teaching with me and told me he could get me in for free. Like any photographer, I’m cheap and I didn’t want to buy a ticket to get in and not have access, so he said, “If you want to come up and teach the D3 to me, I’ll get you into the races.” So I did that.

How did you photograph the races?
You’re at the pylon; the pylon is really just a big stick in the sky, it’s 25 feet tall, and the planes fly around the pylons, that’s their racetrack. So, shooting a moving subject in the sky and getting it sharp, I mean that’s what I’ve been doing all of my life. Of course, being 50 feet away from a plane doing 200mph, the adrenaline rush was a no-brainer, so the bug bit me, and off I went.

You live close to Yosemite; is that your favourite landscape location?
The favourite would be where I live, my home, the Sierra. I’ve never been to any place in the Sierra that I never ended up loving. My family has been up here since 1900, so you could say it’s in the genes. When I was a kid, my dad and I would hike almost 500 miles a year in and around the back country here.

With shooting wildlife, landscape and aviation, do you have different equipment selections for each, or do you take the whole lot?
No, depending on what I’m going after, I have a different kit. For critters or birds, it’s going to be the 800mm. Then if I’m going for big game, it would be the 180-400mm. If I’m going for landscape, then half the time I don’t have the 180-400mm, it’s just that I know at Tunnel View here I need...
that big lens, otherwise it’s going to be smaller stuff. They’re all tools and I have specific tools for what I want to do, of course.

**Do you have a ‘go-to’ camera and lens combination, or does that not apply to you?**

Well, people often ask, “If you only had one, what would you pick?” For me, the body would be the Nikon D5; it will always be my preferred body. When it comes to lenses, right now I’d probably say the 105mm f/1.4. That’s probably my most used lens of all the lenses I have in my bag.

**Why is that? What do you find so special about that lens?**

Depth of focus is a powerful tool for moving the eye into the frame. That f/1.4 on the 105mm, for me, just works in a way in which I can tell stories.

**Do you have a selection of essential accessories that you always pack?**

Well, it’s kind of unlimited [laughs]. I have your basic polariser and the Nikon Speedlight SB-5000 flash, which isn’t really an accessory but important for light. Other than that, I’m a gear head so I have lots of little stuff – but none of it is really essential, right? I’m a photographer, so I have all that stuff that I really shouldn’t be buying! It’s all part of the game, to be honest.

**But is there something particularly unusual that has proven useful more than once?**

It’s not an accessory, but I think that the weather apps on my iPhone are essential. For instance, right now we’re staying longer here in Tunnel View than most people because we can see a hole in the clouds. With the radar and knowing the region and how those clouds will play with the light in the valley, we’re going to be staying here longer, because we know what’s coming just over the horizon. That one particular tool, which costs only

“Wildlife is still my main thing and aviation is no more than a combination of my wildlife and my landscape photography”
99 cents, tells us to stay here and take advantage of the amazing clouds at 30,000 feet altitude above us.

Out there, over Half Dome, we have another set of clouds at about 20,000 feet, so seeing that coming and knowing to wait because of this tool probably makes it more useful than any other tool I can have in my bag.

What has been the best advice you’ve received that you found indispensable?

I work with biologists and researchers, and that has always been a major key to my success. A long time ago, I was working with a particular bird called the light-footed clapper rail. It’s about the size of a chicken, a very endangered bird. I was working with a biologist; we were in a marsh and I was looking out trying to find one. We’re standing on the edge of the marsh and the biologist was next to me and he said, “What are you looking for?” I said the clapper rail. He said, “You need to learn to look underneath your feet!”

He had me move three feet over – and right below where I had been standing, looking over the marsh, was a clapper rail literally at my feet! So the best photograph doesn’t necessarily have to be miles away: it could be right under your feet.

Which photographers inspired you when you were starting out?

Tupper Ansel Blake was a Californian photographer who specialised, just like I did, in California’s wild heritage. He was influential for a couple of reasons, but the main one was the fact that everything he did was self-assignments. He wasn’t hired by people to go out and shoot: he would go out and find the things that piqued his interest.
“Take a deep breath and enjoy the ride, because photography is a long-term proposition. Failure is a major part of the process”

– the things he wanted to work with to tell a story and then go out and do that story. Then he’d market it to make the money, rather than waiting for that phone call.

You’ve published 29 books so far; can you tell me what’s coming up in the future?
We’re working on a video documentary, bringing a World War II C-47 Dakota back to life, then flying it over to England and across to France in June this year to celebrate the 75th anniversary of D-Day. Right now, a lot of my energies are going into the medium of video to tell a story, as a way to reach more people.

Wow, this project really sounds like a fantastic undertaking!
It is amazing; the history that’s there and the stories that have not been told. Our particular aircraft was part of Operation Varsity, the crossing of the River Rhine, which to this day is still the biggest ever drop of paratroopers. [On 24 March 1945, more than 16,000 paratroopers took part.] It was an amazing event: Churchill and Eisenhower were on the west side of the Rhine watching this whole thing happening on the east side.

We’ve been interviewing a lot of veterans, and when I come over in March, I hope to meet a couple more. In 1945, our aircraft carried the British Army’s 9th Parachute Battalion, so next month we will be carrying British troops in our plane.

Our Dakota will be one of the six that will be picking up jumpers in Duxford, then flying across the Channel and letting them drop right down onto the beaches of D-Day. I’m not exactly sure where the drop zone is.

What is the top tip that you’d give to someone starting out today who wants to become a professional photographer?
Take a deep breath and enjoy the ride, because photography is a long-term proposition. Failure is a major part of the process, and I’ve had some failures – that’s just how it works. As long as you learn from it, then it’s not really a failure.

And finally, how do you relax?
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### MEDIUM FORMAT 6x4.5, 6x6, 6x7 & 6x9 USED

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1. In which year did Kodak stop manufacturing Kodachrome slide film?
   - A 1989
   - B 1999
   - C 2009
   - D 2019

2. Which of these settings is the most suitable shutter speed for taking a portrait in natural light?
   - A 1/8,000 sec
   - B 1/200 sec
   - C 1/2 sec
   - D Bulb

3. Which of this is not a common exposure mode?
   - A W
   - B A
   - C S
   - D P

4. What is the Sunny 16 rule used for?
   - A White balance
   - B Exposure
   - C EV compensation
   - D Depth of field

5. Which British photographer had a heavyweight retrospective published this year? Published by Taschen, the Sumo Edition weighs 30kg and costs £2,250/$3,000.
   - A Rankin
   - B Don McCullin
   - C Norman Parkinson
   - D David Bailey

6. In a new era for astrophotography, what has been photographed for the first time, and was published in April this year?
   - A Bode's Galaxy
   - B Pelican Nebula
   - C A black hole
   - D Pluto

7. The fastest CompactFlash cards use a standard called UDMA 7. But what does UDMA stand for?
   - A Ultra Direct Memory Access
   - B Universal Digital Memorycard Association
   - C University of Denver Memory Alliance
   - D Ultra Dense Memory Application

8. Which letter is being used by Nikon for its newest lens mount?
   - A R
   - B Z
   - C F
   - D L

9. Which piece of professional studio equipment is particularly useful when photographing shiny metal objects?
   - A Flash meter
   - B Snoot
   - C Barn doors
   - D Light tent

10. Which Hollywood A-lister is seen here holding a disposable camera at the Cannes Film Festival?
    - A Emma Stone
    - B Cate Blanchett
    - C Kirsten Dunst
    - D Kristen Stewart

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10 points You’re a photo mastermind!
8-9 points Fantastic, you’re a brainiac
6-7 points Really good score
4-5 points Respectable, but no cigar
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Answers: 1 C, 2 B, 3 A, 4 B, 5 D, 6 C, 7 A, 8 B, 9 D, 10 D

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