

THE WORLD'S BEST-SELLING DIGITAL PHOTO MAGAZINE

1-7 FEBRUARY 2024 ISSUE 593

Photography Week

INSPIRATION | IDEAS | IN-DEPTH REVIEWS



**NIKKOR Z 600MM
F/6.3 VR S**

THE ULTIMATE LENS FOR
HANDHELD SPORTS AND
WILDLIFE SHOOTS?

MASTER THE DARK ARTS

GET CREATIVE WITH LIGHT PAINTING, PLUS PRO
TIPS FOR SHOOTING THE NORTHERN LIGHTS

W E L C O M E

Photography Week



JOIN THE CLUB...



Welcome to the world's No.1 weekly digital photography magazine. If you're already a reader, thanks for your continued support and involvement; if you're new to *Photography Week*, you've come to the right place! In addition to expert advice, brilliant tips and step-by-step tutorials, every issue features interactive galleries of brilliant photos, how-to videos on

essential shooting and editing techniques, and in-depth reviews of the latest camera kit.

But that's not the whole story. *Photography Week* is more than a magazine – it's a community of like-minded people who are passionate about photography. To get involved, just follow any of the links below and share your shots and comments.

Jeff Meyer, Editor

JOIN THE PHOTOGRAPHY WEEK COMMUNITY AND START SHARING!



FACEBOOK

<http://bit.ly/39py9lg>



TWITTER

<http://bit.ly/2vGadLP>



FLICKR

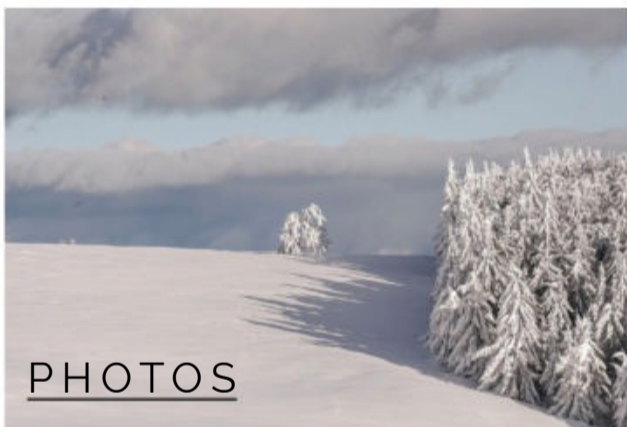
<http://bit.ly/2VIgsJ0>

We're more than just a magazine – read on and discover the many ways you can interact with and enjoy *Photography Week*



CONTENTS

FIND OUT WHAT'S INSIDE THIS ISSUE



REVIEW

NIKKOR Z 600MM F/6.3 VR S

Packing serious telephoto reach into a lightweight body, is this the ultimate lens for sports and wildlife shoots who love shooting handheld?



NEWS

ASTRHORI ANNOUNCES NEW WIDE MACRO LENS

25mm 2-5X optic goes big on magnification for a small price

FEATURE

LIGHT UP THE NIGHT

Get creative with light-painting, and capture the northern lights

PHOTOS

GURUSHOTS

Photos from the GuruShots Winter Wonders challenge

INSPIRATION

INTIMATE ENCOUNTERS

Winning images from Close-Up Photographer of the Year

CRASH COURSE

SMOOTHER SHORES

Pro tips for creating minimalist long-exposure seascapes

PHOTOSHOP

FINE-TUNE FACES

Harness the power of AI masking for smarter portrait retouching

Cover image © Getty

JUST
39¢/39p
PER ISSUE!
WHEN YOU SUBSCRIBE

SEE THE SUBSCRIPTION
PAGE FOR MORE INFO



WHAT'S HOT

THE WEEK'S TOP HEADLINES IN PHOTOGRAPHY

ASTRHORI LAUNCHES NEW WIDE
MACRO LENS FOR MIRRORLESS

25mm 2-5X optic goes big on magnification for an affordable price



© AstrHori

AstrHori has launched a new macro lens, further bolstering its range of interesting and unusual macro lenses. The new arrival, the AstrHori 25mm F2.8 2-5X Ultra Macro Lens, is another ultra-macro offering, suitable for full-frame and APS-C cameras, but this time with an unusually wide 25mm focal length.

The new lens, which is available in a range of mounts, joins existing AstrHori optical oddities like the 28mm F13 2X Macro Periprobe probe lens. The manufacturer's latest 25mm offering

has a 2x-5x magnification range, and can focus down to 113mm with 2x magnification, or 186.4mm at full 5x magnification.

The lens has been designed with a slim form factor, and is relatively lightweight – the Sony E-mount version, for example, weighs 474g. It measures 102mm long at its minimum 2x magnification setting, extending to 174mm when the lens is set to full magnification – this change in lens barrel length is to be expected from a macro lens with variable magnification.

Inside is a 10-element optical stack arranged in seven groups, which incorporates two extra-low dispersion elements designed to reduce chromatic aberrations. A clicked aperture control ring enables adjustment of the 8-blade diaphragm through the lens's f/2.8-f/16 aperture range.

The AstrHori 25mm F2.8 2-5X Ultra Macro Lens is available now in Canon RF, Nikon Z, Sony E, Fujifilm X and L-mount versions. It can be purchased direct for AstrHori, or from Amazon, for what looks to be a very reasonable £239 / \$249.



© Getty

AFTER-DARK PHOTOGRAPHY

Dan Mold shares some techniques for capturing creative images during the longer winter nights

Just because the sun has set for the day, that doesn't mean your photographic fun has to stop. In fact, one of my favourite times to take photos is after dark, using basic camera kit and a variety of accessories that can

be sourced for a minimal outlay.

In this feature, I'll go over some of the essential kit that allows you to add your own lighting to scenes after dark – torches, LEDs, fibre-optic lights and flashguns. Then I'll run you through

some of my top creative light-painting techniques that will help to make your night-time outdoor shots really stand out. And, to round things off, I'll show you how to shoot the amazing spectacle that is the Northern Lights.



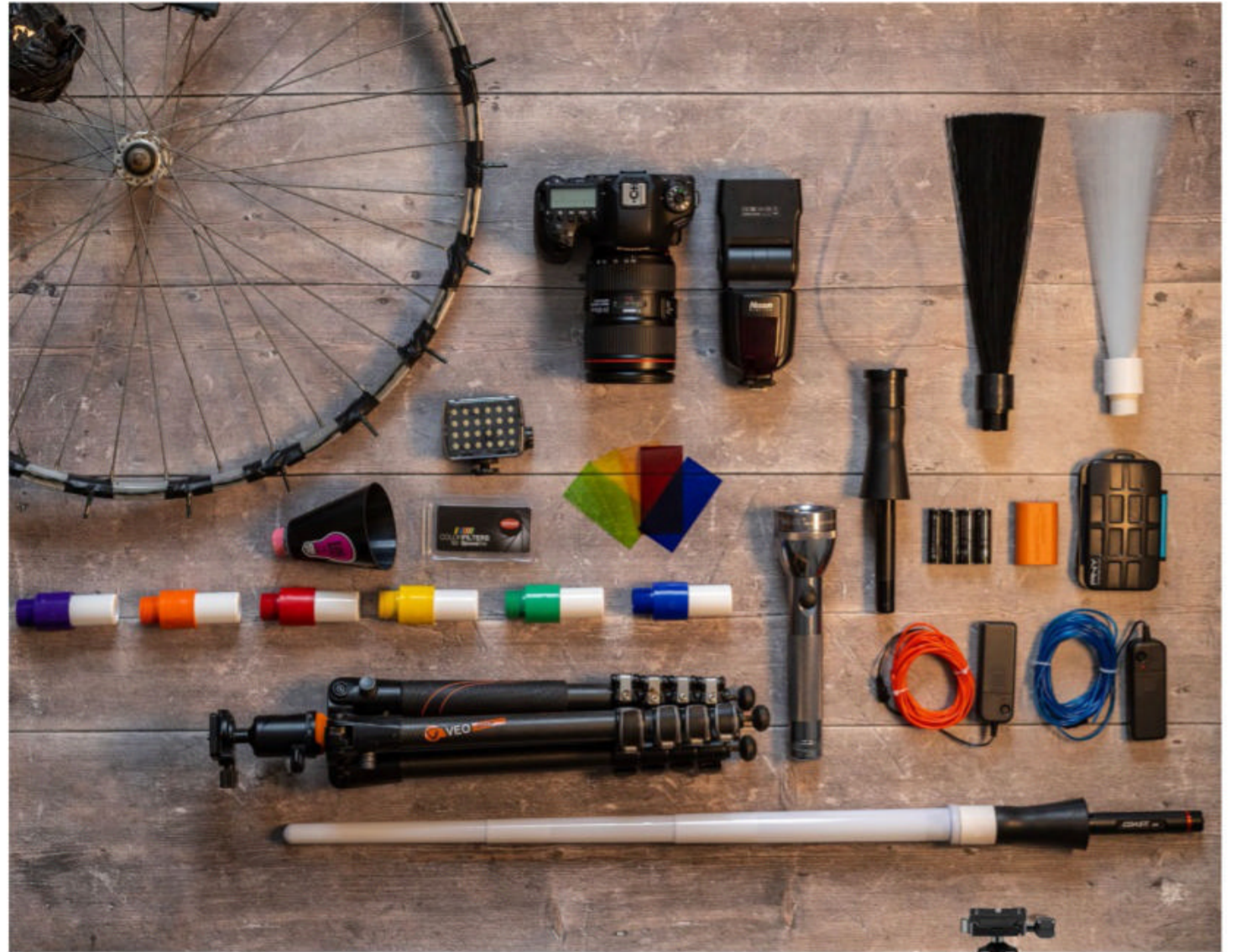
FEATURE

1 GET THE RIGHT GEAR

Discover the affordable accessories that will make painting with light easier

Painting with light is one of the more specialised fields of photography, and there's lots of niche equipment available to solve the particular challenges it poses, some of which can be rather pricey. The good news is that the essential kit you'll need to get started with light-painting is fairly basic stuff that you probably have to hand already, such as an interchangeable lens camera, a wide-angle lens, a basic flashgun, and a few different torches, string lights and coloured gels.

Once you've got the hang of light painting you can then look to upgrade your kit, slowly building it up over time as and when it's convenient for you. This spreads the cost, and you'll be able to work out from experience which upgrade items will most benefit your painting-with-light photography.



ESSENTIAL KIT



CREATIVE CAMERA from £300/\$350

Even basic interchangeable-lens cameras are great for light painting, as they have full manual controls, with budget options including the Canon EOS 2000D and Nikon's D3500. It could also be worth considering an Olympus OM-D or PEN mirrorless camera, which have a Live Composite feature that lets you see your light painting being built up in real time.



BUDGET FLASHGUN From £120/\$120

A flashgun is important for all sorts of photographic scenarios, and should definitely be something to add to your kit bag. They're great for illuminating large swathes of your landscape scenes at night. We like to set our flash to Manual mode with a low power value, then use the Test button to manually fire it off-camera and add a few blips of flash around the scene.



WIDE-ANGLE LENS from £300/\$400

While you can take painting-with-light shots with any lens (even a kit lens will work well), you'll often be shooting landscape scenes, so a wide-angle optic would be a good choice. A lens like the Samyang 14mm f/2.8 offers a wide field of view as well as a wide aperture of f/2.8, which helps suck in loads of light when you shoot at night. Available for a range of mounts, it doubles up as a great lens for astrophotography, too!



STURDY TRIPOD From £110/\$110

A tripod is an absolute must for painting-with-light photography. By its very nature, you're going to need to shoot an exposure several seconds, or even minutes, long to give yourself enough time to go around the scene and paint in your light. While entry-level tripods start at around £30/\$30, it pays dividends to spend a bit more on a professional-spec model.



FEATURE

1 GET THE RIGHT GEAR CONTINUED

TOP LIGHT GRAFFITI KIT from lightpaintingbrushes.com



DELUXE STARTER KIT

from £155/\$192

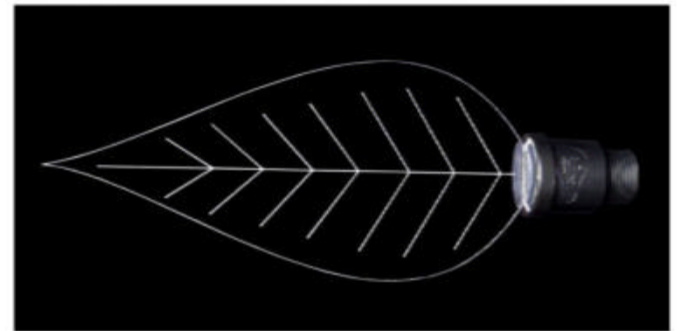
This kit includes a flashlight, three universal connectors and tools that are perfect for creating light orbs, light sculptures, light graffiti, light painting portraits, abstract light paintings and anything else you can imagine!



COLOUR HOOD SET

from around £45/\$55

The Light Painting Brushes colour filter and hoods block the flashlight bulb from being seen by the camera, to eliminate unwanted streaks of lights and let your flashlight pick up colour, so you can make your low-light scenes more vibrant.



FIBRE OPTIC STARTER KIT

from around £75/\$90

This set uses thin fibre optic strands that can be attached to a flashlight and then brushed into a scene. Of course, you can use a cheap inexpensive fibre optic toy, though this kit is designed for light painting and can produce better results. See how we created an abstract fibre optic portrait on the next page.



PLEXIGLASS SHAPES

from around £35/\$40

There's a brilliant range of plexiglass shapes and kits from Light Painting Brushes, such as this etched-leaf pattern, which is brilliant for light painting trees, or the Plexiglass Feather, perfect for adding wings to a low-light portrait.



PRO KIT COLOUR GELS

Colour gels, such as this set from Rogue, are coloured sheets of plastic that wrap around the front of the flashgun head to change its colour temperature. This stops the flash looking too white, and you can use whatever colour you'd like to illuminate your dark scenes. You can even get creative and layer multiple gels together to build up the colour or mix them together.



PRO GEAR PIXELSTICK

The PixelStick allows you to paint digital images into your low-light scenes by waving its thin wand of LED lights through the scene. It 'prints' any digital image into the scene line by line, one row of pixels at a time, which opens up a whole new world of possibilities. PixelStick is sadly no longer

in production, but you can pick them up second-hand, and we were able to find similar products on sites like Etsy by searching for 'Pixel Staff'. Products from Magilight, such as the Magilight LED Stick Light, are also great options.

© PixelStick



FEATURE

2 USE FIBRE-OPTICS FOR ABSTRACT PORTRAITS

Create otherworldly portraits that are sure to turn heads with this unconventional but low-cost light-painting trick

For this technique you'll photograph a model in pitch-darkness, and provide your own light sources to bring them to life during a long exposure. We used a fibre-optic light with different colour options that offers a greater range of possibilities. Wave your light over your model's face to create fantastic light trails for ethereal and abstract portraits.

This technique is a fun one to try with friends and family – and you can even try a self-portrait. You just need to make sure the focus is targeted on where you're going to be sat during the long exposure, and use your camera's self-timer to give yourself a chance to get ready in position before the exposure begins.

PRO SHOT BUILD UP THE COLOUR

Experiment with different colours on separate exposures, then blend them together in Photoshop. Load the images as layers in one document. Change the blending mode and Opacity of your layers, and use layer masks to hide areas to correct the perfect blend.

PRO ADVICE SLOW-SPEED FIBRE

You'll need to expose for several seconds to give yourself enough time to paint your model's face with the fibre-optics. Enable your camera's 2-sec or 10-sec self-timer mode to give yourself enough time to get into the position where you're ready to start light painting.



FEATURE

2 USE FIBRE-OPTICS FOR ABSTRACT PORTRAITS CONTINUED

PRO KIT GET SET UP FOR TOP FIBRE-OPTIC ABSTRACTS



1 USE A TRIPOD To get started, you'll need a model or a friend to pose for a few photos. Have them sit down: you'll need them to keep as still as possible during your long exposure as you paint with the fibre-optics to brush over their face. Set up on a tripod and compose your scene. Autofocus on the eye that's closer to the camera, and switch to manual focus to lock off the focus.

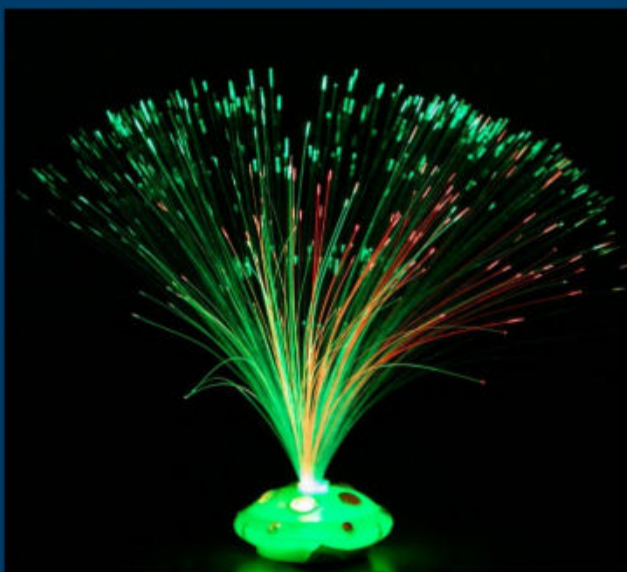


2 SETTINGS Use Manual mode and begin with a shutter speed of 6 secs, an aperture of f/14 and an ISO of 100. You'll also want to shoot raw files for more detail, and set the self-timer mode to give yourself enough time to get into position. Take a test shot, and inspect it to see if you need to change the exposure by closing or opening up the aperture.

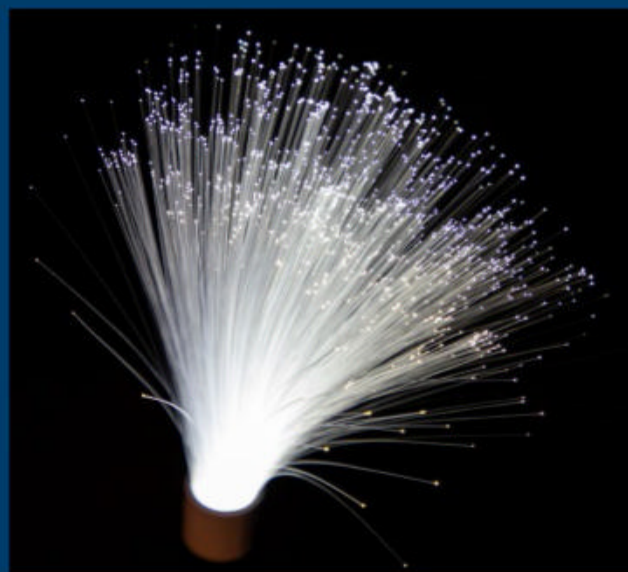


3 START PAINTING Now you're ready to paint with your fibre-optics. If you're shooting indoors, turn the lights out and ask your model to stay as still as possible. During the long exposure, carefully brush over your model's face with the fibre optics to paint them with light and create vibrant abstract trails. Check the results and see whether you need more or less light painting.

PRO TIP THREE TOP FIBRE-OPTIC TOOLS



1 FIBRE OPTIC TOY One of the most budget-friendly ways to paint with fibre-optic lights is using a toy like the one pictured – they're usually full of colour for vibrant portraits.



2 WHITE FIBRE-OPTIC This accessory fits on top of a torch and fires white light through the fibres. Gels could also be added to the torch to change the colour of the light.



3 BLACK FIBRE-OPTIC This is illuminated only at the very ends, so you have more control over where your light will appear as you brush over your model's face.



FEATURE

3 STAMP-IN COLOURFUL SHAPES WITH FLASH STENCILS

Put your very own stamp on your photos with this project



© Dan Mold

When you hear the word flash, it's easy to think of a bright burst of light from a studio strobe or flashgun that covers the whole scene. While you can use a flashgun to broadly illuminate large swathes of your landscape and urban night scenes, there are times when you might prefer some more control. By getting a little creative, you can

create a custom flash stencil from an old shoebox. Draw and cut out the shape you want your stencil to take on; simple shapes such as butterflies and flowers work well. It's then just a case of running a long exposure on your camera, and manually firing your flash stencil at various points throughout the scene to stamp colourful patterns around your photo.

TOP TIP FLASH

A flashgun is an essential addition to your kit bag for light painting. A flash can cover a large area with an adjustable brightness; many come with a diffuser or bounce card for more lighting possibilities. You can add flash gels to the front of the flash bulb to change its colour, too. You don't need an expensive flashgun with all the bells and whistles – just a basic model will be perfect. In this project, the flash is fired while it's off the camera, using the flash's test button.



PRO SHOT BUILD IT UP

Every time you change your lighting or painting-with-light technique, it's best to shoot a new exposure to keep them separate. This gives you much more control when you come to blend the different photos together in editing.

PRO ADVICE CHANGING COLOURS

Instead of changing the coloured tissue paper of your flash stencil, leave it set to one colour, then change them later in Photoshop. Add a Hue/Saturation adjustment layer and drag the Hue slider to shift the colour, then mask it off.



FEATURE

3 STAMP-IN COLOURFUL SHAPES WITH FLASH STENCILS CONTINUED

THE SETUP



1 USE A TRIPOD

As you'll be using a long exposure to give yourself enough time to move around the scene and firing your flash stencil, you'll need to set up on a tripod so that your camera is still during the long exposure time. A tripod also helps all of your frames line up correctly, if you decide to blend several of the exposures together to build up the exposure.



2 LOCK THE FOCUS

Shine a bright light on the part of the scene that you'd like to be the focal point – this will give your camera enough light to be able to autofocus on it. If in doubt, focus about a third of the way into the scene for decent sharpness throughout. Next, switch to manual focus to lock the focus in place.



3 SHUTTER SPEED

Go into Manual mode and dial in a shutter speed of 15 secs to give yourself a decent amount of working time with the flash stencils. Set ISO to 800, then dial in an aperture of f/8 to begin. You can open or close the aperture to make the exposure brighter or darker as required. Turn on the 10-sec self-timer to give yourself time to get in place.



4 START PAINTING

Start the exposure, then move around the scene, firing your flash stencil – make sure it's pointing towards the camera. Firing it close to the camera will make it larger, while moving further away will make your stencil smaller. Be careful of bright LEDs on your flashgun – tape these up to stop them showing up in your exposure.

MAKE A FLASH STENCIL

Draw and cut out simple graphics, and craft your own flash stencil to punch colourful shapes into your light painting scenes. It takes no time at all, and is particularly budget-friendly. All you need to try it out for yourself is an old shoebox, some aluminium foil, black card, colourful tissue paper, some glue, a flashgun and a sharp craft knife.



1 LINE YOUR BOX WITH FOIL

Line the inside of a shoebox with aluminium foil, using some spray glue or double-sided tape. This will help bounce the light from your flashgun around the shoebox and force it through the stencil opening.



2 CREATE A HOLE FOR THE FLASHGUN

Now cut a hole in one side of your shoebox, just large enough for you to fit the head of your flashgun inside. You'll also need to cut a hole in the top of the shoebox lid, for your stencil to fit on top.



3 ATTACH YOUR STENCIL

Draw your stencil shape onto some black card and carefully cut it out with a craft knife. Use a glue stick to adhere some paper tissue to the back of it. Secure your stencil to the top of the shoebox with tape – and you're done!



FEATURE

4 ADD EERIE LIGHT DOMES TO YOUR NIGHT-TIME SCENES

Learn a clever way to add stunning light sculptures to your shots

Creating mysterious light domes is a brilliant light-painting technique that you can add to your repertoire. These odd geometric half-spheres are a great way to bring your low-light scenes to life, adding a vibrant focal point (or points) if your scene is lacking one.

To do this, attach a series of string lights to a bicycle wheel, add an axle to it, and pivot the whole wheel around the axle during a long exposure. The

technique works best with an old bicycle wheel, so you don't have to remove the lights when you next need to use your bike! You can leave your new light-painting tool all set up for the next time you'd like to add some light domes to your low-light scenes.

A number of photographers offer online guides to this technique, which will help you master details – we especially love Chris Benbow's guide at www.bit.ly/dcm277domes.

PRO ADVICE LIGHT IT UP

Make sure your string lights are set to their constant-on setting so they don't fade or flash while you're spinning the wheel. You don't have to stick to plain white lights; you can either choose lights that have alternating colours, so that each spoke has a unique colour, or add coloured plastic sweet wrappers to each bulb to change their colours.

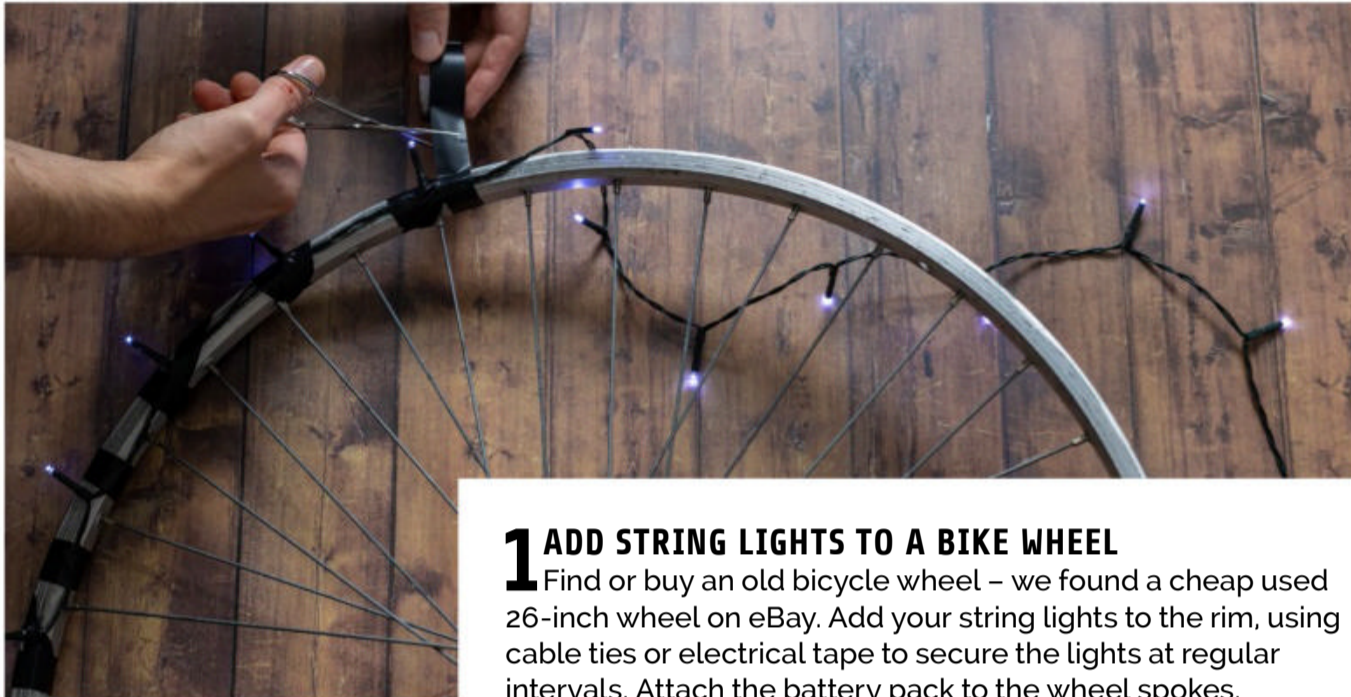
Setting up your camera on a tripod is the hard part. You can then go around the scene with your modified bicycle wheel to create these fantastic spooky half-spheres. Paint a few domes around your scene, and make sure each is captured in a separate exposure; you can then blend them together in Photoshop (see 'Build the scene with layers' on the next page).



FEATURE

4 ADD EERIE LIGHT DOMES TO YOUR NIGHT-TIME SCENES CONTINUED

MAKE A LIGHT DOME



1 ADD STRING LIGHTS TO A BIKE WHEEL

Find or buy an old bicycle wheel – we found a cheap used 26-inch wheel on eBay. Add your string lights to the rim, using cable ties or electrical tape to secure the lights at regular intervals. Attach the battery pack to the wheel spokes.



2 ATTACH YOUR AXLE

You need to attach a pipe to the central hub of the wheel, to act as an axle. The pipe needs to be the same length as the radius of the wheel – 13 inches on ours. You may need to use some adhesive, but ours held snugly with a push fit.

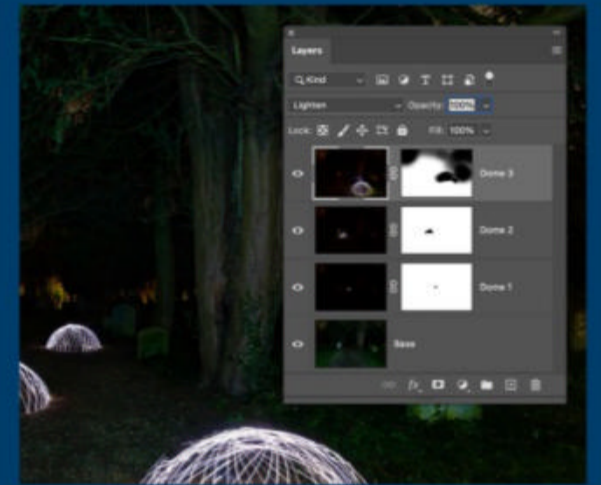
3 START SPINNING!

With your camera on a tripod, get into position. While the exposure is running, turn on the lights and rotate the wheel on the ground, using the axle as a pivot point. After one full rotation, turn the lights off. This will take some practice!



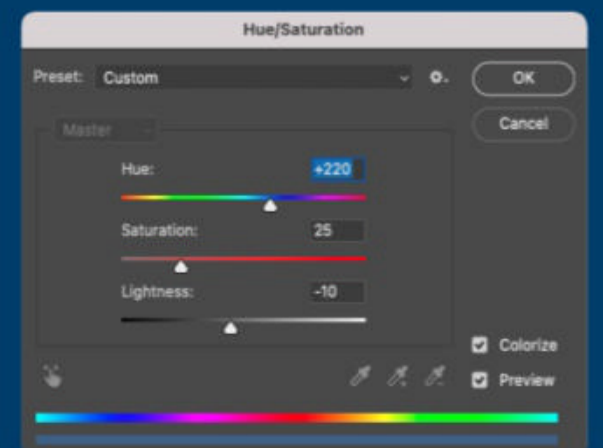
BUILD UP YOUR SCENE WITH LAYERS

We'd recommend shooting each light dome on a separate exposure, as this gives you more control at the editing stage. To merge several shots together, open them in Adobe Bridge; select them all with Ctrl/Cmd+A, then go to Tools > Photoshop > Load Files Into Photoshop Layers. In the Layers Panel (Window > Layers) you can change the blending mode of each layer to Lighten to build up the effect.



PRO ADVICE TRY CHANGING YOUR COLOURS IN PHOTOSHOP

You can change the colours of your light paintings easily in Photoshop. It helps if your light has a colour to begin with, in which case you can hit Ctrl/Cmd+U and drag the Hue slider to change the colour to your liking. To change white light you'll need to tick the Colorize box, and you'll also need to lower the Lightness a little.



FEATURE

5 PAINT WITH A LIGHT SWORD

Use the force! Light wands and sabres allow you to draw abstract and graphic light graffiti in your low-light portraits



Light wands are a brilliant way of painting with light that looks completely different. While we used a collapsible sword from Light Painting Brushes for our photo shoot, you could also use an LED ICE light, or even a toy lightsabre if you have one to hand. Get creative with how you swing it through the frame to add interest and flair to your night-time portraits.

A tripod is once again vital for

this technique, with a long exposure providing enough time to record the trail of light as the wand is swung through the frame. However, you don't want to push the exposure time too far, or you'll start to record movement in the model; a shutter speed of one to three seconds will work well. We'll also show you how to freeze your model with a little off-camera flash to eliminate their movement in the frame.

PRO ADVICE THE BLUE HOUR

The blue hour, also called the 'magic' hour, is the dimly lit hour immediately before sunrise or after sunset. This is when there can still be some dramatic detail and colour in the sky, before it turns totally black as we move into nautical twilight. It's a photogenic time in which to shoot, but your light streaks will become even brighter as the light levels drop.

For this shot we arrived on location at sunset so that we could get set up in the daylight, before it got too dark. This made it easier to focus, and also meant we could include the colourful sunset. An off-camera flashgun was set up to add some fill-light to our model, so that she wasn't in complete silhouette.



FEATURE

5 PAINT WITH A LIGHT SWORD CONTINUED

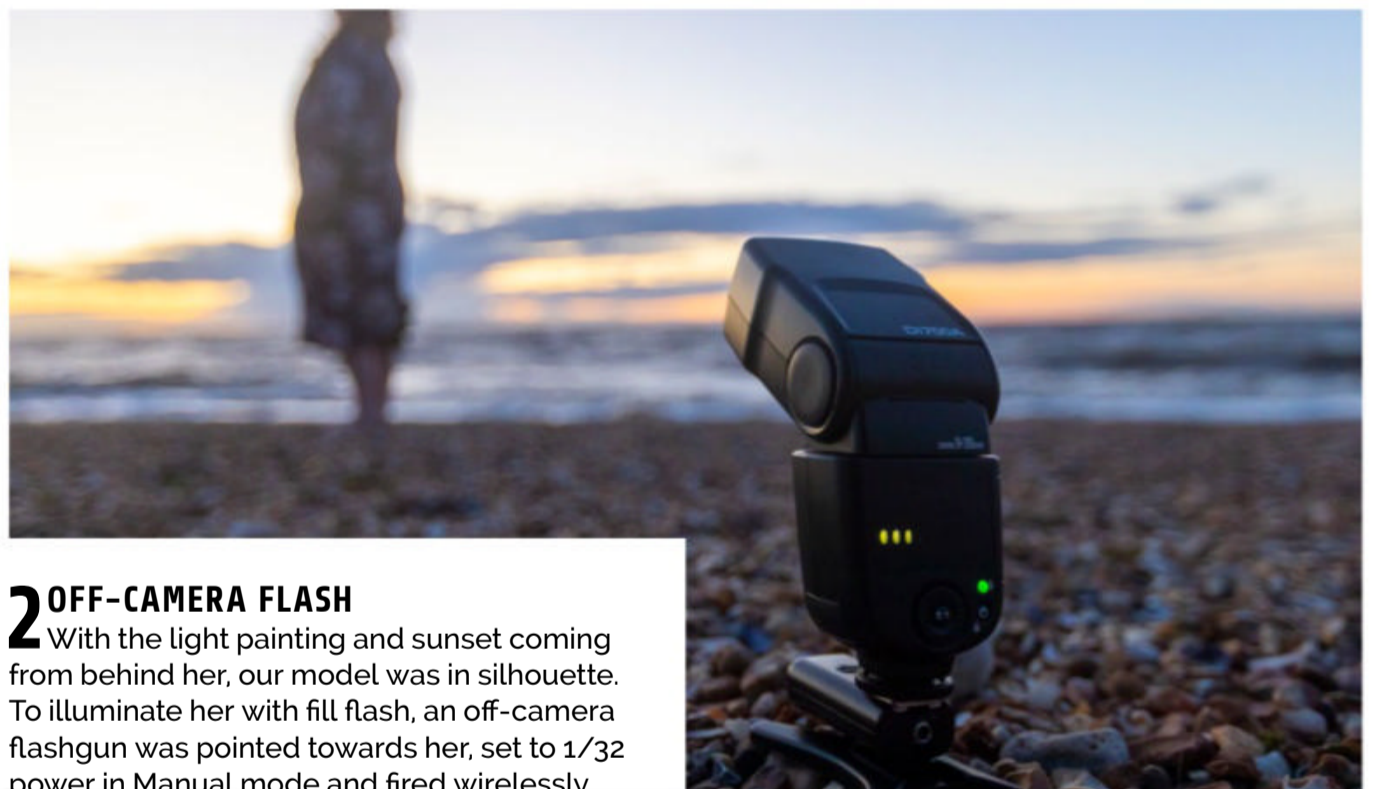
DRESS CODE: BLACK

Wear dark clothing so that you're less likely to be picked up in your light-painting photos; as you can see in the image below, even wearing dark clothes I still appeared faintly on the right. It's always worth taking a 'blank' frame of the scene, which you can superimpose over your final shot: this makes it easy to remove any areas where the light painter has appeared. Alternatively, use the Clone Stamp Tool or the Spot Healing Brush in Photoshop.



1 GET SET UP

Pose your model, then frame up and place your camera on a tripod. Set your camera to Manual and dial in an exposure of 3 secs, an ISO of 100 and aperture of f/11 – you'll need to open the aperture or boost the ISO as the light fades.



2 OFF-CAMERA FLASH

With the light painting and sunset coming from behind her, our model was in silhouette. To illuminate her with fill flash, an off-camera flashgun was pointed towards her, set to 1/32 power in Manual mode and fired wirelessly.

PRO TIP

USE 2ND CURTAIN SYNC

If the flash for the model fires at the start of the exposure, any movement during the rest of the exposure will appear as a blur in front of the flash-lit subject – not what we want here. The solution is to select second-curtain sync, which triggers the flash at the end of the exposure. Now, any movement recorded at the start of the exposure will appear as a blurred trail behind our sharp, flash-lit subject.

Shutter synchronization

Second-curtain synchronization



SET OK

3 WAVE YOUR WAND

We set our camera to fire continuously using a shutter release cable, so we got into position and waved our light wand to create the abstract streaks of light. We could then combine the best exposures together in Photoshop.



F E A T U R E

6 CAPTURE THE LIGHTS FANTASTIC

Award-winning astrophotographer Josh Dury explains why now is the ideal time to capture the majestic splendour of the aurora borealis

As we approach solar maximum in 2024, there's no better time to glimpse the Northern Lights from the United Kingdom. During its 11-year solar cycle, the sun becomes more active, resulting in stronger solar winds and 'coronal mass ejections'. These react with atoms of oxygen and nitrogen in Earth's atmosphere at either pole to produce the aurora borealis (or aurora australis in the southern hemisphere). The stronger the ejections, the further down in latitude the 'auroral arc' is seen – so now's a perfect time to capture this spectacular astronomical sight.



The Northern Lights as seen from Tromsø, Norway. As we approach solar maximum in 2024, you may not have to travel quite so far to capture images of one of nature's greatest spectacles

JOSH DURY



Josh Dury is a professional landscape astrophotographer who lives close to the Mendip Hills 'Super' National Nature Reserve in Somerset, UK. He was recently named

overall winner in the Historic Photographer of the Year competition, and was also shortlisted for the Astronomy Photographer of the Year in 2023.

[@Josh_dury_photomedia](#)



FEATURE

6 CAPTURE THE LIGHTS FANTASTIC CONTINUED

ESSENTIAL KIT FOR SHOOTING AMAZING AURORAS



LOW-LIGHT CAMERA

To prepare for the Northern Lights being visible further south in the UK and other countries this year, you should ideally get a low-light camera – I use a Sony A7S II. However, while a low-light camera is preferable, it isn't essential. Any decent camera will capture detail in the aurora arc and curtains.



SIGMA 14MM ART F/1.4 LENS

Of course, we'll be shooting the aurora in the dark, so we need a lens that allows as much light as possible to enter. My go-to optic is the Sigma 14mm Art F/1.4. It's great to shoot with, has a wide field of view, and allows more light in, so you get greater detail in the aurora.



'AURORA' APP

Apps such as Aurora can help you predict when the aurora will be visible. However, the sun's activity is often unpredictable, so even if you receive a warning about a Solar Wind, that doesn't guarantee the presence of the aurora. However, it's still worth getting prepared to give it your best shot.



MOVESHOOTMOVE LENS HEATER

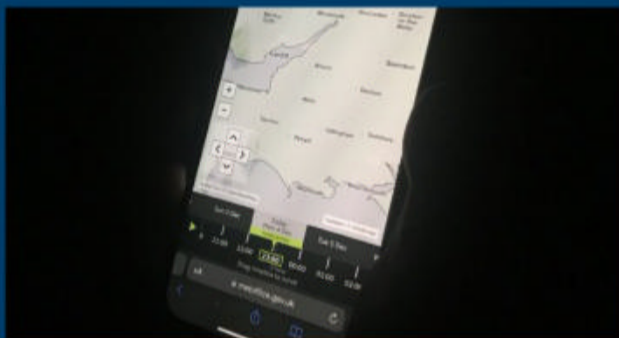
For shooting outdoors in the winter months, it's advisable to use a lens heater to prevent condensation as the air temperature falls. This warms the optics above the dew point to stop the formation of dew and condensation from obscuring your view.



REMOTE SHUTTER RELEASE

To maintain as much detail as possible in your aurora images, you need to make sure they're free from camera shake. Here, we can use a remote shutter release to reduce shake caused by pressing the shutter button.

HOW TO SHOOT THE NORTHERN LIGHTS IN 6 EASY STEPS



1 CHECK THE WEATHER

Especially in the UK, the weather can be unpredictable, with the Jet Stream coming across the Atlantic. So make sure to regularly check weather updates on the day before the shoot. Also, make sure you have the right clothing and kit for the conditions.



2 AURORA FORECAST

This is your best chance of predicting when the aurora will be visible. Once you have a potential 'strong substorm', check the likelihood of clear skies. At lower latitudes, the aurora is visible for shorter periods of time, so be prepared and check the Aurora app regularly for updates.



3 USE A TRIPOD

A sturdy tripod is an essential piece of kit for astrophotography. With the longer exposure times, you want to avoid as much potential for camera shake as possible, so make sure to use a firm tripod when setting up your composition, and fire the shutter with a remote release.



4 USE A WIDE LENS

Use a wide lens to let as much light as possible into your camera – an aperture of around f/2.8 is optimal. This, combined with your shutter speed, should be sufficient to capture the auroral arc, curtains and pillars in your image.



5 ISO SENSITIVITY

This is crucial for capturing images of the aurora. Your latitude will determine how visible the aurora is and what ISO values you use. Start with a minimum ISO of 1000, and push your settings as far as they can go without creating too much noise amplification.



6 SHUTTER SPEED

Finally, experiment with the shutter speed. Shorter exposures of two seconds may be adequate depending on your aperture and ISO settings, but the key to a good shot is getting the balance of all three right and creating a clean signal-to-noise ratio.



6 CAPTURE THE LIGHTS FANTASTIC

CONTINUED

GREAT PLACES TO SHOOT AURORAS AT NIGHT

The best locations to shoot the aurora borealis in the UK, and both the northern and southern lights around the world



WORLDWIDE

1 ICELAND

This a northern lights hotspot within the Arctic Circle, making it ideal for viewing the aurora, even during relatively weak substorms. There are countless popular photography locations around the country.

2 UNITED STATES

The Arches National Park in Utah makes for some visually stunning astrophotography compositions. The Cove of Caves is the park's most famous landmark, providing the perfect frame for the night skies.

3 CANADA

Churchill and Yellowknife are two of the best places in Canada to see the Northern Lights. In the northwest

territories, you can capture spectacular shots of the lights against the frozen tundra covering the landscape.

4 NEW ZEALAND & AUSTRALIA

The southern lights, or aurora australis, can be captured in the southern hemisphere when strong substorms hit the South Pole. The hotspots include the southern fringes of Australia, New Zealand and the Antarctic.

5 SOUTH AMERICA

There are several popular southern lights locations in South America. Chile has some of the clearest skies in the world, and off the coast of Chile in the South Pacific Ocean is Rapa Nui (Easter Island), home of the world-famous Moai statues.

IN THE UK

1 OUTER HEBRIDES

Home to some of the clearest skies in the United Kingdom, this is also an ideal place for photographing the Milky Way, especially when weather conditions are favourable and timed around the new moon.

2 SCOTLAND

Scotland is home to many iconic photography locations. Away from the major cities, there are plenty of places where you can capture natural rock formations, abandoned castles and lakes in the foreground – making for some fascinating night-sky compositions.

3 NORTHERN ENGLAND

The north of England, including regions such as North Yorkshire, Cumbria and the Lake District, is also popular. Northumberland, home of Hadrian's Wall and other amazing historic locations, is a Dark Sky Park, and a great place to photograph the stars.

4 SOUTHERN ENGLAND & WALES

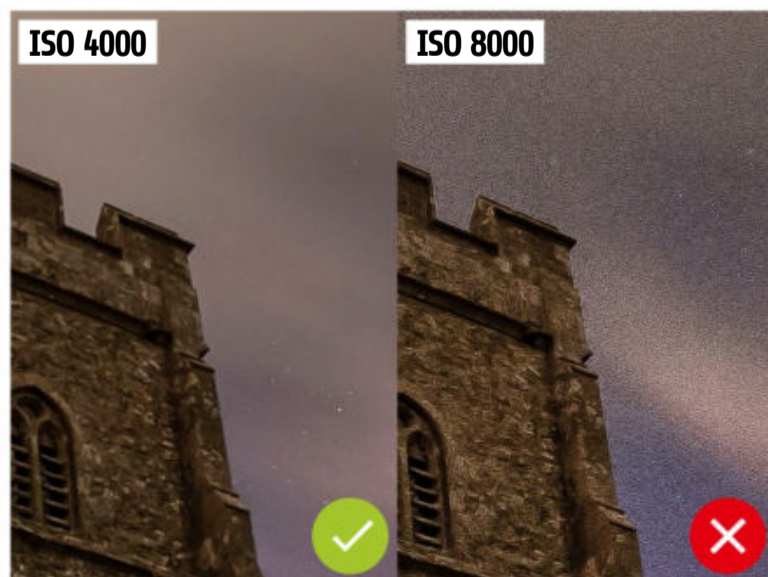
There are plenty of iconic locations to choose from, including the UNESCO World Heritage site at Stonehenge, Dorset's Jurassic Coast, and in Wales, the Brecon Beacons National Park, the bioluminescence from the Gower Peninsula and the natural beauty of the Isle of Anglesey.

5 CORNWALL

The south-west of England, including Devon and Cornwall, has beautiful dark skies and popular photography locations, including St Michael's Mount, Botallack tin mine and Tintagel, amongst others. If the aurora comes this far south, you're in luck!

TOP TIP: SIGNAL TO NOISE RATIO

When photographing the aurora, be mindful of the signal-to-noise ratio (SNR) and your ISO values. Make sure not to push the ISO setting too high, as this has the potential to increase the noise in your image. Experiment with aperture, ISO and shutter speed settings to find the combination that delivers the cleanest results.



S U B S C R I B E

SUBSCRIBE TODAY AND ENJOY
PHOTOGRAPHY WEEK FOR
JUST 39¢/39P AN ISSUE*



To find out how you can get **Photography Week** delivered straight to your device every week for just a few pennies, simply search for **Photography Week** on any of the platforms below

AVAILABLE ON YOUR DEVICE NOW!



<https://apple.co/2RjoIOa>



<http://bit.ly/2txbB2B>



<http://bit.ly/36kQ7TC>

*Available for a limited time only. Standard subscription offer varies across platforms/devices – please refer to specific store for the most up-to-date offer



GuruShots

We've joined up with online photo game GuruShots to print the winning images from the Winter Wonders challenge

GuruShots is billed as the world's leading photo game. It's an online photography platform conceived to give global exposure to people who love taking photographs. GuruShots members start out as Newbies and compete with other photographers to win challenges, increase their ranking on the site and eventually

progress to coveted 'Guru' status.

Challenges are voted on by Gurus and the wider GuruShots community, and there's a fresh competition brief – such as this Winter Wonders challenge – every day. Challenge winners receive prizes from GuruShots' sponsors, including Lowepro, Kodak and Lensbaby.

<https://bit.ly/3HrvnyJ>

SPONSORED CONTENT

GURUSHOTS 'WINTER WONDERS' CHALLENGE

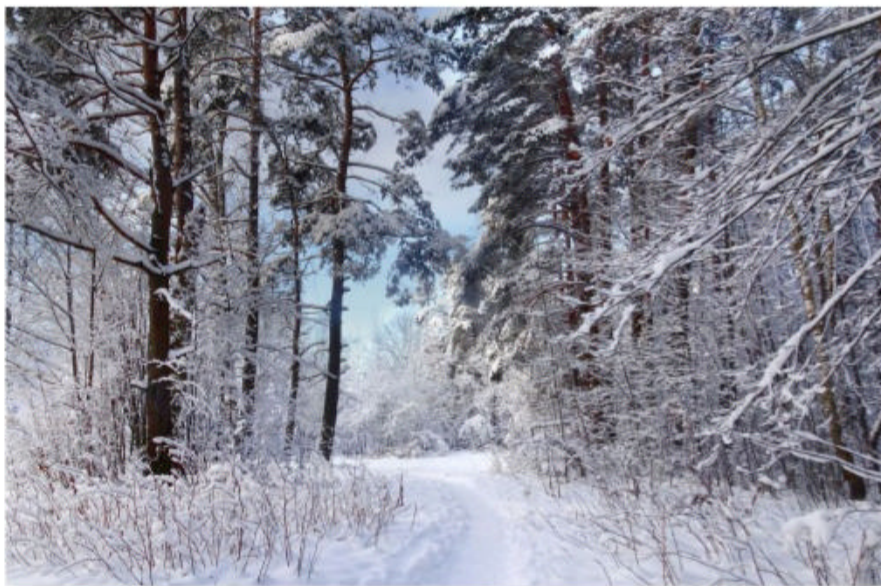


<https://bit.ly/3HrvnyJ>

SPONSORED CONTENT
GURUSHOTS 'WINTER WONDERS' CHALLENGE



Above, from top-left to bottom-right: **Irina** Switzerland, **Will** United States, **Zuza Kosejková** Czech Republic, **Lily Xu** Germany, **Yana Raaga** Latvia, **Bajkó Tamás** Hungary.



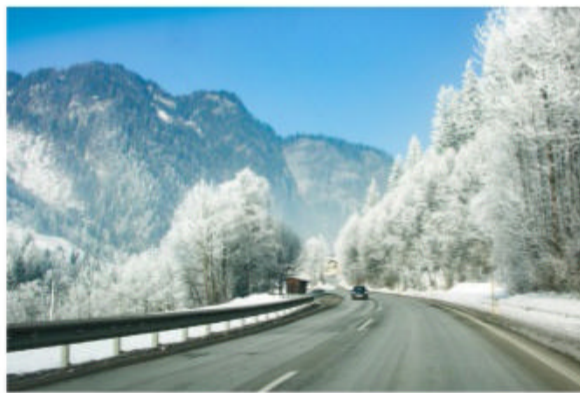
Above, from top-left to bottom-right: **Arta Berzina** Latvia, **Petr Moravec** Czech Republic, **Guy Wilson** Israel, **Witold Steblik** Poland.

<https://bit.ly/3HrvnyJ>

SPONSORED CONTENT
GURUSHOTS 'WINTER WONDERS' CHALLENGE



Above, from top-left to bottom-right: **Jeanne** Canada, **Norma George** UK, **Juhani Pölönen** Finland, **No Turbo Merja** Finland.



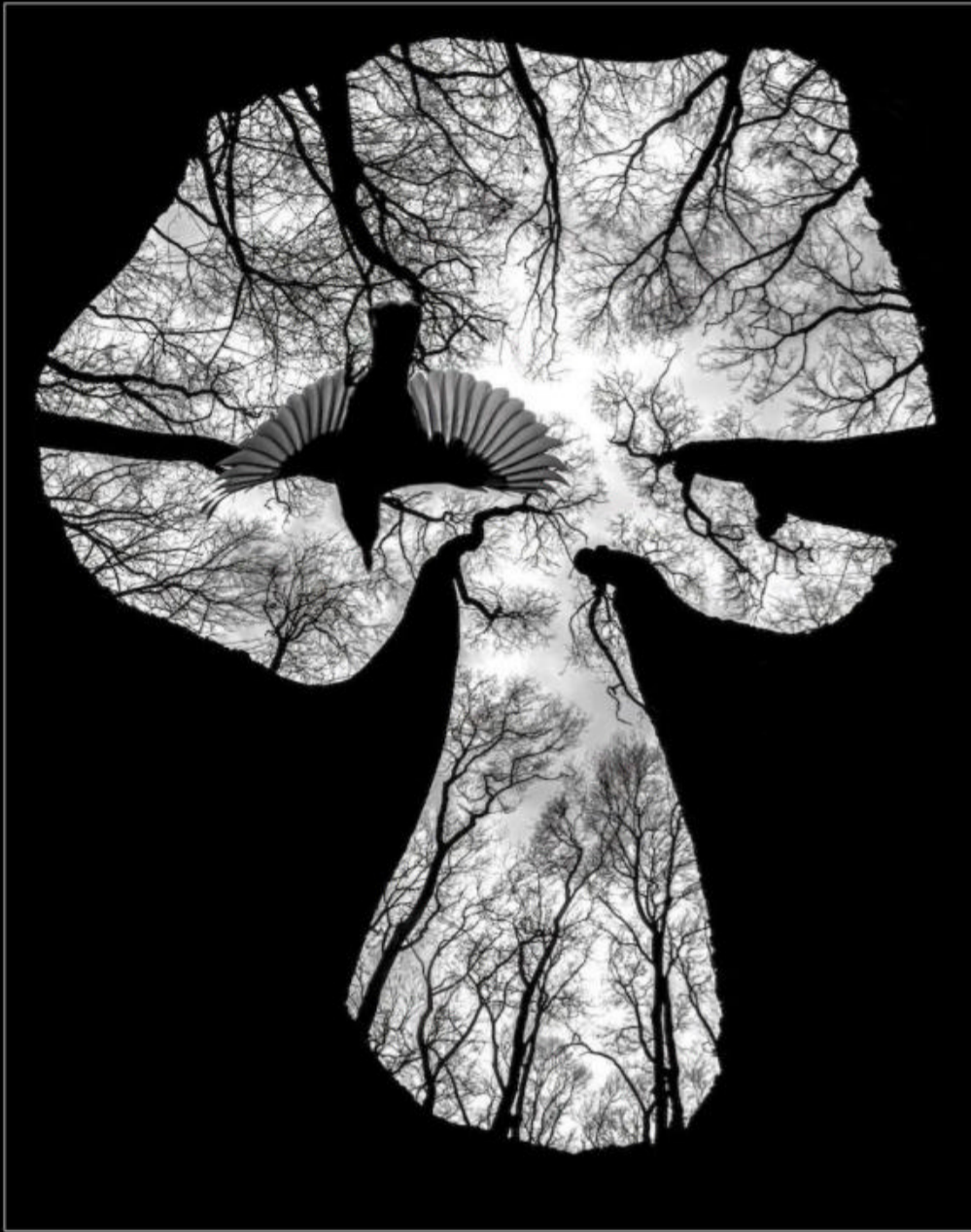
Above, from top-left to bottom-right: **Roxanne Collins** United States, **Simona L. Neumann** Romania, **Violetta Wiczorek Kuchciak** United States, **Anita Hansen** Norway, **Irene Waters** Australia, **Csaba Petrény** Hungary.

<https://bit.ly/3HrvnyJ>

I N S P I R A T I O N

IT'S COOL, THAT

THE BEST THING WE'VE SEEN THIS WEEK



Images © The photographer and courtesy Close-Up Photographer of the Year

Above: *The Bird of the Forest* by Csaba Daróczi, Overall Winner and Winner, Animals. Right, top: *Wood Ants Firing Acid Secretion* by René Krekels, Winner, Insects. Right: *Beach Grass* by Gerhard Vlcek, Winner, Micro

INVENTIVE BIRD SILHOUETTE STUMPS PHOTO CONTEST JUDGES

Image captured from inside a tree stump wins Close-Up Photographer of the Year

A striking and ingeniously composed image captured from inside a hollowed-out tree stump has won first prize in the latest Close-Up Photographer of the Year competition.

Hungarian photographer Csaba Daróczi was crowned the overall winner for his black-and-white image *The Bird of the Forest*, which shows a Eurasian nuthatch silhouetted against sky, within a natural frame created by the outline of the stump.

Daróczi captured the image in a forest near his home, using a GoPro Hero 11 Black. After coming across the tree stump he hit on the idea of placing his camera inside, and used a sunflower to attract birds and insects into the frame.

The contest, which is supported by Affinity Photo 2, attracted almost 12,000 entries across categories including Insects, Animals and Fungi. Click the link to see more images at the competition website



CRASH COURSE

ESSENTIAL PHOTO SKILLS MADE EASY

SILKY SMOOTH

Landscape pro Stu Meech takes advantage of overcast conditions by turning a drab seascape into a minimalist long exposure

1 I shot this minimalist seascape at Southbourne Beach in Dorset in southern England on a cold winter's afternoon, just before sunset. The overcast sky matched the sea pretty well, so the conditions were ripe for a simple, minimalist composition. I used a long exposure to smooth out the clouds and sea, to further blend them together, while adding a little motion into the photo.

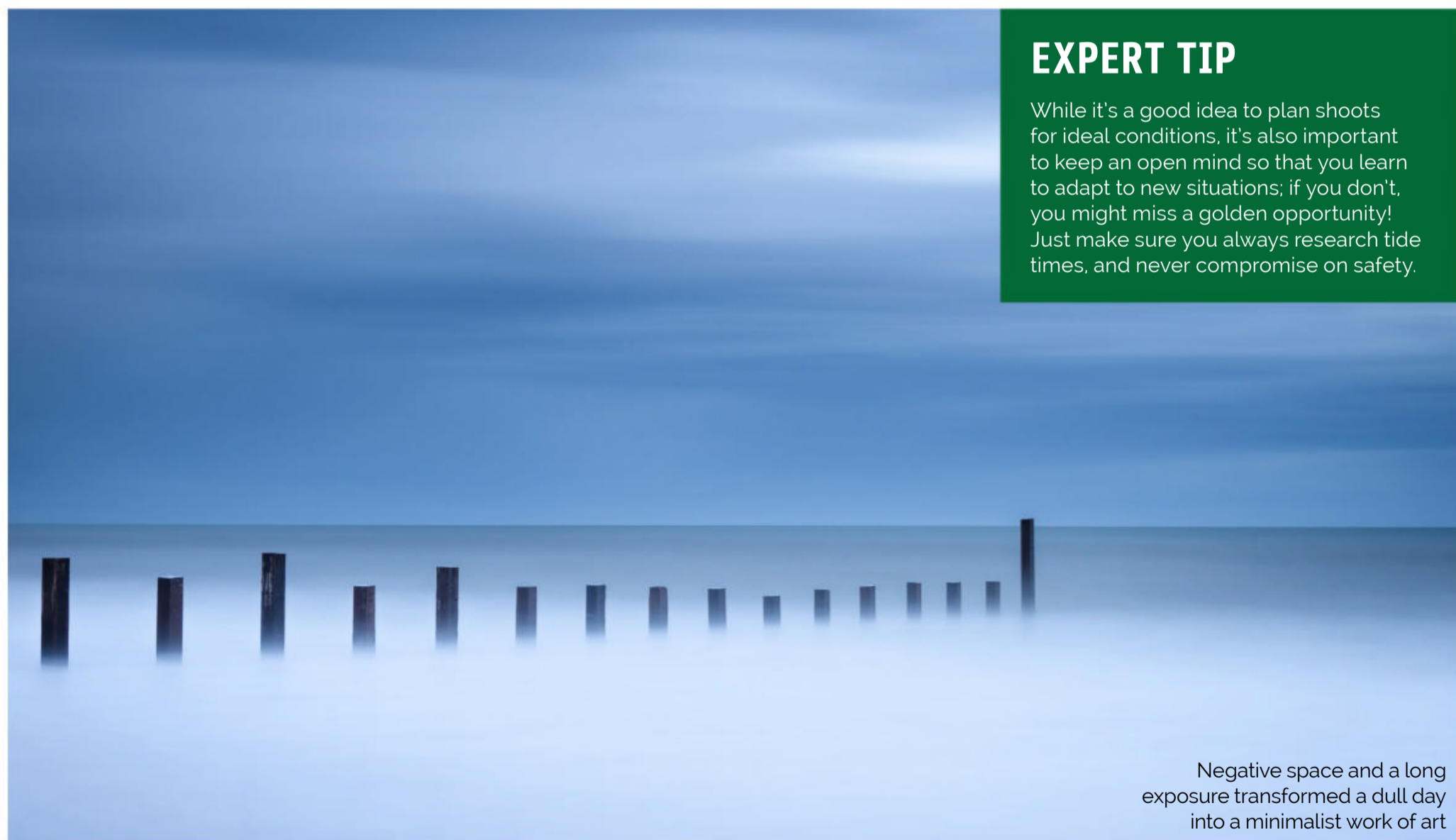
1 PLAY THE FRAME GAME Composition is one of the most important factors when capturing a photograph. Even with an interesting subject, a poor composition can lead to a weak image. Minimalism is often about creating space, so I chose to place the horizon on the lower third of the image to frame more of the sky. I then used the posts to lead across the photo from the left-hand side.

2 FOCUS BEFORE YOU FILTER Long exposures allow you to blur clouds and water, amplifying the minimalist feel. If you're using an ND filter, you'll need to focus before you attach it. Use single-point AF to focus on your subject. If you're not using back-button focus, you'll need to switch to manual focus so the autofocus doesn't try to refocus or 'hunt' when the ND filter is attached.

CAMERA Nikon D750 LENS 24-120mm f/4 EXPOSURE 123 secs, f/5.6, ISO100

EXPERT TIP

While it's a good idea to plan shoots for ideal conditions, it's also important to keep an open mind so that you learn to adapt to new situations; if you don't, you might miss a golden opportunity! Just make sure you always research tide times, and never compromise on safety.



Negative space and a long exposure transformed a dull day into a minimalist work of art

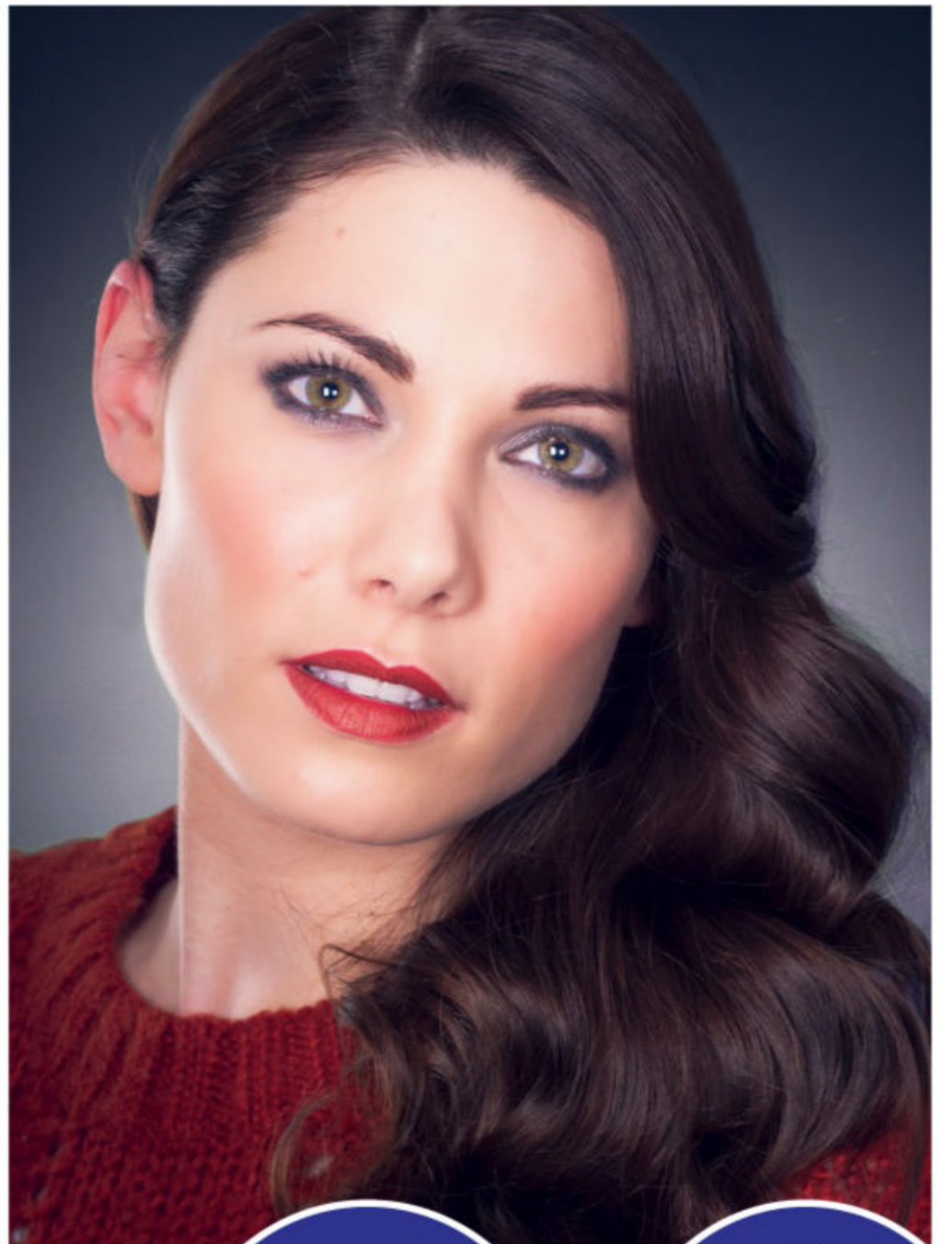
3 FIND YOUR BASE EXPOSURE Before you attach the ND filter, take a photo to make sure your base exposure is correct. If it isn't, amend your settings accordingly, while sticking to your base ISO. If you've been using Aperture Priority mode, make a note of your settings, because you'll be switching to Manual mode in the next step. Taking a test shot also gives you another chance to review your composition.

4 DO THE MATHS Using manual mode ensures that your settings don't change when the ND filter is attached. If your exposure is over 30 secs, you'll need to use Bulb or Time mode. If it's under and you're using a mirrorless camera, you can eyeball your exposure; DSLR users will need to use an app like Long Exposure Calculator to work out the long exposure via their base shutter speed and strength of ND.

5 FILTER AND FIRE! Now that you've focused and set the correct exposure, you can attach your ND filter; if you're using square filters, make sure you slide them into the groove that's closest to the lens. A shutter release cable will allow you to fire the shutter without introducing any camera shake, and is essential if you're using Bulb mode; if you don't have one you can use Exposure Delay Mode or the self-timer.

CAMERA RAW & LIGHTROOM

LEARN ESSENTIAL EDITING SKILLS FAST!



HOW TO...

USE SMART PORTRAIT MASKS

Discover the AI face-masking tools in Camera Raw and Lightroom with James Paterson

Introduced back in 2021 and having seen a raft of updates since, the Masking panel has been one of the best improvements to Lightroom and Camera Raw in recent years. Intelligent AI-powered tools allow us to isolate intricate objects or backgrounds with a couple of clicks, without the need to spend time painstakingly masking out areas by hand. In particular, portrait lovers have been treated to an array of masking features that enable us to target parts of a face or body with ease.

Enhancing portraits is often about making delicate changes to different

parts of a face, perhaps to lift the whites of the eyes, boost the iris or soften the skin. Previously, these kind of local adjustments would require manual masking with a brush, but now we're offered a list of attributes that can be targeted automatically, like hair, skin or eyes. Once targeted, we can make changes to those areas, using an array of tonal tools that now include Curves. As such, we can make a series of powerful local adjustments to our portraits, and like all raw edits made in Camera Raw or Lightroom, these changes remain non-destructive and endlessly editable.



WATCH THE VIDEO
<https://bit.ly/3Hrvgia>



DOWNLOAD THE
PROJECT FILES
<https://bit.ly/3vI6zQg>

ON A PC OR MAC

EXPERT TIP

Rather than working over the whole image as normal presets do, Adaptive Presets use the power of AI masking to target specific parts of an image.

To coincide with People Masking tools, you'll find a set of Adaptive Presets for common portrait fixes like teeth whitening and hair smoothing. Click the Preset icon in the toolbar, then scroll down to the Adaptive Portrait set to experiment.

LENS TEST

EXPERT OPINION ON THE LATEST KIT



NIKKOR Z 600MM F/6.3 VR S

This lens packs powerful telephoto reach and mighty performance into an unfeasibly lightweight package

www.nikon.co.uk [£4,999/\\$4,797](#)

The Nikon Z 600mm f/6.3 VR S follows in the footsteps of a couple of impressive Nikon super-telephoto lenses. It has the same kind of design as the Z 800mm f/6.3 VR S, based on the use of a Phase Fresnel element in the optical path, which is used in lighthouse beams and theatrical stage lights to enable a smaller, more lightweight design. The Z 600mm is smaller and lighter than the Z 800mm, weighing 1.47g, compared with 2.38g. It has a regular 95mm filter attachment thread at the front, whereas the Z 800mm takes 46mm drop-in filters at the rear.

A more recent comparable lens is the Nikon Z 180-600mm f/5.6-6.3 VR, which has the advantage of zoom versatility, although it's not a top-flight

S-line lens and is heavier than the Z 600mm, at 2.14g. Cost-wise, the Z 600mm is over £1,000 / \$1,000 cheaper than the Z 800mm, but is three times the price of the Z 180-600mm zoom.

Key features

The 600mm focal length of this lens makes it ideal for action, sports and wildlife photography, when you need distance between where you're standing and the subject you're shooting. In these scenarios, it's generally a better fit than the Z 800mm prime, whereas the latter is better for small subjects, such as bird photography. Another upside of the super-telephoto focal length is that you can compress the effect of

1 The inclusion of a Phase Fresnel element enables a relatively compact and manageable design.

2 With a relatively lightweight build, the lens has been engineered to make handheld telephoto shooting a breeze.

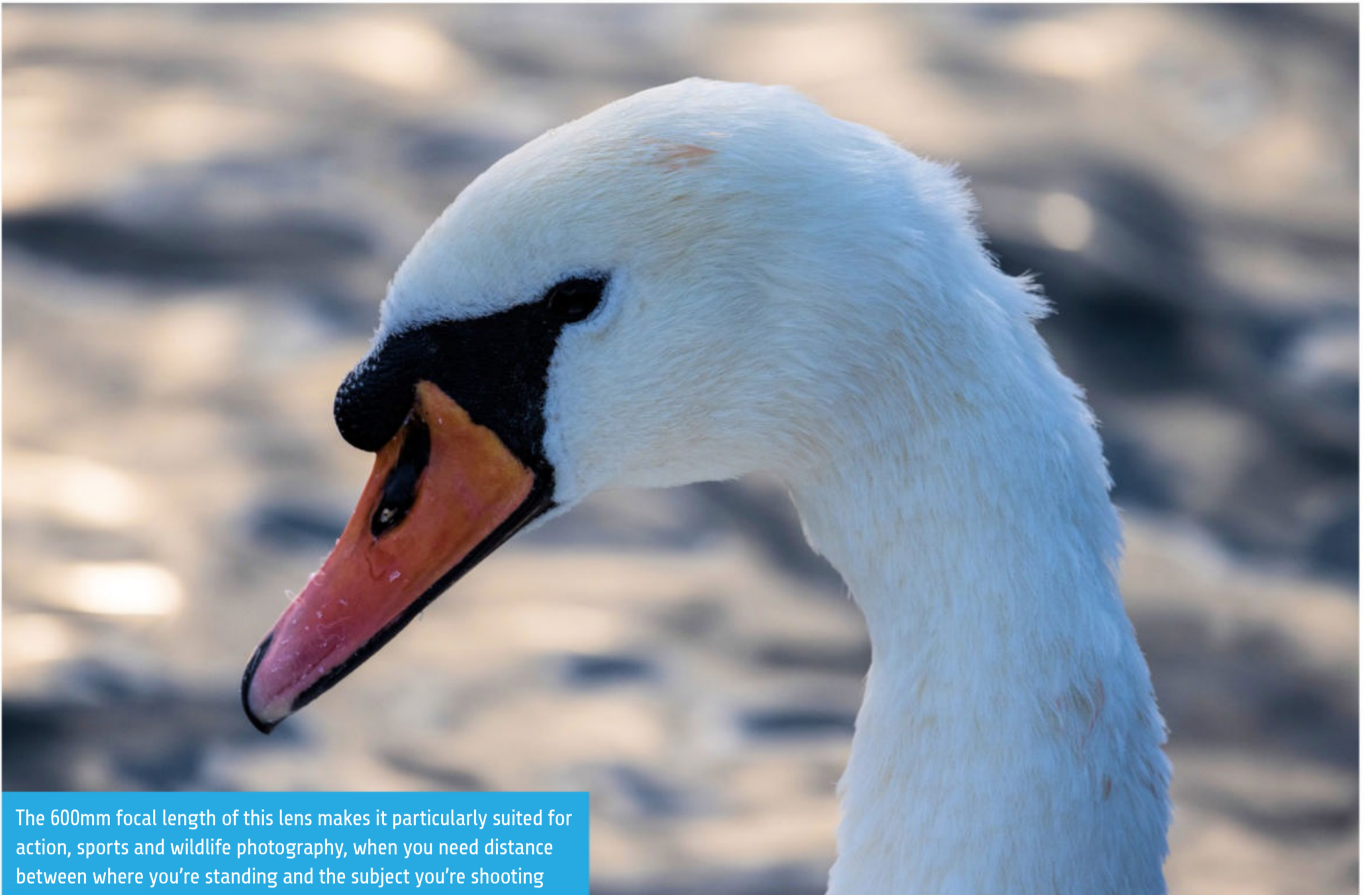
3 Handling exotica includes one customisable L-fn (Lens-function) button at the rear and four towards the front.

perspective, giving a different look to landscape images.

The inclusion of a Phase Fresnel element enables a comparatively downsized design. For a 600mm prime, the dimensions of 106.5 x



LENS TEST NIKKOR Z 600MM F/6.3 VR S



The 600mm focal length of this lens makes it particularly suited for action, sports and wildlife photography, when you need distance between where you're standing and the subject you're shooting

278mm and front-mounted 95mm filter attachment thread make the lens manageable. That's even more true of the overall weight, which shrinks from 1,470g to just 1,390g if you remove the tripod mount. By way of comparison, the lens is barely any heavier than the Nikon Z 70-200mm f/2.8 VR S trinity zoom.

Other optical highlights include two ED (Extra-low Dispersion) elements and an SR (Short-wavelength Refractive) element, to enhance clarity and colour accuracy while minimising chromatic aberrations. Nano Crystal Coat is applied to guard against ghosting and flare, while a fluorine coating on the front element helps to repel moisture and greasy finger marks, as well as making the element easier to clean.

Engineered to make handheld super-telephoto shooting a breeze thanks to its relatively lightweight build, the lens features optical Vibration Reduction, rated at 5.5 stops. This is



The long focal length enables a tight depth of field. Defocused areas look smooth, with pleasing bokeh

further enhanced to six stops when on recent Nikon bodies that support Syncro VR, including the Z 8, Z 9 and Z f. Autofocus is based on a linear stepping motor system, which is designed to be suitably fast for tracking fast-moving subjects in sports and wildlife photography, as well as being virtually silent in operation.

If you want to super-size your telephoto reach, the lens is compatible with Nikon's 1.4x and 2.0x Z-system teleconverters, albeit with the usual 1-stop or 2-stop reduction in

aperture, respectively. Naturally, using the lens on a DX-format Z camera gives you a 1.5x 'effective' boost in focal length to 900mm, with no aperture reduction.

Build and handling

Build quality is everything you'd expect from Nikon's top-flight S-line lenses. It feels solid, features a comprehensive set of weather seals, and, for added security, there's also a Kensington lock slot. The lightweight build makes for easy handling, but



LENS TEST NIKKOR Z 600MM F/6.3 VR S



For outright sharpness, the lens performs excellently across the entire image frame



The autofocus is fast enough for tracking rapidly moving subjects, and virtually silent in operation

also, thanks to the Phase Fresnel element, the centre of gravity is near the rear of the lens, so it feels natural in handheld shooting. Rubber grip rings help ensure a secure and comfortable hold when shooting handheld.

Further handling exotica includes one customisable L-fn (Lens-function) button at the rear, and a rank of four customisable L-fn buttons towards the front. These are useful for the

S P E C S

- MOUNT:** NIKON Z **LENS CONSTRUCTION:** 21 ELEMENTS IN 14 GROUPS **ANGLE OF VIEW:** 4.2° **MAX APERTURE:** F/6.3 **MIN APERTURE:** F/32 **DIAPHRAGM BLADES:** 9 **MIN FOCUSING DISTANCE:** 4M **MAX MAGNIFICATION RATIO:** 0.15X **FILTER SIZE:** 95MM **DIMENSIONS (L X D):** 278 X 106.5MM **WEIGHT:** 1,470G (INCL TRIPOD RING)

likes of AF-On, AF-Lock and AE-Lock, set up via the host camera's Custom Settings menu. The same goes for the primary and secondary control rings, which can be useful for stepless aperture control when shooting video. A Memory Set button is also here, as well as an autofocus range limiter to lock out the short end of the range.

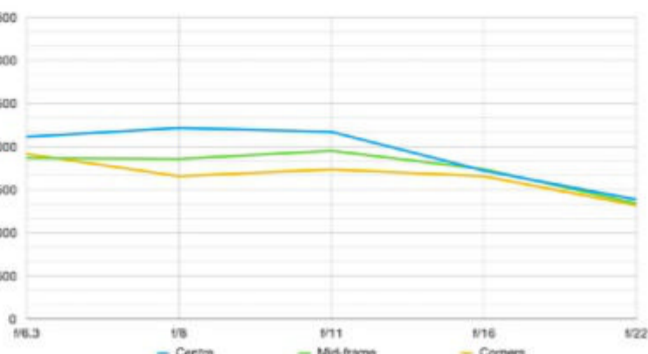
Performance

Although the f/6.3 aperture rating isn't particularly fast, the long focal length of the lens enables a tight depth of field when shooting at this aperture. Defocused areas in images look smooth, with pleasing bokeh. For outright sharpness, the lens performs excellently across the entire image frame, even when shooting wide-open. That's important, as you'll often want to shoot at the widest aperture to maintain fast shutter speeds for freezing movement without the need to bump up your camera's ISO setting, which can degrade image quality.

Coupled with advanced tracking options in recent Nikon Z cameras, particularly for people, animals and vehicles, the lens's autofocus system proved super-quick at acquiring subjects during our testing, and agile for tracking them through quick and erratic movements. Overall, every aspect of image quality and all-round performance is top-drawer.

Matthew Richards

SHARPNESS



Even shooting wide-open, which you'll often want to do given the modest aperture rating, the Z 600mm is both super-sharp and remarkably consistent, right out to the extreme edges and corners of the frame.

FRINGING

0.51

There's virtually no colour fringing to be seen, even in terms of lateral chromatic aberration out at the edges and corners of the image frame, where it typically tends to be more problematic.

DISTORTION

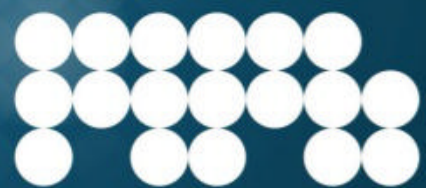
0.66

It's not quite a zero-distortion lens, although it does come pretty close. With no in-camera correction applied, there's only the slightest hint of pincushion distortion, although that generally goes completely unnoticed in real-world shooting.

VERDICT

Think about super-tele primes, and heavyweight lenses that are a pain to lug around for handheld shooting spring to mind. This 600mm lens uses a Phase Fresnel element in its optical path, and crafty design work makes it a lightweight that's a real joy to use. That joy is enhanced by terrific image quality and all-round performance, along with exotic handling characteristics, but it doesn't come cheap.

★★★★★



mpb.com



Don't sit on it. **Sell it.**



More than half of us have camera gear we no longer use.

Sell your gear and upgrade your visual storytelling.

Trade up for new adventures.

Upgrade, completed.



Do you have unused camera gear? MPB is the largest global platform to buy, sell and trade used gear.

Get an instant quote



Buy • Sell • Trade
Create ●

See mpb.com/info/unused-tech-survey for more details.

A P P S

MORE GREAT MAGAZINES FROM
THE MAKERS OF PHOTOGRAPHY WEEK



N-PHOTO

N-Photo is a monthly magazine for Nikon photographers, and is packed with technique and Photoshop video lessons every month.



<http://bit.ly/3atHlf0>



<https://apple.co/2TNE26T>



PHOTOPLUS

PhotoPlus is a monthly magazine for Canon photographers that features expert advice, tips and video tutorials on all things Canon.



<http://bit.ly/30Fo0l0>



<https://apple.co/2vaIdzw>



DIGITAL CAMERA WORLD

A monthly magazine that aims to improve your photography with an inspirational mix of amazing images and how-to articles.



<http://bit.ly/2RER7g6>



<https://apple.co/2RBrZqG>



DIGITAL PHOTOGRAPHER

The monthly kitbag essential for enthusiast and pro photographers, packed with tutorials, exclusive interviews and the latest reviews.



<https://bit.ly/3IH4ucX>



<https://apple.co/2S3f6ff>

C R E D I T S

Photography Week

photographyweek@futurenet.com



FACEBOOK

<http://bit.ly/39py9lg>



TWITTER

<http://bit.ly/2vGadLP>



FLICKR

<http://bit.ly/2VIgsJ0>

www.digitalcameraworld.com

ADVERTISING

UK Commerical Sales Director

Clare Dove
clare.dove@futurenet.com

Head of Market

Matthew Johnston
matthew.johnston@futurenet.com

Account Sales Director

Matt Bailey
matt.bailey@futurenet.com

MARKETING

Head of Acquisitions

Helen Harding

LICENSING

International
Licensing Director

Rachel Shaw
licensing@futurenet.com

Editor Jeff Meyer

jeff.meyer@futurenet.com

Art Editor

Alvin Weetman

Production Editor

Mike McNally

Reviews Editor

Gareth Bevan

Lab Manager

Ben Andrews

REGULAR CONTRIBUTORS

Mike Harris, Marcus Hawkins,
Rod Lawton, James Paterson,
Matthew Richards

SENIOR CREATIVE TEAM

Content Director

Chris George
chris.george@futurenet.com

Senior Art Editor

Warren Brown

SENIOR MANAGEMENT

Senior Vice President – Games,
Entertainment, Tech & Sports

Kevin Addley

Managing Director – Music,
Photography & Design

Stuart Williams

Head of Art & Design

Rodney Dive

APP SUPPORT

Digital Controller

Jason Hudson



Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR) www.futureplc.com
Chief Executive Officer Jon Steinberg
Non-Executive Chairman Richard Huntingford
Chief Financial and Strategy Officer Penny Ladkin-Brand
Tel +44 (0)1225 442 244



Disclaimer
All contents © 2024 Future Publishing Limited or published under licence. All rights reserved. No part of this magazine may be used, stored, transmitted or reproduced in any way without the prior written permission of the publisher. Future Publishing Limited (company number 2008885) is registered in England and Wales. Registered office: Quay House, The Ambury, Bath BA1 1UA. All information contained in this publication is for information only and is, as far as we are aware, correct at the time of going to press. Future cannot accept any responsibility for errors or inaccuracies in such information. You are advised to contact manufacturers and retailers directly with regard to the price of products/services referred to in this publication. Apps and websites mentioned in this publication are not under our control. We are not responsible for their contents or any other changes or updates to them. This magazine is fully independent and not affiliated in any way with the companies mentioned herein.

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

