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FOR BEGINNERS







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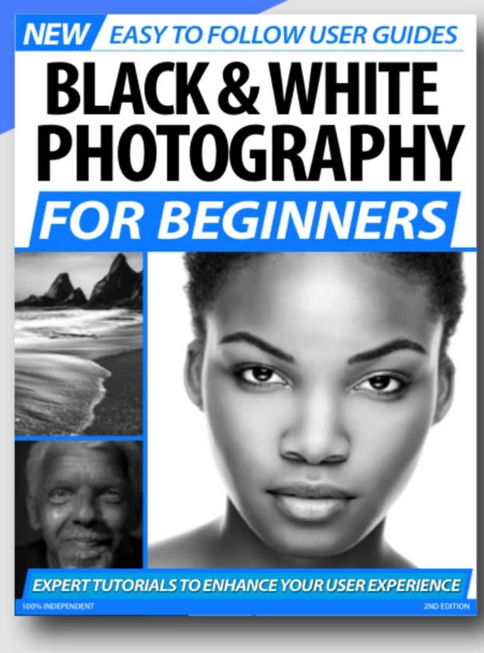
2ND EDITION

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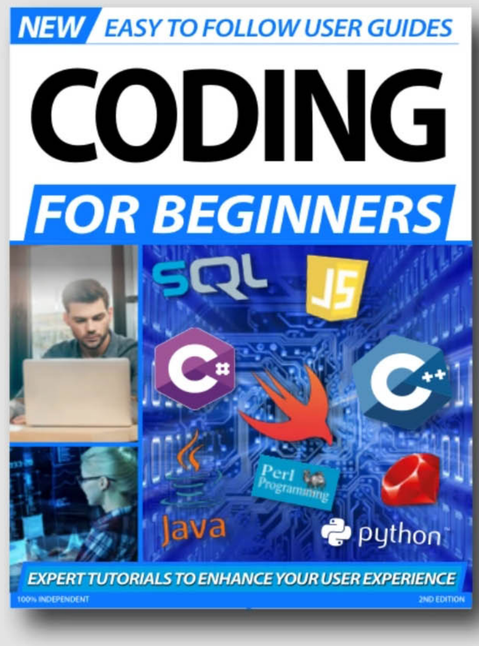




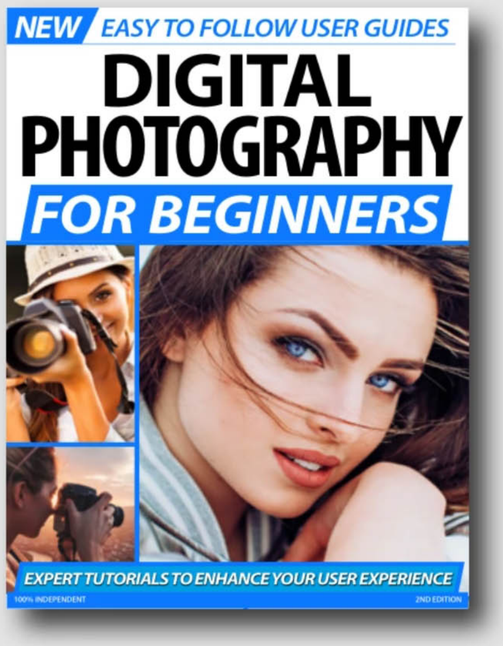
























PHOTOSHOP

FOR BEGINNERS

Starting something new can be daunting. Learning a skill or mastering a new piece of hardware is tough. Even tougher if you have no-one at hand to help. Conversely as the complexity of our consumer technology increases, the size of the requisite instruction manual decreases or in some cases it simply disappears. At numerous times in our lives we have all been "beginners", there is no shame in that fact and rightly so. How many times have you asked aloud, "What does this button do?". "Why doesn't that work?". "What do you mean it doesn't do that?". "HELP!". At the start of any new journey or adventure we are all beginners but fortunately for you we are here to stand beside you at every stage.

Over this extensive series of titles we will be looking in great depth at the latest consumer electronics, software, hobbies and trends out of the box! We will guide you step-by-step through using all aspects of the technology that you may have been previously apprehensive at attempting. Let our expert guide help you build your technology understanding and skills, taking you from a novice to a confident and experienced user.

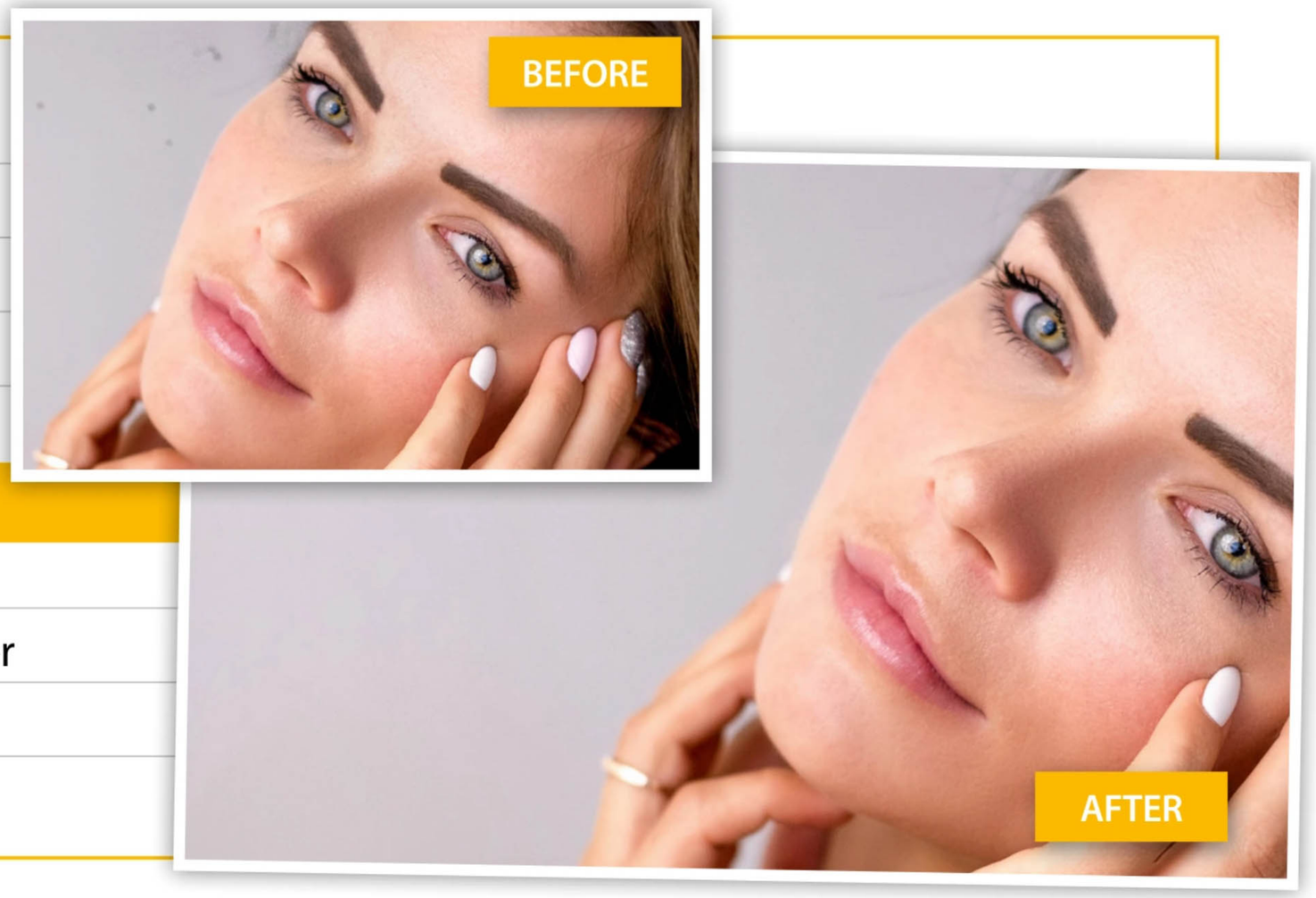
Over the page our journey begins. We would wish you luck but we're sure with our support you won't need it.

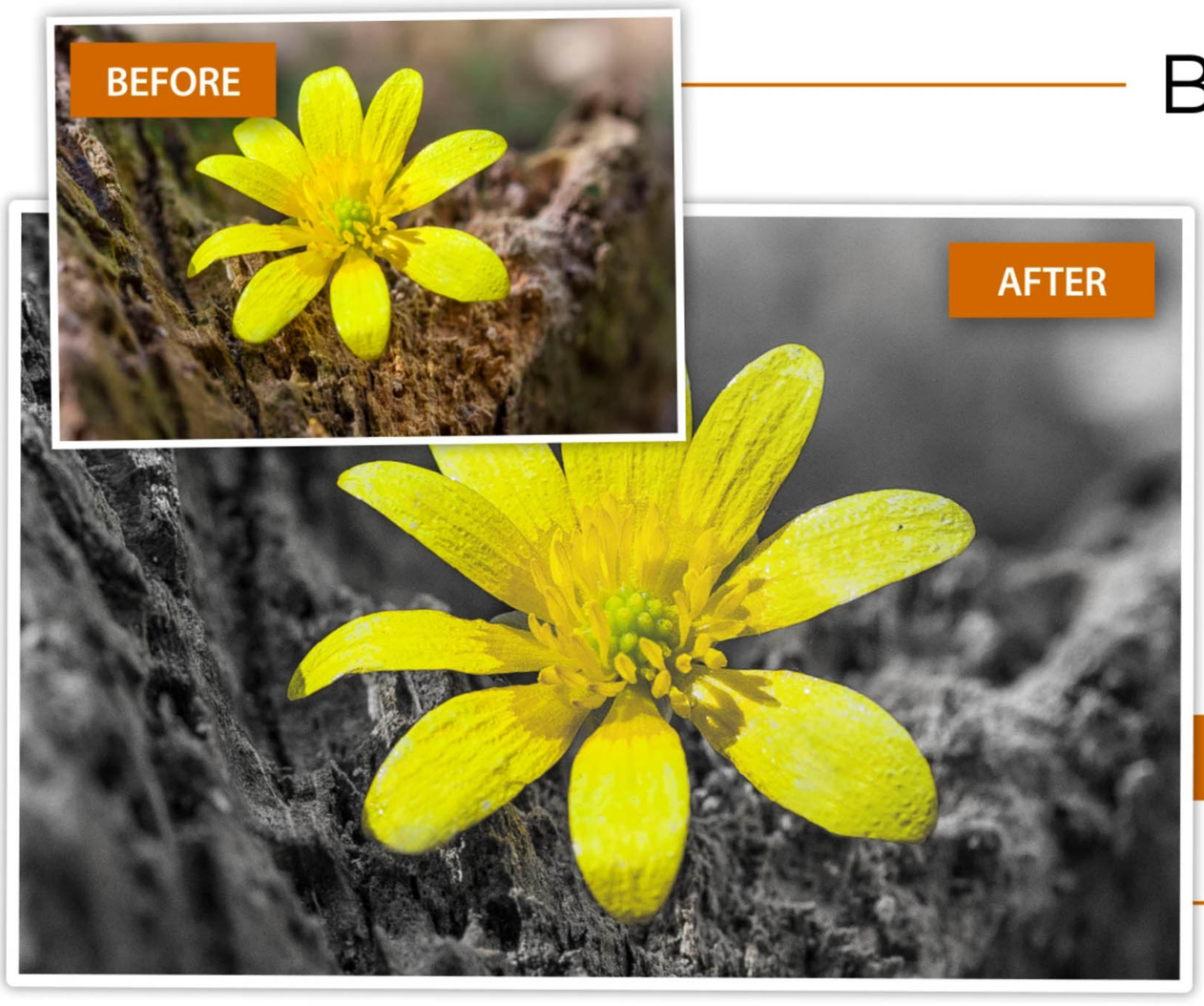


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Photoshop For Beginners

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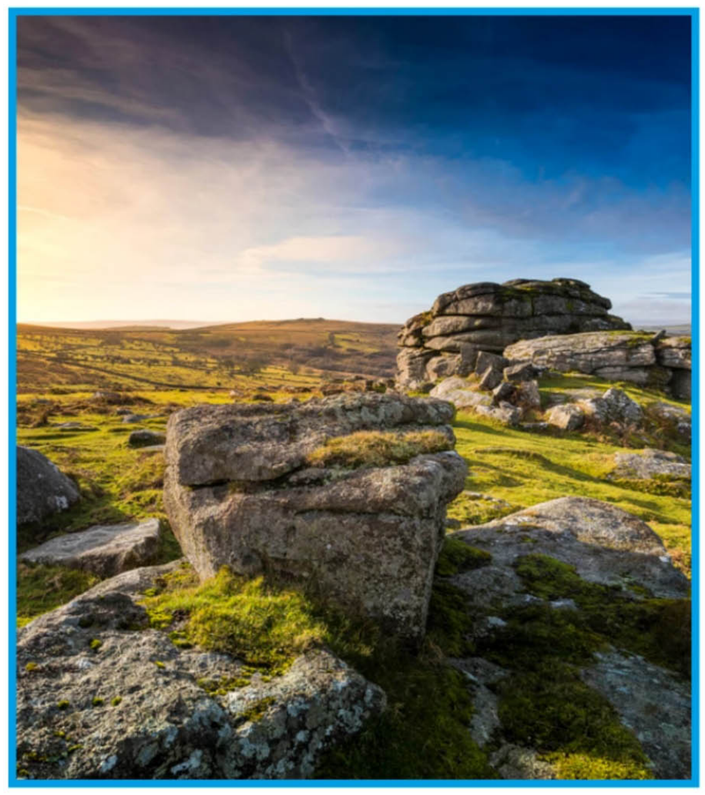


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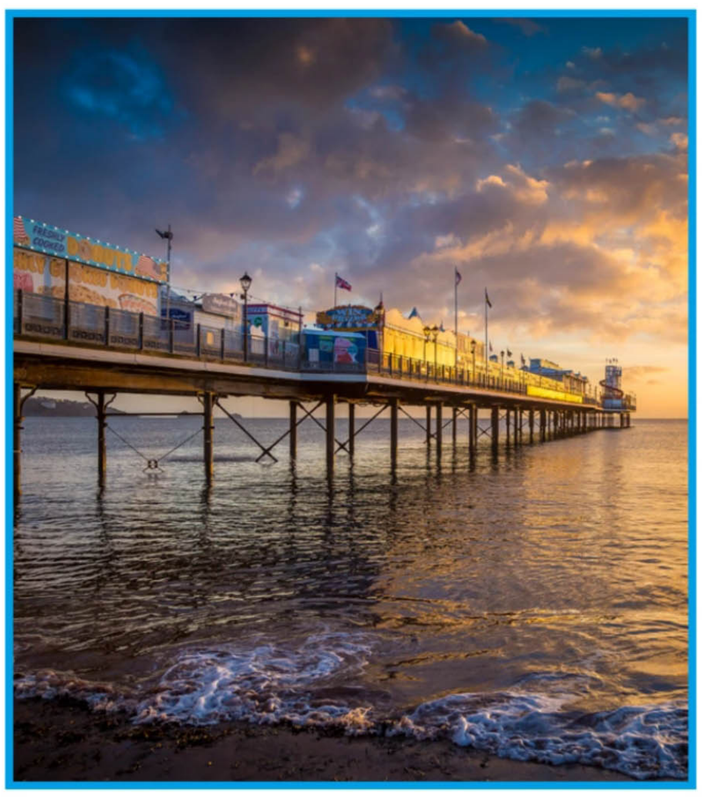
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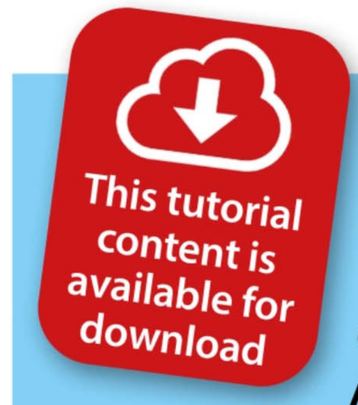






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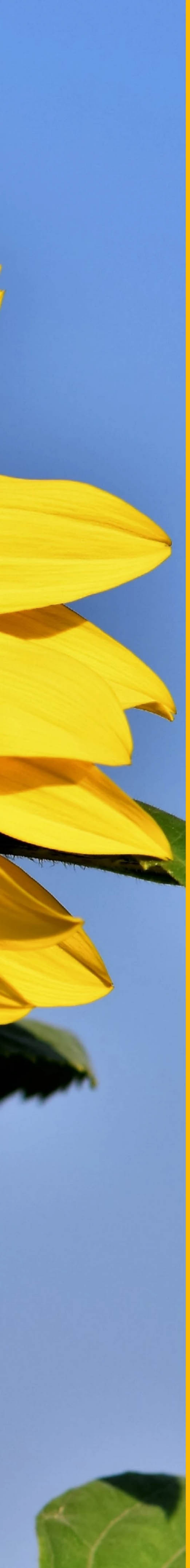


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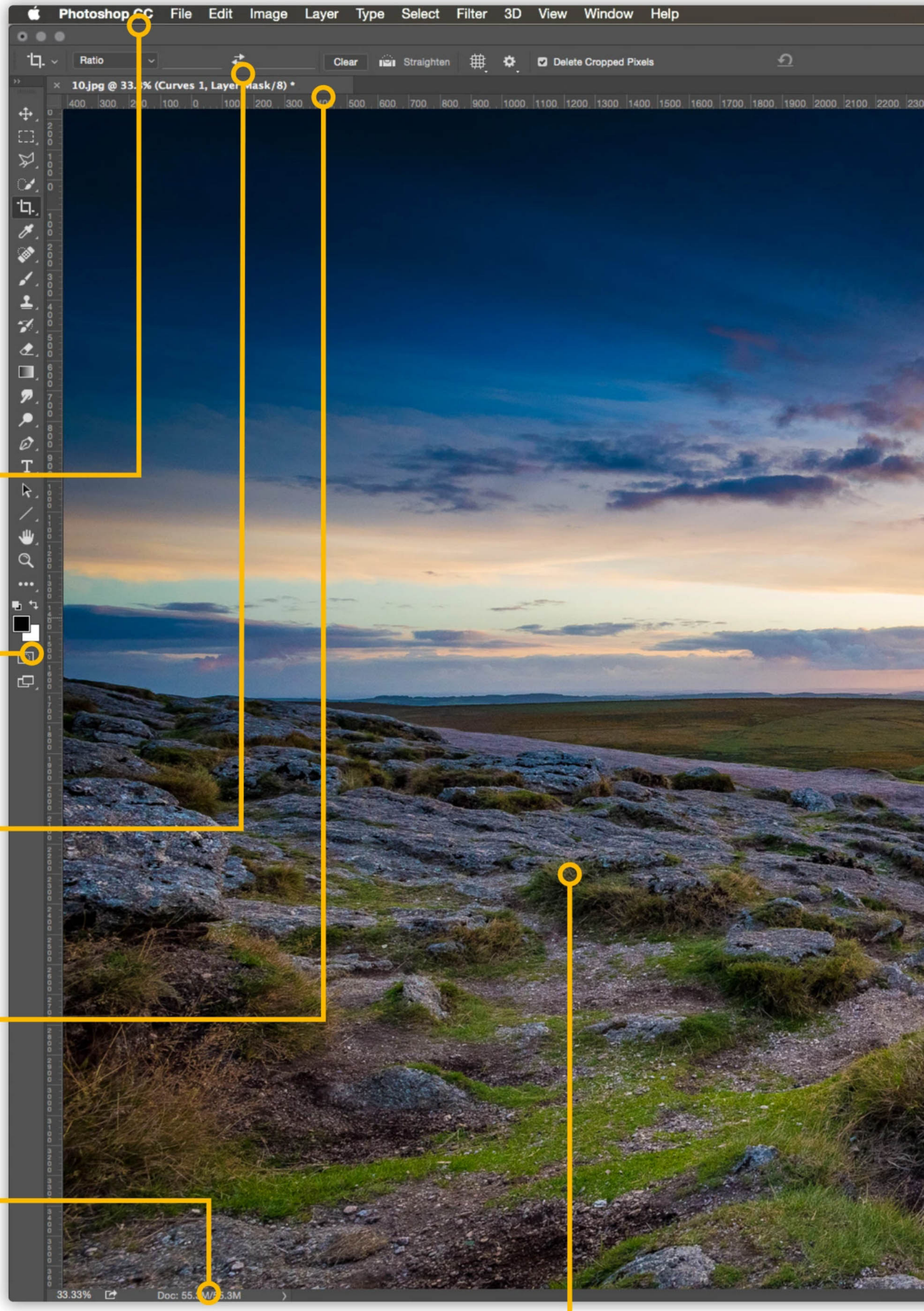
Getting Started

The beauty of this program is that it has the power to let you create the most complex pieces of digital art, or it can simply let you adjust the brightness of a favourite photo. You can use as few or as many of its vast range of tools as you want. We begin by looking at the main tools that Photoshop offers for editing and manipulating images.

Main Interface

This is Photoshop's graphic user front end

Photoshop has a great interface, with a dark slate grey work area, slightly lighter menu and palette bars and sharp white text. It looks great and really makes photos stand out from the background. Let's see what it has to offer.



Menu Bar
You'll find all the options menus here. Read on for more details.

Tool Palette
Here you'll find your main editing tools. The following pages look at the individual tools and what you can do with them.

Tool Option Bar
For each tool on the palette there are options, such as brush size or softness. You'll find them in this area.

Document Window
Each window you open will have its own tab to identify it. It includes the document name, current scaling and colour space being used.

Document Details
Here you'll find the compressed and real size of your document.

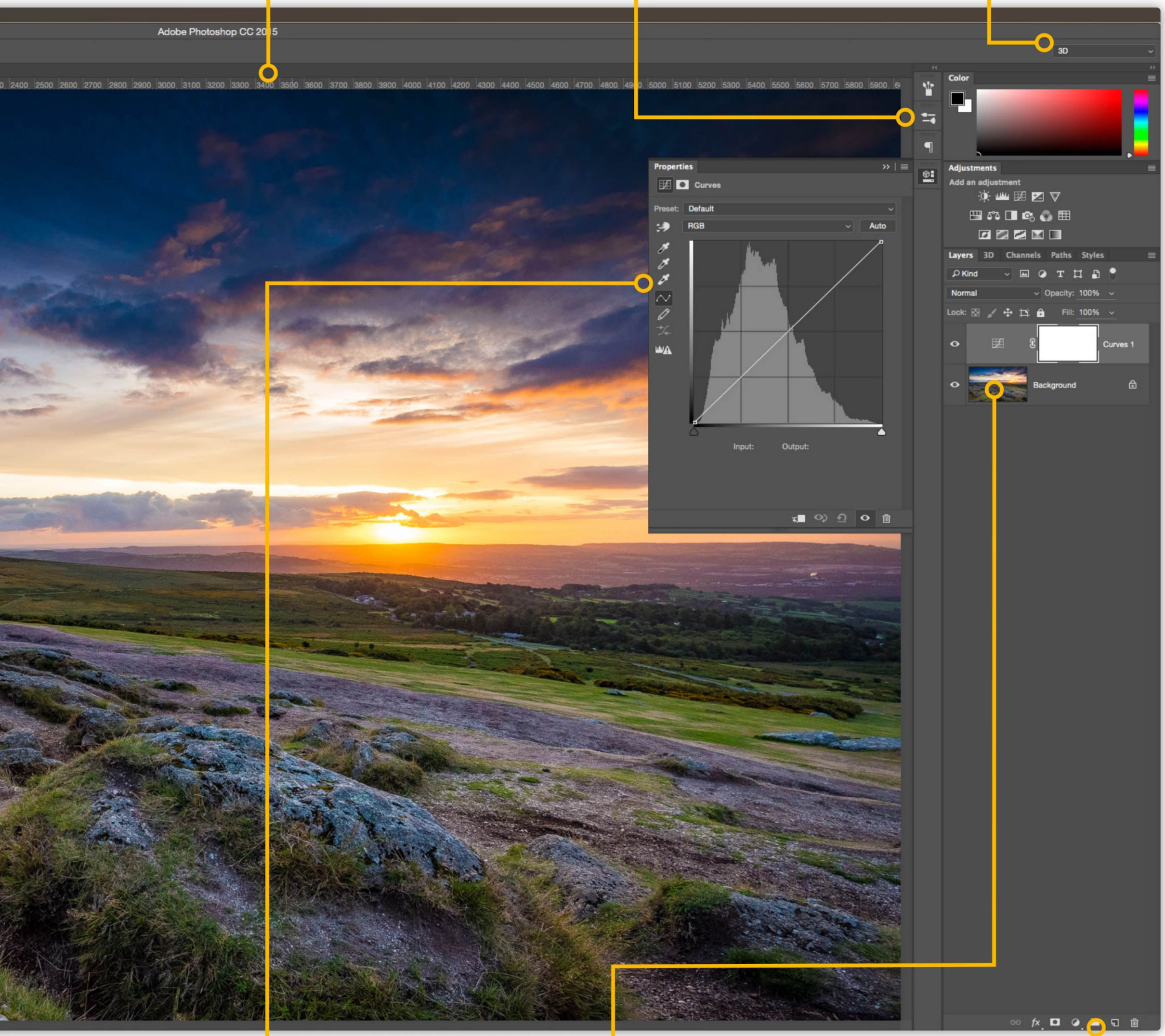
Active Image
The new interface provides a larger area to work on your images, with a darker background colour.

USEFUL TIP
You can set up your own workspaces to reflect the way you work, and save them so that you can quickly switch from one to another.

Rulers
Use these to accurately measure positions on your image, and drag guidelines from here to help line up text and layers.

Palettes
There are a number of interchangeable palettes available, which you can choose from the Window menu.

Workspace Option
Choose between preset workspace arrangements, including 3D workspaces and other user options.



Fly-out Palettes
You can set up your own custom list of frequently used palettes, and access them by clicking on these buttons.

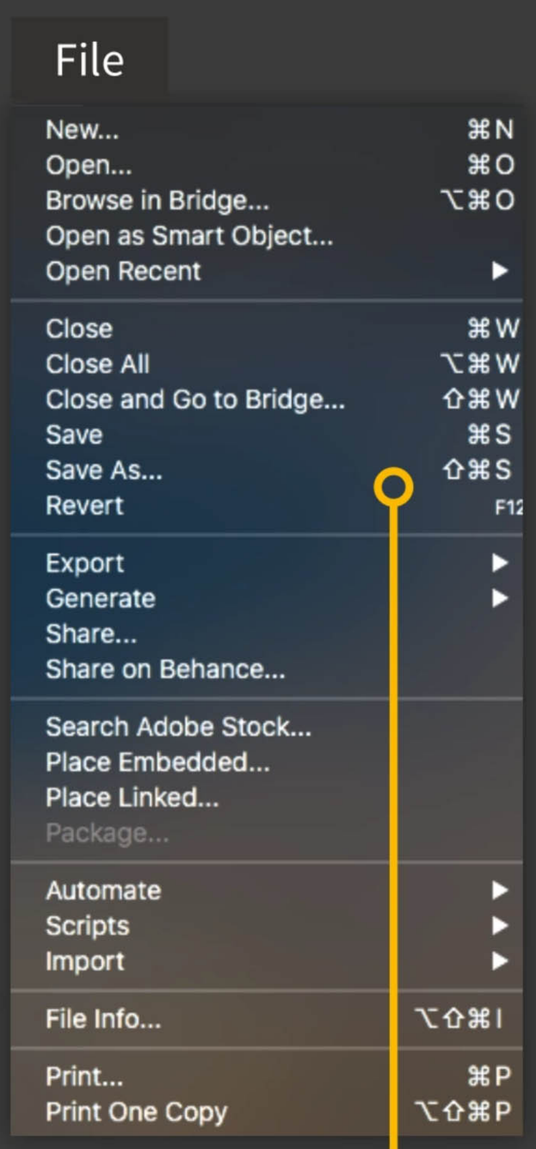
Layer Palette
Here you'll find the layers of the image you're currently working on. Layers at the top of the stack will appear above those below.

Layer Options
Here you can add effects, layer styles, adjustments and other options to your currently active layers.

Menus

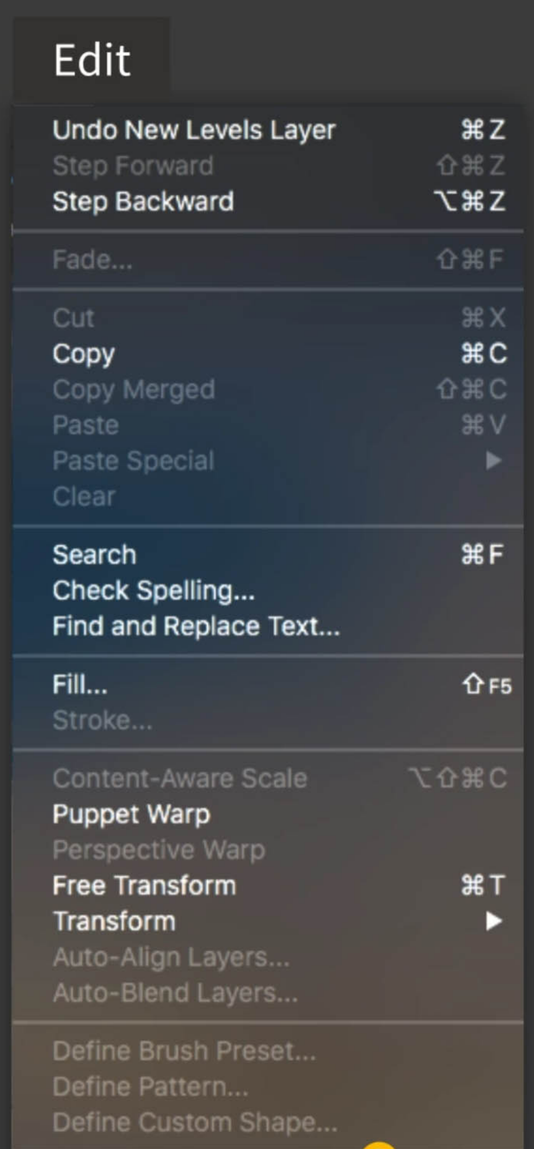
One look at the menus and you begin to understand Photoshop's complexity and versatility

The main interface of Photoshop has no fewer than eleven menus and a Help option, each with many options, and with many additional nested sub-menus. It's vital to become familiar with the contents of the most important ones, because once you know where to look for everything you'll be able to work more quickly, efficiently and confidently. Let's take a look at some of the key menu listings.



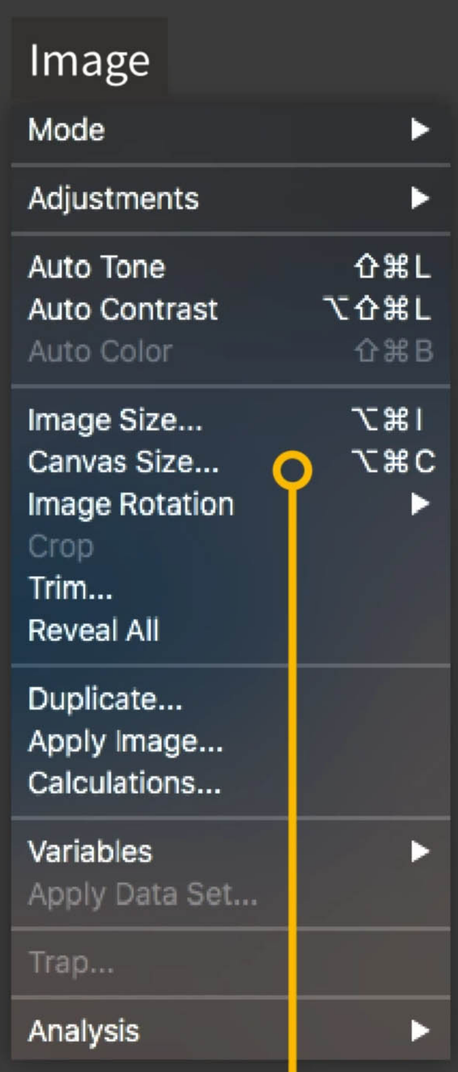
File

The most important options here are New… to create a new document, Open… to open an existing document, Save to save your current project in its default file format and location, and Save As… which gives you the option to save in a different format or location, and to change the file name. Also in the File menu are the important Automate and Scripts sub-menus, which provide advanced batch processing and automated editing options.



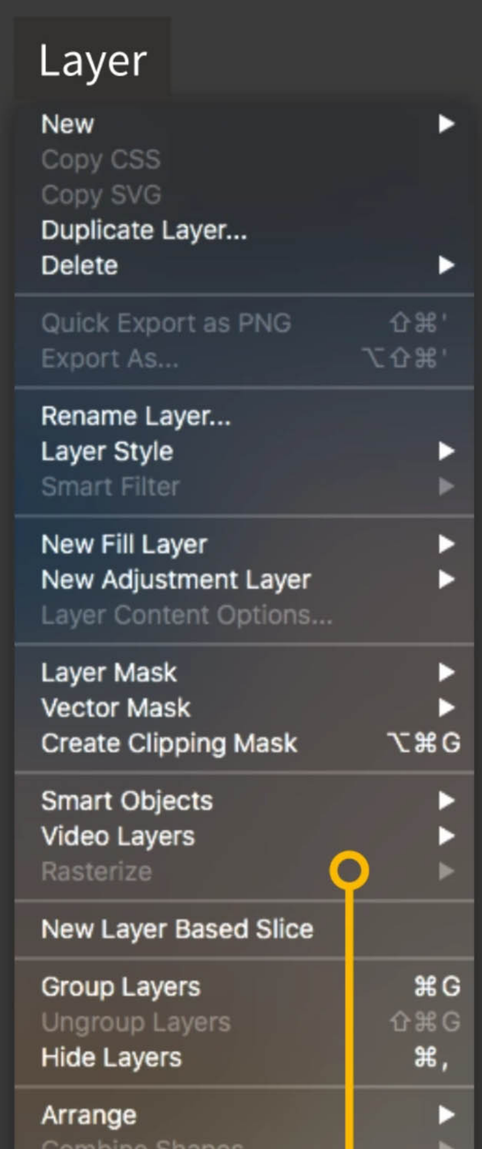
Edit

The Edit menu has many features you'll find familiar if you use a word processor, including Copy, Paste and Cut functions and even a spelling checker, although you'll probably find it quicker to use the keyboard shortcuts for these. You'll also find the useful features Fill, Stroke, Content-aware Scale, Puppet Warp and Free Transform, as well as the colour profiles and Preferences sub-menu.



Image

The Image menu is where you come to make changes to the whole image, including Mode (colour type), Image Size, Canvas Size and Image Rotation, but the most important thing you'll find here is the Adjustments sub-menu, which Adobe could probably have made into a separate main menu in its own right. Under Adjustments you'll find all your main image controls, such as Brightness/Contrast, Levels, Curves, Hue/Saturation and many more. You'll find many of these duplicated on the Adjustment Layer palette.

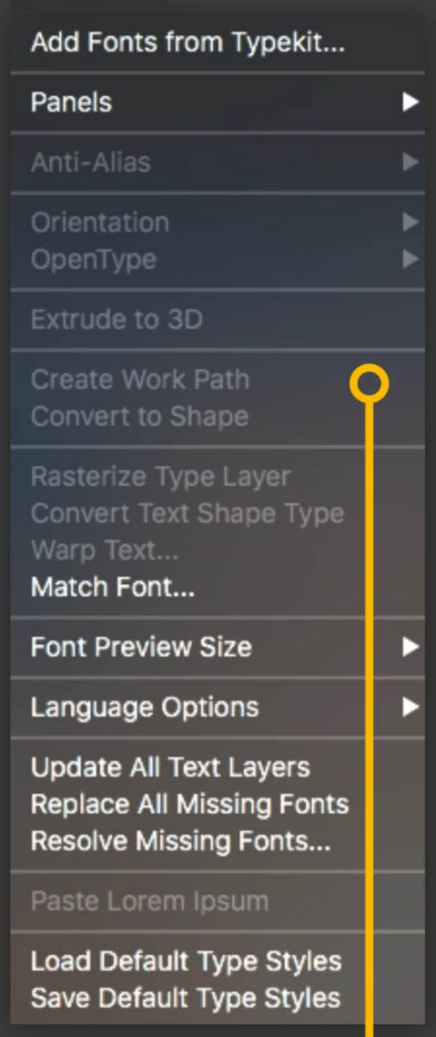


Layer

Layers are a vital feature of Photoshop. The most important options here though are New, which lets you create and name a new layer, and New Adjustment Layer, which adds a non-destructive editing layer to your image. The Merge and Flatten options can also be found here along with Mask and Slice options.

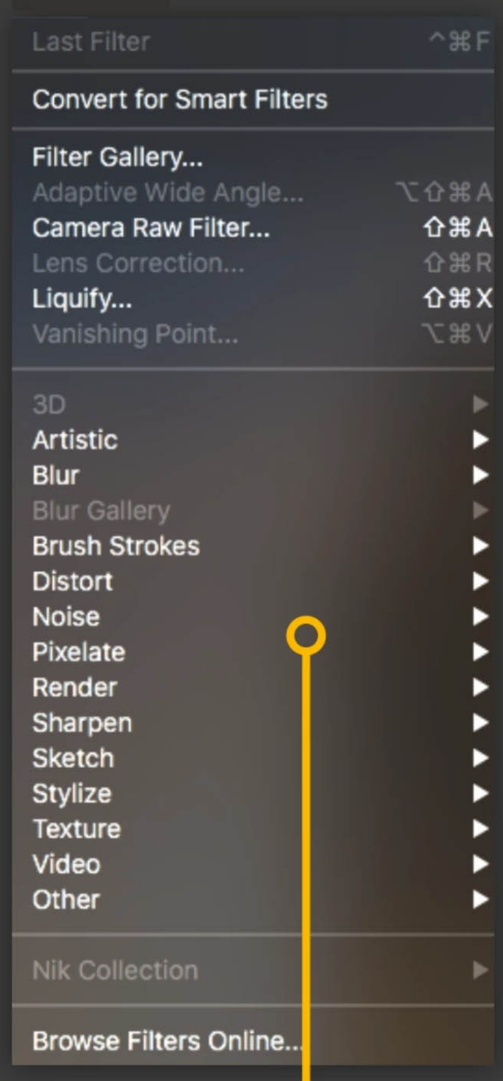


Type



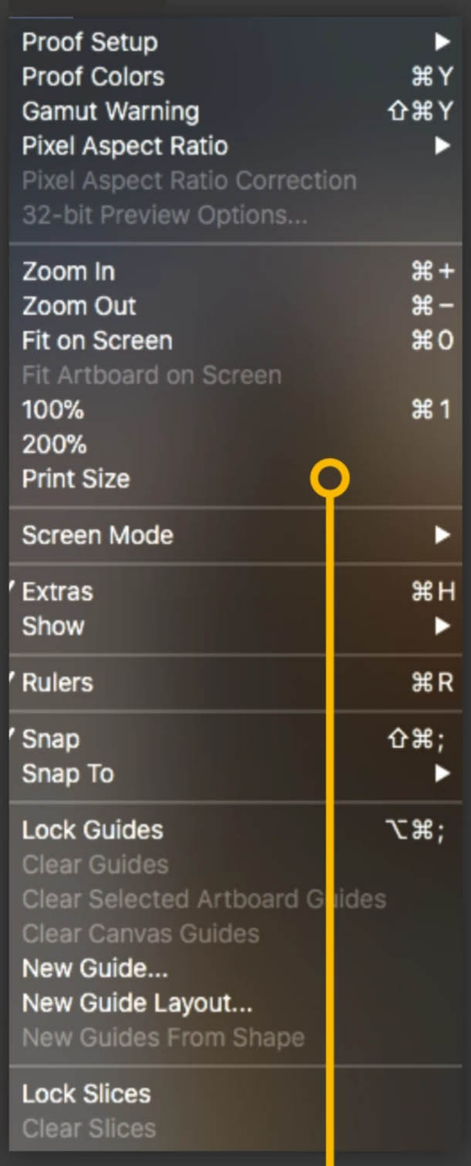
The latest version of Photoshop includes many new text presentation and handling options. Most of these can be found in the fly-out Character and Paragraph panels on the right of the screen or accessed from the Panels option at the top of the menu, but others can be found here, including 3D text, warping, and special foreign language options.

Filter



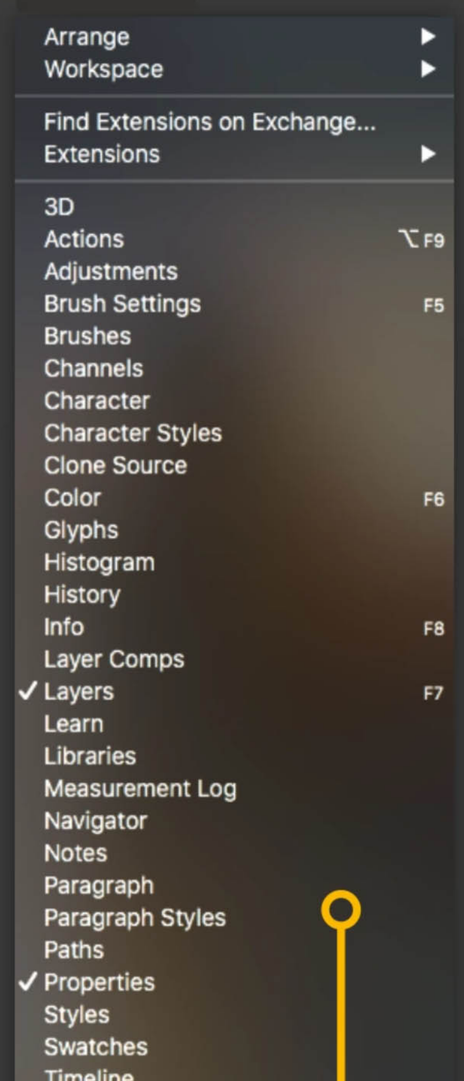
Photoshop CS6 and Creative Cloud saw a major overhaul of the Filters menu, with many new options, including the amazing Adaptive Wide Angle feature. There's the ever-popular Liquify filter, automatic lens distortion correction, as well as a huge range of other filters and effects. Don't go too wild though, most of them are best used sparingly!

View

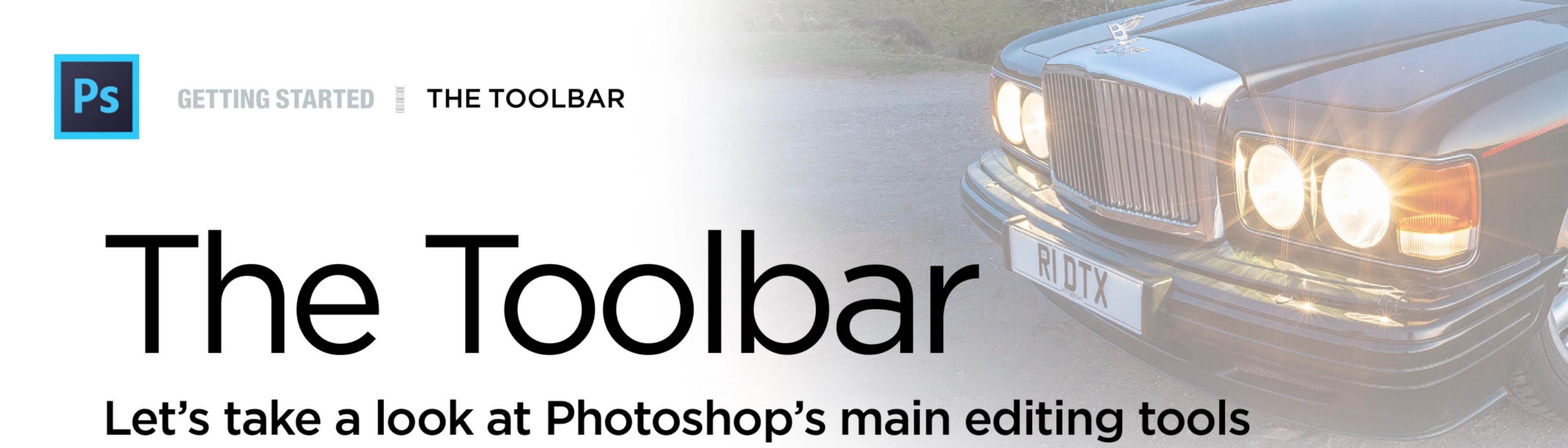


The View menu is home to the basic viewing controls such as zoom level, but again you'll want to control those using shortcuts to save time. You'll also find the very useful controls for the Snap functions, including guide lines, essential when you're laying out a design or composing text on an image.

Window



This isn't a menu you'll be using constantly, but it does hold some very useful features, such as the Arrange and Workspace sub-menus, which allow you to control the layout of tabs, windows and the various tool palettes and panels.



The Toolbar

Let's take a look at Photoshop's main editing tools

The main elements of the Photoshop Toolbar haven't changed all that much since the introduction of Layers and the Move tool with version 3.0, back in 1994. The shape has changed a bit, elongating into a single column to take advantage of today's larger monitors, and a few more tools have been added, but anyone who's familiar with any previous version of Photoshop will soon feel right at home.

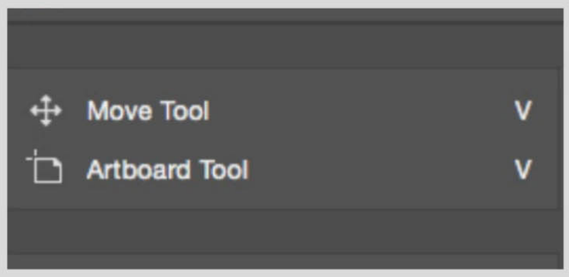
USEFUL TIP

Most of the tools in the toolbar have alternative options, denoted by the small arrow below and right of the icon. Click and hold on the icon to see the pop-up alternative menu. This diagram shows the alternative menus for each tool. You can move the Toolbar around by dragging the border at the top, or switch back to the old two-column look by clicking the double arrow.

MOVE
MARQUEE
MARQUEE LASSO
MAGIC WAND
CROP
EYEDROPPER
SPOT HEALING
BRUSH
CLONE STAMP
HISTORY BRUSH
ERASER
GRADIENT
SMUDGE
BURN
PEN
TYPE
PATH SELECTION
LINE
HAND
ZOOM
EDIT TOOLBAR
SWITCH COLOUR
SET COLOUR
QUICK MASK MODE
SCREEN MODE

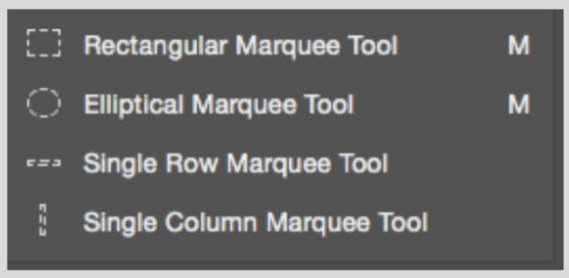
Move

Used to move pixel information on the active layer or selection. You can also create multiple layouts using the Artboard feature.



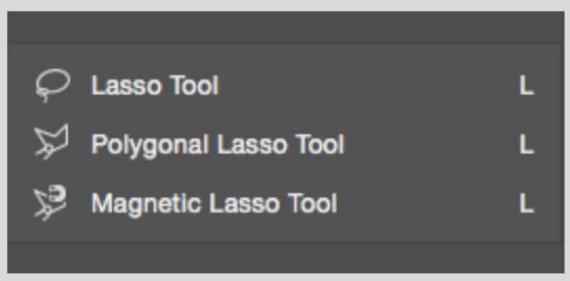
Marquee

The Marquee is used to select an area of the active layer. Alternative options include an elliptical shape and single row or column selections.



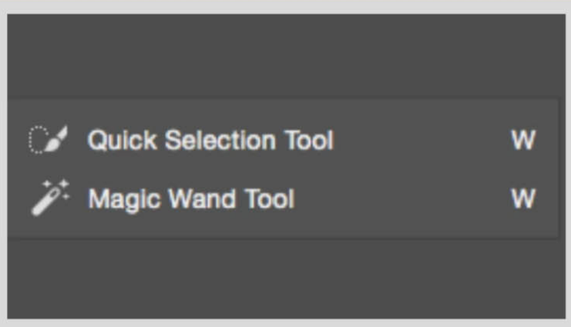
Lasso

The Lasso is also used to make area selections from the active layer, but this time the shape can be irregular, marked out by clicking or drawing a line around the area to be selected.



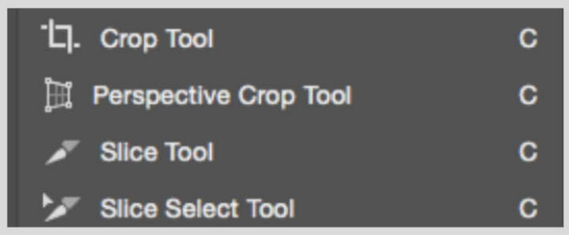
Magic Wand

Yet another area selection tool, this one can select an area based on its colour. The alternative option is Quick Selection, which as the name suggests can be used to paint an area into the selection created.



Crop

The Crop tool has seen a major overhaul in Photoshop CS6, but it still does the same job. Use it to select one area of an image and discard the rest.



Eyedropper

The Eyedropper and its extensive list of alternatives provide you with tools that can tell you more about the image you're working on, such as colour values, sizes and even a tool for counting objects in an image.





Spot Healing

Another tool that has seen some changes in the latest version, the Spot Healing tool is for removing small blemishes such as stray hairs or dust spots from your images.

Spot Healing Brush Tool	J
Healing Brush Tool	J
Patch Tool	J
Content-Aware Move Tool	J
Red Eye Tool	J

Brush

The Brush tool is one of the most basic and most useful for all types of image editing, painting and drawing. Alternatives include the equally useful Pencil tool, as well as colour replacement and colour mixing.

Brush Tool	B
Pencil Tool	B
Color Replacement Tool	B
Mixer Brush Tool	B

Clone Stamp

Clone Stamp is used to copy one area of an image onto another. It can remove any unwanted element in your image.

Clone Stamp Tool	S
Pattern Stamp Tool	S

History Brush

Used in conjunction with the History palette, the History Brush can be used to selectively restore certain areas of an image to a previous state. It's useful if you're making a change to an image.

History Brush Tool	Y
Art History Brush Tool	Y

Eraser

As the name implies, the Eraser tool is a special brush that can delete an area of an image, layer or selection.

Eraser Tool	E
Background Eraser Tool	E
Magic Eraser Tool	E

Gradient

The Gradient tool can apply a fill-in to an area that fades gradually from one colour to another.

Gradient Tool	G
Paint Bucket Tool	G
3D Material Drop Tool	G

Smudge

The Smudge tool, along with its alternatives, can be used to blend and alter colours and details in the image.

Blur Tool	
Sharpen Tool	
Smudge Tool	

Burn

Burn, and its alternatives Dodge and Sponge, are based on photographic darkroom techniques, and are used to selectively lighten, darken images.

Dodge Tool	O
Burn Tool	O
Sponge Tool	O

Pen

The Pen tool is used to draw smooth curves for lines or selections, using something called Bezier curves. They can produce great results.

Pen Tool	P
Freeform Pen Tool	P
Add Anchor Point Tool	
Delete Anchor Point Tool	
Convert Point Tool	

Type

The Type tool is another area that received a major overhaul in version CS6. It is now part of a powerful text system.

Horizontal Type Tool	T
Vertical Type Tool	T
Vertical Type Mask Tool	T

Path Selection

Paths are used for many purposes in Photoshop. Use this tool and its alternative to select a path to use.

Path Selection Tool	A
Direct Selection Tool	A

Line

The Line tool and its alternatives are used to create shapes and paths on your images. It is very useful for graphics work and adding arrows and custom shapes.

Rectangle Tool	U
Rounded Rectangle Tool	U
Ellipse Tool	U
Polygon Tool	U
Line Tool	U

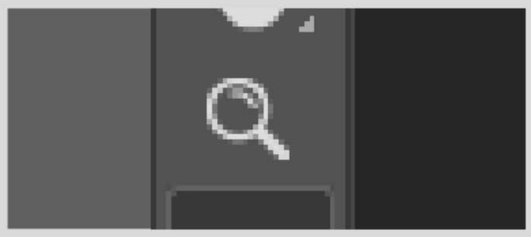
Hand

The hand tool is used to navigate around a large image. It is most often used via its default keyboard shortcut, the space bar.

Hand Tool	H
Rotate View Tool	R

Zoom

This tool simply zooms in to an area of the image. Again it is most often used via a shortcut, in this case CTRL + or CTRL -.



Edit Toolbar

The Edit Toolbar enables you to customise your toolbar to add or remove tools to your specific requirement.



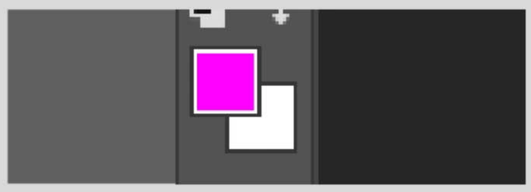
Switch Colour

Clicking on this swaps the current background colour for the current foreground colour.



Set Colour

Clicking here brings up the colour chooser palette, which lets you choose the foreground or background colours.



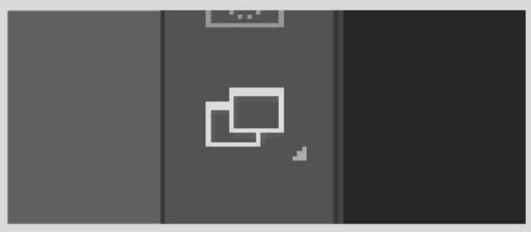
Quick Mask mode

The Quick Mask mode is a great way of making complex selections using the drawing and painting tools.



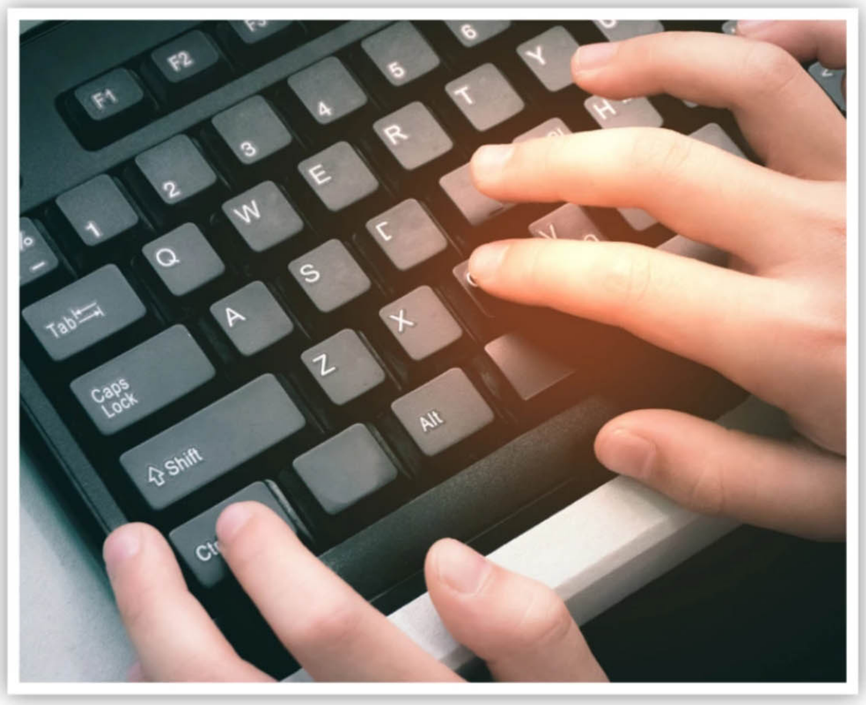
Screen Mode

Click here to switch between the current screen mode and a full-screen view of your current image.



Keyboard Shortcuts

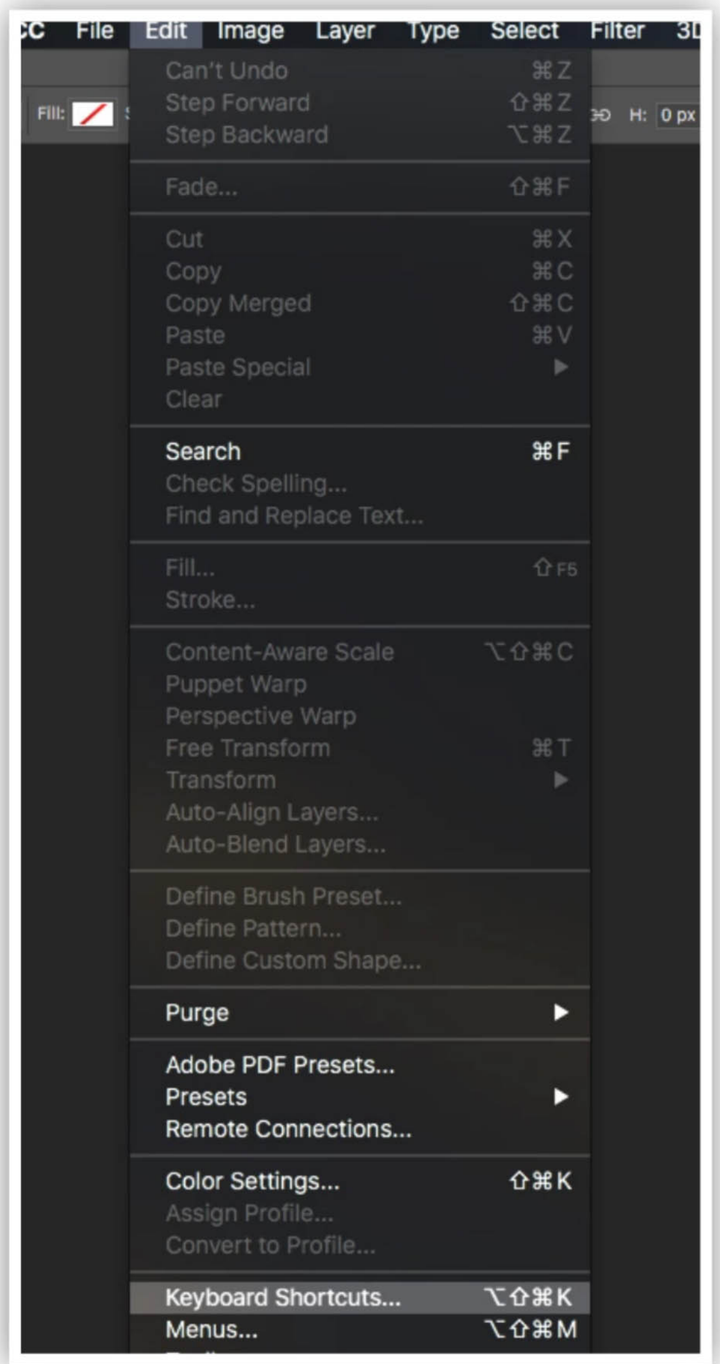
There's always a quicker way of doing almost everything

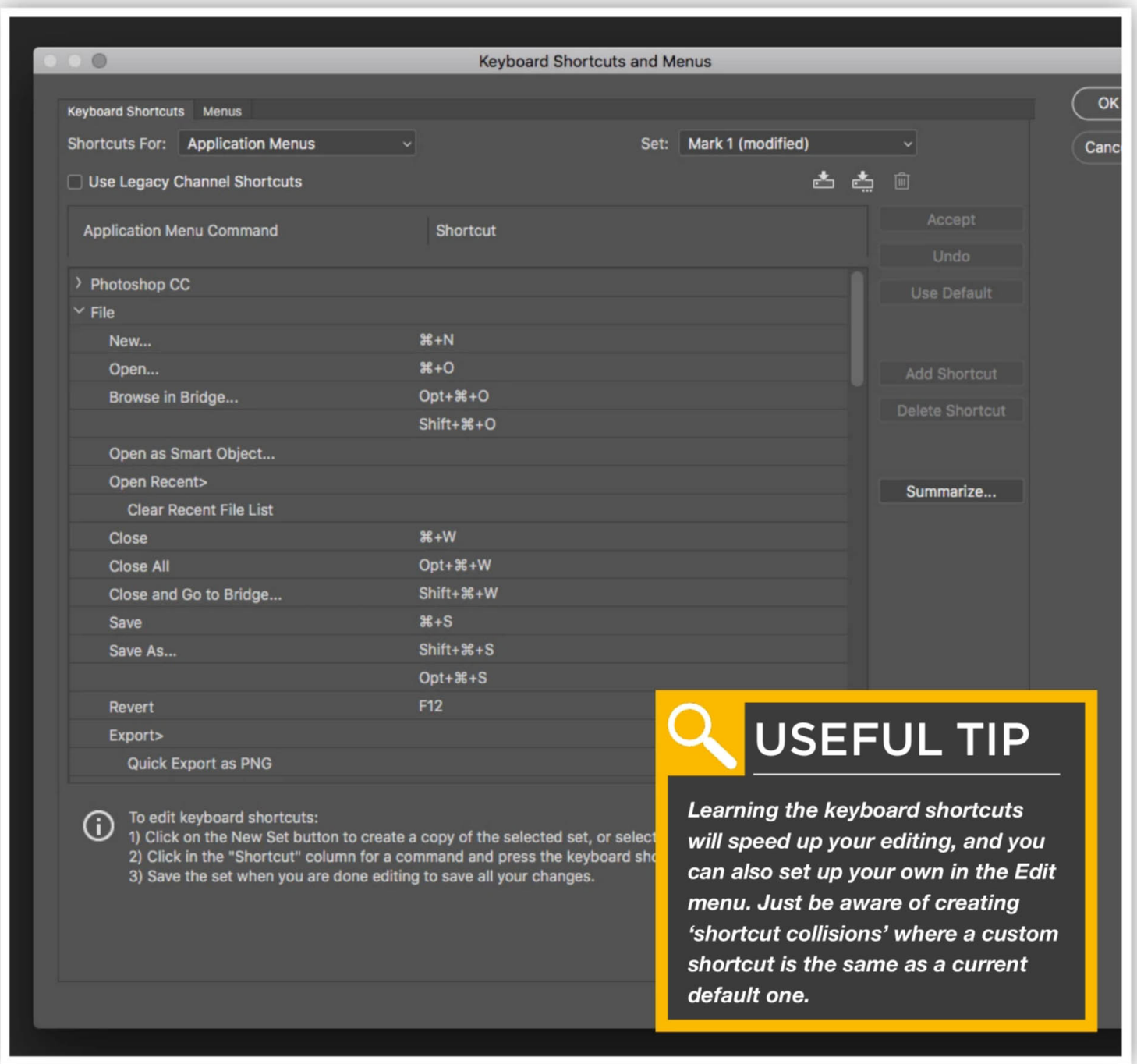


One of Photoshop's best features is its huge list of fully customisable keyboard shortcuts. Almost all of the program's functions can be accessed quickly by pressing various combinations of keys, and once you learn those shortcuts your workflow will speed up immensely. You can even make up your own for your most frequently-used operations.

Customising Shortcuts

You'll find the keyboard shortcut preferences menu at the bottom of the Edit menu, although naturally it has its own keyboard shortcut, Alt+Shift+Ctrl+K. You'll find an exhaustive list of all Photoshop functions, broken down into category headings matching the names of the main menus. You'll find that many operations already have their own default shortcuts. You can easily change these, or even add your own new ones. To apply a shortcut to an operation, first locate it in the list, and then click in the space to the right of the name. You'll see a small text window appear, and the next key or combination of keys that you press will appear here. If the combination is already used by another shortcut you'll see a notification warning you of this, and asking if you want to proceed with the change. If you click Accept the new shortcut will be applied immediately. Take care when making your own shortcuts that you don't accidentally overwrite some useful defaults.





USEFUL TIP

Learning the keyboard shortcuts will speed up your editing, and you can also set up your own in the Edit menu. Just be aware of creating 'shortcut collisions' where a custom shortcut is the same as a current default one.

Some Useful Default Shortcuts

Here are some of the more commonly-used shortcuts for image editing. There are many more of course, but it's worth taking the time to memorise these ones. You'll work efficiently and they'll make your life a whole lot easier.

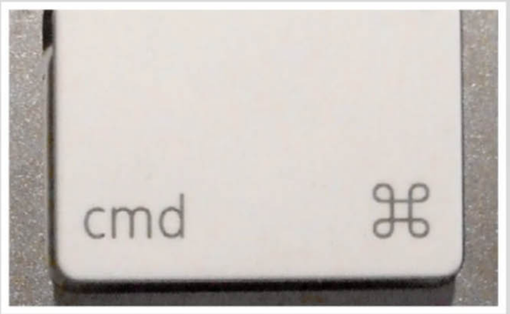
CREATE NEW DOCUMENT control + N	**REDO LAST STEP** shift + control + Z	**INVERT SELECTION** shift + control + I	**PASTE FROM CLIPBOARD** control + V
CREATE NEW LAYER shift + control + N	**LEVELS** control + L	**ZOOM IN VIEW** control + + =	**COPY TO CLIPBOARD** control + C
CLOSE CURRENT DOCUMENT control + W	**CURVES** control + M	**ZOOM OUT VIEW** control + — _	**CUT TO CLIPBOARD** control + X
CLOSE ALL DOCUMENTS alt + control + W	**INCREASE BRUSH SIZE** }]	**FIT ON SCREEN** control +) 0	**FREE TRANSFORM** control + T
SAVE CURRENT DOCUMENT control + S	**DECREASE BRUSH SIZE** { [	**100% ZOOM** alt + control +) 0	**TURN SNAP ON OR OFF** shift + control + : ;
SAVE AS control + shift + S	**BRING CURRENT LAYER TO TOP** shift + control + }]	**SHOW RULERS** control + R	**SELECT ALL ON CURRENT LAYER** control + A
UNDO/REDO control + Z	**MOVE CURRENT LAYER UP** control + }]	**SHOW OR HIDE GRID** control + " '	**DESELECT ALL** control + D
UNDO LAST STEP alt + control + Z	**MOVE CURRENT LAYER DOWN** control + { [	**SHOW OR HIDE GUIDES** control + : ;	**HELP** F1

Important Note

On a PC the Ctrl key for your shortcuts looks like this on a standard Windows keyboard. If you use a PC and you see an instruction in this title to use a Cmd key, then just use Ctrl instead.



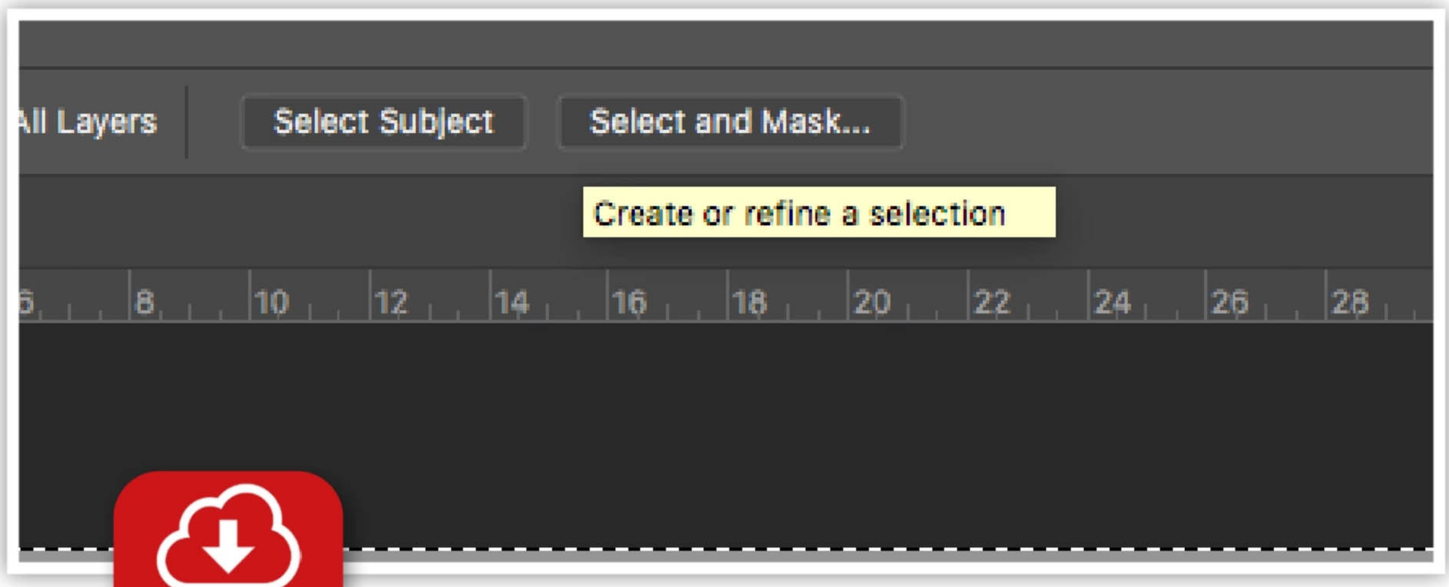
On a Mac computer the Ctrl key is replaced by the Cmd key on a standard Mac keyboard. If you use a Mac and you see an instruction in this title to use the Ctrl key, just use your Cmd key instead.

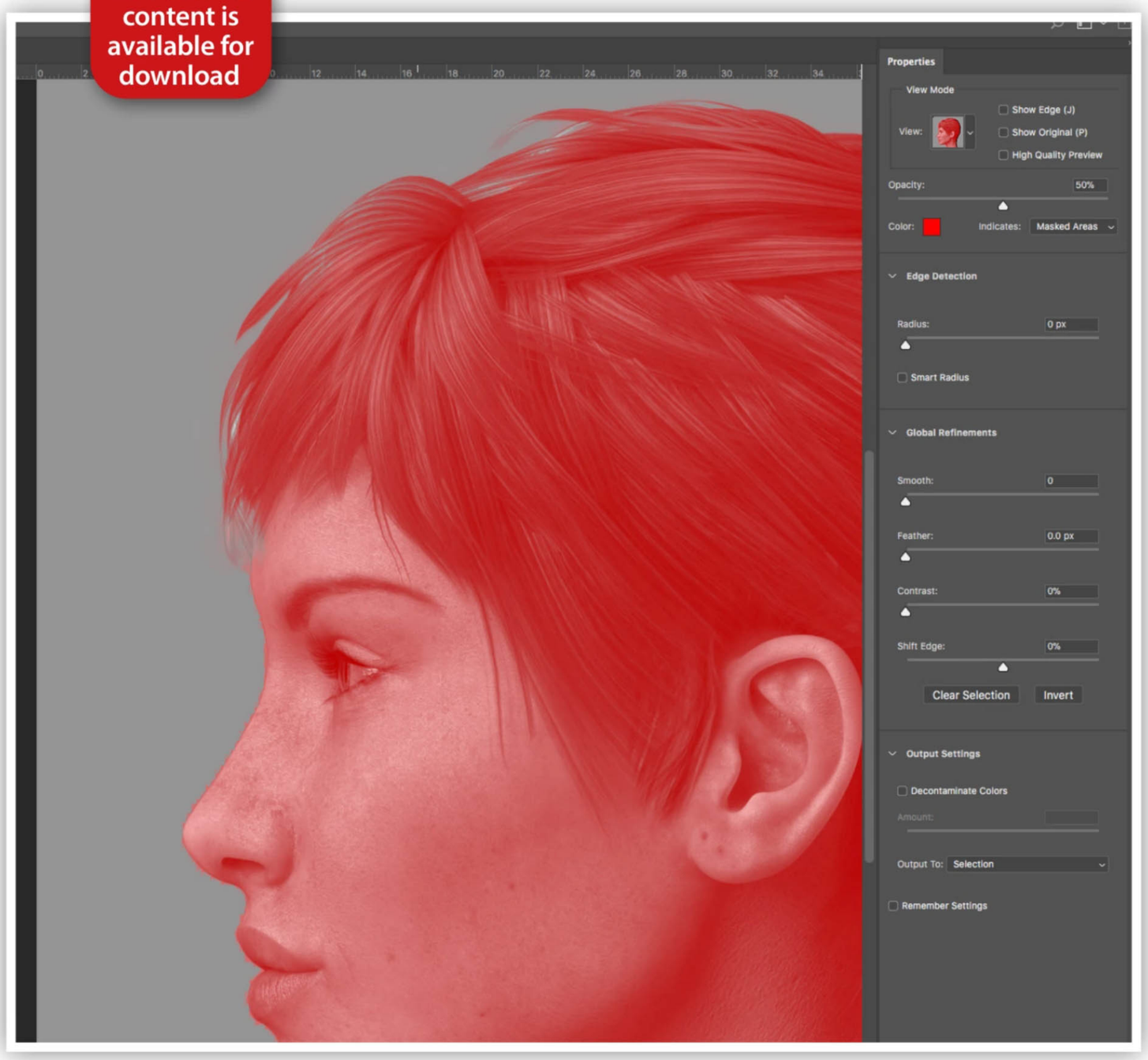


Selection Tools

Photoshop provides multiple methods for isolating areas of your image

The ability to select discrete areas of an image and change them in isolation is fundamental to Photoshop editing, and to help with this there are many different ways of making that selection. The most frequently used are the Marquee tools, which allow you to select regular shapes such as rectangles, ellipses and lines. For irregular shapes there are several Lasso tools, which let you draw the area to be selected. For quicker selections there are the Magic Wand and Quick Selection tools.





Common Options

If you look across the top left of your menu bar, you will see there are common tool options for all of the selection tools. The first row of four buttons are: New Selection, which is the default setting; Add To Selection, which can also be activated temporarily by holding down the Shift key; Subtract From Selection, also activated by the Alt key; and Intersect With Selection, which selects only from areas you have already selected.

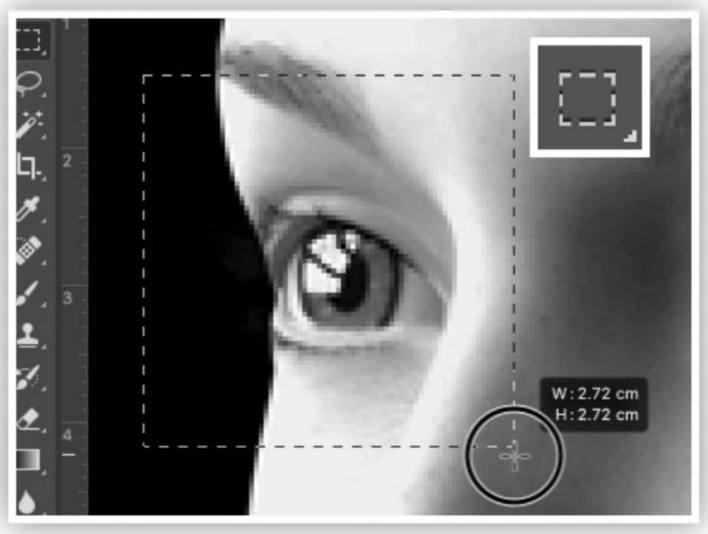
Edge Refinement

The next option is Feather, which softens the edge of the selection, useful for gradual effects. The edge of the selection can be further adjusted by using the Refine Edge menu in CS6 or Select and Mask in Photoshop CC, which uses sophisticated edge-detection techniques to automatically select around things like fine hair or soft and blurred edges.

USEFUL TIP

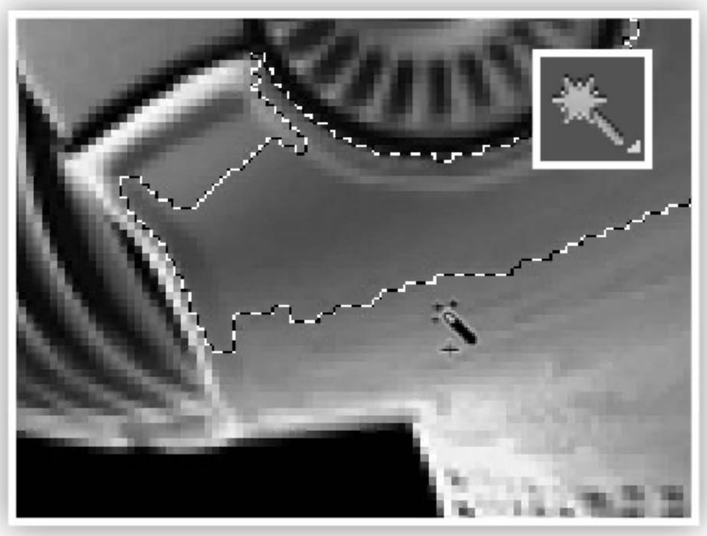
You can use the Quick Selection tool to quickly paint a selection using an adjustable round brush tip. As you drag, the selection expands outward and automatically finds and follows defined edges in the image. If the tool isn't visible in your toolbar, hold down the Magic Wand tool to see the fly-out menu with the additional options that are available to you.

Rectangular Marquee



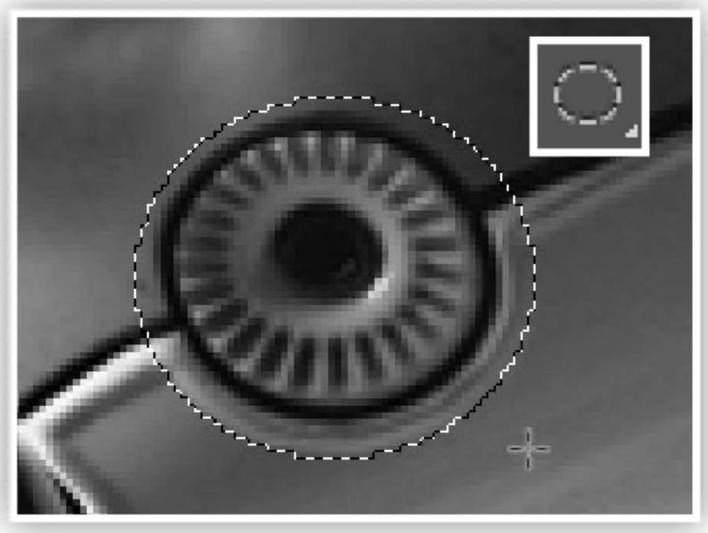
Lets you make a selection of a rectangular area of any size or aspect ratio. Just click and drag to the right size. Hold down the Shift key to constrain the selection to a square shape, and use the arrow keys to move the selection area.

Magic Wand



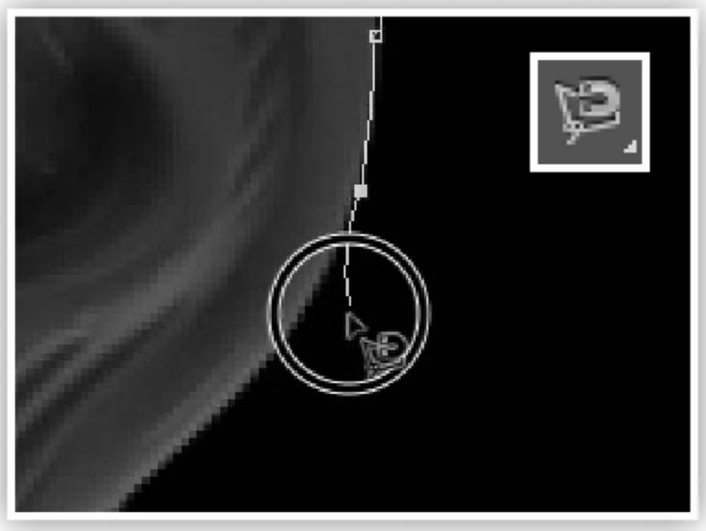
This tool lets you select areas of the same colour and brightness, and by adjusting the tolerance and whether or not it will select contiguous areas, you can use it to do things like automatically select all the sky in your image.

Elliptical Marquee



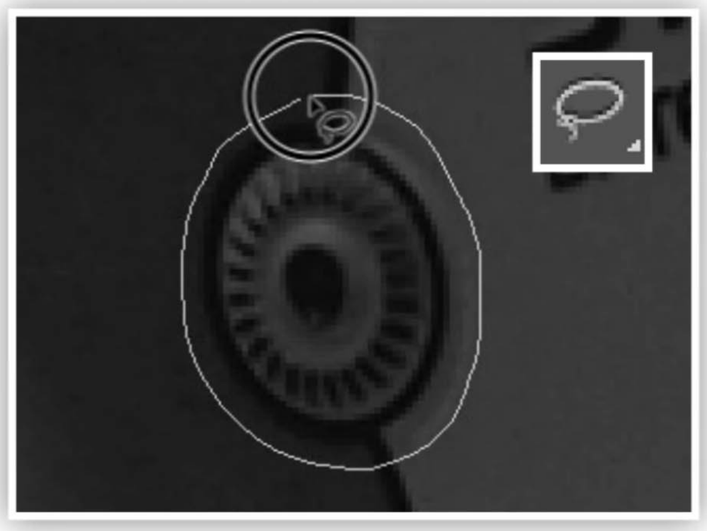
Create a selection of an elliptical shape of any size or proportion. Just click and drag to the size and shape you need, and hold down the Shift key to draw a circle. If you hold down the Alt key the ellipse will be centred on the starting point.

Magnetic Lasso



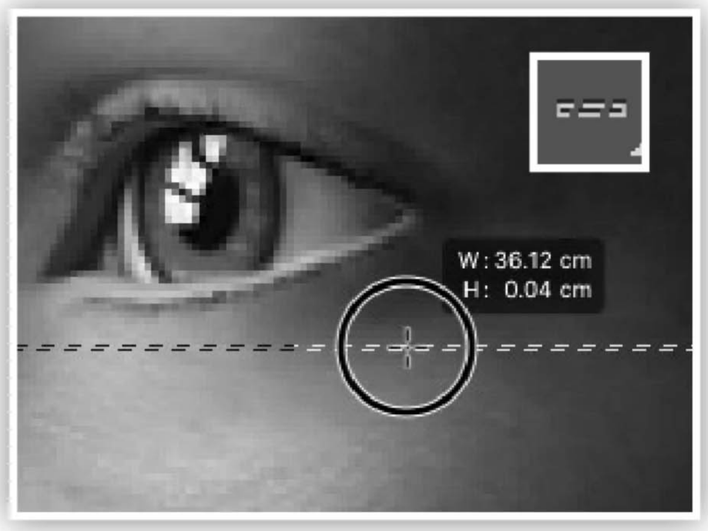
This tool uses edge-detection to try to match your selection to the edges of the subject in the image. You simply draw a line as closely as possible to what you want, and it should automatically snap to the edge. Works best on high contrast areas.

Lasso



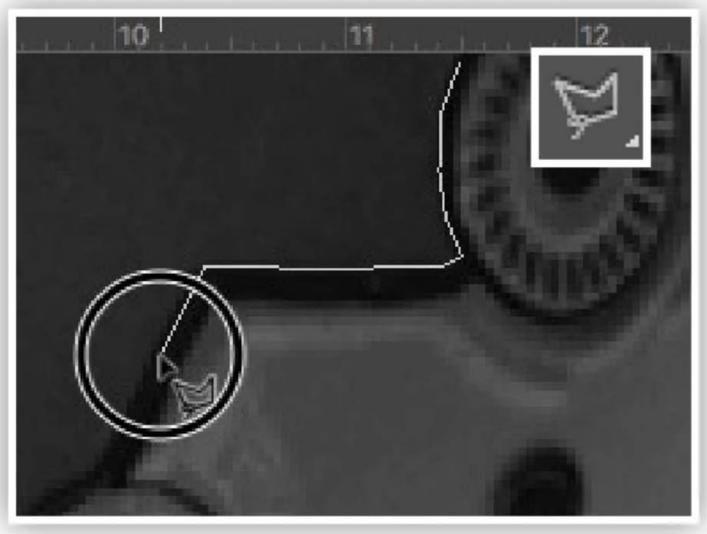
The Lasso is also used to make area selections from the active layer, but this time the shape can be irregular, marked out by clicking or drawing a line around the area to be selected. Join up your lasso at the point you started to close the selection.

Single Row Marquee



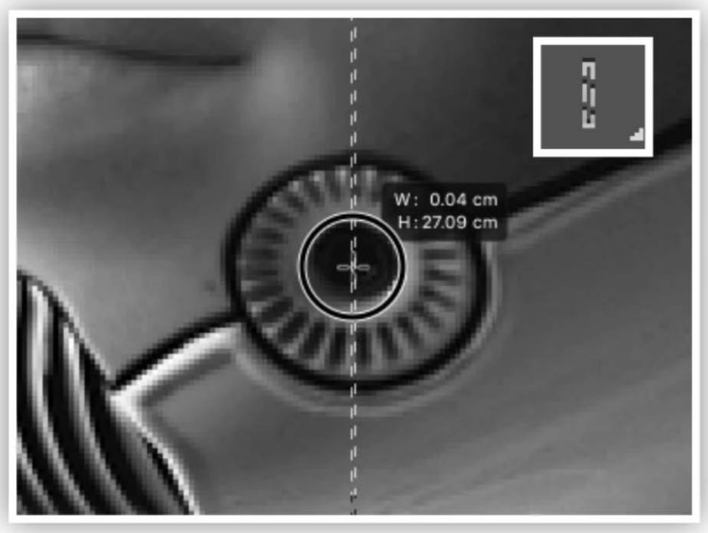
This is the same as Single Column Marquee, but this time it selects a single horizontal row of pixels. As with the Single Column Marquee option, click near the area you want to select, and then drag the marquee to the exact location.

Polygonal Lasso



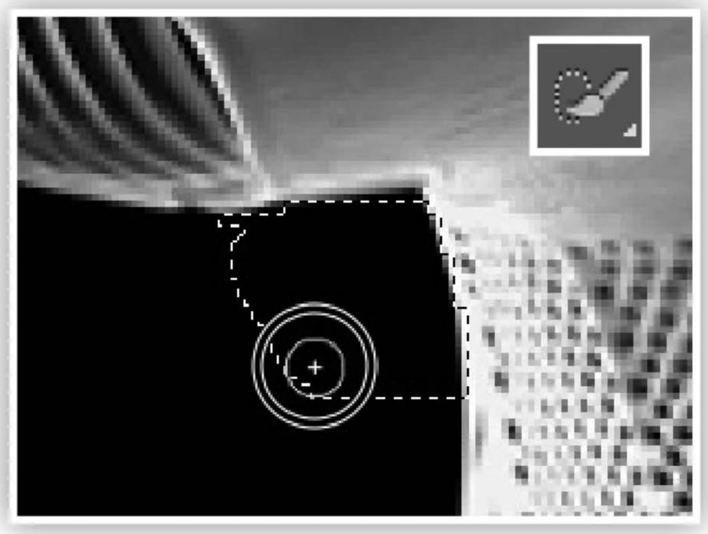
The Polygonal Lasso lets you draw a point-to-point line around your subject. It can only draw straight lines, but by using very short sections it's possible to approximate a curved line. To draw curved lines you need to use the Pen tool.

Single Column Marquee



This option creates a selection of just a single vertical column of pixels. This is useful for tidying up other selections or crops that are just a little too big. Click near the area you want to select, and then drag the marquee to the exact location.

Quick Selection

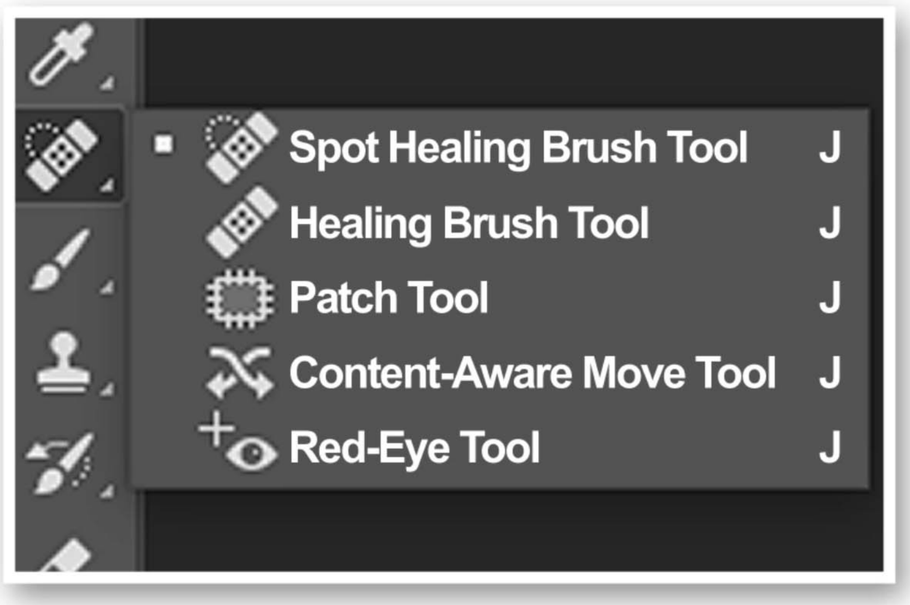


This tool lets you paint a selection, and uses edge detection to try to match the selection to the nearest edge in the image. Again it's often only an approximation, and will have problems with blurred or low contrast edges.

Healing Brush Tools

Clean up minor blemishes, dust spots and stray hairs with the Healing Brush tools

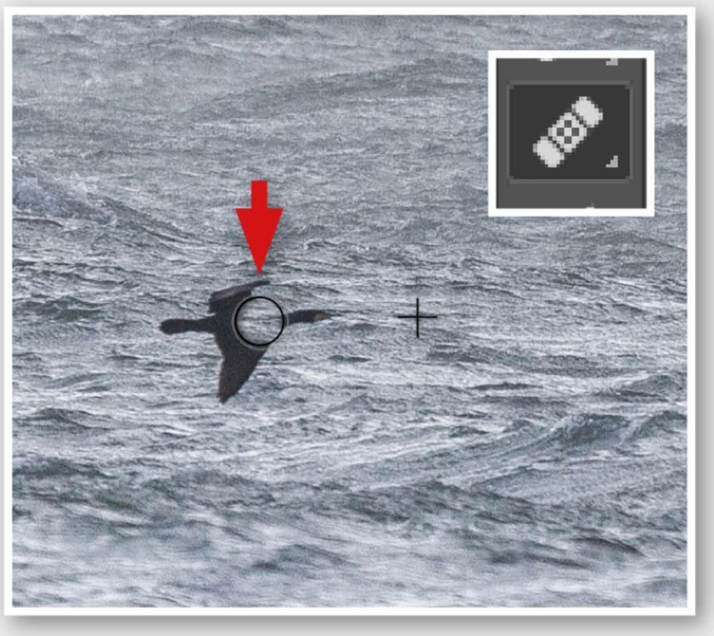
Even with a modern digital camera, your photos may have slight imperfections. Maybe it's just a stray hairs or an unwelcome skin blemish in a portrait, or maybe some dust has managed to get onto your sensor, causing dark spots on your photos. Whatever the reason, sometimes you need to remove some small features from your images, and the best tools for this are the Healing tools. There are five healing tools in Photoshop, which you can see if you click and hold on the Spot Healing Brush tool icon in the tool palette.



USEFUL TIP

To get the best out of the healing tools, you need to work with care and not overdo the effect. The key to success is to be subtle. There is also no reason you can't use several of the healing brushes to make sure you get a perfectly healed image.

Healing Brush Tool



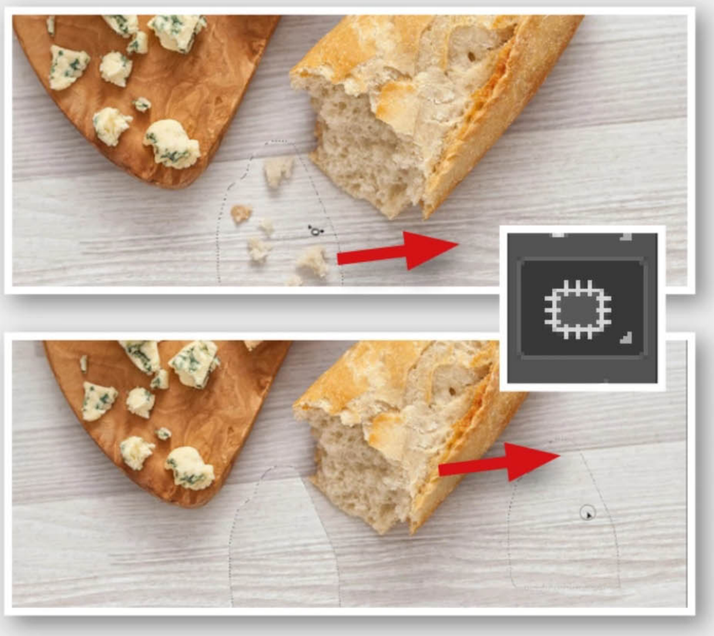
The Healing Brush is a legacy from older versions of Photoshop. It does much the same job as the Spot Healing Brush, but is rather less sophisticated. It works in much the same way as the Clone Stamp tool. To heal a blemish, you first need to set a sample point by clicking on an area of similar texture while holding down the Alt key, then painting the sample over the blemish. As ever, when it comes to healing and cloning techniques, subtlety is the key. You may find that it might take several attempts to get a good texture that doesn't stand out as being cloned in.

Content Aware Move

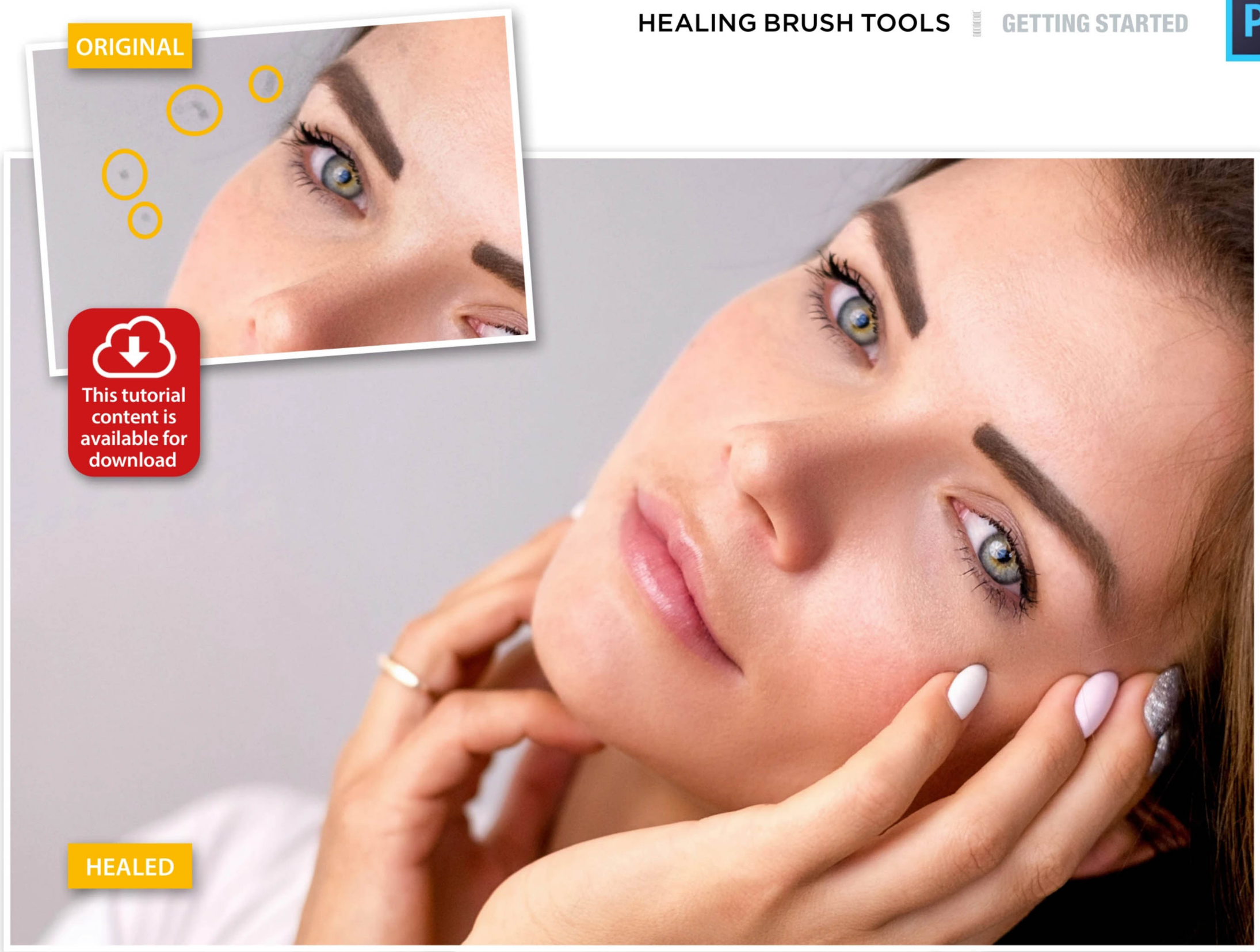


The Content Aware Move tool was introduced in Photoshop CS6. The idea is that you can simply draw a selection around an object and then drag it to another place. The program analyses the surrounding area and fills in the source with a matching texture. In practice the Content Aware Move tool is only useful in very specific circumstances, when the object you want to move is surrounded by a uniform texture. You will find that the more even the texture, the better the final result. Backgrounds such as grass and blue sky are much more successful candidates for this.

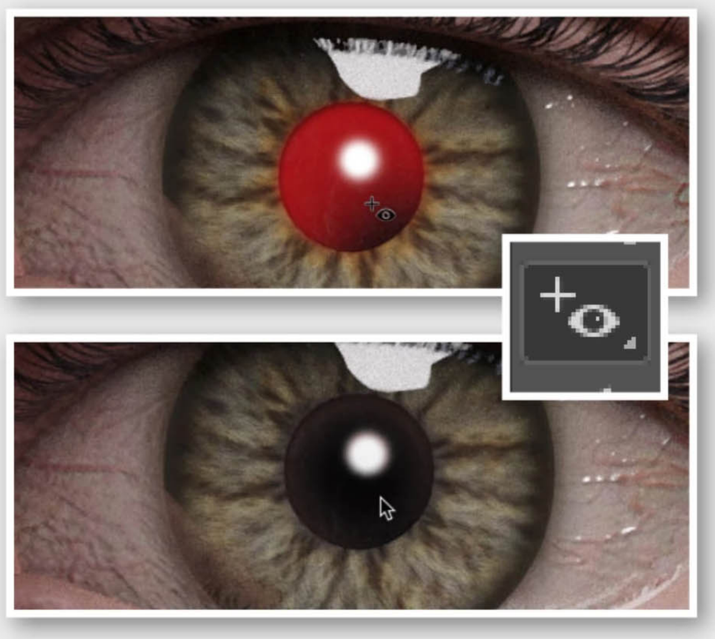
Patch Tool



The Patch tool is used for repairing larger areas. It can be used in one of two ways; either draw around the area you want to replace and then drag the sample to an area of matching clean texture, or sample an area of clean texture and then drag it over the part you want to replace. Here, a patch of wooden floor can be used to remove some bread crumbs from the shot. As you drag the patch, it will show you a real-time overlay over your target area so you can align it as best you can to ensure a good patch.

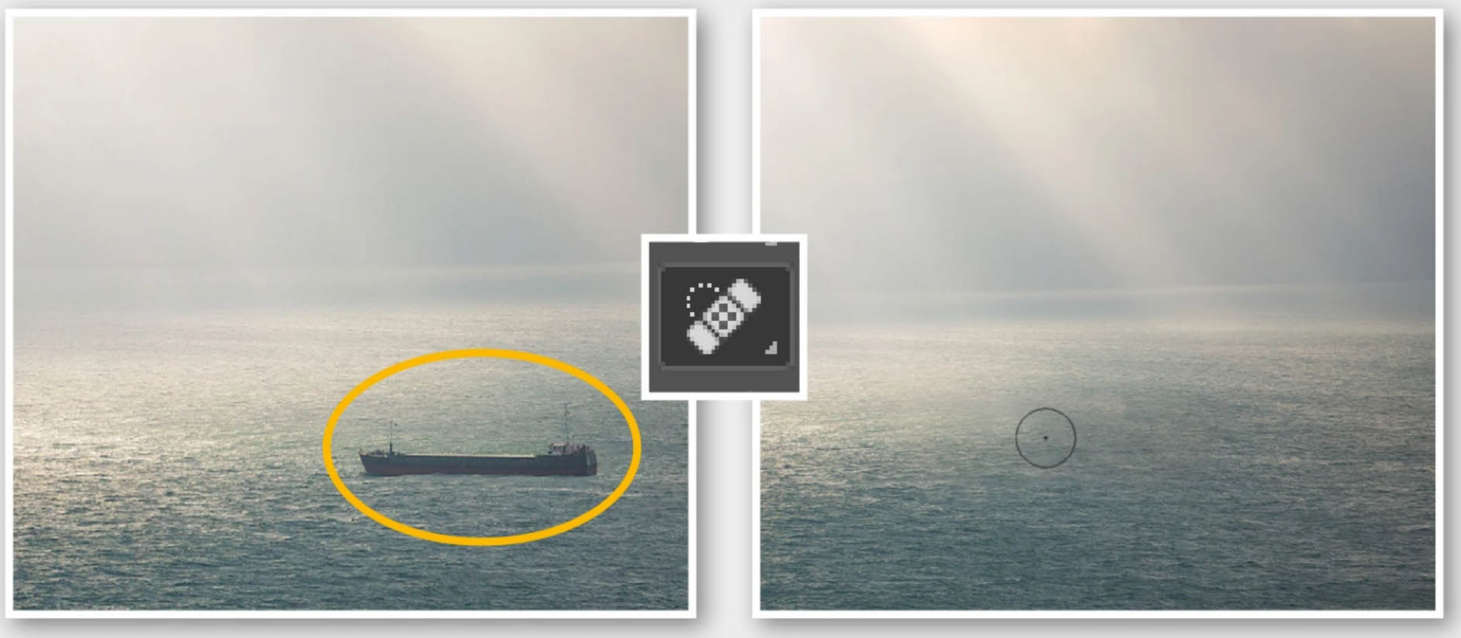


Red Eye Tool



Red Eye is caused by light from a camera flash reflecting off the blood vessels at the back of the eye when the pupil is wide open. It's possible to avoid it by proper camera technique, but if you find it in one of your portraits, Photoshop has a quick and easy tool to help remove it. Simply click on the offending redness and the tool will automatically analyse how much redness there is in the subject's eyes and remove it and replace it with a more natural-looking tone which is usually black or a very dark tone.

Spot Healing Brush Tool



For removing small objects such as dust spots and stray hairs, the Spot Healing Brush is the most useful and effective tool at your disposal. In some cases, you can even remove larger objects and people. When you use it to paint over an object, the brush samples the area around it and replaces the object with a simulation of the background. The way that it samples can be selected, and most effective option is Content Aware sampling. The brush parameters can be adjusted like any other brush.

USEFUL TIP

Camera sensors pick up dust spots over time. Use the Spot Healing Brush to remove unwanted sensor dust spots that appear on your digital images. As you can see from these examples, you can also remove larger objects as long as you have an even background behind it, otherwise the effect might look fake.

The Clone Stamp Tool

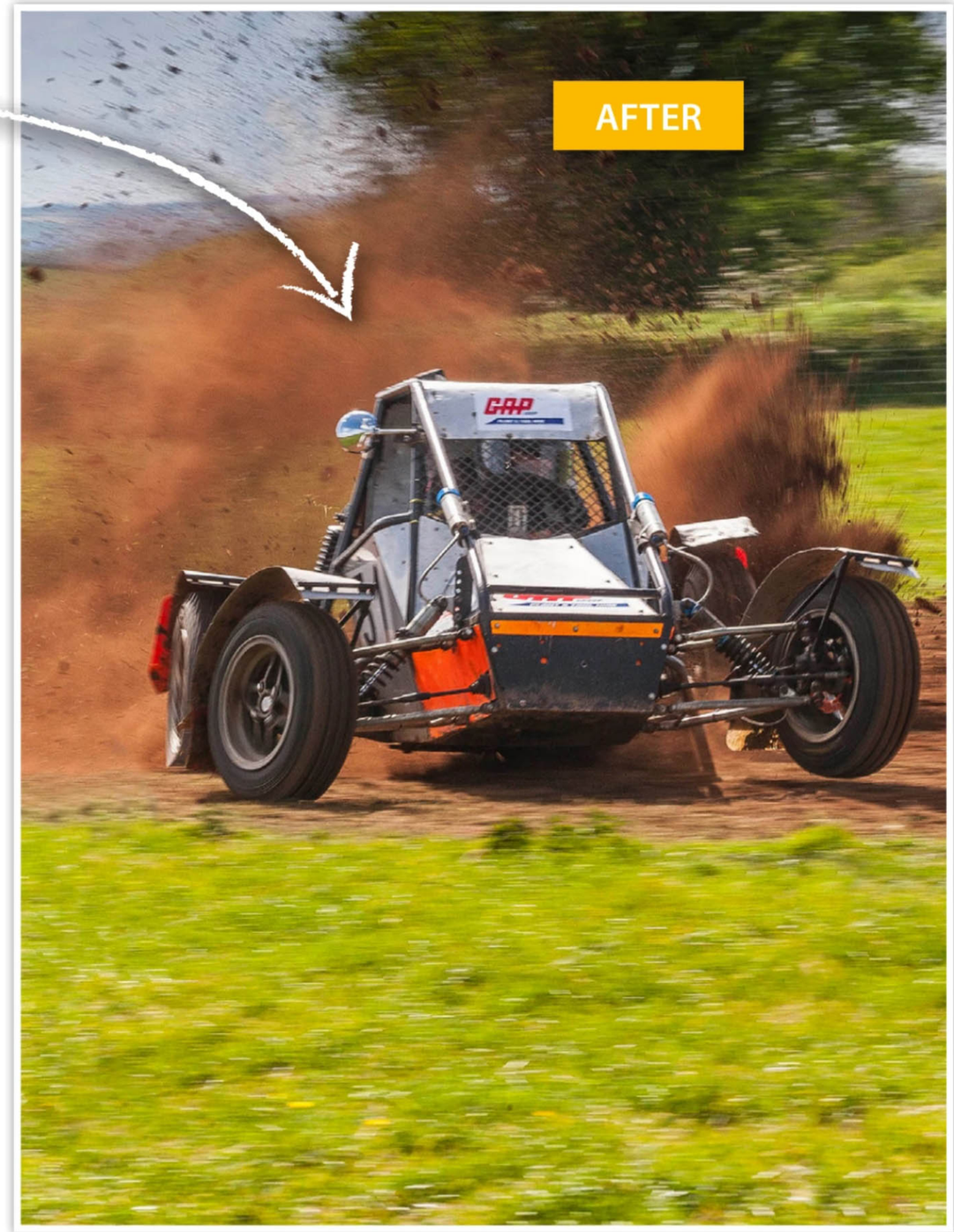
USEFUL TIP

Vary brush size by using the open and close square brackets keys, and vary brush hardness with the curly brackets.

Remove unwanted elements from your photos

The Clone Stamp tool (also known as the Clone Brush in some programs) is one of the most useful items in your image editing tool kit. Despite recent developments such as Photoshop's Spot Healing tool and Content-aware fill, it is still the most precise and reliable way to retouch photographs, allowing you to remove unwanted elements such as dust spots, skin blemishes, lens flare, telephone lines and other intrusive objects from your pictures. Because the process is entirely manual it can be somewhat time-consuming, but the results are often superior to the output of the more modern automatic tools.



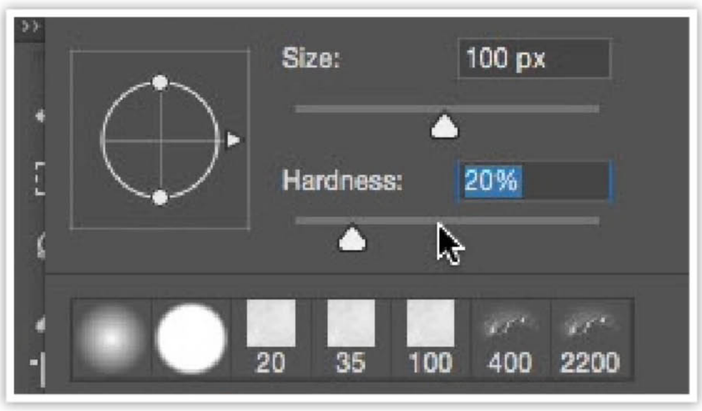


The Clone Stamp works by copying ("cloning") pixels from a selected target area and placing them over the unwanted objects. Using the Clone Stamp it is relatively straightforward to remove even quite large unwanted objects from a photo. Our example is a photo taken at a motorsport event. It is a good shot with plenty of action and flying dirt, but we thought the flags in the foreground were a bit distracting, as was the telephone line stretching across the back of the shot in the top left corner.

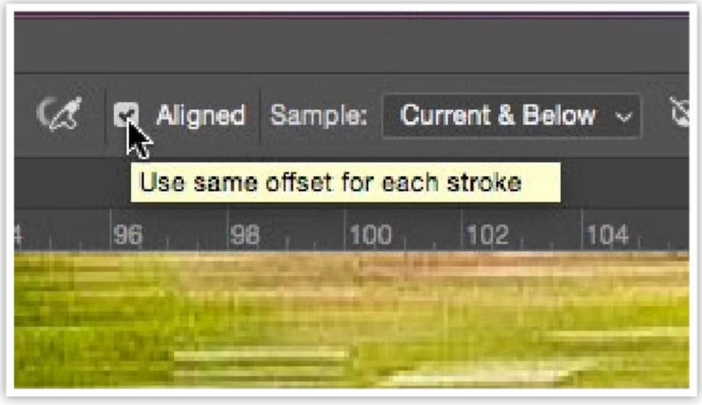
We decided it would be a good demonstration of the power of the Clone Stamp tool to remove both flags and the telephone line from the shot. Let's see how they were removed.

01 Go to your toolbar and select the Clone Stamp Tool (S). For the image we're working on, a brush Size of about 75 - 100 pixels will be fine. You can make the brush Hardness anywhere between 0% - 20%. We're going to start with the flag in the lower right corner.





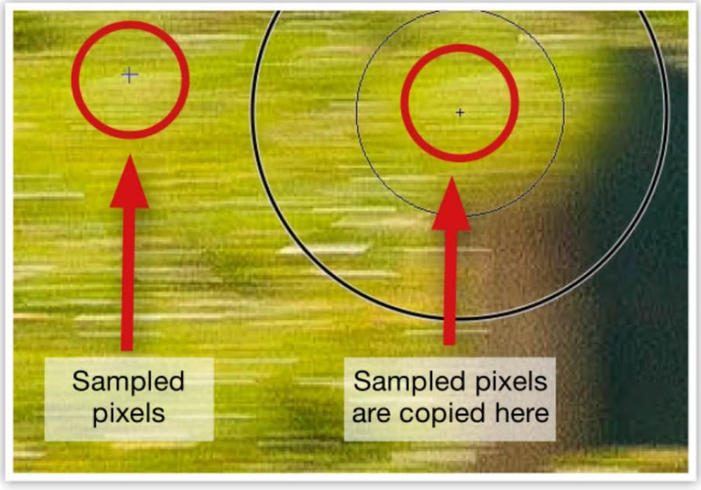
02 Make sure that you have the Aligned option ticked. This means that the sampling area of your brush moves as your brush does, otherwise you will clone the same sampled area repeatedly until you alter it.

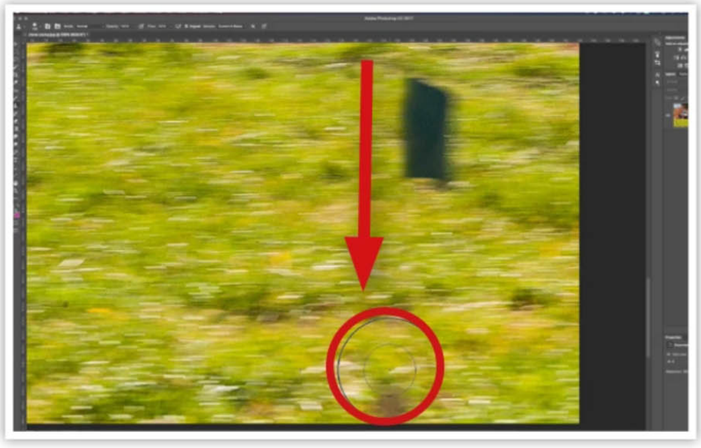


03 Find an area of clean grass next to the flag and then press your Alt key. A small target icon will appear. Anything under this target will be your sample to be used as the starting point of the cloning. Left-click your mouse to confirm this as your sample area.

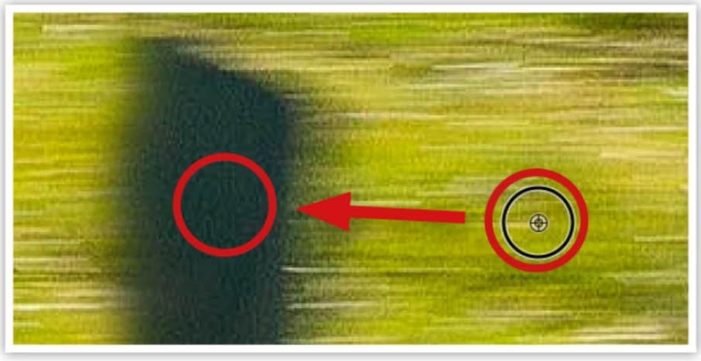


04 Now move your cursor over the top of the flag, level with your target area from the last step. It is shown as an overlay so you can see what you are about to clone on top of your flag. If you click and drag your mouse down the flag pole, the grass adjacent to it will be cloned over the top, removing the pole.

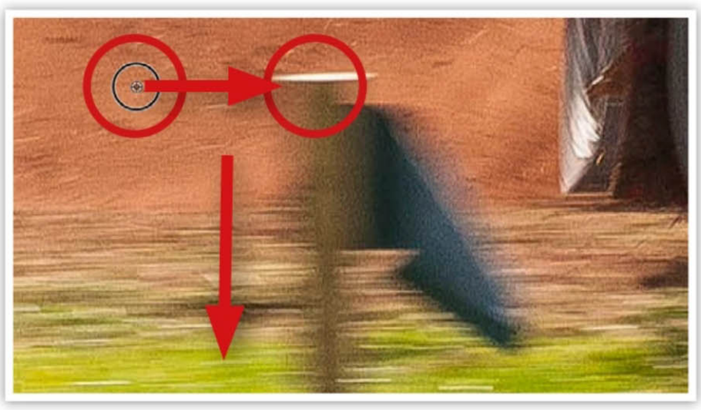




05 You can now choose another target sample to the right of the flag and clone grass from that side over the remaining area of the green flag. If you notice any repeated areas that stand out as being cloned, you can choose a new target area and clone in some new grass to keep the pattern random.



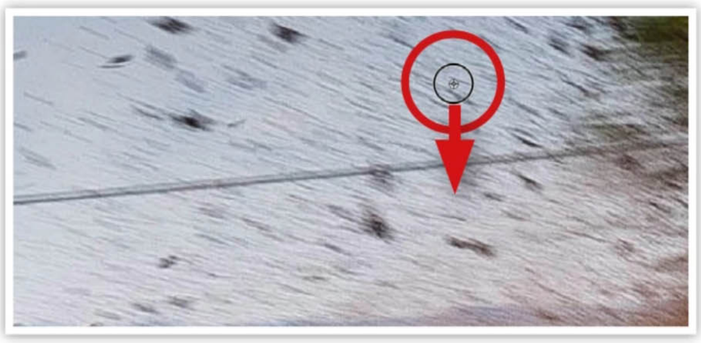
06 You can now move to the second flag on the left and create a new sample to clone over the pole as you did with the first. Again, watch out for obvious repeat patterns as you clone clean areas on top of the flag pole.

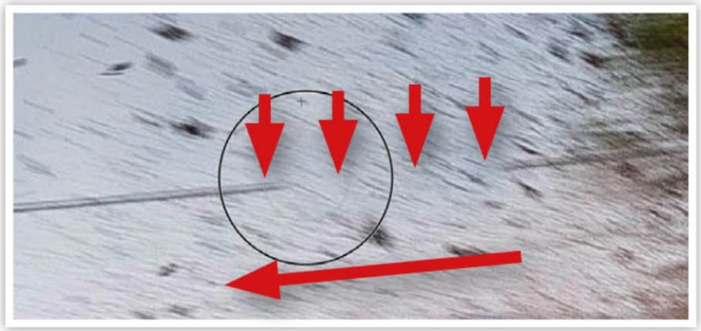


07 Now you can remove the green flag by sampling an area of the mud to the left of it and cloning that over the top of the remaining part of the flag. Finally, we can remove that telephone line from the top of the shot using the same techniques for both flags.



08 The random nature of the dirt flying across the frame is actually quite useful. sample an area directly above the unwanted telephone line and then clone the sample on top of it. You can simply click on the telephone line and drag the mouse to the left, cloning the patch of dirt that is directly above it as you do.





09 Once complete, you can assess the result and if you see any obvious repeating patterns that give the game away, you can simply clone new areas over the offending repeated parts with random grass and sky as needed.



Brushes, Pencil and Eraser



Photoshop has many tools to help you create images as well as edit them

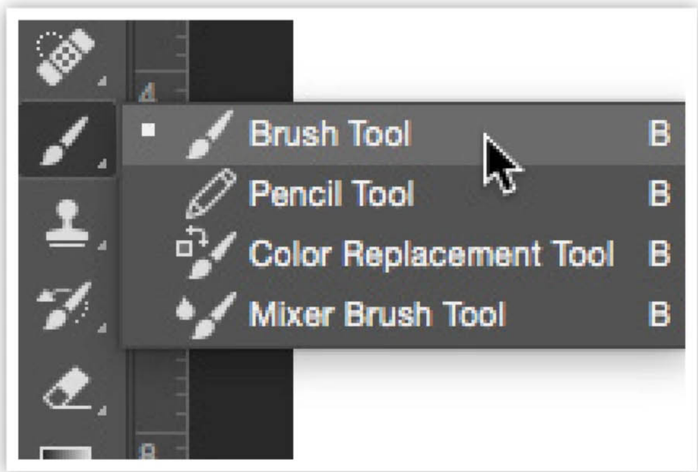
Although it is primarily designed and best known as an image editing program, Photoshop also offers a range of versatile tools, allowing you to create original artwork as well as adapting existing images. The brushes, pencils and eraser are designed to behave as much like their real life counterparts as possible, to make using them an intuitive process. If you have a graphics tablet and a pen, this helps even more.

The Brush Tool

The most useful drawing implement is the Brush (keyboard shortcut B), which is a multi-purpose tool that can emulate almost any type of drawing tool imaginable, be it a fine pencil, a felt-tip marker pen, a soft-bristle brush, an airbrush, or anything in between. The Brush tool has received a major upgrade for version CS6, and now has more options and more presets than ever before, giving you unparalleled versatility for creating your own artistic Photoshop masterpieces.

You select the Brush tool by clicking on its icon in the tool palette, but to get the most out of it you need to open the new Brush palette by clicking on the little folder-shaped icon in the options bar.

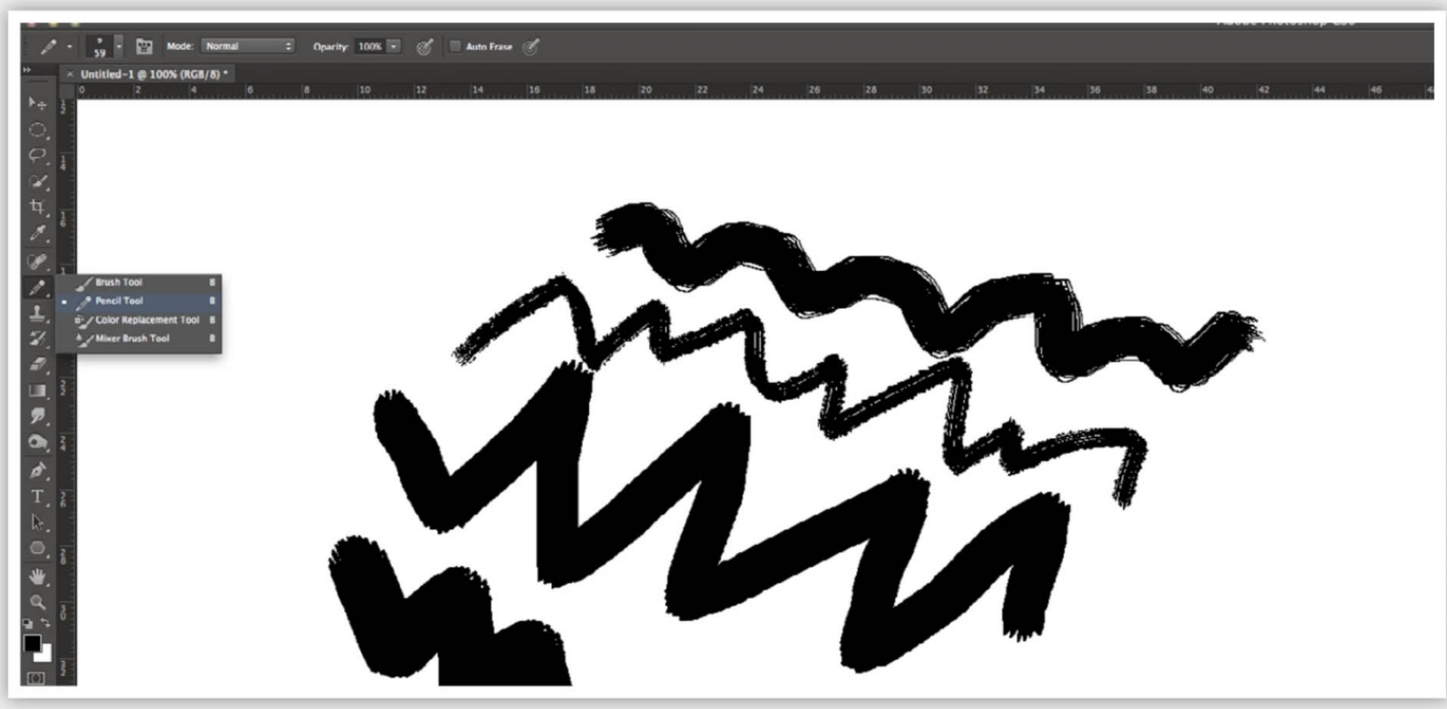
When you take a look at the new Brush palette you'll be blown away by just how customisable it is. You can adjust the shape of the brush tip, the density, length, thickness, stiffness and angle of the brush bristles, and adjust or disable brush spacing. As well as



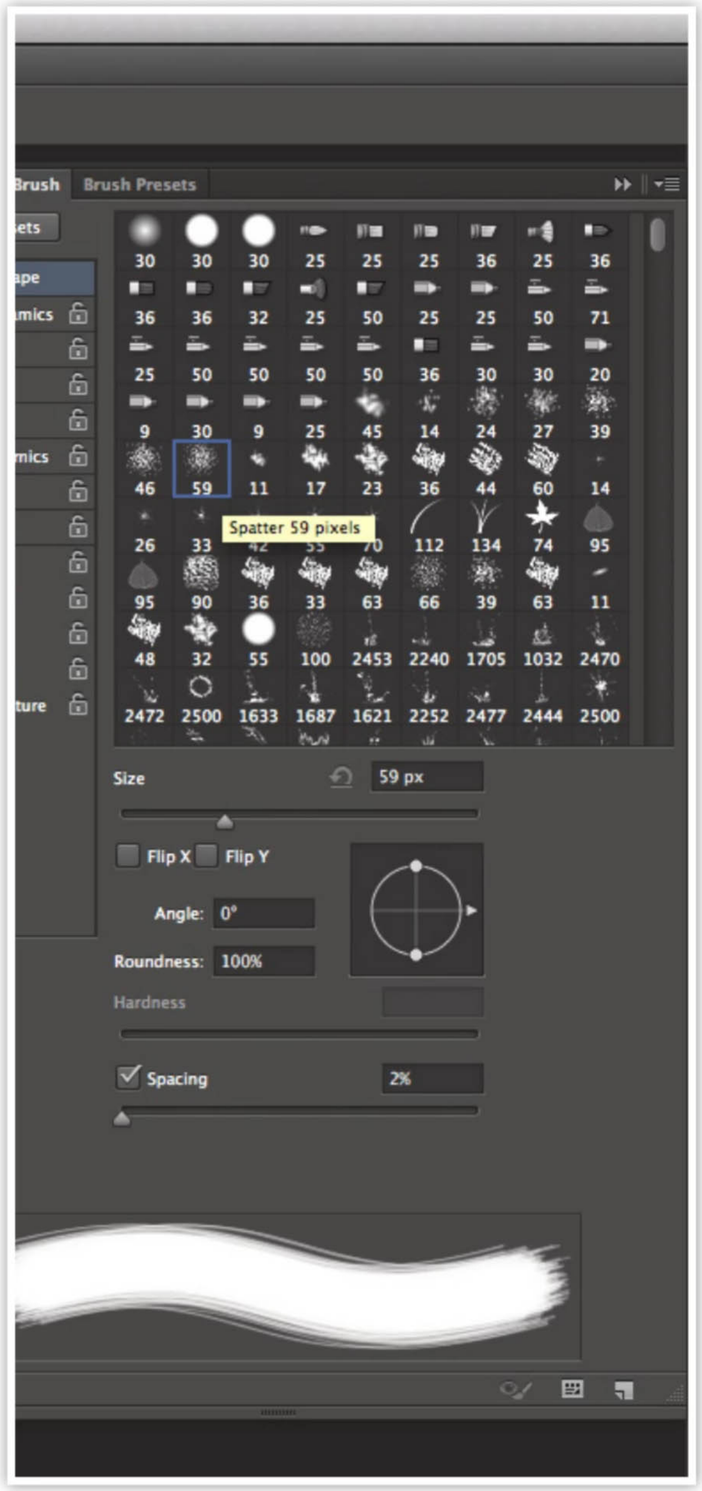
The Pencil Tool

The Pencil tool used to be a separate item from the Brush tool, but with radical expansion of the Brush in Photoshop to include simulations of numerous types of pencil, the Pencil tool itself now is just a variation of the Brush tool, and uses the same options palette. It's not without its uses though.

The Pencil can be used as a secondary brush, which can save time swapping between presets, and can also be used to apply a stroke to work paths. You can press Shift + B to make it appear. By default it uses the 1 pixel brush size. The pencil tool is limited to hard-edged brush shapes of various sizes.

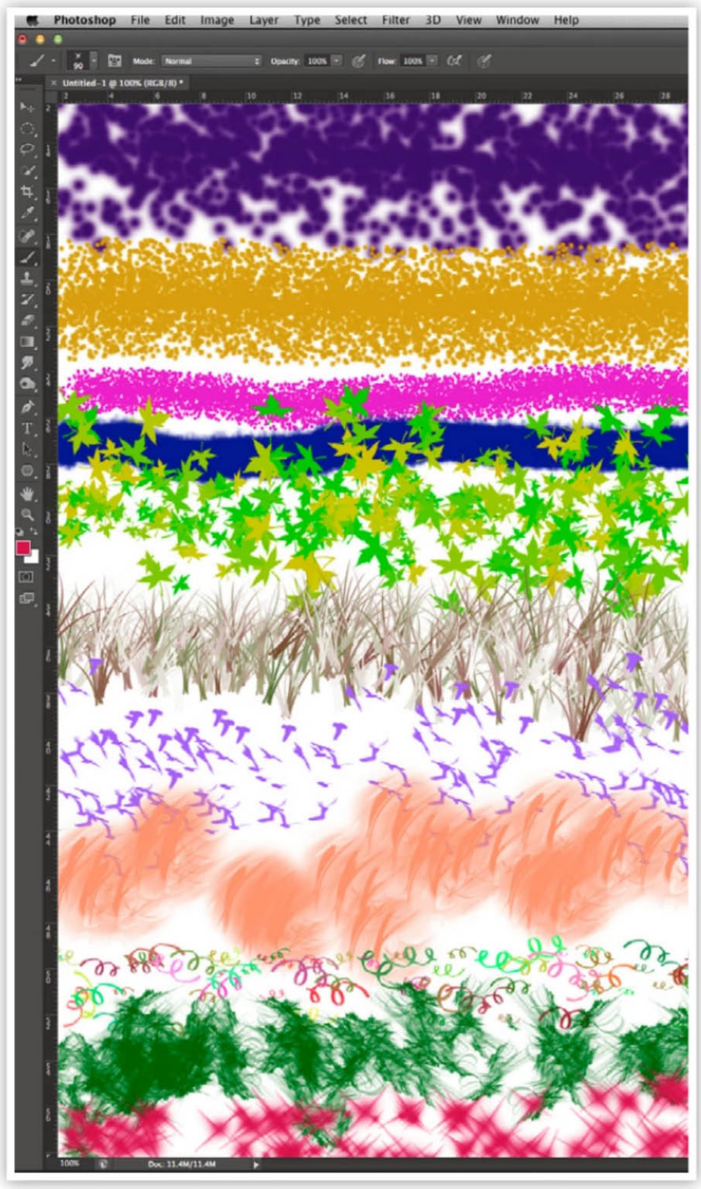


this there are many more options, allowing you to add random scattering, noise, texture, wet edge simulation, airbrush-like build-up, and both shape and colour dynamics. If this degree of control is too time-consuming there are also dozens of preset brushes, a small sample of which you can see in the picture shown below.



There are preset brushes to simulate airbrushes, pastel crayons, big soft brushes, small stiff bristles, pencils, felt pens, sponges, and even template brushes to quickly draw grass or leaves. The options and adjustments can be applied to preset brushes, so you can customise them for your own specific needs. You can even make your own brushes if you want.

As well as options for the appearance and texture of the brush, there are also options for how it interacts with the layer that you paint on. These are called Blend Modes, and you can choose which one to use by clicking on the Modes button in the tool options bar.



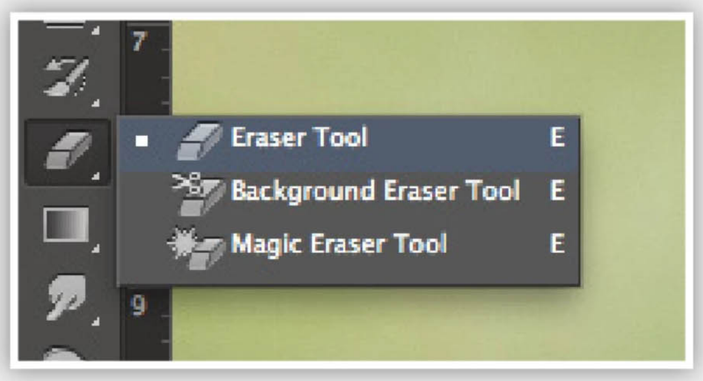
Many people will probably use Photoshop with a pen and tablet device, such as the Wacom Intuos 4 shown here. The Brush tool includes options for pen tablet users, such as allowing pen pressure to control either brush size or opacity.



The Eraser Tool

The Eraser tool (keyboard shortcut E) is a specialised variation on the brush tool, and uses the same palette options. It differs from the standard brush in that it can render pixels from a layer transparent, allowing the layer beneath to show through. If used on the background layer it paints in whatever the current background colour is set to.

As well as the Brush palette options, the Eraser also has tool options including Opacity, Flow, and one unique one, Erase to History, which can be used in conjunction with the History palette to selectively undo changes in layers. The Mode options for the Eraser are Brush, Pencil or Block, which is a small square-shaped eraser of fixed size and full opacity.



There are two other Eraser options available if you click and hold on the Eraser tool. Background Eraser can, as the name suggests, erase parts of the background, but it does this by converting the background into a layer. Magic Eraser simply combines the Magic Wand tool with the Eraser tool, and selectively erases contiguous areas of colour.

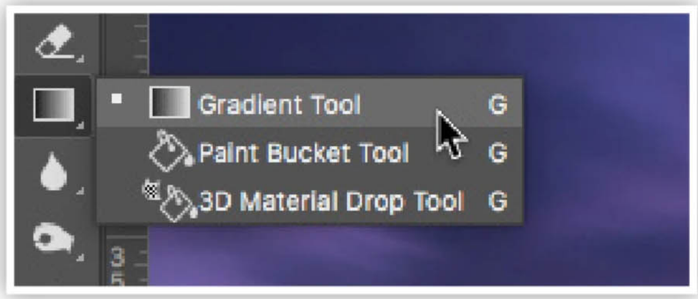


Gradient and Fill Tools

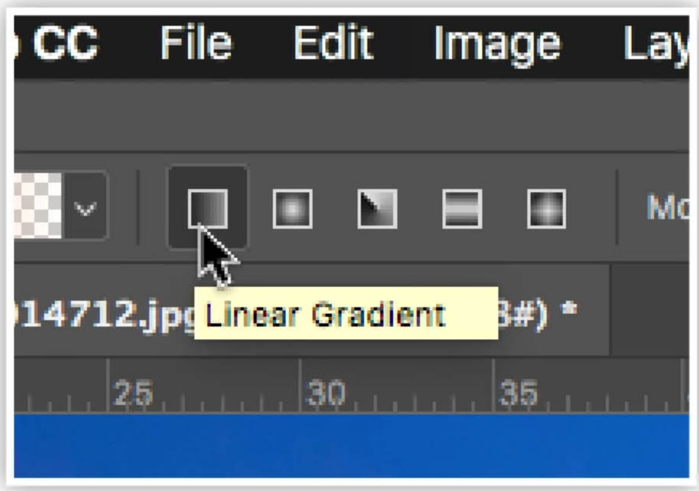
Fill layers and selections with colours, textures and gradients

One very useful facility that Photoshop provides is the Gradient tool. It can fill an area of a layer with a gradual blend between multiple colours. You can choose from a selection of preset gradient fills or create your own. It's a great way to add gradient filters for enhancing photographs, or to create effects such as vignettes and centre-spot soft-focus. Let's take a closer look at how it works.

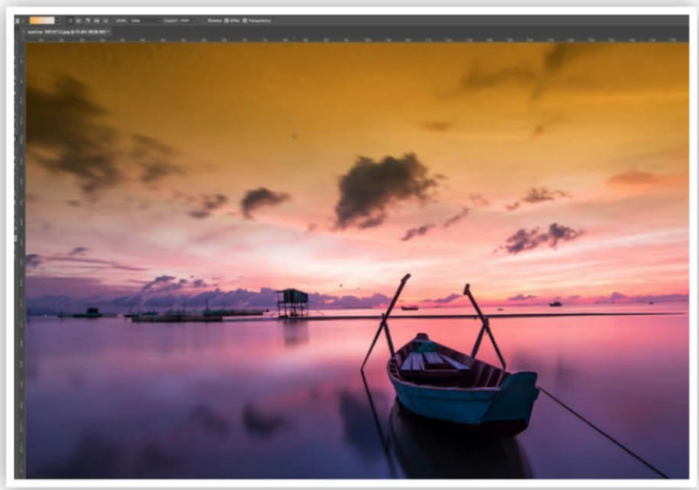
You'll find the Gradient tool about halfway down the Tool Palette. It has its own unique set of options in the Tool Options bar, the main one being the Gradient Picker, which lets you choose from a list of preset gradients.







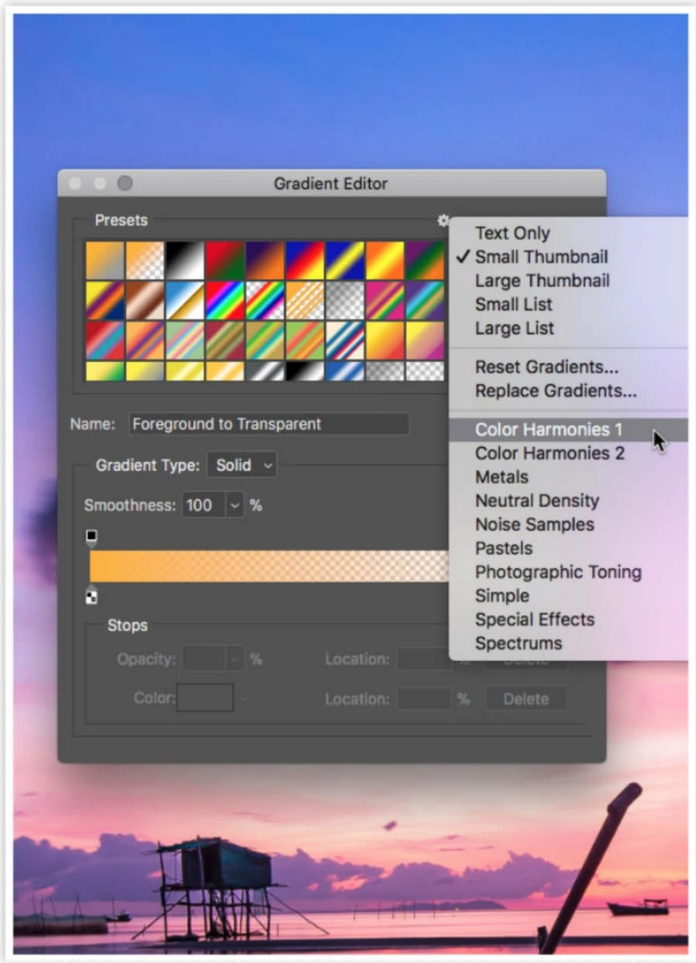
Next to this is a row of buttons that create different gradient shapes. The default setting is a straight linear gradient, but other options include Radial, Angle, Reflected and Diamond shapes.



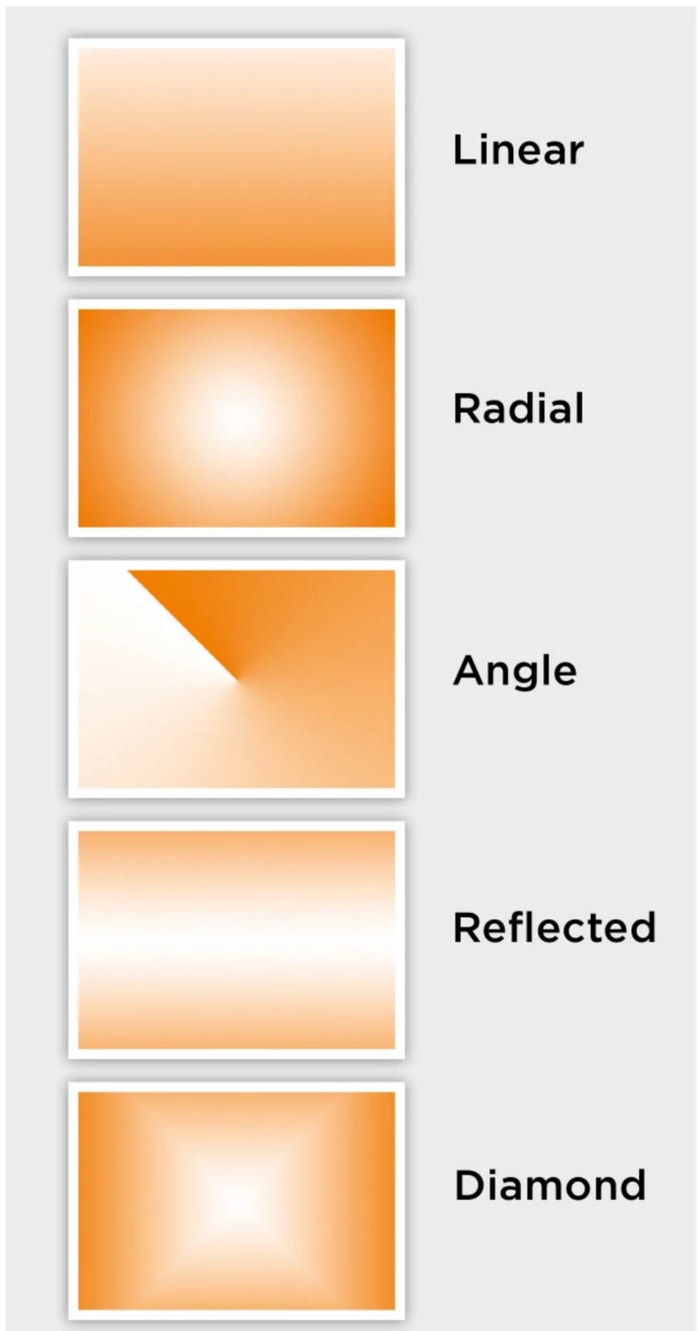
Like the Brush tools the Gradient has blend modes that let you mix the gradient colour fill with the layer below it in various ways. This is a great way to enhance sunset landscape shots, by using a orange-to-transparent gradient fill in color mode, as in the example seen here.

Photoshop comes with a selection of default preset gradients loaded, but there are other packs of gradients available. You can load in these other packs via the Gradient menu. If you open the Gradient Picker you'll see a small icon like a cog wheel. If you click on this you'll see the menu, with the list of standard gradient packs available to load at the bottom.

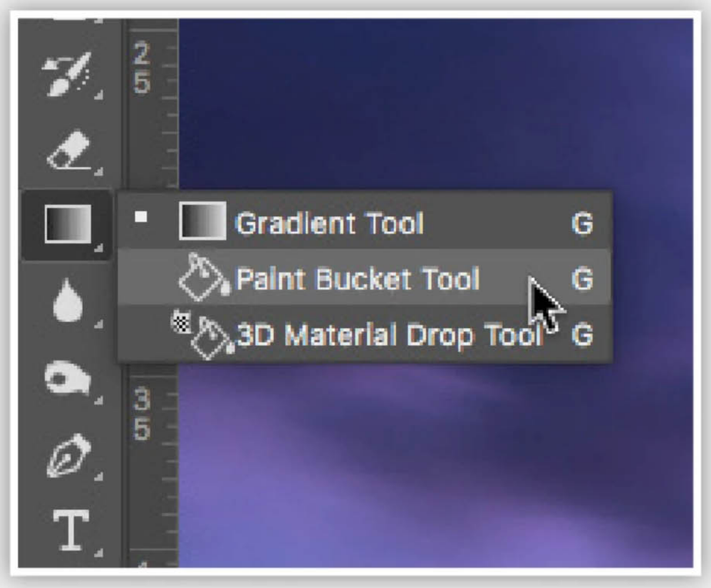
Other gradient tool options include the overall layer opacity, reversing the direction of the gradient colour mix, changing the "dither" of the colour mixing, and toggling the transparency.

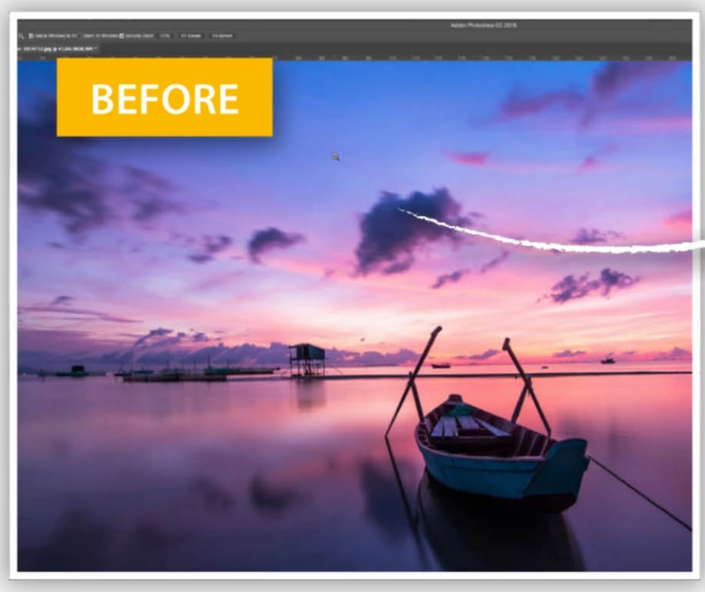


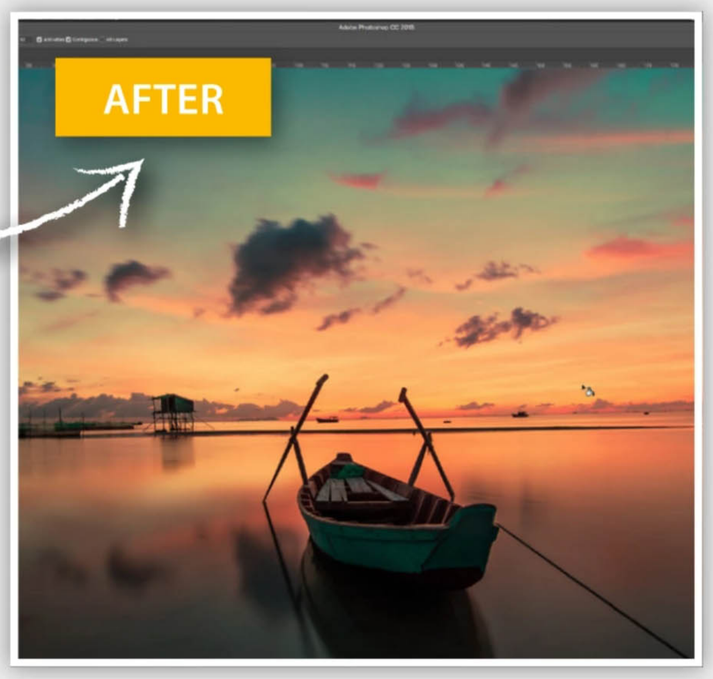
Below are the main gradient types that you can choose from the tool options bar at the top left of your screen.



Paint Bucket Tool







If you click and hold on the Gradient tool you'll find that one of its options is the Paint Bucket tool, which is used to fill an area, a layer or a selection with a solid colour. In combination with layer transparency and blend modes it's a great way to add a colour tint or filter to a whole image.

If you use the Paint Bucket on the background layer of your image it will fill in an area of contiguous colour in much the same way as the Magic Wand tool. To add a tint to a whole image, create a new layer, then fill it with the colour. It will fill the whole layer, and you can then use layer transparency and blend modes to achieve the effect you're looking for.

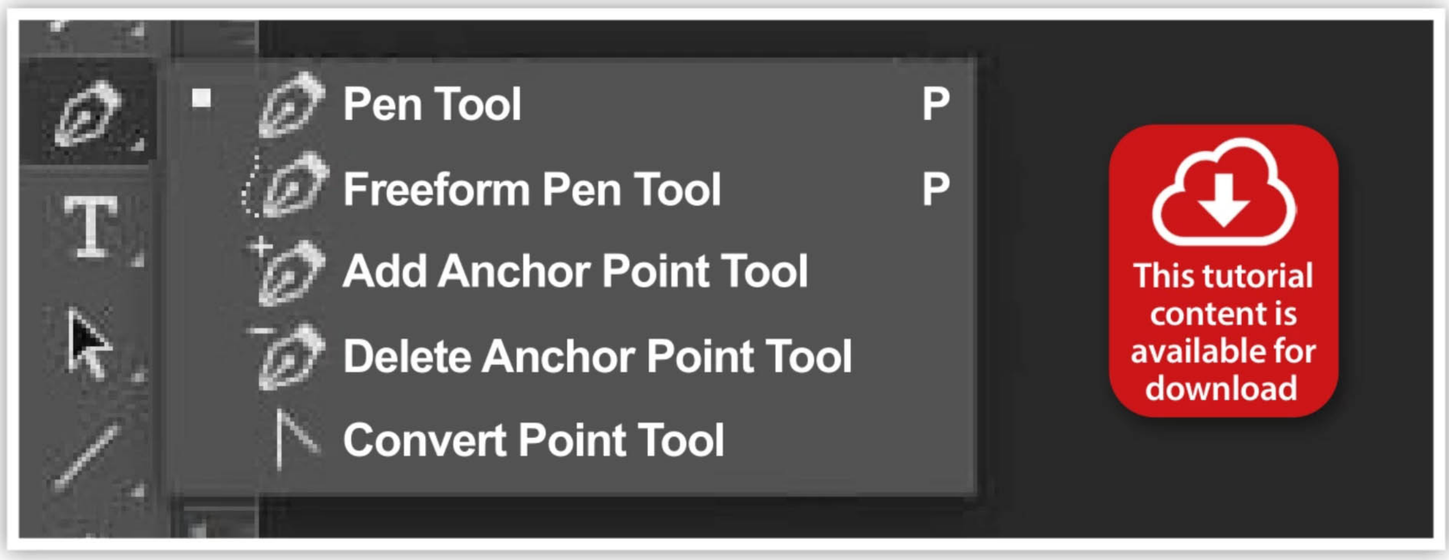
To get this cross-processed photo effect on this example image, we used a strong orange colour, at 50% opacity, and a Color blend mode, which combines the fill colour with the background colours of the image.

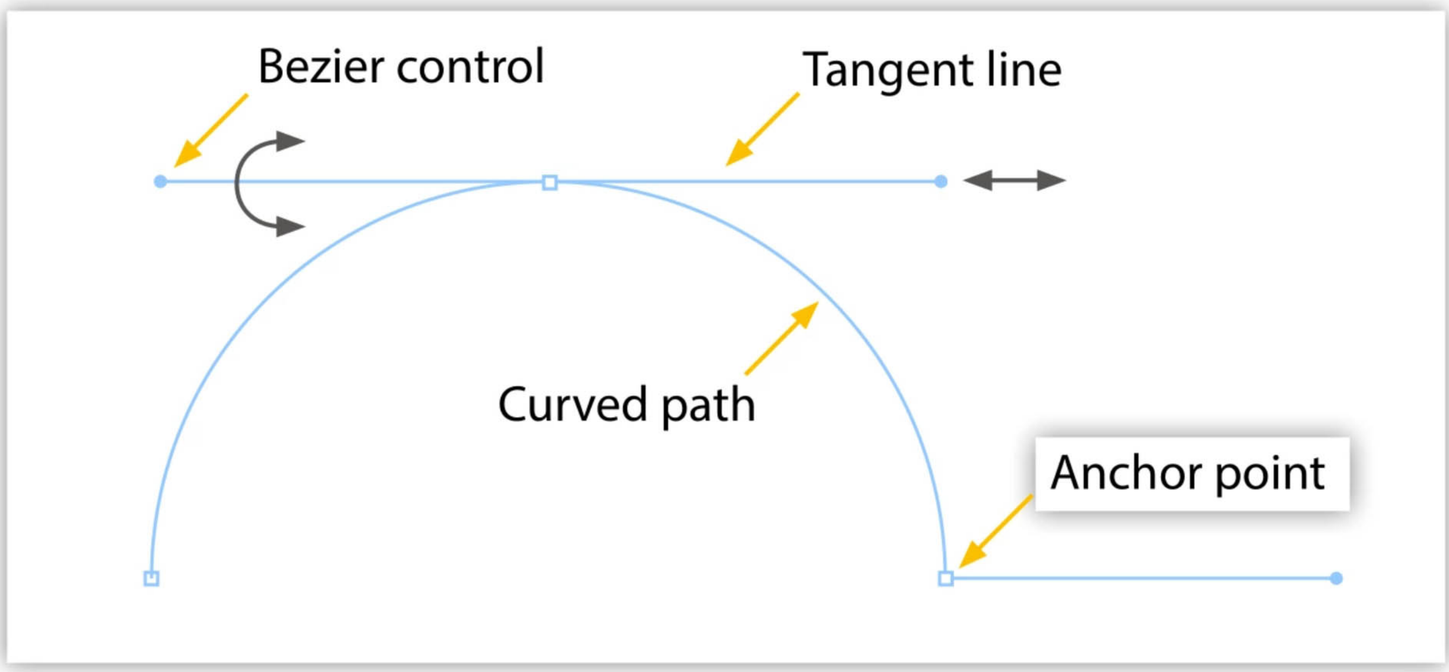
USEFUL TIP

Remember that the Paint Bucket uses the same edge detection as the Magic Wand tool. If you want to fill the whole screen, use a new layer.

The Pen Tool and Paths

Draw smooth curved paths with the versatile Pen tool







The quickest and most common way to make selections is to use the Polygonal Lasso tool but since that only draws straight lines from point to point it isn't ideal for making accurate selections around curved edges. Photoshop does have a tool for making smooth curves though, and it's called the Pen tool (keyboard shortcut P).

Rather than creating a selection directly like the Lasso tool, the Pen tool is used to create a Work Path. A Work Path in Photoshop is a vector graphic outline which can be used for several functions, including shaped text, outline strokes and of course selections. A path consists of straight and curved lines segments connected with points. You can leave a path open to form a straight or curved line, or close a path to form a shape.

Paths are independent of any particular layer, so you can use the same path to create shapes on more than one layer of an image, and you can copy a path from one image to another.

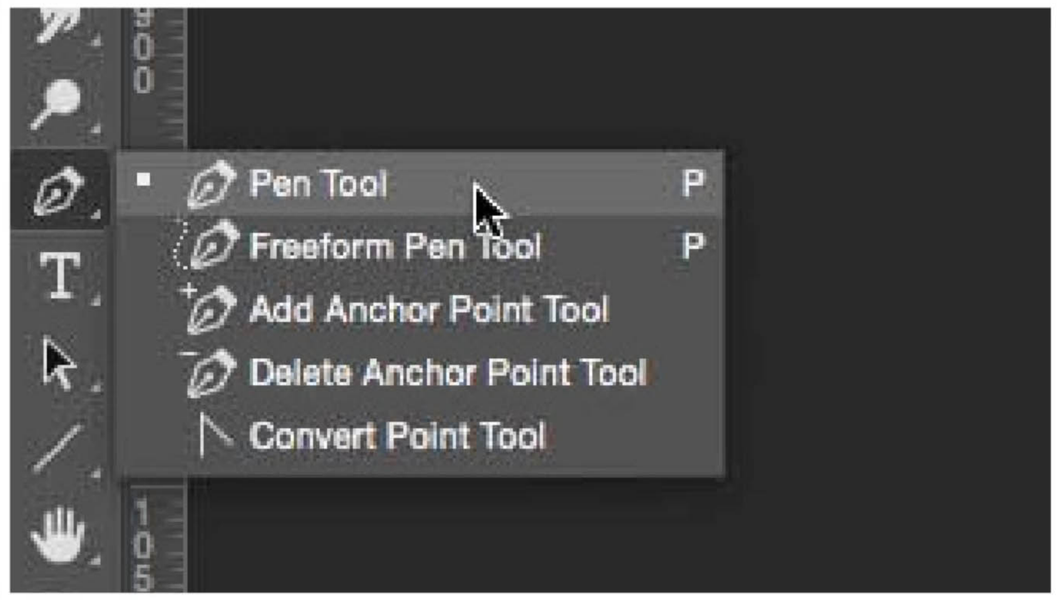
Using the Pen tool and Paths effectively is a complicated process that takes a lot of practice to master, but it's worth the effort, because once you crack it you'll be able to make smooth curves and selections around almost any shape. If you want to use Photoshop in a professional capacity it's an essential skill to learn.

USEFUL TIP

If you need to repeat the same selection on multiple layers, save your selection as part of the image. You can then load it in again to save repeating work.

Using the Pen Tool

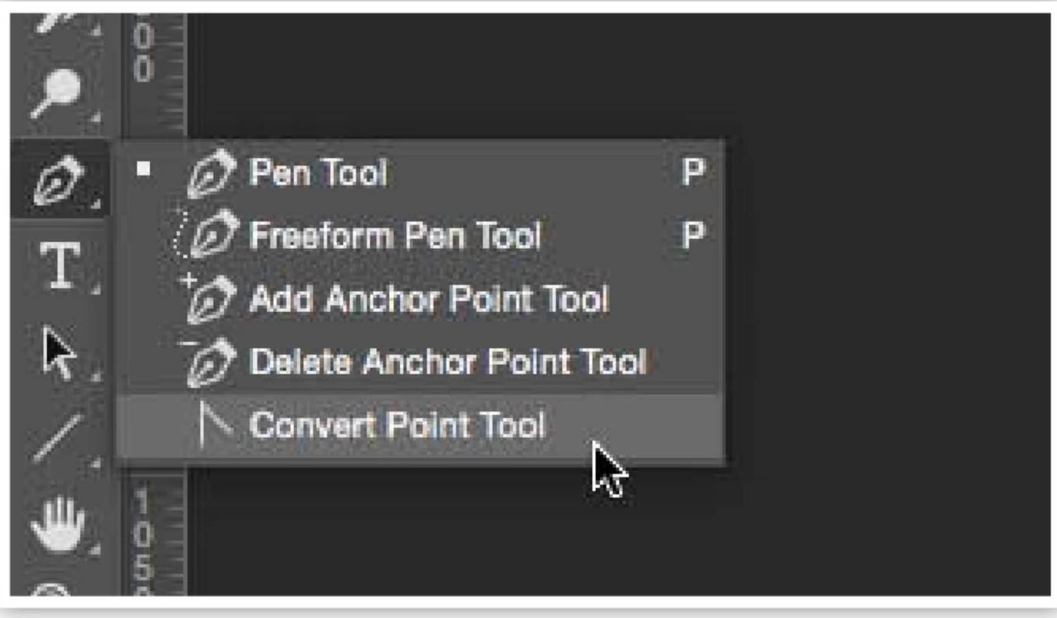
Using the Pen tool effectively takes some practice and a lot of patience. Here's the low-down on how it works.



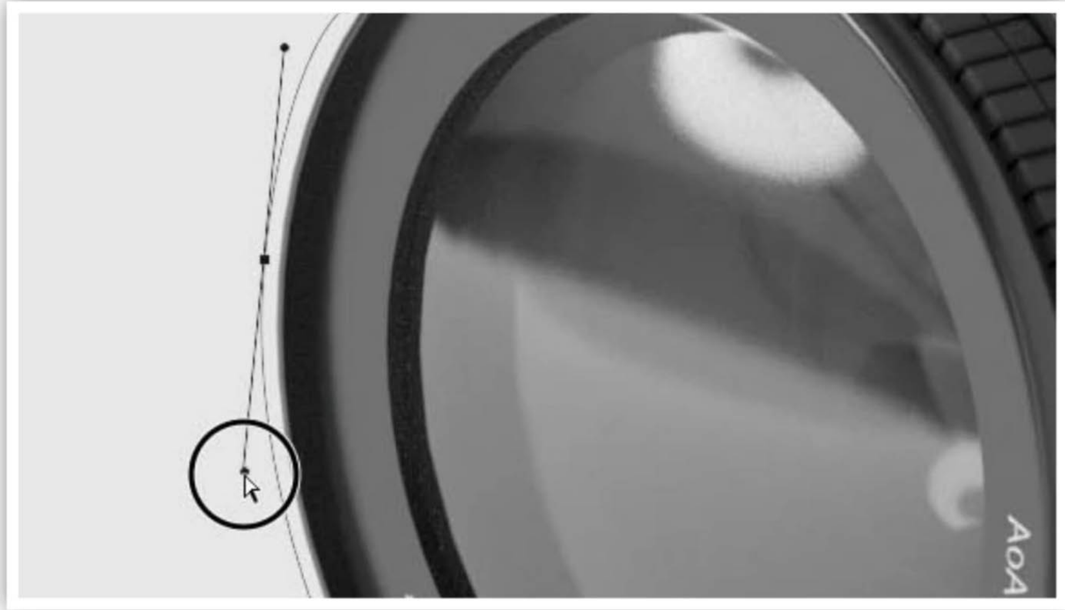
01 The Pen tool works by using anchor points which are connected by lines. To draw a curved line, first select the Pen tool from the Tool Palette.



02 Click with the pen tool at three or four points on the line you wish to draw; these are called anchor points, and you'll see that there are straight lines connecting them.



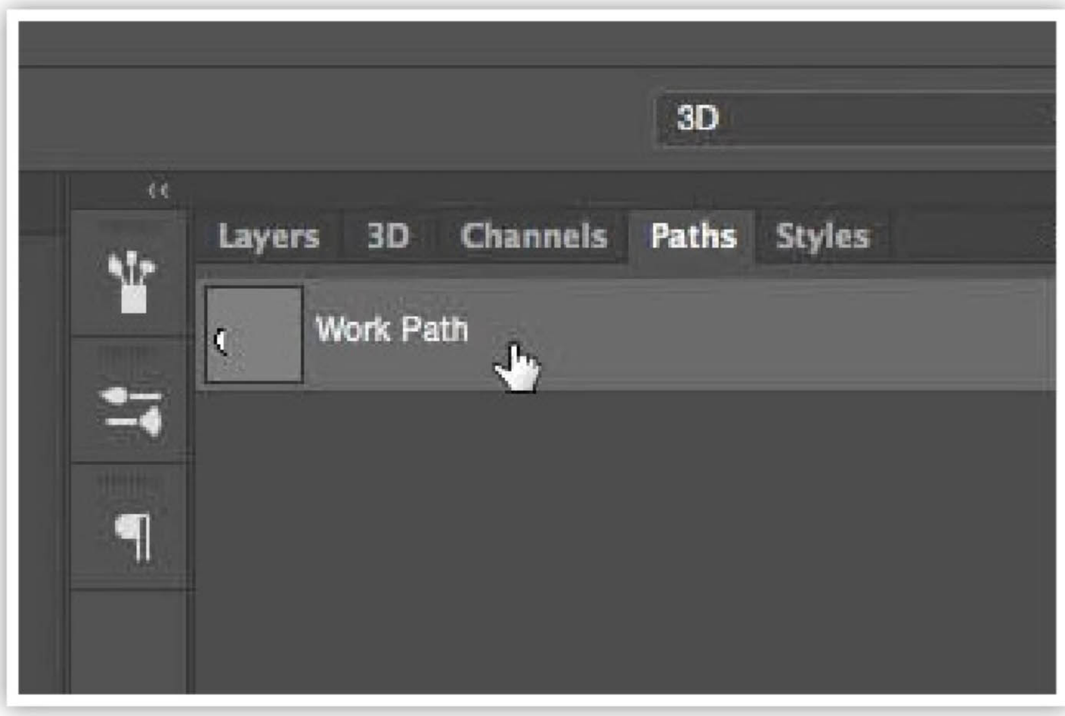
03 Next, click and hold on the Pen tool icon, and select the Convert Point tool. You use this to manipulate the anchor points and control the curvature of the line.



04 Click and hold on any of your anchor points, and drag away from the point. You should see two lines with handles on the ends extrude from the anchor point. This is called a tangent line.

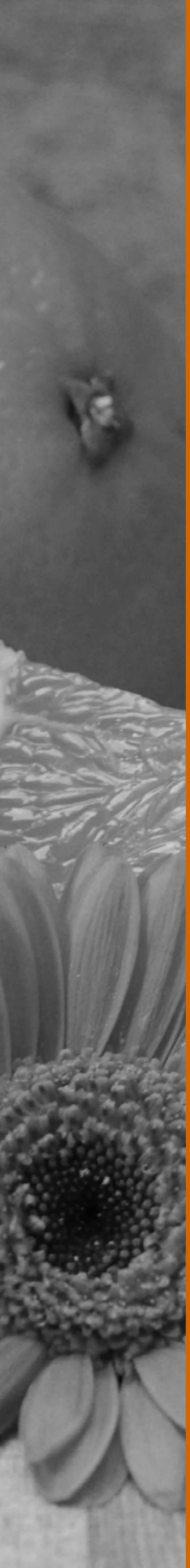


05 If you move the cursor around you'll see the line linking your anchor points flex and bend. You can use this to bend the line to match the curvature of the edge you're trying to follow.



06 With practice and patience you can bend a curved line around even quite complex shapes. If you open the Paths palette you'll see the work path you've created appear in the list.



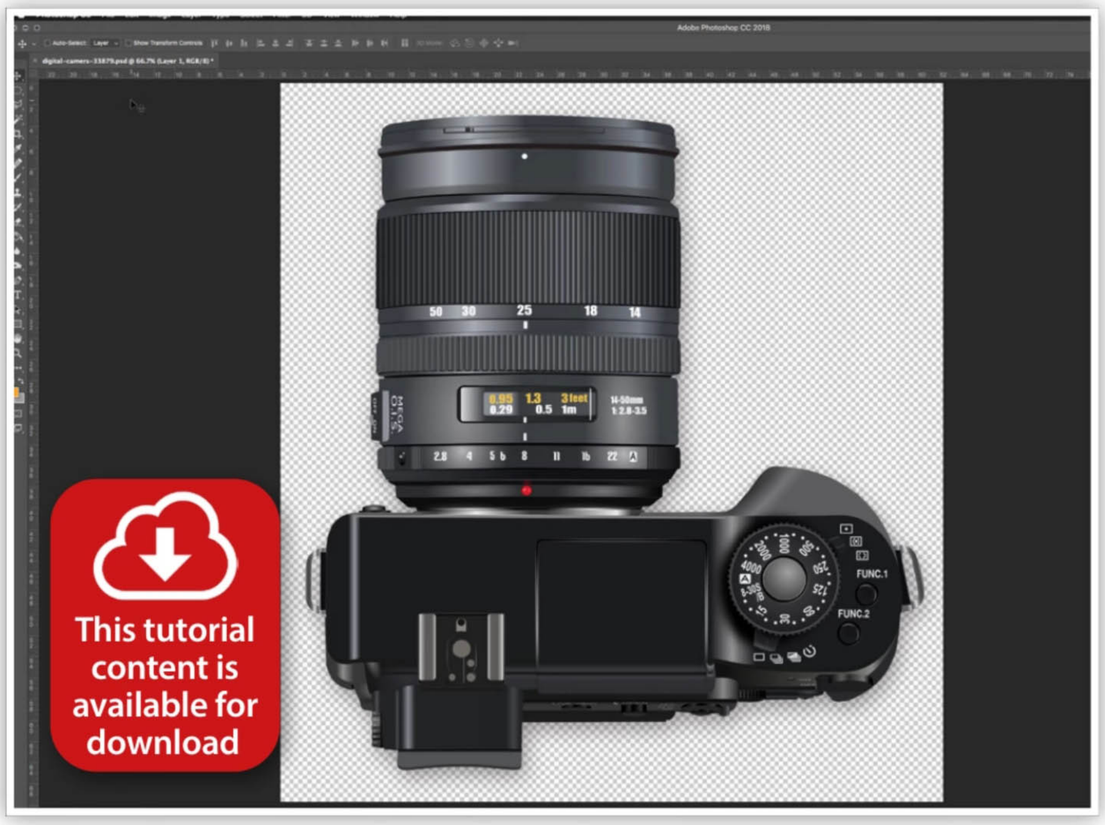


Basic Editing Techniques

Now we need to show you how you can use more of Photoshop's tools and add to your growing skill set. You can simply edit the brightness of a photo, or combine it with another one. There are some great techniques that will have you creating your own masterpieces in no time.

Making Selections

The ability to select and modify only part of an image is fundamental to how Photoshop works



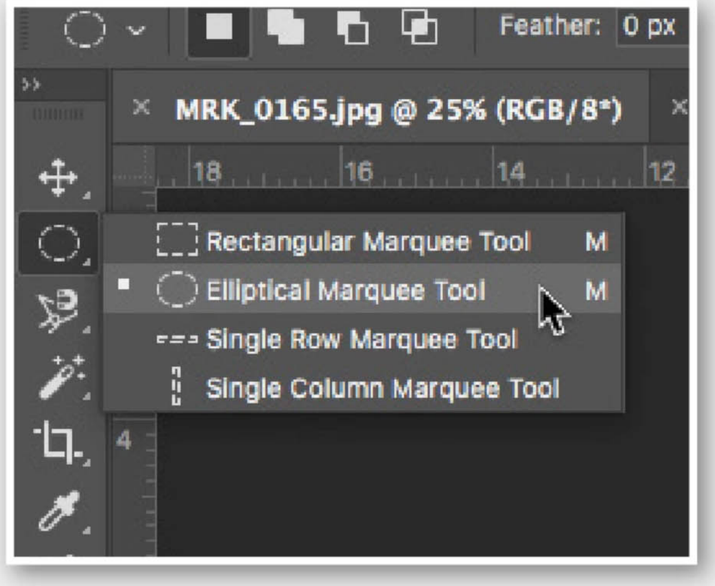
One of the most basic features of Photoshop is the ability to modify only part of an image, leaving the rest unchanged. The way that we do this is by using Selections, and there are several tools and menu operations that we can use to help us achieve this.

After the Move tool, the next three icons on the Tool Palette are all selection tools, giving you a wide range of methods for isolating an area of your image. Some are fully manual, while others use varying degrees of automation.

The most basic Selection tools are the Rectangular and Elliptical Marquee tools. These both allow you to manually select a simple shape of any size, or of a fixed size or aspect ratio. You can select several areas, either separately or joined together, and with a hard edge or a soft feathered edge. The various Lasso tools let you select an area of irregular shape, again with the option of a feathered edge. You can draw the area freehand, or use point-to-point lines for greater precision.

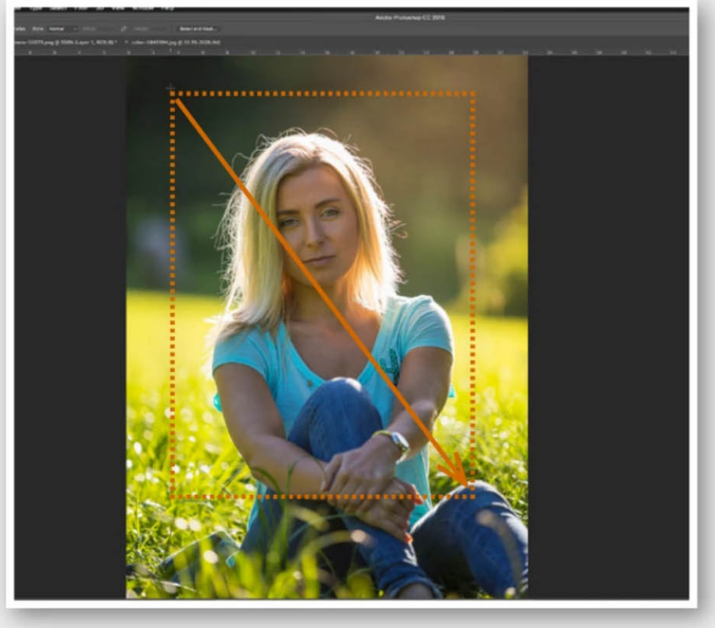
Let's take a look at the process of making a selection, and examine the various options that are available.

Elliptical Marquee Tool

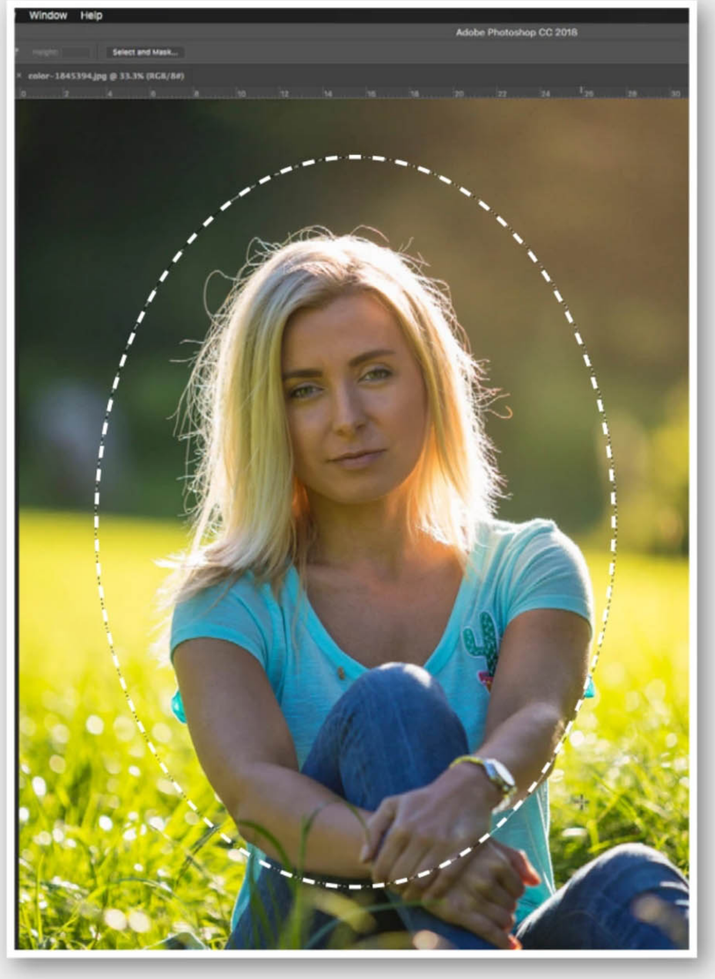


01 The Elliptical Marquee tool works in much the same way as the Rectangular Marquee, but draws a curved shape.

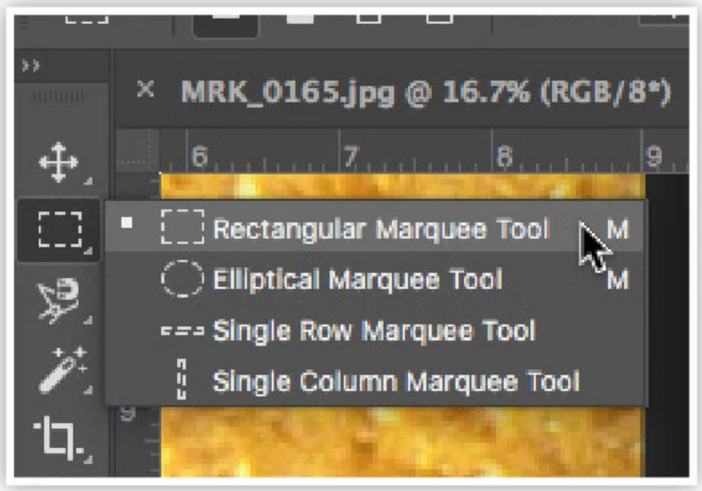
02 As with the Rectangular Marquee, you can set the size or aspect ratio. A ratio of 1x1 draws a circle, other ratios draw ellipses of various sizes.



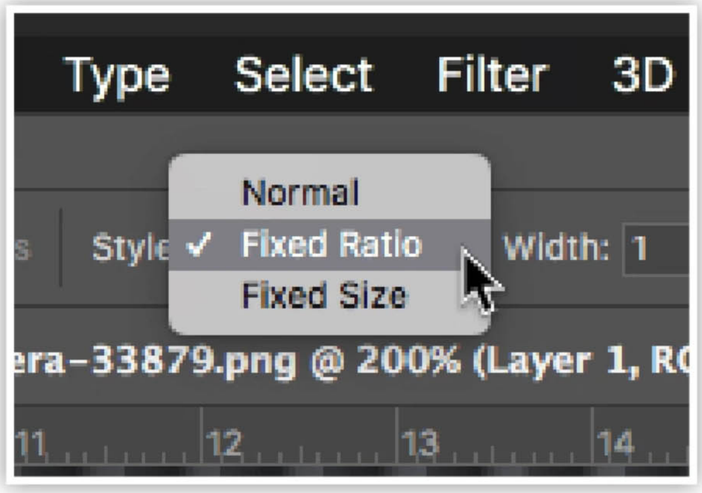
03 To draw an ellipse around your selection, imagine that it's actually a rectangle, start from one corner and drag to the diagonally opposite corner. This can be tricky to get right, so alternatively hold down the Alt key and start from the centre of where you want your ellipse to be.



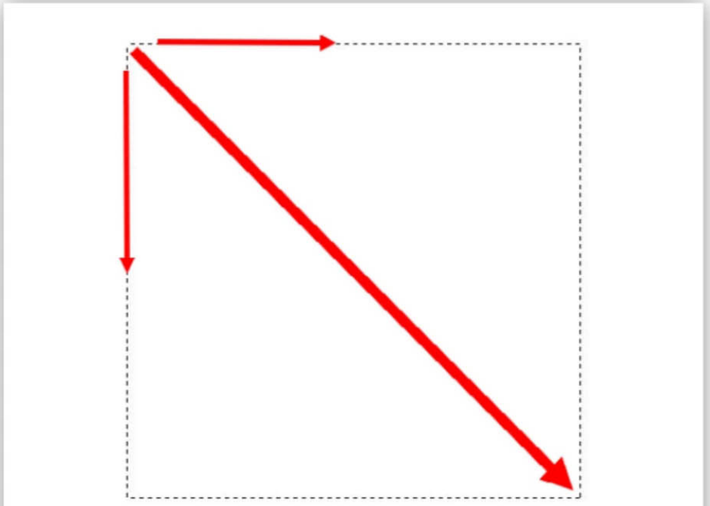
Simple Area Selection



01 Let's start off with the simplest selection tool, the Rectangular Marquee. This is used, as the name implies, for selecting simple rectangular shapes.



02 You can draw a freehand rectangle, or fix the size or aspect ratio by using the tool options. Let's draw a perfect square selection by setting a ratio of 1x1.



03 To draw a square, click on a point where you want one of the corners to be, then hold and drag to the diagonally opposite corner. You'll see the "marching ants" line of the selection box appear following the cursor.



04 If you use the Paint Bucket tool to fill the area you've selected you'll see that the edges are very sharp.



05 To make a soft-edged selection, type a number into the Feather box. The higher the number, the more blurred the edge will be.

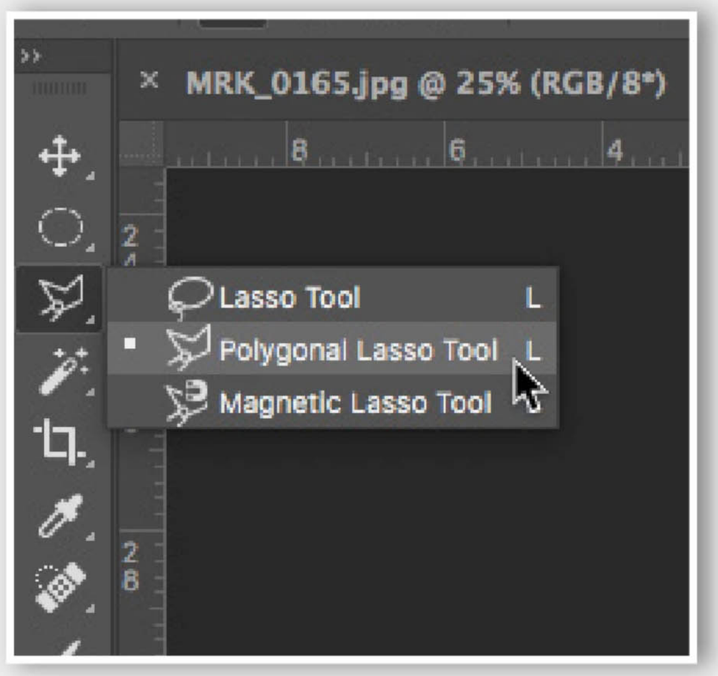


06 This time if you draw a selection and fill it, you'll see that the edges are very blurred, with the marquee "marching ants" line in the middle of the blurred area.

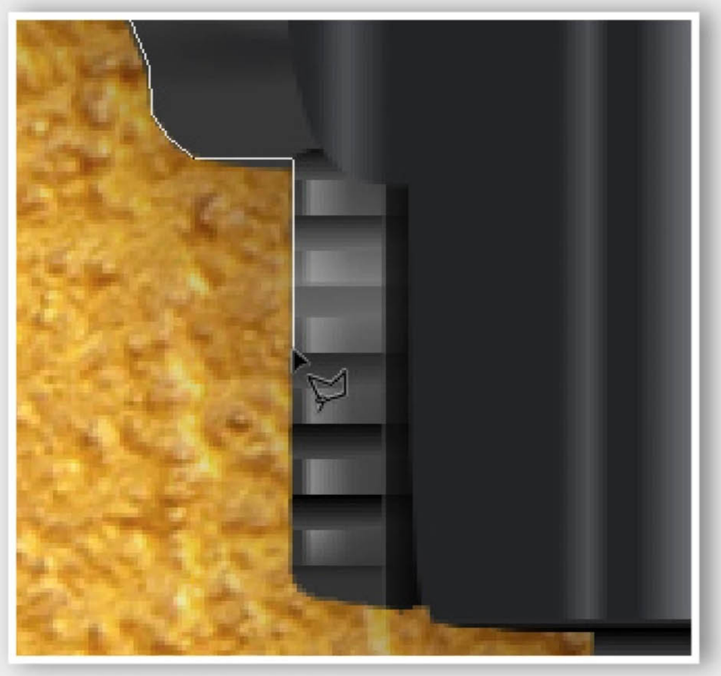
USEFUL TIP

If you want to select more than one area or add to the current selection, holding down the Shift key will temporarily put the tool into "Add to Selection" mode.

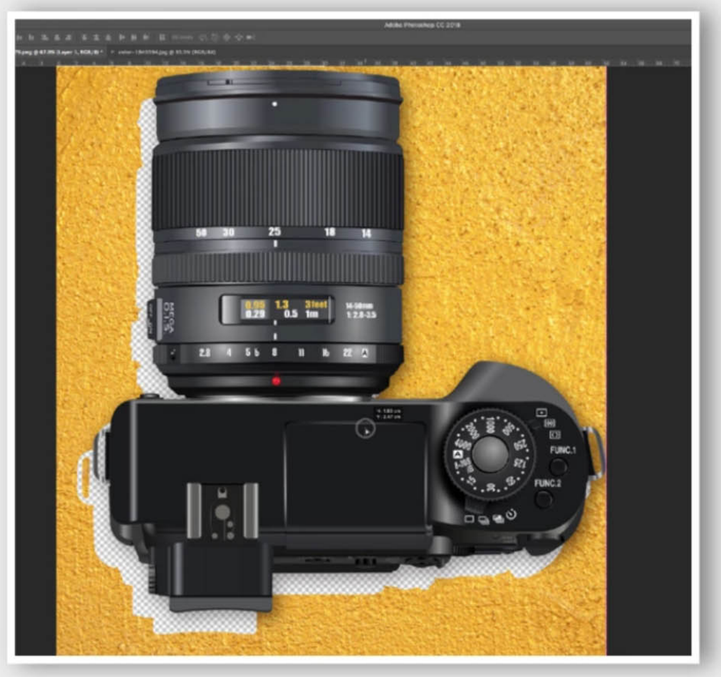
Polygonal Lasso Tool



01 For selecting more complex shapes, the best option is the Polygonal Lasso tool, or if you want to draw freehand, then the Lasso Tool is the one to go for. Drawing freehand may be quite odd using a mouse, but with a little practice you can use it with confidence.



02 With the Polygonal Lasso, you click around the edge of the area you want to select. When you complete the loop, or double-click, the selection is completed and you'll see the "marching ants" border.



03 A Polygonal Lasso selection is ideal if you want to cut or copy a complex shape out of a background, for example to make it part of another picture. It is particularly helpful when your subject has lots of straight, regular edges that are easy to follow.

Modifying Selections

Photoshop has sophisticated tools to refine selections

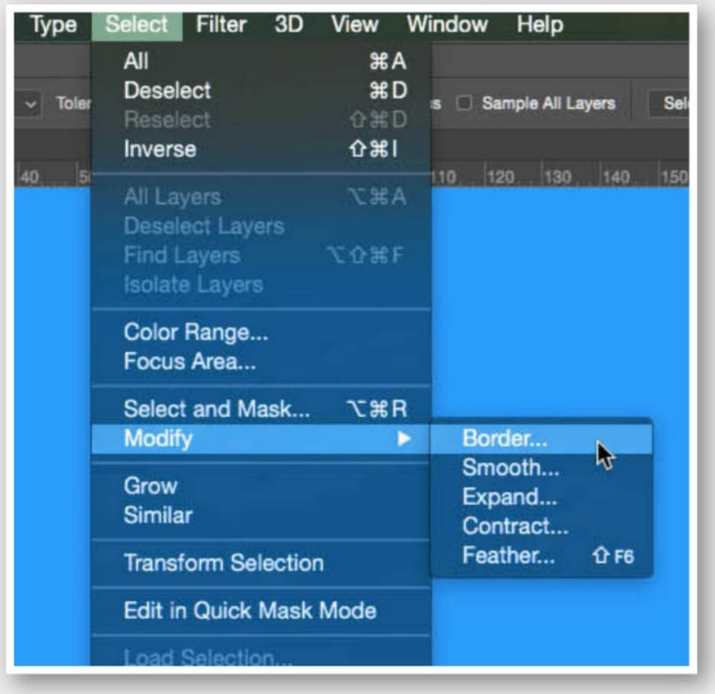


Photoshop's standard selection tools, the Marquee, Lasso and Magic Wand, are fine for making basic selections of regular, well-defined shapes, but they're not so good at picking out soft-edged or very fine shapes. One thing in particular that has always been a problem is the edge of fine or untidy hair. Take this photo for example:

This subject has been photographed in a typical studio setting, with good lighting and against a plain light grey background. Photos like this are used all the time for catalogues, advertising posters and the like.

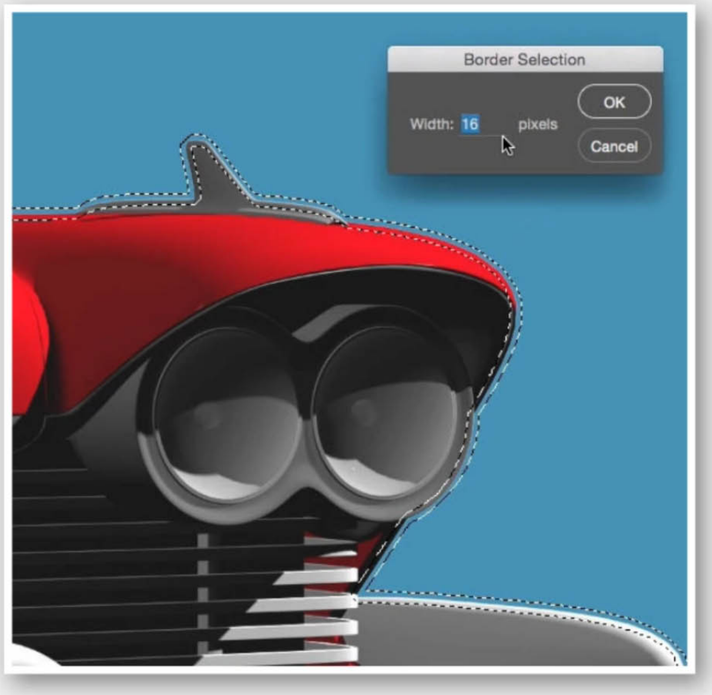
However, in order to fit these needs the dog will have to be separated from the background. With a plain background like this, it would be tempting to use a normal selection tool such as the Magic Wand. However if we try it, what we end up with is something like this:

Modify Selection



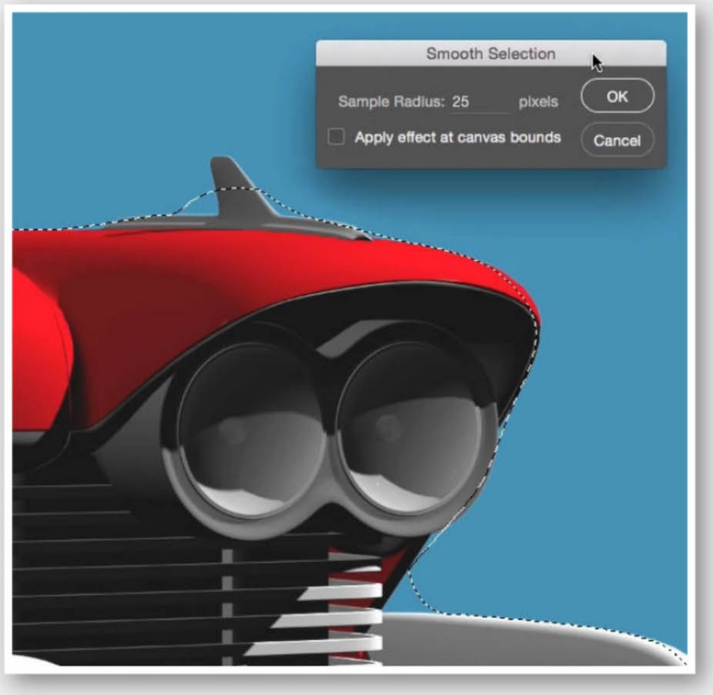
Photoshop has other tools to modify a selection which you'll find, appropriately enough, in the Select menu, under Modify. The options include Border, Smooth, Expand, Contract and Feather. They're all relatively simple, but useful nonetheless. We have some examples to show you.

Border

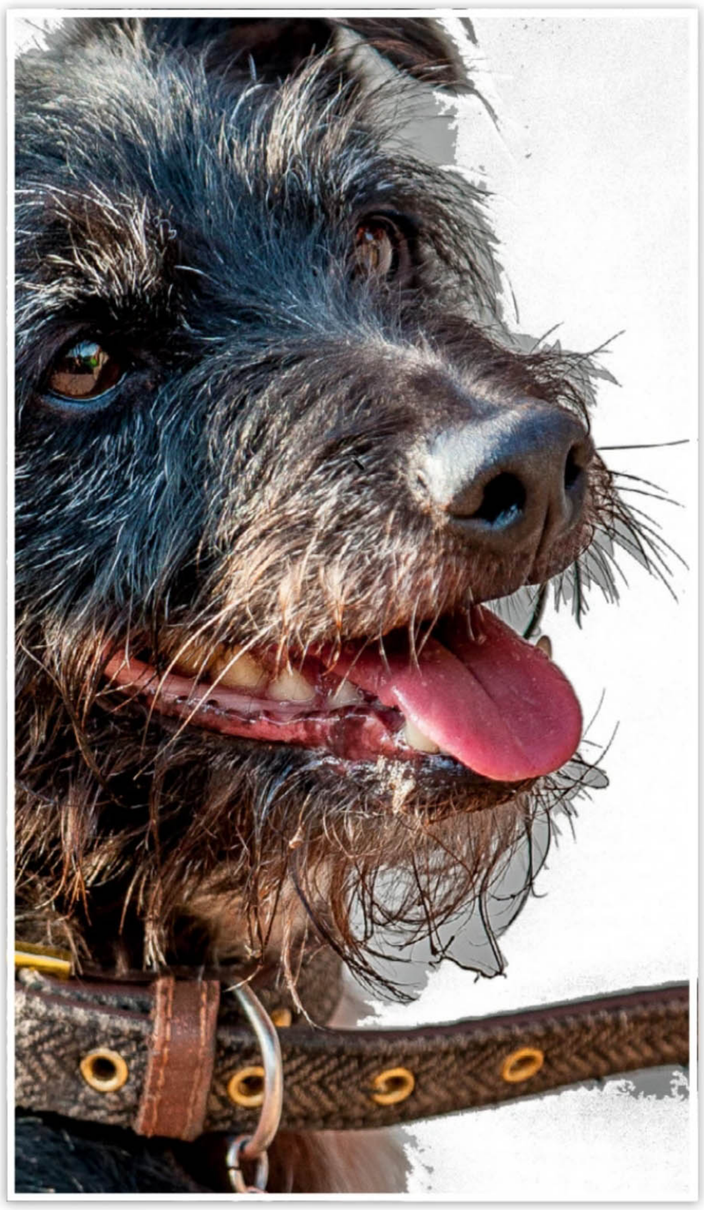


Border converts the single-line selection into a border of the specified width. You can use this selection to create a border around your selection by using the Paint Bucket tool. Be aware that the border extends an equal amount from either side of your original selection.

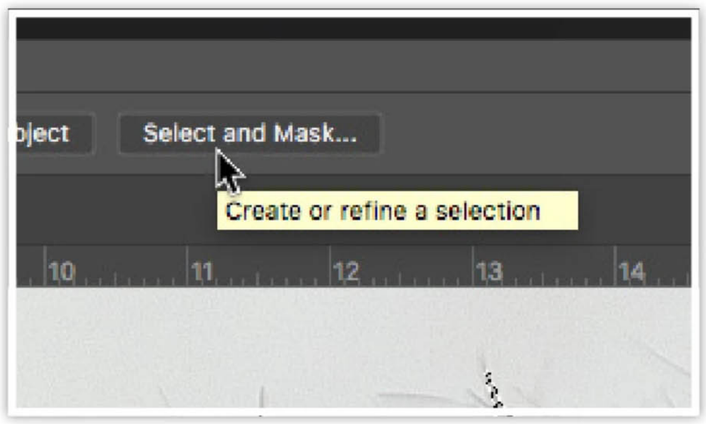
Smooth



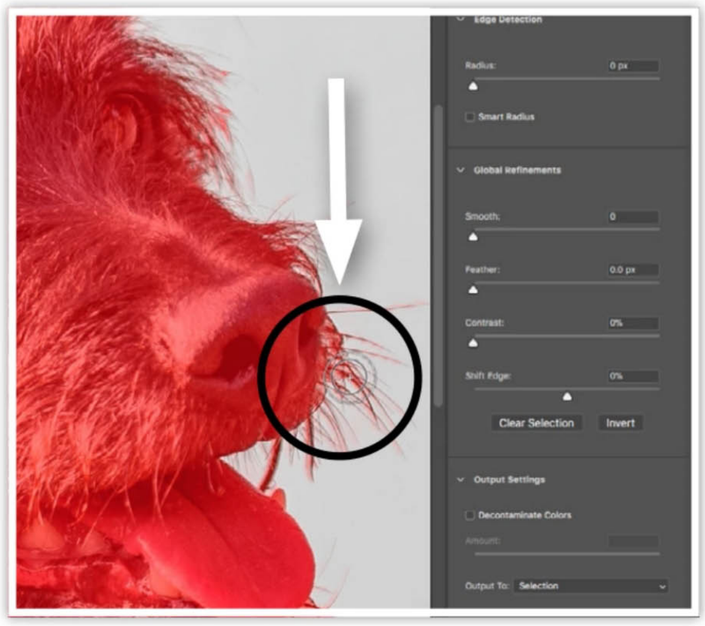
Smooth removes the kinks and wrinkles from the line of your selection. It's useful when you're selecting smooth-edged objects, but it will round off the corners of any irregular shapes. The larger the value of Smooth Selection, the smoother and less detailed the selection becomes.



As you can see, the edge around the dog's hair looks terrible. The automatic Magic Wand selection has produced a very jagged edge, because it can't distinguish between the fine edge of the hair and the background. Fortunately the latest version of Photoshop has a feature called Select and Mask, which is capable of making much finer distinctions.



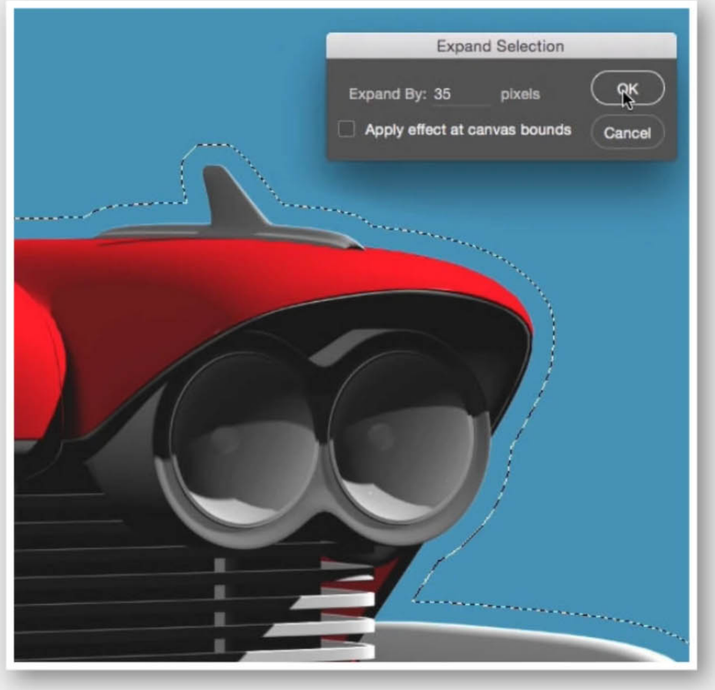
Select and Mask is very easy to use. Starting with a Magic Wand or Polygonal Lasso selection as close as possible to the edge of the hair or any other soft edge, click on the Refine Edge button on the tool options bar. In the dialog window that opens, in Edge Definition, check the box marked Smart Radius, and use the square brackets keys to set the brush size so that it's large enough to cover the hazy edge area around the hair. Then simply paint around the edge, overlapping both the dog and the background.



When you've been around all the edge area that you want to refine, click OK, and then wait a few seconds while the program recalculates the edge. As you can see here, the result is a good improvement over the first attempt.



Expand



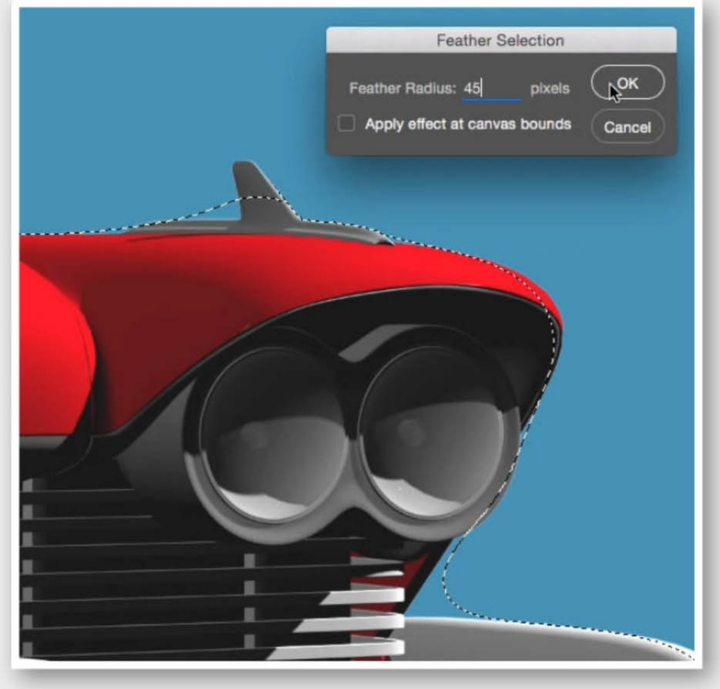
Expand, as the name suggests, expands the size of the selection by the specified number of pixels. The larger the value you expand the selection by, the detail and shape of your original selection will begin to decrease as it enlarges outwards.

Contract



Contract is the opposite of Expand. It shrinks the size of the selection by the specified number of pixels. As with the Expand option, the more you Contract the selection, the original selection shape's detail will become less well-defined.

Feather



We've looked at Feather before. It softens the edge of the selection by the radius set in the dialog box. It's perhaps the most useful option here, particularly if you're trying to copy and paste the selection into a background. Unlike Smooth, this creates a soft vignette effect.

Using Layers

Understanding layers is fundamental to Photoshop editing

The concept of Layers was first introduced with Photoshop 3.0 in 1994, and has become the very core of Photoshop image editing, as well as being imitated by every other image editing program on the market. Layers are exactly what they sound like; the elements of the image are stacked up and displayed in descending order. Since layers can include transparency, lower layers can be visible through higher layers.

Effects, adjustments and operations can be applied to individual layers, or to all the layers at once. You can move layers around relative to one another, change the order of layers in the stack, turn layers on or off, and delete layers without affecting the others. Some people seem to have a hard time getting their head around the concept of layers, so the best way to think of them is as a pile of glass panels with the elements that make up the image painted onto them, with you looking down on them from above to see how they stack up.



Layers have a number of advantages. For one thing, the ability to change one element on one layer without affecting the other layers means that you can edit your image non-destructively. For example if you want to perform an operation on a layer but you're not sure how it's going to turn out, just make a duplicate layer, set the original to be invisible, then do your editing on the copy. If you don't like the result, you can simply delete it and go back to the original.

There are four main types of layer. There are Pixel layers, which contain the graphical elements of the image. There are Text layers, which contain text information which can be edited and resized. There are Vector layers, which contain vector information such as shapes and work paths, and then there are Adjustment layers, which contain embedded commands that affect the layer immediately below. We'll look at Adjustment layers in more detail on the following pages.

There is a downside to using layers, and that is the file sizes they generate. Adding layers and the information that goes along with them massively increases the size of the file, so when you've finished editing and you want to save the picture you've created, it's usually a good idea to Flatten the image, which merges all the layers together into a single image.

USEFUL TIP

Click on a layer, press and hold the Shift key on your keyboard and click on another layer to multi-select a number of layers.

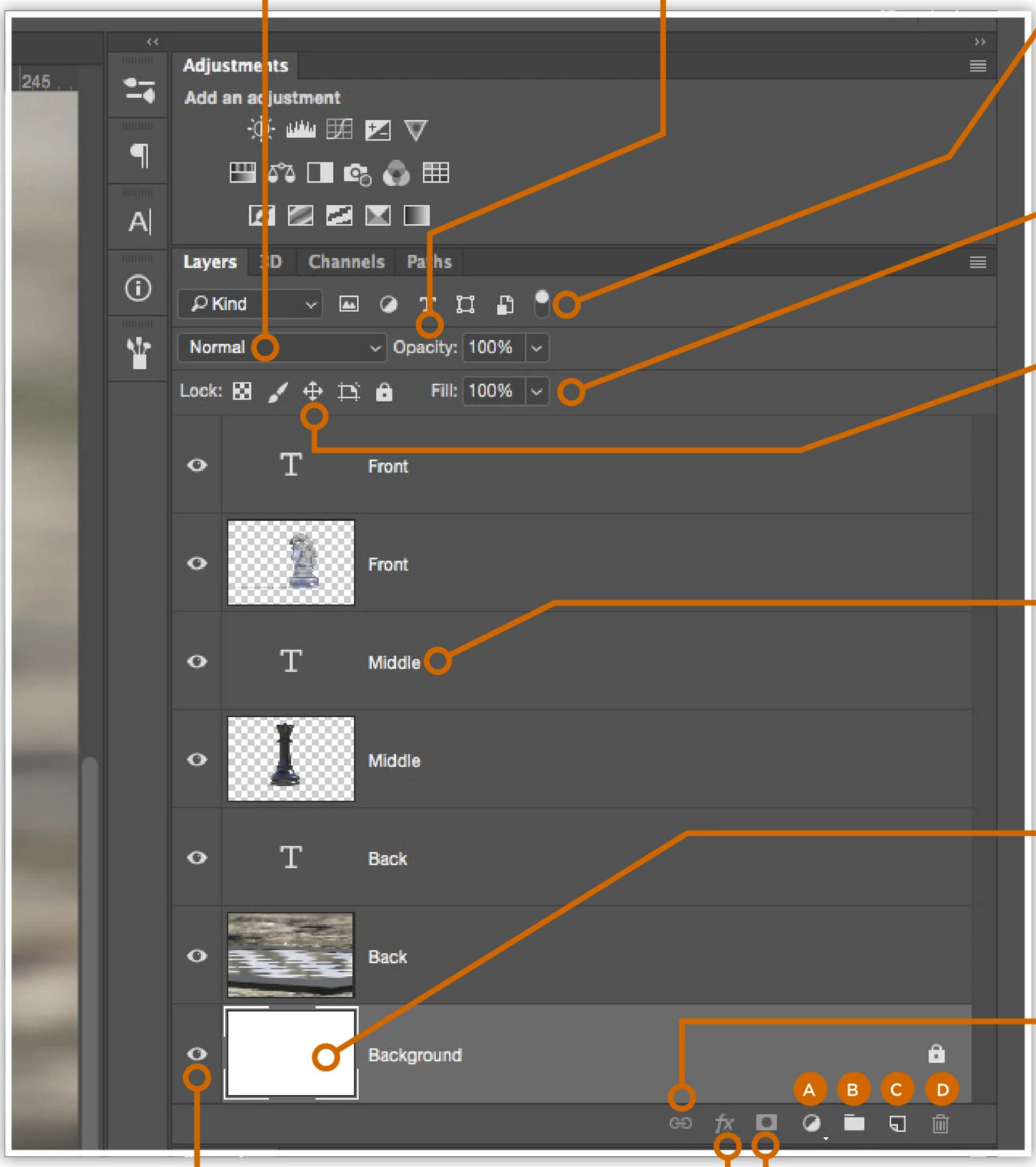
The Layer Palette

Knowing your way around the Layer palette is vital if you want to make the best use of this feature.

Blend Mode
Determines how the layer interacts with the layer below it. Can be changed for every layer one by one, or for a group.

Opacity
Controls how transparent the layer is, and how much of the layer below will show through.

Layer Filters
Choose to display only one type of layer, or all of them, and by selecting from the drop-down you can choose what order to show them in.



Fill
Similar to Opacity, but only works on pixel information, ignoring blending options and layer effects.

Layer Locks
By clicking on these buttons you can lock the layer from any further activity. Transparency, image pixels and position can be locked independently of each other.

Text Layer
There are several different types of layer. Text layers, not surprisingly, contain text characters.

Background
The Background layer is the default bottom layer, and always starts off locked when you open a new Photoshop document.

Link Layers
Highlight a few layers and then click this button to link the layers. Transform and Move commands will affect all linked layers.

Visibility
Clicking on the eyeball simply renders the layer and all its effects invisible.

Layer Styles
Add effects such as drop shadow, bevelled edges, inner glow and more.

Layer Mask
Add a mask to a pixel-based layer to reveal or conceal information using a black or white brush.

A Adjustment Layer
An alternative to the main layer menu, you can add all the adjustment effects such as Levels, Brightness and Contrast and Saturation here too.

B New Group
Creates a new layer group, into which you can drag and drop layers, which helps you to organise layers in a big complicated composition.

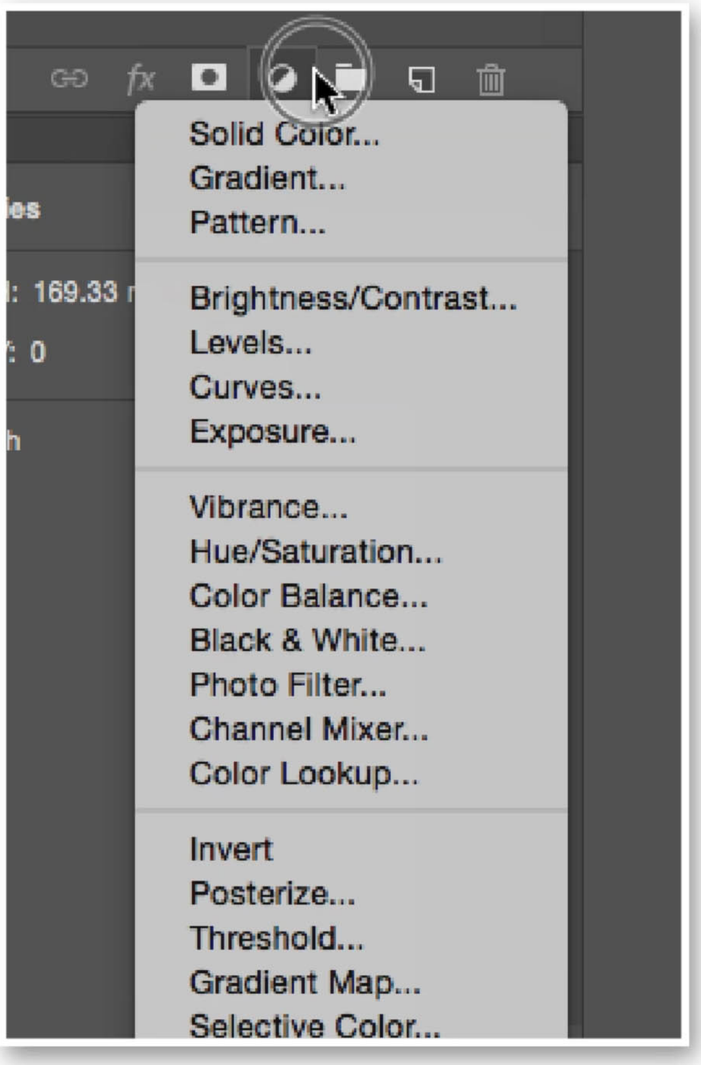
C New Layer
Clicking on this button creates a new blank layer directly above the currently active layer.

D Delete Layer
Does exactly what you'd expect it to do. Click to delete the currently active layer, or drag a layer onto the button to delete it.

Adjustment Layers

A great way to edit your images without damaging them

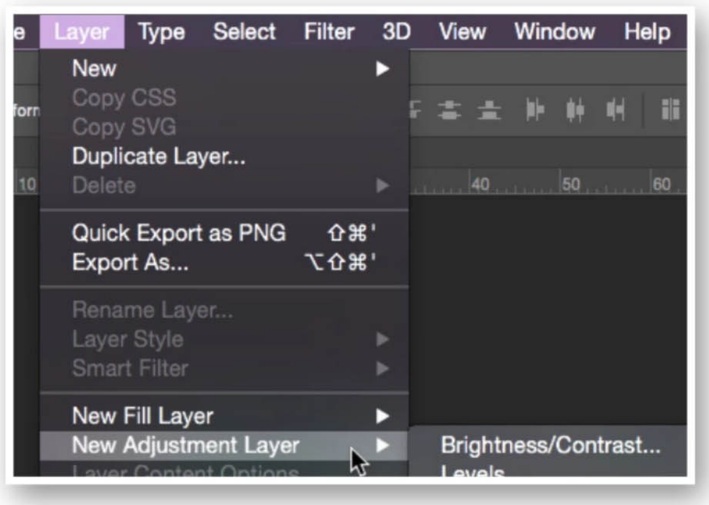
Although there are many editing options in the Image > Adjustment menu, they all have one thing in common. When you apply them to an image the effect they have is destructive, because they discard information from the original image. For example, if you apply Curves, the Hue/Saturation, then add a Photo Filter effect, that's three operations that have discarded information, each one degrading your image quality. If you apply an operation repeatedly, such as multiple Curves corrections, you'll actually be able to see the degradation. The only way to undo the damage done by these modifications is to revert to an earlier version by using undo or the History palette, but that also undoes all your subsequent editing as well. This degradation is much worse with 8-bit than with 16-bit images, since there's less information to start with.





It's impossible to avoid this image degradation altogether, but by using Adjustment Layers we can reduce it as much as possible. Adjustment Layers sit above the pixel layer in the stack, and their effects are applied in real-time as the layers are displayed. That way if you change your mind about an effect, or wish to change it after it has been applied, your alteration doesn't have any further effect on the layer below it, and the image degradation isn't applied until the layers are merged when flattening the image.

You can apply Adjustment Layers in several ways. First, you'll find a list of available layers in the Layer > New Adjustment Layer menu. Second, if you have the Adjustments palette open (it's open in the default interface workspace) you can click on the button for the layer you want to apply. Third, you can click on the middle button at the bottom of the Layer Palette. All of these offer exactly the same list of options and produce the same results.



The Adjustment Layer Palette

Click on any of these buttons to instantly create a new adjustment layer.

01 **Brightness/Contrast**
Edit image tonal range.

02 **Levels**
Adjust colour and tonal range.

03 **Curves**
Adjust points through the tonal range.

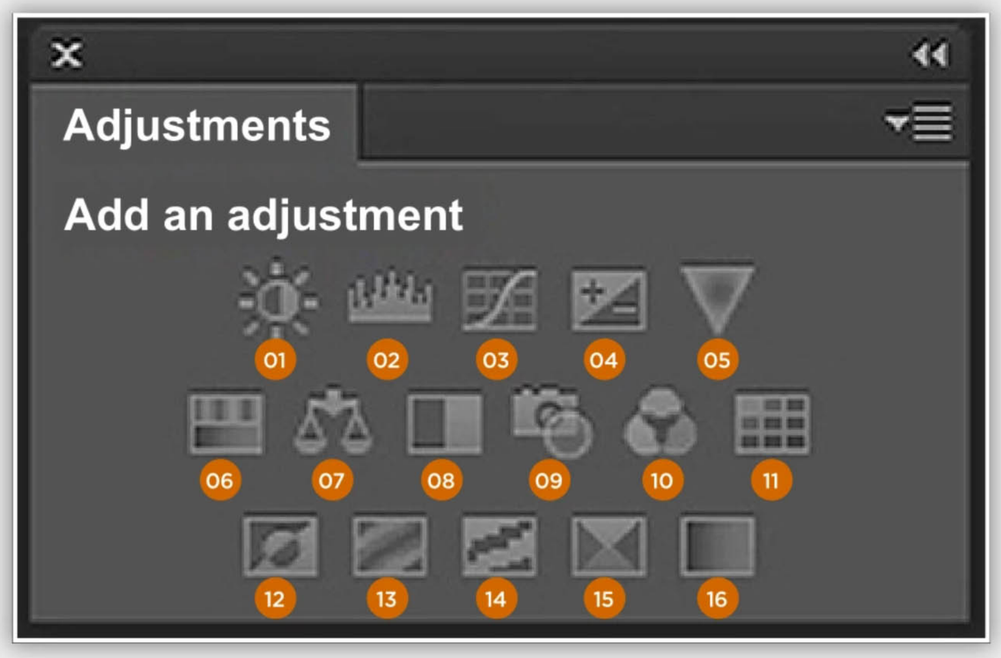
04 **Exposure**
Adjust an images' exposure range.

05 **Vibrance**
Enhance less saturated colours first.

06 **Hue/Saturation**
Alter Hue, Saturation and Lightness.

07 **Colour Balance**
Add colour to shadows and highlights.

08 **Black and White**
Convert to monotone or greyscale.



09 **Photo Filter**
Add custom colour cast to images.

10 **Channel Mixer**
Create tinted or greyscale images.

11 **Colour Lookup**
Add preset colour effects to images.

12 **Invert**
Inverts image colours like a negative.

13 **Posterize**
Adjust the number of tonal levels.

14 **Threshold**
Convert to black and white bitmap.

15 **Selective Colour**
Alter individual primary colours.

16 **Gradient Map**
Maps an image to a custom gradient fill.



Before and After

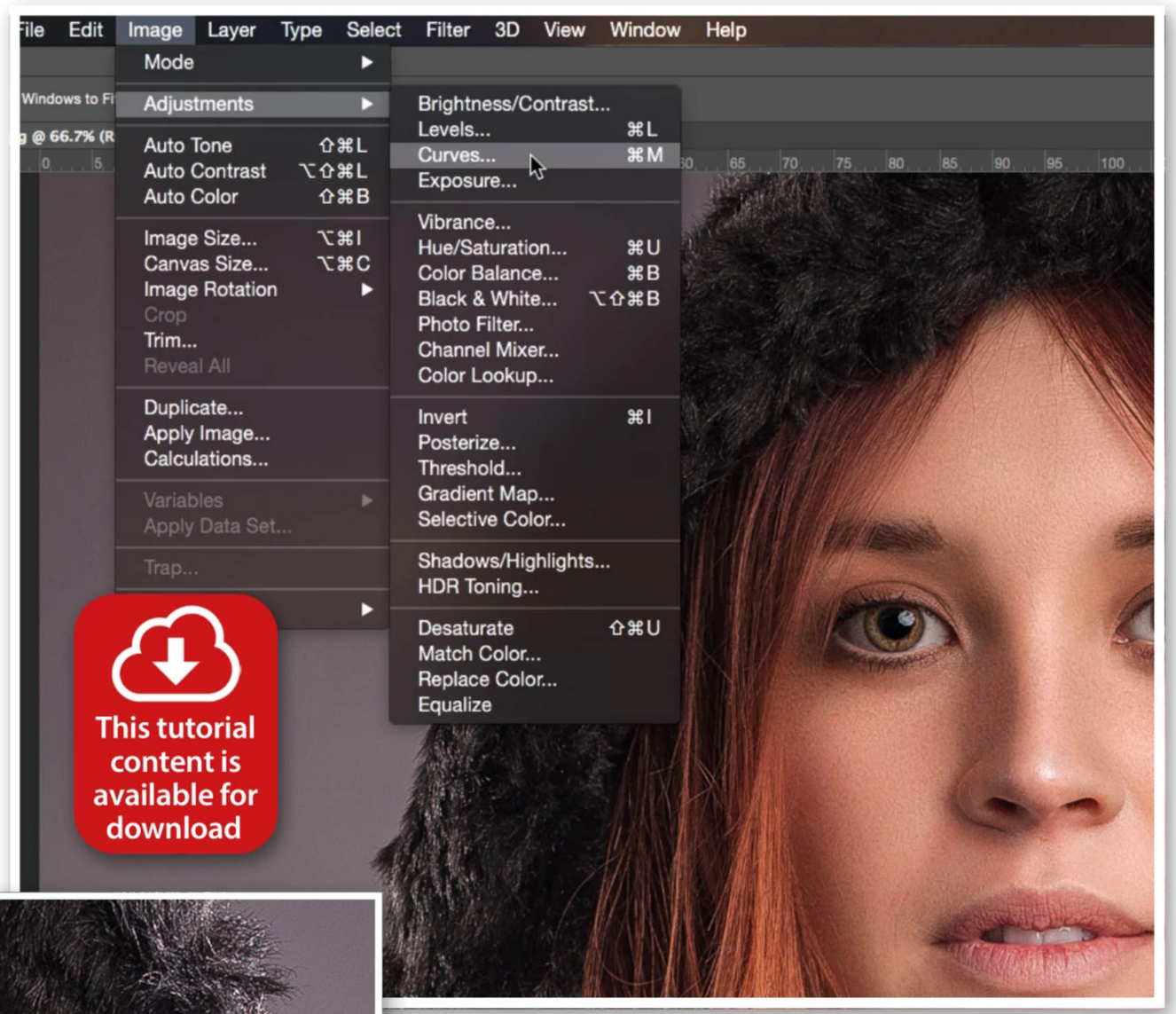
This car photo was taken on a Canon 5DMK3. The subject was photographed on the moors after sunset and there was little contrast. By applying Levels, Saturation and Photo Filter adjustments to the image, the colours have been saturated and contrast enhanced to bring back some punch and detail to the image.

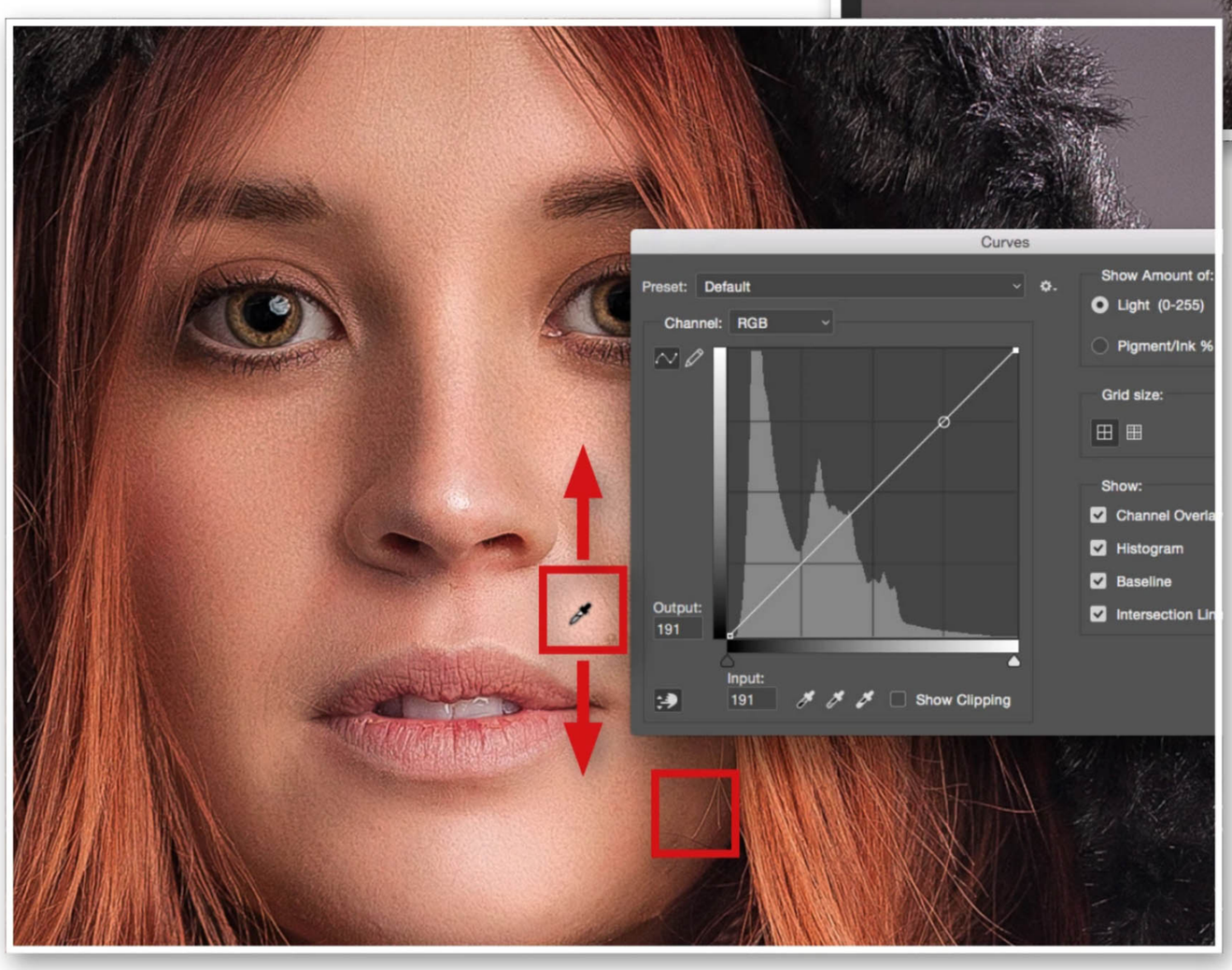
Curves and Levels

The most versatile way to adjust brightness and contrast in your digital images

You'll find the Curves function in the Image > Adjustments menu, or use the keyboard shortcut Cmd+M. The Curves dialog looks a bit daunting at first; a graph with a diagonal line running up the middle of it, like a difficult piece of maths homework. It's nothing to be scared of though, and is in fact the most useful and versatile tool for making adjustments to the exposure and tonal balance of your images. Use this picture of model Gemma as a starting image. What we want to do first is crop it down so we just have the main part of her face in the picture with some hood and hair.

The Curves graph is a histogram showing the relative strengths of different tones within the image. It shows the input distribution along the bottom of the graph, and the output up the vertical axis. The straight diagonal line from corner to corner indicates that there is a 1:1 ratio between input and output at all tones; the output is exactly the same as the input, as you'd expect. It is by adjusting the line and altering the ratio of input tones to output tones, that we can achieve a number of effects. The left-hand end of the horizontal axis represents the darker tones, while the right-hand end represents the highlights.



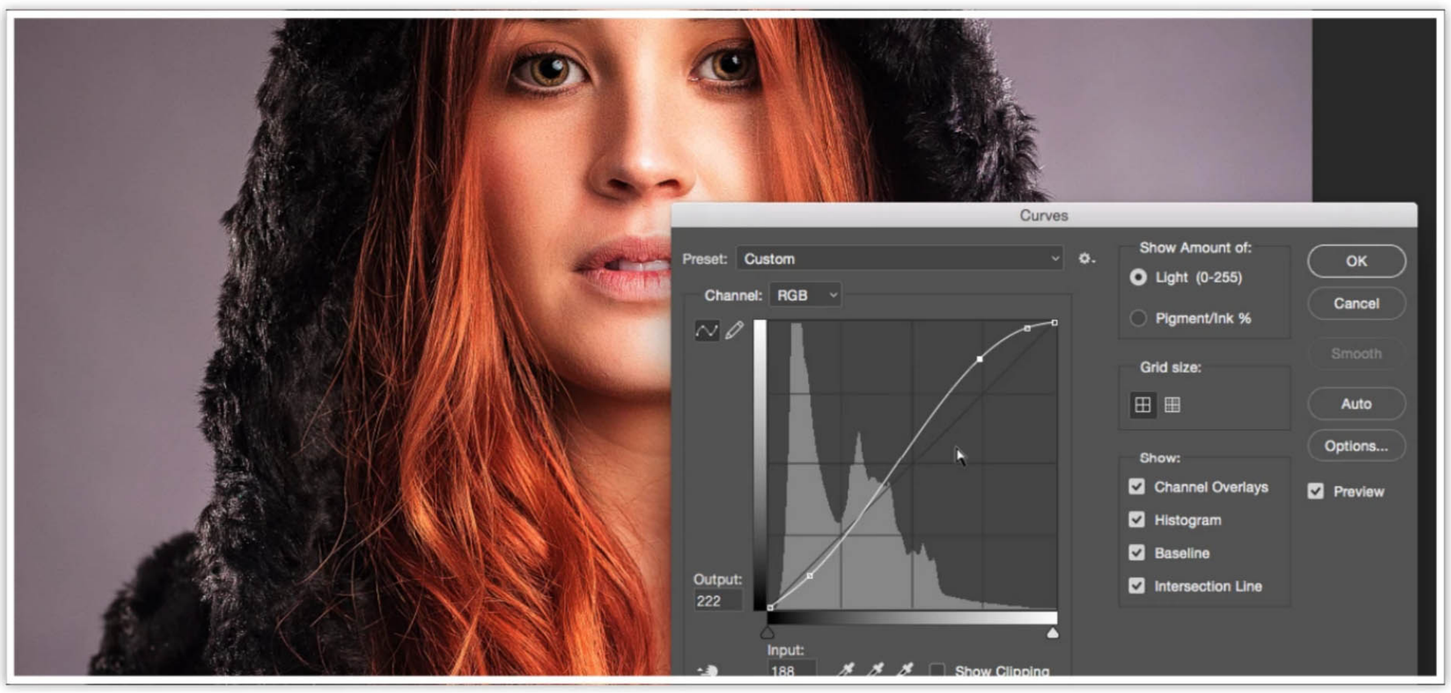


The Curves graph can be manipulated in several ways. You can move the line directly, by clicking on it to place new anchor points and then dragging these points into new positions. You can also use the arrow keys to nudge a selected point up, down, left or right. There's no limit to where the line can start or finish, or where it goes in between, which can lead to some extraordinary results.

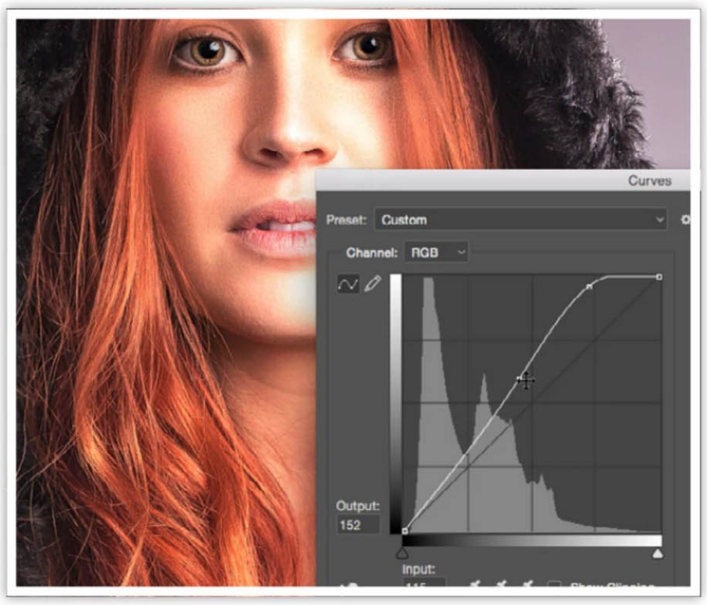
In later versions of Photoshop there's an even more useful way to use Curves. Just to the lower left of the histogram you'll see a button with a hand and two arrows on it. If you click this button and then move the cursor over the image you'll notice a point on the line move up and down as the cursor passes over lighter and darker areas. Pick a spot that you want to lighten, click on it and drag upward, and you'll see the tone curve move to match. Using this awesome feature you can selectively lighten or darken pretty much every tone in the image.

Boosting Contrast

Add two anchor points to the tone curve roughly one-third of the way from either end. Drag the shape of the line into a narrow S-shaped curve, slightly raising the upper half of the curve and lowering the lower half of it, leaving the mid-point and both ends in the same positions. This will brighten the lighter areas of the image, while darkening the darker areas, increasing the contrast while maintaining the same overall exposure. It's an excellent way to make very precise adjustments to contrast. Mid-tone lightness can be adjusted by moving the mid-point on the curve up or down.

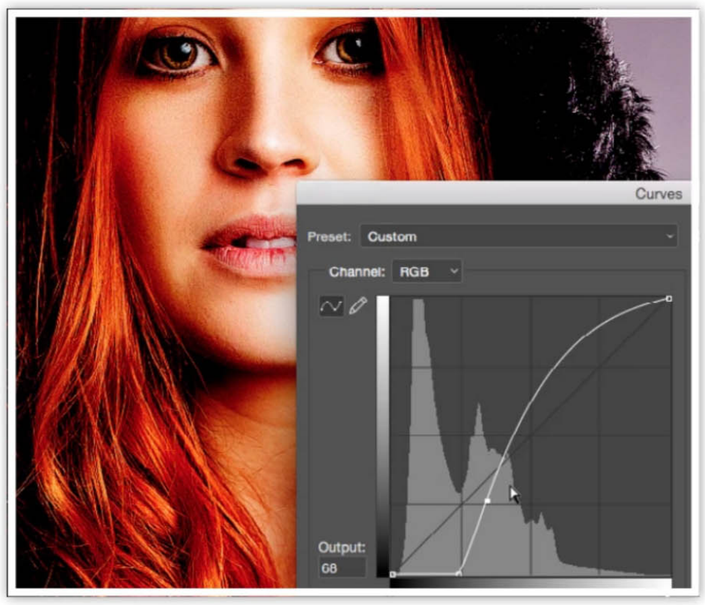


Emphasising Highlights



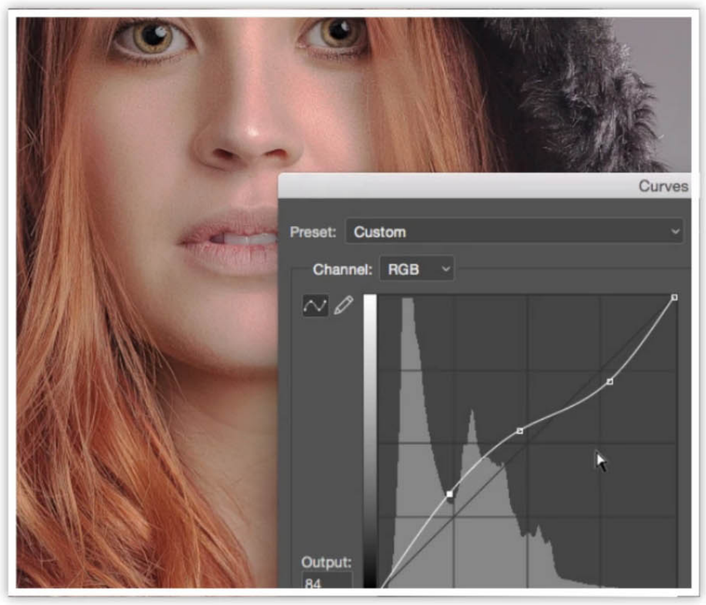
To boost the highlights of an image move the highest point leftwards along the top horizontal axis. This increases the brightness of the lighter pixels, and may cause the brighter highlights to be burned out, but the result can be quite pleasing for the right kind of image. This technique works well in monochrome, producing an ethereal high-key image.

Emphasising Shadows



Moving the lowest point on the curve to the right will darken the shadows, but this will lose both shadow and mid-tone detail. This can be alleviated by moving the mid-point of the curve upwards slightly, flattening the upper part of the curve and brightening the mid-tones. This emphasising of shadows is very similar to boosting contrast, but can create a more extreme result.

Brightening Mid-tones



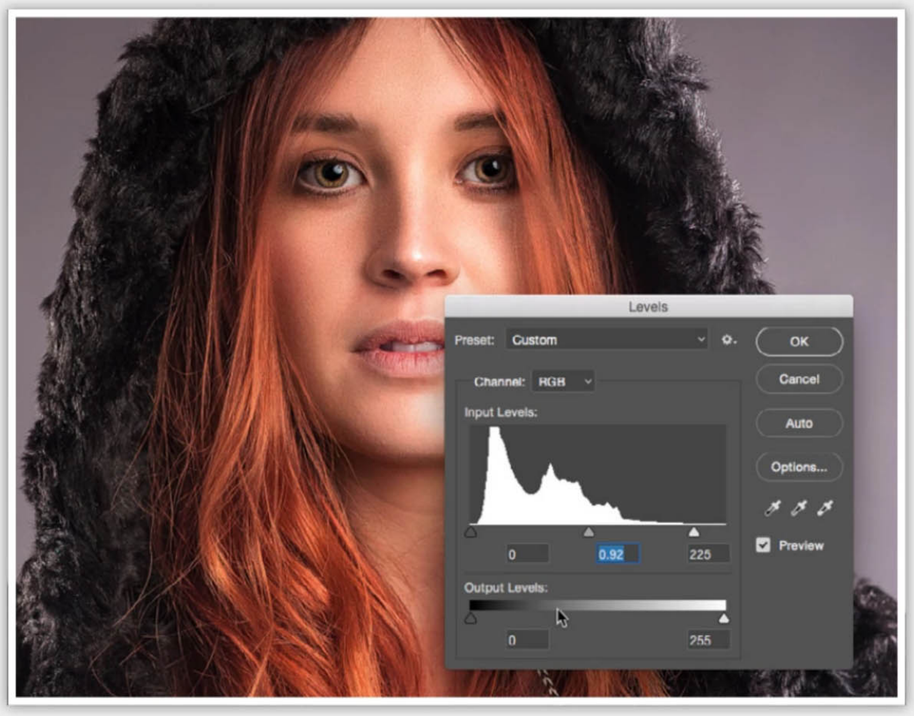
For images with very high contrast sometimes it is necessary to boost the mid-tones to balance the image. To do this, set three points on the tone curve at roughly equal positions along the curve, and then move the middle one upwards to achieve the effect. The other two points act as anchors, keeping the shadows and highlights unchanged. Moving the mid-point downwards has the opposite effect.

Levels

A quick, easy and accurate way to adjust brightness and contrast

Also in the Image > Adjustments menu you'll find Levels, keyboard shortcut Cmd+L. The Levels function is easier to use than Curves, and lets you quickly adjust the black and white points and overall brightness of your image. It's particularly useful for images that contain a lot of light or dark areas, such as dark objects on a light background, because it provides a method for fixing the lightest and darkest areas of the image, while leaving the mid-tones free to be adjusted upward or downward.





Cropping and Resizing

Changing the size of a digital photograph

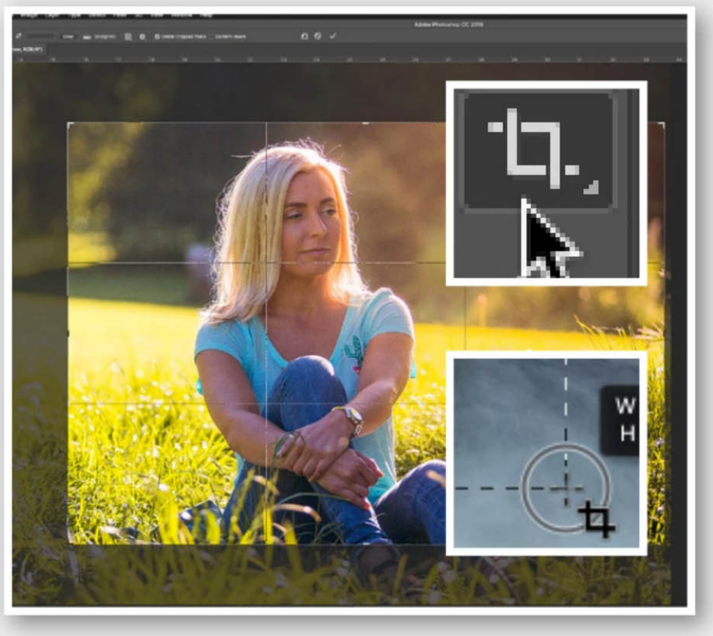
Sometimes a digital photograph can be the wrong size. Maybe you have too much of the surroundings in the picture, when you wanted to concentrate on just the main subject, or maybe the whole image is too big, and you need to make it smaller to send via email or publish on a website. Doing both of these things is very quick and simple in Photoshop.

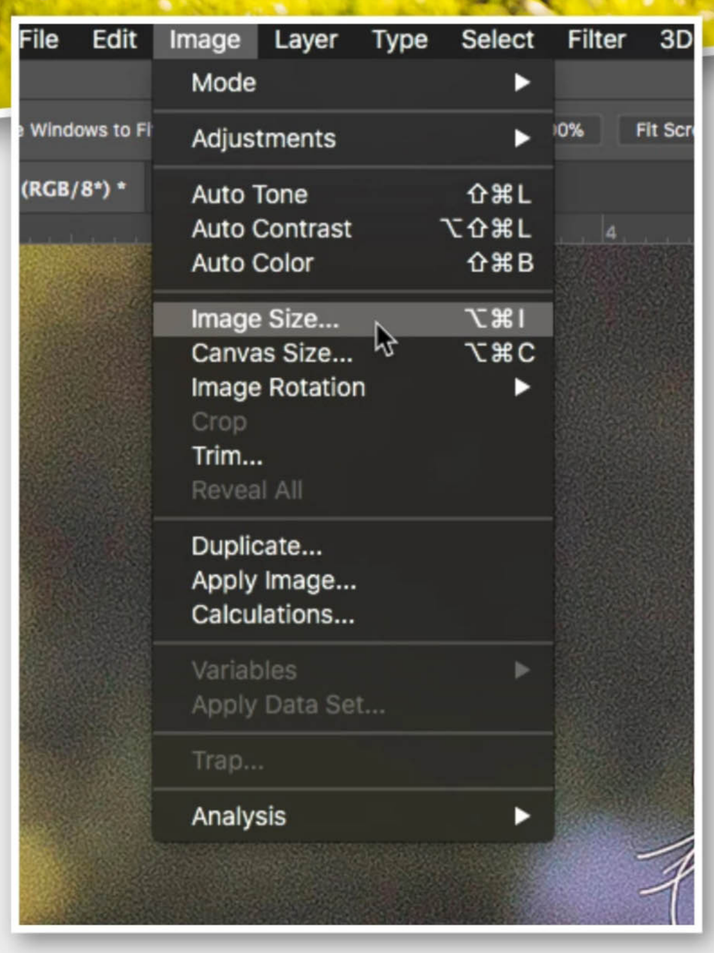
Use this summer portrait image as a starting point. What you want to do first, is crop it down so you just have the girl as the prime point of focus in the picture.



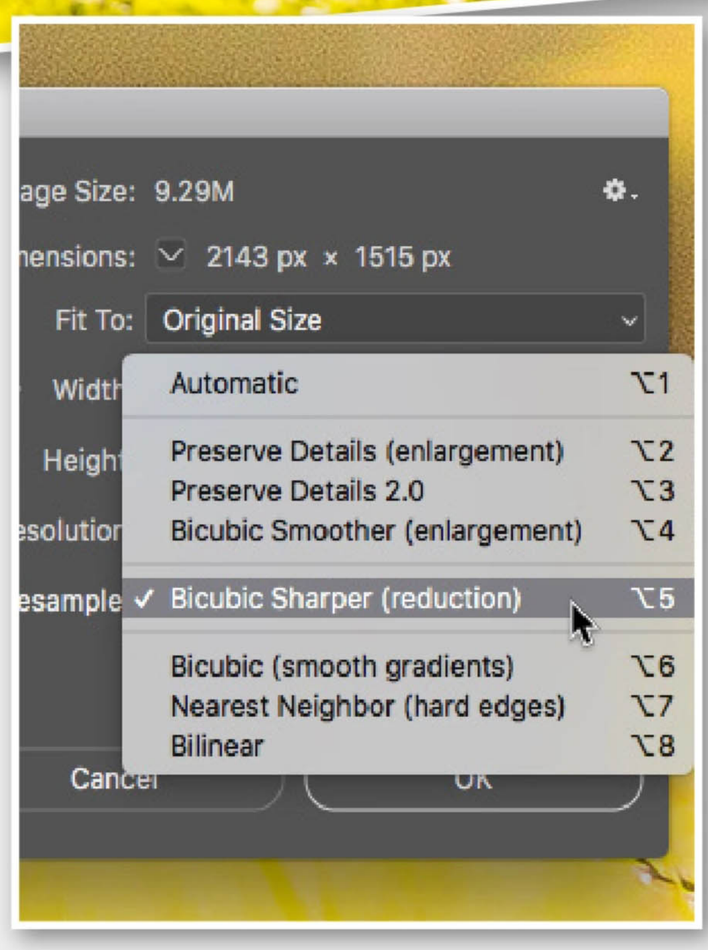
01 The best tool for the job is, not surprisingly, the Crop tool. You'll find it in the tool palette, fourth down from the top. It looks a bit like two set-squares.

02 The crop tool is very easy to use. Simply click near one corner and then drag a box around the area you want to crop. Don't worry if you don't get the size exactly right first time, because you can adjust the size of the box by using the drag-handles on each side and corner. Press Enter to perform the crop.



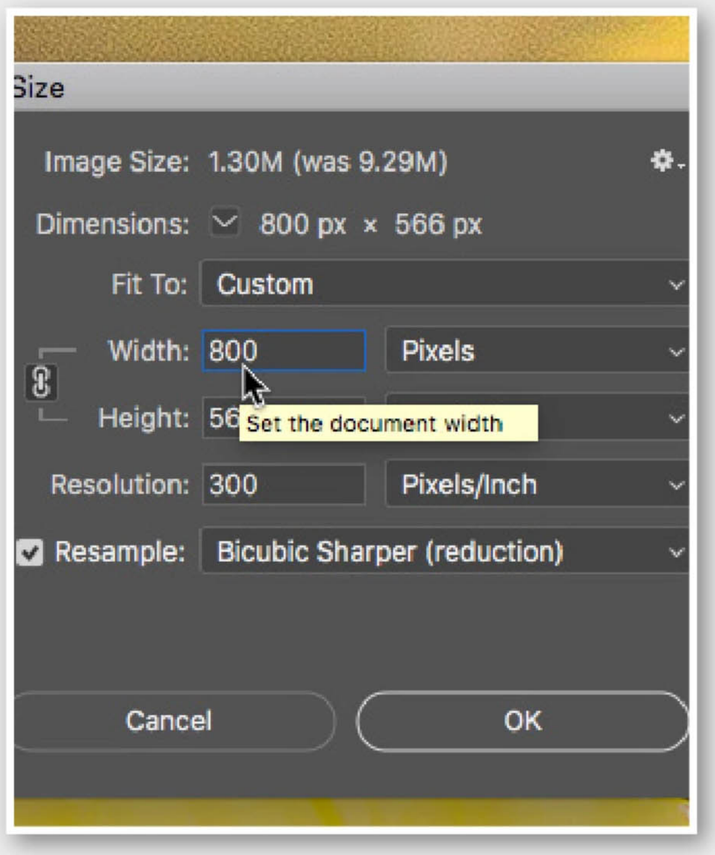


03 In the next step we'll resize the image to make it more manageable. To do this you'll need to get to the Image menu and select Image Size, or use the keyboard shortcut Cmd + Alt + I.

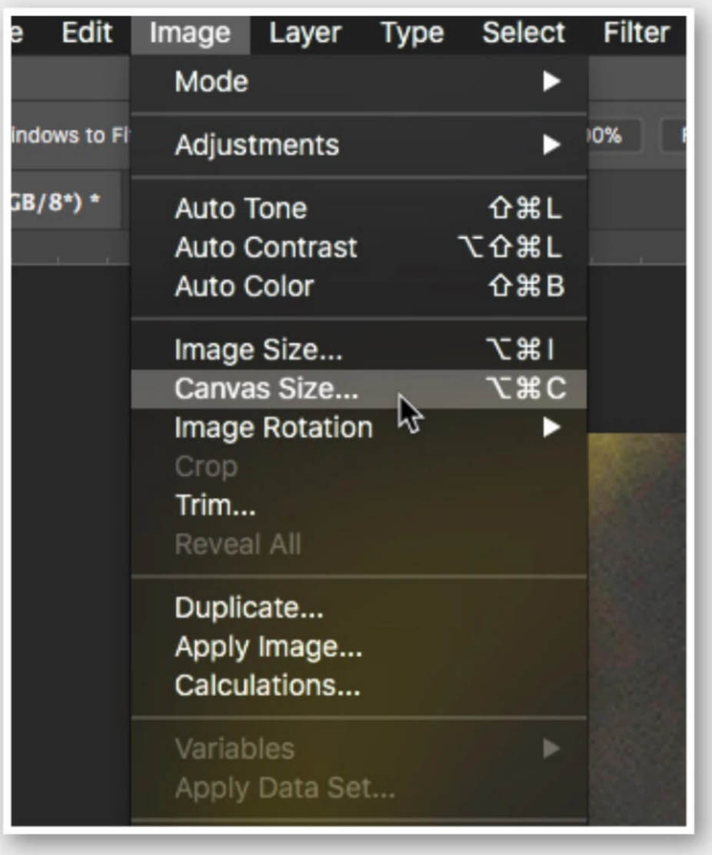


04 In the Image Size dialog box, check the box marked Resample Image, and open the drop-down option panel below it. We're reducing the size of this picture, so select Bicubic Sharper.

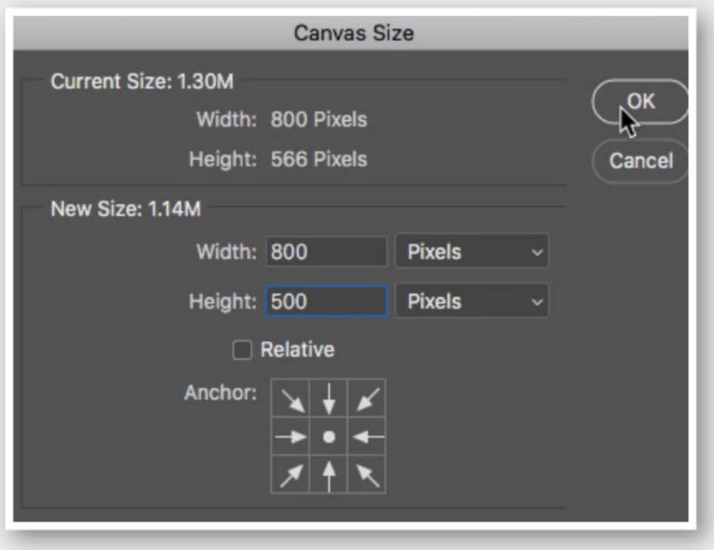




05 In the Pixel Dimensions panel, enter the width that you want your image to appear. If we were preparing this picture for a website, a width of 800 pixels would be ideal. The height will change automatically to keep the aspect ratio the same. Press OK to resize the picture.



06 Next, go back to the Image menu, but this time choose Canvas Size, or use the keyboard shortcut Cmd + Alt + C. Canvas Size will allow you to be able to extend the dimensions of your current document by adding extra pixels to the image. Bear in mind this is different than simply resizing the image.



07 You'll see the current size in pixels at the top of the panel, with the width as 800 pixels. In the lower window put in a height of 500 pixels. If your main subject is not in the centre of the frame, you can alter the anchor point by clicking on the arrows surrounding the box below. Click OK to perform the resize. You'll get a warning that you're about to chop off part of the image, but just ignore it.

Now we've resized the image to 800 x 500, a convenient size for display on many mobile devices, and ideal for uploading to a website or sending via email.

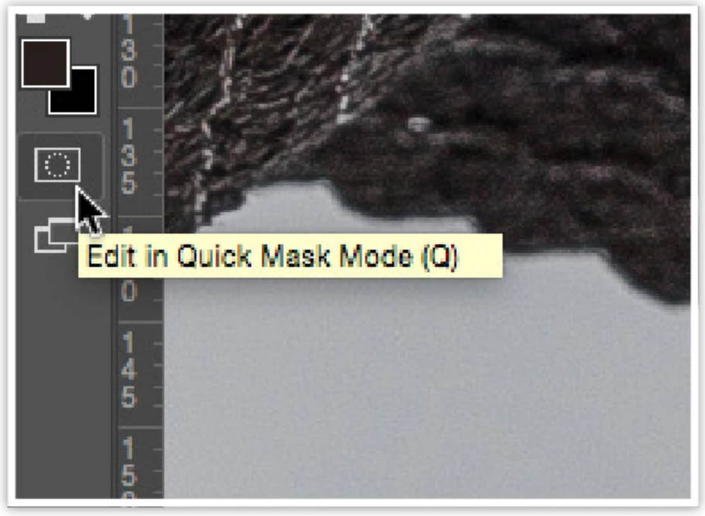
Quick Mask Mode

USEFUL TIP

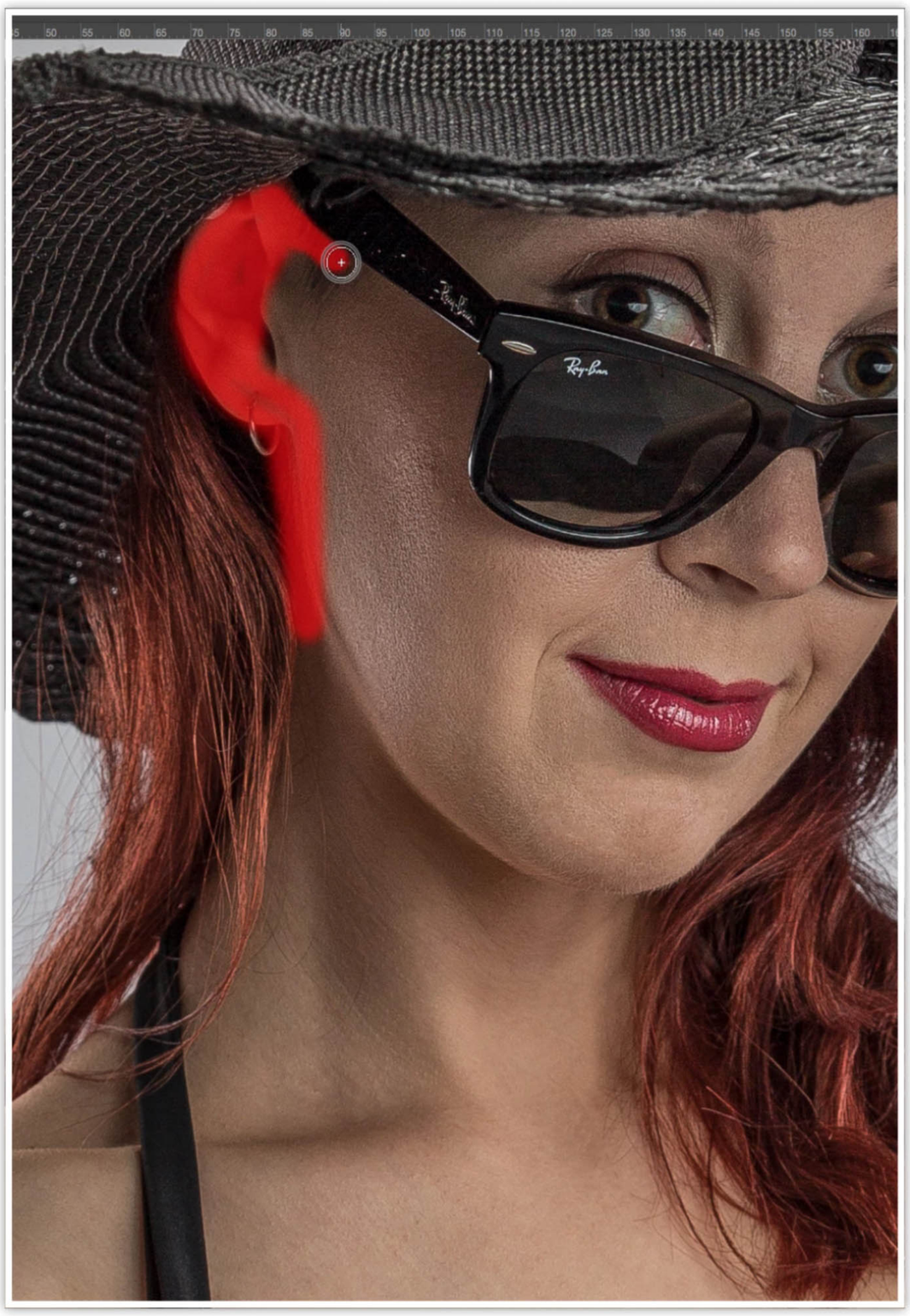
By varying the transparency of the Quick Mask selection you can alter the effect of the edit you want to perform.

There's a quicker way of editing selections and masks

This tutorial content is available for download



Often when editing in Photoshop it's useful to be able to block off certain areas that we don't want to be affected. For that we use masks, and there are several ways of creating them, but by far the easiest is Quick Mask, a fantastically useful feature that was first introduced in Photoshop 7. Quick Mask lets you create and edit masks and selections quickly and easily using any of Photoshop's pixel painting tools to apply a brushed mask with freehand strokes of the mouse. It's extremely simple to use, but it can produce a wide and varied range of results. You'll find the Quick Mask mode button near the bottom of the Tool Palette. Clicking it will toggle Quick Mask mode on or off.





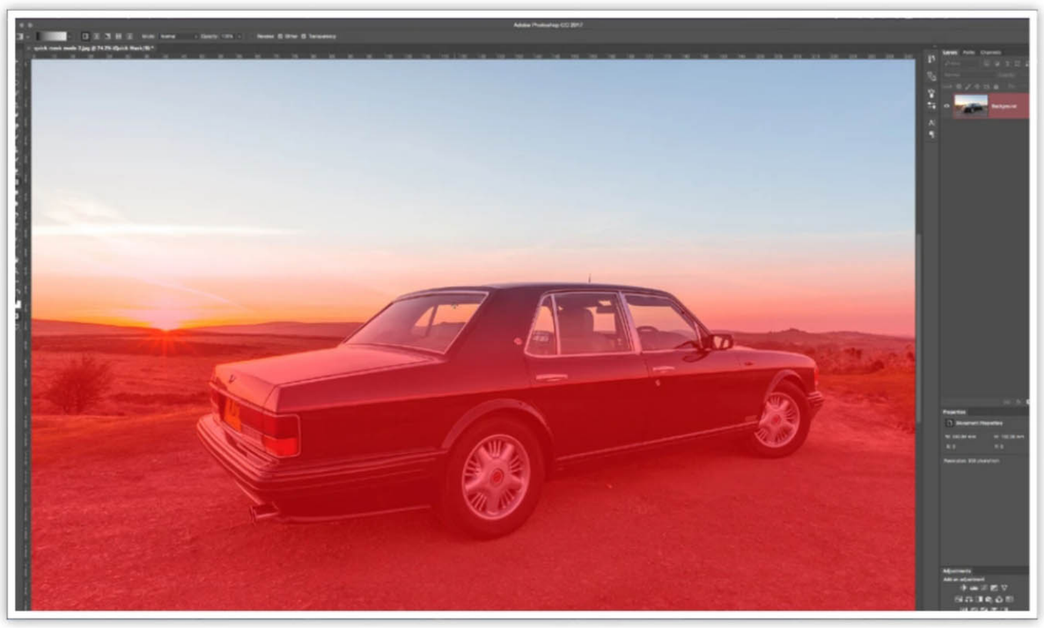
The most basic way that Quick Mask is used is with the brush tool. When you switch on Quick Mask, you'll notice that the foreground and background colours change to black and white. Select a normal paint brush and start painting in black. You'll see that instead of black, the colour is a translucent red. Paint this colour over the area you want to mask.

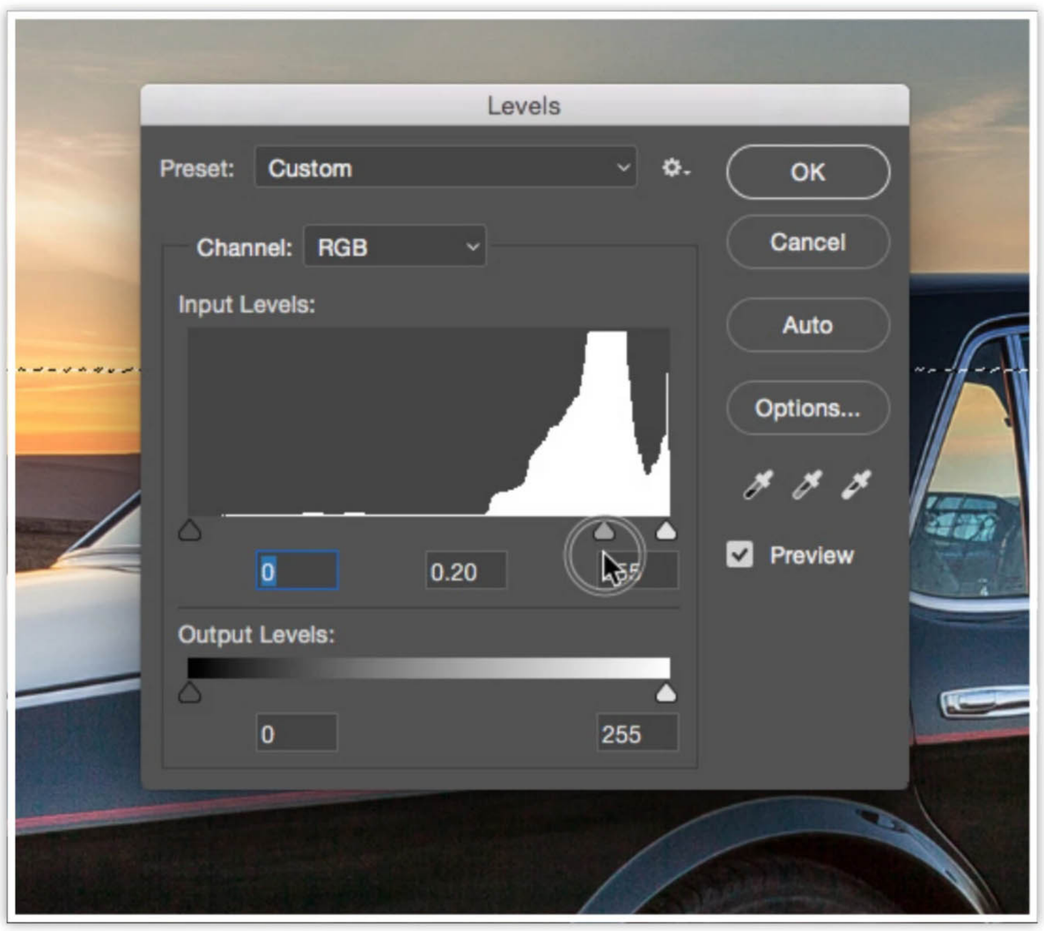
If you make a mistake and overlap your area, simply switch to the white background colour. Painting white will erase the mask.



Gradient Mask

There are other ways to apply Quick Mask. For example it can be used with the Gradient Tool to produce gradual mask effects. Simply enter Quick Mask mode, then select the Gradient Tool. Drag a gradient fill over the area you wish to affect, and when you release the mouse button you'll see that the gradient effect is in translucent red, like the painted Quick Mask.









You can now use this gradient mask to produce graduated effects on the image. For instance, on this picture we can darken the sky and leave the foreground as it is by using a graduated Levels function. The gradient mask ensures a smooth transition from the full effect at the upper edge to zero effect at the lower edge of the picture.

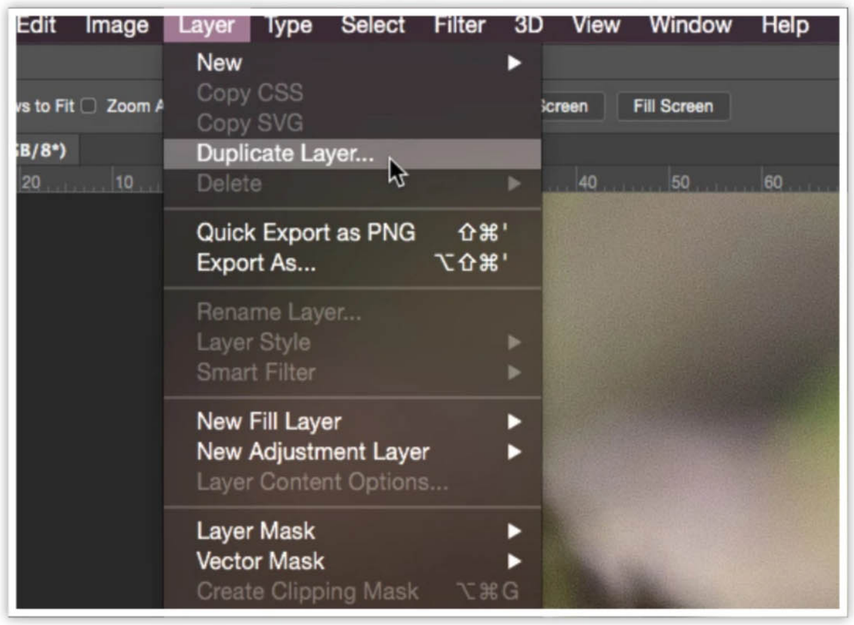
Using Layer Masks

Add effects non-destructively with Layer Masks

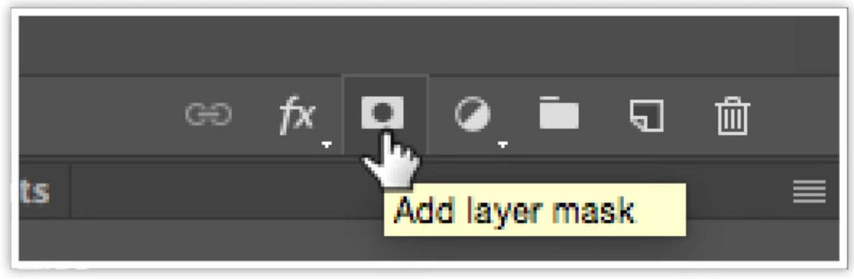
While the Quick Mask function is an easy way to selectively edit your pictures, the more traditional method is to use Layer Masks. The advantage to this method is that it is non-destructive, so if you don't like the results you can just go back and start again. It is also repeatable, because you can use the same mask for multiple effects, saving you time and effort. For this quick tutorial we'll use a Layer Mask to apply a selective monochrome or colour extraction effect. We'll start with this bright image of a buttercup. The yellows will remain in colour while the rest of the picture will be changed to black and white.



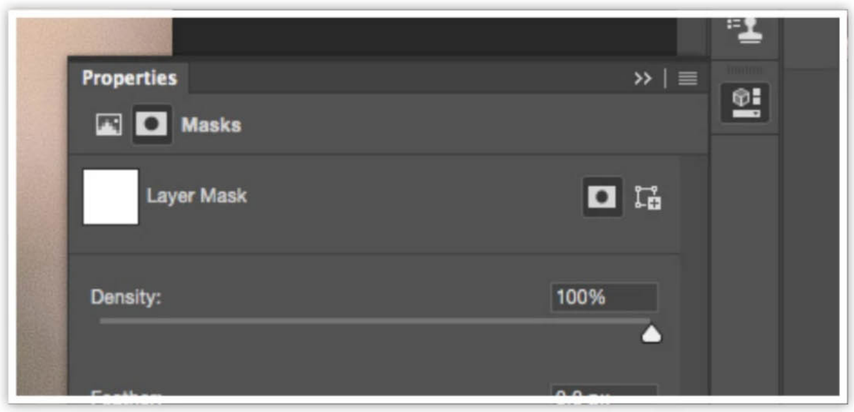
01 To start with, right-click on the thumbnail of the photo in the layer palette and select Duplicate Layer from the menu. Alternatively click and drag the layer thumbnail in the palette onto the New Layer button at the bottom of the palette, which will also duplicate the layer.



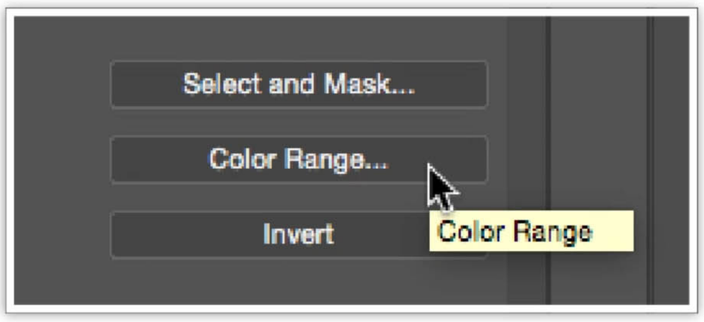
02 Next, activate the new layer by clicking on it in the palette, and then click on the Add Layer Mask button at the bottom of the palette.

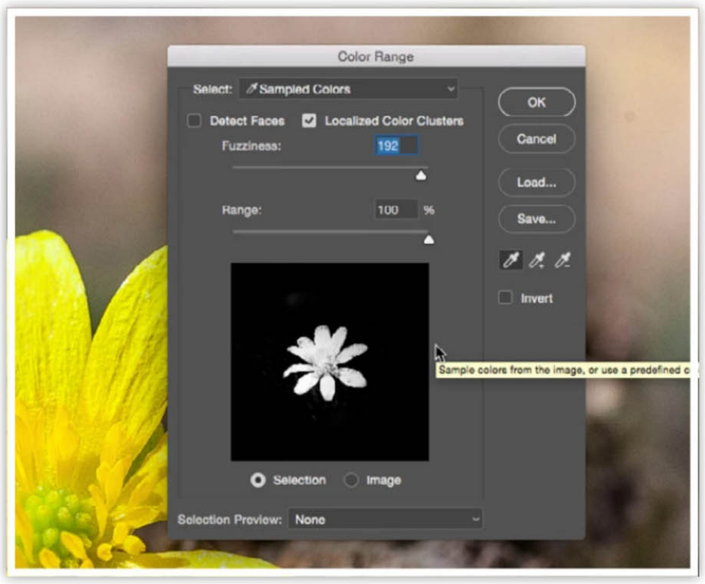


03 A white square will appear in the layer palette representing the new mask. Double-click on this and the Layer Mask palette will fly out. This palette lets you configure the mask in a variety of ways.

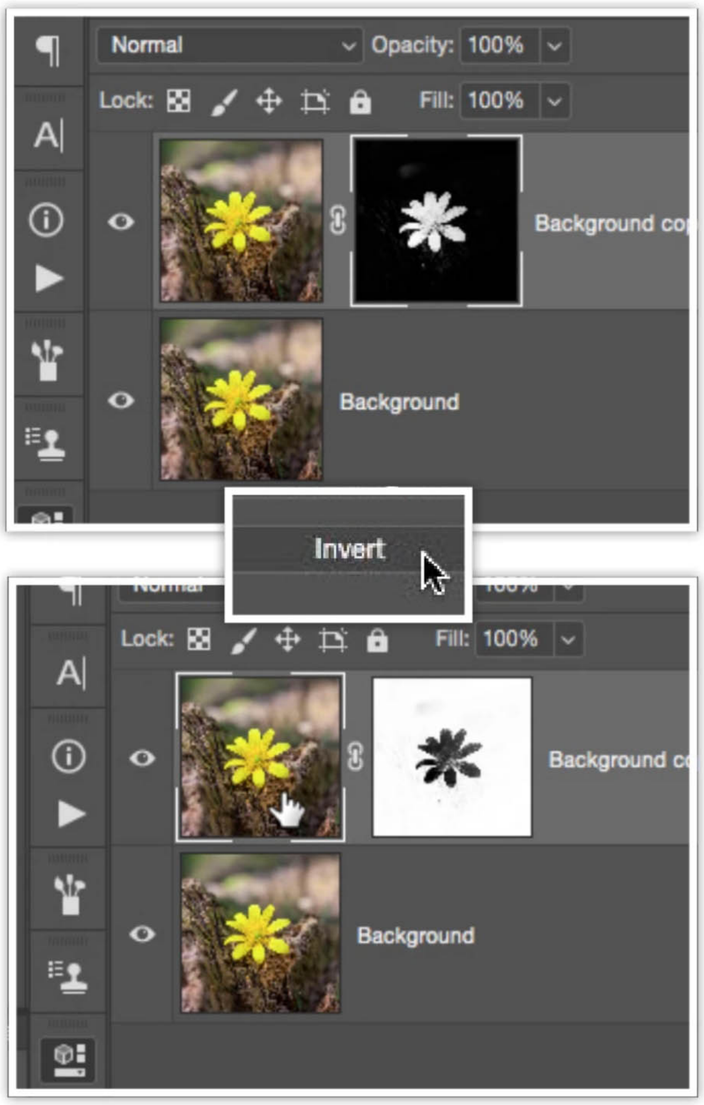


04 Click on the Color Range button and you'll see a new window appear with a colour range picker, and the cursor will change to an eyedropper tool. Click on the yellow petals of the flower, and adjust the sliders so that as much of the colour as possible is selected, but none of the background. Click OK when you're happy.





05 Now we've got a mask that covers the shape of the flower but what we need is a mask that leaves the chosen colour, but covers everything else, so click on the Invert button that swaps the mask and the background. This effectively creates a hole in the layer through which the background layer will be visible.



06 Next we can apply the effect to the top layer. For this one we'll use the Black and White menu option, since it's a quick and easy effect. You'll find it in the Image > Adjustments menu.



07 You can adjust the parameters of the Black and White effect with the sliders on the window that appears. The results are a matter of personal taste, so adjust the parameters until you're happy.

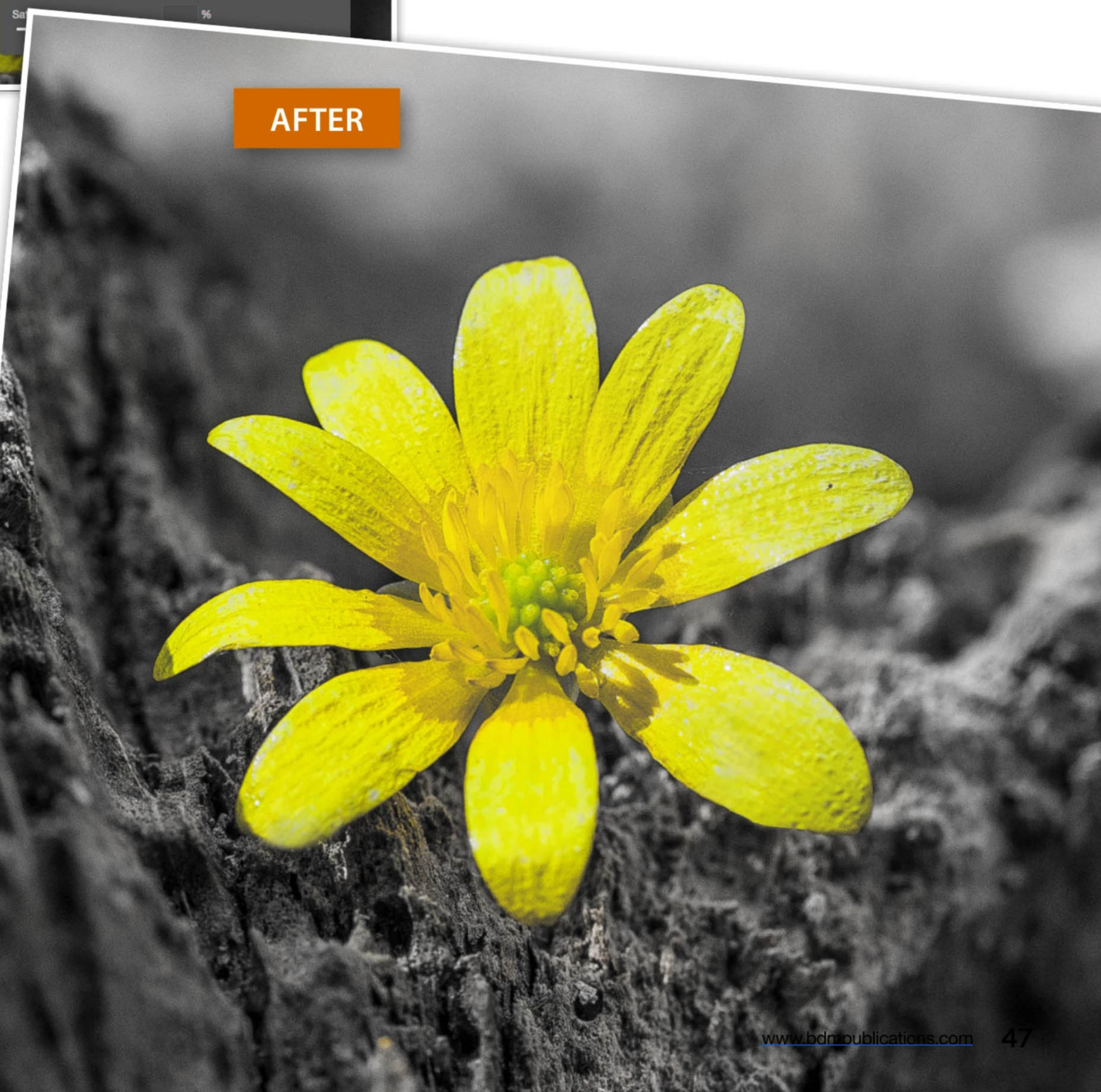


08 The Layer Mask can be used to produce any kind of selective effect like this, and the great part of it is that the original image is still intact in the background layer, so if you're unhappy with the finished result you can just delete the effect layer and start again. However as you can see, the effect is just about perfect.



USEFUL TIP

Always remember that layer masks do not erase any of a layer's detail, it just makes certain details invisible without deleting them. This is referred to as non-destructive image editing.



Content-Aware Fill and Scale

Photoshop contains image processing technology so advanced it looks like magic

Photoshop CS4 introduced the world to an amazing new technology called Content-Aware Scaling, which can resize an image while preserving the proportions of important image elements. It works by analysing the image and removing lines of pixels that contain relatively little information, so that a plain background will be affected before the main subject. The best way to illustrate the effect is with examples, such as this picture of a mountain scene.



This tutorial content is available for download

Content-Aware Scaling

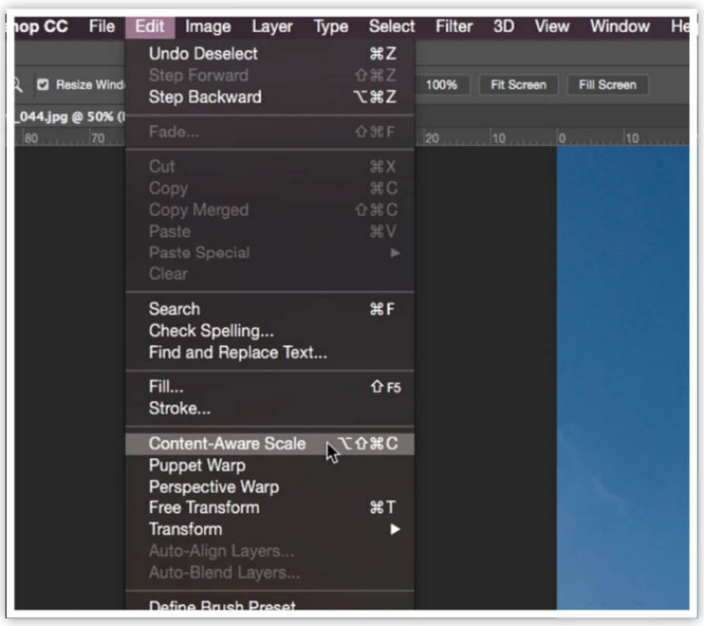
01 If we resize the image vertically by 75 percent using the standard Photoshop Image Size menu option, the people and ground will end up looking flattened and out of proportion, since their height has also been reduced by 70 percent.



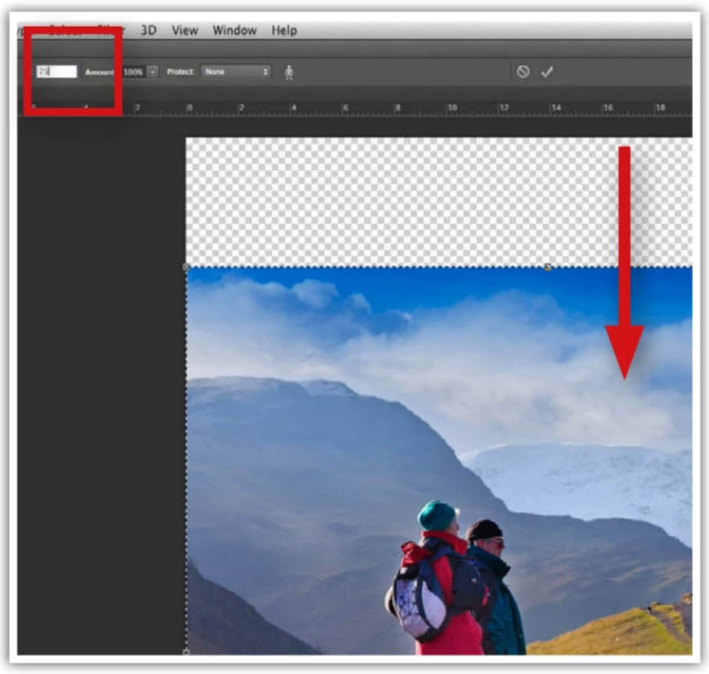
02 However if we use Content-Aware Scaling, the clever algorithm detects that the areas that are just sky contain relatively little information, and so this time when we re-scale the image it deletes those pixels first, preserving the more information-rich pixels that hold the details including the people. As a result a 75 percent height reduction leaves the scene looking relatively unchanged, although the area of blue sky has been reduced.



03 You'll find Content-Aware Scaling in the Edit menu, but it will be greyed out unless you've converted the image into a layer.



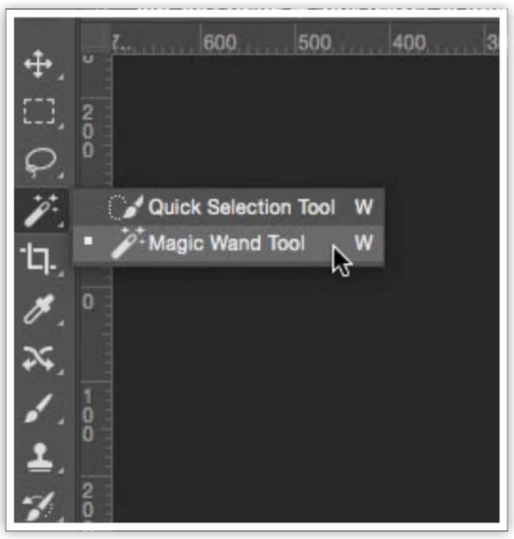
04 You use Content-Aware Scaling in just the same way as the normal Image Size option. Either drag the handles on each edge in the direction you want, or directly enter the proportions into the text boxes on the tool options bar. Content-Aware Scaling works for both height and width, and can also be used to enlarge an image.

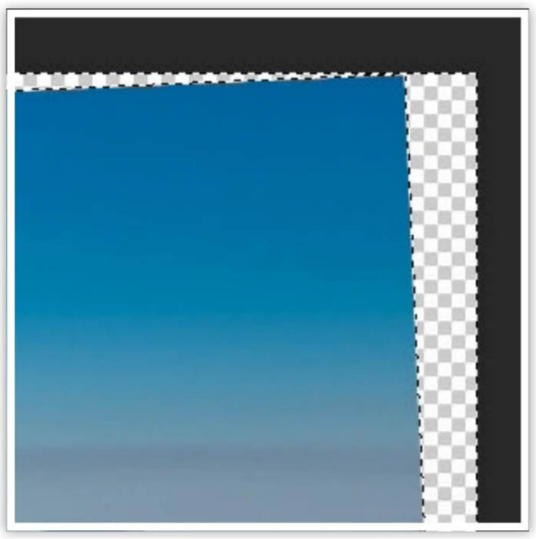


Content-Aware Fill and Move

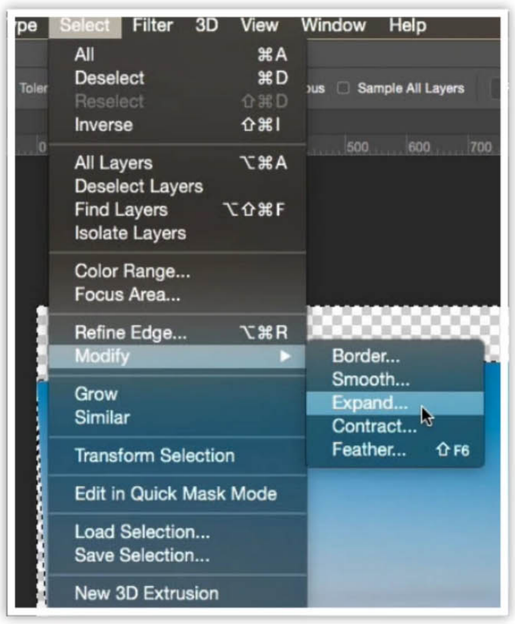
Photoshop CS5 took the content-aware technology further with the introduction of Content-Aware Fill. This extremely useful function can fill in blank areas of an image with an approximation of the surrounding area, which makes it particularly handy for filling those triangular edges that are left after rotating an image, for example when levelling the horizon line. Again it's relatively easy to use.

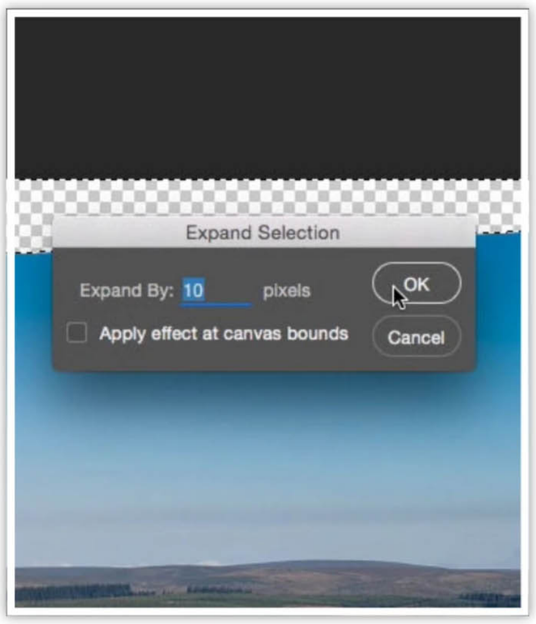
01 Starting with an image that has just been rotated, leaving those empty triangles, take the Magic Wand tool and select the plain areas.



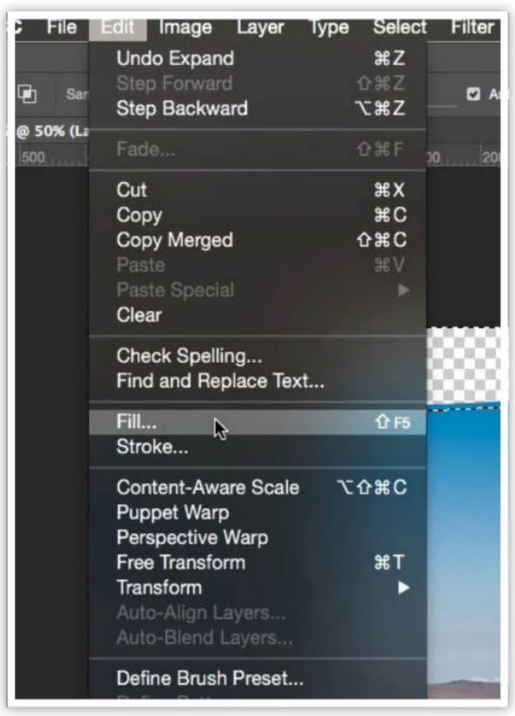


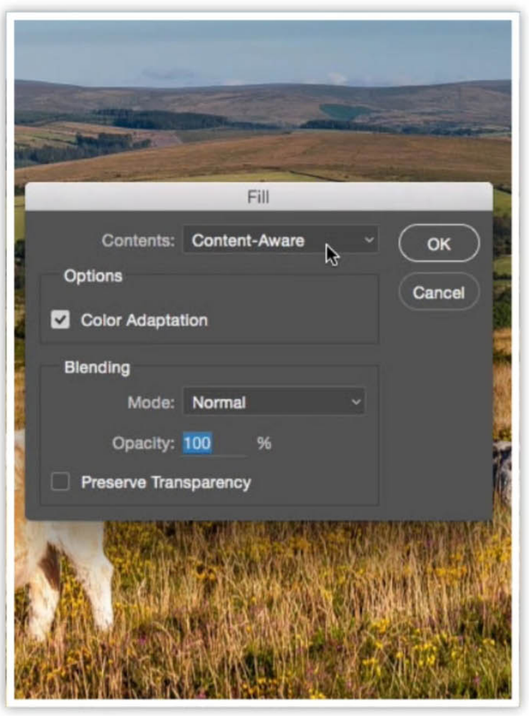
02 Next, go to the Select menu and click on Modify > Expand. Increase the selection area by a decent amount; for this picture 10 pixels should do nicely.



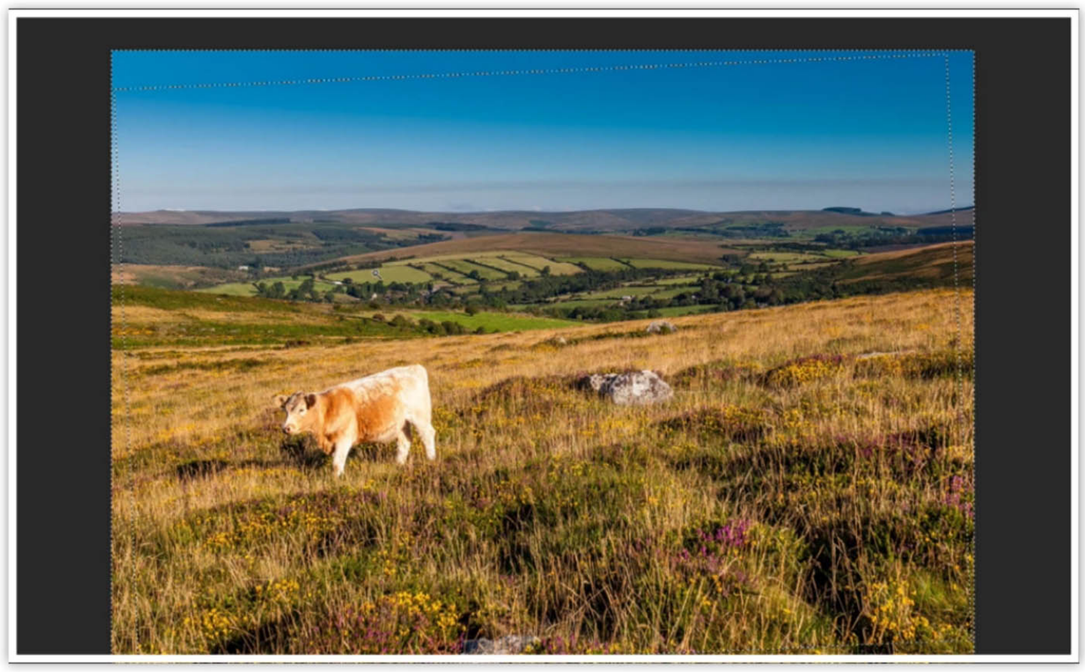


03 You'll find Fill in the Edit menu. Click on it and you'll see the Fill options window appear. Content-Aware should be selected by default, but if not choose it from the drop-down menu.





04 There will be a short pause while Photoshop analyses the image, but then it will fill in the blank areas with a texture derived from the content of the immediately surrounding area.



05 Content-Aware Move is a new feature introduced with Photoshop CS6, and uses the same technology as Content-Aware Fill. The idea is that you can select an object on a background and move it to a new area of the image. The Content-Aware algorithm should automatically fill in the area that you moved from and also blend in the moved object.

In practice it's not actually much use unless the object to be moved is on a virtually plain background, in which case it's often simpler to use the Clone Stamp anyway, but some people may find it useful.









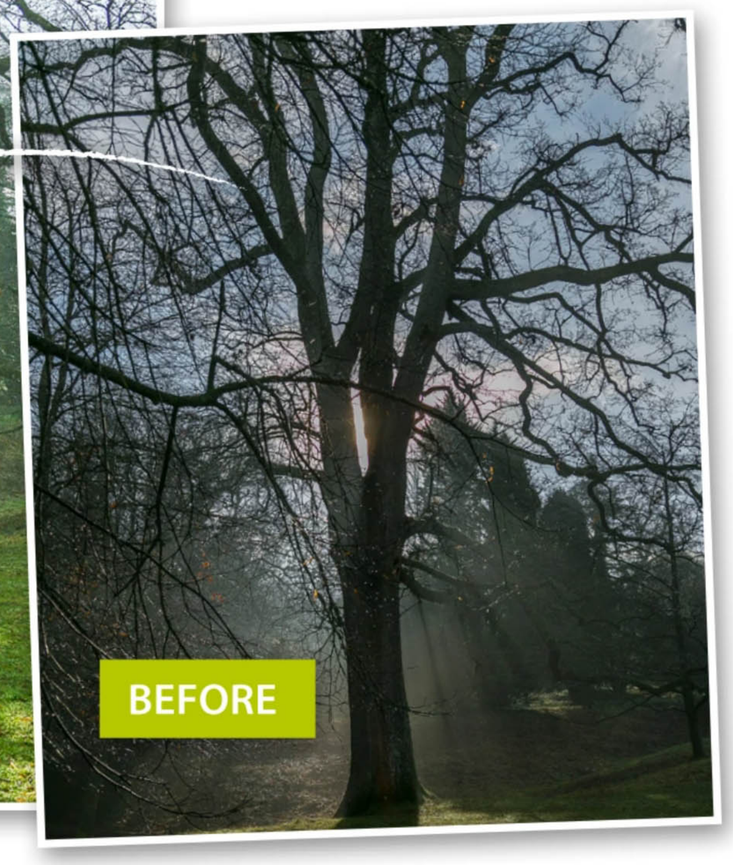
Building Your Editing Skills

Although it is used by photographers, graphic designers and digital artists, at its heart, it is a program for editing photos. Do you want to adjust the exposure of a photo, alter its white balance or convert it to monochrome? For these tasks, and more, Photoshop can help you out.

Adjusting Exposure

Correcting your exposure mistakes is easy with Photoshop





Even with the sophisticated technology found in the light metering systems of modern digital cameras, they are not infallible. Some lighting conditions can confuse them, resulting in pictures that are over or under-exposed.

All cameras have a limited dynamic range, levels of illumination at which they record featureless pure white or featureless pure black. The tonal variation available between those two extremes depends on the quality of the lens, sensor and image processor that captured it, and the bit-depth of the file type used to record it. For maximum bit-depth it's always best to use Raw mode, since this will usually store images in 42-bit or even 48-bit form, capturing greater dynamic range. We'll look at improving the exposure of the more common JPEG images from a compact camera. JPEG images are usually only 24-bit, so have less latitude for any exposure recovery.

Over-exposure tends to be more of a problem than under-exposure, since burned-out highlights contain no detail, but the JPEG format is surprisingly good capturing detail in areas that might initially look like featureless black. As a result it's often possible to rescue shots that are quite badly under-exposed, although this will also amplify any noise in the image, there is a trade-off for image quality.

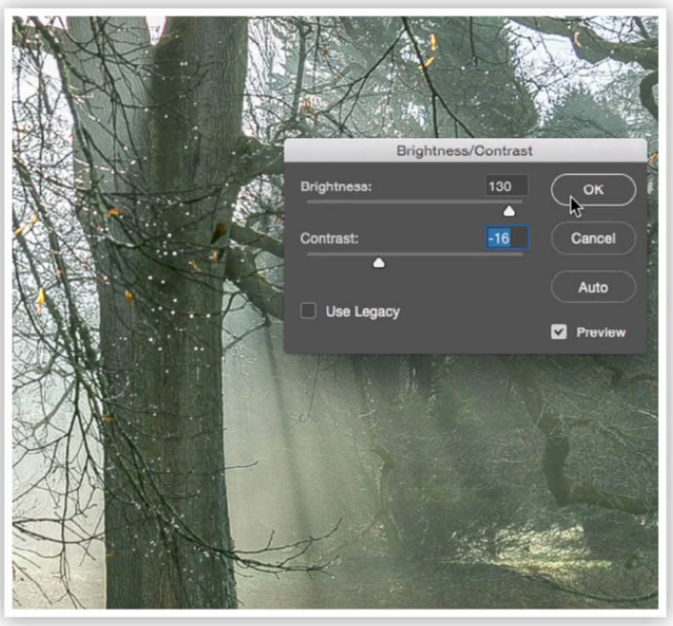
Take a look at this shot. It was taken using centre-weighted metering against quite strong backlighting, and as a result the foreground is in dark shadow and very under-exposed. It would have been a better idea to use spot metering, we can still rescue this photo using an image editing program.

Brightness/Contrast

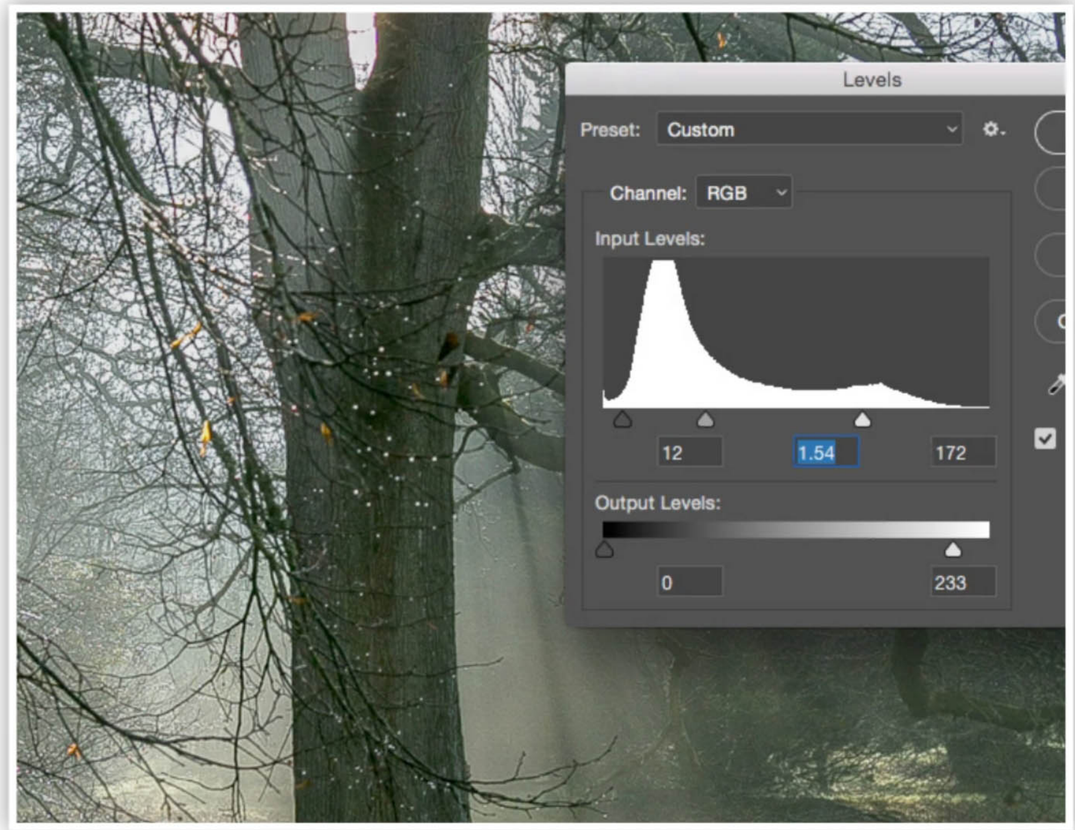
The quickest and easiest way to brighten the photo is to simply turn up the brightness. You'll find Brightness/Contrast as an adjustment layer in the palette on the right, or in the Image > Adjustment menu. The Brightness/Contrast function in recent versions of Photoshop has been changed to improve contrast and tonal balance when adjusting the brightness of your images.

By moving the Brightness slider to the right, the overall brightness of the entire photo is increased, but the new algorithm retains a reasonable balance in shadow tones. You can tweak the effect with the Contrast slider, the result is reasonably acceptable.









Levels

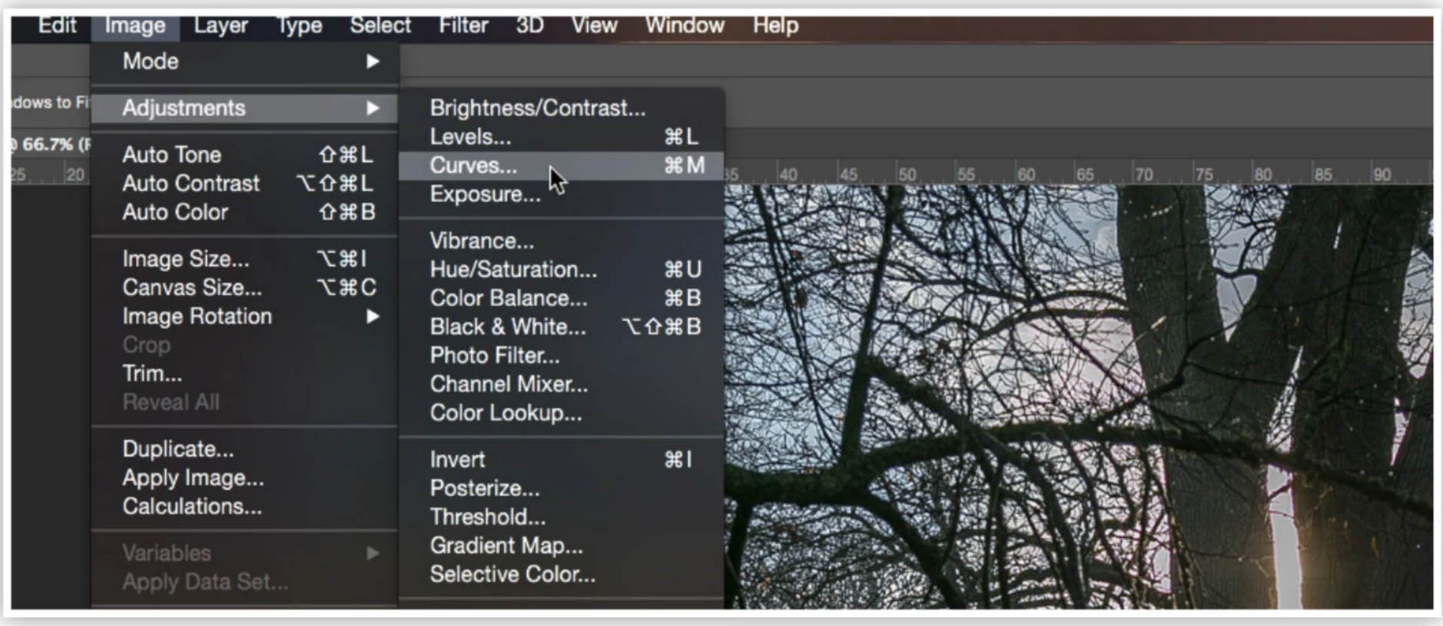
Photoshop offers another way of altering brightness and contrast, but this time with more subtlety and control, by adjusting the Levels histogram. You'll find Levels in the same Image > Adjustment sub-menu as Brightness/Contrast. The Levels histogram is basically a graph showing the proportion of pixels in the image at each colour intensity. The far left-hand end of the graph represents black, and the right-hand end is white, with every tone in between represented by a spike on the graph. On the bottom axis of the graph are three points, the left representing the black cut-off point, the right the white cut-off point, and the one in the middle representing the midtone point.

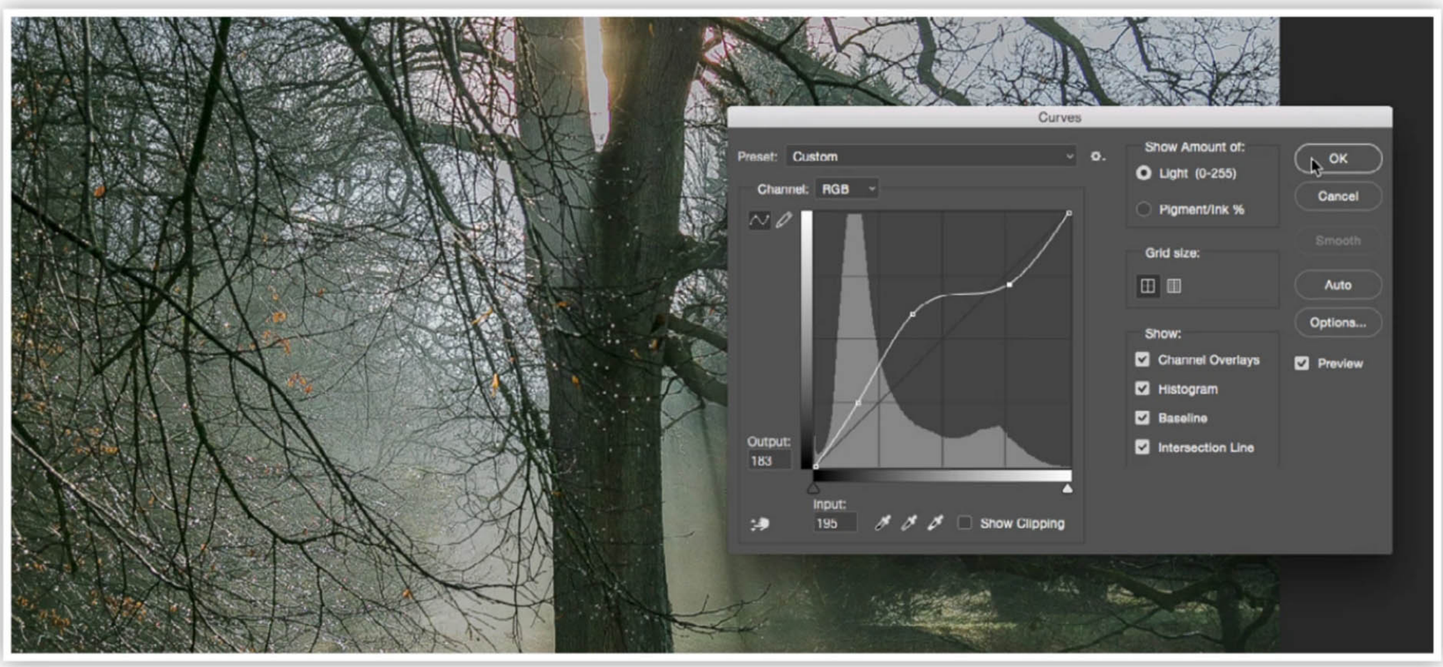
As you can see from the graph our image is mostly shadows and midtones, with little highlights, so we need to brighten some of those shadows into mid-tones. The way we do this is by moving the mid-tone and highlights points left towards the shadows. This has the effect of bringing out a lot of the detail from the shadow areas without burning out any more highlights. It also leaves the deeper shadow areas intact. It is a far better way of adjusting the exposure of a photograph than simply altering the Brightness/Contrast, however it isn't quite the best way. Adjusting the Levels mid-point is still strictly linear in its adjustment.

Curves

The Curves adjustment option, again found in the Image > Adjustment menu and as an adjustment layer option, is a method of changing the relative brightness of specific tones and ranges of tones within an image, giving precise control over exposure. Learning to use it properly is a core skill in image editing, and will enable you to make precise and subtle changes to brightness and relative contrast not just of the image as a whole, but also of individual colour channels.

Drag the Curves output line around by clicking at any point, then moving the handle that appears. To improve this picture we need to brighten the shadows and mid-tones, while simultaneously darkening the highlights, so we should drag the lower side of the curve upwards, and the upper part of the curve downwards, creating an inverted S-shaped curve. As with many Photoshop techniques, the key here is subtlety. Push the curve too far and you'll ruin the picture, so keep an eye on it as you progress.



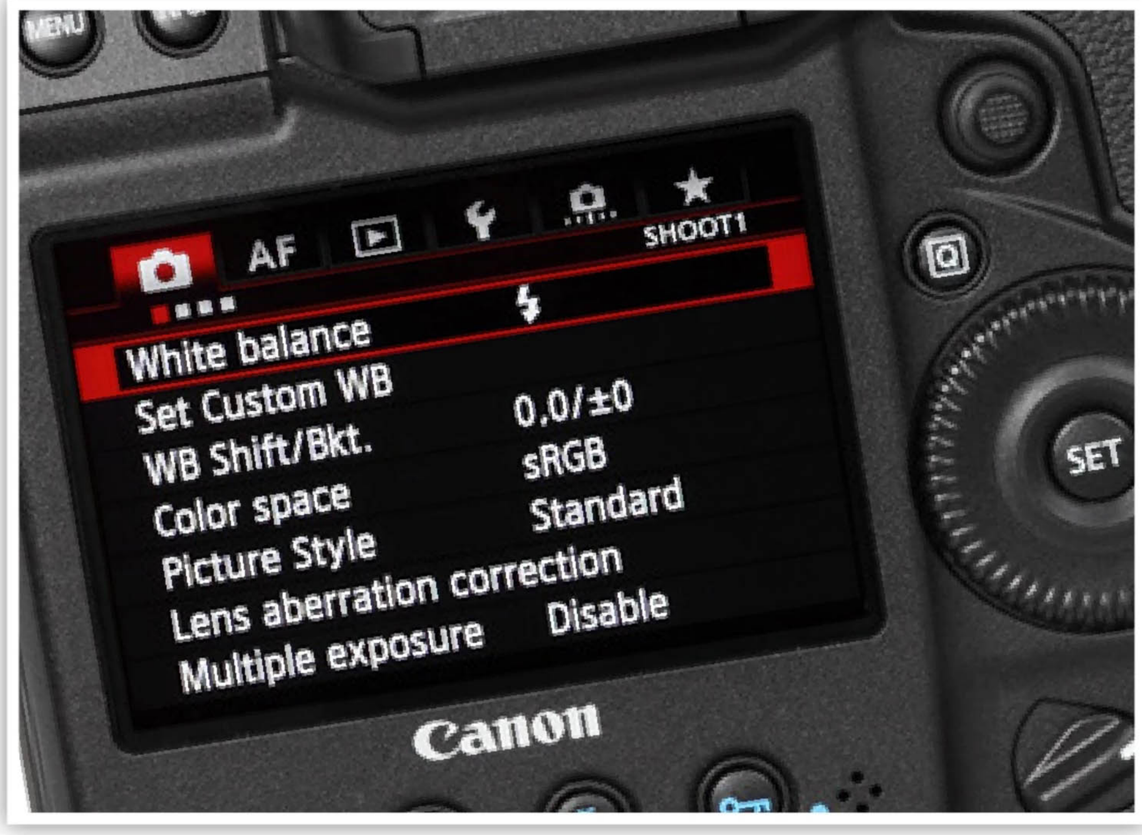


USEFUL TIP

As with most Photoshop editing techniques, subtlety is the key. If you push the curves too far you'll lose detail.

Colour Correction

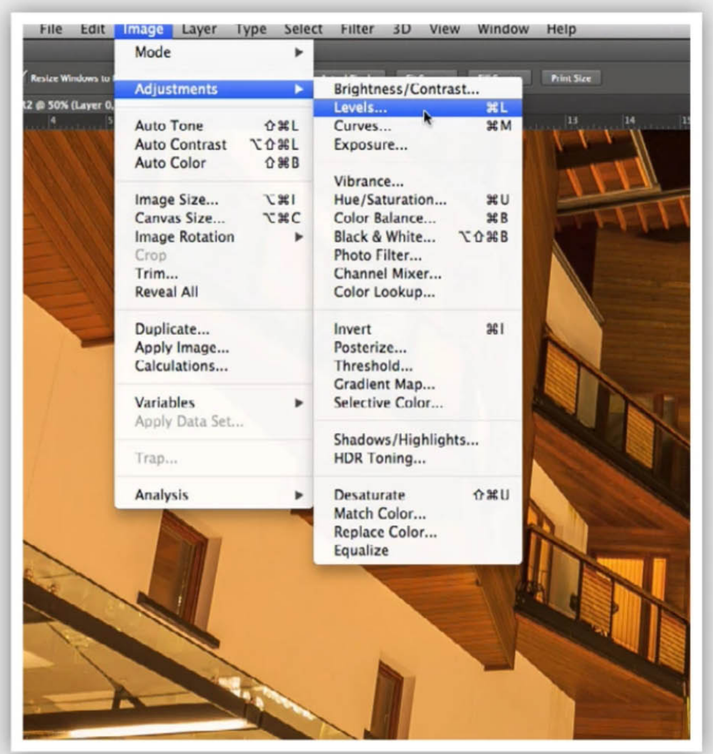
Correcting colour casts and white balance problems



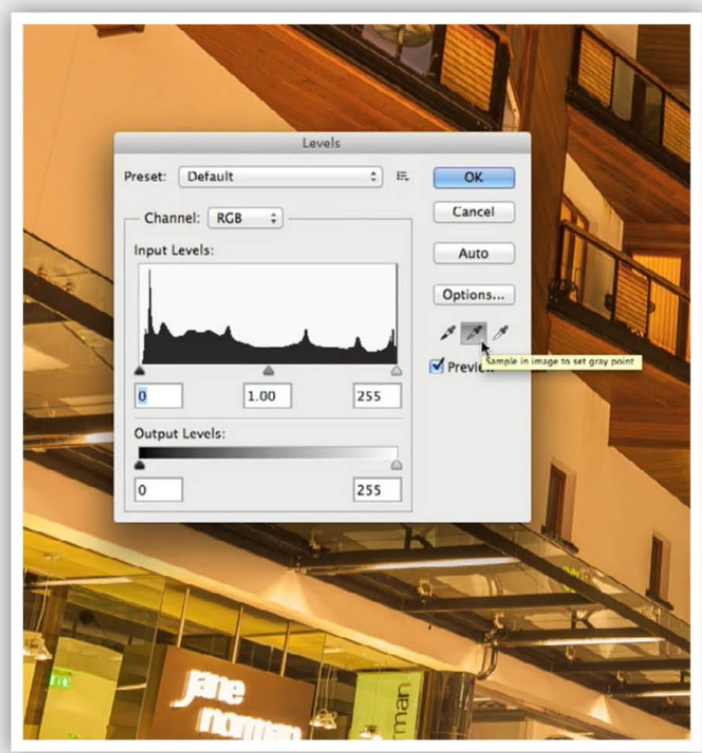
Almost all digital cameras have some sort of white balance selection, but it's a feature that most people seem to ignore. In most cases this isn't a problem, because the default automatic white balance feature handles most everyday lighting situations perfectly well. However sometimes, usually when shooting without the flash in artificial light, your pictures may show a strong colour tint, caused by incorrect white balance setting. Using the preset white balance options in your camera's menu will normally prevent this problem, but it is also possible to correct colour tints later using photo editing software. There are several ways you can do this.

This photograph is illuminated by a combination of sodium vapour street lighting, fluorescent light and coloured tungsten lighting, using automatic white balance, and as you can see the camera has got a bit confused, resulting in a heavy colour cast.

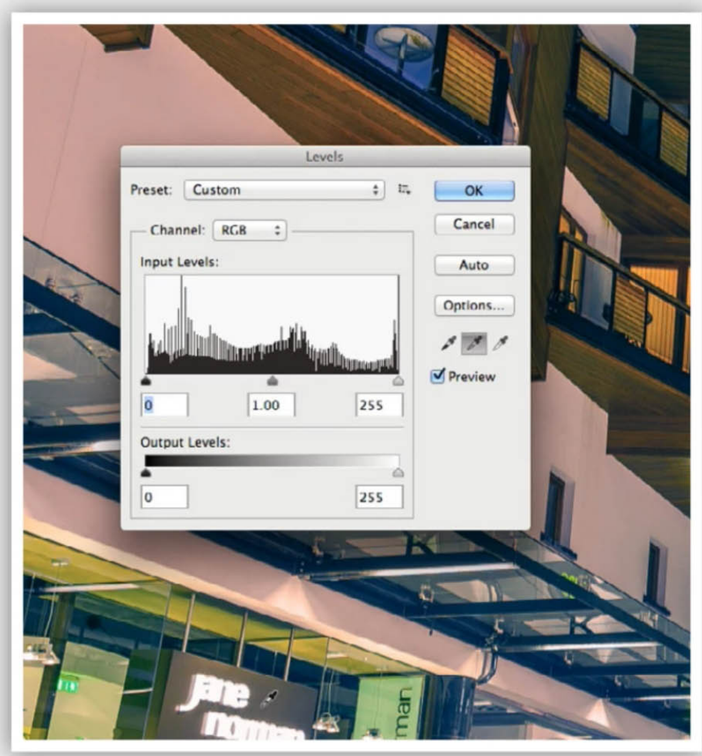
However by adjusting the colour balance in Photoshop we have been able to largely correct this fault. Reducing the colour cast results in a much better picture overall.



01 There are several ways to correct a colour balance problem using Photoshop. One of the quickest and most effective is to use the Levels function. You'll find this in the Image menu under Adjustments, or by using the keyboard shortcut Cmd + L.



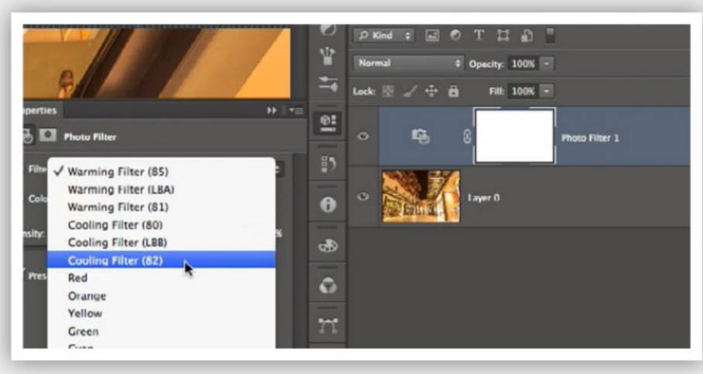
02 Levels is used to adjust the relative brightness and output levels of the various tones in the image, and can also be used to set particular points on the histogram. The one we're interested in is the grey point, the middle one of three buttons on the right of the dialog panel.

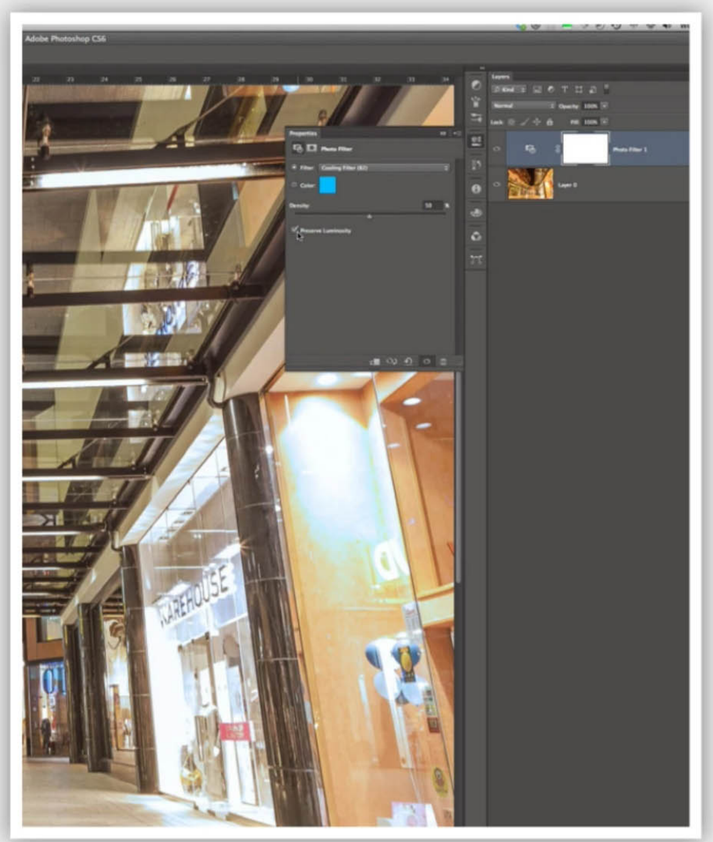


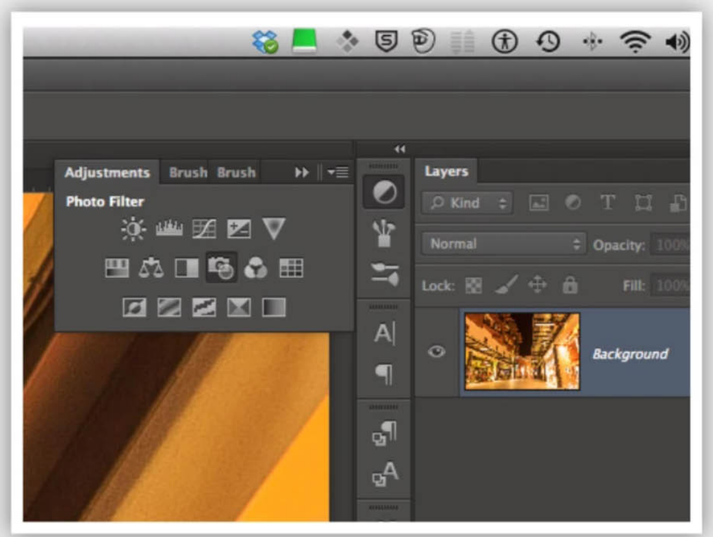
03 Click on the grey point button, and move the cursor off the dialog panel. You'll see that the cursor has changed into an eye-dropper tool. Click this on any part of the image that should be a mid-tone grey, in this case the lower part of the blackboard on the right. The colour balance of the image will immediately change to make this point the new grey, which will help correct the colour cast.



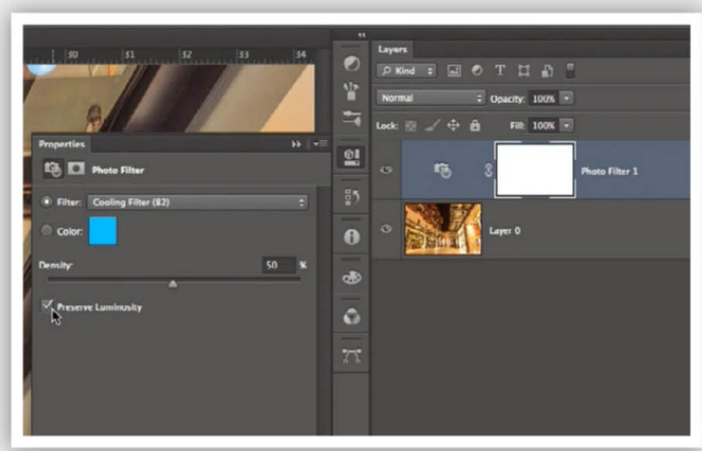
04 Another way of correcting the image is the Variations function. You'll also find this in the Image menu, under Adjustments. It presents you with a series of colour adjustment presets that you can choose to best suit your image. Please note: Variations is no longer available for Photoshop CS6.







05 A quick alternative if you are using CS6 is to select the Photo Filter option from the Adjustments menu. This behaves as if you had actually applied an old-style warm/cool filter to the front of your camera to balance the tones.



06 Adding the Photo Filter layer above your image now gives you the ability to apply a colour filter that can counteract the colour cast in your shot. In this case, the warm orange hues of this street are offset by the cool blue tint of the Photo Filter.

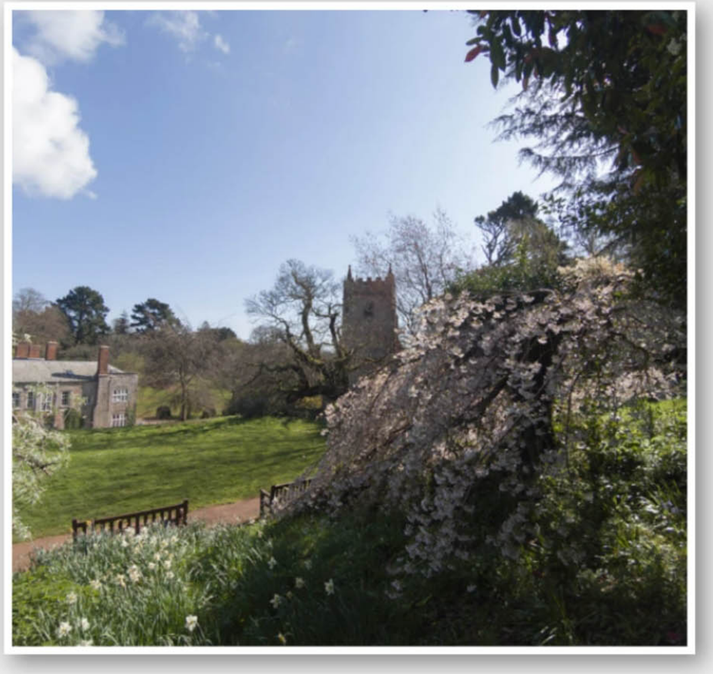
07 You can alter the colour you are applying to the image as well as the opacity. You can keep clicking until you've got something that looks acceptable. It's not precise, but with some lighting conditions it may not be possible to obtain a perfect result. Sometimes "good enough" is all you can do.

Contrast and Saturation

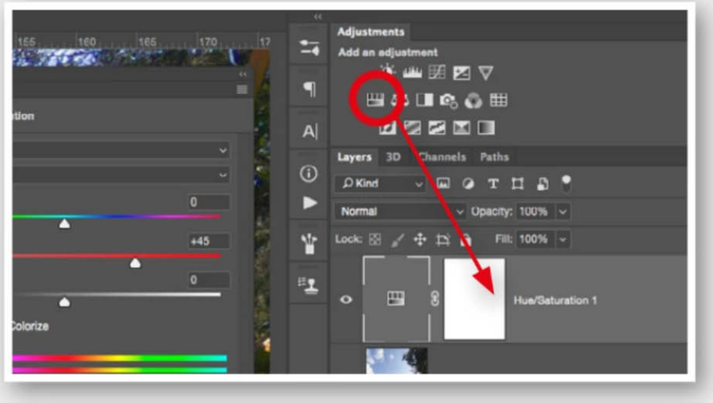
Using curves and blend modes to improve colour saturation and contrast in your digital photos

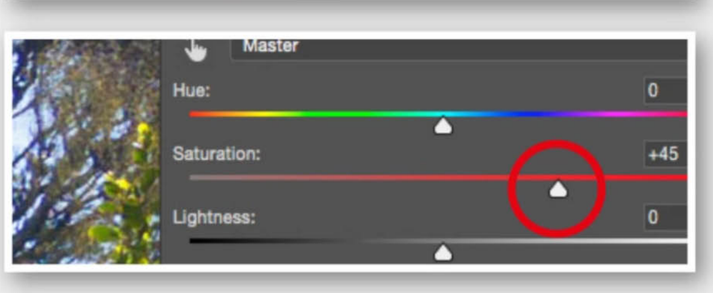


When you take a digital photo of a scene, you are relying on your camera to be able to capture all the colours and tones that you see. Unfortunately most digital cameras simply aren't capable of recording the full range of colours and shades that the human eye can see, so your photo of what was a bright and colourful scene may prove to be a bit of a disappointment when you see it on your monitor. Fortunately there are many different ways to improve both contrast and colour saturation, which might help to restore some of the sparkle to your photos. Let's take a look at some of the alternatives.

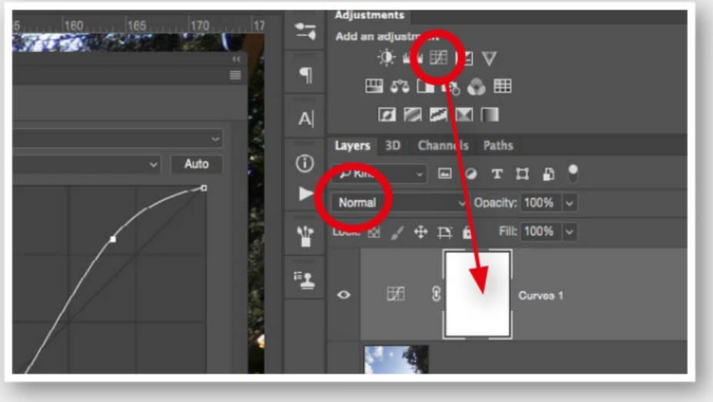


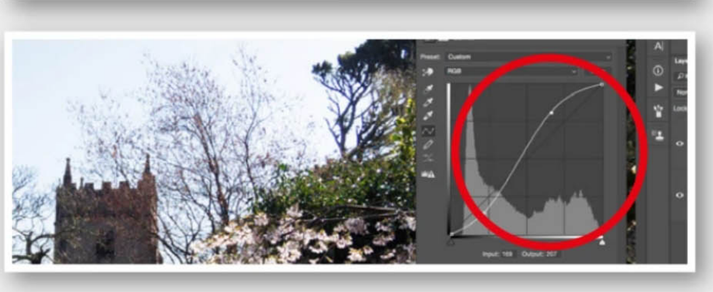
01 As an example we'll use this snapshot of Cockington. In reality the colour of the scene is much more intense than it looks here, but the digital camera that was used to take the photo was set to a neutral and flat colour mode to capture as much dynamic range as possible. This mode generally leaves images looking a bit pale and lacking contrast and vibrant colour. This shouldn't be a problem as the shot is well exposed and contains plenty of detail that will suit the increase in saturation.





02 The simplest way to improve the saturation is by adding a Hue/Saturation adjustment layer. Like many other parts of the program, Hue/Saturation has been improved in Photoshop, producing a smoother result than previous versions. If you were to boost the saturation by about +45, you'd restore some of the missing colour, but it's a scattergun approach and doesn't offer much fine control. It can also increase noise in shadow areas in JPEG images. Let's look at more options.

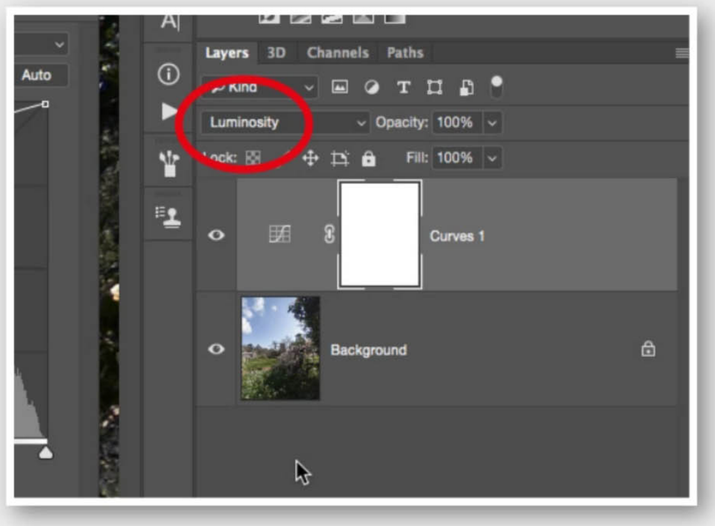


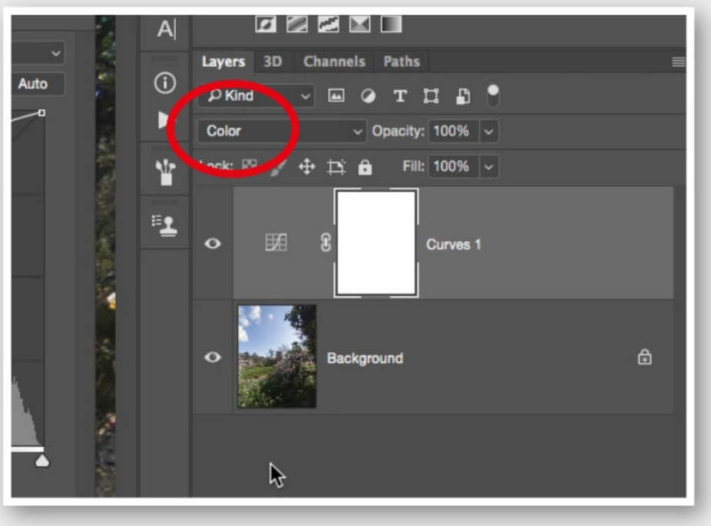


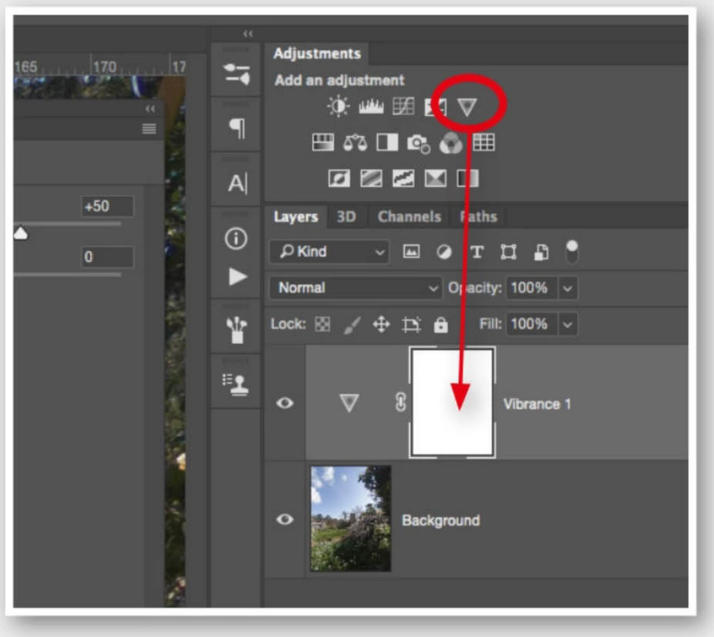
03 A much more controllable way to adjust both saturation and contrast is to use a Curves adjustment layer. We've already looked at Curves in the section on adjusting exposure, but by using Blend Modes we can also use Curves to enhance saturation. In Normal blend mode the curve will change both contrast and saturation. We're using the same S-shaped curve, which boosts brightness at the upper end of the scale and darkens shadows at the lower end.

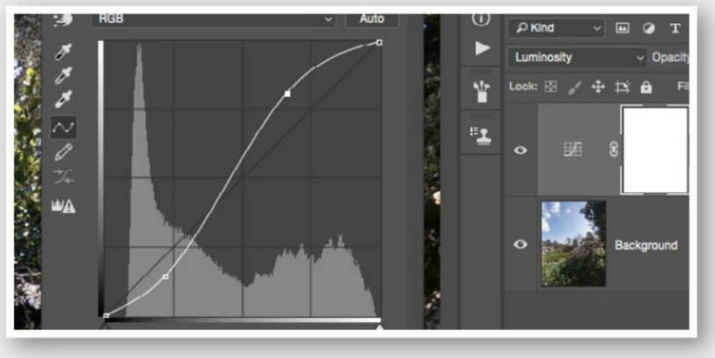
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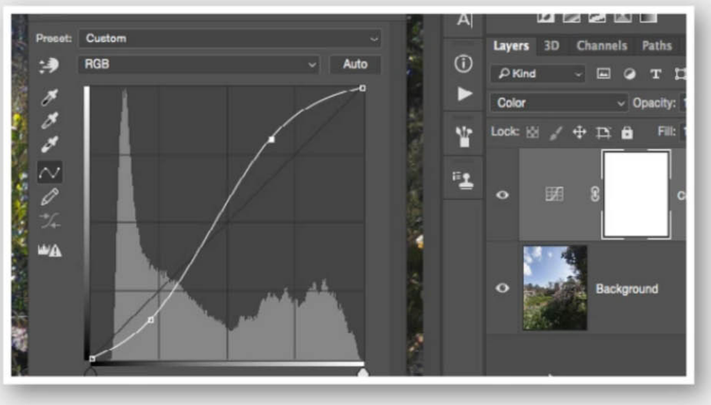












04 By changing the blend mode to Luminosity, the curve will only affect brightness, so the same S-shaped enhancement curve will improve contrast, lightening highlights and darkening shadows without affecting colour saturation.

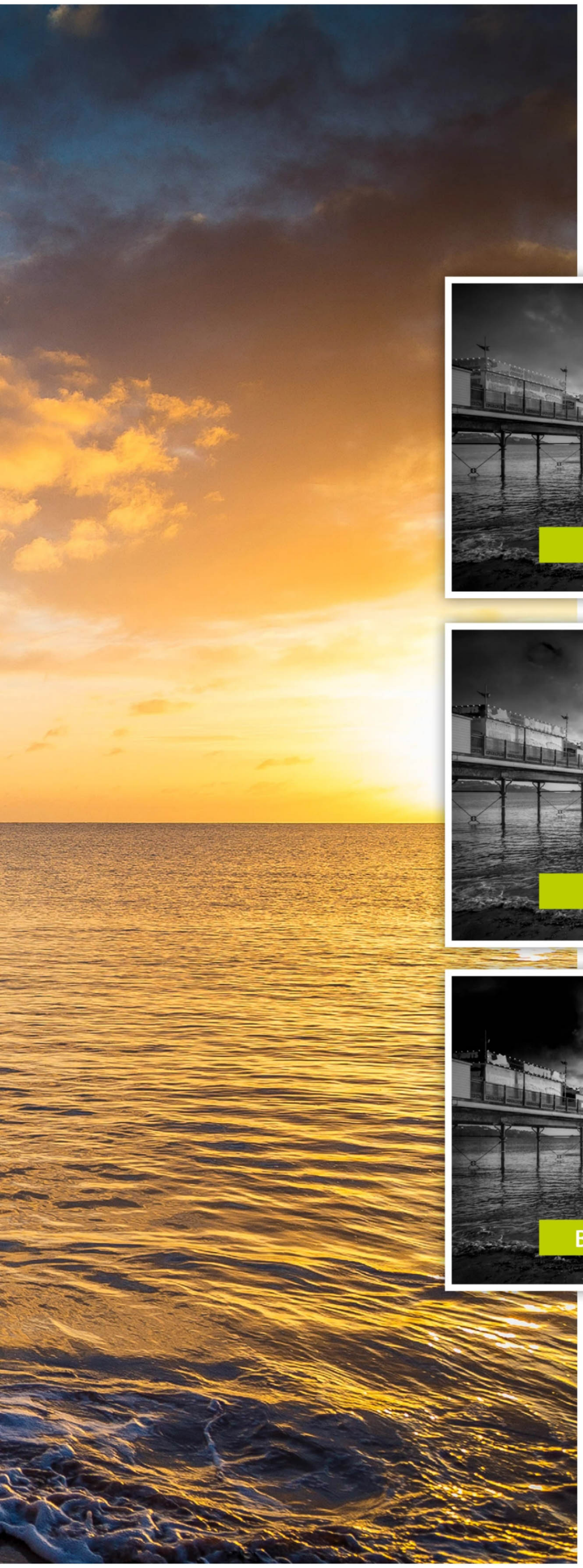
05 Conversely, by using a Color blend mode, the S-shaped curve will alter colour saturation without affecting brightness, so shadows and highlights are unaffected. This is great to keep noise under control.

06 Another way to improve saturation is a Photoshop function called Vibrance, which can also be applied as an adjustment layer. Vibrance is a difficult thing to quantify. It is a saturation function, but it works on a graph, affecting the least saturated areas most, and the most saturated areas least. On a picture like this it can help, but it has to be used with contrast enhancement for best effect, which may again cause an increase in noise. This option is less intense than using Saturation. Vibrance is best used when processing a Raw image file.

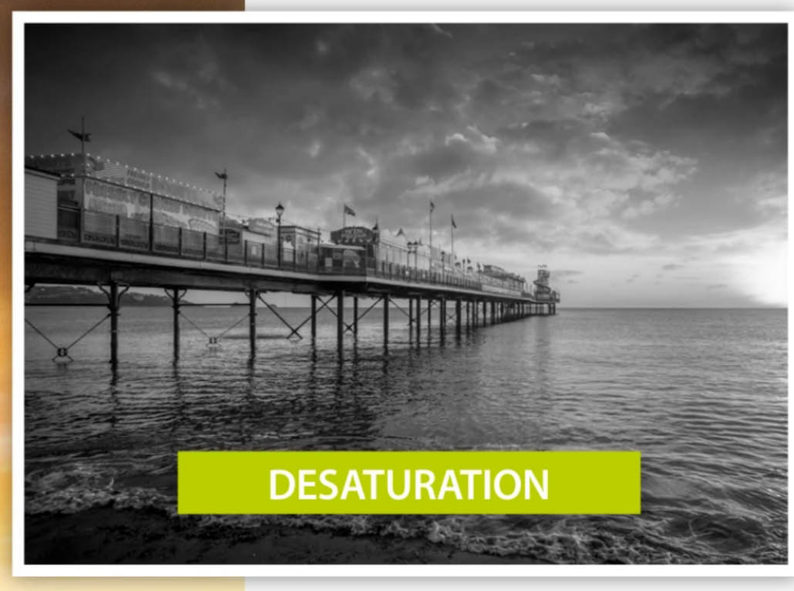


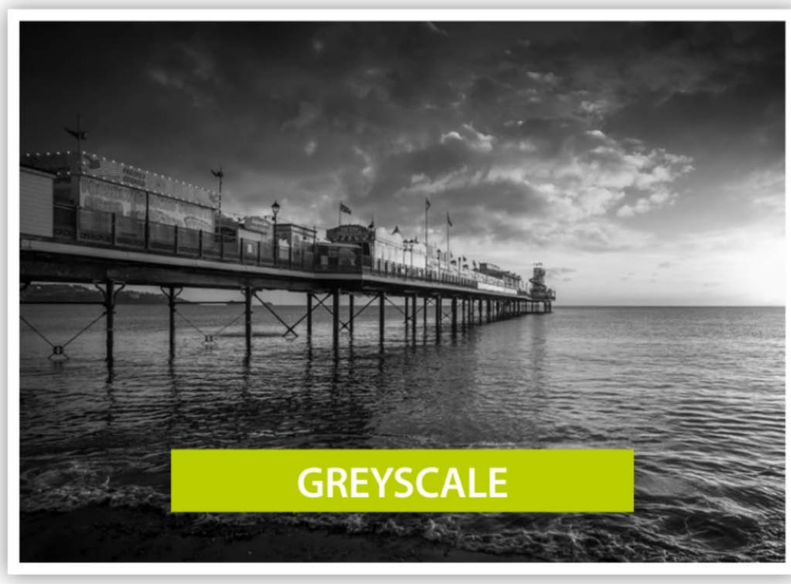
Monochrome Techniques

Photoshop offers many ways to convert colour images into black and white



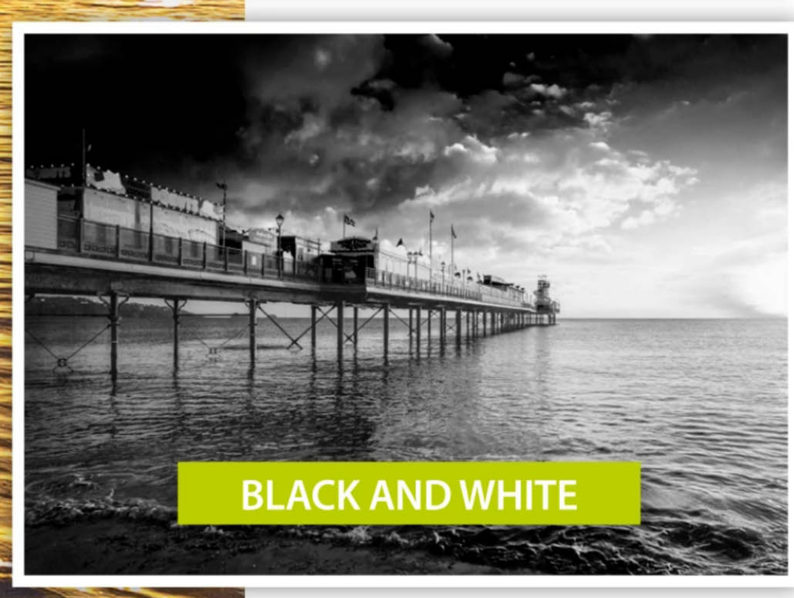
Although easy colour photography has been around since at least the 1940s, monochrome or "black and white" photography remains popular to this day. There's something about black and white that really works for some subjects, bringing out texture, form and detail that the more realistic depiction of colour somehow misses. With the right choice of subject, a good well-exposed monochrome image can become a work of art. Almost all digital cameras include a black and white mode, and as you'd probably expect Photoshop offers multiple methods for converting colour images into stylish black and white. For this section we'll use this seaside photograph. It has some strong shapes and colours, and the excellent textures will also prove useful for the conversions.

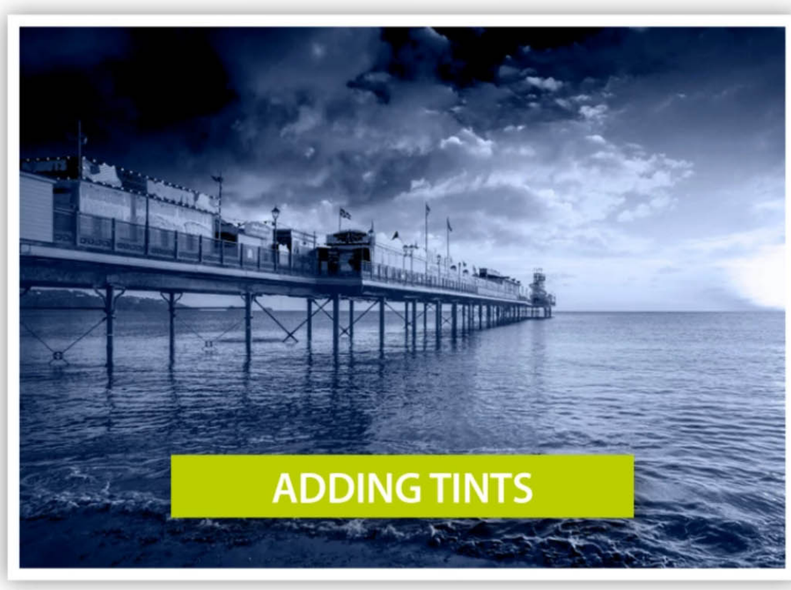












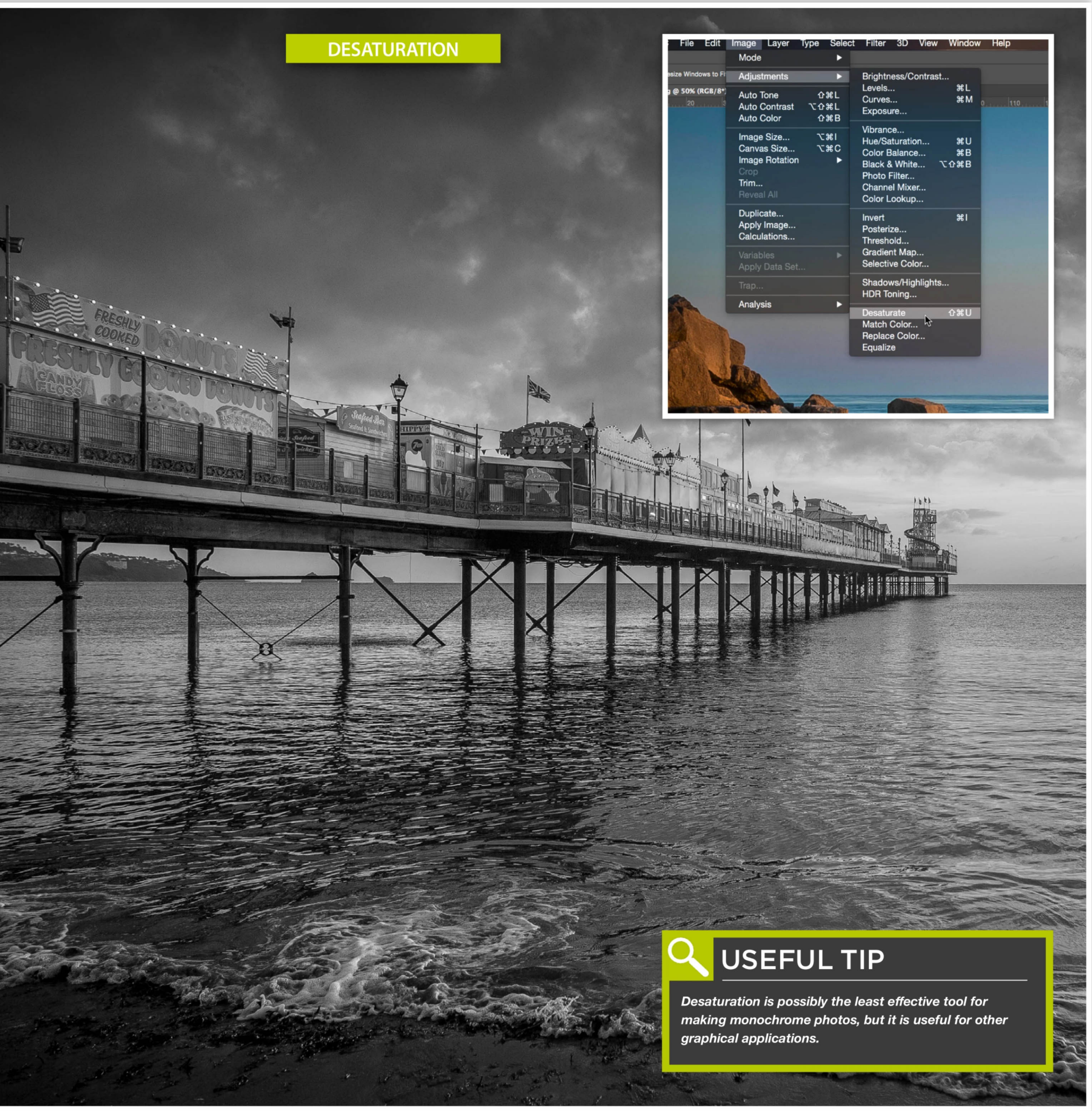
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USEFUL TIP

Only certain types of photo will look better in black and white. Remember, you can't make a bad photo good by adding Photoshop.

Desaturation

The quickest and easiest way to turn a colour picture into a monochrome one is to simply remove the colour. It's called Desaturation, but it's very crude and offers no creative control at all. The resulting image is not too bad, but it does look a little flat and lifeless, with reduced contrast, tonal variation and highlights are not as strong. Some of the texture needs to be able to stand out a little better. Nonetheless, if all you want is a quick-and-dirty monochrome conversion, you'll find Desaturate in the Image > Adjustments menu and it will suffice for most of your mono conversion needs if you're not going to work on it further.

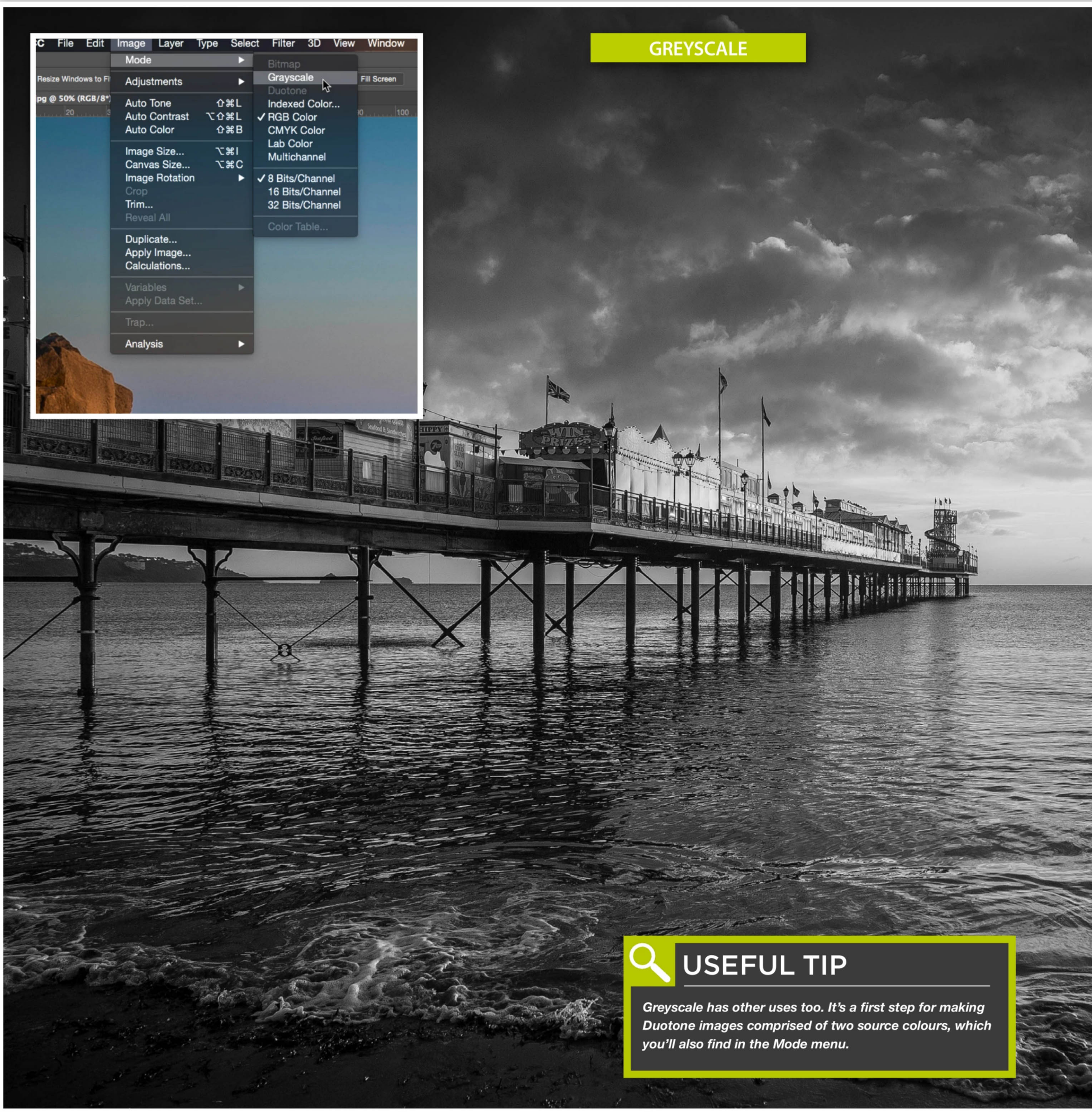


USEFUL TIP

Desaturation is possibly the least effective tool for making monochrome photos, but it is useful for other graphical applications.

Greyscale

Another method for removing the colour from an image is to convert it from a normal RGB (Red Green Blue) colour image into a monochrome greyscale image. This simply discards the colour information from each pixel, leaving only the brightness information. It will preserve the full range of tones from the original picture, but like Desaturate it offers no creative control. The results do look slightly brighter, with decent tonal range, but it still looks a bit flat, and furthermore greyscale limits some further editing options. You'll find Greyscale in the Image menu under Mode.

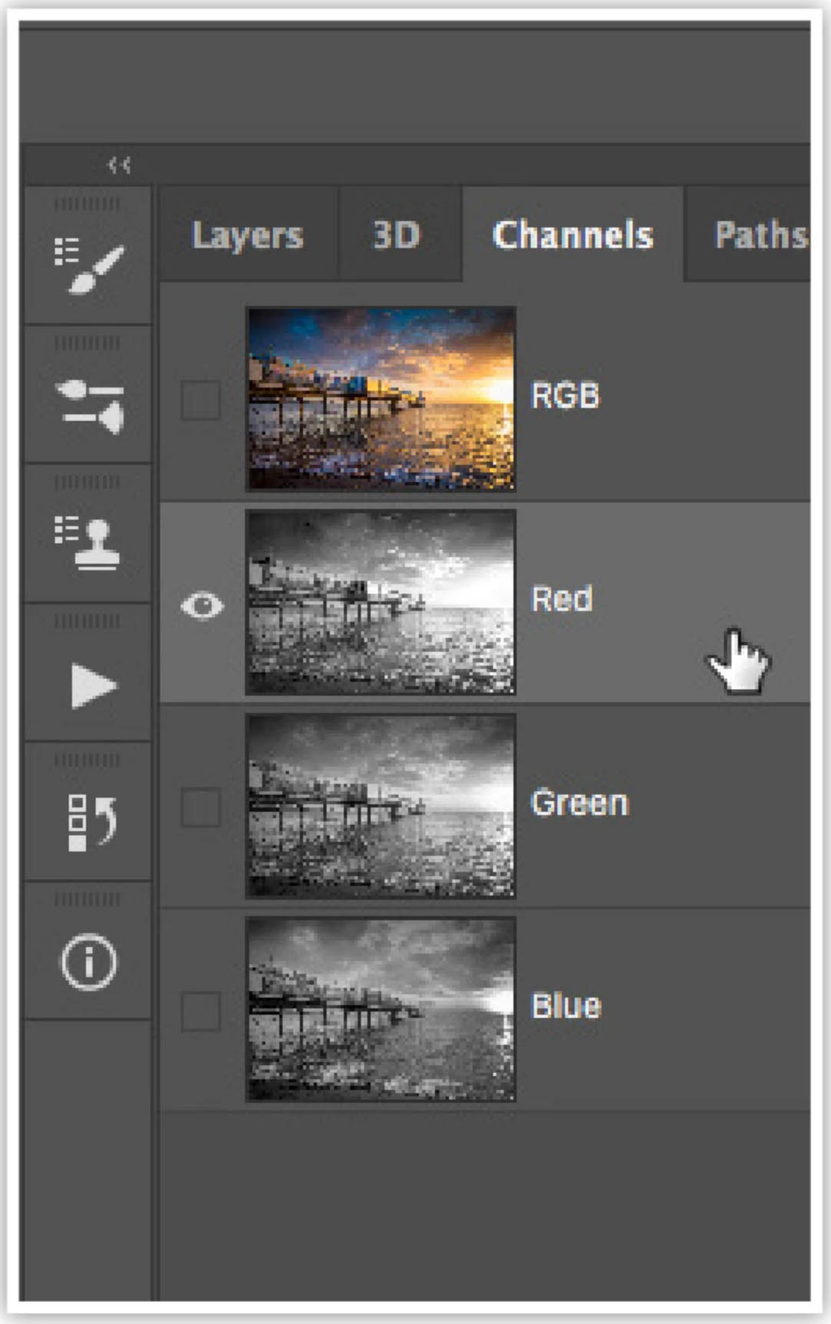


USEFUL TIP

Greyscale has other uses too. It's a first step for making Duotone images comprised of two source colours, which you'll also find in the Mode menu.

RGB Channels

Most colour pictures that you'll come across are made up of a mixture of three primary colour channels, one each for red, green and blue. With these three primaries it's possible to make any other non-primary colour. Most modern forms of colour imaging use this method. Digital cameras have an RGB colour filter mask in front of the sensor to provide colour information, TVs and monitors display colour images as an array of tiny red, green and blue dots, and even your eye detects red, green and blue pigments, which is why some people can have colour blindness in one or more of these colours. Photoshop also uses colour channels, and you can see how this works by activating the Channels palette.



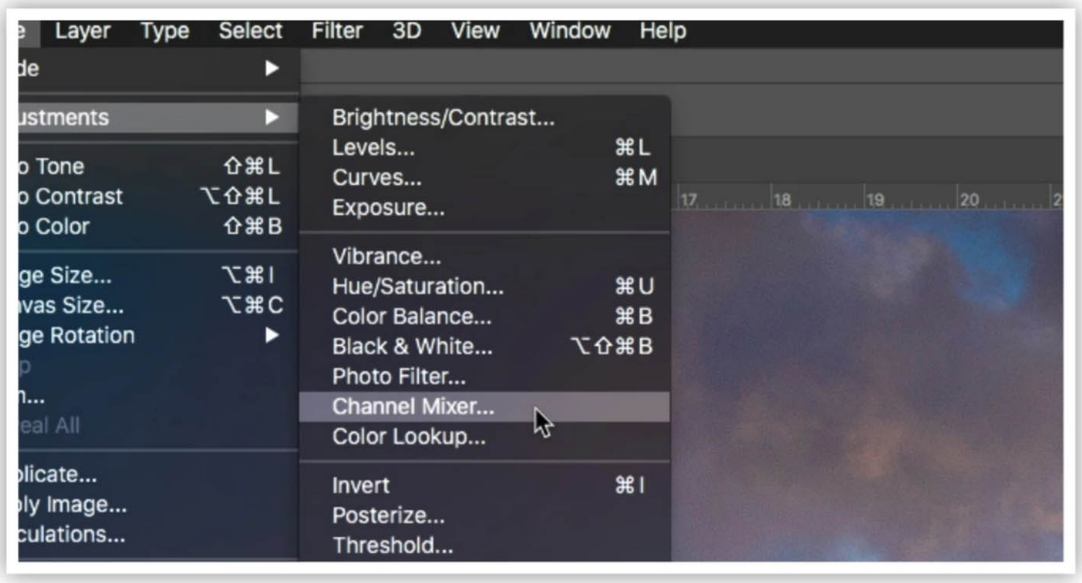
You can see what each channel looks like independently by clicking on it, which will turn off the other two. Compare the three channels, noting how the relative brightness of different areas such as the blue of the sky or the reds and browns of the sky and sea reflections change from one channel to the next. You can select and save just one channel by activating it and using the Greyscale mode option to discard the other channels. This does offer a bit of creative control, but it's a bit crude.



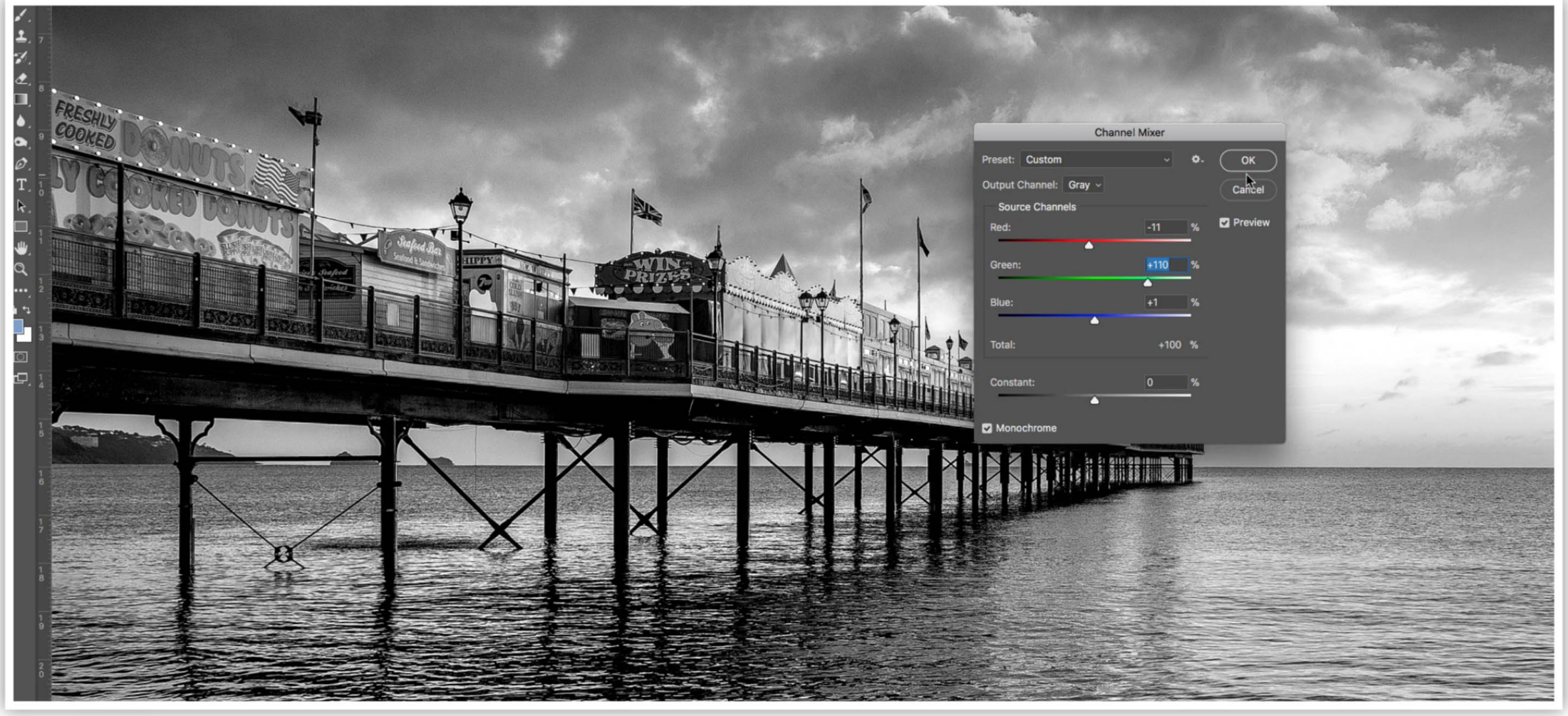
The Channel Mixer

One of the best ways to convert a colour image to monochrome is to use the Channel Mixer. This takes the RGB colour channels that we just discussed, and offers a way of mixing their output into a black and white image. You'll find the Channel Mixer in Image > Adjustments > Channel Mixer.

Until the introduction of the Black and White menu and adjustment layer option in Photoshop CS3, the Channel Mixer was the preferred method of converting to monochrome for many photographers. Open the channel mixer and check the box for Monochrome at the bottom of the panel. The image will immediately convert to monochrome, but now you can adjust the channel sliders to alter the relative brightness of the tones in the image.

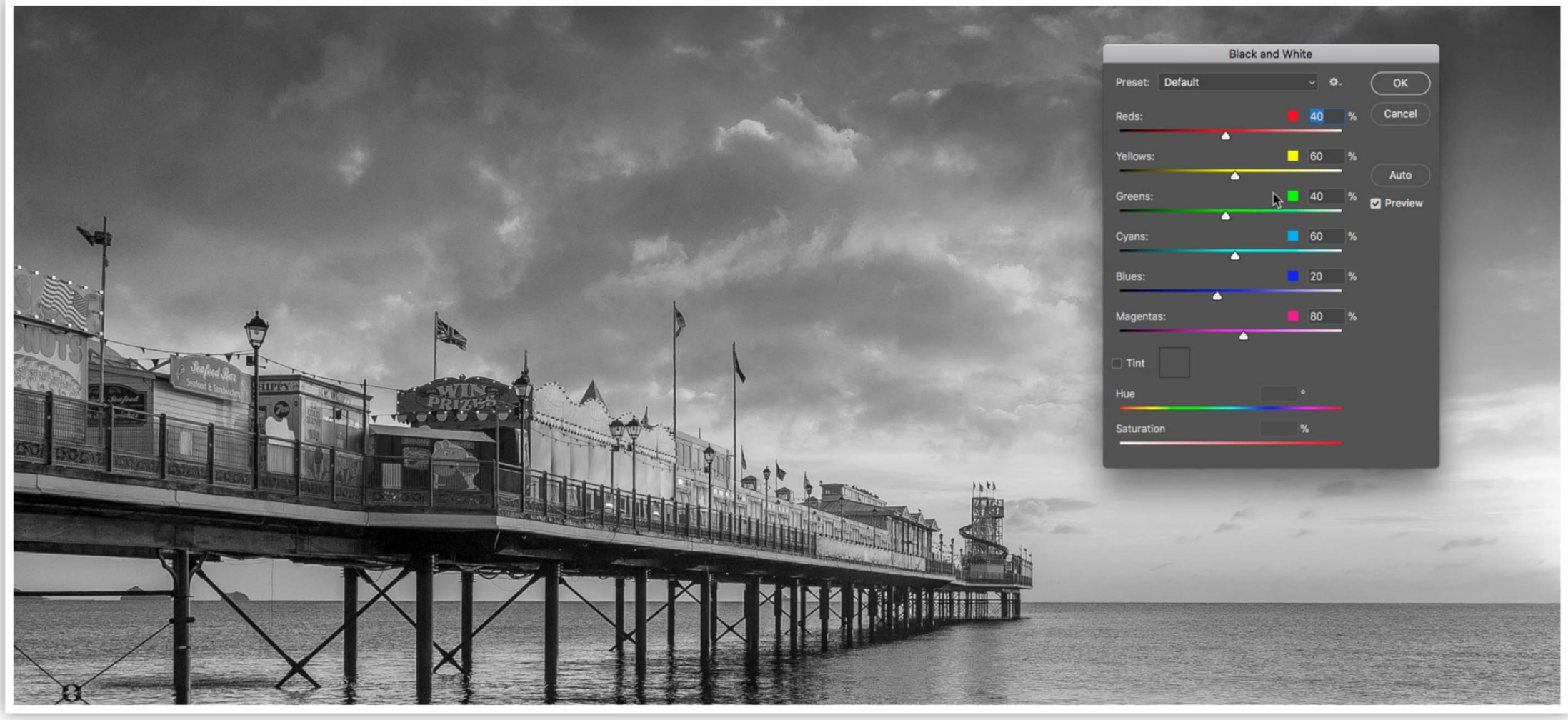




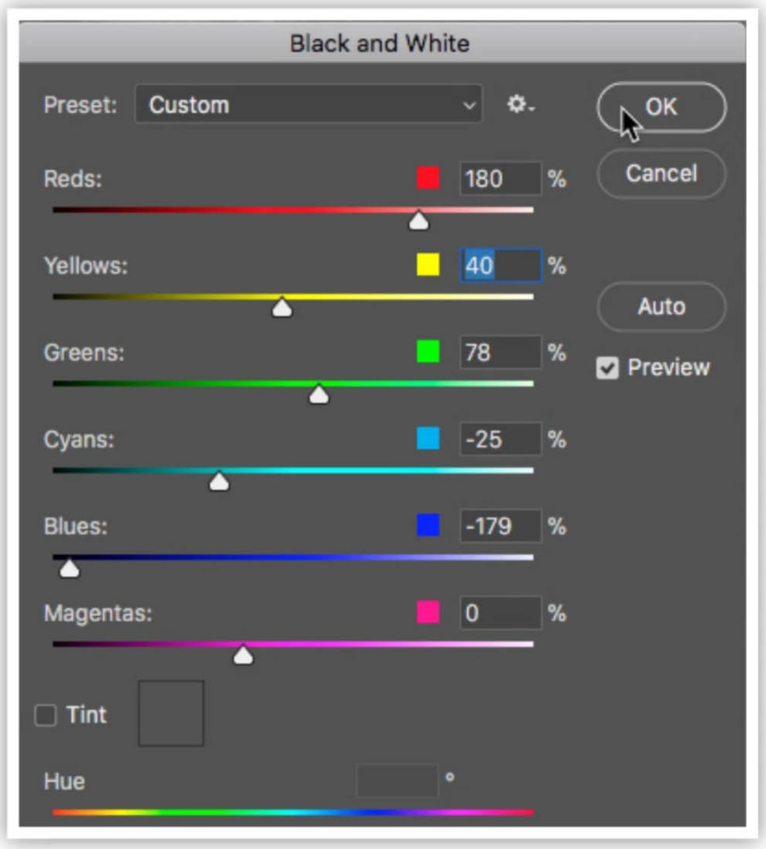


Black and White

Until Photoshop CS3 came along in 2008 you would find dozens of online tutorials offering home-brewed methods for converting colour images to monochrome. The Channel Mixer offered one approach, giving some control over the relative levels of tone, but the Black and White function takes that control and offers even more. It's available as an Adjustment Layer, so it can be used non-destructively, keeping your base image untouched.



Black and White offers complete control over the tonal balance of your image, with channel sliders for the primary red, green and blue, as well as non-primary yellow, cyan and magenta, so you can fine-tune tone and contrast, emphasising any other colour range. Each slider adjusts the relative brightness of a particular channel.





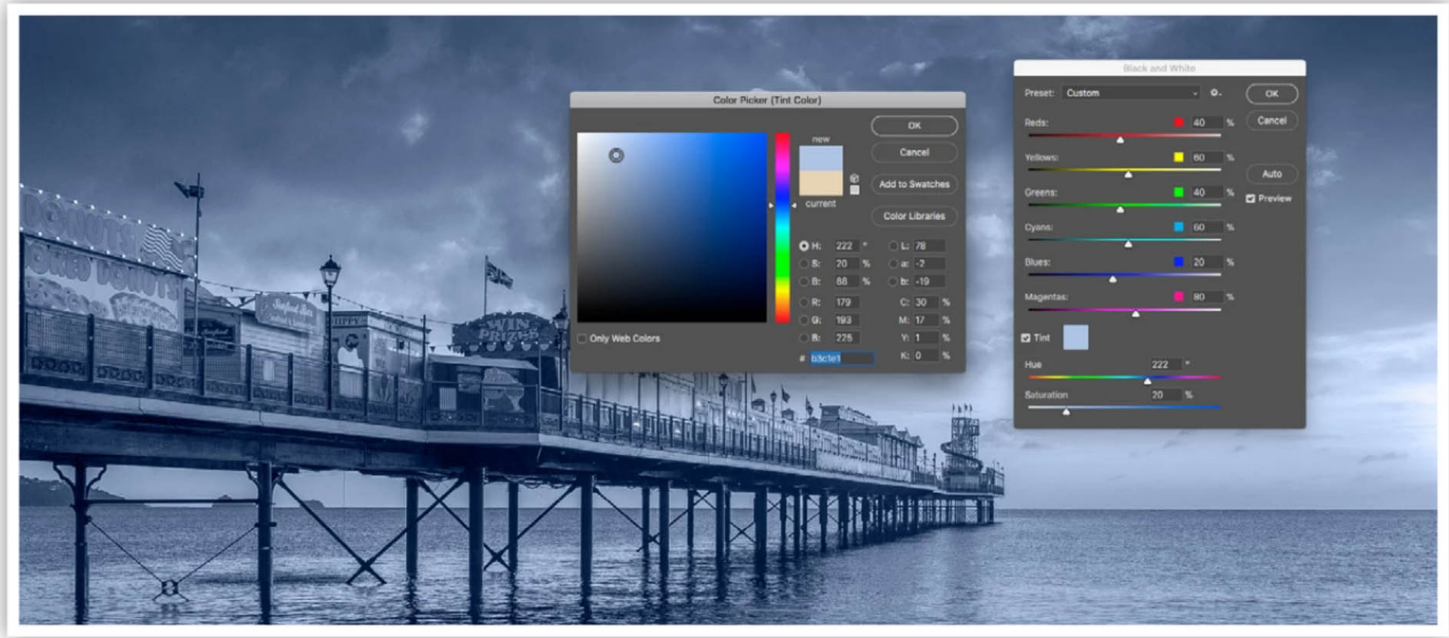
For our sample picture here, the best result is obtained by decreasing the level of red, cyan and blue, while boosting yellow. This creates a good tonal balance, bringing out the detail in the rock formation, as well as adding greater detail to the water and darkening the sky. There is also a large boost in contrast that helps.

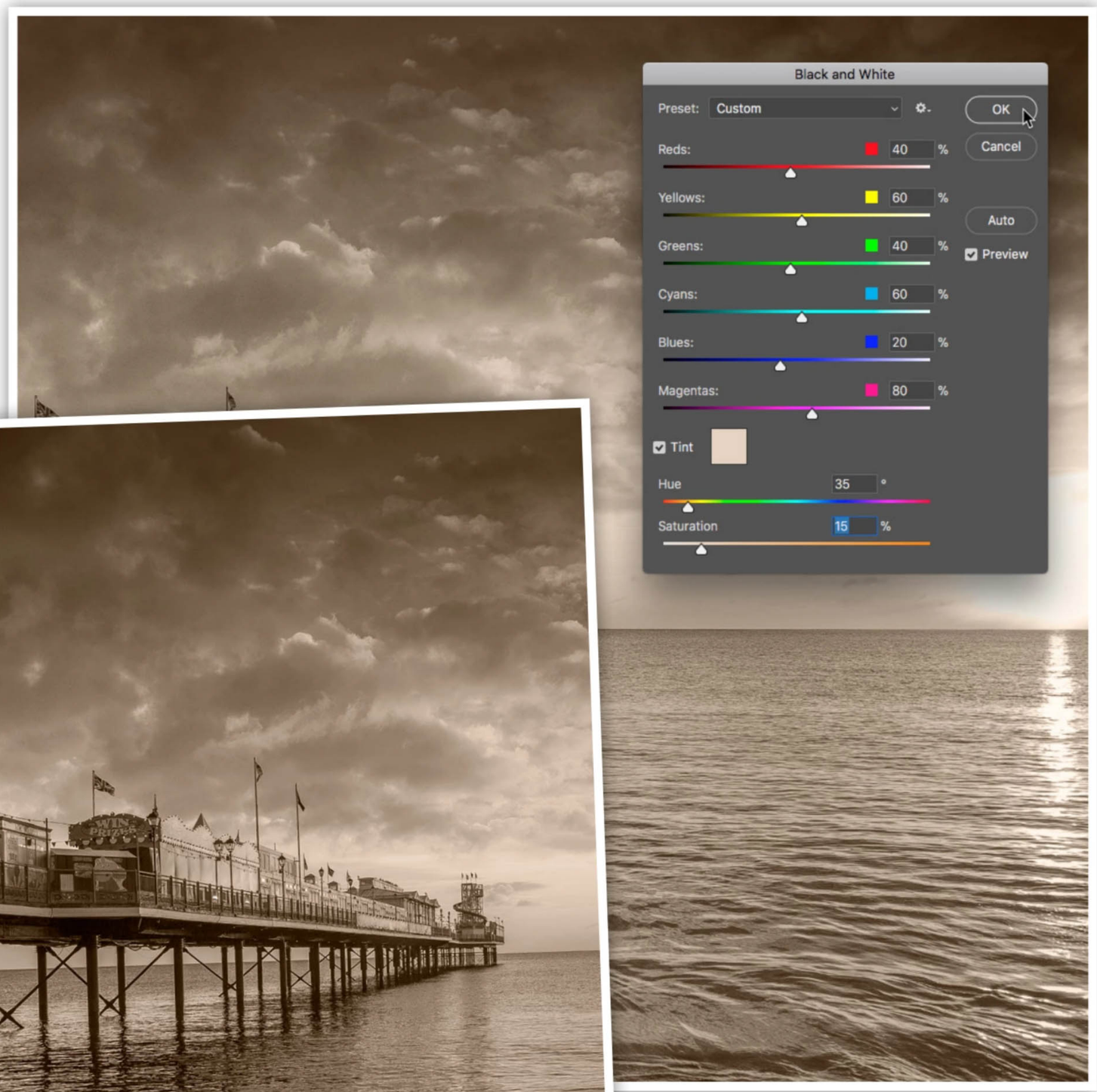
Adding Tints

The Black and White function also provides an easy and effective method of applying tints to monochrome images, accurately replicating old but popular processing techniques such as sepia or cyanotype toning, both of which can add a lot of atmosphere to the right sort of picture.

Starting with the same settings as before, with the Black and White sliders set to enhance the image check in the Tint box. The default setting is something that looks a lot like sepia, but in fact it's not quite right, according to most popular opinion. If you're using the Black and White function from the menu option you'll see Hue and Saturation sliders at the bottom of the control window.

For a nice approximation of the blue tone typical of cyanotype toning, set the hue slider to about 220-230, and move the saturation slider to the left so that the blue tint is quite pale. If you're using the Black and White adjustment layer technique (a much better method), check the tint box and then click in the small coloured square next to it. This will bring up a Photoshop colour picker window, offering a much better way of controlling the colour and intensity of the tint. For a recreation of sepia toning, set the hue to about 40 for an antique feel to the image.



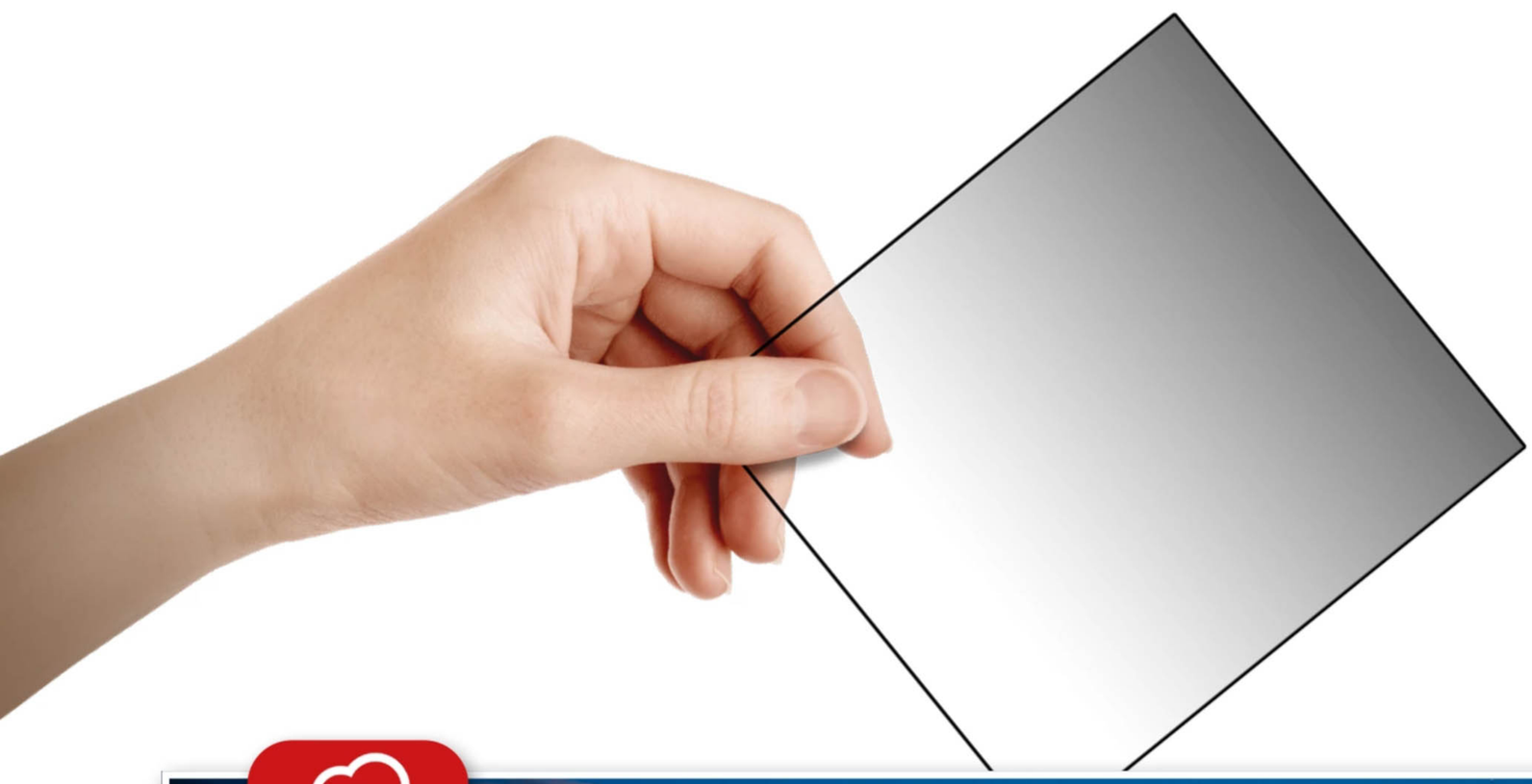




Sepia toning works well with a wide range of subjects, but it's best with certain images. A simple landscape photo of the coast with no modern references has the look of an old, aged photo and works extremely well with sepia toning. It would look a bit odd if it were a photograph of some ultra-modern cityscape given an antique makeover. A cool blue tint such as the cyanotype tone might be more appropriate.

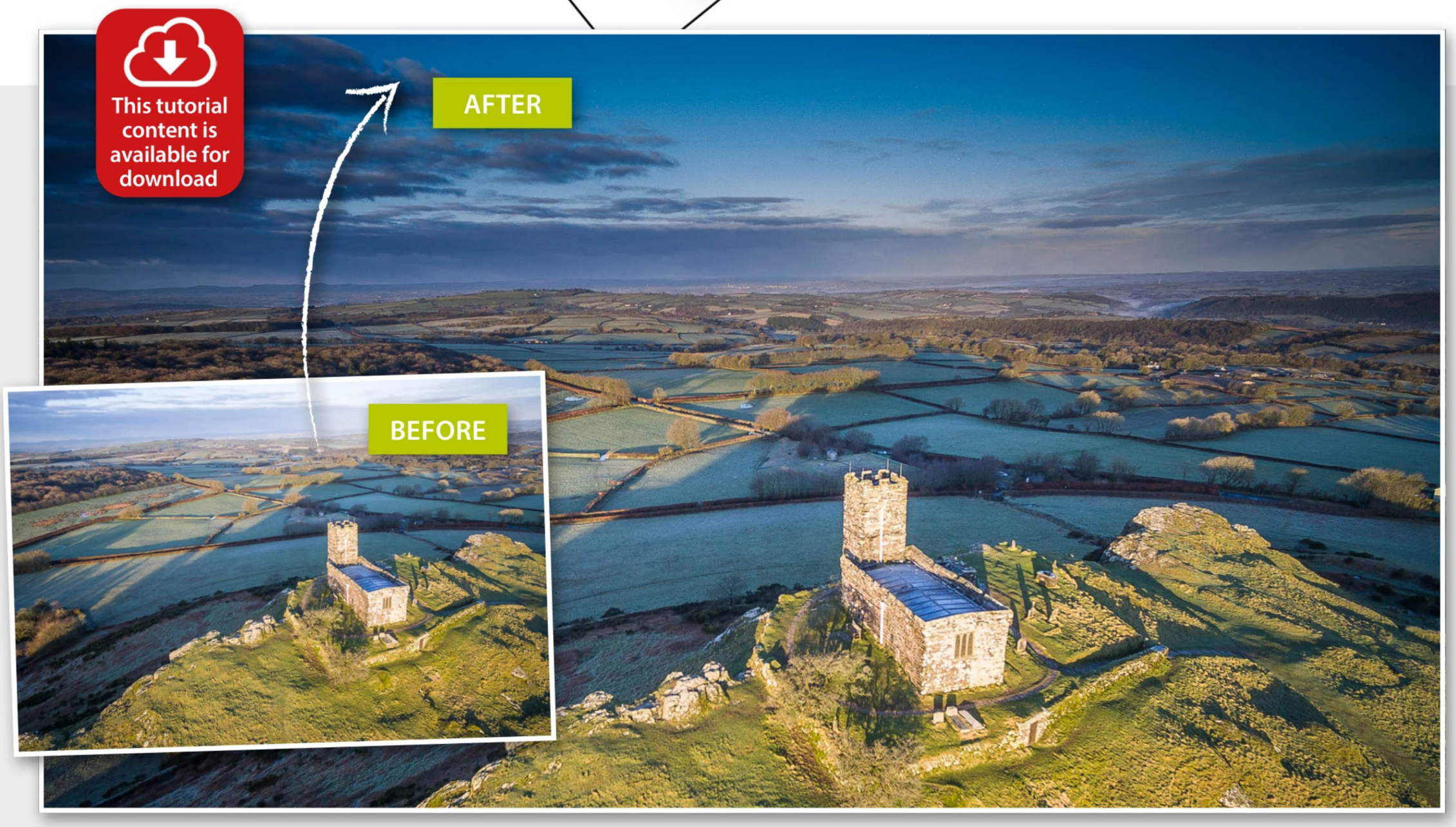
Adding a Graduated Filter

Graduated filters can improve photos by adding depth and colour to the sky



Photographers use graduated filters placed in front of the camera lens to selectively change the exposure and sometimes the colour of part of a picture, usually to darken the sky to bring out details in the clouds and balance the exposure with the landscape in the foreground. They come in many different shapes, sizes and colours to fit all types of camera system.

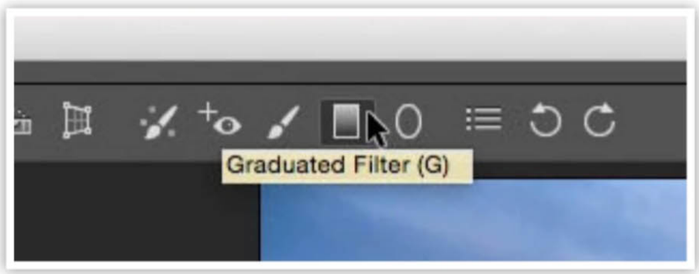
As with most photographic techniques, it's possible to duplicate the effect of graduated filters using Adobe Photoshop, and as usual there are several ways to accomplish this. For this example we'll use an aerial image of a sunrise taken above a church in Devon.



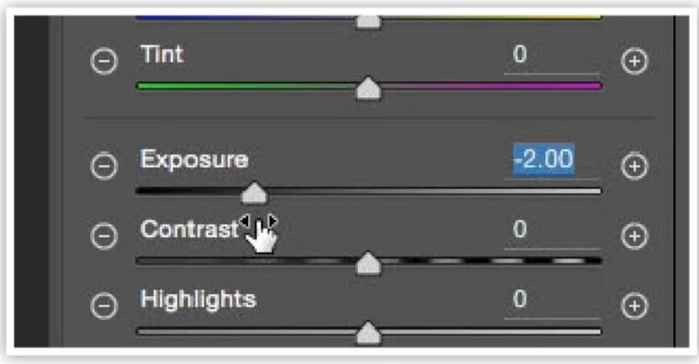
Graduated Filter in Camera Raw

Since this photo was taken using Raw mode, we can use the Graduated Filter tool in Adobe Camera Raw (ACR). ACR is the Raw processing application supplied with each version of Photoshop, and allows you to add the effect during processing. This is by far the best way to do it, since it preserves the maximum amount of detail in the photograph.

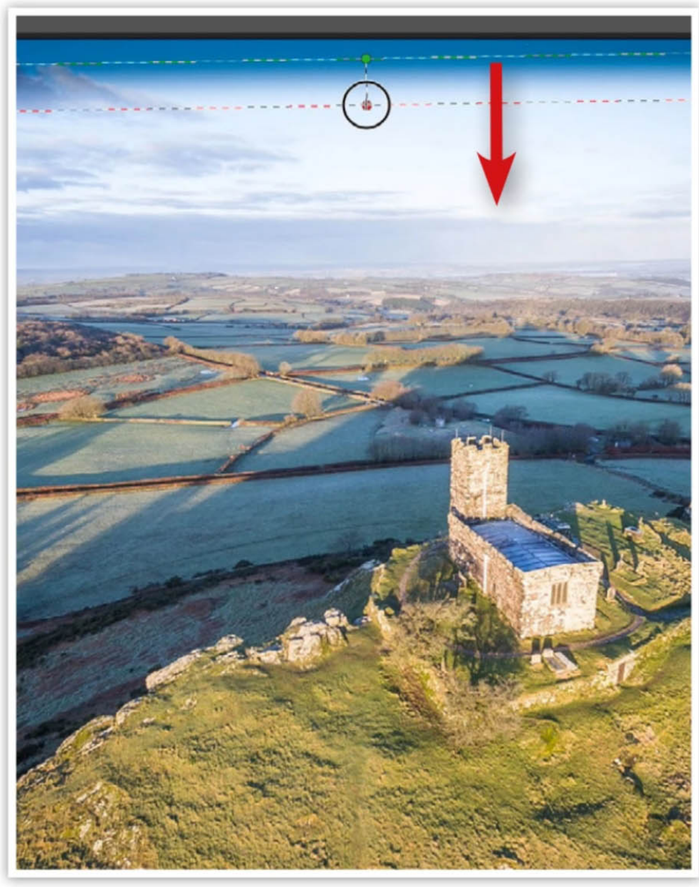
01 When you open the image in Adobe Camera Raw, you'll see a row of tool icons across the top of the main image window. The Graduated Filter icon is to the right.



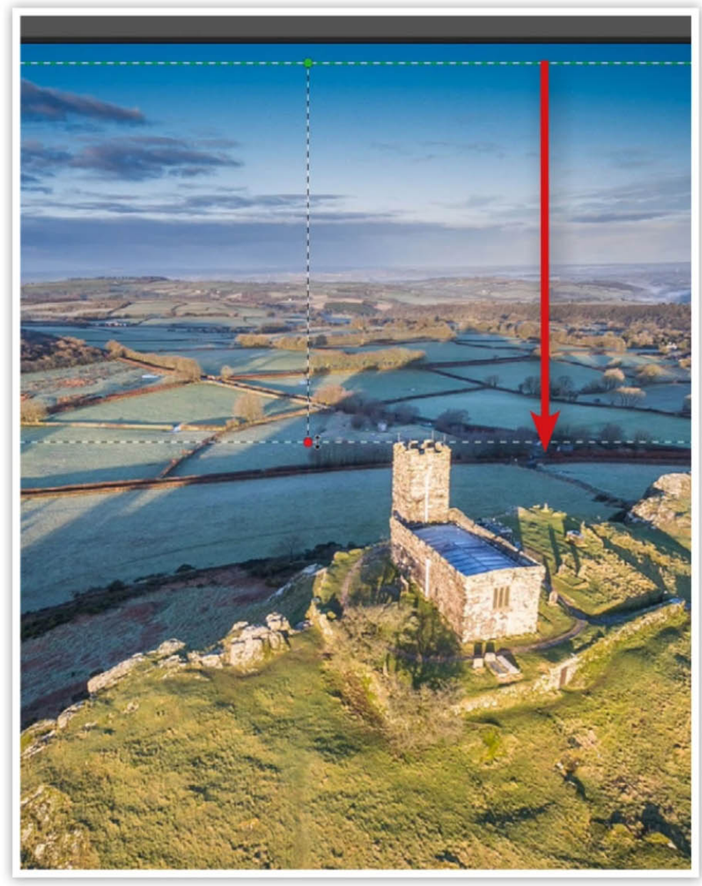
02 When you click on the Graduated Filter icon, you'll see the control panel on the right of the screen change. The filter can apply many different effects, but the one we want to use is a reduction in exposure. A setting between -2.00 and -2.70 should produce a suitable effect for this picture.



03 To apply the filter, drag a line down from the top of the screen to the horizon line. You'll see a horizontal and vertical dotted line like an inverted T. You'll also notice that you can change the angle of the line by moving the cursor left and right. To constrain the line to the vertical, hold down the Shift key while dragging.



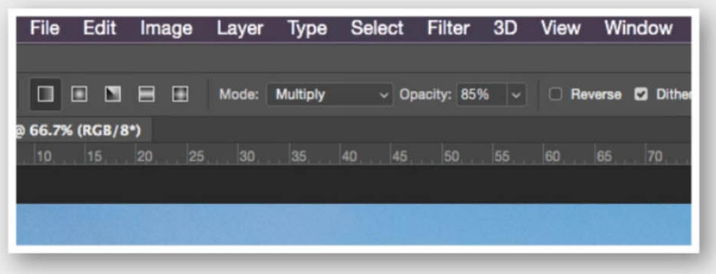
04 The red dotted line marks the lower, least saturated edge of the gradient effect, but there is also a green line at the top of the frame. This marks the top or most saturated edge of the effect, with a smooth gradient between the two lines. If you drag this green line down, more of the image will be at maximum effect and the gradient will be shorter.



Graduated Filter in Photoshop



01 If your photo wasn't taken in Raw mode, you can apply a graduated filter using the Gradient Tool. To set up the graduated filter, first select the Gradient Tool, then set the foreground colour to blue by clicking on the foreground square and then using the colour picker.



02 Next, in the tool options bar, click on the gradient editor and select Foreground to Transparent, click on the button for Linear Gradient, set the Blending mode to Multiply, and the Opacity to 85 percent. Make sure the boxes for Dither and Transparency are checked.

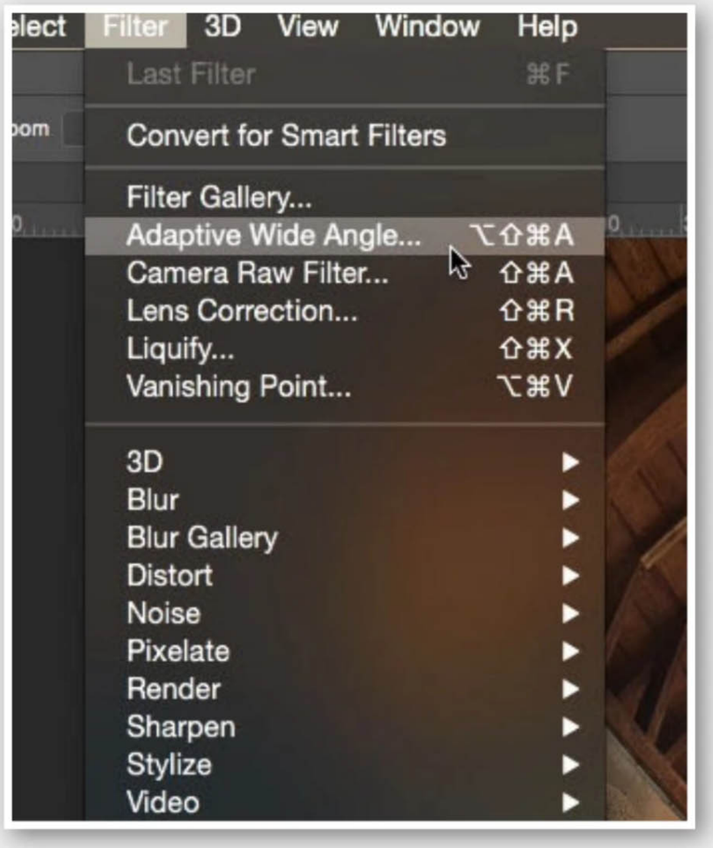
03 To apply the gradient to the picture, start at the top of the frame, click and drag down to the horizon line. If you hold down the shift key it will constrain the line to the vertical. The blue is blended into the clouds making them darker. It's always a good idea to tailor the blend colour to match the sky.

Correcting Lens Distortion

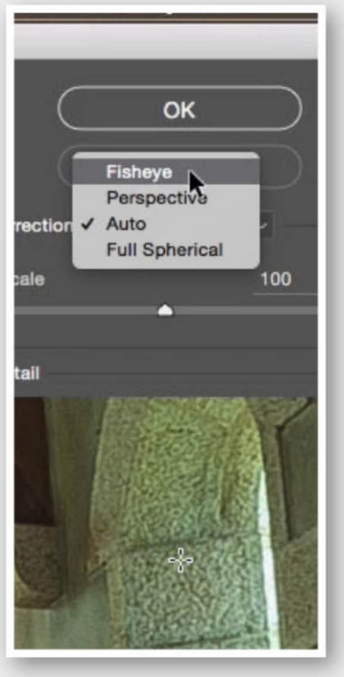
Correct the optical distortion of ultra-wide lenses with Photoshop's Adaptive Wide Angle

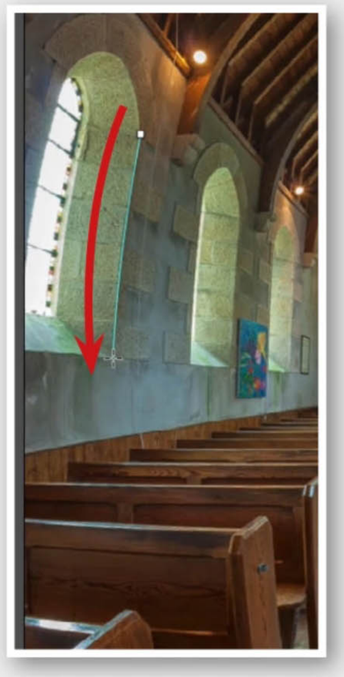


One of the new features introduced with Photoshop CS6 is called Adaptive Wide Angle; this can warp and bend an image to undo the optical distortion common to all very wide angle lenses. We've all seen photographs taken with "fish-eye" lenses. These lenses are called ultra-wide-angle, because the angle of view that they can capture can be as much as 180 degrees. Naturally the ability to squeeze half a room into the same shot comes at a price, and that is extreme optical distortion. Straight and parallel lines appear to be bent, perspective is massively shortened and familiar objects take on almost unrecognisable proportions. In the photo opposite, the straight uprights of the window alcoves and bench seats seem to curve inwards, the walls seem to bulge outwards and the whole effect is quite disconcerting.

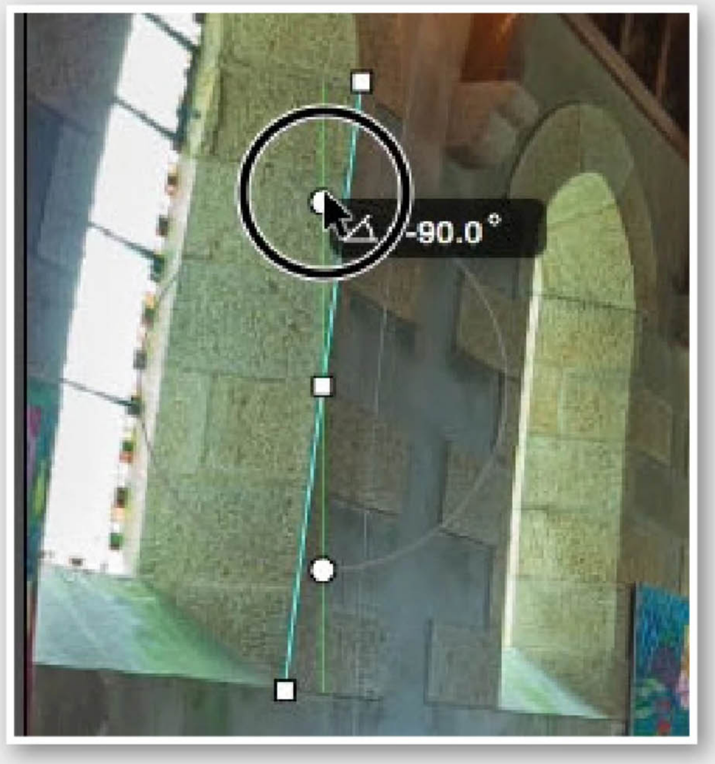


01 Adaptive Wide Angle attempts to correct at least some of these problems, and can warp the picture to undo most of the optical distortion. Remarkably it can do all this while still preserving most of the detail in the picture. You'll find Adaptive Wide Angle in the Filters menu.



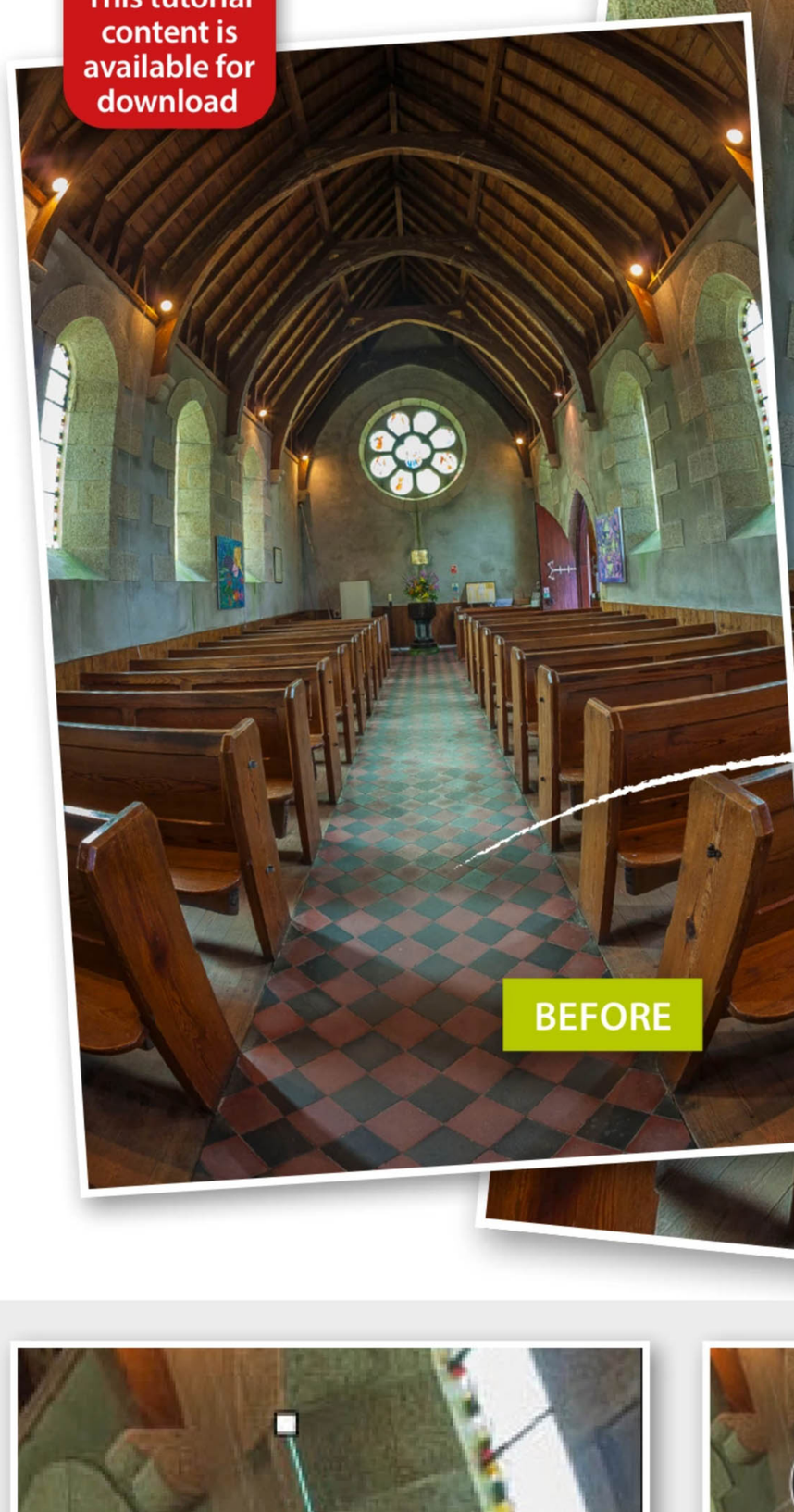


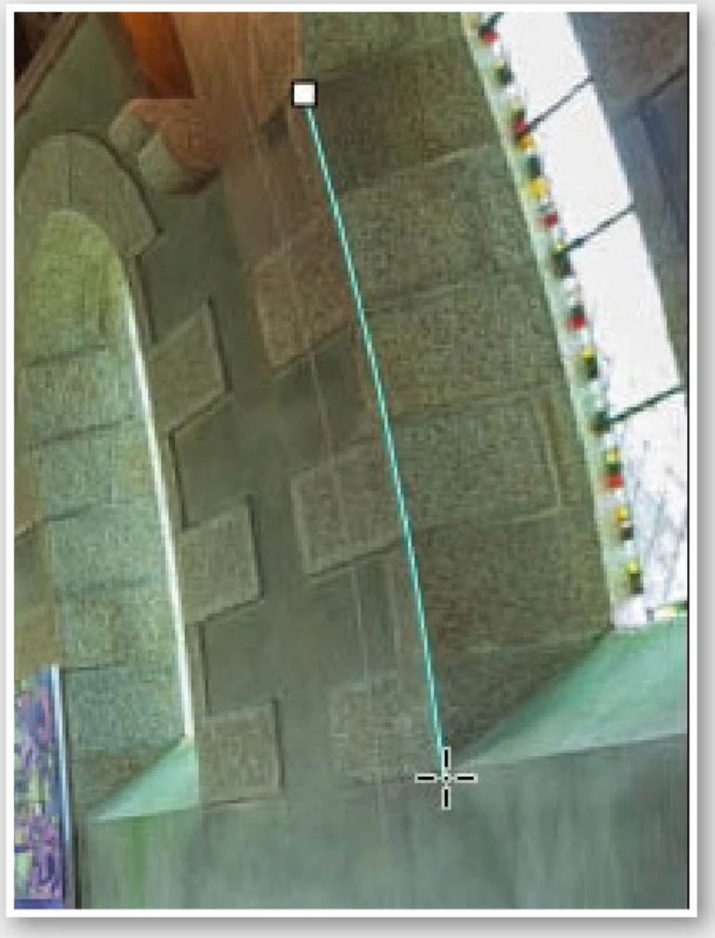
02 In the Adaptive Wide Angle interface, first select the Constraint tool from the panel on the upper left of the main screen, and select Fisheye from the Correction drop-down menu. Pick one of the vertical lines, in this case one of the stone window alcoves, click near the top of it and drag a line down the length of it. You should find that the line will automatically curve to follow the line, but you can drag the control handle in the mid-point of the line to match it up to the curvature.



03 The line will automatically warp the picture to make the curved line straight. You'll see that there is a circle overlaid on the line, with two more control handles where they intersect. You can drag these handles, rotating the line to bring it into a vertical position. If you hold down the shift key it will automatically snap to vertical right away.

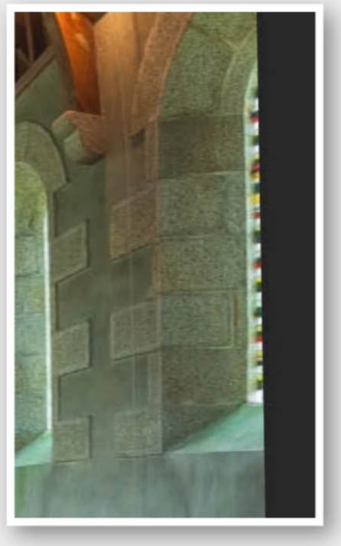
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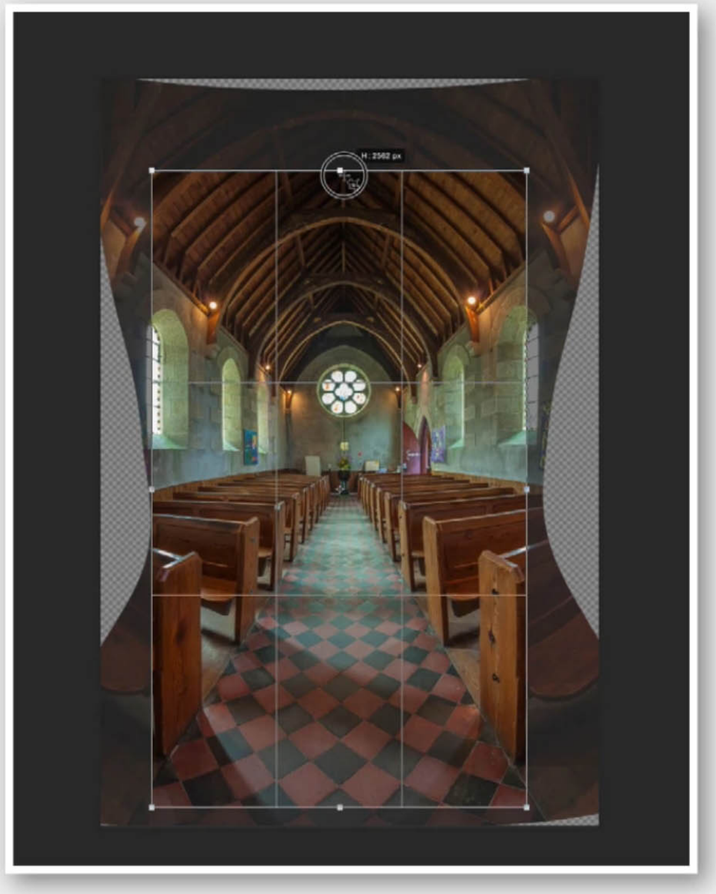


04 Pick a line on the opposite side of the picture and repeat the process, dragging a line down the upright of the stone wall. This too will automatically straighten up the line.





05 Again, drag the handle on the circular line to move the upright into a vertical position. If you've done it right the vertical curvature distortion of the image should now be looking better. You may notice that the correction isn't quite perfect; there may still some slight curvature of the various uprights and horizontals, but it's certainly a great improvement, and the vertical structures are much straighter. You can carry on and try to correct more of the curvature, but be aware of how much warping is being applied to the image to straighten everything out. Click OK when you're done to finalise the correction.



06 The process will have left some empty spaces at the edges of the image, so it will be necessary to crop the image to remove these. This does mean losing some of the original photograph, but the result is much less distorted than it was at the start.

Panorama Stitching

Get the whole of the landscape into one ultra-wide picture



Many digital cameras have a feature known as "Panorama Stitching" or "Panorama Assist" mode. It's there to help with a particular type of photograph, or rather series of photographs, in which successive shots are taken as the camera is panned across a scene. After you take the first shot, the camera shows the edge of that shot superimposed on the monitor so you can match up the position of features in successive shots, producing a long continuous photo showing an entire panoramic scene. You can also shoot your pan sequence manually, especially if you have a tripod handy to keep the camera level. When it's done well the results can be breathtaking, but getting a satisfactory result isn't as easy as it looks.

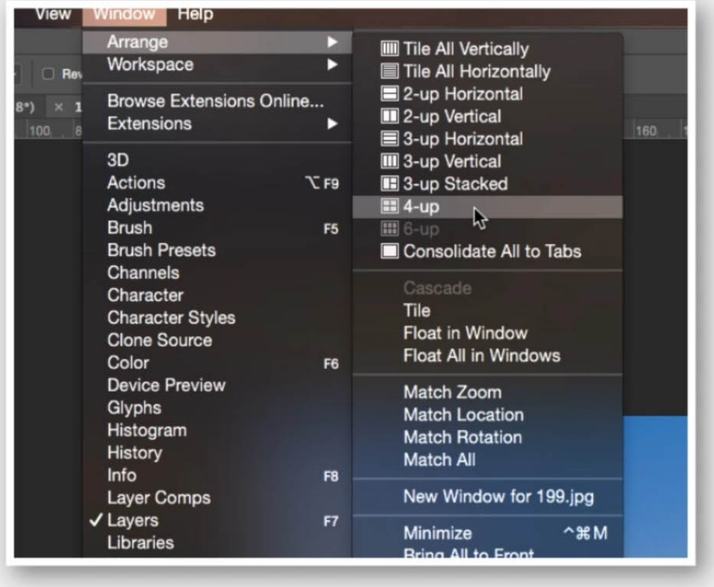
BEFORE

For the purposes of this tutorial we'll use this example of a four-shot sequence taken down on the Devon coast.

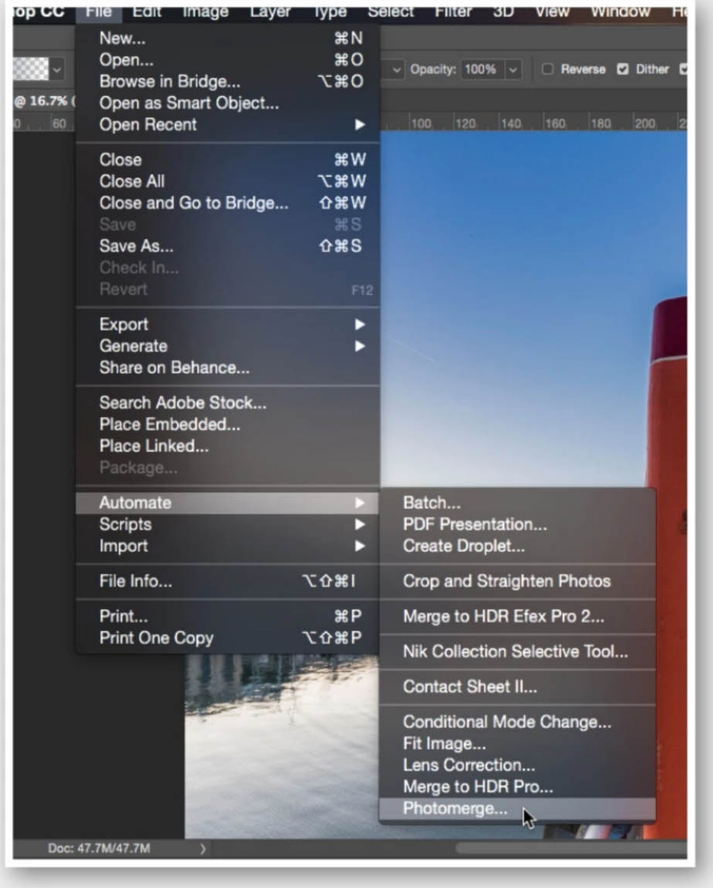


USEFUL TIP

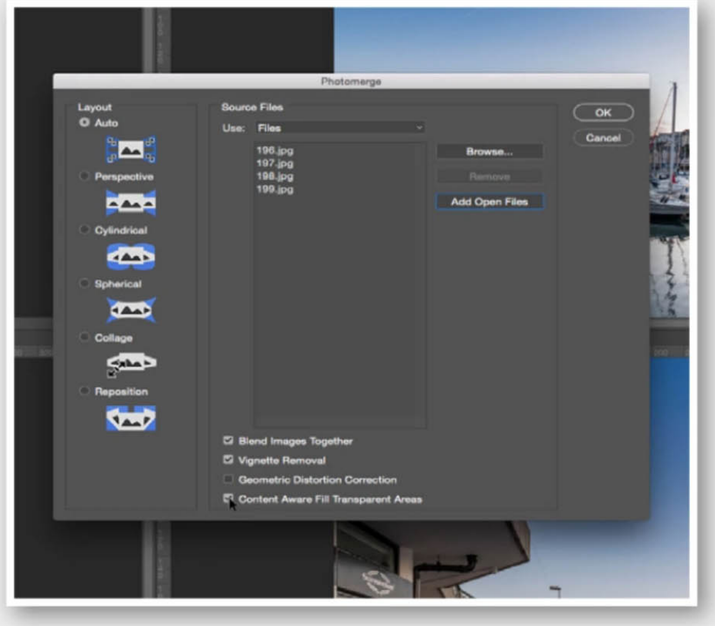
If shooting a panoramic sequence manually, always make sure that you have a large enough overlap between each shot you take. For best results, it is advisable to have about 25% of the previous frame visible each time.



01 Having downloaded our panorama pictures from the camera into a folder on the PC, it's time to fire up Photoshop and stitch them together into a panorama. Locate the files on your hard drive and open all of them in Photoshop. If you go to the Window > Arrange menu you can view them all at once in 4-up Horizontal mode. Not essential, but it gives you a chance to make a last-minute exposure check.



02 In Photoshop you'll find Photomerge in the File menu under Automate, along with several other automatic processes.



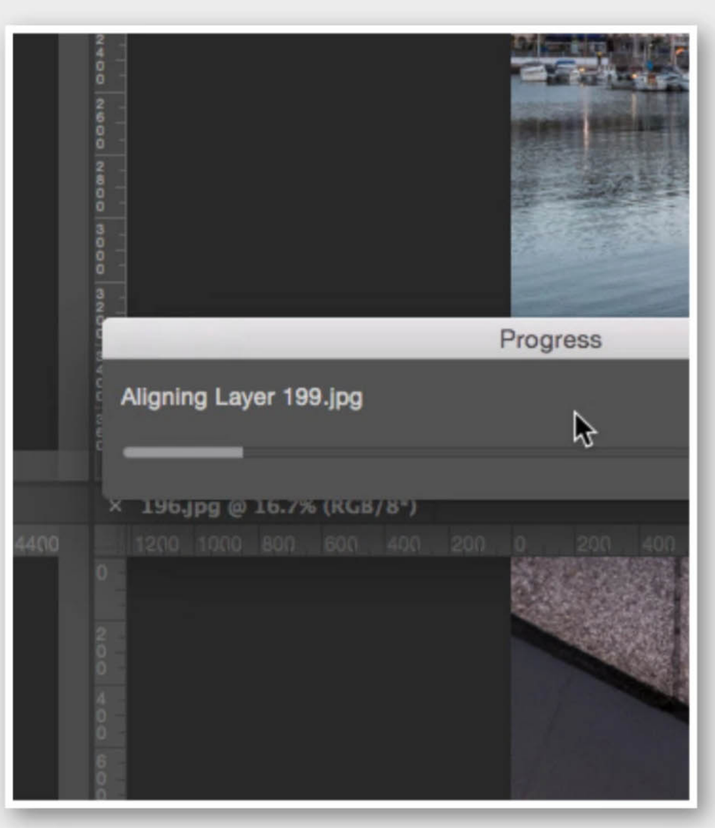
03 The Photomerge window offers a number of options for how to arrange your panoramic shots. For a simple landscape panorama like this the Auto option should work fine. Click on the Add Open Files button to add the three shots to the Photomerge list, and check the top two options and the bottom option to attempt to fill blank areas with the Content Aware tool.



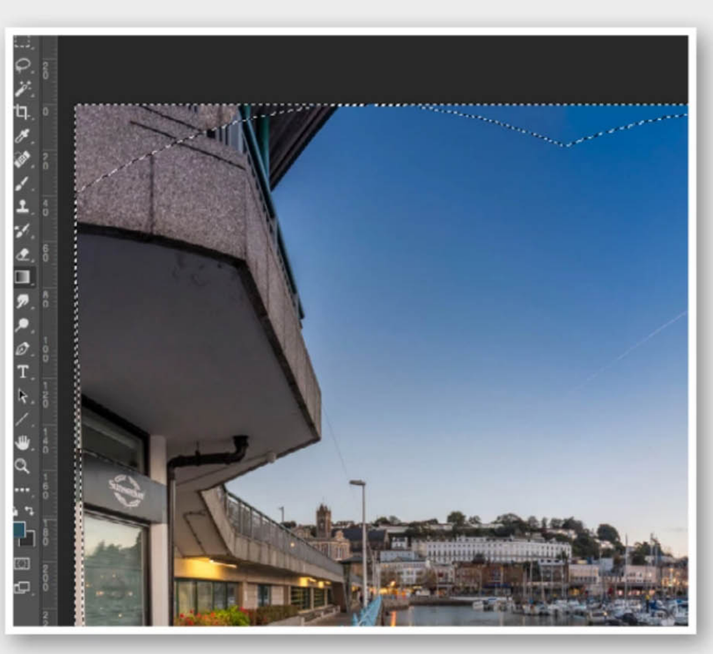








04 Once you click OK the merging process starts, and it is completely automatic. It will take a while to complete, possibly quite a long while if you have a slow computer and/or very large image files.



05 Once the Panorama has been rendered, you'll see that there are areas where the program has had to warp the pictures to correct for perspective. This is where the Content Aware Fill tool will have attempted to add something that looks a bit like sky and fields. Depending on how well the fill works, you can always crop out these areas.





06 You can also use the crop tool to straighten out any slight tilt in your horizon, but hopefully you won't need it. The finished result should look something like this.

Colour Replacement

Swapping one colour for another

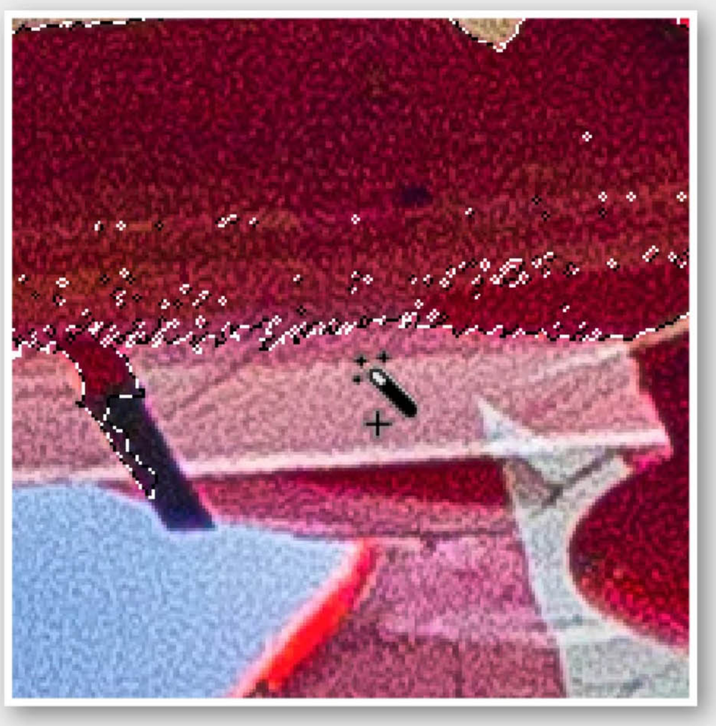
One relatively simple operation that you can do in Photoshop is to replace one colour with another. By using some of the selection tools we looked at earlier, along with the Hue/Saturation controls, we can change the colour of individual objects in our photos, such as replacing the colour of the aircraft fuselage in this shot.

This tutorial content is available for download

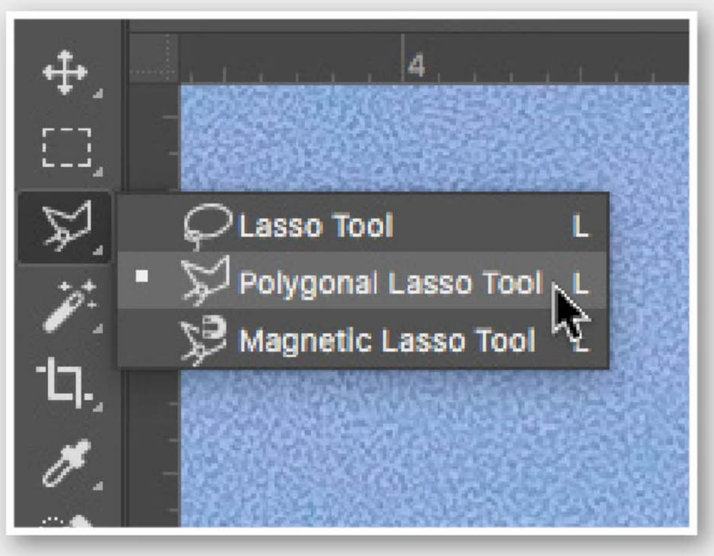




01 Selecting large areas of the same colour is one of those few occasions where the Magic Wand tool is actually useful, so we'll use it as a starting point here. With a tolerance setting of 60 it should be able to pick out the red fuselage without too much trouble.



02 With the Magic Wand, it's best to add a bit at a time. Click on an area that's a mid-tone for the total area you want to select, and you'll find that the wand tool will select an area around it. The size of the selection will depend on the tolerance setting. By holding down the Shift key and carefully clicking on areas around your starting selection, you can add more areas. If the wand selects part of the background, use Cmd+Z to undo that step, and try again more carefully, possibly adjusting the tolerance downwards if it keeps happening.



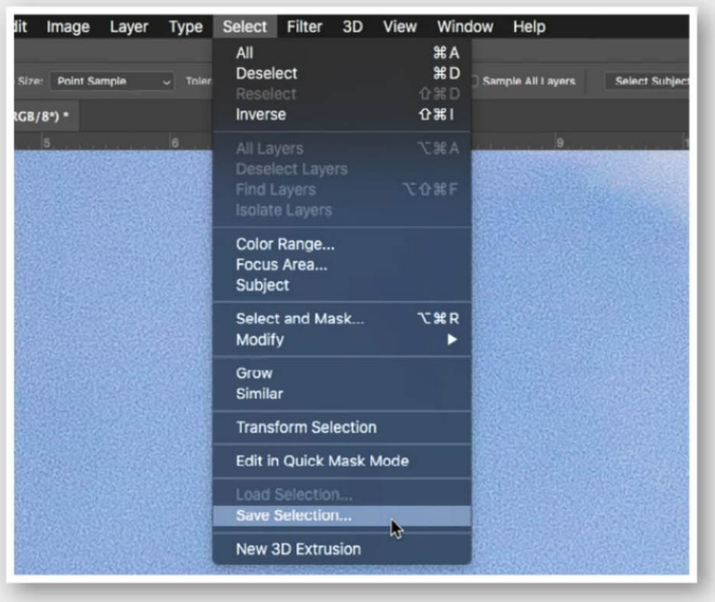
03 When you've reached the limit of what you can usefully select using the Magic Wand tool, you can finish your selection using the Polygonal Lasso tool. By setting the Feather to zero you can produce a sharp-edges selection. Alternatively, use the Selection Brush tool.



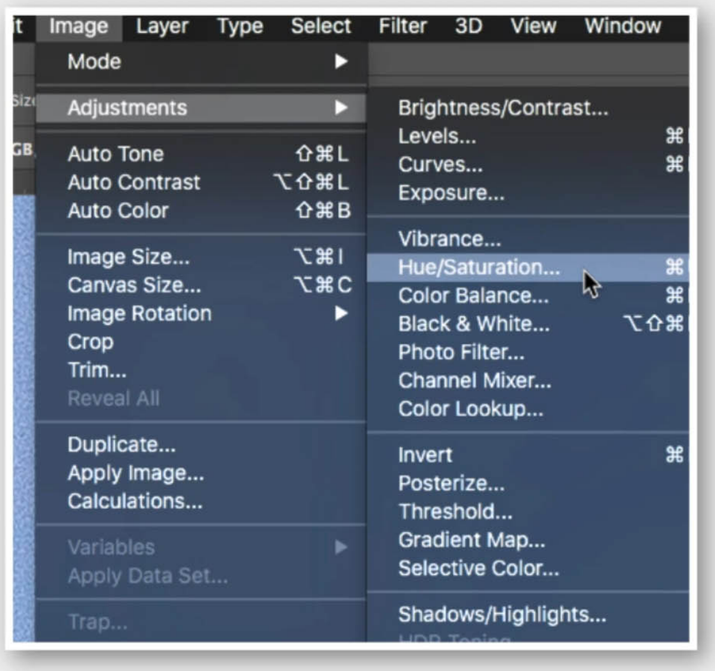
04 Again hold down the Shift key to add more areas to your selection. If you need to remove any areas from the selection, such as the undercarriage, you can subtract by holding down the Alt key and going around it with the Lasso.

AFTER

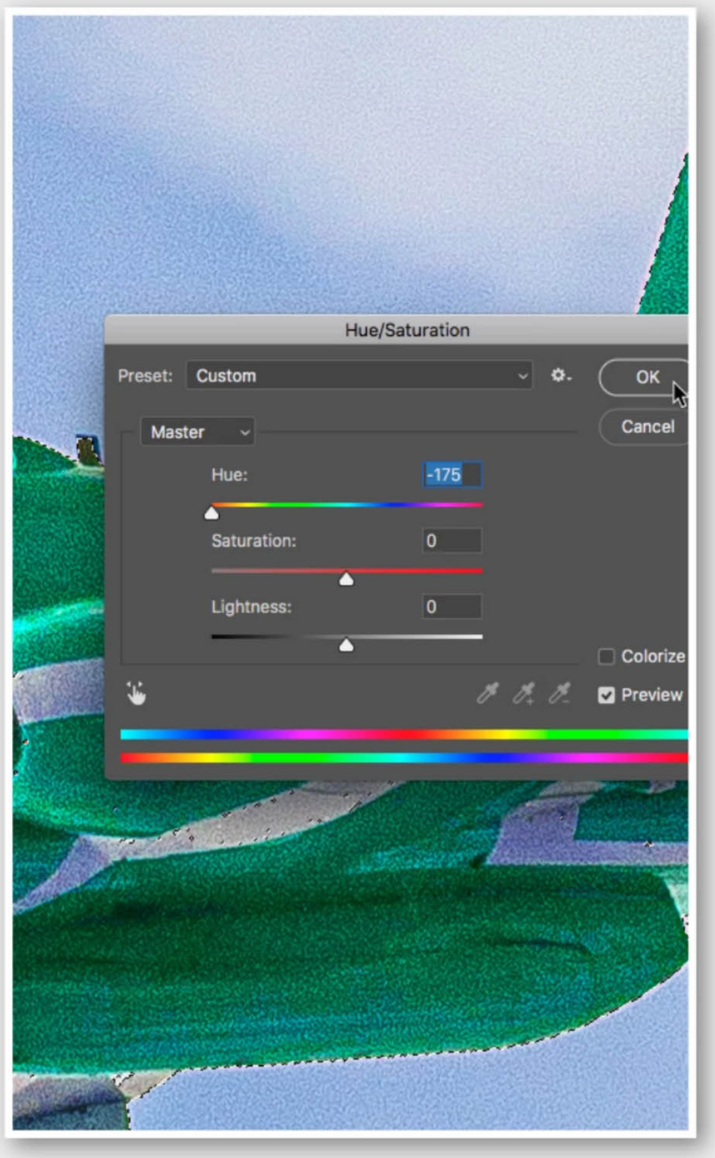




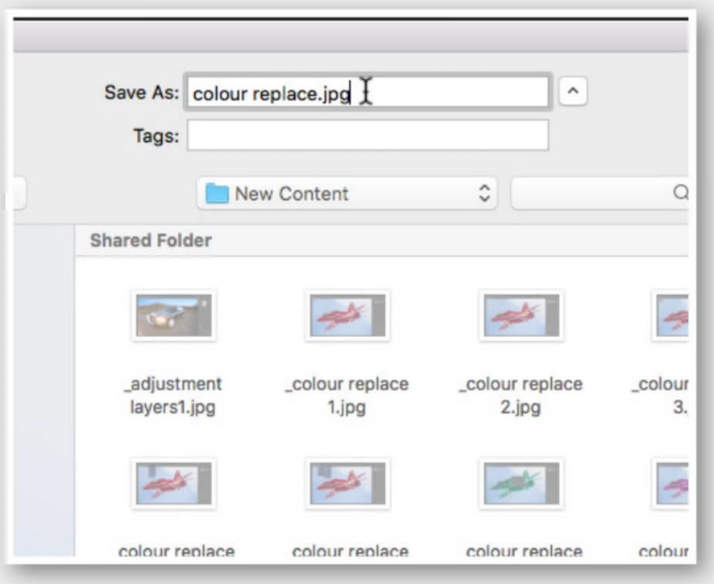
05 When you've selected all the bits you want to repaint, you can save the selection for later use, to save you doing all that work again if you change your mind.



06 Although there are several filters we could use at this point, the most versatile way to change the colour of the selected area is the Hue/Saturation/Lightness option. This is common to most editing programs. In Elements you'll find it in the Enhance menu.



07 You have three options under the Hue/Saturation setting. Leave the Lightness slider in the middle position to preserve the overall brightness of the object, but you can experiment by moving the Saturation and Hue sliders around. As you move the Hue slider, the colour will start to shift through the spectrum of colours, or you can produce subtle colour changes with lower saturation settings, or say to hell with subtlety and go for broke with full saturation.



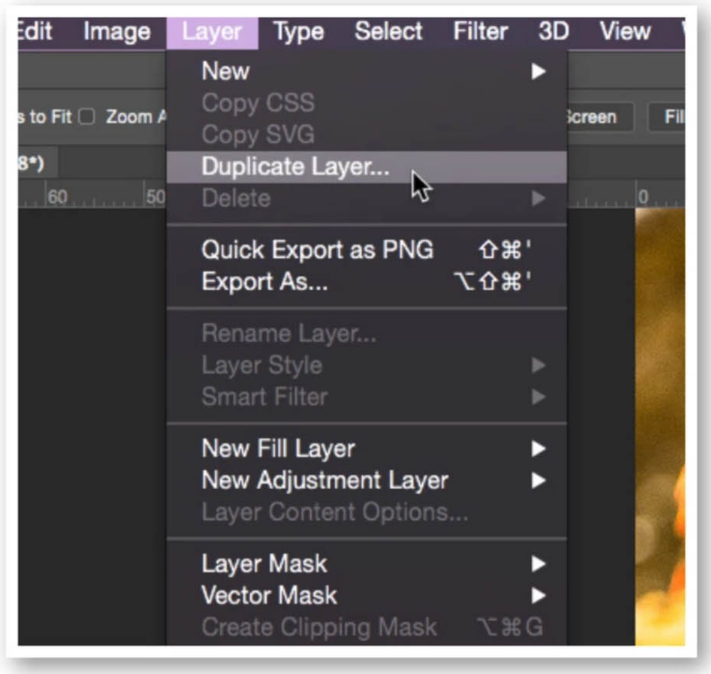
08 When you're happy with the result, or when your eyes start bleeding, you can clear the selection by using the keyboard shortcut Cmd+D, and then save the result. When you save the final image as a .PSD file in Photoshop or Elements, the selections are saved as well, embedded in the file.

Soft Focus Technique

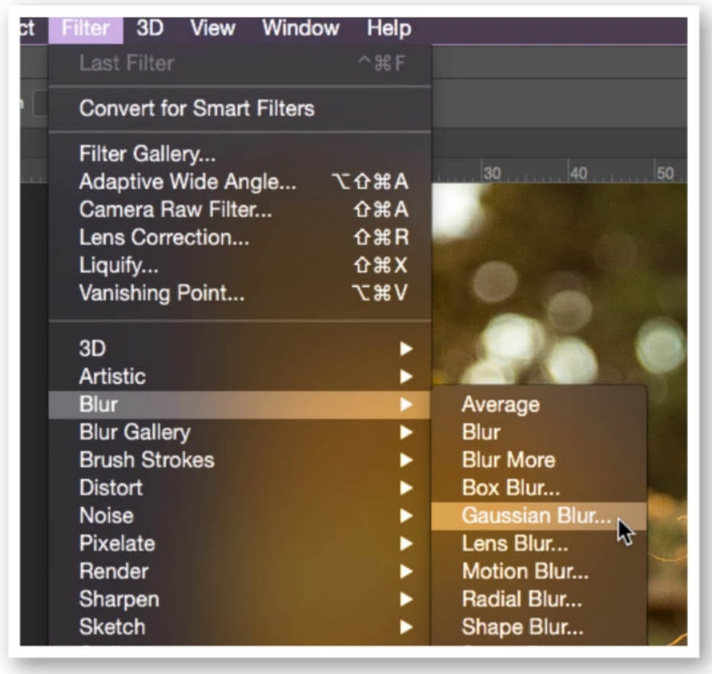
Adding a soft focus effect gives your portraits a romantic feel

Soft focus is an effect used widely in television and in the movies, as well as in many commercial and advertising photographs, for producing a dreamy romantic look. It's also a big favourite with wedding photographers. In traditional photography the effect is achieved with a special filter fitted over the camera lens. Many digital cameras now include soft focus as a digital effect, but we can produce the same results in Photoshop with ease using Gaussian blur and layer transparency.

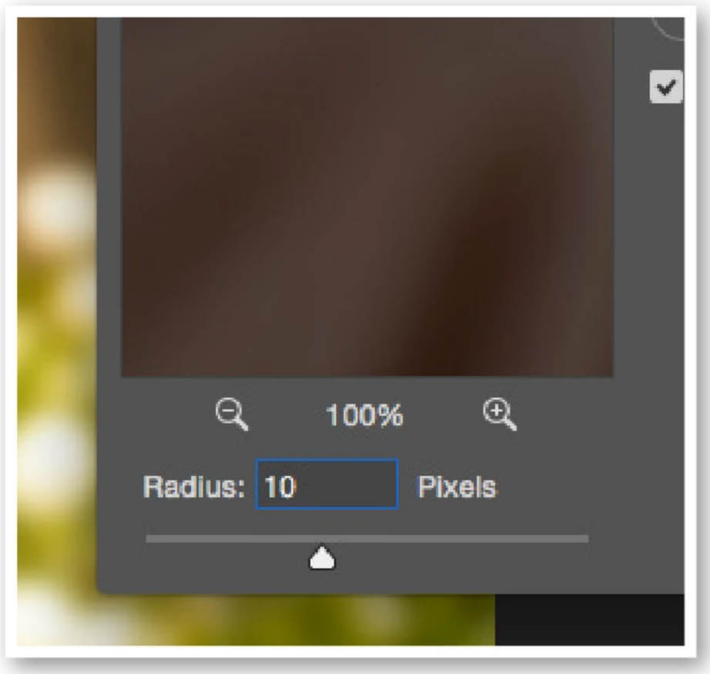




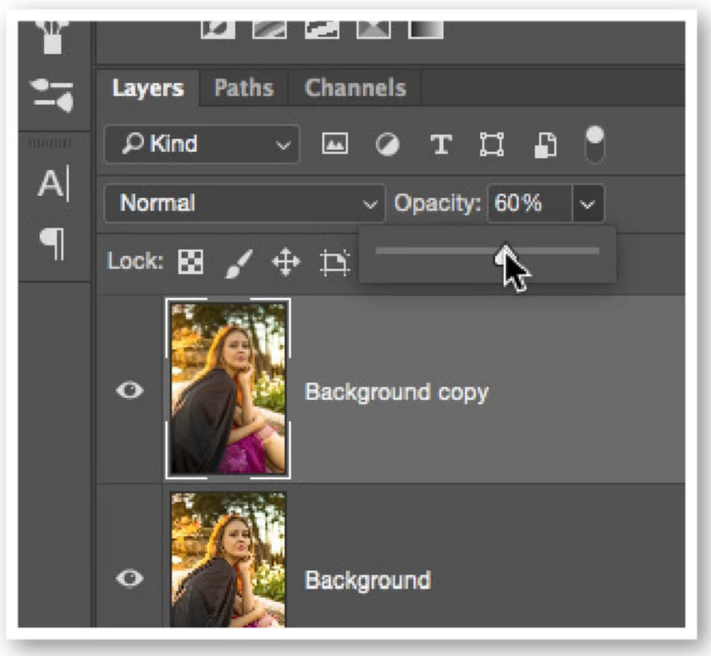
01 The first step is to turn the picture into two identical layers. To do this, go to the Layer menu, and select Duplicate Layer. Don't worry about naming this layer, it's the only one we're going to make.



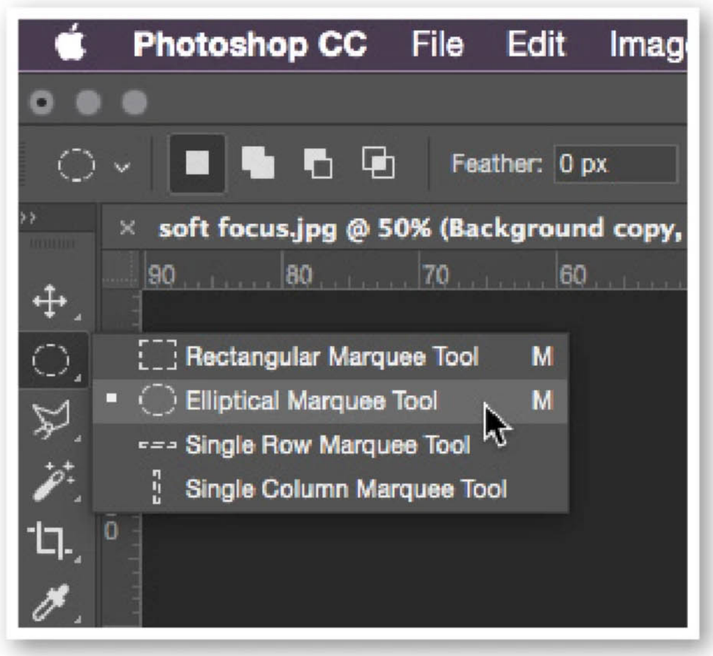
02 Next, go to the Filter menu, move down to Blur, and select Gaussian Blur. This is a special type of blurring that can be adjusted to produce certain effects.



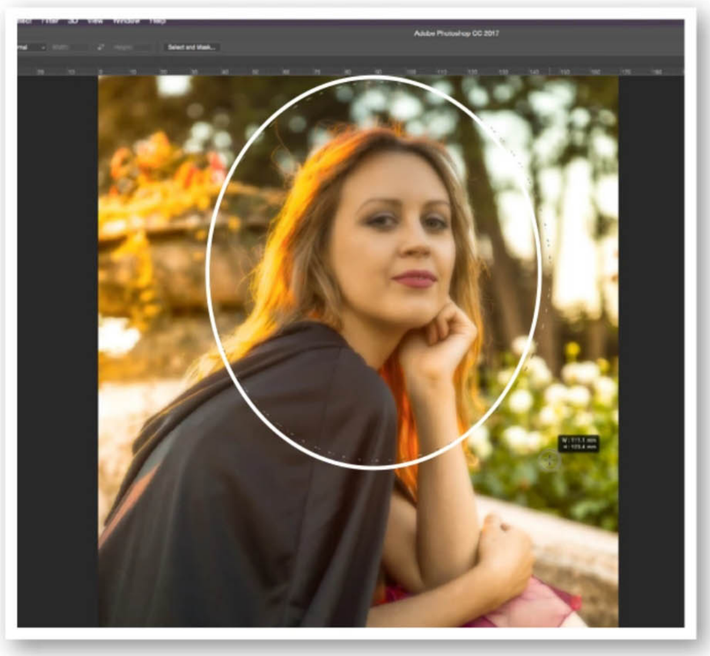
03 We don't need very much blurring to produce the soft-focus effect, so for this portrait shot, set a radius of 10 pixels. You may need a smaller radius for smaller images, but keep it subtle.



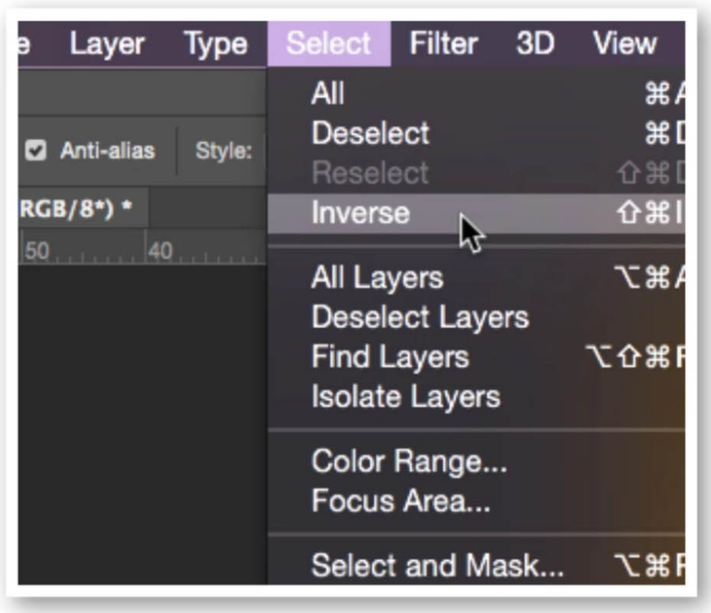
04 In the Layers palette, set the transparency of the blurred layer to around 60 percent. This lets the still-sharp lower layer to show through, mitigating the effects of the Gaussian blur. If you feel it is too blurred, you can drop the Opacity down to about 40% if you like.



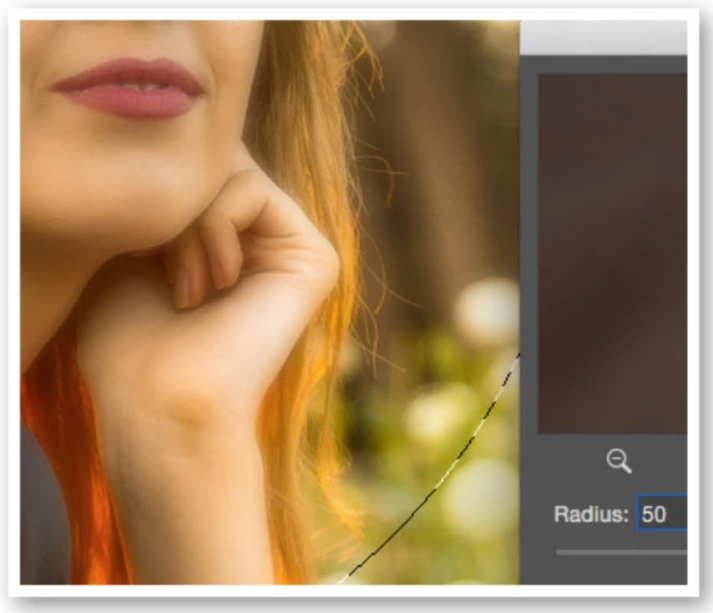
05 We can further enhance the look of the picture by adding an elliptical vignette of further blurring around the subject. This is a technique that portrait photographers have been using almost since the invention of photography. First, select the Elliptical Marquee tool.



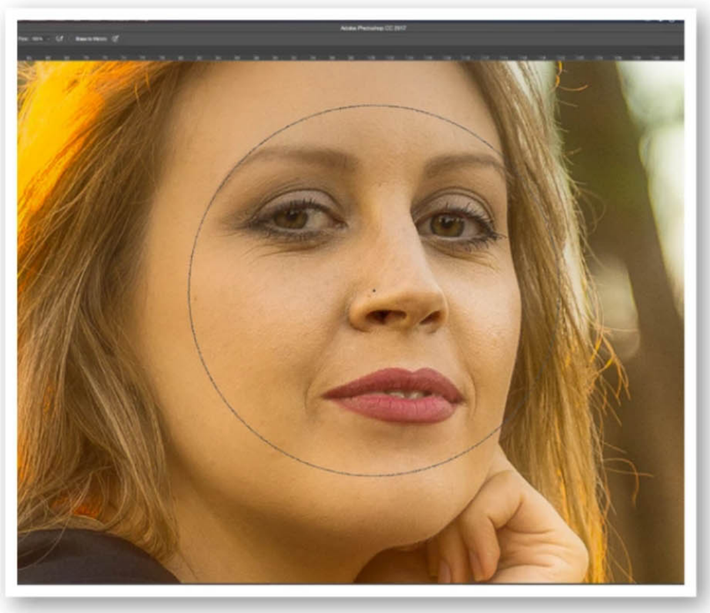
06 Drag an elliptical marquee selection around the portrait subject. This may take a few tries to get right, so use Cmd+D to de-select if you get it wrong. When you're happy with it, go to the Select menu and click on Feather. Set a radius of about 40-50 pixels.



07 Next, select Inverse from the Select menu to change the selection so that everything outside the ellipse is selected.



08 Now add a Lens blur filter to the selection, giving it a slightly bigger radius than before; around 50 pixels should do the job.



09 One final option is to use a soft eraser and erase areas of the blurred layer around your subject's face to keep it sharp if you prefer.

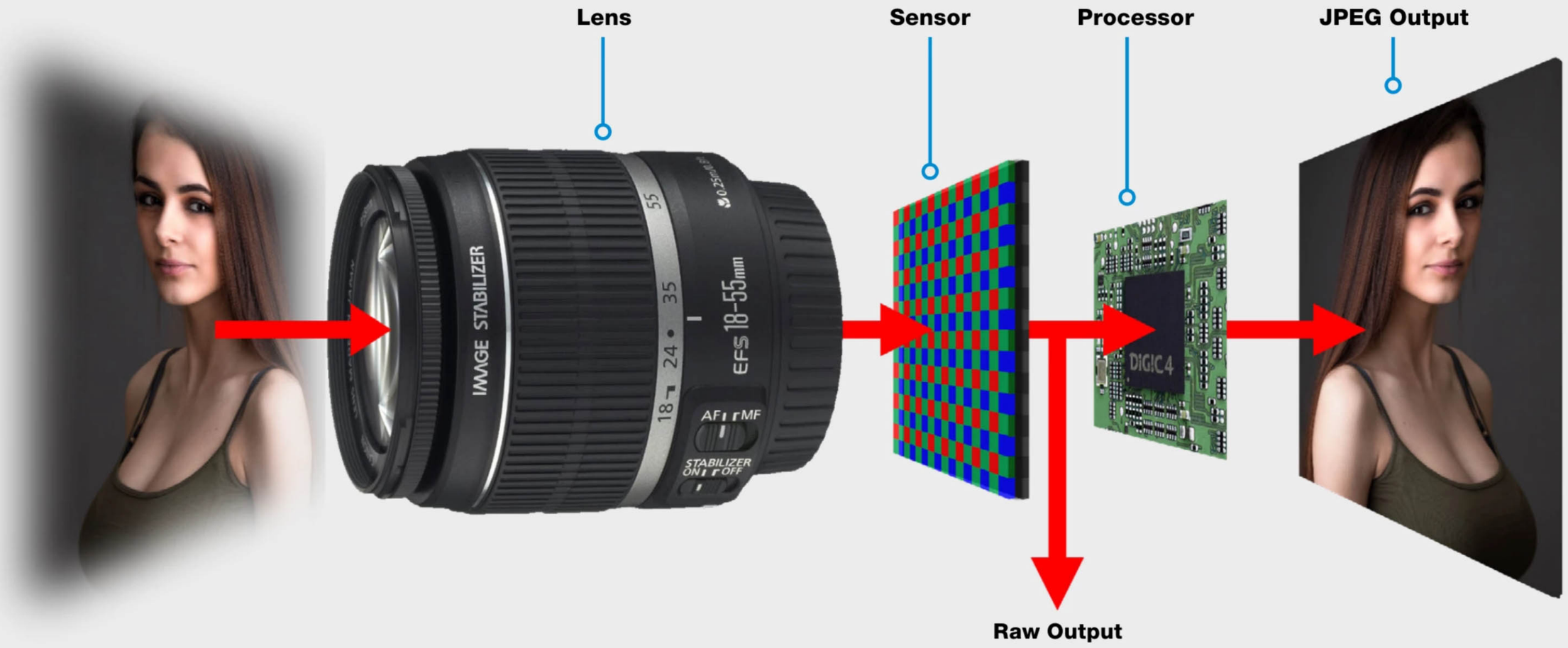
Processing Raw Files

For the best possible quality, shoot in Raw mode



All digital SLRs and Compact System Cameras, and most of the better compact cameras, have a shooting option called Raw mode. You'll usually find it in the menu as an option under image quality. Raw mode offers greatly improved image quality over the usual JPEG image file format, and is recommended for all serious photographers. Let's take a closer look at Raw mode, find out how it works and see how it can help you produce better photographs.

What is Raw Mode?

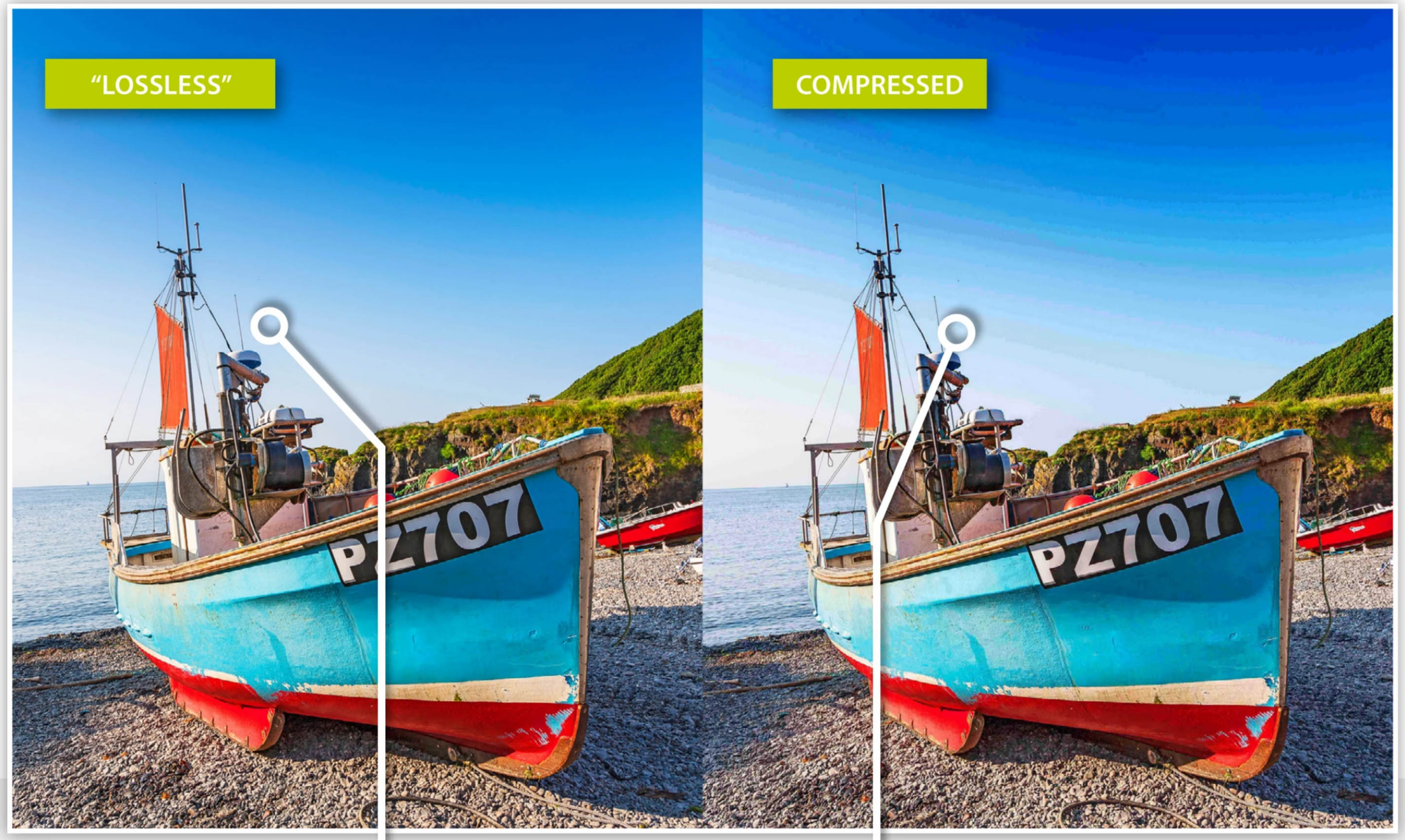


Raw mode is a special image recording option that is available on digital SLRs, Compact System Cameras, and other high-quality digital cameras. If your camera has this option, you have access to much higher image quality than the standard JPEG file format.

Essentially, Raw mode is just what it sounds like. It's the raw data pretty much straight from the camera's sensor. In a digital camera the photographic image is, as I'm sure you're aware, captured by an electronic image sensor. This sensor has millions of tiny photocells that produce a charge when they are exposed to light; the brighter the light, the higher the charge. Digital camera sensors don't record the colour of the light hitting them, just the brightness, so a special mosaic of coloured filters is placed in front of the sensor, called a Bayer filter.

Naturally, the image generated by the sensor and filter wouldn't make much sense to the unaided eye, so the signal from the sensor feeds into the camera's image processor, a combination of computer electronics and software which turns the brightness data from the sensor, adjusted for the colours in the Bayer filter, into a full colour digital image that you can view and print.

Part of that process includes reducing the bit-depth of the basic image data (the amount of 1s and 0s used by a computer to describe each pixel), usually from 36-bit (12 bits per channel)







USEFUL TIP

Modern cameras all come supplied with Raw processing software, although if you have Photoshop, it has Adobe Camera Raw built in as part of the application. Try to get used to always shooting in Raw mode on your camera. The quality and processing possibilities are much greater than JPEG files. These days, even some camera phones have the ability to shoot in Raw format. They are larger file sizes than JPEGs but the benefits become clear once you start to understand how much more processing ability you have. Your photos will see a marked improvement when you use Raw.

or even 48-bit (16 bits per channel) to 24-bit (8 bits per channel), which makes a smaller and more easily processed file, but loses some colour depth because of the smaller palette that can be represented by that many bits. Other adjustments to the colour balance, such as unusual white balance settings, can also reduce image quality, as will heavy noise reduction.

In order to save space on the memory card, produce faster transfers and make it easier to display and print the photograph on a computer, the image is usually converted to a compressed JPEG file. Unfortunately JPEG compression also reduces the image quality, and can introduce artefacts into some areas of the image.

The main advantage of Raw shooting, apart from the improvement in overall image quality, is that it bypasses the in-camera image processing, such as white balance, saturation, sharpness etc. This sounds illogical, but it's not really. The processing that takes place in the camera is preset before the shot is taken, and irreversible once the image has been converted to a JPEG file. By shooting in Raw mode, you can make the processing adjustments after the shot has been taken, and if you need to change them you can do so as long as you have the original Raw file.

The downside to Raw file recording is of course that the saved files are much larger, so they take a lot longer to save to the memory card, and you can fit fewer of them on there. For a typical 16MP DSLR, a high quality JPEG file will be around 8MB, while a Raw file will be around 25MB, over three times the size.

Many of the more recent DSLRs have the ability to record Raw and JPEG image files simultaneously. This has the advantage of the convenience of JPEG with the versatility and quality of Raw, but takes up even more space on your memory card. Fortunately the price of very large memory cards is falling almost daily, so this needn't be much of a problem.

ACR Interface

Adobe Camera Raw isn't as difficult as it looks

Photoshop comes with Adobe Camera Raw, usually shortened to ACR. It offers a range of processing options that enable you to get the best out of your photos, including exposure adjustment, sharpening, noise reduction, colour correction and automatic correction for lens distortion. It is regularly updated to maintain compatibility with all the latest cameras and lenses. Like the rest of Photoshop, it's easy to get started. Let's take a look at the interface and see what it has to offer.

Toolbar

This holds all the main selectable tools, most of which are similar to tools in the main Photoshop interface, including Zoom, Hand, Crop, Straighten, Spot Removal, Red Eye Removal, and a newly-added feature that can add a graduated filter to your picture.

Control Palette

This is the main dialog palette, which contains the controls for each tabbed section. Most of the controls are sliders, and you can see the results of each adjustment both in real-time on the histogram and in the main image window.

Image Window

This is the main window displaying the image you're currently working on. All changes that you make during Raw editing will be visible here. You can zoom into the image using the magnification controls at the bottom left, or use the usual CTRL + and CTRL - shortcuts. You can see what effect your editing has had by checking and unchecking the preview option at the top right.

Output Options

At the bottom of the screen you'll find the controls for when you've finished your editing. If you click on the blue link you'll see a range of output options, since Adobe Camera Raw can process your pictures in a range of sizes. You can also save your edits back into the Raw file to keep them for later.



Control Tabs

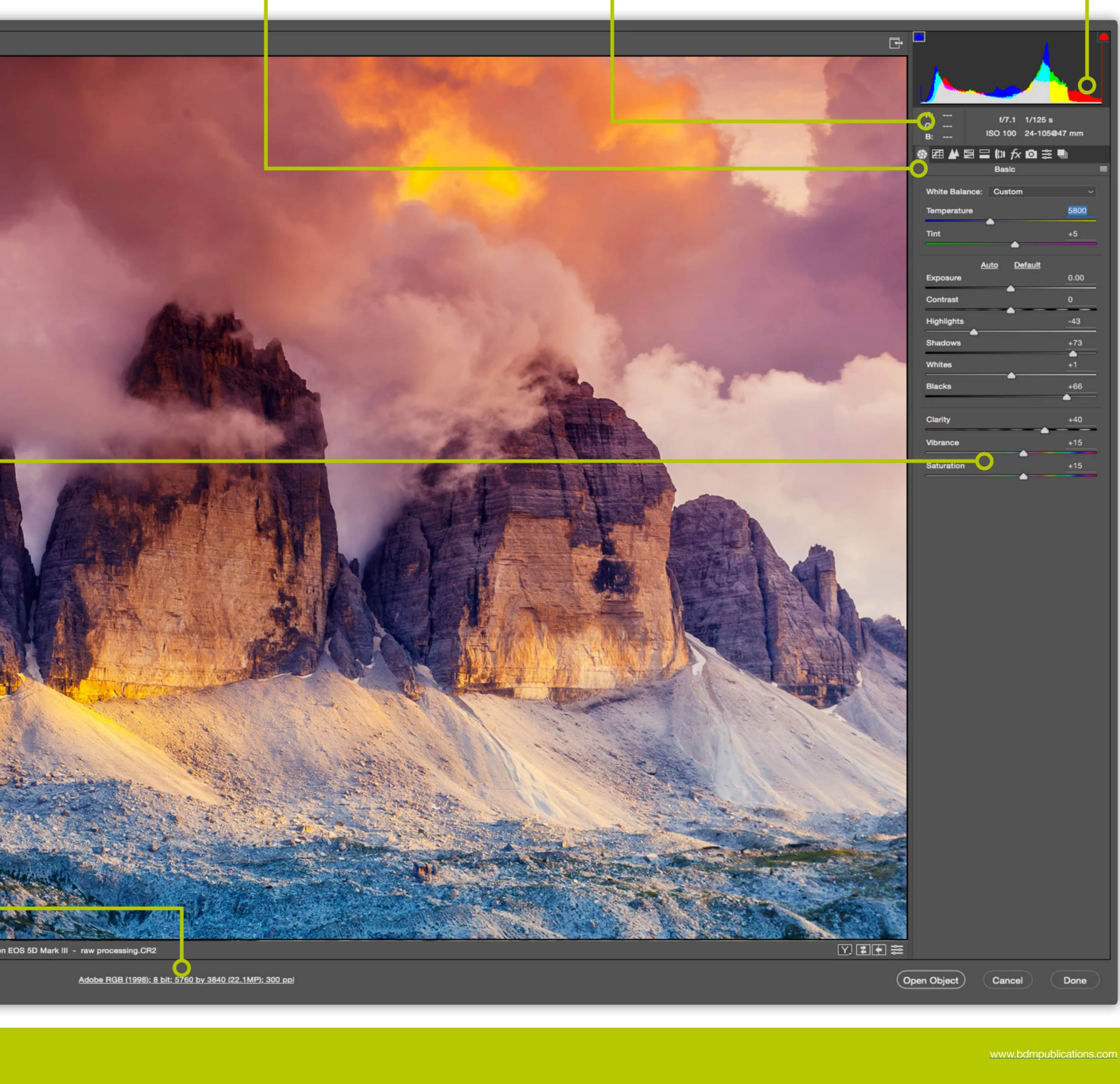
Camera Raw breaks the workflow down into discrete sections, each with its own tabbed palette, and you can switch between them by clicking here. The tabs are, from left to right: Basic, Tone Curve, Detail, HSL/Greyscale, Split Toning, Lens Correction, Effects, Camera Calibration, Presets and Snapshots.

Information Palette

The left side of this panel shows the RGB colour values at the cursor position. The larger right side of the area displays the exposure information for the image, including the aperture, shutter speed, ISO setting and focal length of the lens.

Histogram

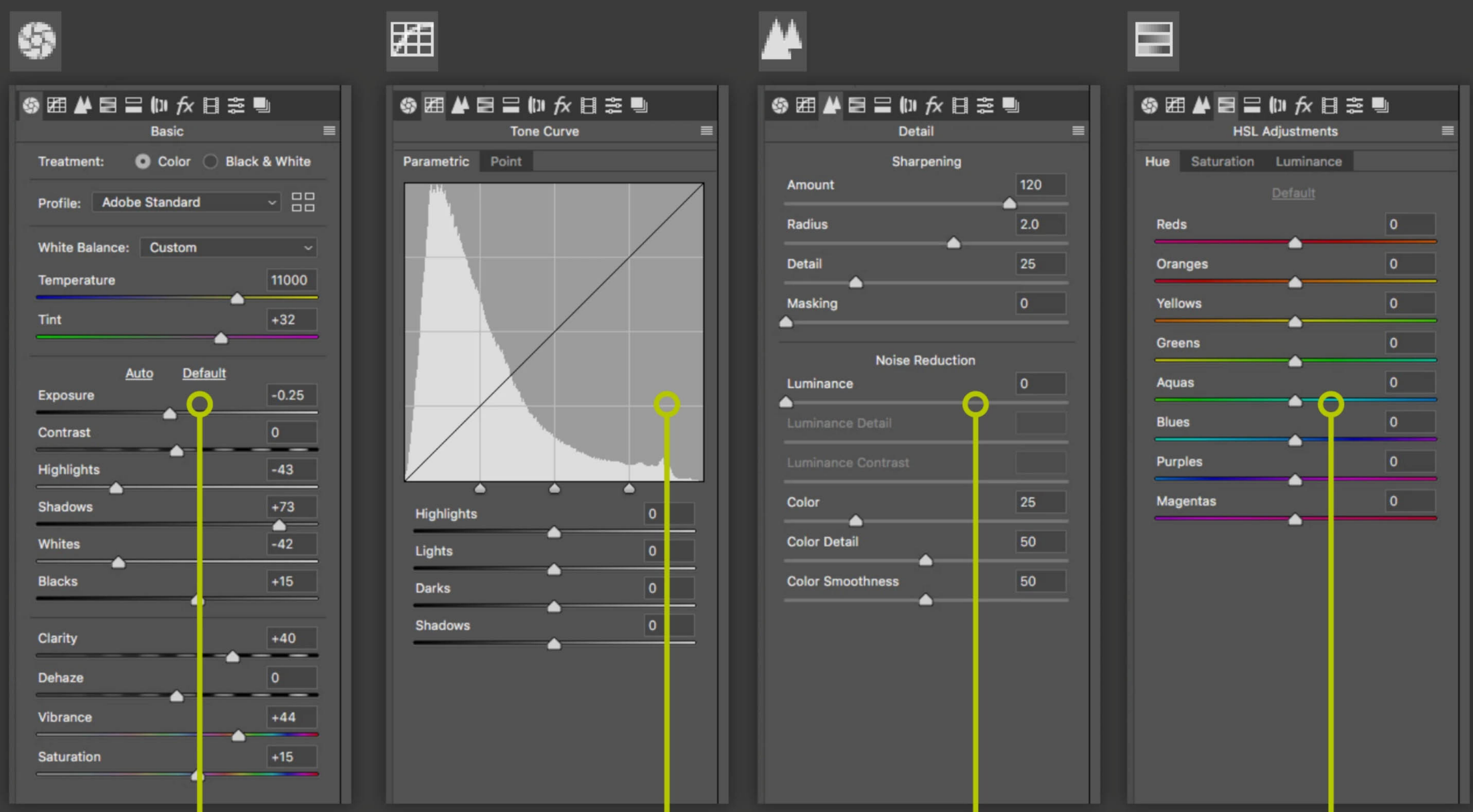
The Histogram shows you the number of pixels of each tone in your image and changes as you make exposure and colour balance adjustments. The graph represents the colour in digital form, with levels from 0 to 255, with the darkest on the left and the brightest on the right. The white area represents the combined colours, but you can also look at each colour channel individually.



ACR Menus

Adobe Camera Raw has a powerful set of features all nested within a series of easily accessible control tabs.

The main interface of Adobe Camera Raw is comprised of ten menus, each with a series of control sliders and some additional menu tabs to access further features. Although you will no doubt spend most of your time working in the Basic panel, when used in conjunction with adjustments from the other control panels, you will be able to enhance your images beyond what you thought possible in no time at all.



Basic

The Basic panel in ACR is probably the one you will spend the most time in and also making the most important global image adjustments. Apart from choosing the colour treatment, you can adjust Exposure, Contrast, Highlights and Shadows as well as Clarity, Vibrance, and Saturation. More recent additions include being able to apply a colour profile from a collection of presets and the Dehaze option to reduce haze in your photos.

Tone Curve

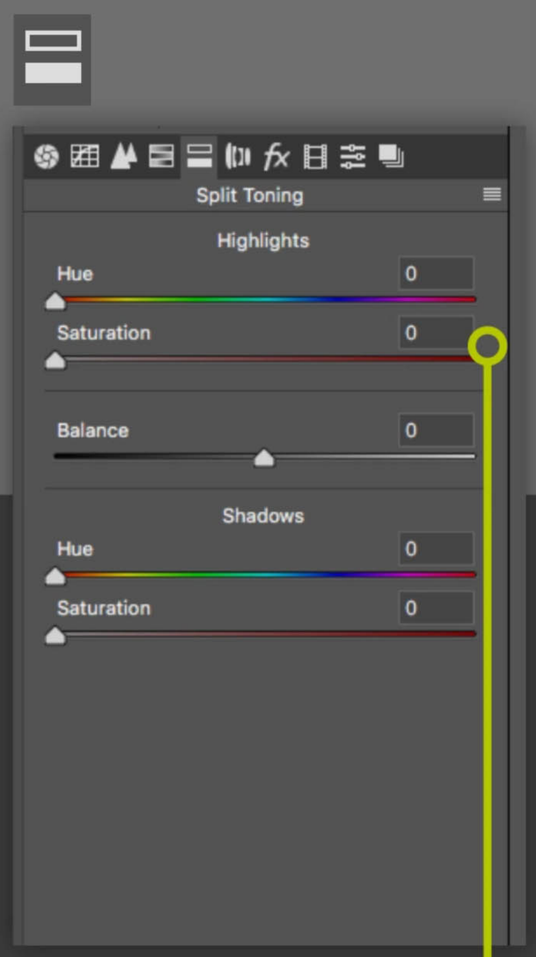
The Tone Curve options in ACR behave very much like the Levels and Curves Adjustments you can make in Photoshop itself. The basic Parametric adjustments allow you to use sliders to individually adjust Highlights, Lights, Darks and Shadows. The Point Curve adjustment allows you to place control points and create your own custom curves by moving the points around to your own personal preference.

Detail

The Detail section concerns itself with how you handle both Sharpening and Noise Reduction in your Raw files. Sharpening is basically an increase in the contrast of the brightest and darkest edges in your image. Too high a value and you may suffer image degradation. The Detail and Masking sliders can effectively suppress the halo effects of over sharpening. The Noise Reduction settings help you reduce the amount of image noise and colour artefacts seen in high ISO photos.

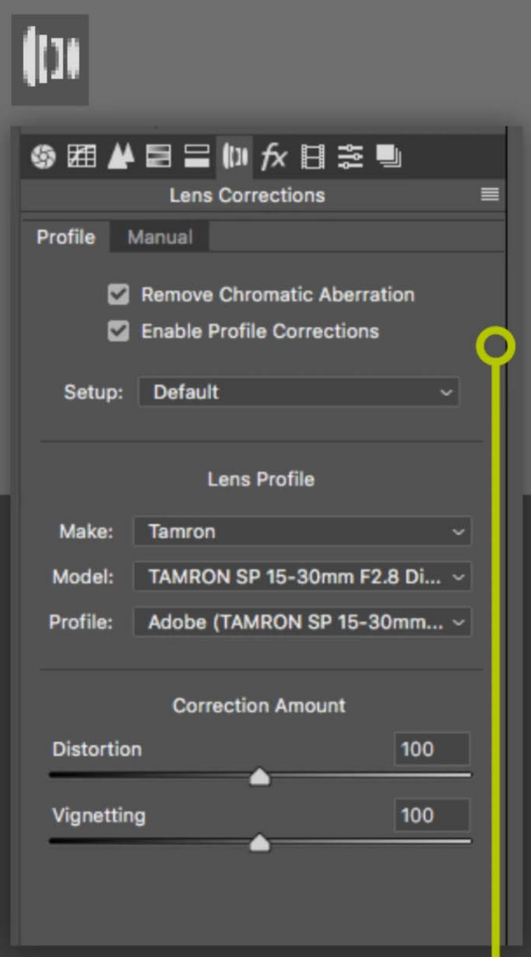
HSL

The HSL panel, which is an acronym for Hue, Saturation and Luminance, is where you can get to grips with the colours in your images and how you can affect them. The first panel is Hue, which lets you alter a specific range of colour values such as reds for example; then alter their hue to make them more magenta or make orange more yellow or blue more purple. The other panels allow the adjustment of their colour intensity and brightness.



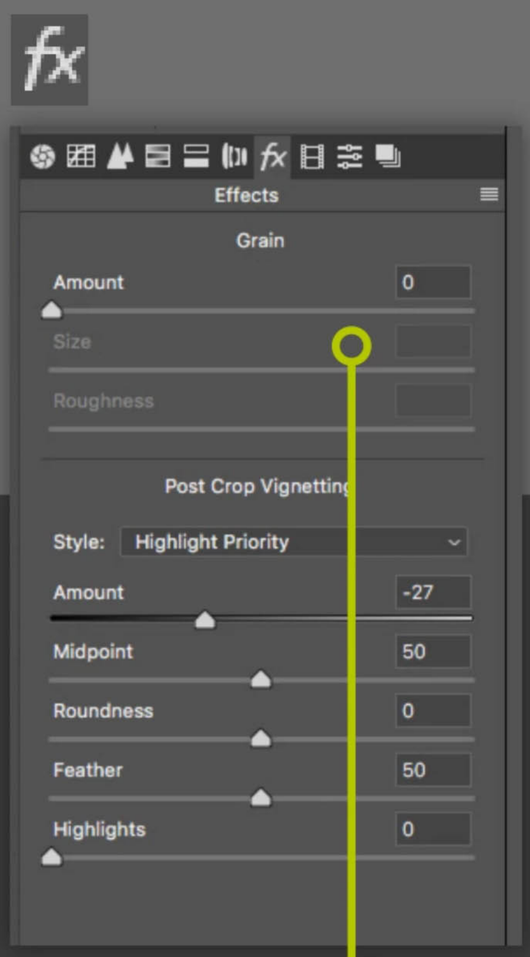
Split Toning

Split Toning is a particular effect you can apply to your images in order to control how much of a certain colour appears in the highlights or shadows of your images. There are Hue and Saturation sliders for both Highlights and Shadows. Set a Hue value and then increase its Saturation amount. When you do so, that chosen colour will start to dominate the brightest and darkest areas of the shot. The Balance slider governs which is most dominant.



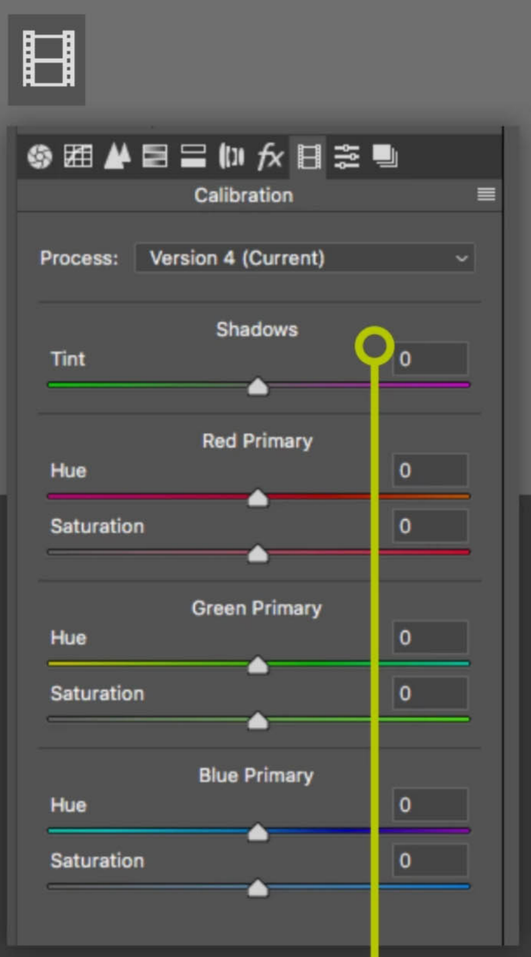
Lens Corrections

Throughout its life Adobe Camera Raw has been updated at regular intervals. Each new update brings the latest Lens Correction profiles that can automatically assess your photo and determine what lens was used on the camera that took the shot. Once it knows what lens was used, it can apply a set of corrections that can eliminate lens aberrations and distortions specific to that lens. It does also allow for manual adjusts as well.



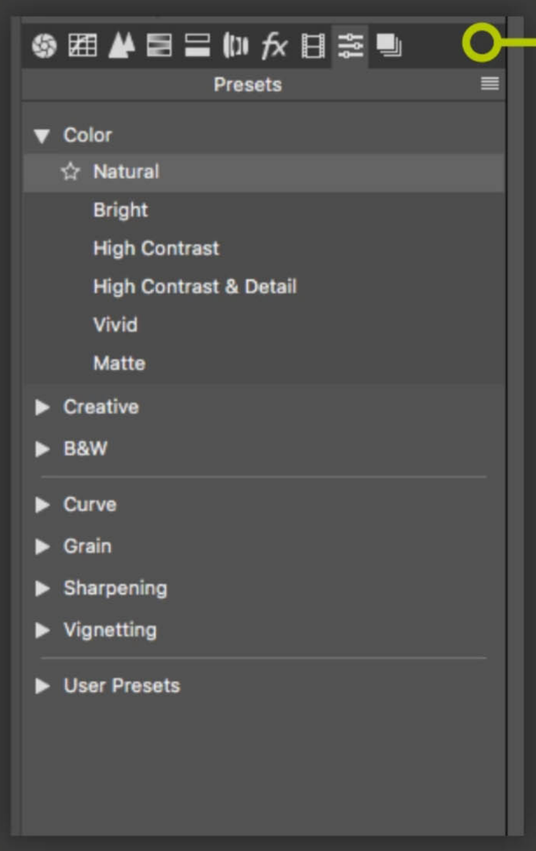
Effects

The Effects panel allows you to add Grain to your image, with three values to control its impact. You can specify the Amount, the Size of the grains and the Roughness of the image grain you apply. The other effect is Post Crop Vignetting which allows you to darken the outer edges of the photo before and after you've cropped the photo. You can control the Amount, Midpoint, Roundness, Feather and Highlights.



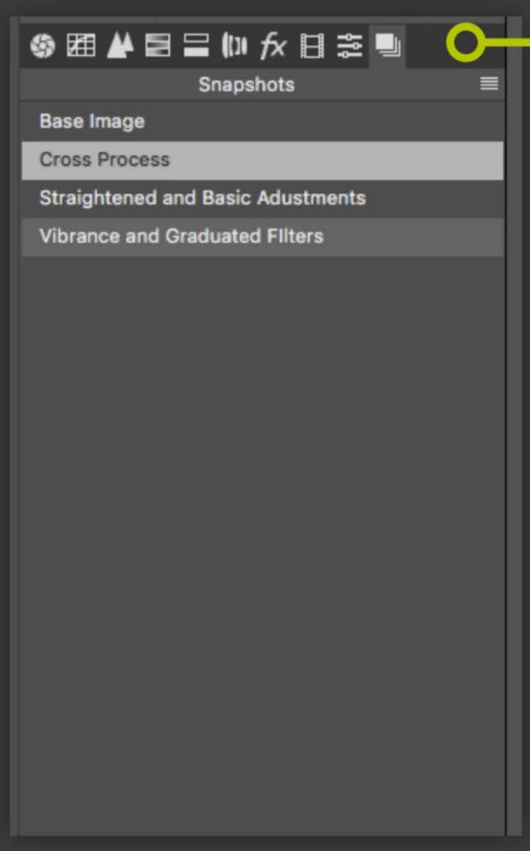
Calibration

Found in both Adobe Camera RAW and Lightroom is a module that is more powerful than it may look at first glance. Mainly used as a calibration for your camera it can be a brilliantly creative tool. You could think of it as a more refined Hue and Saturation adjustment tool. You can alter the Tint value found in the shadows of your image, as well as adjust the general use of Hue and Saturation in the Red Green and Blue channels of your image for much finer control.



Presets

This is another recent addition to Adobe Camera Raw. Normally, you can save a preferred method of image adjustment as a User Preset and that would have been that. Now, there are also a number of new Presets added that mean you can apply one-click adjustments to your photos. These presets range from High Contrast colour adjustments to Cross Process effects and a number of Creative and Black and White options too.



Snapshots

Here is another more recent feature that you normally find on another Adobe product, Lightroom. Snapshots, as the name implies, allows you to create a snapshot of a particular part of the adjustment process. If you have a set of basic edits you like, you can Snapshot it. If you then make a series of edits that you don't like, you can always go back to a previous state by clicking on one of the Snapshots you stored whilst you were working.

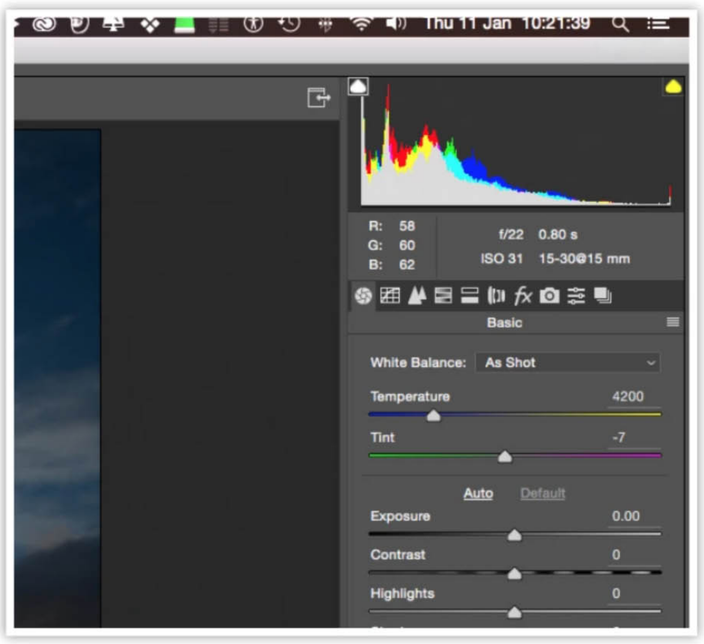
ACR Workflow

Getting the most out of your Raw files

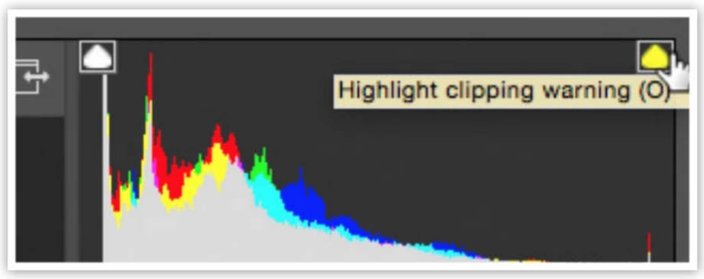
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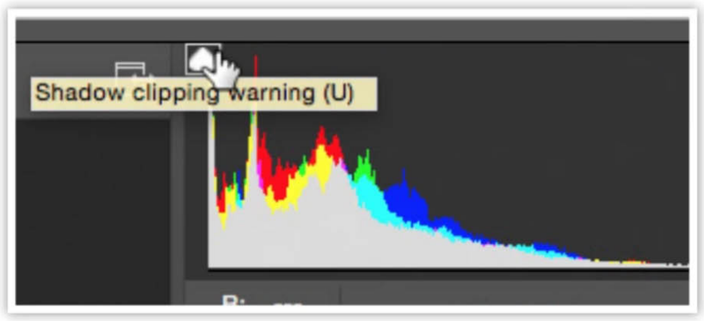
Ask any five professional photographers about the process they use to create their pictures, you'll get five different answers. The amount of processing and adjustment used will vary, depending on the job at hand and the type of final image required, as well as the type of camera used to take the photo and the use to which the photo will be put. There are certain operations that will be common to most photos that you'll want to process, so we'll take a look at a common general purpose workflow that will be suitable for most types of photo. We'll be using a coastal sunrise photo of Paignton beach shot with a Nikon D810 and a Tamron 15-30mm lens.

01 If you look at the histogram at the top right of the screen you'll notice that the line at the right (brightest) end of the graph is relatively flat compared to the peaks on the left. Ideally the graph should fill the area between the lightest and darkest ends of the range, so we need to slightly boost the lighter end of the graph without causing over-exposure.

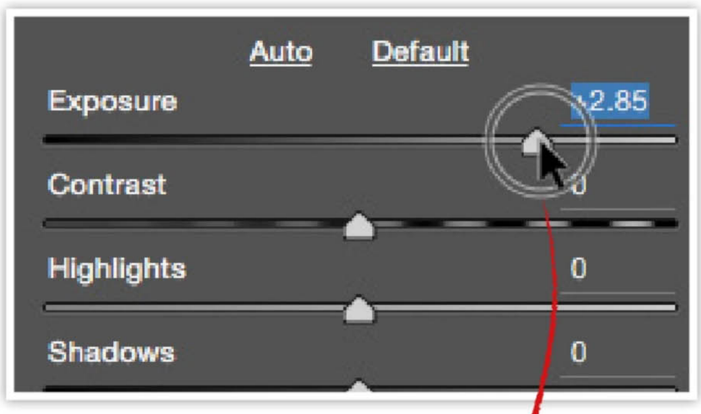


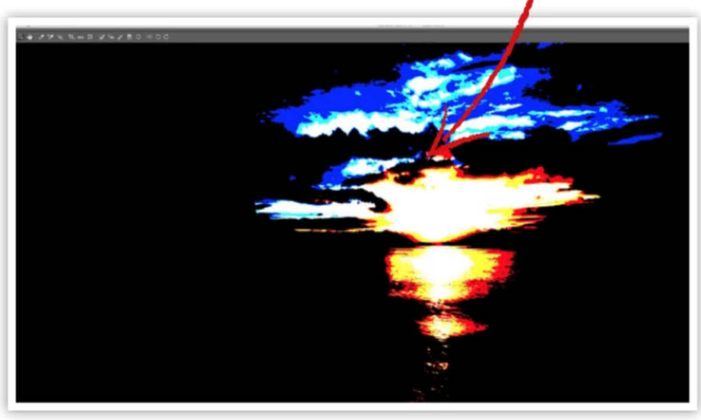
02 To ensure that we don't lose too much detail to highlight clipping, click on the arrow in the top right corner of the histogram window. This turns on the highlight clipping warning. Any over-exposed areas will turn bright red in the image window. Clicking on the left button turns on the shadow clipping warning.

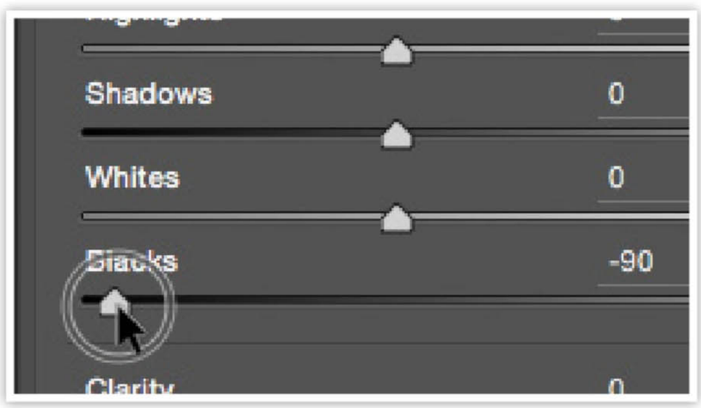


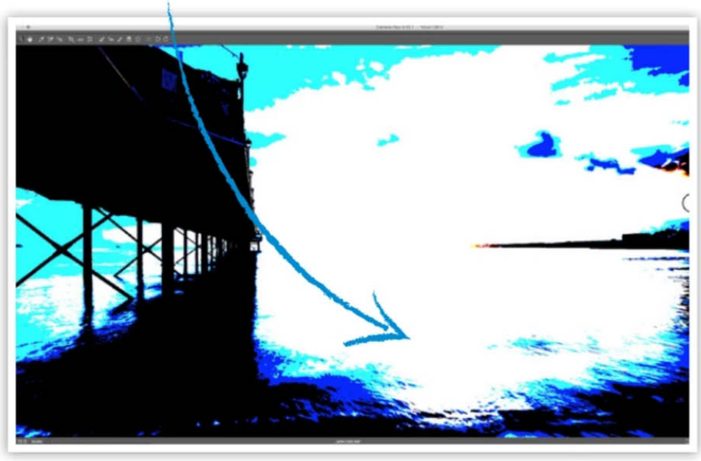


03 While holding down the Alt key (Option on Mac), move the exposure slider to the right. With the key held down, all you'll see will be the over-exposed areas. You can do this with any of the first six sliders, and it's a good way to make adjustments without going too far.

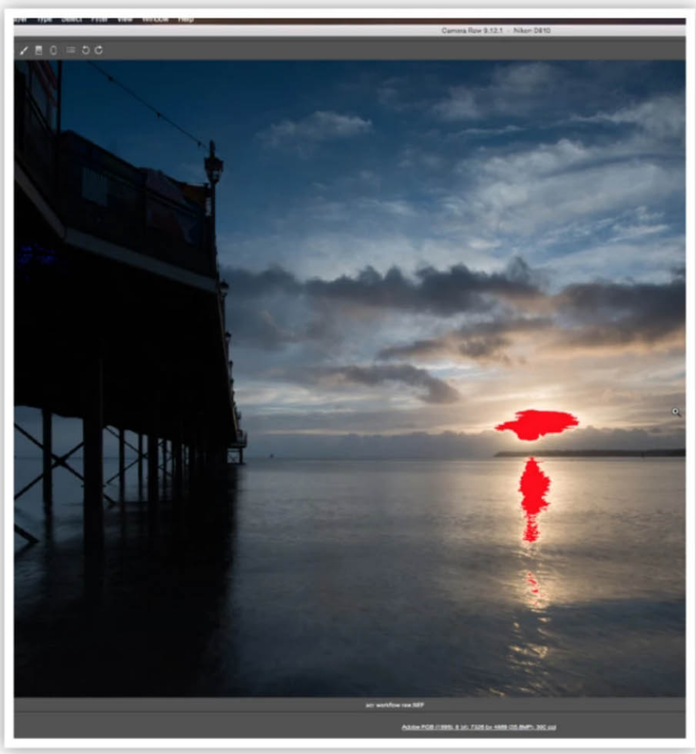


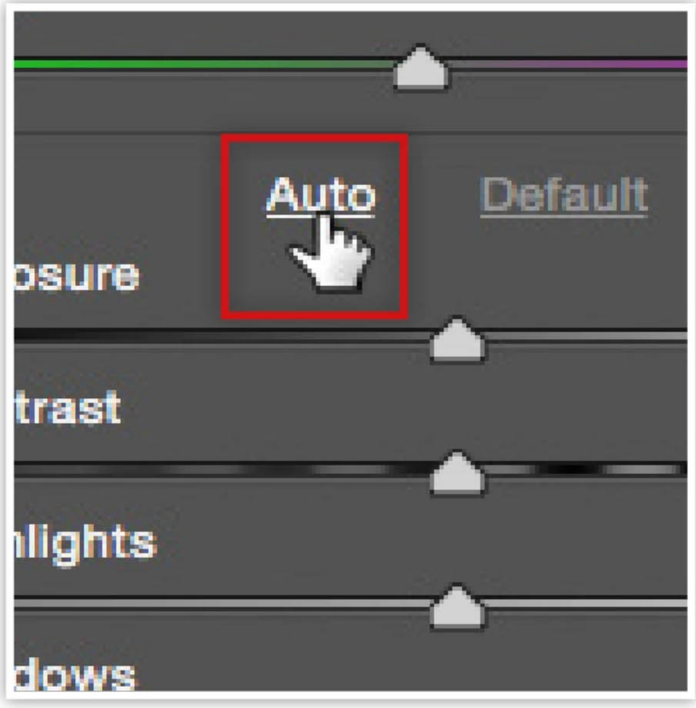




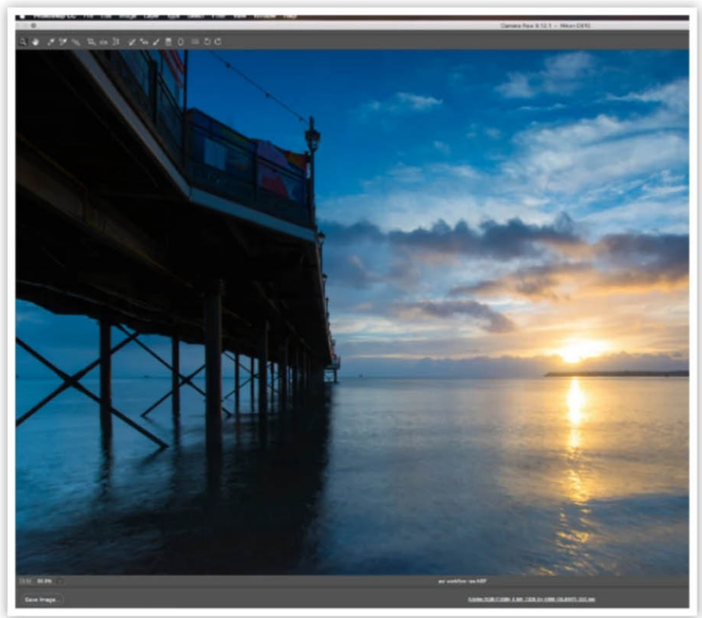


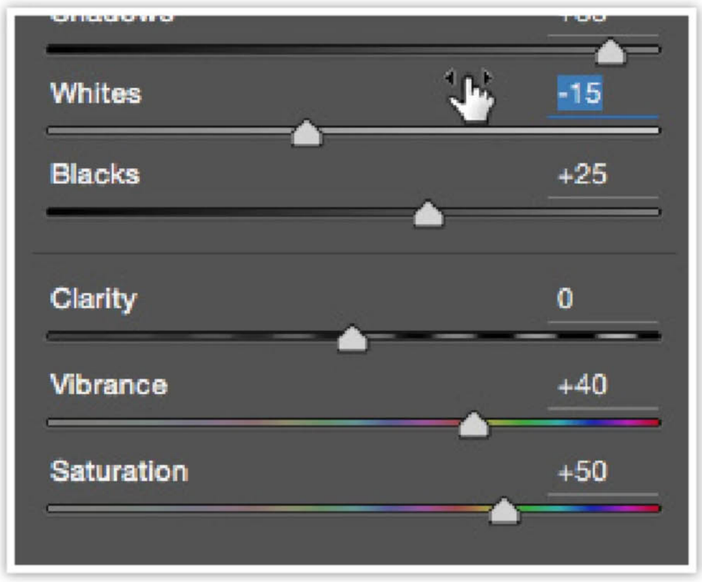
04 We can spend a while carefully adjusting the various sliders by hand to try and equalise the histogram, but the quickest way to get close to the optimum result is to let Camera Raw do the hard work. If you click on Auto the software will automatically adjust the image to produce a good approximation to a perfect exposure. It's probably not going to be ideal, but it will give us a good starting point. You'll notice that the sun on the horizon and the clouds around it are over-exposed, but that's OK. We're looking for a good spread of tones, and that includes white.



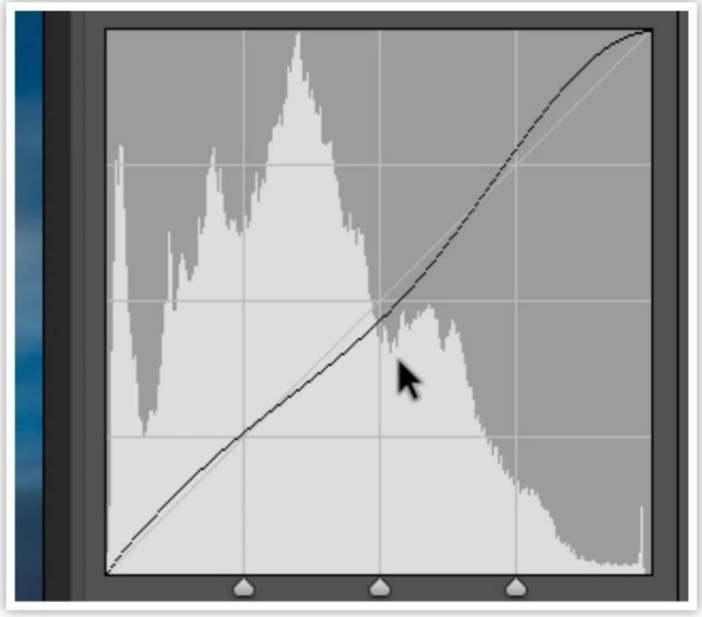


05 The Auto adjustment has made a good job of this particular picture, but for landscape shots a little bit of extra saturation usually looks good, so we'll boost the vibrance by about +40 and the saturation slider by +50 to get the colours of the sunlight, sea and sky to really pop out.

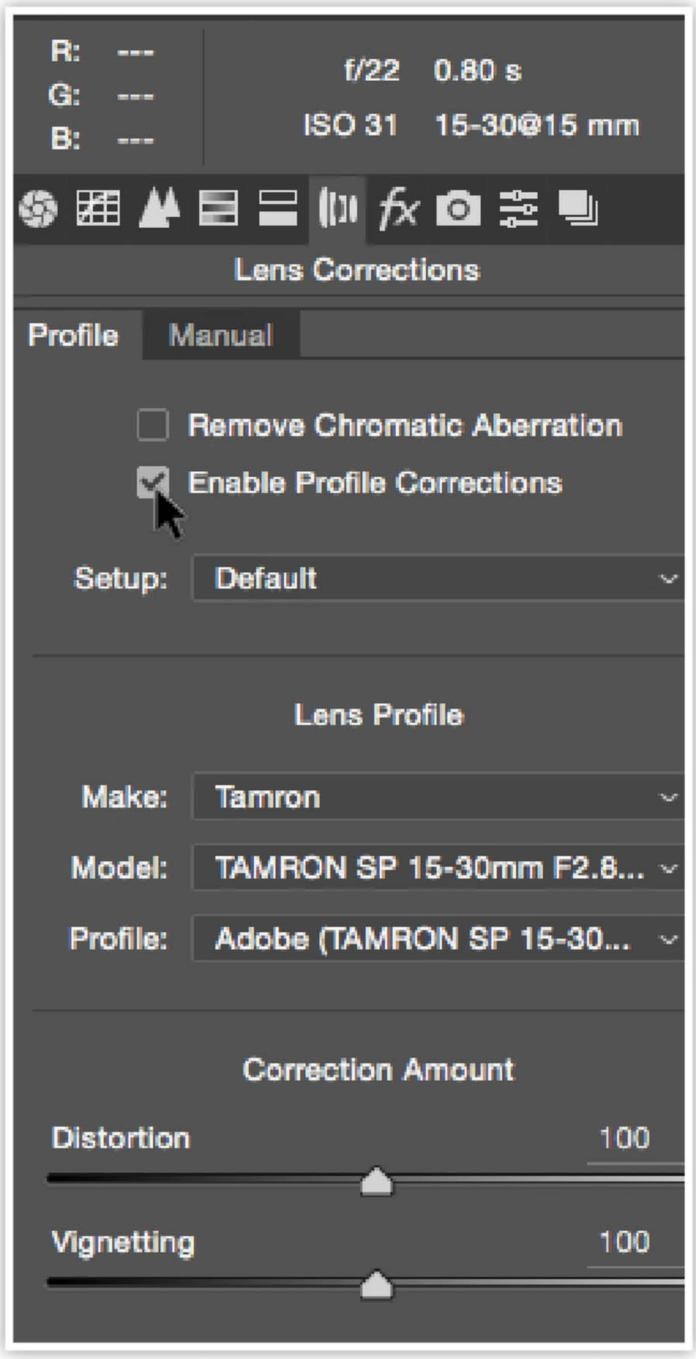




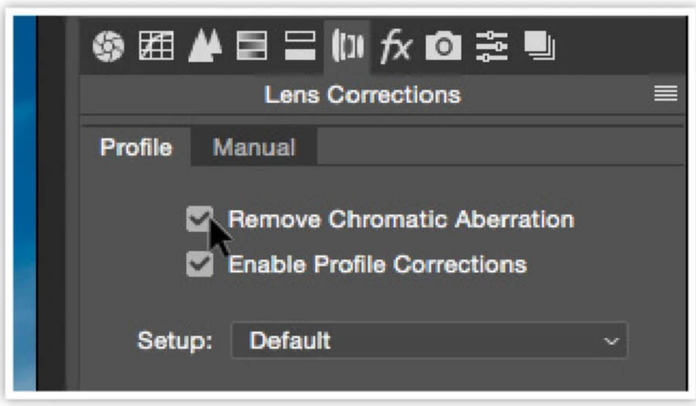
06 Adobe Camera Raw also provides a second method of adjusting contrast, by altering the tone curve. Although it's no more accurate than using the sliders many people will prefer it because it's nice and simple and gives a good visual representation of what we're doing. It's also a lot harder to burn out the highlights using curves. By boosting the highlights a lot, and then boosting the other sliders in decreasing amounts we can quickly equalise the histogram without losing too much quality.

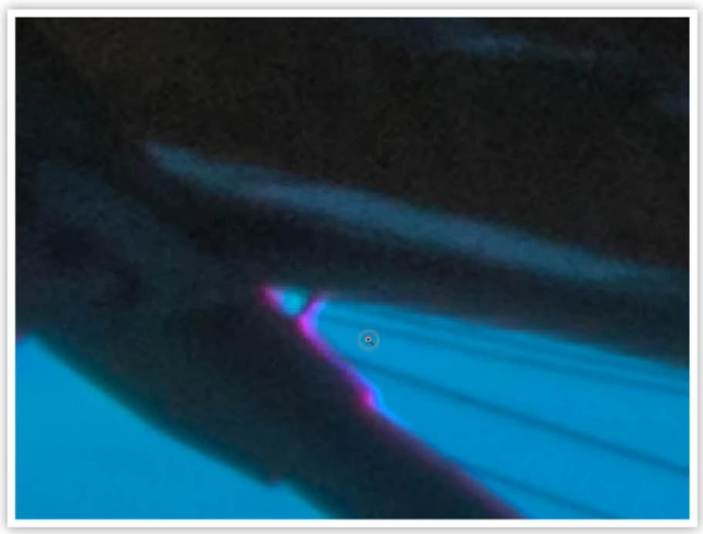


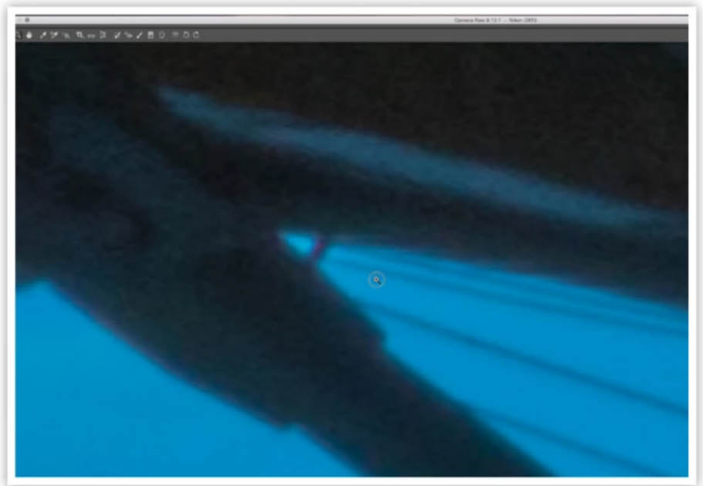
07 One of the best things about Adobe Camera Raw is its lens correction feature. The Tamron f/2.8 lens used to take this picture is a nice bit of glass, but it's not perfect. Although it's hard to see at a glance, this wide-angle shot does suffer from some pincushion distortion and slight chromatic aberration. Fortunately Camera Raw comes pre-loaded with correction profiles for a huge list of popular lenses, including this one. All you need to do to automatically correct the optical distortion caused by the lens is to check the box Enable Lens Profile Corrections. You'll see the change happen to your image immediately.

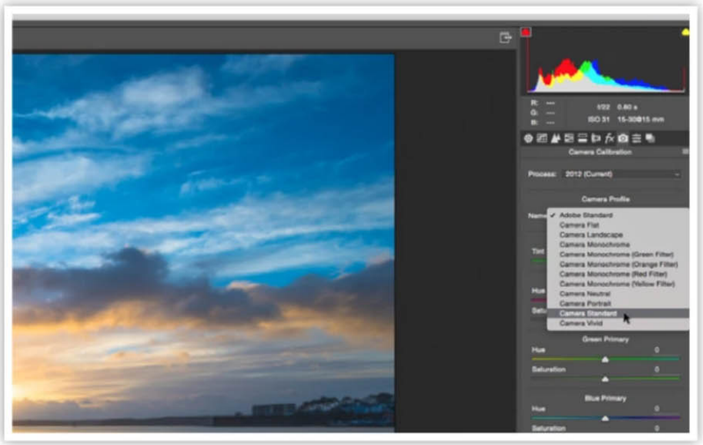


08 The chromatic aberration is just as easy to fix. Click on the Color tab in the Lens Correction palette and simply check the box Remove Chromatic Aberration. You'll need to zoom in near the edge of the frame to see the difference, but you'll notice the effects at once.

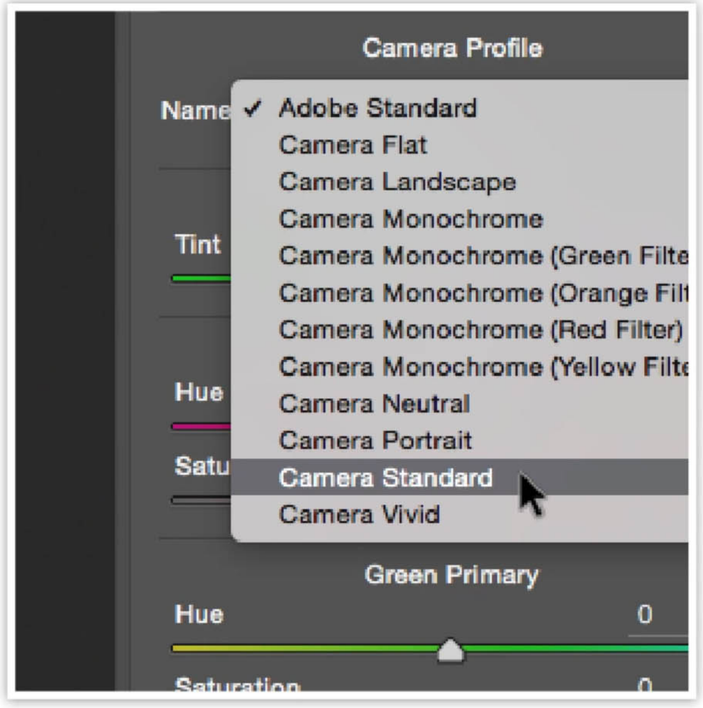




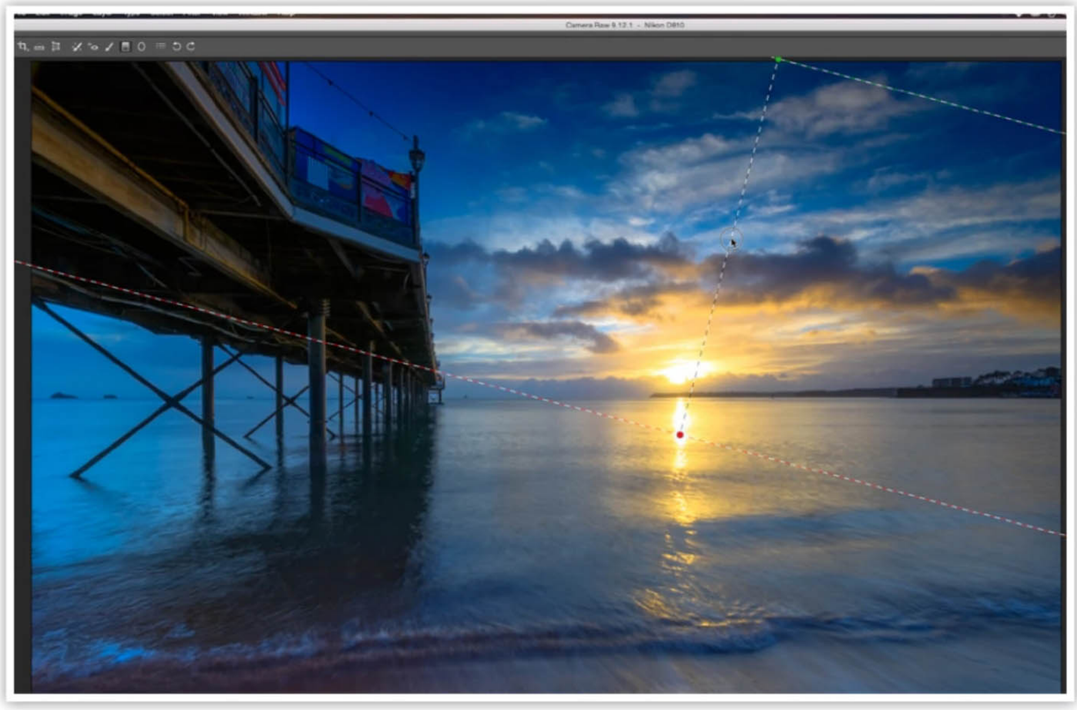




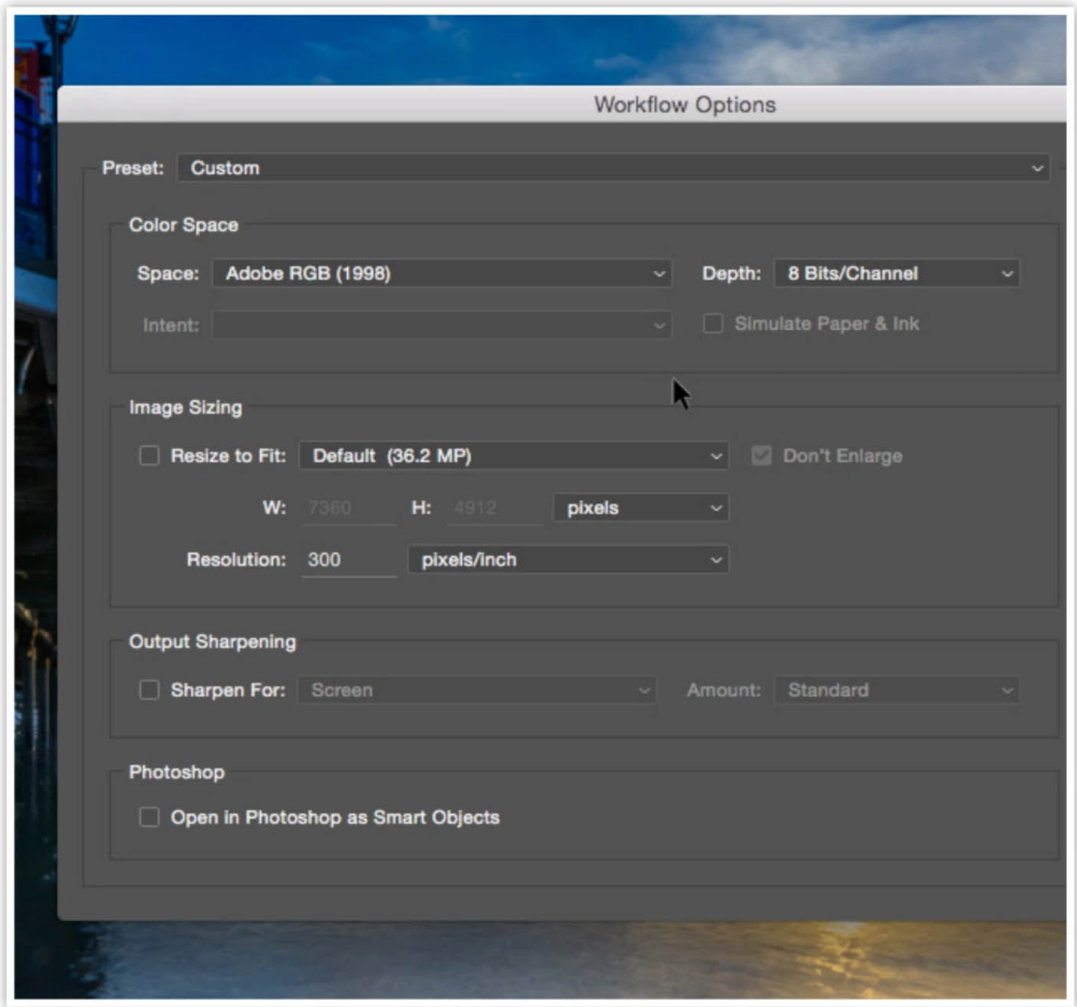
09 The next step is largely a matter of personal taste, but you can also choose to use a camera profile for the colour calibration too. In the Camera Calibration tab, click on the Camera Profile button, and from the drop-down menu select Camera Standard. This sets the colour rendering profile to the embedded profile recorded by the camera. The D810 does produce some really great colours, so for this shot we'll use the camera profile.

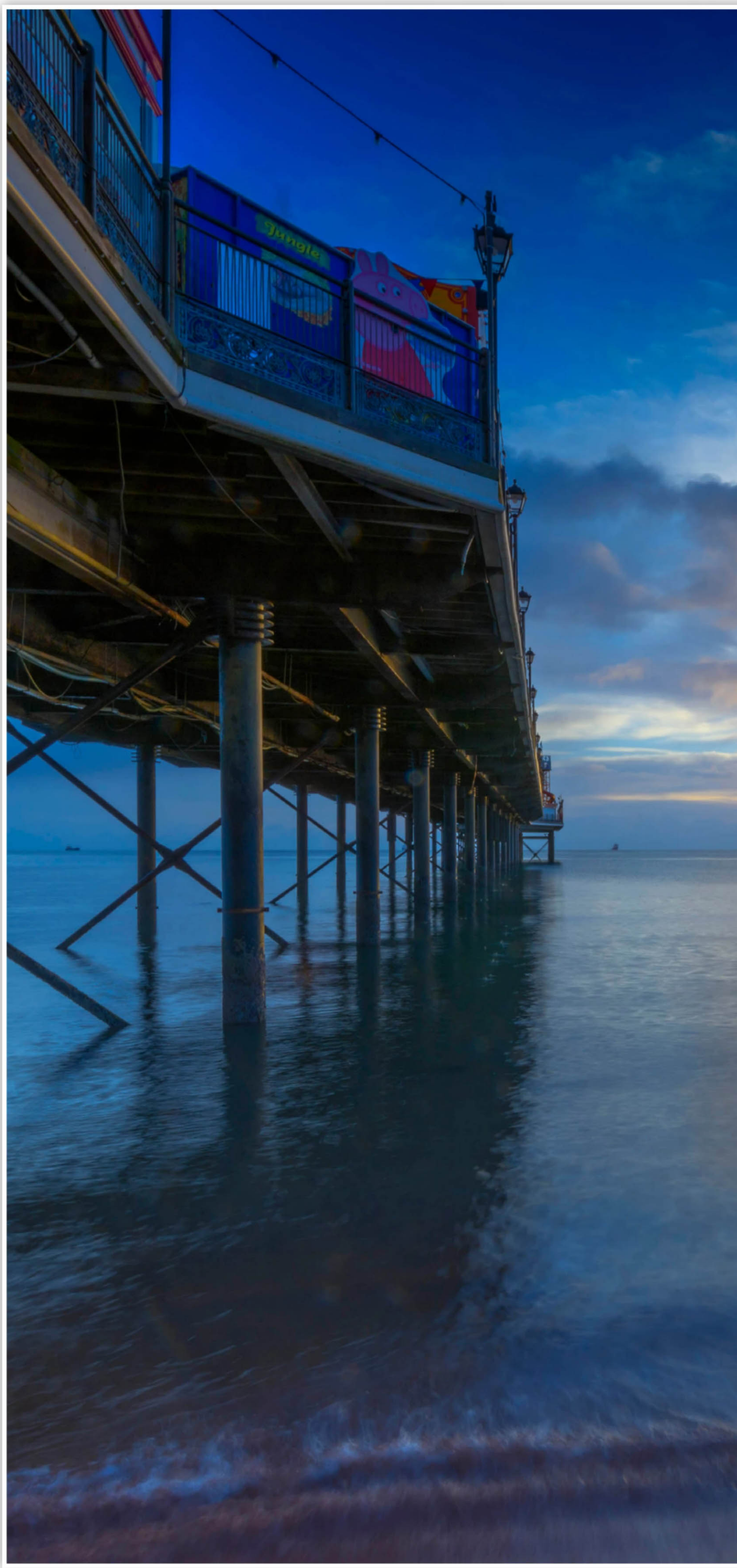


10 For this particular image, the sky is a bit lighter than it needs to be, but we can easily darken it down a bit by adding a high quality digital graduated filter in Camera Raw. Click on the Graduated Filter button at the top of the screen, and you'll see the filter control palette appear. Set the exposure slider to about -1.5 or -2, then in the image window drag down from the top of the picture to just below the horizon line to apply the filter. If you hold down the shift key while dragging it will stay parallel with the top of the frame.



11 Finally we have the output options. Camera Raw gives you the option to output the processed image in a number of different ways, but which one you use will depend on what you want to do with the finished image. For most purposes the default settings will be ideal, but you may need to select a different colour space, and for maximum colour fidelity you can output in 16-bit format. You can also choose an image size different from the native resolution of your camera, but be aware that choosing a larger size doesn't magically create new pixels; the image will be enlarged using Photoshop's bicubic resampling algorithm. If you're planning to print the picture you might also want to look at the sharpening options. When you're happy with your choice, click OK, and then Open Image. The picture will now open in Photoshop, from where you can either carry out more editing, or save the picture in JPEG or TIFF format.







USEFUL TIP

Any adjustments you make to your image do not directly affect the Raw file. They are added to an XMP file that is used to keep a record of all your image modifications. When you finally save your final image, to preserve as much detail as possible, try saving your photos as TIFF files instead of JPEG, since it uses lossless compression and keeps all that detail in your images.

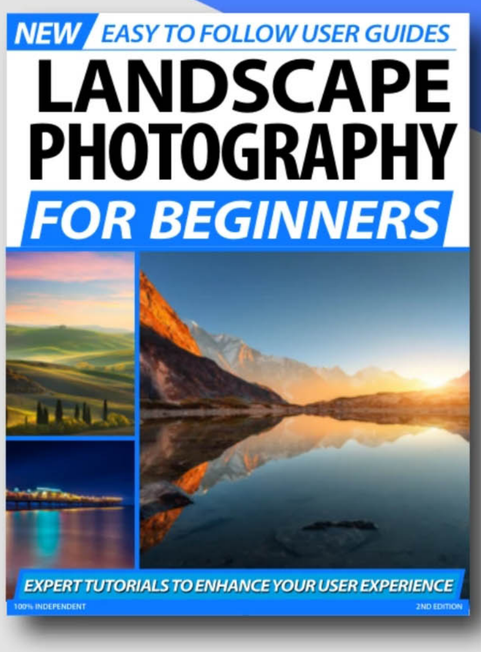
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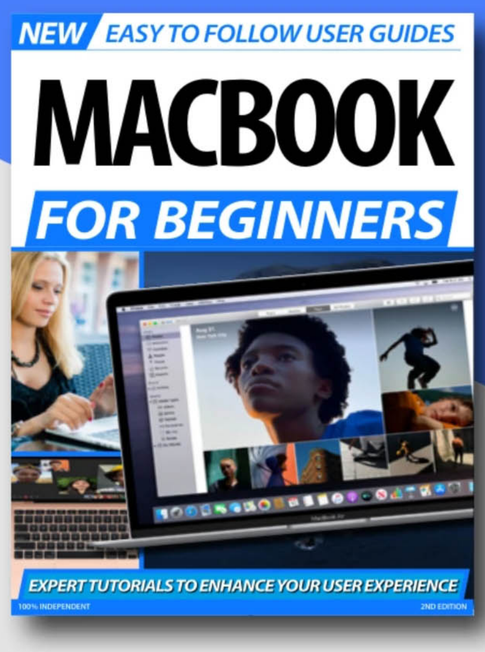
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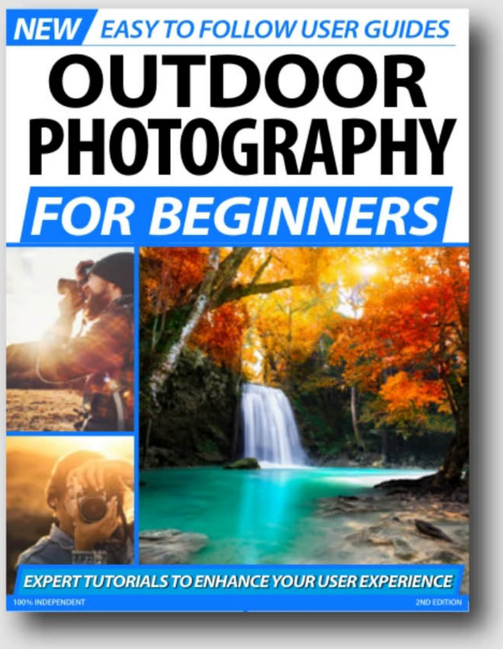


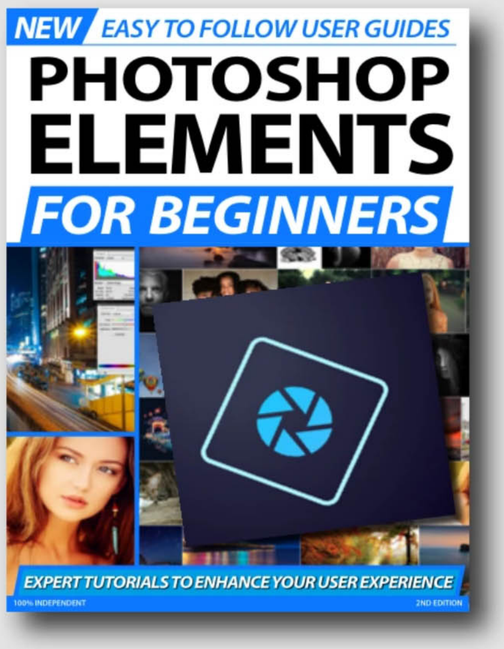




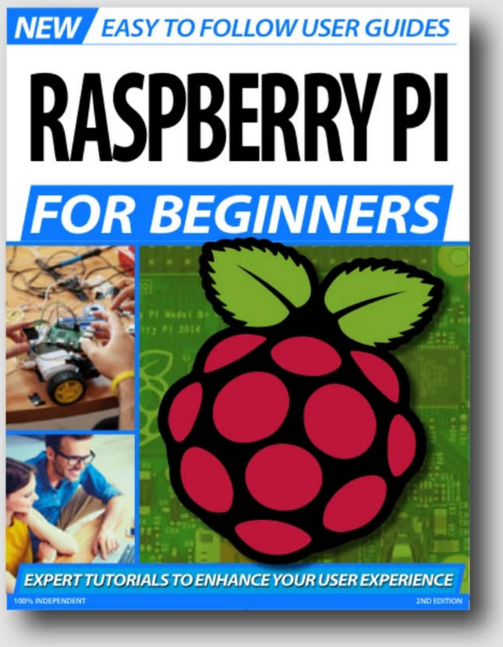


























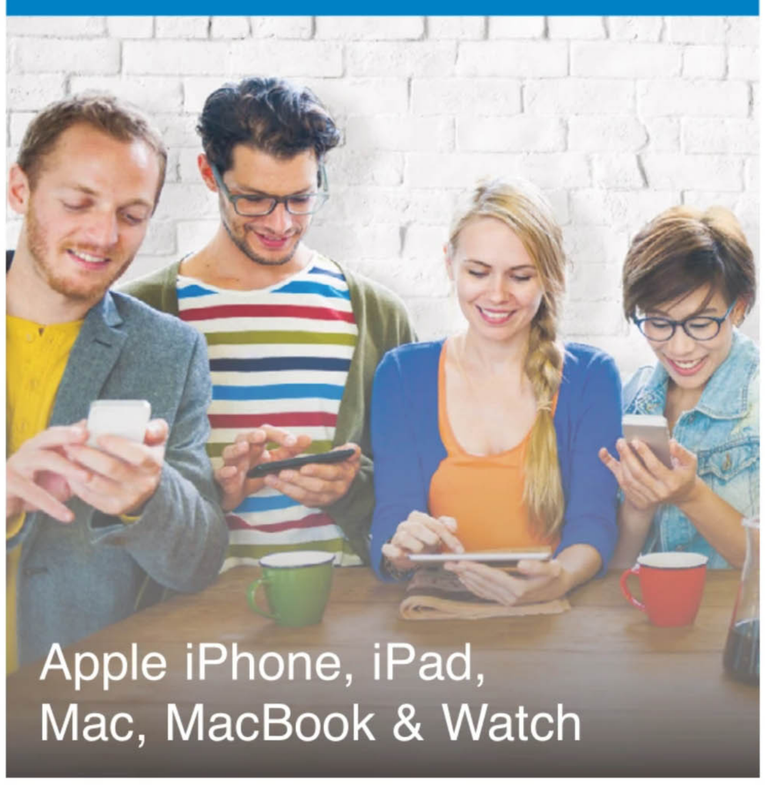
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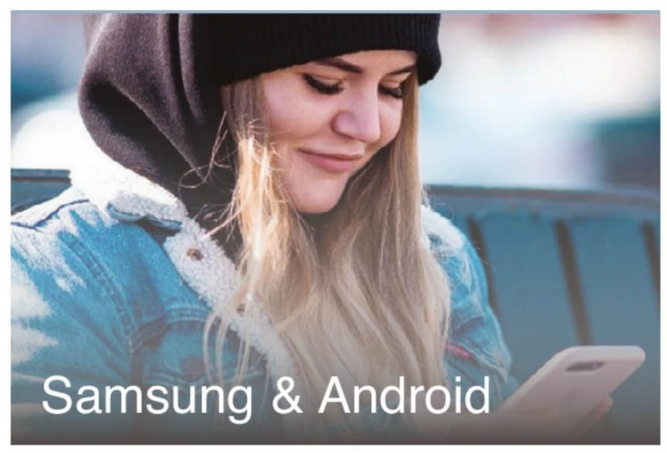
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