



Ely Photographic  
Club

## **REMOVING LENS FLARE IN IMAGES IN PHOTOSHOP**

There are three / four methods

- Cloning
- Frequency Separation
- Curves adjustments (Two methods)

### **Cloning**

This is just using the healing brush tool, the clone stamp tool, or the patch tool.

These tools can work well on simple small areas with plain backgrounds but don't work as well on large areas or areas with complex backgrounds.

### **Frequency Separation (YouTube Video by Alex Nail Photography 10/04/2021)**

This method separates the colour and detail so you can just work on the colour without impacting on the detail.

Carry out your normal Lightroom Classic adjustments and when finished right click on the image and select "Edit in" and from the list select Adobe Photoshop.

Then using Ctrl J create two copies of the background layer. Name one Colour and one Detail.

Select the colour layer and add Gaussian blur to it (Filter menu > Blur > Gaussian Blur), say 10 pixel radius and leave blend mode as normal.

Then select the Detail layer and go to Image (on the top menu) > Apply Image.

For 16 bit images you need the following settings:-

- Layer = The Colour layer we just created so will show as colour as you named it.
- Check the Invert box; Blending = Add; Opacity = 100%
- Scale = 2; Offset = 0; Preserve Transparency and Mask leave unchecked
- Then click OK

To check your photo is 16 bit, in PS go to Image > Mode and the tick will be against the photo's mode. If it is 8 bit, then don't check the invert box; Blending = Subtract and offset = 128.

Then for this Detail layer select Linear Light as the blend mode.

To tidy up you can group these layers by selecting and clicking on the group icon at the bottom right. This allows further adjustments later without confusion.

If you have grouped them open the group and select the colour layer as this is the layer to work on.

If you want to you can add a new transparent layer to clone onto rather than directly onto this Colour layer so if it goes wrong it's easier to delete and start again.

I use a separate transparent layer for each flare area so it's easier to delete it without affecting the other areas worked on, and I can use different global opacities etc on each separate layer.

Now using the clone stamp tool at 100% opacity select an area of colour to use not affected by the lens flare and with a soft brush go over the flare areas.

You can vary the opacity to get a good blend with the flare and surrounding areas.

Then if required you can also do some local adjustments later using the clone tool or healing brush tool later, on a new transparent layer.

You can also use the Hue / Saturation adjustment layer to selectively adjust the colours later as well.

To do this I adjust the flare area ignoring the rest of the image, then invert the mask and with a soft white brush go over the flare area to show the Hue / Saturation adjustment just to this area. Adjust the opacity to suit.

### **Curves method (Simple)**

I have found that this method works on slight flare situations but not if the flare is too intense.

Having taken the image into Photoshop make a copy of the background using Ctrl J.

Then open a curves adjustment layer. As cameras and monitors use RGB all colours are a mixture of these three primary colours. It's worth checking the colour of the lens flare as a proportion of red, green, and blue. Blue is normally very low and can even be zero.

As a sun flare is normally a red / orange tint, there will usually be more red involved than anything else so we will adjust the red channel first so select the red channel and move the black point to the right and check the result.

You may need to do the same with the green channel as well depending on the amount of green identified.

Check the results as you go if its ok, select and invert the mask (Ctrl I) and paint away the flare using a soft white brush using a 10% opacity to start with.

Don't increase the opacity too much as its best to do this in small increments as you can add multiple curves adjustment layers one on top of another to get the required result.

If you use multiple curves layers group together add a mask to the group to do some final tweaking if required on this mask.

### **Curves method (Detailed) (YouTube video by James Abbot 29/10/2017)**

This method works quite well on more intense flare areas than the simple curves method.

Having taken the image into Photoshop make a copy of the background using Ctrl J.

Then create a black and white adjustment layer. This is temporary just to see the luminosity of the lens flare.

Then open a curves adjustment layer and label this one Darken and pull down the curve to reduce the luminosity of the flare. Then Invert the mask.

Now copy this curves layer and call it lighten. This may not be required but its worth having it just in case we go too far with the darken curves layer. Drag the curve up a little. As the mask is black you won't see the change but its there in case its needed.

Now select the darken curves layer mask and paint over the flare, with a white brush say 50% hardness and at say 10 – 20% opacity depending on the brightness of the flare.

Reduce the size of the brush to go around the edges of the flare.

This will have dealt with the luminosity / brightness of the flare and now we need to deal with the colour. Turn off the Black & White layer, it could actually be deleted at this stage but maybe worth keeping in case further adjustments are required.

Click on the lighten curves layer and then go to the adjustment layer icon and select selective colour.

As noted before, a sun flare is normally a red / orange tint, there will usually be more red involved than anything else so we will adjust the red channel first so select the red channel and move the slider back and forth to see the effect.

You may need to do the same with the yellow and / or green channel as well depending on the amount of green identified. Just move the sliders back and forth to see the result.

Check the results as you go if its ok, select and invert the mask (Ctrl I) and paint away the flare using a soft white brush using a 20% opacity to start with and increase the opacity as required to various areas of the flare.

Again, use a smaller brush to go around the edges of the flare.

Create a new transparent layer and using a soft brush select a colour from the surrounding area by pressing Alt and brush over the flare.

When the colour looks ok change the blend mode of this layer to colour so only the colour is affected not the detail.

Select this area by pressing Ctrl and click the left mouse button on this layer.

Then select a curves adjustment layer and crease a basic "S" shaped curve to get the contrast required.

The final step is to clone around the edges to get a good blend with the surrounding area. Create a new transparent layer and using the healing brush tool with a 50% hardness brush, work around the edges. Select the areas to use as the donor areas by pressing Alt.

Select all the layers and group them so you can turn the group on and off to see the result of your work. Open the group and go back to any of the layers as required if further adjustment is needed.

## **Conclusions**

All these methods work but I have found the frequency separation method to be the most effective for serious lens flare.

However, there is sometimes the need for some minor tweaks using the clone stamp tool or healing brush and there is no reason all three / four methods can't be used together on difficult situations.

The best solution is to not get lens flare in the first place by shielding the lens with your hand or a piece of card. You can take one photo unshielded and then one with say the top half cut off but the lens flare in the bottom half is removed and then blend the two images in post-production in Photoshop. This may not totally remove the lens flare but should reduce it so its easier to deal with.