

Remove Halos between sharp contrast areas

Recently Competition Judges have been negatively commenting on halos. This article is intended to help you removing halos using Adobe Photoshop and minimizing halos in Photomatix.

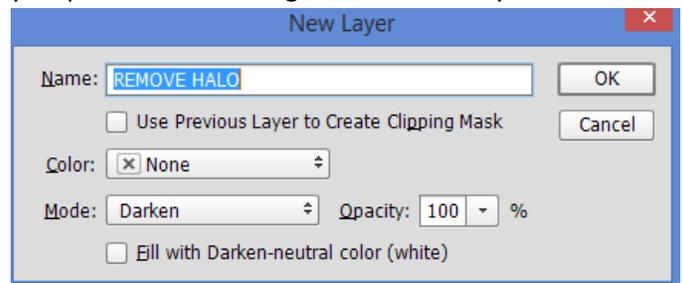
Halos are most obvious on high-contrast edges where a darker area and a lighter area meet each other. When you use different sharpening methods, often you are left with edges that have white, or light-colored halos, particularly on high-contrast edges, such as tree trunks, poles, and between the sky and a dark landscape. Also if you over process an HDR image in the tone-mapping process, you are almost guaranteed to have halos.

All the methods described below may not remove all the haloing in your photo. The best practice is to prevent haloing when you process your photograph. There are many techniques for removing halos; however, the following procedures are common methods used to remove or reduce halos.

1. *Brush or Clone Stamp Tool:*

▪ **Clone Stamp Tool — Darken blend mode:**

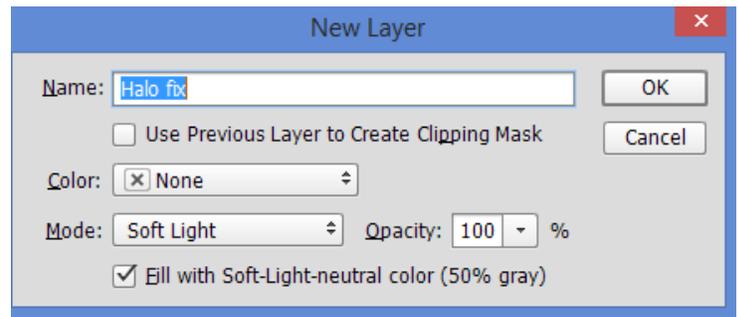
- Depress the **Create new Layer** icon at bottom of Layers panel while holding down the **Alt** key. The New Layer dialog box will appear. Change the blend mode to **Darken** (choose **Lighten** if you are correcting a dark-colored halo) and name the layer.



Since the blend mode is set to Darken, any color that is **lighter** than the sampled sky color will be changed; therefore, the darker terrain and the darker sky areas surrounding the halo area will not be affected as you clone.

- Click on the Clone Stamp tool (shortcut **S**). In the Options bar select a **Hardness** of 100%, **Opacity** set to 100%, and **Flow** to 100%. Make sure you set **Sample** to **Current & below**.
 - Zoom in close (100% or greater) and sample an area (holding down the **Alt** key to select a nearby darker sky area), preferably at nearly right angle to the edge. It is best to sample just slightly ahead or behind the right angle point. Then clone over the top of the white halo pixels.
 - Consider reducing the Opacity slider to help blend the color better.
- #### ▪ **Brush Tool — Darken blend mode:**
- Instead of using the Clone Stamp tool, you may find it easier to use the Brush tool and sample a sky color area near the halo area.
 - Create a new layer as described above insuring you select **Darken** blend mode.
 - Magnify close into the Halo area. Select the Brush tool (**B**) and in the Options bar select a small brush set to 100% Opacity and 100% Flow. Depress the **Alt** key to bring up the eyedropper. With the eyedropper, sample a nearby sky color near the halo area that is darker than the white halo. The **Foreground** color in the Tools bar will change to the sampled sky.
 - Brush over the halo area and repeat sampling as you move along the halo areas.
- #### ▪ **Brush Tool — Soft Light blend mode:**

- Create a new transparent layer as described above except change the blend mode to **Soft Light** and check the **Fill with Soft Light-neutral color (50% gray)** box.



- Make the Foreground color black (depress the letter **D**). Painting over the halo regions with black darkens the area. Since halos are bright, you are burning (darkening) the halo area. If the Halo area is dark, then you want to brighten up the halo region by using a White Brush (set Foreground color to white).
- Select a soft Brush (hardness to zero), opacity 100%, and flow between 2-4%. Magnify the halo area and carefully paint over the halo regions. Zoom out from time-to-time to review your changes.

2. *Thin Halo caused by excessive sharpening:*

- If you apply excessive sharpening in Adobe Camera Raw (ACR) and move the masking slider while hold down the Alt key, you will probably notice a very thin bright white line between the darker terrain and the sky. This is an indication that haloing has occurred due to sharpening.
- The best way to eliminate this type of haloing (other than not using excessive sharpening) is to duplicate the Layer you want to sharpen. Then click on the Duplicate Layer and add a White Mask. Open Adobe Camera Raw (**Filter > Adobe Camera Raw**; available only in Adobe Photoshop 2014). Make your sharpening adjustments in ACR and when you return to Layer in Photoshop, click on the Mask to make it active. Zoom into the Halo area and with a very small Black brush, brush over the Halo area. This will reveal the non-sharpened halo region from the layer below.

3. *Removing HDR image halos — Photomatix:*

- When you tone map an image in HDR software such as Photomatix, the tone-map process will reduce the contrast ratio (brightness/darkness) of the combined photographs. When the software brings out the details in shadows and highlight regions, halos can often form around high contrast areas. Always keep an eye on high contrast areas when tone-mapping to avoid Halos.
- **Recommended procedures to minimize halos in Photomatix:** Lowering **Strength** will usually control halos. You can uncheck **Lighting Adjustment Mode** box and slide the **Lighting Adjustment** slider to a value between **1** and **4**. Raising the **Highlights Smoothness** slider is also very useful for reducing halos in the bright regions of the image and allows you to increase the Strength slider to a higher value.