



JR Macros: Out of Gamut Colours Fix

Introduction

This macro pack is intended as a temporary solution (as of Affinity Photo 2.2.1) for the following issues when developing RAW images with intense colour values:

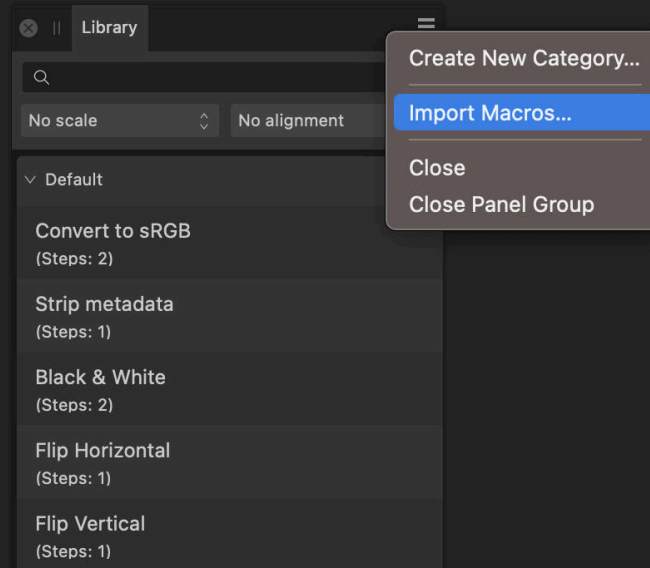
- Magenta solarisation with blue light sources
- Extremely saturated colours where pulling back fine detail seems impossible
- Posterisation of detail around intense colours

Please read the Further Instructions section below to ensure you set Affinity Photo up correctly for these macros to be effective.

You may come across these colour-related issues with images that contain intense artificial light sources, especially bright blue lights.

The problem is related to component (channel) values falling outside of the gamut being used to process colour. These values may be negative, which can cause the magenta solarisation of blue light sources.

I have provided two methods of compressing or re-mapping the colour gamut of these images in order to avoid the issues mentioned above. For this to work, however, you must process your RAW images in a 32-bit unbounded linear colour space (*please see the next page for instructions on how to achieve this*).



Installation

1. Extract the *.afmacros* file to a directory of your choice.
2. In Affinity Photo, you will need to expose the **Library** panel. In V1, go to **View>Studio>Library**, or in V2 go to **Window>Library**.
3. Click the small icon at the top right of the **Library** panel and choose **Import Macros**.
4. Navigate to the directory containing the *.afmacros* file and select it, then click **Open** (or double click the file).
5. The **Library** panel will then be populated with the macros from that category. If you are installing any other macro packs, repeat the process for those categories.

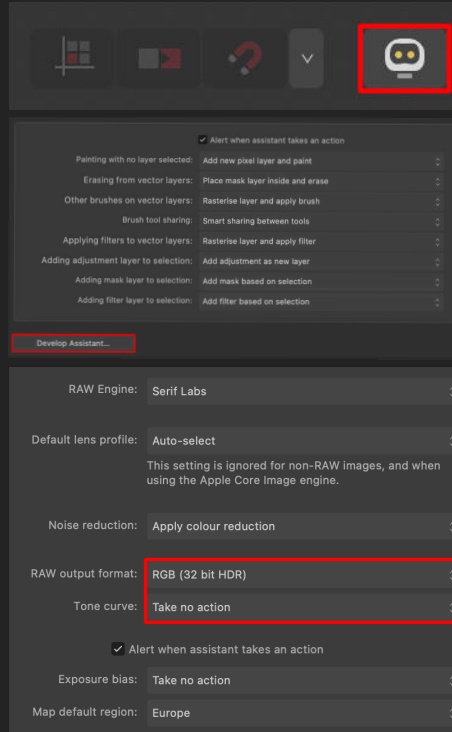


Above: original image. Below: Gamut Compression method

Further Instructions

To use these macros effectively, you need to develop your RAW images to a linear unbounded colour format. This is easily done via the Develop Assistant settings. Here are the steps:

1. Install the macros (drag-drop the .afmacros file onto Affinity Photo's user interface).
2. Without opening a file, go to the main assistant settings (the robot icon), then click the "Develop Assistant" button to go to the RAW development settings.
3. Change RAW output format to "RGB (32 bit HDR)". Important: leave Tone curve set to "Take no action".
4. Open your RAW file and perform any initial editing, then develop it.
5. Run one of the macros (more information below).
6. The image will be corrected, then converted to 16-bit per channel precision so you can continue regular editing.



Within the JR - Out of Gamut Colours Fix macro category, you will see several macros you can use. Here is a quick explanation of the two distinct methods and their additional options:

- **Gamut Compression** will compress the gamut and avoid excessive or negative colour values. This tends to reduce colour intensity and increase luminosity, and so produces the most noticeable difference in tones compared to the original image.
- **Gamut Shift** will use a matrix transform whilst 'protecting' a certain range of colour values for each component (channel). There is less loss of colour intensity with this method, but for extremely saturated colours it may not be as effective as **Gamut Compression**. Do experiment and see which method you prefer.
- The separate **sRGB** and **ROMM** options refer to the eventual colour space the image ends up in. For most workflows, use **sRGB**. **ROMM** will convert to a 16-bit ROMM RGB profile: this is useful if you want to work in a wider colour space to maintain more intense colour values. Please note it is your responsibility to be aware of colour management and how to manage exporting your imagery.
- The **(with Tone Mapping)** options will perform additional colour-preserving tone mapping to compress high dynamic range tones into standard dynamic range. You may find this useful if your image has a large amount of tonal range (dark shadows, extremely bright light sources).



Above: original image. Below: Gamut Compression method