

Photoshop: Alpha Setup for sRGB

How-To setup correct Alpha for sRGB color profile.



Overview

Identify the sRGB Problems

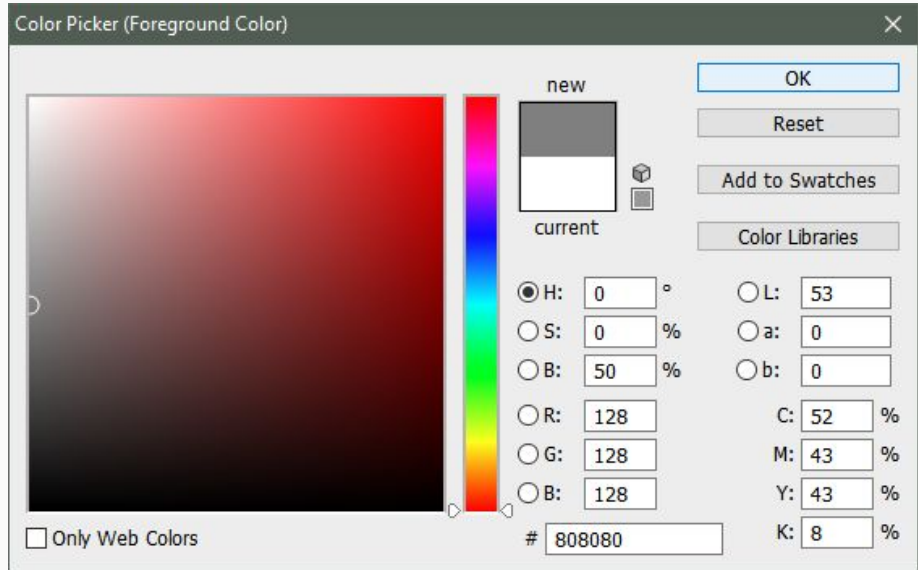
By default photoshop works on sRGB for the color channels, and transparency.

However using alpha channels shows strange results.

The Alpha sRGB problem

In Photoshop

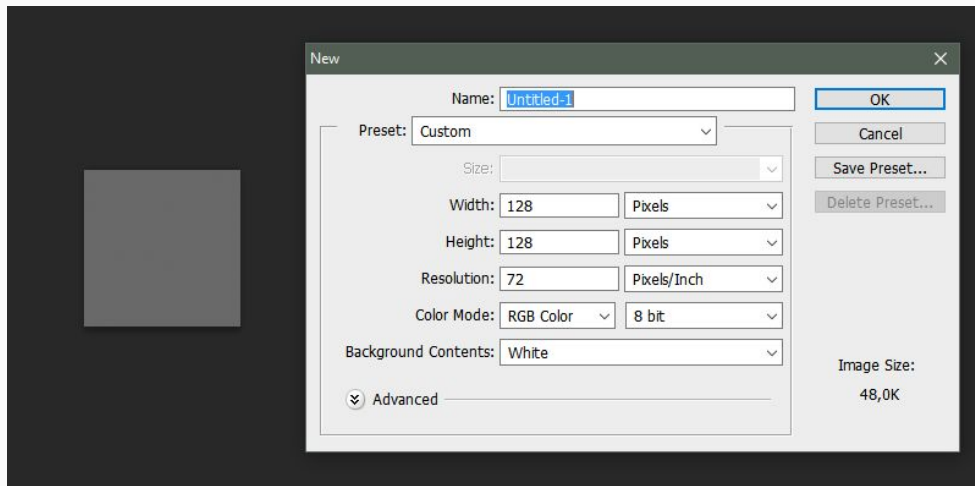
- Copying a value of 50% gray in alpha seems to result in 50% gray value
- Color picking alpha values shows 128 gray
- Or so It seems...



The Alpha sRGB problem

Check actual TGA Values

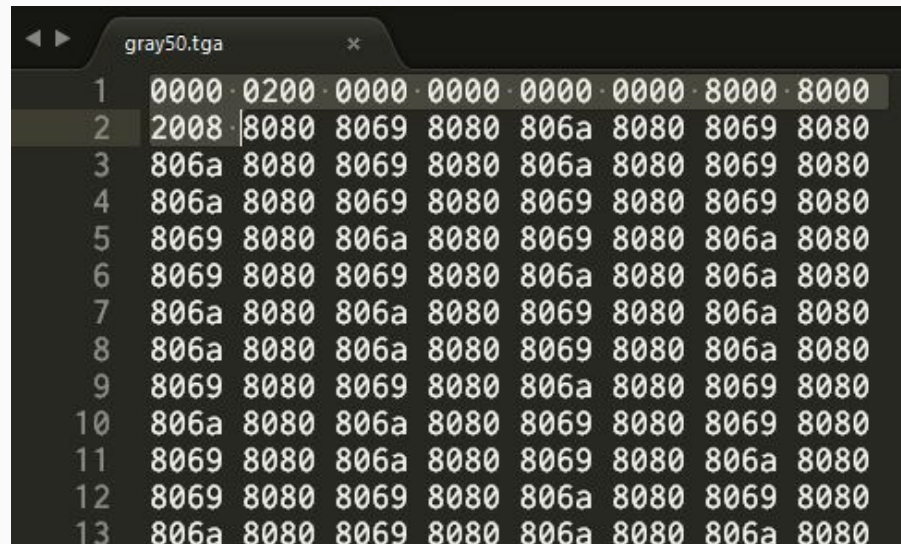
- Create a RGB (8b/channel) image containing 128 gray in RGB
- Add an Alpha Channel
- Copy the 128 RGB gray to a new alpha channel.
- Save the image to TGA 32 bit.



The Alpha sRGB problem

Check actual TGA Values

- Check in Hex Editor : all values (besides header) should be 80's
- TGA encoding is BGRA so every fourth value is not 80 but 69 or 6A

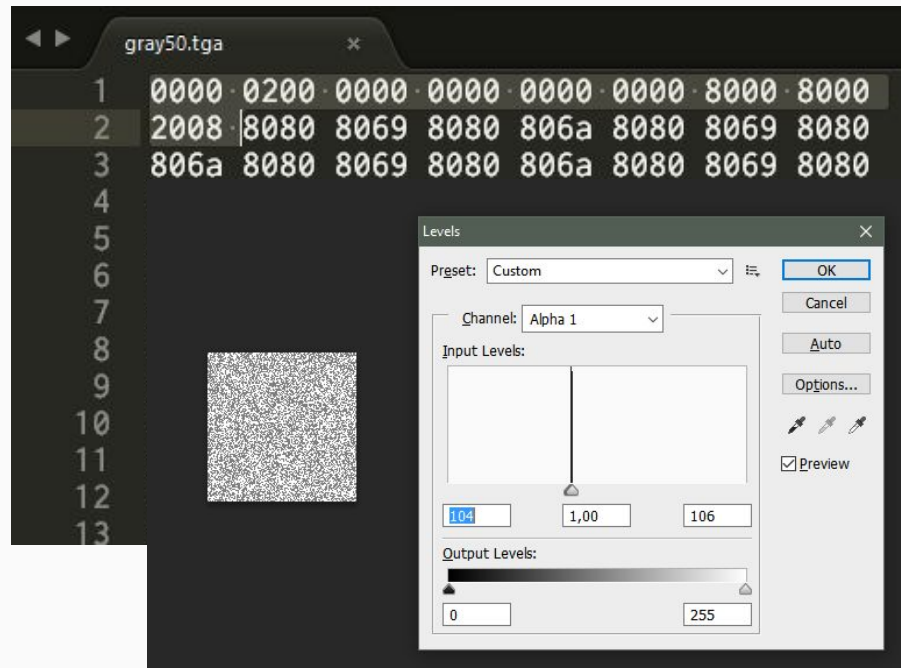


1	0000	0200	0000	0000	0000	0000	8000	8000
2	2008	8080	8069	8080	806a	8080	8069	8080
3	806a	8080	8069	8080	806a	8080	8069	8080
4	806a	8080	8069	8080	8069	8080	8069	8080
5	8069	8080	806a	8080	8069	8080	806a	8080
6	8069	8080	8069	8080	806a	8080	806a	8080
7	806a	8080	806a	8080	8069	8080	806a	8080
8	806a	8080	806a	8080	8069	8080	806a	8080
9	8069	8080	8069	8080	806a	8080	8069	8080
10	806a	8080	806a	8080	8069	8080	8069	8080
11	8069	8080	806a	8080	8069	8080	806a	8080
12	8069	8080	8069	8080	806a	8080	8069	8080
13	806a	8080	8069	8080	806a	8080	806a	8080

The Alpha sRGB problem

Check actual TGA Values

- Moreover, the alpha values are not uniform anymore : 6a & 69 shows a really slight noise in the channel.
- This is an **inappropriate color correction** that **should not happen** implicitly.



How-To fix the Alpha sRGB?

Steps to Complete

Edit > Color Correction Settings

Brings the settings Window up

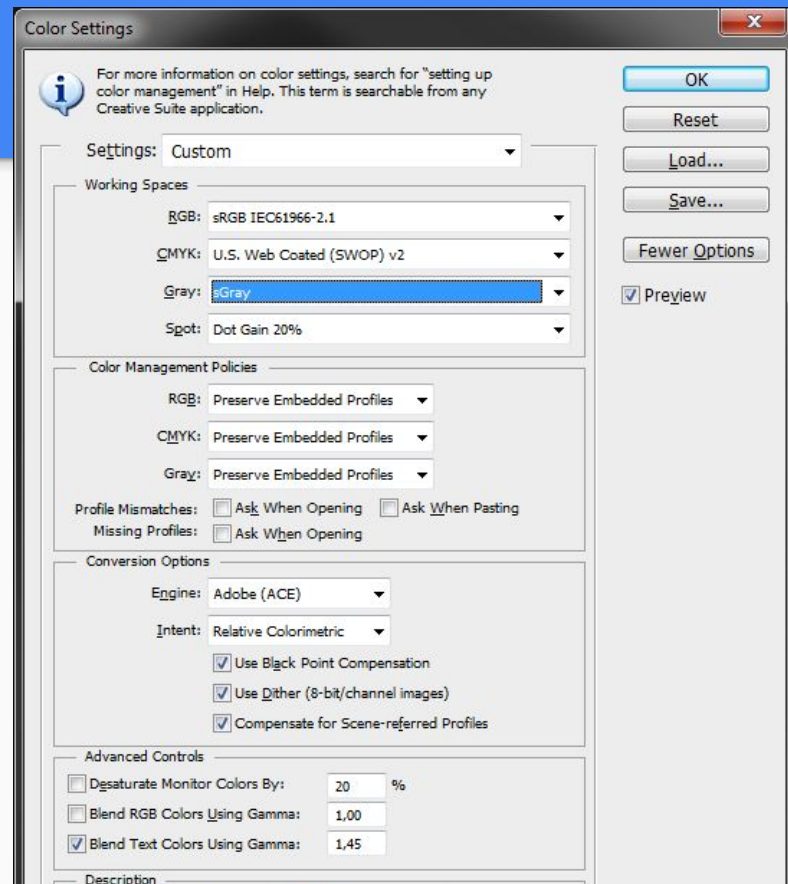
Check Working Spaces > Gray

Should be “Dot Gain 20%” by default

Activate “More Options”

Change Gray to sGray

Same as sRGB profile, for gray & alpha channels.



That's It!

Let's Check Again if this solved our problem....

Solving the problem

Check actual TGA Values

- Create again a TGA File containing 128 gray in RGB and copy the 128 gray to a new alpha channel.
- Save the TGA as 32 bit...
- Check in Hex Editor : all values (besides header) should be 80's

	gray50.tga	*	gray50_sGray.tga	*
1	0000	0200	0000	0000
2	2008	8080	8080	8080
3	8080	8080	8080	8080
4	8080	8080	8080	8080
5	8080	8080	8080	8080
6	8080	8080	8080	8080
7	8080	8080	8080	8080
8	8080	8080	8080	8080
9	8080	8080	8080	8080
10	8080	8080	8080	8080
11	8080	8080	8080	8080
12	8080	8080	8080	8080
13	8080	8080	8080	8080