Photography WORKSHOP

custom CHROME cc

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Hands on POST PROCESS WORKSHOP:
Topic: RGB curves intro
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RGB COLOUR CURVES

Notes:

**Thank you for attending.
Here is what we will cover today:**

* **What are RGB curves?**

* **What are RGB curves useful for?**

* **Some techniques to use curves toward perfecting post processing.**

1. What are RGB curves:

The RGB curves tool allows you to control the intensity of a colour (red, green, or blue) in the pixels of a certain brightness. Increasing the amount of blue in the lighter pixels results in a bluer shade in the light pixels, whereas removing some of the blue results in a yellower tint of those pixels.

The adjustment is done through a curve graph, a diagonal line on which points can be added and pulled either up (to increase) or down (to decrease) the amount of that certain colour in the pixels of the corresponding lightness, all part of a graph where shadows are represented towards the bottom and left side, and the highlights towards the top and right hand side.

One such graph is attributed to each of the three base colours, Red, Green, Blue. Together, they form the resulting colour and brightness value fsor each pixel, so increasing red in highlights, not only makes them redder, but also brighter. In order to preserve the exact same brightness to those pixels, one would have to increase the red and decrease the green and blue by the exact same amount, and then only the colour would shift towards red.

A Red, Green and Blue curve, all in the same graph

* Contrast

* Fixing the white balance

* Achieving a "prettier" colour palette

2. Uses for RGB curves:

1. Contrast adjustments

The S shaped curve: brightens the highlights and darkens the shadows, thus creating contrast.

The inverted - S shape curve: it darkens the highlights and lightens the shadows, thus reducing contrast.

2. Colour calibration - White Balance Control: using the curves you can easily control the colour cast in the highlights, shadows, or mid tones ...or overall even, easily being able to compensate for editing in an environment without a White Balance tool (editing JPG files in GIMP/Photoshop).
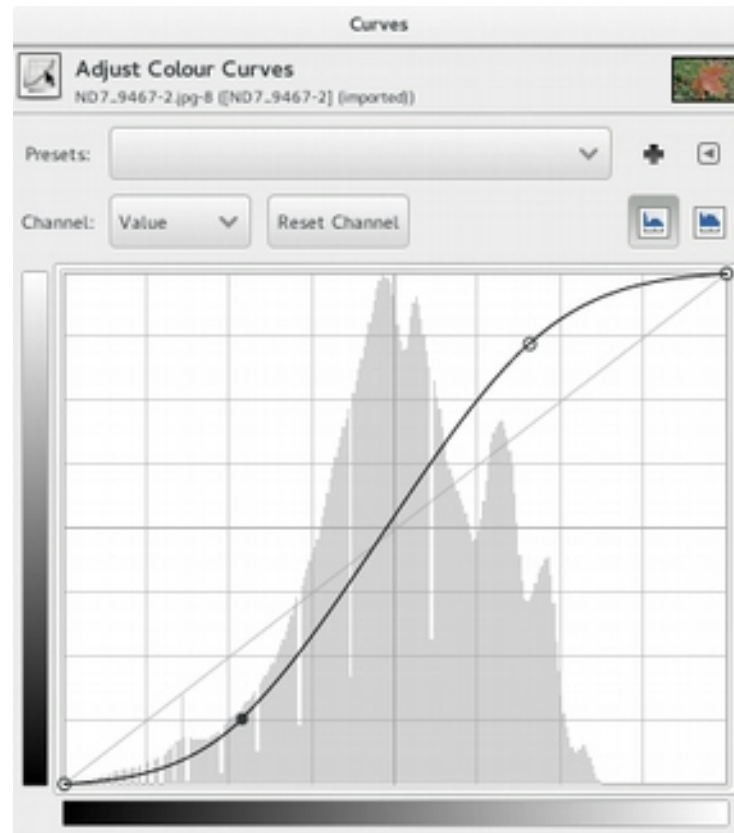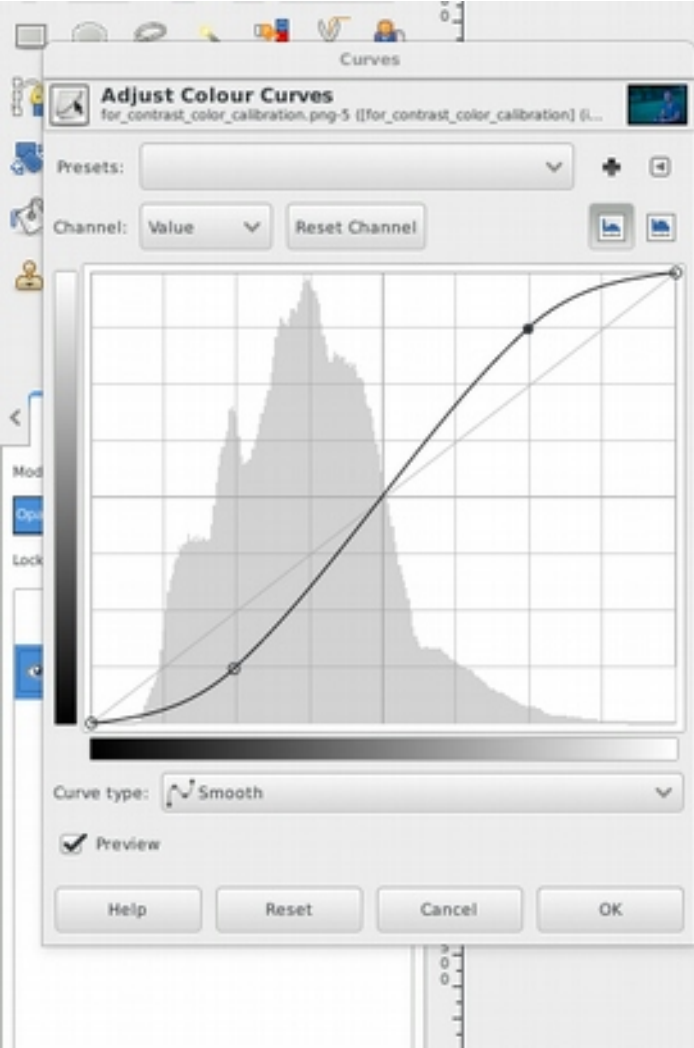

Left: a curve graph applying an S shaped curve to the lightness of the pixels.
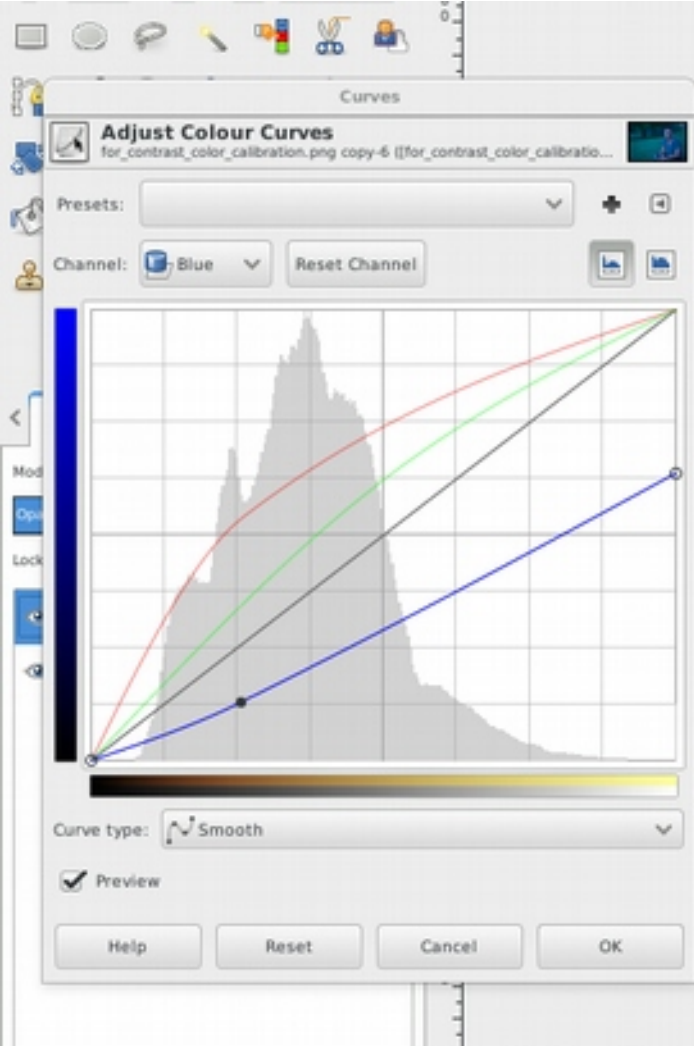**Above:** before | **Below:** after

An S shaped curve will increase the overall contrast of the image by darkening the shadow areas (bottom left) and lightening the highlights (top right).

Above: The image's White Balance is heavily biased toward blue and for the sake of demonstration, I added a strong contrast with an S shaped Value Curve.

White Balance

Above: The White balanced is fixed with a drastic lowering in BLUE and a slight increase in Red + Green (which also equals further lowering in blue, but restores lightness.

White Balance: using RGB colour curves, white balance is tweaked between Blue/Yellow (using the blue curve) and between **Green/Magenta** (using the green curve)

Here: we heavily biased the image toward Yellow (removed blue) and Green (added green). We also biased toward Red (away from cyan)
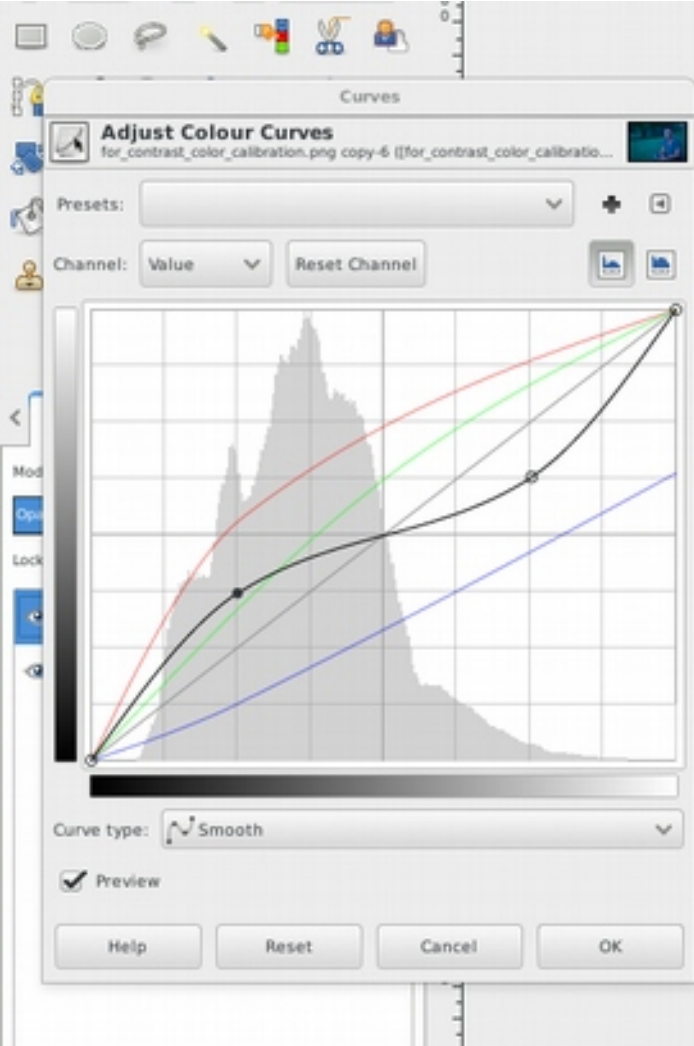
Above: Finally, by adding a curve of inverted-S shape curve in the Value, the contrast is lowered in the image. Personally I found myself debating if the version with exaggerated contrast wasn't better looking; but for the sake of demonstrating how to inverted-S shaped curve lowers contrast, here it is.

Note: Notice how the gray area on the camera is not quite gray. The White Balance compensation is not perfect, and that is because it is rather difficult to do with colour curves alone and on a non-raw file. So shoot raw and get the white balance as close to right in camera as possible.

Pretty Colours

Nature is beautiful, but the camera is unable to reproduce it accurately, and even if it were to, there is more to a beautiful day than the way things looked; so in order to replicate the good feel of a day ...or create a positive look where there is nothing but boring content, colour can be tweaked in the photographer's advantage.

In the days of film photography, film manufacturers paid considerable amounts of money in order to discover the most visually pleasing colour palettes attainable with given combinations of film and chemicals.

Such alterations would be done by varying the film's sensitivity to certain colours, such as to Red, Green, Blue. These, we can replicate much more easily, today, with colour curves.

Peachy Highlights

Find the composition of the colour you want to introduce to the highlights in terms of Red, Green, Blue.
Meaning: Leave red alone, take away some green, then take away even more blue.
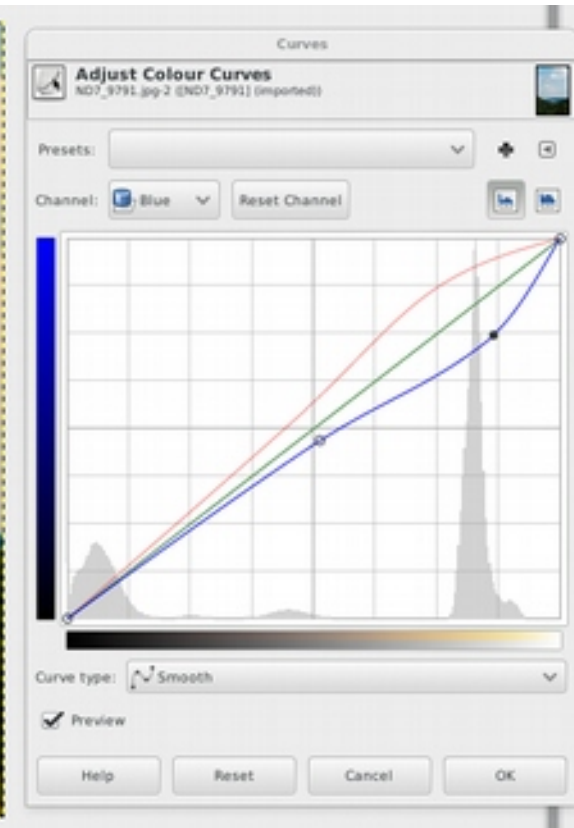
Peach:
Red: 255 (100%)
Green: 229 (89%)
Blue: 180 (70%)

Peach curve:
Red: 0
Green: -1
Blue: -3

To maintain the lightness:

Red: +2
Green: 0
Blue: -2

!Note: keep in mind that when using colour curves, they affect both colour and brightness. In order to keep the same brightness level; when removing 1 unit of blue, instead of doing that, remove 0.5units of blue and add .25 units of red and .25 units of green, in order to balance the brightness. Adding red and green in the same amounts, is the same in terms of colour as removing their combined amounts from blue.

For the sake of printing, skin tones have been referred to in Cyan©, Magenta(M), Yellow(Y), Black(K) terms, usually.

In RGB curves, bringing a curve **up**, versus bringing a curve **down**:

Red   - Cyan
Green   - Magenta
Blue   - Yellow

The average Caucasian skin tone would, on average have :

1xC, 2xM, 2.5xY

Magenta and Yellow are almost the same, with slightly more Yellow. Cyan should be 1/3 to 1/5 of the magenta or yellow value.
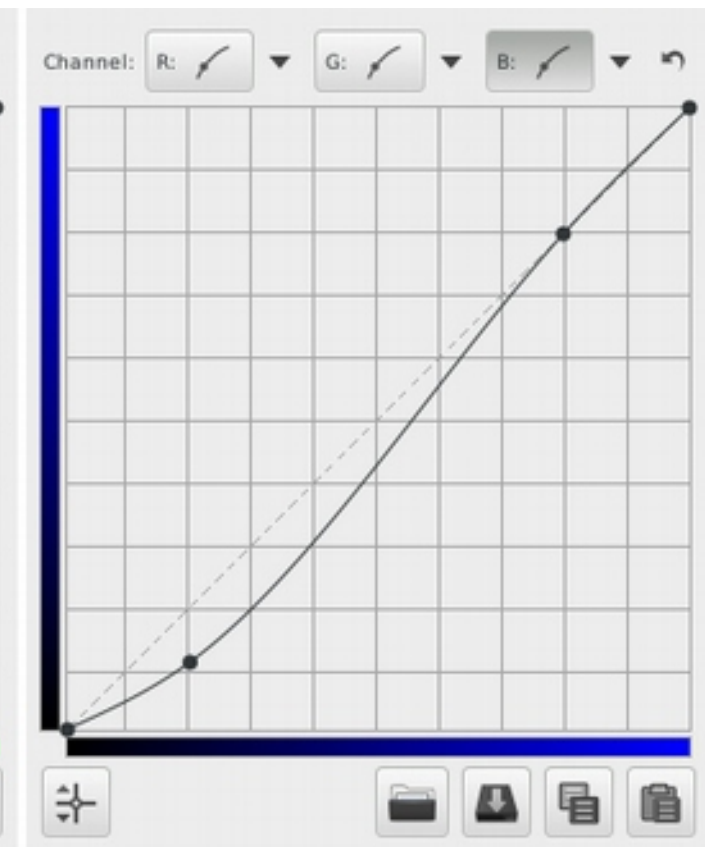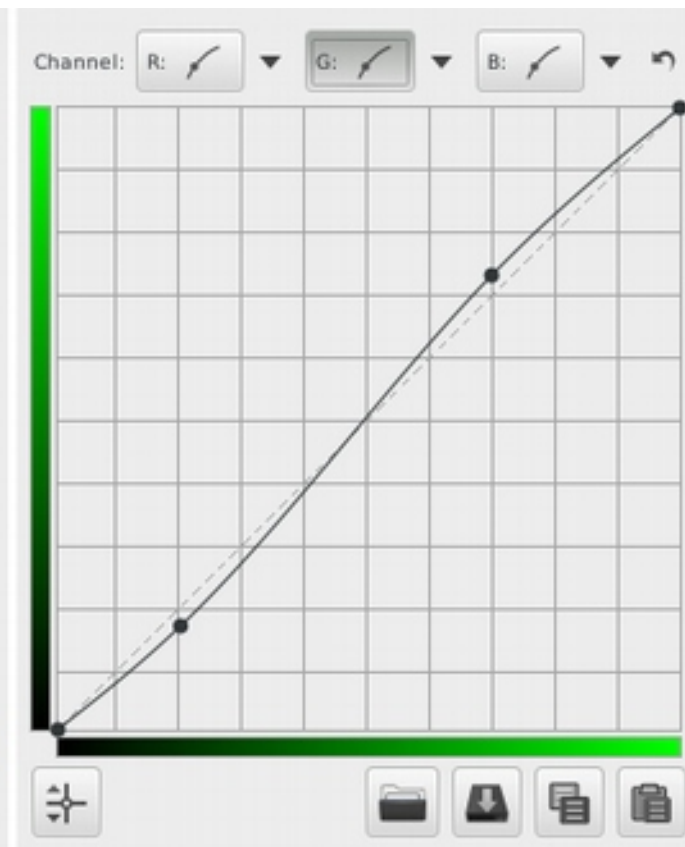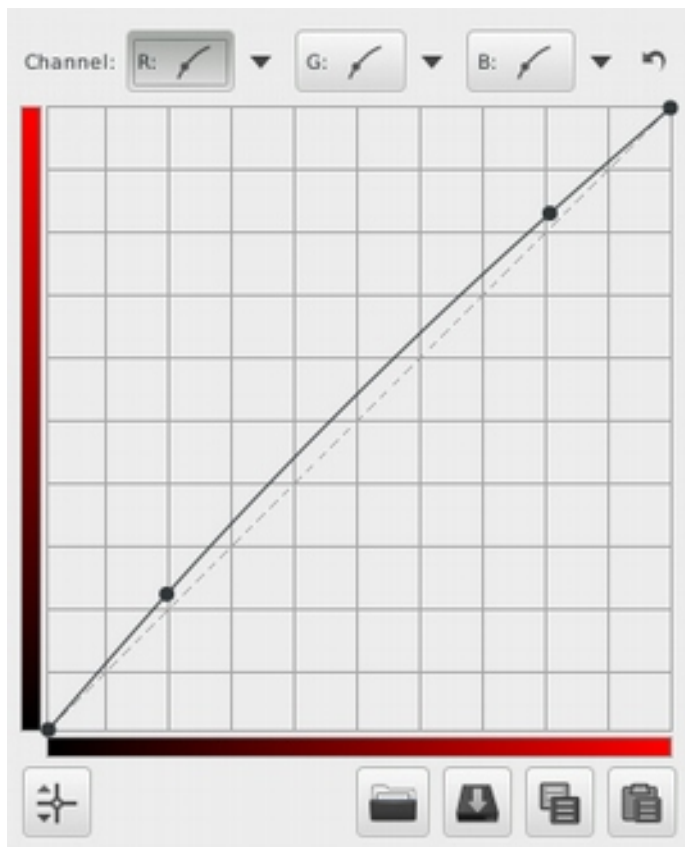
2. Uses for RGB curves: Skin Tones

First I wanted to take BLUE out of the shadow areas in order to give the skin the yellow part of the gold tone; then I added a bit of RED and removed a little GREEN. The recipe is not written in stone ...apply what seems right. In cases like this, subtlety is key.

Another look grandfathered from the film days; the Cross Process look is the name given to a variety of colour palettes resulted from the wrong use of developer fluid, namely developing Slide film as if it were Negative film, and vice versa.

Usually when people refer to this look they mean strong contrast, bold blues, greens and blacks. Here is how RGB curves can give us that.

2. Uses for RGB curves: The Cross Process Look
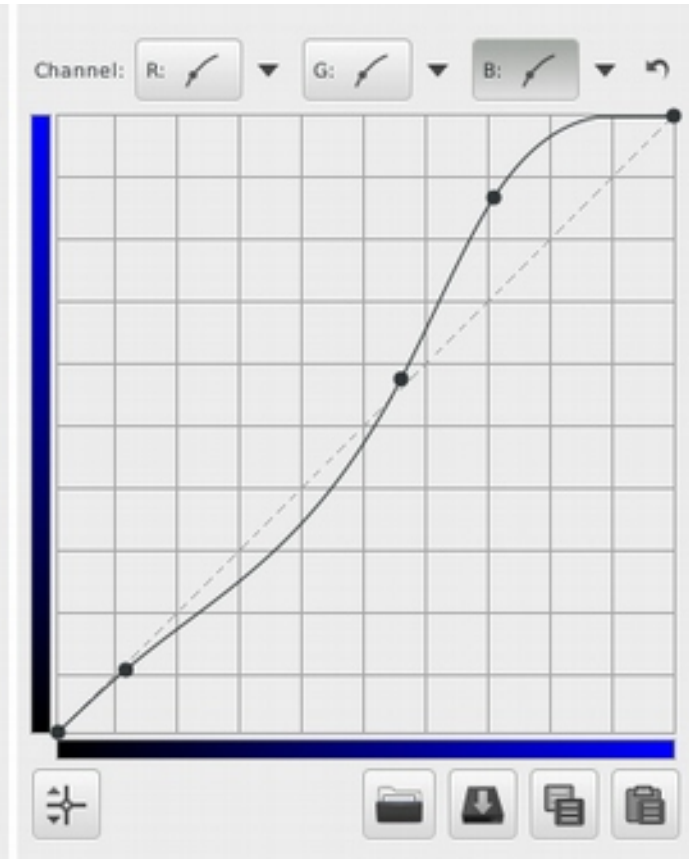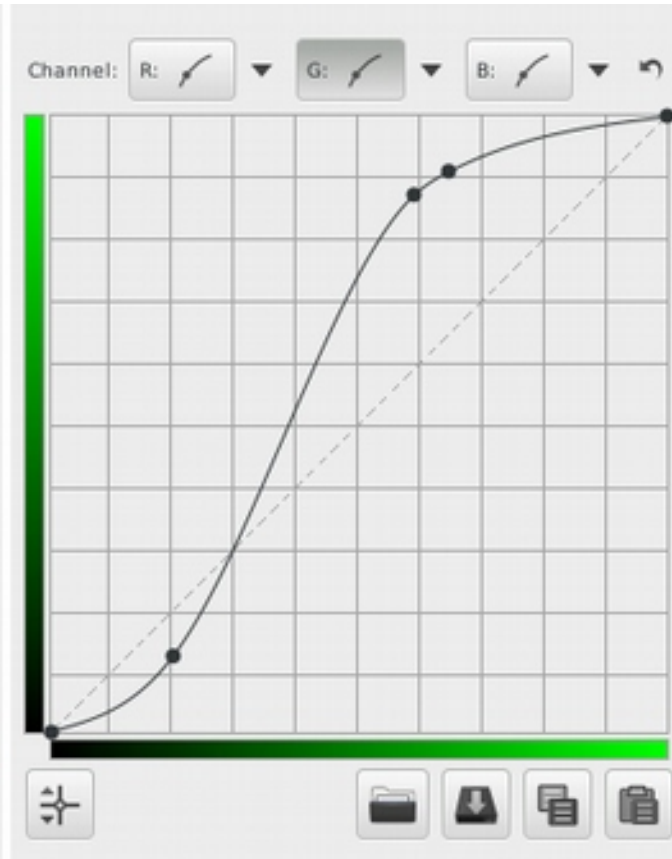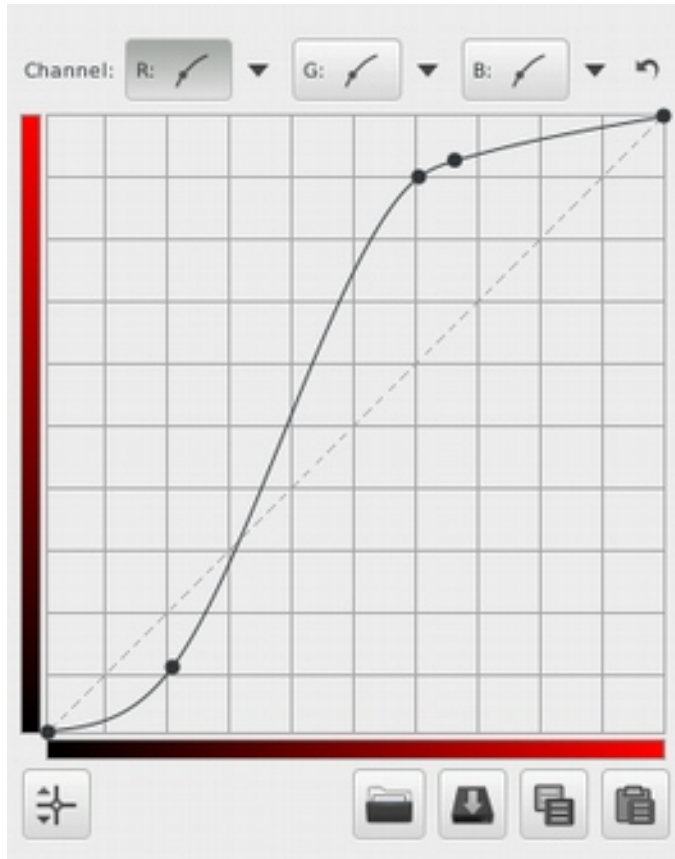
Thank you for attending.
Please direct any questions and feedback to:

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