# Serum - Reference Guide

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greyscalelabs.com

Serum takes the skin-retouching techniques used by photography professionals for years and brings it to use in your video editing workflow. Simply put, it's a process of separating high frequencies (texture and pores) from low frequencies (color and tone) allowing them to be edited separately.

In Davinci Resolve, we generally want to mask the desired areas *one at a time.* With Serum, the seaparational blur creates the low frequency (color) layer, and the high frequency (texture) layer is separated from it. to determines the what will become a part of the color and texture layers. The post-separational blur only effects the color layer, and effectively improves color and tone consistency.
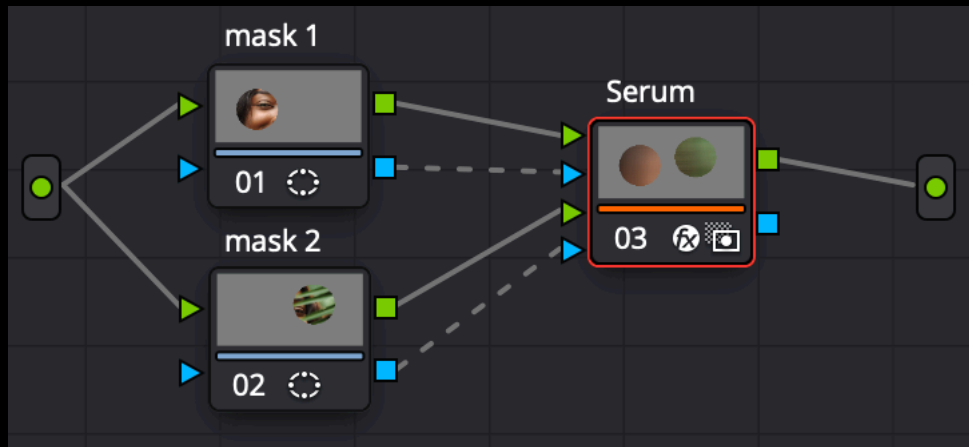
Here's informative videos about bit-depth and chroma-subsampling.

Node Structure
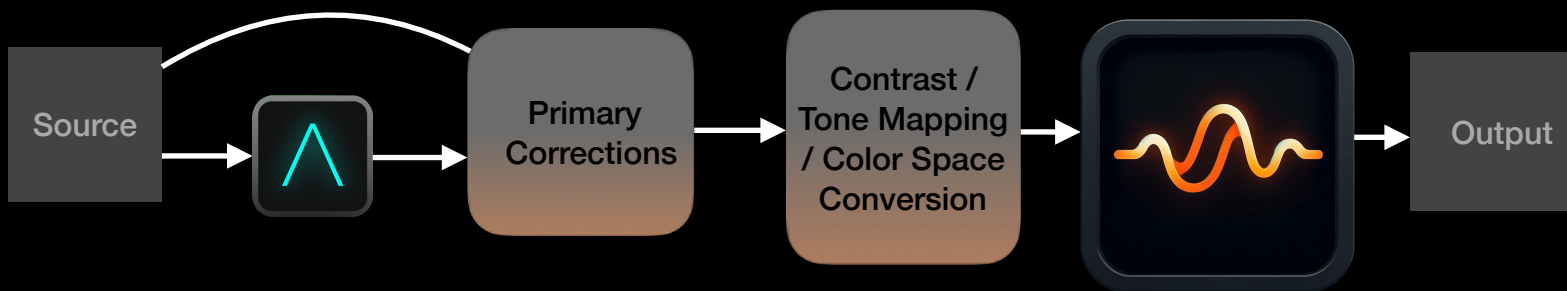
Serum delivers the best results when applied in your final color space. A color space override feature will be added in a future release for use earlier in your node structure.

Interface

Unlike most OpenFX Plugins, Serum accepts up to 2 inputs, allowing for an easier time processing different features independently with one node. Any additional inputs will need to be processed parallel to this tree.
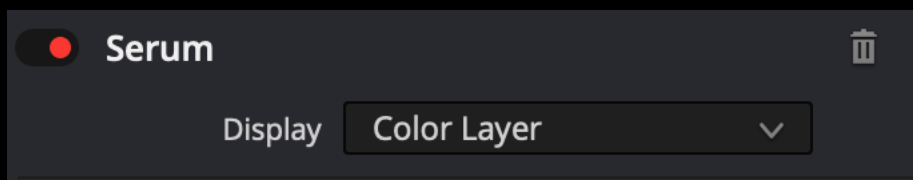

Display:

This describes the output of the node.

Final Output: The processed image, consisting of the texture layer superimposed over the color layer.

Color Layer: Shows the low frequency layer of the image. This is useful when monitoring the strength of your base filter.

Texture Layer: Shows the high frequency layer of the image. This is useful to determine the effectiveness of your base filter in separating the layers.
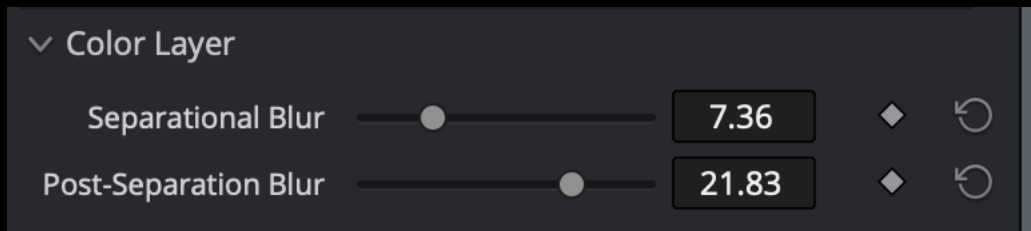
Color Layer:

SEPARATIONAL BLUR
Determines the strength (radius) of the base filter. A larger value will lead to more populous texture layer, but no difference on the final ouput without an active post-separational blur.
*Any increase to this parameter will demand more processing power from the GPU.*

POST-SEPARATIONAL BLUR
Determines the strength (radius) of the color-layer blur. This determines the smoothing effect on the low-frequencies and does affect the final output regardless of the separational blur.
Any increase to this parameter will demand more processing power from the GPU.

The common technique is the begin with the post-separational blur at 0 and decide your separation blur to define texture, then increase post-separational blur to get the desire effect.
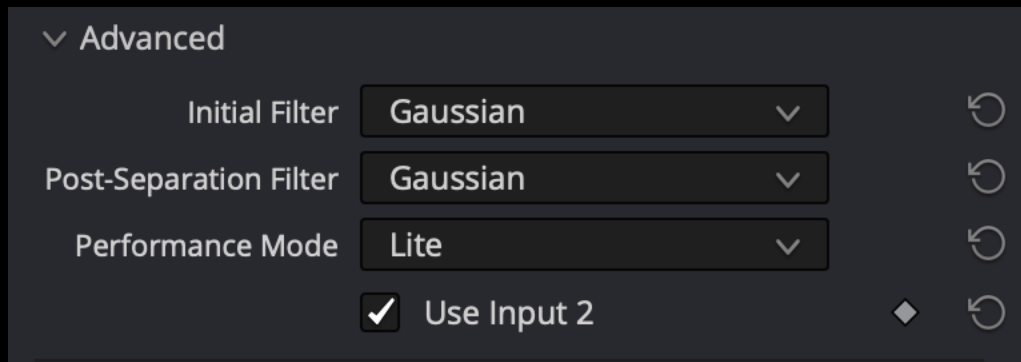
ADVANCED

INITIAL/POST-SEPARATION FILTER:
Determines the algorithm used to perform the blur at each respective stage.

Gaussian *(default):* The accurate but efficient choice, with no specific strengths or weaknesses.
Surface: The best filter for targeting blemishes. Identical to Gaussian but denies blurring of pixels beyond a color delta defined by 'Threshold', which appears once the 'Surface' filter type is invoked.
Box: The fastest performing filter type, but less quality of a blur. This quality loss will barely be detectable in most cases.
Bilateral *(coming soon)*: Allows the user to prioritize color vs spatial similarity in the filter.

PERFORMANCE MODE:
Lite:
Typically Identical to the output of Standard Mode on timelines 1920x1080 and greater, with 1/4 the processing power. An M1 MacBook Air can reach 24fps performance in this mode.

Standard:
Significantly more computationally intensive than Lite Mode, but still trades a small amount of accuracy for performance. Systems with 16GB of VRAM can reach 24fps performance in this mode.

USE INPUT 2:
Determines whether the second input will be processed. The settings for the 2nd input will appear once it is checked off.