

# MY DIGITAL SECRET WEAPON

## *On Using Lasersoft SilverFast HDR*

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If you are a photographer, like me, and your primary interest is in creating high quality images, then we have a common need. I spend a lot of time and effort with a computer to color correct, adjust and edit photographs. So what I want is an application that has those functions as its primary core, and in addition that the tools are efficient and accurate in getting an image to look the best I can make it. Most current, popular image editing applications are stuffed full of functions unrelated to color correction, adjustment and refinement of a photographic image. Those capabilities are mixed in with a lot of other uses of the application, any of which are not photographic in nature or purpose.

In addition image editing, that grew out of digital paint programs, requires that the entire image file be open in the application and in RAM memory to make editing changes. In addition most of the functions like gamut optimization, tone adjustments, curve changes, brightness, and contrast, color balance and individual color adjustment, not to mention sharpening, require engaging a separate individual dialogue window, and using it to make the adjustments or corrections, and then closing it to add the edit changes to the image data in RAM. This is a slow, time-wasting exercise that is inefficient especially applied to a large image file.

Of course when digital camera Raw file processing became necessary, an application to do this same color correction and adjustment, those applications that have been made available open a virtual interactive preview image and the adjustments made with simple sliders can be made consecutively so the editing is cumulative as represented in the preview and only become a real image file if saved as such and exported from the application. Now that works a lot like a good scanning application, which supports color correction, adjustment as well as sharpening all applied virtually to the preview image, and then incorporated in the final scan image produced.

Lasersoft Imaging has been making SilverFast scanner software for most consumer and many professional scanners since the late 1980's. My first experience with it was using it with the Epson Expression 836XL scanner in 1998 and SilverFast at that time was in Version number 4.0. It was already highly refined and developed, and in the dozen years since the company has continued to develop their SilverFast capabilities. An offshoot of the scanner drivers is a very similar program called SilverFast HDR designed originally to open and process high-bit raw image files using many of the same tools and facilities as in the scanner software. When dSLR camera Raw file formats became popular Lasersoft extended the capability to include converting Raw film formats and providing the tools and processes to color correct, adjust and edit these images as well, first in a SilverFast DC series now also included in the HDR version. The result is SilverFast HDR is a fully functional high-bit image file processor that can be applied to image files originating from a scanner or a digital camera. Regardless where the file originated, when opened by SilverFast HDR what the user is working with is a virtual representation on a Preview screen that is interactive with the tools and processes of the SilverFast software, quickly and efficiently to result in a new finished image file ready for all types of use and reproduction. In addition Lasersoft SilverFast HDR is a fully color managed application, and includes SilverFast Print Tao, a utility to print the image files directly from HDR or any other saved files accessible on your computer system.

## LASERSOFT SILVERFAST HDR

I first became acquainted with the current HDR that is part of the SilverFast Archival Suite that includes both a scanner AI version and HDR when I was testing the Epson Perfection V600 scanner, and the Plustek OpticFilm 7600i dedicated 35mm scanner, as well as the new Canon Canoscan 9000f model most recently. The unusual beauty of this Archival Suite is its very efficient “batch” scan capability that includes the infrared iSRD data in a 64-bit raw scanner file. Then when processed to a color corrected, adjusted final image with HDR the iSRD cleaning can be applied as part of the process to a finished image file. This Archival Suite method is thus complete including cleaning and is very time efficient, particularly compared to doing raw file color correction and adjustment processing with a traditional image editor.

But more importantly I have obtained the best image quality from scanned film of all kinds using this SilverFast method with much less effort and time

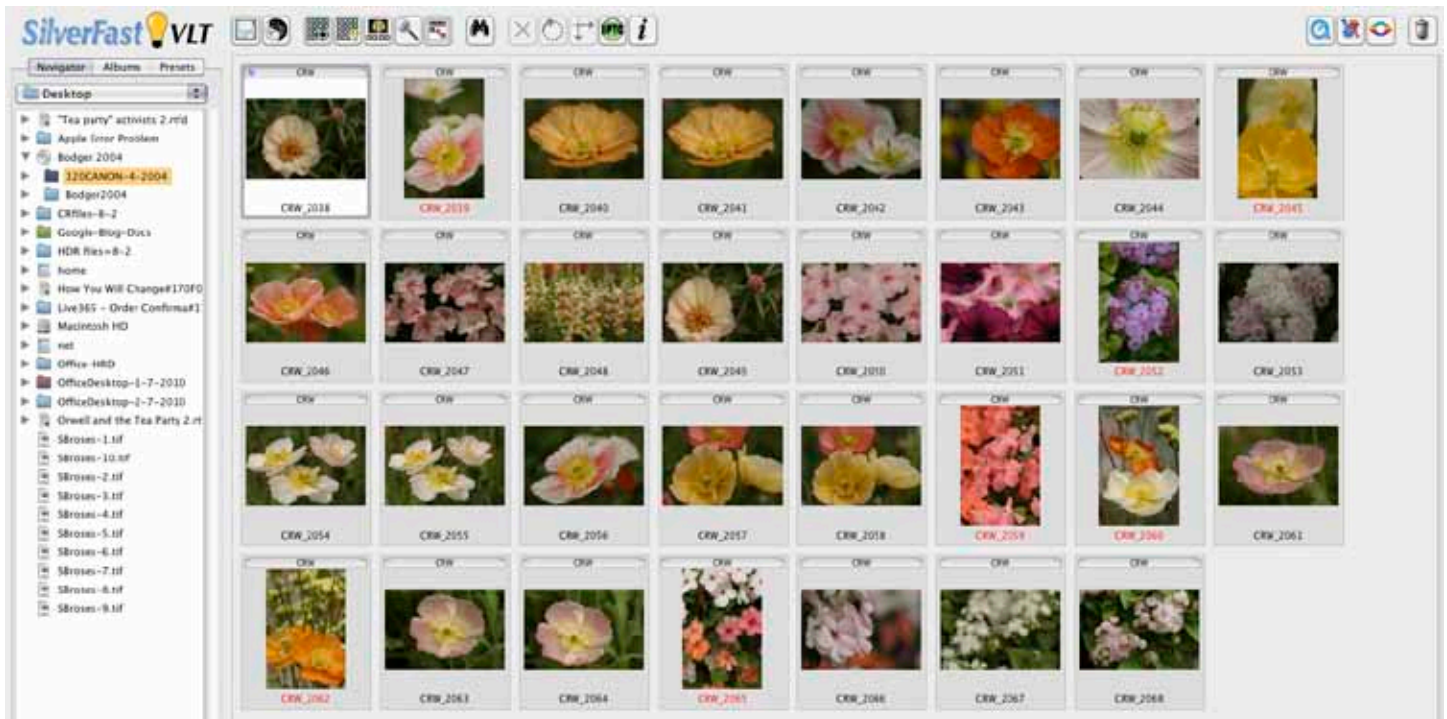
consumed in the process. To complete the picture and also provide a picture of how HDR works I did a series of current color correction and adjustment processing from my collection of dSLR Raw files. These results were also everything in quality I would hope for and very efficiently processed. Of course I think my coverage of SilverFast in my reports on the Epson V600, Plustek 7600i and the Canoscan 9000f provide a good view of how this new scanning software from Laser-soft works with scanned film images. Those who are at all familiar with SilverFast may realize in the past as a scanner driver it has often been used as a plug-in within Photoshop and other image editing applications. But SilverFast in recent years has also had its own Launcher so it can run as a standalone application free of the overhead an image editing program involves. The convenience of course of scanning directly into an application is an advantage, but if the process is batch scanning to high-bit files that convenience is not relative, and as a stand-alone both the SilverFast scanner software and HDR will run most efficiently as stand-alones, and my experience has confirmed it is a more effective workflow.



## THE SILVERFAST HDR WORKFLOW

The remainder of this article will be in the context of captions associated with a series of screenshots illustrating each stage in the process.

When SilverFast HDR is launched I find it most convenient to begin by opening the browser, SilverFast VLT (virtual light table), and then use its navigator to open and create thumbnails of the images I plan to process whether they are saved in a folder, are on a CD or other storage device. Then the image I want to process can be marked (one click) and double clicked to transfer it to open it in HDR's work window.



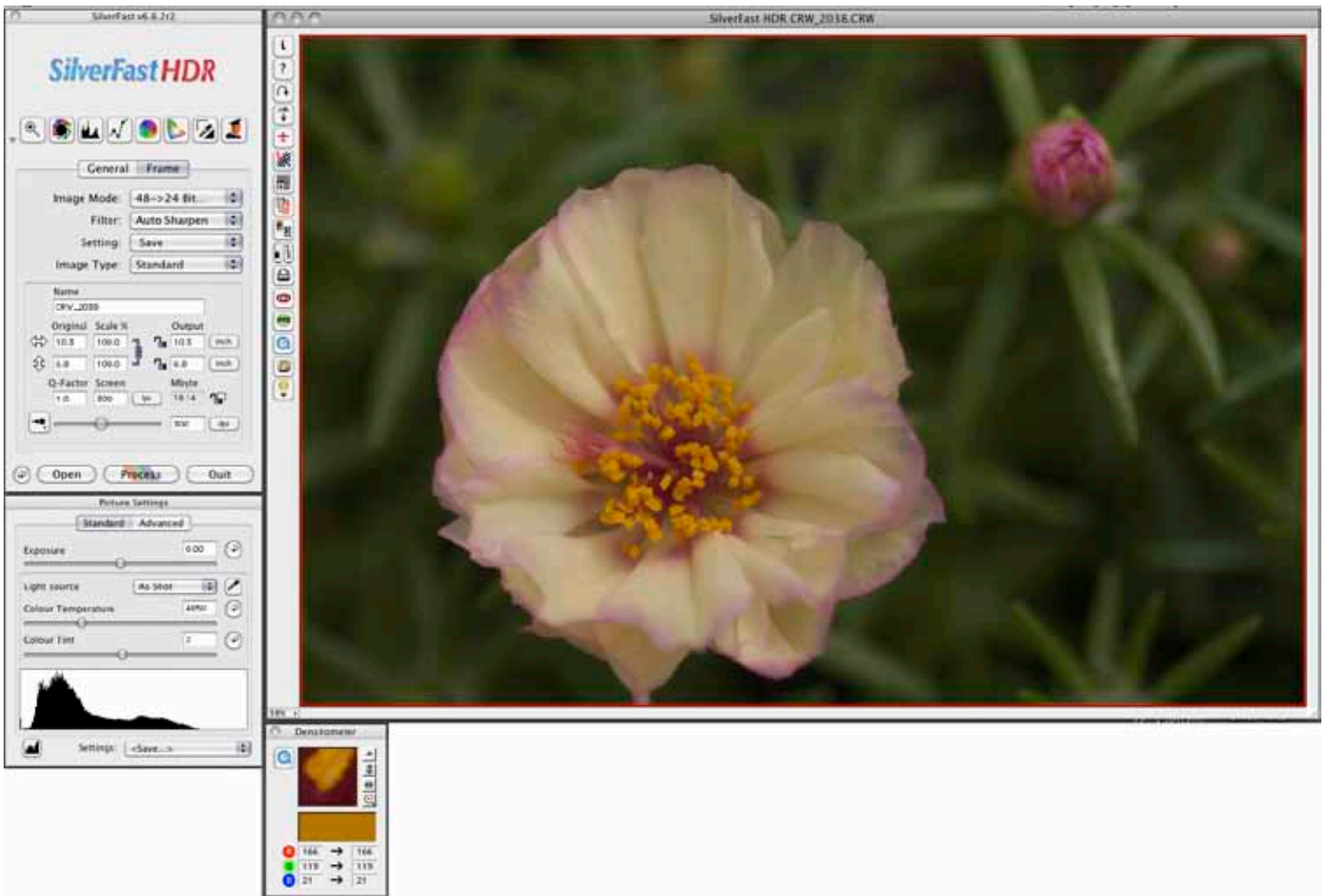
If a thumbnail is too small to evaluate the image content, it can also be viewed as a full screen raw image directly from VLT. The 5th icon from the left at the top of the VLT window if clicked on opens a selection of image screen sizes including full screen.



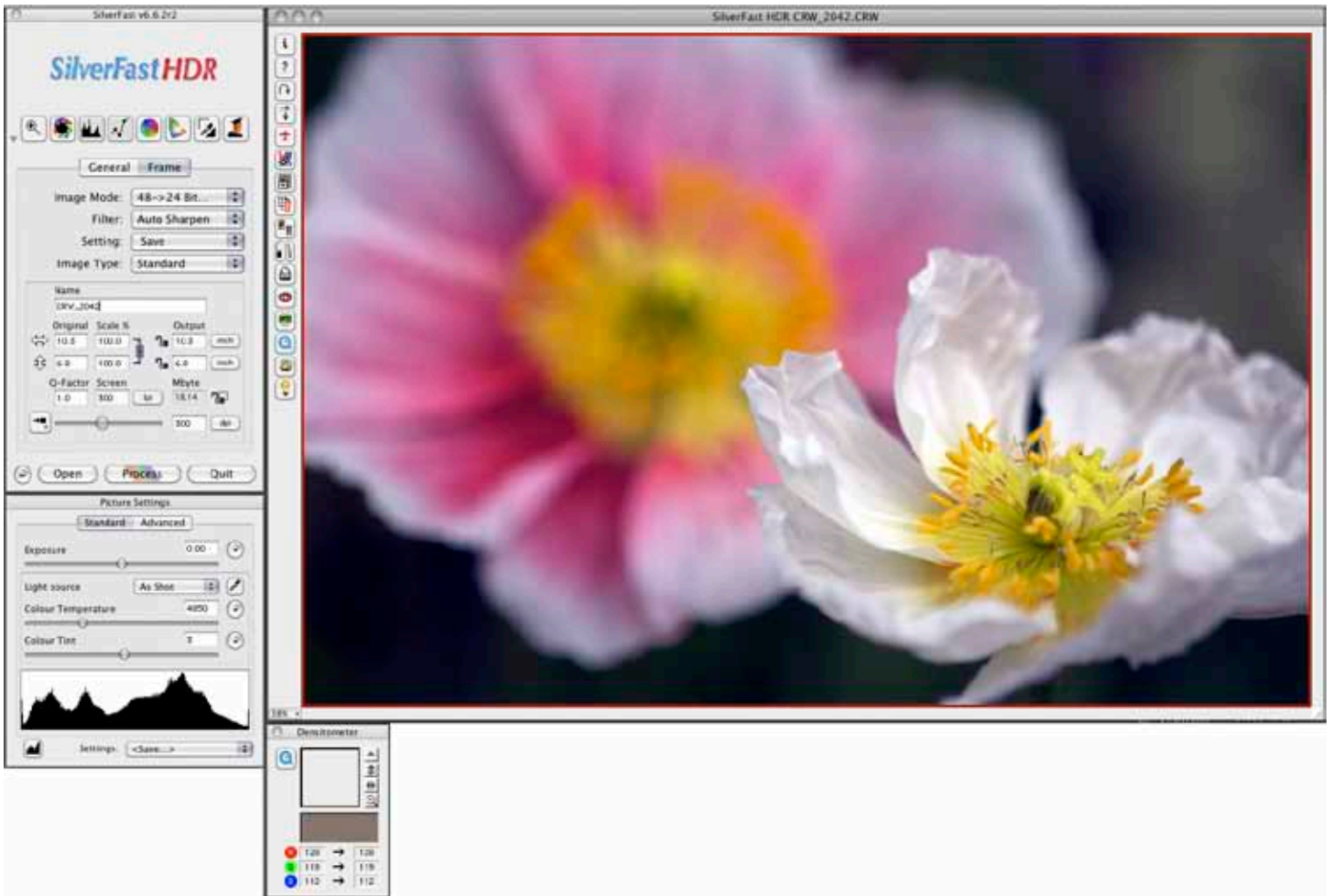
When SilverFast switches from VLT to its workspace with the raw image file preview open on the right. The control window is on the top left, with Options preferences under it with slider adjustments for Exposure and Light Source Color Temperature and Tint. The Densitometer window is free floating and provides a high magnification of what is under the mouse cursor, as well as reads out of adjustment changes to RGB color channels.

Under a row of icons below the nameplate there are two tabs: a General one that sets the image type to positive/negative and provides access to the preference settings. And the Frame tab has all of the output settings like Image Mode, Filter and Image Type that includes a number of auto-adjust selections. The output file drop-down choices as well as resetting the output size and resolution are provided. And at the bottom there are three buttons: to Open, Process and Quit SilverFast.

In this following series of screen pictures I will deal with the adjustments available from the six central icons. Always start the processing with the second from the left icon that looks like a lens aperture. It automatically adjusts the white, black and mid-tone levels of the image.

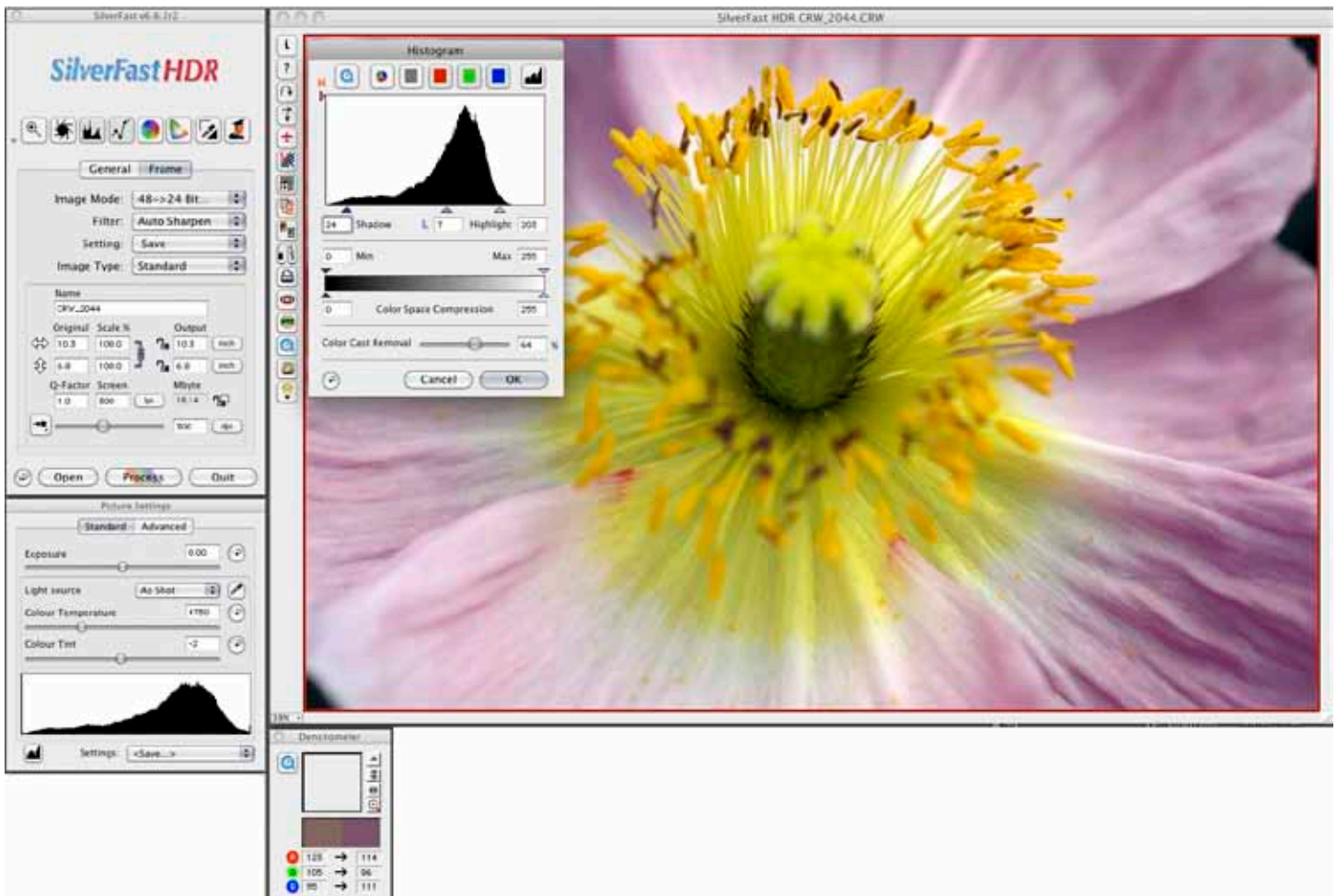


The result of clicking on the second icon is the image data gamut is adjusted to eliminate waste space in the raw file to fill the digital image space with picture information. This identifies and sets both the white and black points of the image. With some images like this white flower in the foreground, the gamut set automatically may need adjustment in Picture Settings. In this case the Exposure should be lowered some so all of the white detail image information in the foreground flower petals is included in the image gamut to preserve the subtle tone and detail in the white petals. Lowering the Exposure value may push some dark image data out of gamut, but in the context of this image there is no real loss to what is important to the picture.

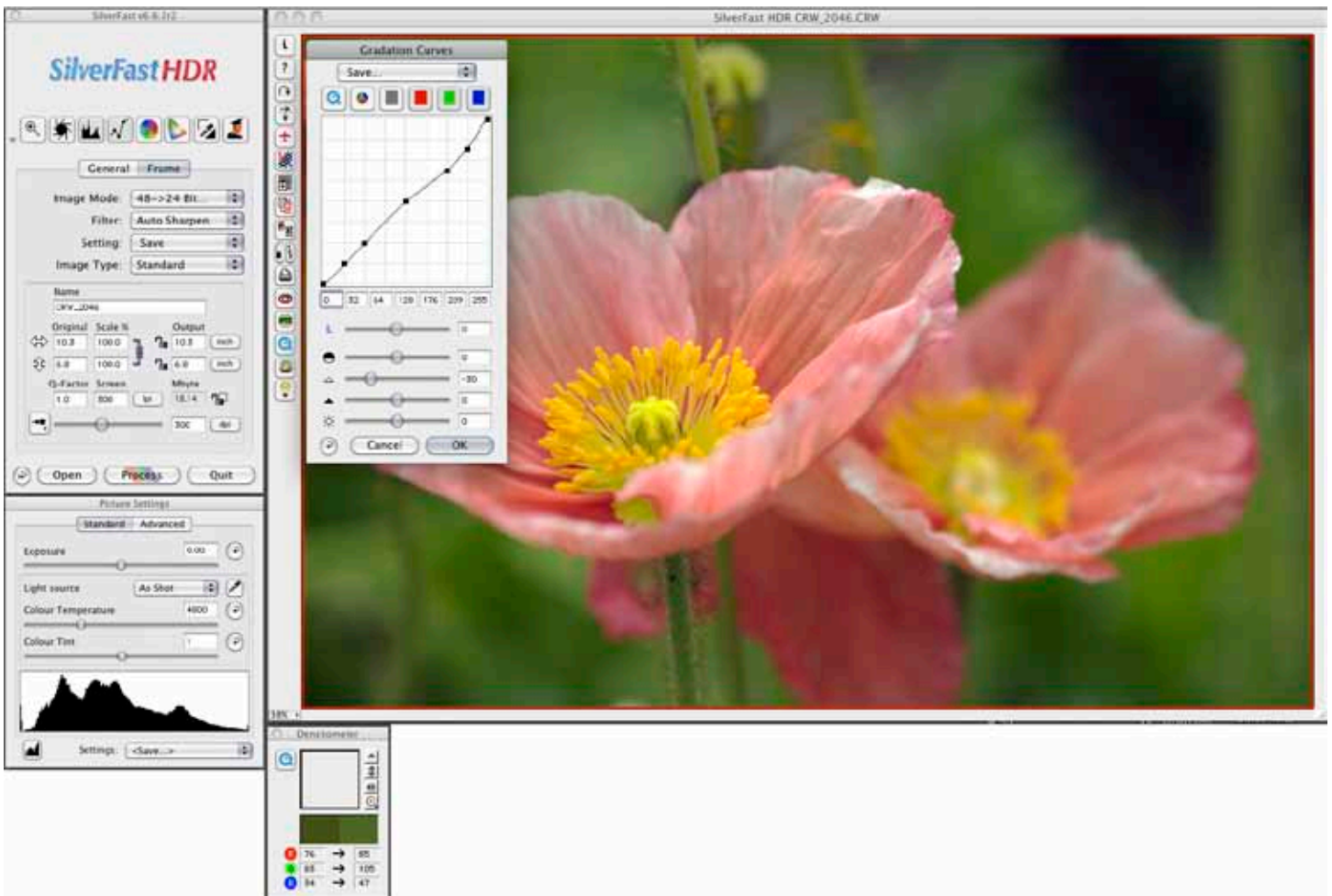


The third icon from the left looks like a chart and opens the Histogram window. It displays a graph of the original image information distribution, as well as small pyramid indicators under the bottom line indicating the location of the white, black and midpoint settings made by SilverFast. These settings may be adjusted manually if desired.

What I have found most advantageous to getting clean color and high quality image adjustment is the Color Cast Removal slider adjustment at the bottom of the window. The Color Cast Removal can be activated as an automatic function in Options preferences. But I now routinely use the slider to view if there are any changes needed to the previewed image, and to choose the setting that produces the best balanced color reproduction. With scans of color film color casts are often present due to the film base and processing, as well as subject conditions that also affect dSLR images like smog and smoke and haze, reflective light from objects in the environment. Some images are clean and free of any color cast, but many are not.



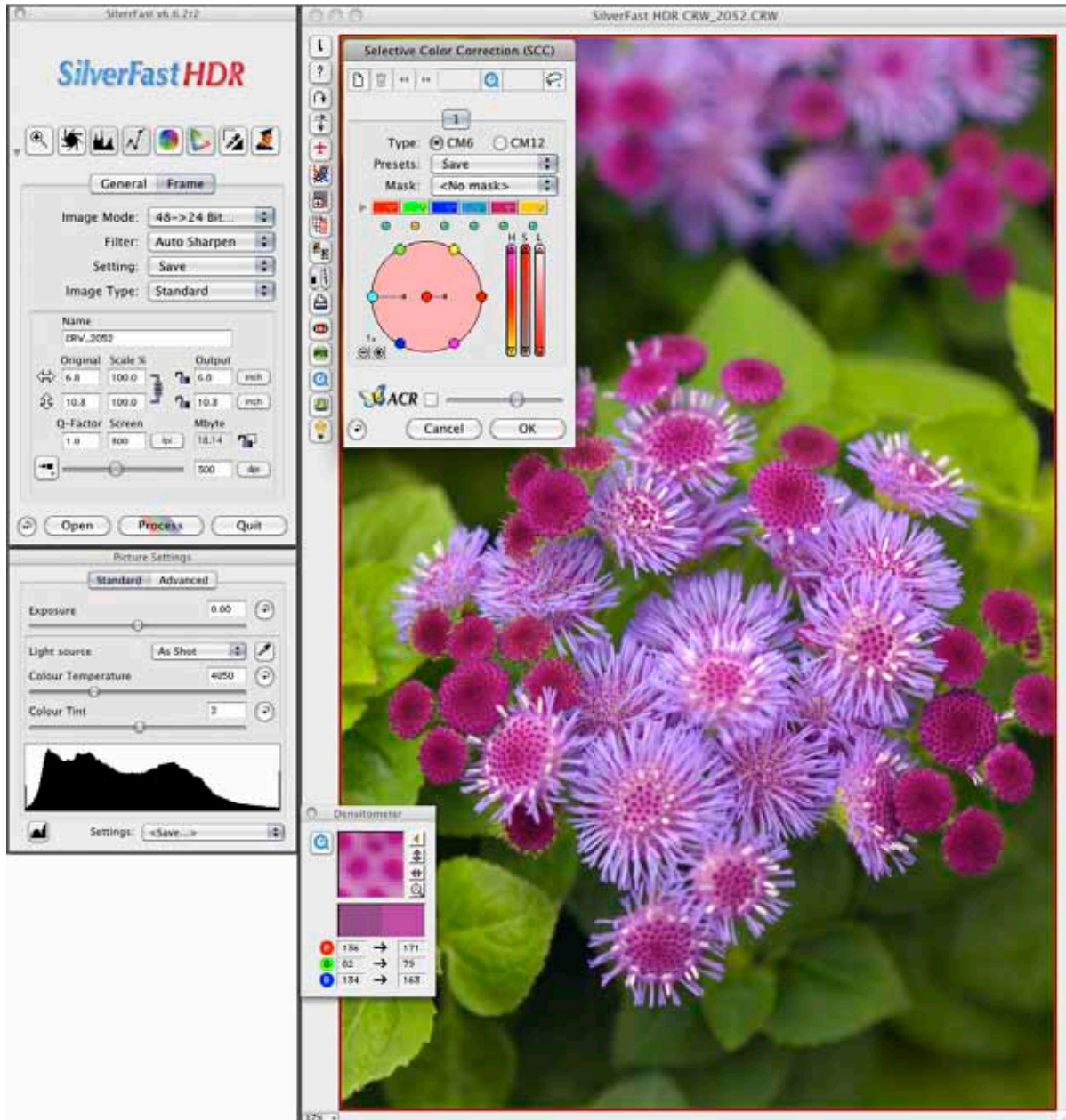
To obtain a desired overall image brightness adjustment, as well as contrast, and most valuably adjustment of the tone depth of highlights and shadows; a set of slider adjustments under the graph window make what used to be the intimidating Curve adjustment, easy. In fact the adjustment of the sliders for brightness, contrast, high-light and shadows are interactive with the Preview image and the adjustments are reflected by modifications to the curves, as well as interactive adjustment to the actual image displayed in the curve line of the graph. So besides an easy adjustment of tone levels in an image, the Gradation Curves dialogue teaches us what a gradation curve chart is and how it works.



Note: At the center of the row of Icons is one that looks like a color wheel that is a global color correction tool. I do use it on occasion adjusting raw scan images, particularly images that have cross-over imbalance (pink highlights and greenish shadows) due to a film or processing error but with Raw digital camera images that has support in the Color Setting window for both color temperature and tint, I seldom find a global color balance adjustment is needed.



The third icon from the right with a varied color patch is the Selective Color Correction dialogue. It allows dividing the color wheel into 6 or 12 segments at the top. Using the 6 segment option I use the shift key and turn the buttons on with the mouse cursor activating all color channels to make a global adjustment to color saturation or an overall hue shift. However its primary advantage, using either the six or twelve segment option, is to click on a subject color in the Preview image you are working with so you can alter its hue, saturation or brightness without affecting other colors in the image. For instance, very often violet/purple color in nature record in film or a digital capture with a weak color reproduction that can be enhanced using this selective color correction tool. But what I find I use it for most is to fine tune human complexion tones, which even when just slightly off are all too apparent in a photograph.



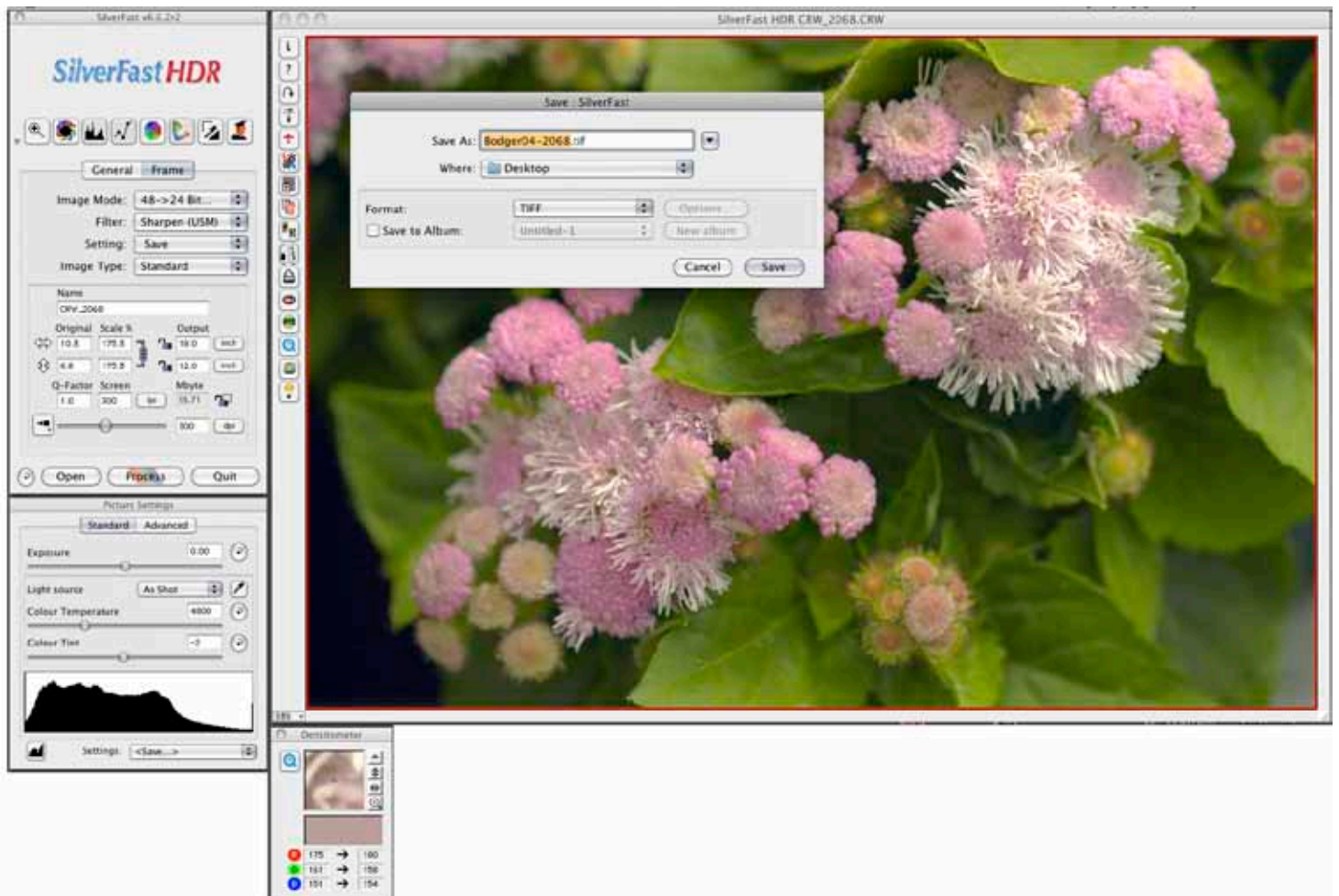
Processing digital camera Raw files I use SilverFast HDR to output my results in the print image size I will use to reproduce the image, usually 12x18 inches at 300dpi. You should always make this size setting before you apply sharpening filtration to the image before processing it.



I prefer to use Sharpen (USM) with HDR because it provides a magnified before and after comparison of a select part of the final image. This allows fine tuning the amount of sharpness precisely to just enough to crisply define the image detail, without getting an excessively harsh overall look applied to the image.



With size and the sharpening chosen the last thing in a usual processing workflow is to process the image. SilverFast pops up a Save dialog which allows a finished image to be saved, but does not support saving back to the original file, so you are never endangering an archived Raw file, that you can then always go back to an generate a new finished image. In other words save this newly processed version to a new file name. SilverFast provides a structure to save these finished files to albums that are automatically thumb-nailed and the file storage located wherever the user wants to archive the image.



SilverFast includes a printing utility that is easy, efficient and color managed called Print Tao. The access is the second icon from the left at the top of SilverFast VLT, select Print Tao and a new workspace is opened. At the top is a navigator that allows you to go to any storage of files accessible to your computer, including flash memory cards and CD or DVD's. Click on any of these files and the green arrow will move a replication of the file content to the Preview window – the file does not have to be opened to print it. There is a box to select the image size you want printed, as well as an icon in the vertical Preview frame bar to center the image on the page. And there is also a “T” icon that supports including text like a title or a copyright notice added at an edge of the printed image. There is access to select the printer and page setup for paper size and orientation. When you have all the factors chosen, including the color management selection of printer profile, just click print and the driver window appears to finish the setup to print the image, and its settings are remembered by Print Tao for the next print, you don't have to reset the printer driver for a series of prints. Printing more than one image to a page is easily arranged, even setting up a contact sheet page of thumbnails with filenames under each image, is supported. You might also notice that when a printer profile is chosen, the Preview image responds interactively adjusting the image and gives you a visual screen prediction of how it will print.

