

## SYBEX Sample Chapter

# SilverFast<sup>®</sup>: The Official Guide

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## Chapter 6: Fine-Tuning the Color in Your Scans

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# Fine-Tuning the Color in Your Scans

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*We've discussed* the details of capturing and adjusting a low-resolution preview with the auto-adjustment tool (Chapter 4) and with manual adjustments (Chapter 5). In this chapter, we dig a little deeper into some of the tools and techniques for fine-tuning your color and discuss some alternative methods of making adjustments.

The following topics are covered in this chapter:

- **Setting and using densitometer points**
- **Color correction with curves**
- **Color correction using the powerful MidPip tool**
- **Selective color-based corrections**
- **Making your own selections through masking**
- **Color restoration made easy**

## Setting and Using Densitometer Points

It is often useful to measure, monitor, and adjust grayscale values and the values of specific color—such as neutrals (grays) and “memory colors” (such as facial skin tones)—within an image. This can easily be done in SilverFast through the use of densitometer points. SilverFast allows for the setting and editing of up to four densitometer, or “fixed-pipette,” points (known as fixed-PIP points). Each point can be set to measure in a different color mode if you prefer.

### Color by Numbers

The human eye is notoriously inept at making quantitative color judgments. And our evaluation of color changes with time of day, surrounding colors, how we feel, lighting conditions, even what we had for lunch!



Figure 6.1

Set four fixed-pipette locations in this image.



When we were kids we used to create pictures by filling in the color-by-numbers spaces. We can, and often should, take advantage of this same concept when we adjust colors in our scanned images. Using numeric values to adjust our colors frees us from the uncertainty that exists when we make color judgments strictly by eye. One of the most effective ways to evaluate and monitor numerous values in your images is to use densitometer/fixed-pipette points. Here is how you can use fixed-PIP points to evaluate and adjust the color in your images.

As always, perform a clean prescan first. For this exercise, let's use a picture of another of my nieces, Lindsay Faye. (An uncorrected copy of this image can be found on the CD.) This image has several points we can use to monitor and adjust numerically. Also, zoom in on your image; working with an enlarged image is usually a good idea because a bigger image allows you to place your PIP points more accurately. This (and other color images) is shown in the color signature and can be used for reference, but cannot really be used for scanning purposes as it is screened there. However, I have selected my scan images to be representative of what you will find in many images. You can find similar measurement points in your own images.

### Choosing and Setting Fixed-PIP Points

I typically look for two kinds of areas in an image to measure, monitor, and adjust: I look for neutral areas first and then any key memory color areas. Memory colors are important areas of our images that need to “look” right. Key memory color areas include facial skin tones, green grass, blue skies, and red stop signs. In this image of Lindsay, there are several neutral areas we can use, including the white areas of her

dress and hat, the white snow on the barn roof, and the wicker chair in which she is sitting. The key memory color area in this image is Lindsay’s skin.

If you remember our discussion of color theory basics in Chapter 1, all color values in a digital image are controlled by the underlying grayscale values of the pixels. We can take good advantage of this concept by looking for and adjusting neutral/gray areas in our images. If we find and make our neutrals neutral, the remainders of the colors in our images should fall into place as well. Working with neutrals is one of the cornerstones of color capture, correction, and editing.

To set a pipette point, simply hold down your Shift key and click the areas you would like to monitor. Place four PIP points at the following locations, as shown in Figure 6.1:

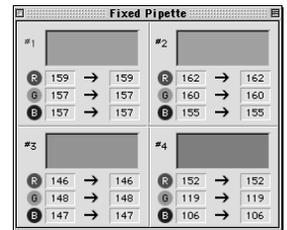
1. The bright white spot on the hat
2. In the snow on the roof of the barn
3. On the wicker chair
4. On Lindsay’s forehead

PIP points 1–3 are neutral points, and point 4 is a skin tone memory color.

Once the PIP points are placed, fixed-pipette symbols will be placed over each spot on which you click. In addition, an individual densitometer window will appear for monitoring each point (Figure 6.2).

Figure 6.2

Initial PIP densitometer readings



## Reading the Raw Measurements and the Histogram

Once we have set our four fixed-PIP points, we can evaluate the values and start correcting our image, monitoring the densitometer reading as we go. The initial densitometer readings are as follows:

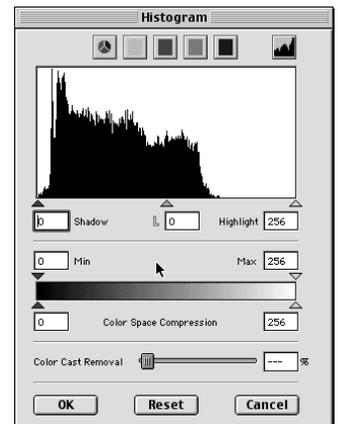
PIP	Location	R	G	B
1	White hat	159	157	157
2	Snow on barn roof	162	160	155
3	Chair arm	146	148	147
4	Skin tones	152	119	106

Click the Histogram tool and then click the mode button in the upper-left corner of the Histogram window until the single-channel black data histogram is visible (Figure 6.3).

When we analyze highlight neutrals, we are looking for two things: our highlight values should be equal (that is, neutral or gray), and our diffuse highlight should be about 242. As we can see by looking at the PIP densitometer numbers in the white hat and the snow on the barn, our white highlights are neither neutral nor light enough. For instance, we would like to see our white hat values, which are currently 159, 157, 157, to be closer to 242, 242, 242. A look at our initial histogram shows

Figure 6.3

Initial histogram of raw image



why our highlight readings are so dark. The highlight triangle is set way out to the right of the significant data, as shown in Figure 6.3.

## Making Initial Image Adjustments and Tracking Numbers

We will use our histogram to adjust our image and we will use our PIP densitometer reading to guide our adjustments.

Click the auto-adjustment tool to initiate the adjustment and then view the PIP densitometer points (Figure 6.4). Note that PIP densitometer values for point #1 now read 201, 200, 200. The #2 point now reads 205, 202, 197. This is an improvement. All the numbers are now closer to our target highlight value of 242.

Because the image has improved, we may be inclined to accept the auto-adjustment. But our densitometer reading informs us that we can do better:

1. Activate the single-channel histogram we used earlier. Note that the highlight triangle has moved significantly to the left as a result of our auto-adjustment tool use.
2. While watching the #1 and #2 PIP densitometer readings, move the highlight triangle farther to the left until one of the three (red, green, or blue) values reaches 242.
3. Note the position of the highlight triangle and the new PIP densitometer values (Figure 6.5).

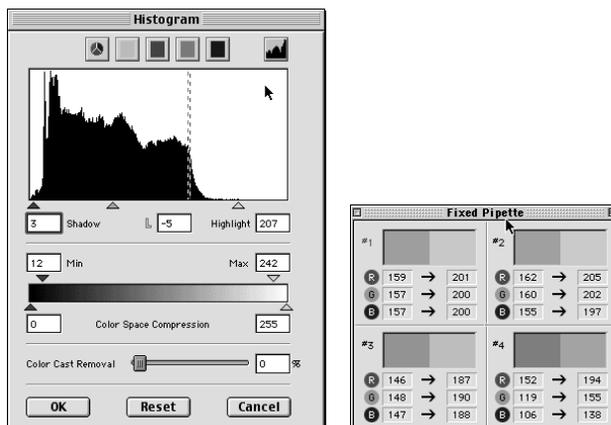
Our readings at point #2 are now 243, 242, 239. These values are very close to the neutral highlight targets values of 242, 242, 242.

## Fine-Tuning Histogram Values

To fine-tune our highlight values, we will now go to the three-part histogram:

1. Activate the three-part RGB histogram by clicking the Histogram tool and clicking the histogram mode selection button in the upper-right corner of the window. The dialog now presents us with histograms for all channels (Figure 6.6) so that we can edit them separately. Our current #1 PIP densitometer values are R = 243, G = 242, and B = 239.

Figure 6.4  
Readings after  
auto-adjustment



2. While watching the #1 densitometer values, move the Red channel highlighter until the R densitometer value is 242.
3. Now, while again watching the #1 densitometer values, move the Green channel highlight slider until G equals 242 in the densitometer.

Your final histogram and densitometer readings are shown in Figure 6.6.

## Evaluating Skin Tone

Once we have the highlight adjusted, we can have a quick look at the skin tones. Unlike neutral values, skin tones are never equal (as long as we are working with live bodies). Also, unlike white highlights, which have specific target values such as 5%, skin tones will have a wide range of tonal values depending upon whether we are viewing and measuring the values in a highlight, midtone, or shadow region.

What we do know about skin tones is that they should fall in a range of RGB ratios. Now, whole books and careers have been based upon evaluating and adjusting skin tones, but we don't have time for all that here, so I would like to provide some simple guidelines to get you started.

Nearly all people have skin tones values in which red is greater than green and green is greater than blue. This is easy to remember because that is the order in which most of us refer to those colors: RGB. So just remember RGB (R > G > B).

Now, to get a bit more numerical about it, these RGB ratios typically fall in the range of 5/4/3 to 5/3/2. For skin that you think should be a bit more red, like the skin of a red-haired Irishman, you might look for a ratio of 5/3/2, which places more emphasis on the red values. If your image is of a Polynesian surfer, who will naturally have more green in their skin, then a 5/4/3 ratio might be more appropriate.

Measure the skin tone of Lindsay. Look at the densitometer reading for point # 4 in Figure 6.6. We see that Lindsay's skin tones measure a perfectly human R = 237, G = 201, B = 182, with R > G > B.

Now compare the original image with your final corrected image, shown in Figure 6.7 and also in the color section. Notice how the final image is much brighter and has better contrast and that the highlights are bright white and neutral. And

Figure 6.5

Readings after manual adjustment

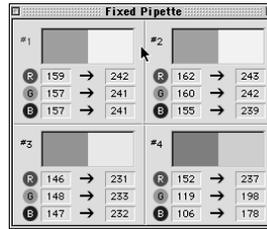
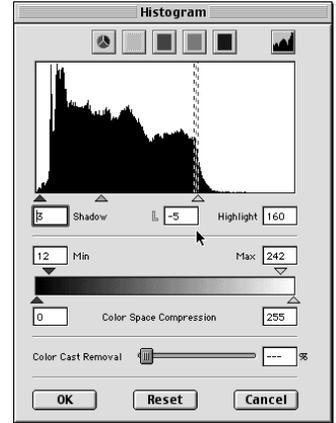
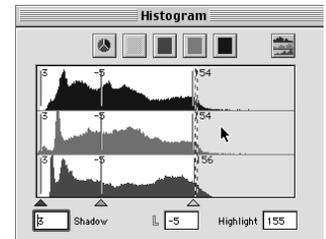
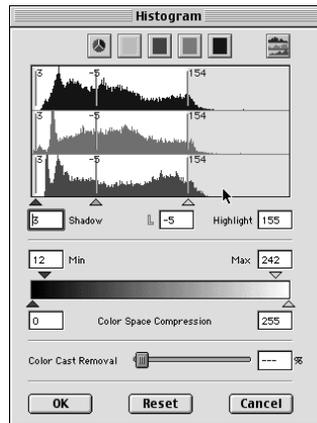


Figure 6.6

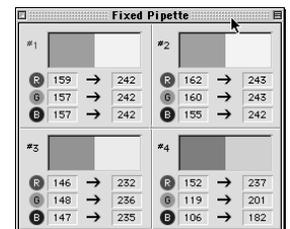
A three-part histogram



After additional manual corrections



After initial auto-correction



PIP readings after additional manual corrections

because we guided our adjustment based upon numbers rather than just visual cues, we can have confidence that the corrections we have made are good ones.

If you actually calculate the ratios here, you will determine that they are 5/4/1.7. This deviates slightly from our 5/3/2 target but is acceptable, because 5/3/2 is a general target value, not an absolute. If you care to fine-tune to these values, you can make adjustments to the individual channels (of the color values you would like to change) of the Gradation Curve tool. (See Chapter 4 and the next section in this chapter for specific instruction on use of the Gradation Curve tool.)

## Color Correction with Curves

For making highlight and shadow value adjustments, nothing beats the histogram; it's visually easy to adjust and intuitive. But for adjusting the values between the highlight and shadow, we need a different tool, one that gives us more subtle control of the entire range of grayscale values from the highlight to the shadow. That tool is the curve tool, or in the lexicon of SilverFast, the Gradation Curve tool .

Figure 6.7  
Comparison of the  
Lindsay photo (left,  
original image; right,  
the final corrected  
version)



Unlike the histogram, which allows you only one point of control (the midtone slider) for adjusting all the grayscale values, the curve tool, which offers a line rather than a single triangle slider point, gives us virtually unlimited ability to control the distribution of our intermediate grayscale values. It is worth mentioning that because we cannot actually see any image data in a curve window, we nearly always use the densitometer measurement values to help guide us when we work with curves. To see how a curve tool is used and fits into a workflow, use the following example. For this example, scan an image of a barn and some autumn trees in which there is no true white highlight. (An uncorrected image of this barn can be found on the CD.) Perform a clean prescan, then follow along through the subsequent sections.

## Evaluating an Image

The first three characteristics you may notice about this image are as follows:

- It is rather flat looking (low contrast).
- The colors are not well saturated.
- There is no true diffuse highlight.

In cases like this, we must depend upon image help and information from our tools. As we learned from previous exercises, we look for neutrals to measure and then we view and evaluate our histogram to look for clues about color cast and where to set our highlights and shadows.

When we look for a neutral in this image, about the best we can find is the weathered wood on the side of the barn. Although this wood may not be perfectly neutral, it's close enough for us to measure while we look for any obvious color cast. Besides, it's all we have!

Place several fixed-PIP points around the barn to measure and monitor the RGB values, as in Figure 6.8.

Read the RGB values and you will notice that the wood is nowhere near neutral. There is a strong presence of blue, and red is weak. For example, the PIP #1 values are R = 50, G = 73, B = 92, as shown in Figure 6.9.

Activate the three-part histogram by choosing the Histogram tool and selecting the three-part histogram mode as we have done before.

When we view this histogram (Figure 6.10), we see two obvious clues to this image. We see that both the highlight and shadow ends of the histogram need to be compressed. Also, due to the offset nature of the histograms, we can see that this image probably has a color cast.



Figure 6.8  
Raw barn image  
with location of  
fixed-PIP points

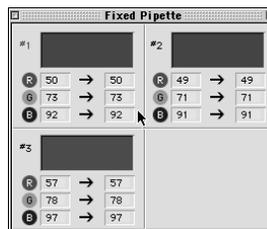


Figure 6.9  
Initial fixed-PIP densitometer readings

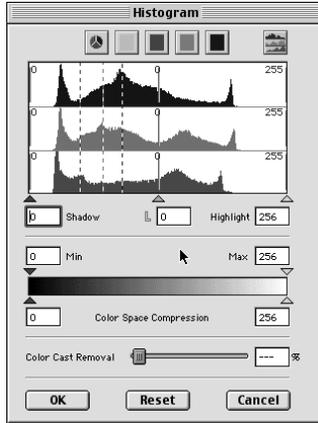


Figure 6.10

**Initial histogram needing tone compression and color cast correction**

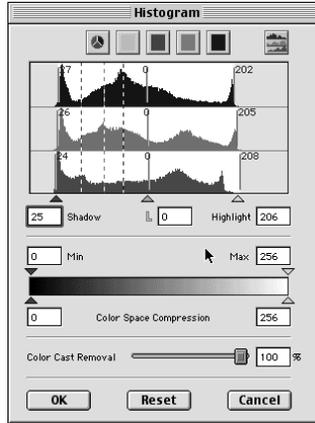


Figure 6.11

**After applying tone compression and color cast correction**

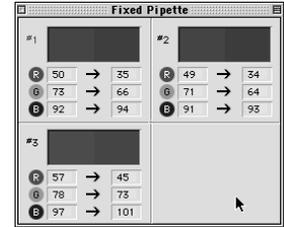


Figure 6.12

**Fixed-PIP densitometer values after histogram correction**

## First Histogram Corrections

We begin our image correction by working in the three-part histogram, compressing the highlight and shadow points separately on each channel to improve the contrast of the image and remove the color cast from the highlight and shadow regions. The corrected settings are shown in Figure 6.11. (See Chapter 4 for more information on these topics.)

Now remeasure the three fixed-PIP points. Note that the RGB values are closer to neutral but not quite there yet. In PIP # 1, R = 35, G = 66, B = 94 (see Figure 6.12).

The highlights and shadows have been neutralized, but the midtones clearly are not. This is where the Gradation Curve tool will be most useful, working on midtones.

Click the Gradation Curve tool . The Gradation Curves dialog appears. Initially, it is a straight line (see Figure 6.13).

## The Adjustment Plan

Our plan is to use the closest object we have to a presumed neutral, the weathered gray side of the barn, to guide our adjustment to neutrals. We will make the barn a neutral gray. If we manipulate this first black (master) curve, we will be editing all three colors at once. We need instead to manipulate the color channels separately.

Because all of the RGB values are different, we will use the middle values—which in this case are the green values 66, 64, and 73 for the three fixed-PIPs—as our numeric targets. This means that we will adjust the red and blue curves.

Click the red square at the top of the window. A new window with an editable red curve appears.

Keeping your eye on the three fixed-PIP densitometer readings, pull the middle of the red curve up until the red values are approximately equal to the green values on all three readings. They will rarely all be equal in a circumstance like this, but get as close as you can to something like Figure 6.14. Experiment with changing the arc of the curve to get the best results. You may notice that I have moved the midpoint of the curve toward the shadow end as well as up. This is the type of subtle adjustment and control that a curve adjustment affords us. A simple movement of a histogram midtone slider would not.

Hold down the Command/Ctrl key when you click and drag the middle point and the entire line will move smoothly. If you do not hold down the key, only the dragged point will move.

View the RGB values in the updated fixed-PIP densitometer. Notice how the red values, while not exactly equal to the green values, are close.

Now perform the same adjustment using the blue curve. Activate that curve by clicking the blue square at the top of the window. Pull the blue curve down until its values on all three fixed-PIP densitometers are as close to the red and green values as possible (as shown in Figure 6.15).

## Color Correction Using the Powerful MidPip Tool

One of the most powerful, and easy-to-use, color correction tools provided by SilverFast is the MidPip (middle pipette) tool, located between the highlight and shadow point tools. The

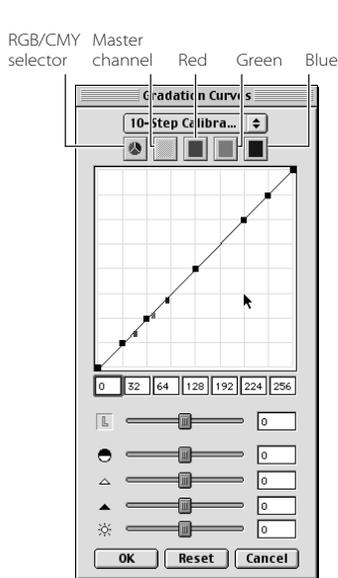


Figure 6.13  
The Gradation Curves dialog

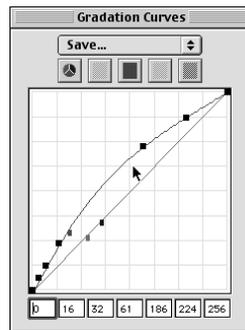


Figure 6.14  
Values for the barn after adjusting the red curve

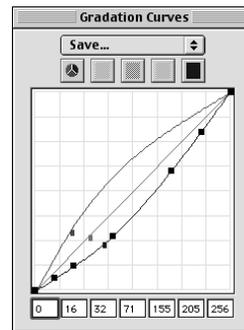


Figure 6.15  
Values for the barn after adjusting the blue curve

#1		#2	
R	50 → 62	R	49 → 60
G	73 → 66	G	71 → 64
B	92 → 94	B	91 → 93
#3		#4	
R	57 → 77		
G	78 → 73		
B	97 → 101		

#1		#2	
R	50 → 62	R	49 → 60
G	73 → 66	G	71 → 64
B	92 → 64	B	91 → 63
#3		#4	
R	57 → 77		
G	78 → 73		
B	97 → 70		

MidPip tool was designed specifically to help us quickly and easily color-correct images by allowing us to neutralize up to four different areas in an image. This is particularly useful for images having color cast that varies from one portion of the image to another.

In this exercise, I use the MidPip tool to color-correct the original autumn barn images by neutralizing the barn, which showed a complex color cast (review Figure 6.12):

1. Perform an initial preview scan.
2. Adjust the image with the auto-adjustment tool.
3. Select the MidPip tool by clicking in the pipette tool symbol between the highlight and shadow point tools .
4. Click on the left side of the front of the barn (see Figure 6.16).
5. Select the MidPip tool again and click in the middle of the front of the barn.
6. Select the MidPip tool a third time and click on the right side of the front of the barn.
7. Now double-click the MidPip tool. This will activate the MidPip data window.

The MidPip data window shows both the initial (source) and corrected (destination) data for each point. For instance, point number 1 has R/G/B source data values of 85/101/122. The destination data values are 76/76/76, thereby making that point and surrounding area neutral. Similarly, the other two points have been neutralized. (Uncorrected and corrected versions of this barn image labeled C20 and C21 can be seen in the color section.)

## Tweaking the MidPip

If you prefer to work with CMY values rather than RGB, simply click the color space selector button  in the MidPip data window to change the displayed values back and forth from RGB to CMY.

To alter the color balance from neutral, click any of the MidPip data window fields and type in whatever value you prefer. For instance, I added a bit of a red color cast to the area around point number 1 by adjusting the red value up from 76 to 80, which is evident in Figure 6.16.

You can easily navigate through the MidPip data window by simply tabbing to move forward or Shift+tabbing to reverse direction.

### ADJUSTING OVERALL IMAGE CONTRAST

When you have completed your color cast correction, whether you use the curve or the MidPip method, you may want to adjust the overall contrast of the image while leaving the corrected color balance unchanged. The Gradation Curve tool is typically the best tool to utilize for this type of adjustment. Here I would use the Gradation Curve tool to increase the overall contrast of the barn image. This should be accomplished using the master curve only so that no alteration of the color balance of the image will occur.

## Selective Color-Based Corrections

You might also find it useful to be able to adjust the color values of a specific color rather than a tonal range in an image. This is what the Selective Color Correction tool allows us to do. To demonstrate how this Selective Color Correction tool works, we will use a sunset image. (An uncorrected copy of this image can be found on the CD.)

Perform a clean prescan and apply the basic histogram and curve adjustments discussed in previous chapters.

Here I click the Selective Color Correction tool  in the SilverFast tools. The Selective Color Correction window appears (Figure 6.17).

### Selecting the Color Matrix Set and Color to Adjust

SilverFast offers two color matrix sets: a standard 6-color set (labeled CM6 in the window) and a 12-color set (labeled CM12). Which you choose depends upon how tightly focused or restrictive you want your selective color adjustments to be. The standard 6-color set includes the basic red, green, blue, cyan, magenta, and yellow. The 12-color set further divides the original 6 colors into 6 more categories. We will use the standard 6-color set for this exercise.

Click the color in the image you would like to adjust—in my case, the portion of the orange area in the clouds. That color will be placed at the center of the color circle. The colors around the edge of the circle are called the contaminating colors and can be added to or subtracted from the color at the center of the circle. The color in the top horizontal set of color matrix boxes that is closest to the color you selected will be activated in the horizontal boxes of the color matrix set. In this case, it is the red box at the far left.

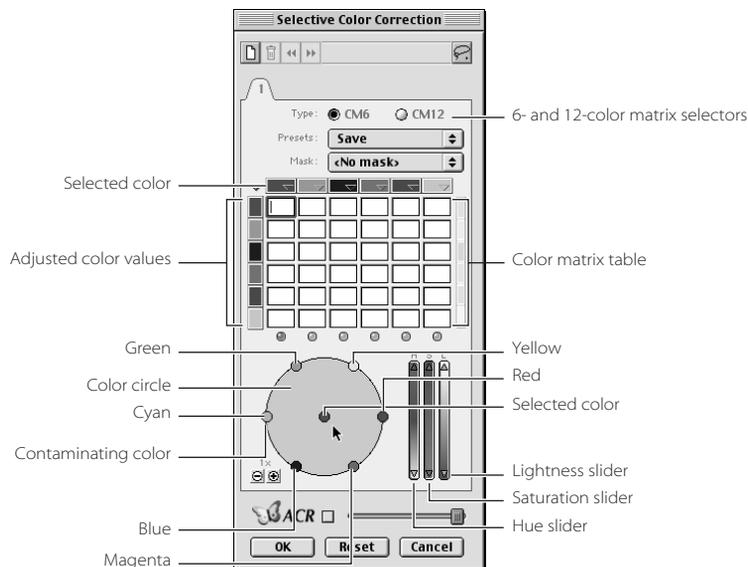


Figure 6.16

The MidPip tool

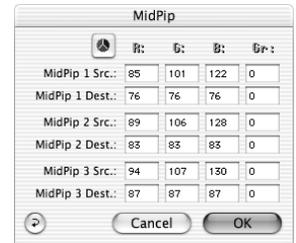
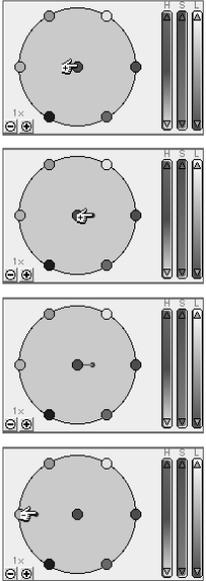


Figure 6.17

The Selective Color Correction window

If you use the 12-color set, you must scroll back and forth through the colors, as all 12 will not fit in the visible window space.



## Manually Adjusting Color

The surrounding contaminating colors can be either added to or subtracted from the selected color at the center of the circle. This addition and subtraction can be accomplished either manually or by the numbers. Let's try the graphical approach first.

First move the cursor over the central spot that displays the selected color. A hand will appear with a + sign in it.

Now click and drag to the right toward the red contaminating color.

A stick with a ball on the end will be drawn out toward the red contaminating color. The farther you move the hand, the longer the stick becomes and the more red will be added to the original color.

Alternatively, colors can be subtracted from the central color. Click and drag from the cyan contaminating color spot toward the selected central color spot. A hand with a negative sign will be displayed as you drag the stick ball symbol toward the central selected color, indicating a removal of cyan.

## Color Matrix: Adjusting by the Numbers

Color addition and subtraction can also be accomplished numerically by making changes to the color matrix table. The best way to see how this works is to make a manual adjustment and view the changes to the color matrix table. The top row includes the starting colors, and the vertical set of colors includes the contaminant colors. The selected color occurs at the far-left side of the horizontal set of colors (see Figure 6.18).

Here I make the same manual addition of red we made earlier to the central selected color but view the changes to the color matrix table. The table will reflect numerically the manual adjustments you make in the color circle. (In the example shown in Figure 6.18, the color matrix box for the starting and red colors increased by 8.) To adjust another color, simply click the color in the preview scanned image. The new initial color will appear in the center of the circle, and the nearest starting color will be activated in the top row of colors in the matrix table.

Make the same manual subtraction of cyan we made earlier from the central selected color but view the changes to the color matrix table. Note that the color matrix box for the starting and cyan colors decreased by 8. If you end up changing the initially selected color to another basic hue, the new hue will be shown in the color circle and activated in the top row of colors in the color matrix table.

## Adjusting Saturation

In addition to manually adjusting the color ball sticks in the color circle or adjusting the numeric values in the color matrix, you have the option of manipulating the slider to the right of the color circle. This slider allows you to control hue (H), saturation (S) and brightness/lightness (L).

Click and drag the saturation slider to increase saturation. Note that when the saturation slider is moved, both the ball sticks and the color matrix are modified (Figure 6.19). Color versions of the original and red-enhanced sunset images can be seen in color-section images C22 and C23.

## Adding Colors to the Adjustment

After you have defined your initial color by clicking the color you want to adjust in the preview image, you can add other colors. In this example of a sunset image, we might want to add yellows to our initial red-orange color selection prior to adjusting the saturation. In this way, surrounding yellows in additions to the reds and oranges will be affected by the saturation enhancement

Hold down the Shift key and click the small radio button underneath the color matrix data boxes below the yellow color. The button will change to green. Now both the first column and the next to last column will be active, as indicated by the green radio buttons, and affected by any changes you might make.

Adjust the saturation slider to increase saturation. You will see that the matrix values underneath both the red-orange and the yellow columns will be changed, as shown in Figure 6.20. A color version of this red- and yellow-enhanced sunset can be seen as C24 in the color section.

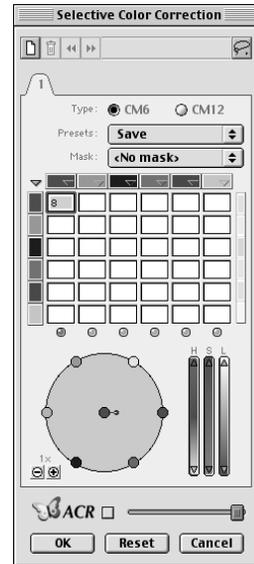
See the color section to examine the results of changes made on a raw scan of this image with basic scan adjustments and selective color adjustments. To see the differences between enhancing just the reds and enhancing both reds and yellows, look carefully at the edges of the sunset colors, where the yellows dominate.

## Preset Adjustments

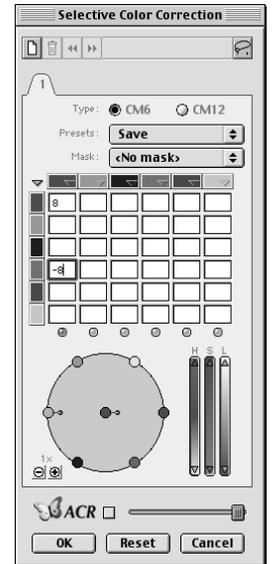
SilverFast has a whole set of preset adjustments if you don't want to make your own adjustments. Just click and hold on any of the starting colors along the horizontal set of boxes and a menu of choices will appear.

Figure 6.18

**Color matrix addition and subtraction results**



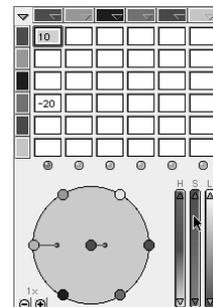
Adding the selected color



Subtracting a contaminating color

Figure 6.19

**Saturation adjustment in HSL sliders**





If you have several sets of corrections you would like to keep track of and apply, it's easy to do. You can save multiple sets of selective color correction values in tabs (Figure 6.21).

Click the document icon in the upper-left corner of the Selective Color Correction window. A new tab will appear, in which you can create and save another set of selective color correction parameters. Each of these tabs can then be saved for loading and use on another day.

## Making Your Own Selections Through Masking

So far we have controlled the editing adjustments of our images by selecting their tonal and color ranges. There are times when even this isn't enough. If you just want to adjust one small area of the image and tonal and color range selections don't do the trick, masking will make it possible.

Masking involves making a physical selection of a specific area of an image. Prior to making any color adjustments, we make our selections and adjustments using the tool we just used, the Selective Color Correction tool. The masking capability is an extension of this tool's capabilities. For this exercise, I work with an image that has one flower, a Hawaii sunset image with a bougainvillea in the foreground. The original and corrected versions of this image can be found on the CD. Here is how it works:

1. Perform a clean preview scan and apply basic histogram and curve corrections to the image.
2. Zoom in on the area of the image from which you would like to make a mask.
3. Activate the Selective Color Correction tool .

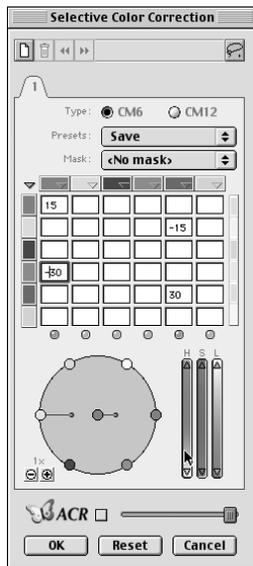


Figure 6.20  
Matrix changes to multiple colors

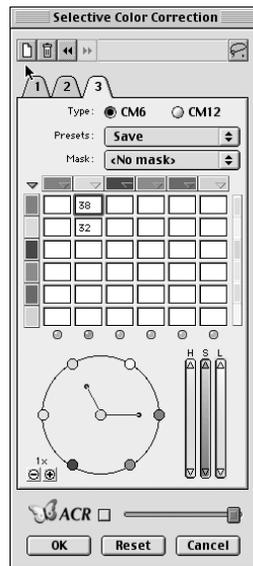


Figure 6.21  
Tabs for multiple sets of correction values

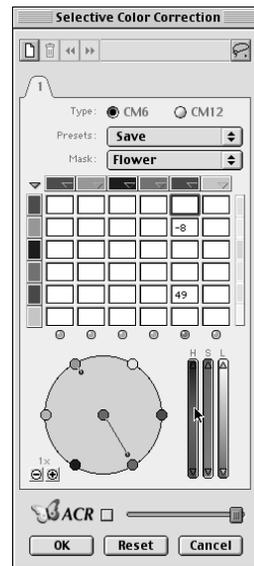


Figure 6.22  
Adjusting within the flower mask

4. Click the Mask drop-down menu and select New Mask.
5. With the lasso tool that appears, draw a mask around the area you want to color-adjust. I have drawn a careful mask here, but if the surrounding areas do not have any similar colors to the colors in the area you want to adjust, you don't have to be too careful with your mask drawing.

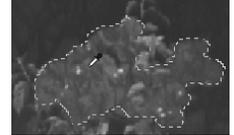
You have your choice of three kinds of masking tools: a lasso (the default), a polygon tool, and a brush accessed through the masking tool menu at the upper-right corner of the window. The use of any of these tools results in the creation of a selected area on the image.



6. When you are finished drawing the mask, a small window appears asking you to name it; give your mask a helpful name. Once named, this mask will appear in the same Save menu and can be loaded at any time.

Any mask you create can be edited with the use of the Shift key and the Command or Ctrl key. Hold down the Shift key to add to a selection and the Command/Ctrl key to subtract from the selection. Masks can also be inverted, deleted, saved, and loaded under the Mask drop-down menu.

7. Click the color inside of the mask that you would like to adjust. Here, I clicked the flower petals.
8. Adjust the settings in the Selective Color Correction window. Here I have decreased the saturation and lightened the selected color range. In Figure 6.22, the flower mask is visible in the Mask menu.
9. Click OK and finish the scan as you would normally. See Figure 6.23 for a comparison of a scan done with and without the mask correction applied.



### ADJUST NOW OR ADJUST LATER?

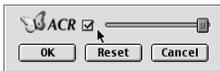
These same types of mask-based adjustments can, of course, be made in a postscanning image editing application such as Photoshop. However, there are three advantages to performing the correction here:

- It's faster to perform the function here; once the scan is complete, you are finished.
- If you perform this image correction after the scan, you will likely be reducing the quality of the image. Remember that any adjustments made in Photoshop will typically be made with less image and often result in the loss of more image data, therefore lowering image quality.
- The Selective Color tools in SilverFast are more intuitive and easier to use than many image editing application tools, so you are more likely to achieve the result you want.

## Color Restoration Made Easy

We are often challenged with having to scan images that have, through time and abuse, been significantly faded. Although it is certainly possible to use SilverFast's wide range of image correction tools in concert to help correct these images, it would certainly be a challenge. Newer versions of SilverFast (6.0+) have a tool specifically designed to handle this challenge. It is called the Adaptive Color Restoration, or ACR, tool. ACR has been added as a component to the Selective Color Correction window. It is an easy one-button solution:

1. Select the area of the faded prescanned image you would like to correct.
2. Activate the Selective Color Correction tool .
3. Click the ACR check box located at the bottom of the window.
4. Now move the slider until you achieve the results you like.



It's a good idea to take a look at an ACR corrected image with your densitometer and perhaps fine-tune it with your histogram and curve tools.

My experience is that sometimes this ACR adjustment works very well and all I need to do is fine-tune the results. On some images, however, I actually get better results performing the standard scanning steps used in Chapters 4 through 6.

Figure 6.23

Correcting a masked area: left, without the mask, and right, with it. Color versions of these two images can be found in the color section as C25 and C26.



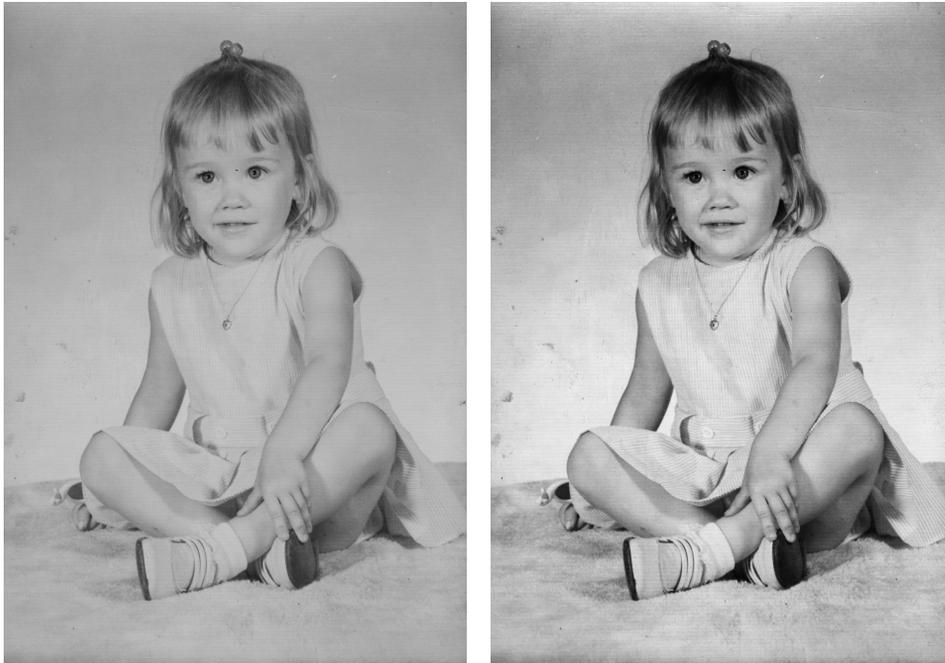


Figure 6.24

**Comparison of fading  
(left) and correcting  
(right)**

Images that have *not* experienced strong color cast shifts during fading respond well to the ACR adjustment. Images with strong color casts, such as the one in Figure 6.24, will probably be best corrected using the auto-adjustment tool followed by manual fine-tuning to restore neutrals and memory colors, as we have performed previously in this chapter. Figure 6.24 shows a faded image that I corrected using SilverFast's auto-adjustment tool, histogram, and gradation curves (color versions of these images are shown in the color section). So, try the ACR on the faded image. If you do not like the results, use the conventional method as I have done here. In either case, SilverFast provides a set of tools to help you get the job done. Try your hand at correcting this image and compare your results with mine. Original and corrected versions of the image "Tina" can be found on the CD. Printed color versions can be seen in the color section as C8 and C9.

