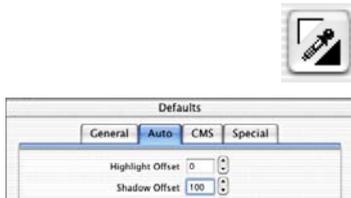


5.2 Highlight / Shadow Tool

Highlight / Shadow with Offset “0”



With the highlight / shadow tool, the brightest and darkest point of the image can be specified manually. For this tool, a highlight offset and a shadow offset can be chosen in the “Options...” / “Auto” dialogue. If the highlight offset value is set to 0 and the shadow offset to 100, the highlight will be brought to 0% and the shadow to 100%. The following example shows the usage with the densitometer readings.

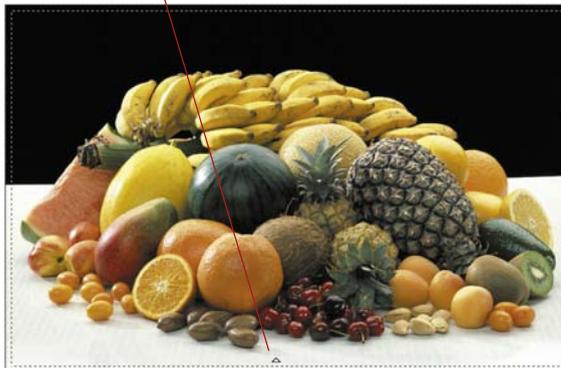
Setting Highlight



To set the highlight, click on the top left corner (the mouse pointer will turn into a white triangle) and find the brightest point on which you want to set the highlight. While moving the triangle over the image, the densitometer displays the values. Now click on the brightest point. The densitometer will display “0” in the output display for CMY.

C	27	→	21
M	19	→	14
Y	20	→	15

C	27	→	0
M	19	→	0
Y	20	→	0



The brightness of the image immediately changes at this point. Accordingly all other shades of the image will be influenced.

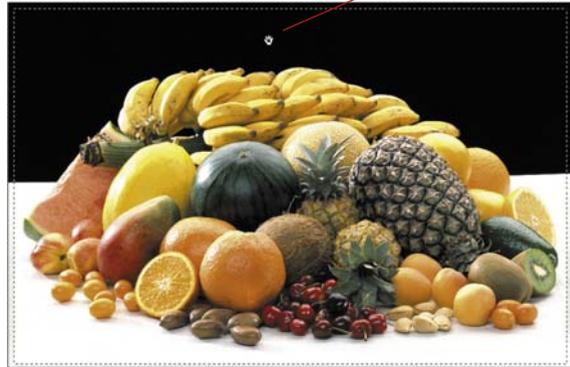
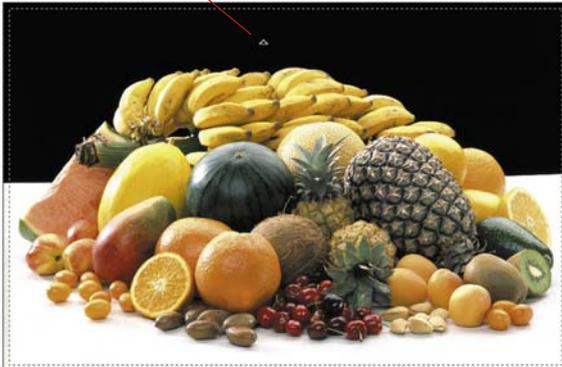
Setting Shadow



To set the shadow (the darkest point), click onto the down right corner of the highlight-shadow tool, the black triangle will appear. Search for the darkest point on the image by observing the densitometer reading, then click on the image in the prescan.

C	99	→	96
M	99	→	96
Y	99	→	98

C	99	→	100
M	99	→	100
Y	99	→	100



Note how the CMY values on the right side of the densitometer are set to 100%. Now the highlight and shadow values for this image are set.



Please note that in printing, the highlight shadow values should not be set to "0" or "100" percent, because, in printing, white should have a printing dot between 3-10% and black between 90-98%. On the next pages you will see this more clearly.

Highlight / Shadow Reset

Macintosh

To reset the highlight / shadow values, press the "Alt" key, and click on the pipette of the highlight / shadow tool.

Windows

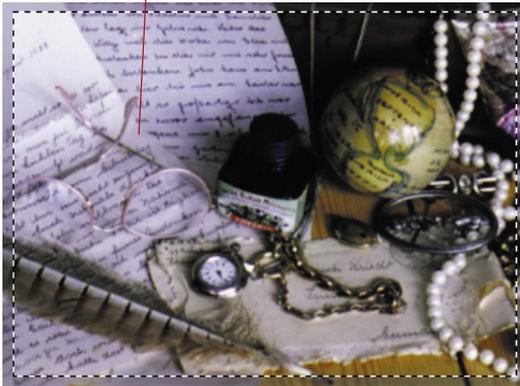
Press "Alt" key and click on the pipette icon in the tools palette.

Setting Midtone

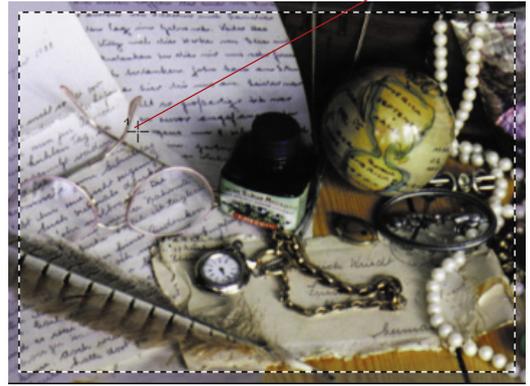


In order to define a midtone (neutral point) click on the pipette like icon of the highlight / shadow tool – the cursor becomes a grey rectangle. Move the tip of the rectangle over the colour you want to be neutral grey and watch the densitometer (select CMY reading).

C	40	→	27
M	39	→	25
Y	30	→	18



C	40	→	23
M	39	→	23
Y	30	→	22



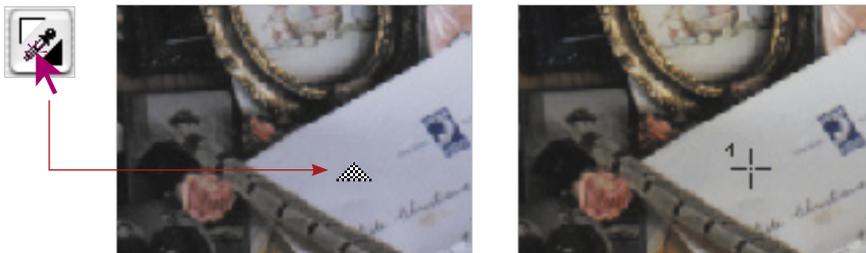
The densitometer reading before might be C27 / M25 / Y18. Now click onto the desired spot in the prescan and you will see how the CMY colours become the averaged value of C23 / M23 / Y22 – the colour tint has become neutral.

MidPip4 • Multiple Neutralising Pipette

MidPip4 (Advanced Colour Cast Removal) allows removal of colour casts comfortably, which e.g. result from a mixed light situation.

In order to achieve this, you can set up to four neutral points in your preview window. The neutral values of any such point can be directly edited in a special dialogue.

To activate the *MidPip4* you click onto the pipette (in the tool bar) and then onto the desired image detail in the preview window. The neutral points set will be marked with a numbered cross.



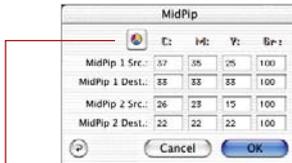
If you want to set several neutral points at once, click onto the pipette and hold the “Option” key while setting up to four neutral points. The pipette will remain as a cursor until you either click the pipette again or you have set the fourth neutral point! In the example below 3 neutral points have been set.



Editing the *MipPip*

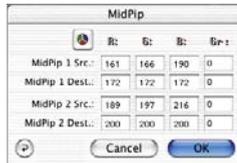


In order to fine tune a neutral point, double-click onto the pipette tool and the *MidPip* dialogue window will appear. The value fields show the “before-after“-RGB- or CMY values of all neutral points. They are fully editable. *SilverFast* version 6 offers the possibility of the most sophisticated colour cast corrections!



CMY <-> RGB Switch

Conversion of values measured from RGB to CMY and vice versa

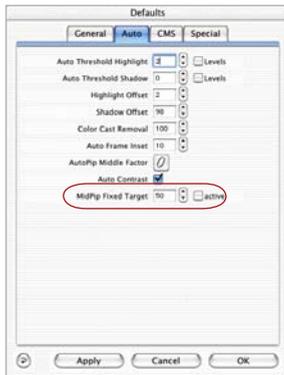




The first line “*MidPip # Src.*” represents the RGB or CMY source values. The second line “*MidPip # Dest.*” represents the RGB or CMY destination values. The latter will normally show the same values for the three colour channels, since the midtone selector pulls the chosen midtone to neutral.

Now the user can change these target values and instead can retain a certain colour tone as a result of the midtone correction. If the user alters the first line or the source values, then the midtone correction effect will have different original colours in the picture details.

Adjusting Neutral Values to a Determined Density



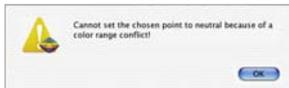
An additional development of the midtone selector tool appears in the “Auto” tab of the “Options...” dialogue.

If the “active” check box next to “*Midpip Fixed Target*” is chosen, the following clicks of the midtone selector will lead to more neutral mid tones, whose target value is not dynamically determined to retain the brightness of the clicked picture detail. Instead, a determined target value is used here. It can be any CMY value, if preset as per default, it has a value of 50% (RGB 128).

Deleting Neutral Points

In order to delete neutral points, click onto the midtone pipette, hold the „Alt“-key depressed and click onto the neutral point you wish to delete.

Alert Messages



An alert message will always appear when the tonal values of the desired point are too distant from the destination value and fall outside a reasonable correction range.

Further indications of limiting errors are: If the third or fourth neutral point does not exhibit the desired results and casts are not neutralized, you have obviously hit the limits of the correctable range.

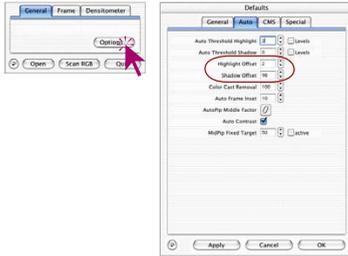
Highlight and Shadow Offset

You may have noticed that where the highlight is set to 0% , the highlight details got lost, that is to say, there are no fine details visible any more.

In order to prevent this from happening, *SilverFast* enables to change highlight and shadow offset in the “Options...” / “Auto” dialogue. Here you can enter values between 0 and 10% for the highlight and 90 to 100% for the shadows.

For the highlight offset a setting of 6 means that 5-6% remains within the highlight. This means that where you place your highlight point, 5-6% of the halftone dots remain. Likewise in the shadows, the density must be set at less than 100%.

In the following example, this is shown more clearly: the details in the highlight are preserved.



C	27	→	7
M	19	→	6
Y	20	→	6



Preserving a Colour Cast with the Highlight / Shadow Tool

You probably have noticed that colour cast removal is related to the highlight / shadow setting. If you desire to preserve the colour cast, press the “Shift” key while setting highlights or shadows, and the colour cast will not be removed.

Preserving Specular Highlights

Specular highlights are reflections of light on sparkling surfaces, like glass, jewellery, etc. Specular highlights shouldn't have printable dots, so that the image maintains brilliancy.

In order to keep those specular highlights, under “Option”>”Auto” set “Highlight Offset” to “0” or fix a densitometer point within these specular highlights and move the highlight end points in the histogram until you get the desired results.

Specular highlights



Displaying Brightest and Darkest Point of an Image

Since it is important to know where the brightest and darkest points of an image are, we have implemented a display of these points.



Displaying Brightest Point

To display the brightest point, move the mouse cursor over the white patch of the display-brightest-darkest point button and click the mouse. A red circle with an “Cross” displays the brightest point. Additionally, all pixels with the same brightness are displayed in negative form.



Brightest point

Displaying brightest point:

Macintosh

Press “Command” key and “Shift” key

Windows

Press “Crtl” and “Shift” key



Displaying Darkest Point

To display the darkest point, move the mouse cursor over the black patch of the display-brightest-darkest point button and click the mouse or press the following combination: “Command” key and “Ctrl” key on Macintosh (make sure that you press the “Command” key first!) PC: press only “Ctrl” key.

A red circle with an “cross” marks the darkest point.

In Combination with Highlight / Shadow Tool

The above mentioned displays can also be shown while using the highlight / shadow tool, with the advantage that the highlights and shadows can be set accordingly. Simply use the above mentioned keys.



Darkest Point

Displaying Darkest Point:

Macintosh

Press “Command” key and “Ctrl” key

Windows

Press “Ctrl” key