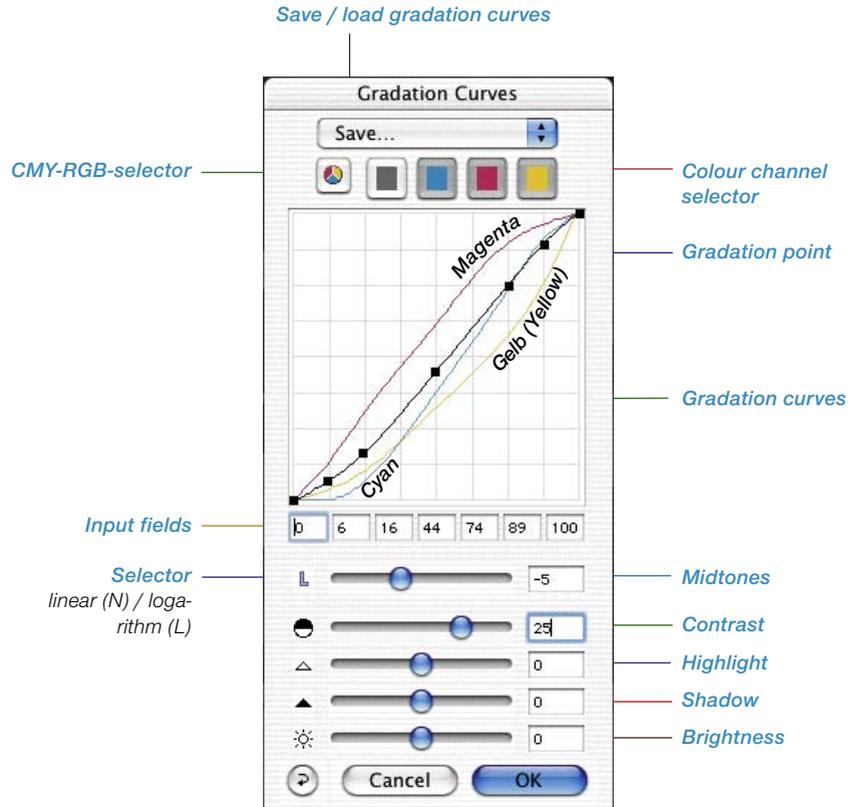# 5.4 Gradation Dialogue

Gradation Curves

Gradation refers to the relationship between input and output. The tonal values of an image are optimised in such a way that the adjustment of highlight / shadow points and gradation give the best possible result. Inexperienced users will often try to optimise the image by means of brightness and contrast control, thus leading to significant deterioration of the image. The correct way of image optimisation can be achieved as follows:

1. Setting highlight and shadow
2. Optimising gradation
3. Selective colour correction
4. Size adjustments
5. Sharpening (unsharp mask)

If you regulate by contrast or brightness control, the danger exists that the highlight will "burn out" and the shadow will "burn in".

Overview

Save / load gradation curves

Gradation Curves

Save...

CMY-RGB-selector

Colour channel selector

Gradation point

Magenta

Gelb (Yellow)

Cyan

Gradation curves

Input fields | 0 | 6 | 16 | 44 | 74 | 89 | 100 |

Selector
linear (N) / loga-rithm (L)

L   -5   *Midtones*

25   *Contrast*

0   *Highlight*

0   *Shadow*

0   *Brightness*
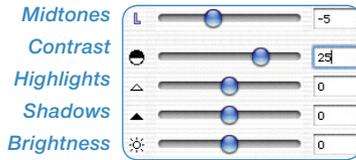
Cancel   OK

Gradation Dialogue in *SilverFast...SE* versions

The dialogue is simplified in all *SilvertFast...SE* versions and is recommended for novice users.
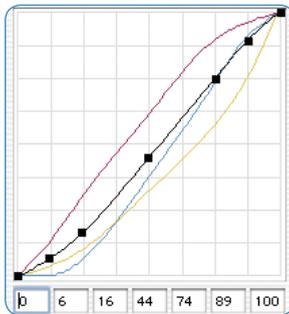
Gradation Curves

| 0 | 25 | 56 | 128 | 200 | 231 | 255 |

L   -1

16

Cancel   OK
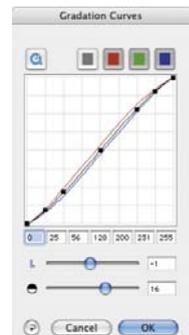
Adjusting Gradation Curves

Gradation curves can be changed in four ways:

Midtones
Contrast
Highlights
Shadows
Brightness

L	-5
●	25
△	0
▲	0
☼	0

a. By Using the Sliders

By using the sliders, the gradation curves can be conveniently altered. The input fields relating to the curve points and those relating to the slider position are updated accordingly. The slider position can also be changed by entering values into the input fields right of the slider.

b. By Moving the Curve Points

The curve points of a gradation curve can be moved by the mouse. Here, the values in the input fields below the curve points are automatically updated.

| 0 | 6 | 16 | 44 | 74 | 89 | 100 |

c. By entering Values into the Input Fields

The curve points can be moved accordingly by changing the values in the five input fields.

✓ Curve_5591
Job JohnLtd.
Mag+5 Cy–10
PhotoShop–Import...
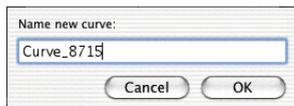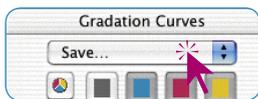SilverFast–Import...
Delete...
Save...
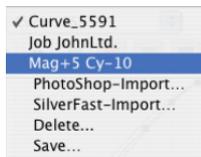
d. By loading Saved Gradation Curves

You can load previously saved gradation curves out of the list and these will take effect immediately.
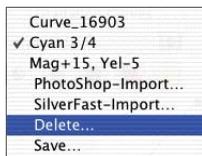
Saving a Gradation Curve

Enter the gradation curve dialogue and get the pull down menu "Save"; the dialogue to the left will open and ask for the name of this curve.
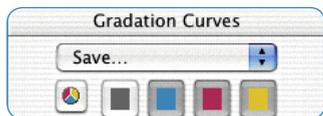
Deleting a Gradation Curve

In order to delete a gradation curve from the list, click on "Delete" and select the curves you want to delete from the list. You can also select more than one curve. Clicking the "Delete" button will delete all curves selected.

Gradation Curve Channels

To choose a single gradation curve channel, for example magenta, click on the appropriate button. To manipulate two channels simultaneously, hold down the "Shift" key and click on a second channel button. To activate all three channels, click on the grey button.

Cyan - Magenta - Yellow
(Red - Green - Blue)

Deactivating Gradation Curve Points

To change gradation curves without the limiting influence of nearby existing curve points, You can deactivate any of the existing curve points.

The following example shows the effect of a curve correction without (left) and with (right) deactivated curve points.

The limiting influence from the neighbouring curve points is obvious.
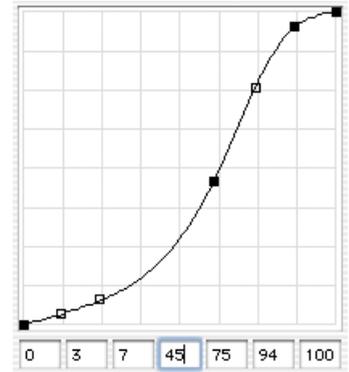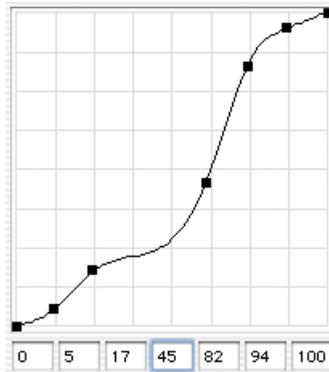
Deactivated curve points

In order to deactivate a curve point, press the "Alt" key and click on the desired curve point – it changes into a black outline.
In order to reactivate a curve point, press the "Alt" key once again and click on the desired curve point – it becomes black again.

Resetting Deactivated Curve Points

In order to reset all deactivated curve points just click on the "Reset" button in the gradations dialogue.

Starting with version 5 of all *SilverFast* plug-ins, there are improved control possibilities of the curve points in the gradation dialogue. If the "Command" key ("Strg" key for Windows) is pressed while dragging the curve points (track points) in the gradation dialogue, the chosen curve point will automatically become active and all other curve points (except 0% and 100%) will become passive. After dragging, the original condition of the active and passive points will return to their prior settings.
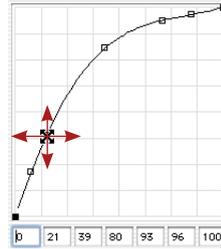
Upon pressing the "Ctrl" key, ("Alt" key for Windows), the clicked curve point can only be shifted in a vertical direction.
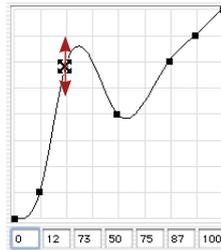
Marking the Condition of Gradation Points (On/Off)

Starting with version 5 of all *SilverFast* plug-ins, the last entered command of the individual tracking points of the gradation curve will be saved up to the next change. The condition of the active (filled in black) or passive (empty) tracking points will remain and is also available after restart.

Control of the curve points:

Point activation/deactivation
Mac+Win: while holding down the "Alt" key, clicking on a curve point makes it active (filled in black) or passive (empty).

Moving the point vertically
Mac: click-dragging while holding the "Ctrl" key down keeps the X coordinates constant.
Moving is only possible in the Y direction.
Windows: click-dragging while holding down the "Alt" key will keep the coordinates constant.
*Moving is only possible in the Y direction.*
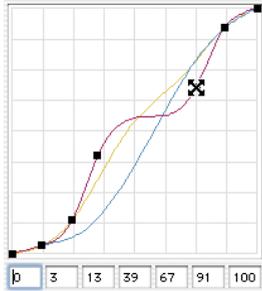
Hottrack in a vertical direction
While holding down the "Command" and "Ctrl" key ("Strg" + "Alt" for Windows), the Hottrack shift will take place for one point only in a vertical direction.
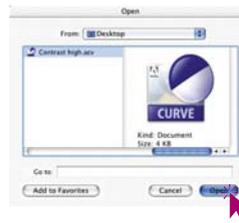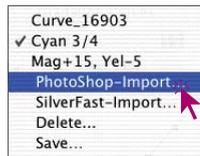
Extended Gradation Curves

Extended gradation curves allow the generation of complex curves. The gradation curve points can freely be moved both horizontally and vertically. Even the most complex gradation curves can be generated in this way.

Loading Photoshop Gradation Curves
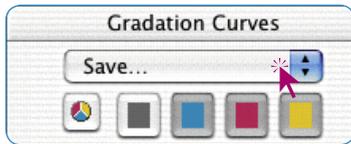
Gradation curves, which were generated by Photoshop, can be loaded by means of the import-function within the pop-up on top of the channel selector.

Selecting Gradation Curves

Gradation curves can be loaded from an existing selection. More curves can be added later.

Linear and Logarithmic Midtone

The midtone slider is the most important slider to achieve the correct over all brightness. For normal images correction of the midtones is sufficient to get the correct tonal balance.

If however an image has a lot of shades in the three quarter tone, it might be necessary to use a different curve to influence the three quarter tone range.
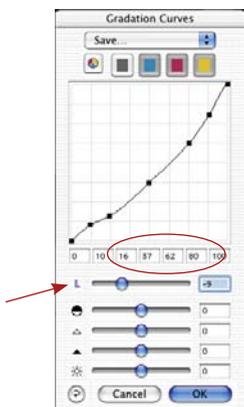
In order to influence the three quarter tone range, click on the "N" (normal) at the very left of the midtone slider – the "N" turns into an "L" (logarithmic) and the gradation curve changes to brighten up the three quarter tones.
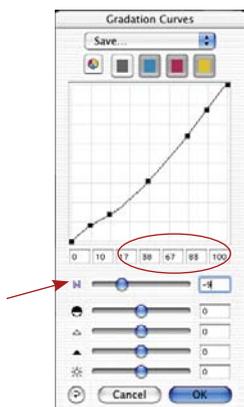
Normal midtone curve

With normal midtone gradation

Logarithmic midtone curve

With logarithmic midtone gradation

5.4 • Gradation curves

SilverFast® Manual